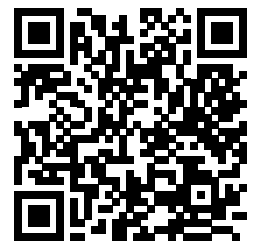




# ANTENNA CATALOG

An overview of some of the most popular antennas available from TE Connectivity (TE)

**PULSTAR®**



Visit our antenna  
selector on [te.com](https://www.te.com)



Recognized as a **GLOBAL INNOVATION LEADER** by several leading indices.

**COMMUNITY LEADER** listed on Dow Jones Sustainability Index and named as one of **WORLD'S MOST ETHICAL COMPANIES** by Ethisphere Institute.

Recognized by Fortune in **WORLD'S MOST ADMIRABLE COMPANIES**.

# YOUR TRUSTED PARTNER



## KEY BENEFITS

- Largest IoT antenna portfolio available
- Custom quick turn design solutions
- Laser Direct Structuring (LDS) technology
- High reliability: high performance and isolation
- High efficiency: optimized throughput, minimal losses
- State of the art antenna laboratories and global footprint
- In-house testing and validation
- Design-in and implementation services
- World class fully-integrated manufacturing capabilities



## WIRELESS PROTOCOLS

- Cellular (2G-5G, NB-IoT, LTE-M)
- Wi-Fi, Bluetooth, ISM
- LoRaWAN, Sigfox, Z-wave/ Zigbee
- LPWAN for IoT
- GNSS, GPS, Positioning
- Ultra-wideband
- UHF, VHF, 7/8/900 MHz public safety
- Combination antennas



## FOCUS APPLICATIONS

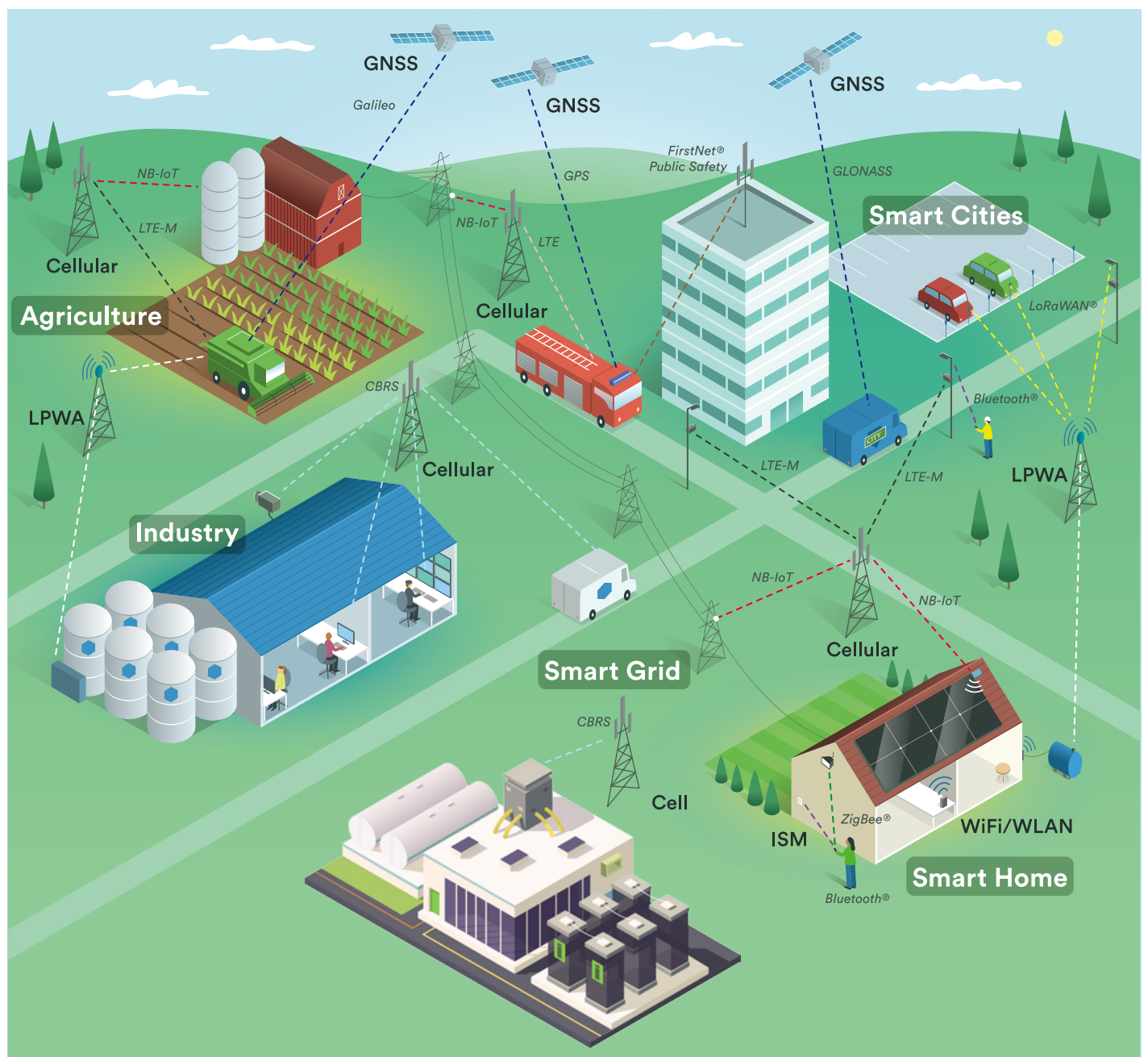
- Security & surveillance
- Intelligent Transportation
- Fixed wireless access
- Lighting
- Home and building automation
- Smart metering, energy management
- Public safety
- Industrial IoT, predictive maintenance
- Health and medical devices
- Telematics, OBD, asset tracking
- Audio and entertainment
- Agriculture



# THE INTERNET OF THINGS: CONNECTING THE FUTURE OF EVERY THING

In every industry and in every application, wireless connectivity is the business-critical upgrade driving the world's cutting edge products and services. In retail, smart metering, remote monitoring, transportation, public safety, and everything in between, getting data to the cloud and enabling sense and control on the ground is critical to satisfying customer demand and enabling smarter products that produce previously impossible results. The right IoT solutions are critical to robust, cutting-edge, next generation products that perform reliably in the field. TE Connectivity's (TE) expanded line of antennas are enabling new possibilities, driving us towards a more connected future of Every Thing.

## HOW TE SUPPORTS THE IoT ECOSYSTEM



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# TABLE OF CONTENTS

Antenna product listings in this catalog are by frequency/applications and antenna type under the headings below. Each section below is linked to the relevant pages of this document to provide a quick link to the most relevant products.

Use the links provided in the table of contents to navigate to the correct section and use the '[-> Table of Contents Link](#)' at the top of every page to navigate back to this page.

## Cellular

Antennas supporting 5G, 4G, 3G, 2G, LTE, LTE-M (Cat-M1), NB-IoT, CBRS and more

### Internal Antennas:

- [Surface Mount Antennas](#)
- [FPC Antennas](#)
- [Rigid PCB Antennas](#)

### External Antennas:

- [Terminal Mount Hinged/90° Monopole Antennas](#)
- [Terminal Mount Dipole Antennas](#)
- [Remote Mount Monopole Antennas](#)
- [Remote Mount Dipole Antennas](#)
- [Low-Profile Omni Antennas](#)
- [Remote Mount Dome/Puck Antennas](#)

### Infrastructure Antennas:

- [Outdoor Omni Baton Antennas](#)
- [Fixed Wireless Access - MIMO Baton antennas](#)
- [Directional Yagi/Log Periodic Antennas](#)
- [Directional Panel Antennas](#)
- [Directional Dish Antennas](#)
- [Ceiling Mount DAS Antennas](#)

## Sub-1 GHz LPWA & ISM

Sub-1 GHz antennas offer multiple styles, mounting, and terminations at 433 MHz, 490 MHz, 868 MHz and 915 MHz in support of applications including LoRaWAN, Sigfox, RFID, Weightless-P, Wi-Fi HaLow, ISM

### Internal Antennas:

- [Surface Mount Antennas](#)
- [FPC Antennas](#)

### External Antennas:

- [Terminal Mount Hinged/90° Monopole Antennas](#)
- [Terminal Mount Monopole Antennas](#)
- [Terminal Mount Dipole Antennas](#)
- [Remote Mount Monopole Antennas](#)
- [Low-Profile Omni Antennas](#)
- [Remote Mount Dome/Puck Antennas](#)

### Infrastructure Antennas:

- [Outdoor Omni Baton Antennas](#)
- [Directional Yagi Antennas](#)
- [Directional Panel Antennas](#)



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# TABLE OF CONTENTS CONTD.

## Wi-Fi / WLAN

Single, dual and triple band 2.4 , 5 and 6 GHz antenna solutions for wireless LAN (Wi-Fi/WLAN) applications including Wi-Fi 7, Wi-Fi 6E, Wi-Fi 6, Wi-Fi 5, Wi-Fi, U-NII 1-4, 5-8, IEEE 802.11b/g/n/ac.

### Internal Antennas:

- [Surface Mount Antennas](#)
- [FPC Antennas](#)
- [Rigid PCB Antennas](#)

### External Antennas:

- [Terminal Mount Hinged/90° Monopole Antennas](#)
- [Terminal Mount Hinged/90° Dipole Antennas](#)
- [Remote Mount Dipole Antennas](#)
- [Low-Profile Omni Antennas](#)
- [Remote Mount Dome/Puck Antennas](#)

### Infrastructure Antennas:

- [Outdoor Omni Baton Antennas](#)
- [Directional Yagi Antennas](#)
- [Directional Panel Antennas](#)
- [Directional Dish Antennas](#)
- [Ceiling Mount DAS Antennas](#)

## 2.4 GHz ISM

2.4 GHz single-band antennas with a broad range of styles, mounting, termination and levels of performance to accommodate 2.4 GHz applications including Bluetooth, Zigbee, IEEE 802.11b/g, IEEE 802.15.4.

### Internal Antennas:

- [Surface Mount Antennas](#)
- [FPC Antennas](#)
- [Rigid PCB Antennas](#)

### External Antennas:

- [Terminal Mount Monopole Antennas](#)
- [Terminal Mount Hinged/90° Monopole Antennas](#)
- [Terminal Mount Dipole Antennas](#)
- [Terminal Mount Hinged/90° Dipole Antennas](#)
- [Remote Mount Monopole Antennas](#)
- [Remote Mount Dipole Antennas](#)

## GPS/GNSS

Global navigation satellite system (GNSS) antennas for constellations and applications including GPS, Galileo, COMPASS, Beidou.

### Internal Antennas:

- [High Precision Antennas](#)
- [Active Remote Active Antennas](#)
- [Other GPS/GNSS](#)

### External Antennas:

- [Terminal Mount Antennas](#)
- [Remote Mount Antennas](#)

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# TABLE OF CONTENTS CONTD.

## Vehicular

Single and multi-port vehicle antenna solutions from VHF to 5G and Wi-Fi 6E/7 and combinations of VHF, UHF, 7/8/900 MHz, 4G/LTE, 5G, Wi-Fi, GNSS, Bluetooth and more.

### External Antennas:

- [VHF Single Port Antennas](#)
- [UHF Single Port Antennas](#)
- [7/8/900 MHz Single Port Antennas](#)
- [VHF, UHF, 7/8/900 MHz Multi-Band Single Port Antennas](#)
- [Multi-Port Combination Antennas - UHF, Cellular, Wi-Fi GNSS, Bluetooth](#)

## Public Safety / LMR

Multiple formats of single and multi-port antenna solutions designed for public safety, first responder, emergency services, FirstNet, Emergency Services and more.

### External Antennas:

- [VHF Portable/Handheld Radio Antennas](#)
- [UHF Portable/Handheld Radio Antennas](#)
- [8/900 MHz Portable/Handheld Radio Antennas](#)
- [8/900 MHz Portable Hinged Radio Antennas](#)
- [VHF Low-Profile Antennas](#)
- [UHF Low Profile Antennas](#)
- [Tunable Low Profile Antennas](#)

### Infrastructure Antennas:

- [VHF Omni Outdoor Baton Antennas](#)
- [UHF Omni Outdoor Baton Antennas](#)
- [VHF Directional Yagi Antennas](#)
- [UHF Directional Yagi Antennas](#)

## Other Antennas

A wide range of antennas for more niche uses including medical, unlicensed and remote control applications including:

### Internal Antennas:

- [NFC](#)
- [315 MHz](#)
- [403 MHz](#)
- [418 MHz](#)
- [458 MHz](#)
- [Ultra-Wideband \(UWB\)](#)

### External Antennas:

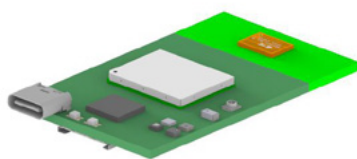
- [315 MHz](#)
- [410 MHz](#)
- [418 MHz](#)
- [1400 MHz](#)

## Useful Links

- [Associated Products](#)
- [Cellular LTE & 5G NR Frequency Band Guides](#)
- [GNSS Frequency Band Guide](#)

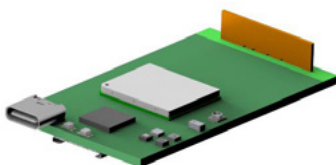
# MOUNTING TYPES

## Internal - Board Mount Antennas



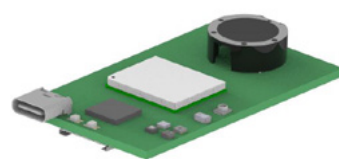
Surface mount

- Consist of: Element + Keep out + Ground
- Small size, low profile
- Ideal for devices with very low height requirement
- Relatively large PCB ground keep out of 10 mm to 20 mm is required



Tab mount

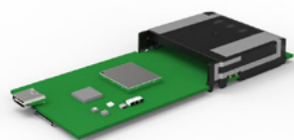
- Consist of: Element + Keep out + Ground
- Higher profile of 10 mm to 20 mm
- Smaller PCB ground keep out of 5 mm to 10 mm is required
- Can save PCB space and offer good antenna performance



Surface mount on ground

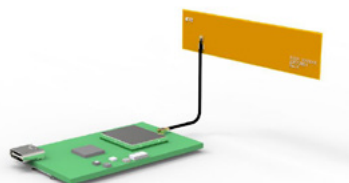
- Consist of: Element + Ground
- Higher profile of 5 mm to 25 mm
- No PCB ground keep out is required
- Can save PCB space
- On-ground type ideal for single/dual high band antennas

## Internal - Direct and Cable Feed Antennas



Chassis mount, direct feed

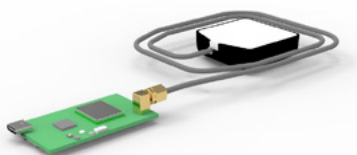
- Compact Antenna
- Use existing ground plane
- Ground plane design + components/routing can have strong RF impact
- Automatic and repeatable assembly



Chassis mount, cable feed

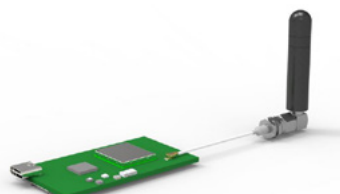
- Larger Antenna
- Ground plane independent antenna
- Ground plane + components having little impact on RF
- Manual assembly

## External - Remote, Terminal and Low-Profile Antennas



Remote

- Stand-alone antenna
- Little to no dependency on device ground
- Preferred option for metal cases
- Option where antenna position different from device position
- Minimal RF design effort, ready to use



Terminal mount

- Stand-alone antenna
- Dependency on device ground increases with lower frequencies
- Preferred option for metal cases
- Higher gain options available
- Adapter cable = adding cost
- Easy manipulation with minimal RF design effort



Low-profile

- Positioned further from a device/board
- On-ground or ground plane independent versions
- Higher gain options available
- Consistent radiation patterns for uniform performance
- Available in many formats
- Options available for all mounting positions



# MOUNTING TYPES

## Vehicle - Whip, Low-Profile, Multi-Port and Covert Antennas



Whip & Low-Profile

- Single port solutions covering many frequencies/applications
- Ground plane required and ground plane independent options
- Ruggedized
- Multi-band solutions available
- High performance



Multi-Port

- Shark fin and low-profile puck formats
- Up to 14 port antenna solutions
- Next generation technologies incorporated including 5G, Wi-Fi 6E, Wi-Fi 7 and more
- Many combinations available covering VHF, UHF, 4G, 5G, Wi-Fi, Bluetooth, GNSS and more



Covert

- Mounted inside a vehicle
- Multi-port solutions supporting 4G/5G, Wi-Fi and GNSS from a single antenna
- Outperforms traditional whips in many cases
- Tamper-proof
- Ideal for many vehicular applications

## Infrastructure - Fixed Position Antennas



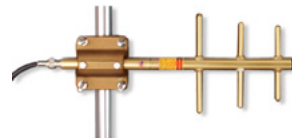
Outdoor Omni Baton

- Pole or mast mountable
- High gain
- IP-rated for outdoor applications
- Ruggedized
- High performance



Directional Panel

- Wall or ceiling mountable
- Directional radiation patterns
- High gain
- Ideal for IIoT, warehousing and more
- Indoor and outdoor versions
- High performance



Directional Yagi

- Pole or mast mountable
- Directional radiation patterns
- High gain
- Ideal for point-to-point communications
- IP-rated for outdoor applications
- Ruggedized
- High performance



Ceiling Mount DAS

- Hard or ceiling tile mountable
- Low-PIM rated
- High performance means less antennas required to service a given area
- Paintable
- High performance



Fixed Wireless Access

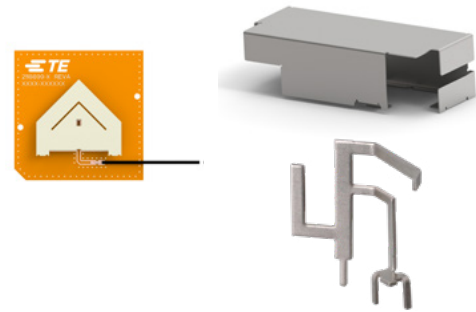
- Omnidirectional and directional options
- Desk, wall, pole and access point mountable
- Next generation technology for current and emerging 4G and 5G applications
- Ideal for primary connectivity or failover support
- High performance

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# STANDARD ANTENNA EXAMPLES

## Stamped Metal Antennas

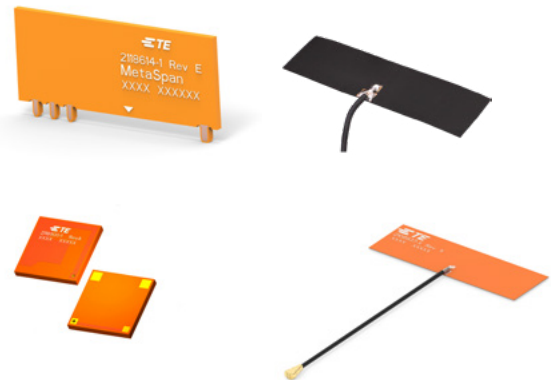
Formed metal embedded antennas can offer high efficiency and may be appropriate for smaller devices where there is limited internal space. TE's standard off-the-shelf offering of low profile, high performance stamped antennas can deliver a low cost and highly repeatable manufacturing solution. Custom designs can also be provided, however, this is typically only suitable for higher volume applications, as tooling is necessary for stamping and forming. Various mounting options are available.



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## PCB & FPC Antennas

Useful for multi-band antennas, flexible printed circuits (FPCs) and printed circuit boards (PCBs) can allow a wide variety of wireless devices to operate at different frequencies without multiple antennas. TE's innovative MetaSpan antenna technology improves wireless connections by using metamaterials to cover an extensive range of frequency bands. A broad range of standard offerings include low profile and miniaturized antennas. Additional benefits include enhanced bandwidth, reduced size, excellent efficiency, and a smaller keep out zone. Custom solutions are quickly available due to short lead time and smaller investment for tooling, while allowing flexibility for pattern changes. Various mounting options are available.



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## External Antennas

TE has an extensive range of external antennas in multiple formats including terminal and remote mount solutions. As external antennas generally do not require additional tuning, they are easy to implement and therefore may reduce the total cost of ownership. External antennas also have the advantage of improved sensitivity due to farther distance from device noise, which can enable excellent coverage and gain for a wide variety of applications and design possibilities. Most of TE's external antennas are offered as standard off-the-shelf solutions which support very rapid time to market. Additionally, TE can offer supplementary cable assemblies and mating RF receptacles that seamlessly connect to the terminated interfaces of the external antennas, which can provide great flexibility for design. Customized cable lengths, connector options, port counts and custom markings are also available on request.

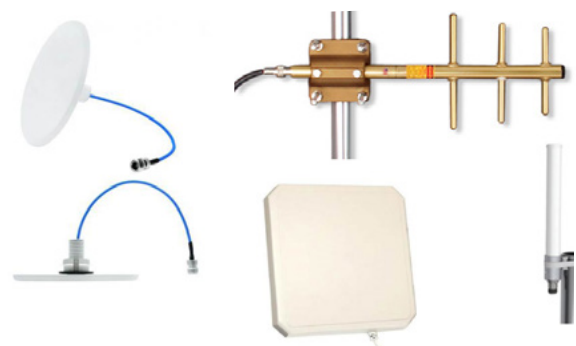


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## Infrastructure Antennas

TE offers a broad range of fixed position infrastructure antennas for multiple frequencies and applications. Infrastructure antennas are available in omnidirectional and directional formats, indoor and outdoor rated and varying levels of certifications and standards.

Typical examples include: outdoor omnidirectional baton antennas, directional panel antennas, directional yagi antennas and ceiling mount DAS antenna. TE also offers latest generation Fixed Wireless Access (FWA) antennas for 5G primary connectivity or failover support.



# TE RF IMPLEMENTATION SUPPORT



## Antenna Design

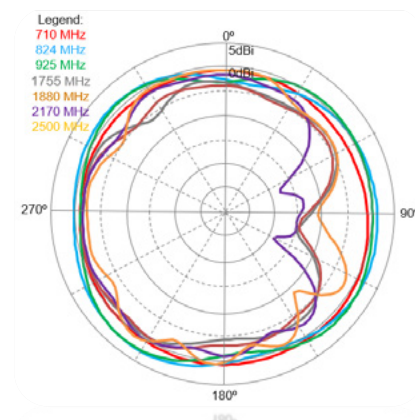
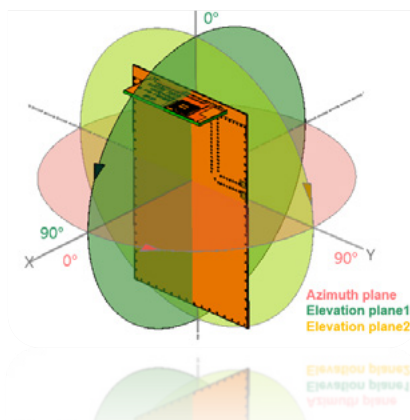
RF Engineering  
Prototyping  
Verification

## System Design Guide

RF Engineering  
Quality of Service  
Verification

## OTA Optimization

Benchmarking  
Throughput Optimization  
Industry Compliance





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# CUSTOM MANUFACTURING

## Laser Direct Structuring (LDS)

TE is a leading supplier of molded interconnect device (MID) technology with more than 25 years mass production experience. LDS is an exciting technology used to create MIDs.

LDS can save valuable space in your application by integrating high frequency, mechanical and electrical functionality into one component. Laser structuring enables 3-dimensional (3D) design/routing capability, versus the limiting 2-dimensional (2D) capability on a printed circuit board (PCB) or other common substrates.

LDS technology also allows for improved antenna performance because antennas can be placed in the design where they have more room for better bandwidth and efficiency.

TE has been a leader in early adoption of LDS manufacturing process technology, giving us the experience to help get the design solution correct with minimal effort. Our in-house development and fully integrated manufacturing means we can better control the process and timing from end-to-end and can transition quickly from prototype to mass production – helping delivering your product faster to increase your speed to market.

The use of LDS technology is not limited to antennas, and also includes electro-mechanical, shielding, and other components used in a wide variety of applications.

### Key benefits

- Ability to selectively and repeatably plate
- 3 dimensionally
- Space savings
- Ability to produce thin (0.15 mm) traces
- Improved antenna performance
- Applied cost savings
- Faster time to market
- Flexibility for pattern changes during production
- Simple/fast/low cost tooling




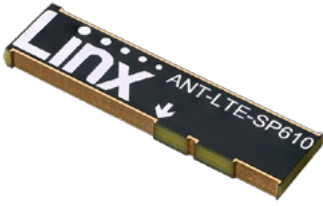
## Printed Electronics


TE has deep experience in various printed electronics technologies, covering ink technologies and printing techniques. Our ink technology research includes custom ink formulation in conductive, magnetic, and other functional inks, in addition to access and experience with various commercially available inks. Our printing capabilities can cover analog and digital printing techniques of 2D and 3D surfaces. TE's process and product development focus areas include antennas, sensors, passive components, in-mold electronics, electrodes & contacts, and medical devices.


**Contact TE for more information.**

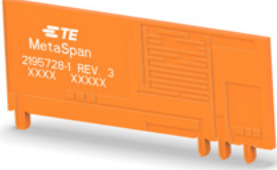
# CELLULAR - INTERNAL SURFACE MOUNT ANTENNAS


2108783-2*	Overview	Electric Data				Mechanical Data	
	5G Cellular Multi-band Monopole PCB chip  Applications 5G NR, 4G LTE, LTE-M (Cat-M1), NB-IoT, Sub-1 GHz, CBRS	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Surface Mount
		617-920	2.5	2.0	61.2	Termination	Solder Pad
		1427-1608	2.0	3.3	70	Dimension	38x7.5x3.2mm
		1710-2900	2.7	2.7	53	Op. Temp	-40°C to +85°C
		3300-3800	2.1	4.9	53.8	Ground Plane	150x45mm
		Polarization		Linear		Package*	-1 bulk
		Electrical Type		Monopole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			

ANT-LTE-SP610-T	Overview	Electric Data				Mechanical Data	
	4G Cellular Multi-band Monopole PCB chip  Applications 4G LTE, LTE-M (Cat-M1), NB-IoT, Sub-1 GHz	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Surface Mount
		698-830	3.4	5.1	61	Termination	Solder Pad
		791-960	3.4	5.1	60	Dimension	40x10x2.8mm
		1710-2200	3.1	5.3	80	Op. Temp	-40°C to 120°C
		2300-2400	3.0	4.9	71	Ground Plane	102x45mm
		2496-2690	5.0	2.7	52		
		Polarization		Linear			
		Electrical Type		Monopole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


ANT-LTE-CER-T	Overview	Electric Data				Mechanical Data	
	4G Cellular Multi-band Monopole Ceramic chip  Applications 4G LTE, LTE-M (Cat-M1), NB-IoT, Sub-1 GHz	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Surface Mount
		698-960	4.0	3.5	55	Termination	Solder Pad
		1710-2200	3.2	4.0	75	Dimension	37x5x5mm
		2300-2400	2.5	3.8	75	Op. Temp	-40°C to +85°C
		2496-2690	2.5	2.0	65	Ground Plane	102x45mm
		Polarization		Linear		Package	-T:Tape & Reel
		Electrical Type		Monopole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


2108994-1	Overview	Electric Data				Mechanical Data	
	4G Cellular Multi-band Monopole PCB chip  Applications 4G LTE, LTE-M (Cat-M1), NB-IoT, Sub-1 GHz	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Surface Mount
		698-960	2.7	1.1	55	Termination	Solder Pad
		1710-2700	2.7	2.3	60	Dimension	40x10x3.2mm
		2300-2700	2.7	1.3	60	Op. Temp	-40°C to +85°C
		Polarization		Linear		Ground Plane	120x45mm
		Electrical Type		Monopole		Package*	Tape & Reel
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


2195728-1	Overview	Electric Data				Mechanical Data	
	4G LTE Cellular Multi-band Monopole Tabbed PCB  Applications 4G LTE, LTE-M (Cat-M1), NB-IoT, Sub-1 GHz	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Tab Mount
		698-960	2.0	1.67	60	Termination	Solder Pad
		1427-1661	2.0	2.13	66	Dimension	55x20x1.6mm
		1710-2700	2.0	2.32	68	Op. Temp	-40°C to +85°C
		Polarization		Linear		Ground Plane	110x65mm
		Electrical Type		Monopole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


2118903-1	Overview	Electric Data				Mechanical Data	
	4G LTE Cellular Multi-band Monopole PCB Chip  Applications 4G LTE, LTE-M (Cat-M1), NB-IoT, Sub-1 GHz	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Surface Mount
		698-960	3.0	2.6	81	Termination	Solder Pad
		1427-1661	3.0	2.8	72	Dimension	75x11.9x1.64mm
		1710-2700	1.6	3.7	80	Op. Temp	-40°C to +85°C
		Polarization		Linear		Ground Plane	112x75mm
		Electrical Type		Monopole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			




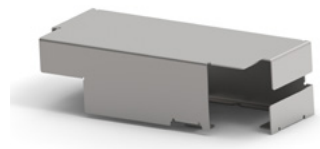
2118614-1	Overview	Electric Data				Mechanical Data	
	4G LTE Cellular Multi-band Monopole Tabbed PCB  Applications 4G LTE, LTE-M (Cat-M1), NB-IoT, Sub-1 GHz	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Tab Mount
		698-960	4.0	1.3	65	Termination	Solder Pad
		1710-2170	2.5	3.3	75	Dimension	50x20x1.64mm
		2300-2700	2.5	2.1	65	Op. Temp	-40°C to +85°C
		Polarization		Linear		Ground Plane	109x72.5mm
		Electrical Type		Monopole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


2118310-1	Overview	Electric Data				Mechanical Data	
	4G Cellular Multi-band Monopole Tabbed PCB  Applications 4G LTE, LTE-M (Cat-M1), NB-IoT, Sub-1 GHz	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Tab Mount
		698-960	3.0	3.5	50	Termination	Solder Pad
		1710-2170	3.0	3.5	60	Dimension	74x11x1.57mm
		2300-2700	3.0	3.5	55	Op. Temp	-40°C to +85°C
		Polarization		Linear		Ground Plane	120x95 mm
		Electrical Type		Monopole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


2195852-1	Overview	Electric Data				Mechanical Data	
	5G Cellular Multi-band Monopole Tabbed PCB  Applications 5G NR, 4G LTE, LTE-M (Cat-M1), NB-IoT, Sub-1 GHz, CBRS	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Tab Mount
		698-960	2.6	0.2	60	Termination	Solder Pad
		1420-1630	2.4	2.5	69	Dimension	55x20x1.0mm
		1710-2700	2.7	3.3	64	Op. Temp	-40°C to +85°C
		3200-3800	2.6	3.1	73	Ground Plane	110x80mm
		4400-5000	1.5	3.3	67		
		5150-5875	1.9	4.5	74		
		Polarization		Linear			
		Electrical Type		Monopole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


2108784-*	Overview	Electric Data				Mechanical Data	
	5G Cellular Multi-band Monopole PCB chip  Applications 5G NR, 4G LTE, LTE-M (Cat-M1), NB-IoT, Sub-1 GHz, CBRS	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Surface Mount
		698-960	2.8	0.4	57.1	Termination	Solder Pad
		1575-1608	2.0	2.3	53.9	Dimension	38x7.5x3.2mm
		1710-2690	2.5	3.1	53.4	Op. Temp	-40°C to +85°C
		3300-4000	1.8	4.0	59.1	Ground Plane	120x45mm
		4000-5000	2.1	3.6	47.7	Package*	-1 bulk
		5000-6000	2.3	1.9	46.6		-2 T&R
		Polarization		Linear			
		Electrical Type		Monopole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			

2195851-1	Overview	Electric Data				Mechanical Data	
	5G Cellular Multi-band Monopole Tabbed PCB  Applications 5G NR, 4G LTE, LTE-M (Cat-M1), NB-IoT, Sub-1 GHz, CBRS	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Tab Mount
		698-960	2.7	0.1	60	Termination	Solder Pad
		1420-1630	2.6	2.2	69	Dimension	60x20x1.0mm
		1710-2700	2.5	1.3	64	Op. Temp	-40°C to +85°C
		3200-3800	1.7	3.0	73	Ground Plane	110x80mm
		4400-5000	2.0	2.6	67		
		5150-5875	1.9	4.0	74		
		5925-7125	2.0	4.6	62		
		Polarization		Linear			
		Electrical Type		Monopole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			

2108823-1	Overview	Electric Data				Mechanical Data	
	5G Cellular Multi-band Monopole Stamped Metal  Applications 5G NR, 4G LTE, LTE-M (Cat-M1), NB-IoT, Sub-1 GHz, CBRS	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Surface Mount
		617-960	1.8	2.5	87	Termination	Solder Pad
		1427-1608	2.6	2.9	54	Dimension	52x21.3x15mm
		1700-2690	2.8	4.8	70	Op. Temp	-40°C to +85°C
		3300-3800	1.8	4.6	70	Ground Plane	135x60 mm
		4300-4700	1.5	3.0	73		
		5150-5875	2.0	2.2	58		
		5925-7125	2.5	2.5	51		
		Polarization		Linear			
		Electrical Type		Monopole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


2108788-1	Overview	Electric Data				Mechanical Data	
	Quad Band Monopole SMD PCB Antenna  Applications 4G LTE, LTE-M (Cat-M1), NB-IoT, Sub-1 GHz	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Surface Mount
		824-960	2.4	0.3	56	Termination	Solder Pad
		1710-1990	3.0	1.2	51	Dimension	37.6x11.4x0.78 mm
		Polarization		Linear		Op. Temp	-40°C to +85°C
		Electrical Type		Monopole		Ground Plane	100x56mm
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


1513317-1	Overview	Electric Data				Mechanical Data	
	Penta Band Monopole Tab Mount PCB Antenna	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Tab Mount
		824-960	3.0	3.0	78	Termination	Solder Pad
		1710-1990				Dimension	49.9x20.3x1.58 mm
	Applications 4G LTE, LTE-M (Cat-M1), NB-IoT, Sub-1 GHz	Polarization		Linear		Op. Temp	-40°C to +85°C
		Electrical Type		Monopole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


1513273-1	Overview	Electric Data				Mechanical Data	
	Quad Band Monopole Surface mount PCB Antenna	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Surface Mount
		824-960	3.0	2.0	74	Termination	Solder Pad
		1710-1990				Dimension	35.6x15.1x1.57 mm
	Applications 4G LTE, LTE-M (Cat-M1), NB-IoT, Sub-1 GHz	Polarization		Linear		Op. Temp	-40 °C to +85 °C
		Electrical Type		Monopole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			





# CELLULAR - INTERNAL FPC ANTENNAS


ANT-LTE-RPC-*	Overview	Electric Data				Mechanical Data	
	Cellular Multi-band Dipole Rigid Patch  Applications LTE, LTE-M (Cat-M1), 5G NR, mMTC, NB-IoT, LPWA, GNSS, Wi-Fi 4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Adhesive
		617-698	2.5	3.6	64	Termination	U.FL-Type Plug
		698-803	1.8	4.9	61		Unterminated
		791-960	2.4	6.3	55	Dimensions	98.4 mm x 14.9 mm x 0.8 mm
		1553-1609	1.2	5.0	77	Op. Temp	-20 °C to +65°C
		1710-2200	1.8	5.1	81	Cable Length	100.0 mm
		2300-2400	1.4	5.0	73	Cable Type	1.13 mm
		2496-2690	2.1	4.6	70		
		2400-2485	1.5	4.8	66		
		3300-3800	4.1	3.1	35		
		Polarization		Linear			
		Electrical Type		Dipole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


ANT-5GW-FPC-V*	Overview	Electric Data				Mechanical Data	
	5G Cellular Multi-band Dipole Flexible Patch FPC  Applications 5G NR, 4G LTE, LTE-M (Cat-M1), NB-IoT, Sub-1 GHz, CBRS	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Surface Mount
		617-698	2.6	4.6	64	Termination*	U.FL-Type plug
		698-803	2.4	6.6	64		MHF4 Plug
		791-894	2.4	7.9	75	Dimension	120x20x0.1mm
		832-1518	2.7	7.9	72	Op. Temp	-40°C to +85°C
		1525-1661	1.6	6.2	82	Cable Length*	50 mm
		1695-2200	1.8	4.9	71		100 mm
		2300-2690	1.8	4.1	76		150 mm
		3300-4200	1.6	6.3	70		200 mm
		4400-5000	2.6	7.9	61	Cable Type	ø1.13mm
		Polarization		Linear			
		Electrical Type		Dipole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


ANT-5GW-FPC-LH*	Overview	Electric Data				Mechanical Data	
	<p>5G Cellular Multi-band Dipole Flexible Patch FPC</p> <p>Applications 5G NR, 4G LTE, LTE-M (Cat-M1), NB-IoT, Sub-1 GHz, CBRS</p>	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Surface Mount
		617-698	1.9	5.0	76	Termination*	U.FL-Type plug
		698-803	2.7	5.0	74		MHF4 Plug
		791-894	2.5	5.5	84	Dimension	120x20x0.1mm
		832-1518	4.7	6.0	69	Op. Temp	-40°C to +85°C
		1525-1661	2.0	5.2	68	Cable Length*	50 mm,
		1695-2200	1.7	5.1	77		100 mm,
		2300-2690	1.8	7.0	86		150 mm,
		3300-4200	1.7	6.2	78		200 mm
		4400-5000	1.6	6.8	69	Cable Type	ø1.13mm
		Polarization		Linear			
		Electrical Type		Dipole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


2108921-2*	Overview	Electric Data				Mechanical Data	
	<p>5G Cellular Multi-band Dipole Flexible Patch FPC</p> <p>Applications 5G NR, 4G LTE, LTE-M (Cat-M1), NB-IoT, Sub-1 GHz, CBRS</p>	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Surface Mount
		617-960	2.2	0.3	62	Termination*	U.FL-Type Plug
		1427-1700	2.7	2.5	67		MHF4 Plug
		1700-2700	2.6	4.5	65	Dimension	119.3x20x0.17
		3300-4000	1.7	3.6	69	Op. Temp	-40°C to +85°C
		4000-5000	2.3	4.8	69	Cable Length*	50 mm
		5000-6000	2.3	3.1	66		100 mm
		6000-7125	2.3	6.1	66		150 mm
		Polarization		Linear			200 mm
		Electrical Type		Dipole		Cable Type*	1.13mm
		Radiation Pattern		Omnidirectional			1.37mm
		Impedance (Ohms)		50			


L9000126-01	Overview	Electric Data			Mechanical Data	
	5G Cellular Sub-6 Multi-band Dipole Flexible Patch  Applications 5G NR Sub-6, LTE, LTE-M (Cat-M1), NB-IoT	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Adhesive Mount
		698-803	6.8	-3.2	Termination	U.FL-Type Plug
		791-960	3.7	-3.0	Dimensions	39.0 mm x 15.0 mm x 0.2 mm
		Polarization		Linear	Op. Temp	-40 °C to +85 °C
		Electrical Type		Dipole	Cable Length	100.0 mm
		Radiation Pattern		Omnidirectional	Cable Type	1.13 mm
		Impedance (Ohms)		50		


2367286-1*	Overview	Electric Data				Mechanical Data	
	4G LTE Cellular Multi-band Dipole Flexible Patch FPC  Applications 4G LTE, LTE-M (Cat-M1), NB-IoT, Sub-1 GHz	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Surface Mount
		698-960	3.6	3.0	55	Termination*	U.FL-Type Plug
		1710-2700	2.5	3.0	60		MHF4 Plug
						Dimension	65x15x0.2mm
		Polarization		Linear		Op. Temp	-40°C to +85°C
		Electrical Type		Dipole		Cable Length*	200 mm
		Radiation Pattern		Omnidirectional			50 mm
		Impedance (Ohms)		50			70 mm
						Cable Type	1.13mm

2372112-1*	Overview	Electric Data				Mechanical Data	
	4G LTE Cellular Multi-band Dipole Flexible Patch FPC  Applications 4G LTE, LTE-M (Cat-M1), NB-IoT, Sub-1 GHz	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Surface Mount
		698-960	2.6	-0.2	38	Termination*	U.FL-Type Plug
		1710-2700	3.0	0.2	52		MHF4 Plug
		Polarization		Linear		Dimension	65x15x0.2mm
		Electrical Type		Dipole		Op. Temp	-40°C to +85°C
		Radiation Pattern		Omnidirectional		Cable Length*	150 mm
		Impedance (Ohms)		50			100 mm
						Cable Type	1.13mm

ANT-LPC-FPC-100	Overview	Electric Data				Mechanical Data	
	Cellular Multi-band Dipole Flexible Patch  Applications LTE, LTE-M (Cat-M1), 5G NR, mMTC, NBIoT, CBRS, LPWA, GNSS	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Adhesive Mount
		698-803	8.2	0.1	25	Termination	U.FL-Type Plug
		791-960	4.8	3.7	43	Dimensions	64.0 mm x 17.0 mm x 0.2mm
		1553-1609	1.7	3.3	72	Op. Temp	-40 °C to +85°C
		1710-2200	4.9	2.2	49	Cable Length	100.0mm
		2300-2400	3.5	3.3	53	Cable Type	1.13 mm
		2400-2485	2.7	3.9	43		
		2496-2690	3.1	5.0	59		
		3300-3800	2.0	5.7	70		
		Polarization		Linear			
		Electrical Type		Dipole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


ANT-LPL-FPC-100	Overview	Electric Data				Mechanical Data	
	Cellular Multi-band Dipole Flexible Patch  Applications LTE, LTE-M (Cat-M1), 5G NR, mMTC, NBIoT, CBRS, LPWA, GNSS	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Adhesive Mount
		698-803	2.3	5.6	47	Termination	U.FL-Type Plug
		791-960	2.4	6.5	57	Dimensions	110.0 mm x 20.0 mm x 0.2 mm
		1710-2200	4.6	4.9	72	Op. Temp	-40 °C to +85°C
		2300-2400	1.4	5.2	73	Cable Length	100.0mm
		2400-2485	1.8	5.0	66	Cable Type	1.13 mm
		2496-2690	1.8	5.3	69		
		3300-3800	3.5	2.9	48		
		Polarization		Linear			
		Electrical Type		Dipole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


2195846-2*	Overview	Electric Data				Mechanical Data	
	5G Cellular Multi-band Dipole Flexible Patch FPC  Applications 5G NR, 4G LTE, LTE-M (Cat-M1), NB-IoT, Sub-1 GHz, CBRS	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Surface Mount
		698-960	1.7	-1.7	49	Termination*	U.FL-Type Plug
		1560-1630	2.1	4.0	54		MHF4 Plug
		1710-2700	2.6	3.2	57	Dimension	80x15x0.2mm
		3200-3800	1.9	3.7	71	Op. Temp	-40°C to +85°C
		4400-5000	1.8	4.7	71	Cable Length*	100 mm
		5150-5875	1.5	4.2	72		50 mm
		5925-7125	2.3	6.7	59		150 mm
		Polarization		Linear			200 mm
		Electrical Type		Dipole		Cable Type*	1.13mm
		Radiation Pattern		Omnidirectional			1.37mm
		Impedance (Ohms)		50			


L9000127-01	Overview	Electric Data				Mechanical Data	
	5G Cellular Sub-6 Multi-band Dipole Flexible Patch  Applications 5G NR Sub-6, LTE, LTE-M (Cat-M1), NB-IoT	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Adhesive Mount
		2300-2400	3.2	3.0	57	Termination	U.FL-Type Plug
		2496-2690	1.8	4.7	73	Dimensions	42.0 mm x 12.0mm x 0.2 mm
		3300-3800	1.7	4.8	59	Op. Temp	-40 °C to +80°C
		3700-4200	1.6	5.9	68	Cable Length	100.0 mm
		4400-5000	1.4	6.7	71	Cable Type	1.13 mm
		5150-5875	1.9	4.5	74		
		Polarization		Linear			
		Electrical Type		Dipole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			




# CELLULAR - INTERNAL RIGID PCB ANTENNAS


2108948-2*	Overview	Electric Data				Mechanical Data	
	5G Cellular Multi-band Dipole Rigid Patch PCB  Applications 5G NR, 4G LTE, LTE-M (Cat-M1), NB-IoT, Sub-1 GHz, CBRS	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Adhesive
		617-960	2.4	0.7	60	Termination*	U.FL-Type Plug
		1427-1700	3.0	2.5	71		MHF-Type Plug
		1700-2700	2.7	4.7	69	Dimension*	119.3x20x0.55
		3300-4000	2.4	3.3	64	Op. Temp	-40°C to +85°C
		4000-5000	2.3	3.9	68	Cable Length*	50 mm
		5000-6000	1.9	4.2	65		100 mm
		6000-7125	2.4	5.6	66		150 mm
		Polarization		Linear			200 mm
		Electrical Type		Dipole		Cable Type*	1.13 mm
		Radiation Pattern		Omnidirectional			1.37 mm
		Impedance (Ohms)		50			


2372105-1*	Overview	Electric Data				Mechanical Data	
	4G LTE Cellular Multi-band Dipole Rigid Patch PCB  Applications 4G LTE, LTE-M (Cat-M1), NB-IoT, Sub-1 GHz	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Adhesive
		698-960	2.6	0.3	35	Termination*	U.FL-Type plug
		1710-2700	2.1	2.5	60		MHF-Type plug
		Polarization		Linear		Dimension	65x15x1.0mm
		Electrical Type		Dipole		Op. Temp	-40°C to +85°C
		Radiation Pattern		Omnidirectional		Cable Length*	150 mm
		Impedance (Ohms)		50			100 mm
						Cable Type	1.13mm


2118879-4*	Overview	Electric Data				Mechanical Data	
	4G LTE Cellular Multi-band Dipole Rigid Patch PCB  Applications 4G LTE, LTE-M (Cat-M1), NB-IoT, Sub-1 GHz	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Adhesive
		698-960	2.5	2.0	60	Termination	SMA Plug
		1560-2200	2.5	3.9	67	Dimension	110x14x1.6mm
		2300-2700	1.6	3.9	70	Op. Temp	-40°C to +85°C
		Polarization		Linear		Cable Length*	130 mm
		Electrical Type		Dipole			254 mm
		Radiation Pattern		Omnidirectional			457 mm
		Impedance (Ohms)		50		Cable Type*	RG-174
							RG-316

2361492-1*	Overview	Electric Data				Mechanical Data	
	<b>4G LTE Cellular Multi-band Dipole Rigid Patch PCB</b>  <b>Applications</b> 4G LTE, LTE-M (Cat-M1), NB-IoT, Sub-1 GHz	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Adhesive
		698-960	3.6	3.0	80	Termination*	U.FL-Type Plug
		1710-2700	2.5	4.0	70		MHF-Type Plug
		Polarization		Linear		Dimension	65x15x1.0mm
		Electrical Type		Dipole		Op. Temp	-40°C to +85°C
		Radiation Pattern		Omnidirectional		Cable Length*	200 mm
		Impedance (Ohms)		50			50 mm
						Cable Type	1.13mm


# CELLULAR - EXTERNAL- TERMINAL MOUNT HINGED/90° MONOPOLE ANTENNAS


ANT-LTE-MON-SMA-E	Overview	Electric Data				Mechanical Data	
	Cellular Multi-band Tilt/Swivel Monopole Whip  Applications LTE, LTE-M (Cat-M1), 5G NR, NB-IoT, mMTC, LPWA, GNSS	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Connector Mount
		617-698	6.8	2.5	58	Termination	SMA Plug
		698-803	2.2	4.5	83	Dimension	72.4 mm x 10 mm
		791-960	1.9	5.1	83	Op. Temp	-40 °C to +130 °C
		1553-1609	3.6	1.1	42	Ground Plane	102 mm x 102 mm
		1710-2200	3.2	3.3	69		
		2300-2400	1.3	3.1	78		
		2496 - 2690	2.9	1.3	51		
		3300 - 3800	6.3	1.2	30		
		Polarization		Linear			
		Electrical Type		Monopole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


ANT-LTE-MON-SMA-L	Overview	Electric Data				Mechanical Data	
	Cellular Multi-band Tilt Swivel Monopole Whip  Applications LTE, LTE-M (Cat-M1), 5G NR, NB-IoT, mMTC, CBRS, LPWA	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Connector Mount
		617-698	3.3	3.4	73	Termination	SMA Plug
		698-803	2.2	4.8	90	Dimension	78.7 mm x 10.0 mm
		791-960	2.6	5.0	90	Op. Temp	-40 °C to +130 °C
		1553-1609	6.1	0.1	33	Ground Plane	102 mm x 102 mm
		1710-2200	3.2	3.9	72		
		2300-2400	2.3	3.4	77		
		2496-2690	1.9	4.1	79		
		3300-3800	2.2	4.6	64		
		Polarization		Linear			
		Electrical Type		Monopole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			

ANT-LTE-MON-SMA	Overview	Electric Data				Mechanical Data	
	Cellular Multi-band Tilt/Swivel Monopole Whip Applications LTE, 5G NR, mMTC, UMTS, GSM, CBRS	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Connector Mount
		698 - 803	3.9	4.8	89	Termination	SMA Plug
		791 - 960	3.3	5.8	89	Dimension	71.1 mm x 10 mm
		1710 - 2200	4.1	3.7	69	Op. Temp	-40 °C to +130 °C
		2300-2400	4.6	2.0	52	Ground Plane	102 mm x 102 mm
		2496 - 2690	4.1	2.4	53		
		3300 - 3800	2.8	6.2	65		
		Polarization		Linear			
		Electrical Type		Monopole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


## CELLULAR - EXTERNAL - TERMINAL MOUNT HINGED/90° DIPOLE ANTENNAS


ANT-5GWW51-SMA	Overview	Electric Data				Mechanical Data	
	5G Cellular Sub-6 Multi-band Hinged Dipole Blade Applications 5G, LTE, LTE-M (Cat-M1), NB-IoT, CBRS	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Connector Mount
		617-698	3.0	0.7	53	Termination	SMA Plug
		698-803	1.9	0.4	53	Dimensions	135.7 mm x 20.1 mm x 10.0 mm
		791-960	2.8	0.6	53	Op. Temp	-20 °C to +65 °C
		1710-2200	1.9	4.0	68		
		2300-2400	1.9	4.0	48		
		2496-2690	2.9	4.1	57		
		3300-3800	1.9	2.7	66		
		3700-4200	3.1	2.2	58		
		4940-4990	1.9	3.5	56		
		Polarization		Linear			
		Electrical Type		Dipole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


2195889-1	Overview	Electric Data				Mechanical Data	
	5G Cellular Multi-band Hinged Dipole Blade  Applications 5G NR, 4G LTE, LTE-M (Cat-M1), NB-IoT, Sub-1 GHz, CBRS	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Connector mount
		617-960	2.3	1.6	47	Termination	SMA Plug
		1427-1661	3.7	2.5	63	Dimension	135.8x19.9x10
		1710-2700	2.9	3.7	76	Op. Temp	-40°C to +85°C
		3300-4200	2.4	1.9	74		
		4400-5000	2.1	2.1	64		
		5150-5925	2.0	4.5	65		
		Polarization		Linear			
		Electrical Type		Monopole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


2195889-2	Overview	Electric Data				Mechanical Data	
	5G Cellular Multi-band Hinged Dipole Blade  Applications 5G NR, 4G LTE, LTE-M (Cat-M1), NB-IoT, Sub-1 GHz, CBRS	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Connector mount
		617-960	2.3	1.6	47	Termination	SMA Plug
		1427-1661	3.7	2.5	63	Dimension	135.8x19.9x10
		1710-2700	2.9	3.7	76	Op. Temp	-40°C to +85°C
		3300-4200	2.4	1.9	74		
		4400-5000	2.1	2.1	64		
		5150-5925	2.0	4.5	65		
		Polarization		Linear			
		Electrical Type		Monopole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			





ANT-5GWWS3-SMA	Overview	Electric Data				Mechanical Data	
	5G Cellular Sub-6 Multi-band Hinged Dipole Blade Applications 5G, LTE, LTE-M(Cat-M1), NB-IoT, CBRS	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Connector Mount
		617-698	2.0	1.4	56	Termination	SMA Plug
		698-803	1.9	1.1	58	Dimensions	133.4 mm x 21.8 mm x 10.0 mm
		791-894	2.4	1.1	53	Op. Temp	-30 °C to +85 °C
		832-1518	2.8	2.3	44		
		1525-1661	1.7	2.8	40		
		1695-2200	2.1	8.5	68		
		2300-2690	2.3	9.9	76		
		3300-4200	2.5	5.4	72		
		4400-5000	1.9	4.0	71		
		5150-5925	4.5	5.1	58		
		Polarization		Linear			
		Electrical Type		Dipole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


ANT-5GWWS4-*	Overview	Electric Data				Mechanical Data	
	5G Cellular Sub-6 Multi-band Hinged Dipole Blade Applications 5G, LTE, LTE-M(-Cat-M1), NB-IoT, CBRS	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Connector Mount
		617-698	4.3	1.7	69	Termination	SMA Plug
		698-803	3.9	2.8	60	Dimensions	176.0 mm x 19.6 mm x 13.0 mm
		791-894	4.7	2.7	48	Op. Temp	-10 °C to +60 °C
		832-1518	3.2	4.4	63	Antenna Color*	Black, White
		1525-1661	3.2	4.1	57		
		1695-2200	2.5	3.4	79		
		2300-2690	3.6	4.9	58		
		3300-4200	3.5	4.8	61		
		4400-5000	3.3	4.9	50		
		5150-5925	3.0	5.2	53		
		Polarization		Linear			
		Electrical Type		Dipole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


DBA6171C1-BSMAM DBA6171C2-BSMAM	Overview	Electric Data			Mechanical Data	
	5G Cellular Multi-band Indoor Dipole Blade  Applications 5G NR, 4G LTE, LTE-M (Cat-M1), NB-IoT, LPWA, Sigfox, LoRaWAN, GNSS, Wi-Fi 7/6E	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector Mount
		617-698	2.5	0.0	Termination	SMA Plug
		698-960	2.0	1.0	Dimension	184x25x9.3mm
		1427-1606	3.5	1.0	Op. Temp	-40°C to +85°C
		1710-2200	2.5	2.1		
		2300-2700	2.3	2.1		
		3300-4200	2.3	3.9		
		5150-6000	2.3	4.4		
		6000-7125	5.0	4.4		
		Polarization		Linear		
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


DBA6171C3-BSMAM DBA6171C4-BSMAM	Overview	Electric Data			Mechanical Data	
	5G Cellular Multi-band Outdoor Dipole Blade  Applications 5G NR, 4G LTE, LTE-M (Cat-M1), NB-IoT, LPWA, Sigfox, LoRaWAN, GNSS, Wi-Fi 7/6E	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector Mount
		617-698	2.5	0.0	Termination	SMA Plug
		698-960	2.0	1.0	Dimension	184x25x9.3mm
		1427-1606	3.5	1.0	Op. Temp	-40°C to +85°C
		1710-2200	2.5	2.1	IP Rating	IP67
		2300-2700	2.3	2.1		
		3300-4200	2.3	3.9		
		5150-6000	2.3	4.4		
		6000-7125	5.0	4.4		
		Polarization		Linear		
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


ANT-5GWWS5-SMA	Overview	Electric Data				Mechanical Data	
	5G Cellular Sub-6 Multi-band Hinged Dipole Blade Applications 5G, LTE, LTE-M (Cat-M1), NB-IoT, CBRS	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Connector Mount
		617-698	1.8	1.6	60	Termination	SMA Plug
		698-803	2.3	1.2	53	Dimensions	181.1 mm x 22.0 mm x 12.8 mm
		791-894	2.3	1.3	47	Op. Temp	-20 °C to +65 °C
		832-1518	2.8	2.2	57		
		1525-1661	2.9	2.7	49		
		1695-2200	2.1	7.0	66		
		2300-2690	2.3	7.9	61		
		3300-4200	2.4	4.2	71		
		4400-5000	1.6	4.2	69		
		5150-5925	2.0	5.0	62		
		Polarization		Linear			
		Electrical Type		Dipole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


DBA6927C1-FSMAM DBA6927C1-FTNCM	Overview	Electric Data				Mechanical Data	
	4G LTE Cellular Multi-band Indoor Dipole Blade Applications 4G LTE, LTE-M (Cat-M1), NB-IoT, LPWA, Sigfox, LoRaWAN, GNSS, Wi-Fi 7/6E	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Connector Mount
		698-806	2.5	0.5	55	Termination*	SMA Plug
		824-894	2.5	0.5	55		TNC Plug
		880-960	2.5	0.5	55	Dimension	229x30.5x15
		1710-1880	2.5	2.2	73	Op. Temp	-35 °C to +70 °C
		1850-1900	2.5	2.2	73		
		1920-2170	2.5	2.2	73		
		2100-2500	2.5	2.2	73		
		2500-2690	2.5	2.2	73		
		Polarization		Linear			
		Electrical Type		Dipole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


2108940-1*	Overview	Electric Data				Mechanical Data	
	4G LTE Cellular Multi-band Hinged Dipole Blade  Applications 4G LTE, LTE-M (Cat-M1), NB-IoT, Sub-1 GHz	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Connector mount
		698-960	2.5	1.4	47	Termination	SMA Plug
		1420-1610	2.4	3.3	74		RP-SMA Plug
		1710-2700	2.3	4.2	71	Dimension	157.9x17.6x13
		Polarization		Linear		Op. Temp	-40 °C to +85 °C
		Electrical Type		Dipole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


2195890-1	Overview	Electric Data				Mechanical Data	
	4G LTE Cellular Multi-band Dipole Whip  Applications 4G LTE, LTE-M (Cat-M1), NB-IoT, Sub-1 GHz	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Connector mount
		698-960	3.7	3.2	62	Termination	SMA Plug
		1710-2700	2.2	3.9	64	Dimension	115.0x10mm
		Polarization		Linear		Op. Temp	-40 °C to +85 °C
		Electrical Type		Dipole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


ANT-LTE-WS-SMA	Overview	Electric Data				Mechanical Data	
	Cellular Multi-band Hinged Dipole Blade  Applications LTE, LTE-M (Cat-M1), 5G NR, mMTC, NB-IoT, LPWA, GNSS	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Connector Mount
		698-960	2.0	4.1	65	Termination	SMA Plug
		1710-2200	2.0	5.9	70	Dimensions	136.3 mm x 10.2 mm
		2300-2400	2.0	3.1	70	Op. Temp	-20 °C to +65 °C
		2496-2690	2.5	4.1	70		
		Polarization		Linear			
		Electrical Type		Dipole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


MAF94300 (SMA) MAF94301 (RP-SMA)	Overview	Electric Data			Mechanical Data	
	Cellular Multi-band Hinged Dipole Blade  Applications LTE, UMTS, LTE-M (Cat-M1), NB-IoT, LPWA, Sigfox, LoRaWAN, GNSS, Wi-Fi 4, Bluetooth	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector Mount
		815-885	2.5	1.0	Termination*	SMA Plug
		824-894	2.5	1.0		RP-SMA Plug
		880-960	2.5	1.0	Dimension	161xØ9.3mm
		1427-1511	2.5	1.0	Op. Temp	-5 °C to +50 °C
		1575.42	2.5	1.0		
		1710-1880	2.5	1.0		
		1850-1990	2.5	1.0		
		1920-2170	2.5	1.0		
		2400-2500	2.5	3.0		
		Polarization		Linear		
		Wavelength		1/2 Wave		
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		

ANT-ELE-S01-005	Overview	Electric Data			Mechanical Data	
	824 MHz Straight Dipole Whip  Applications LTE, UMTS, GSM, LPWA Use with MAG Series Remote Mount Base	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Base Screw
		824-960	1.5	3.8	Termination	Screw Base
		Polarization		Linear	Dimensions	295.4 mm x 9.0 mm
		Electrical Type		Dipole	Op. Temp	-40 °C to +80 °C
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


ANT-ELE-S01-006	Overview	Electric Data			Mechanical Data	
	Cellular Dual-Band Straight Dipole Whip Applications LTE, UMTS, GSM, LPWA Use with MAG Series Remote Mount Base	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Base Screw
		824-960	1.5	0.5	Termination	Screw Base
		1710-1880	1.5	3.7	Dimensions	233.2 mm x 9.9 mm
		Polarization		Linear	Op. Temp	-40 °C to +80 °C
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


ANT-ELE-S01-008	Overview	Electric Data		Mechanical Data	
	Cellular Dual-Band Straight Dipole Whip Applications LTE, UMTS, GSM, LPWA Use with MAG Series Remote Mount Base	Frequency (MHz)	VSWR (Max)	Mounting Type	Base Screw
		824-960	2.0	Termination	Screw Base
		1710-1990	2.0	Dimensions	323.9 mm x 11.9 mm
		Polarization	Linear	Op. Temp	-40 °C to +80 °C
		Electrical Type	Dipole		
		Radiation Pattern	Omnidirectional		
		Impedance (Ohms)	50		


ANT-ELE-S01-010	Overview	Electric Data			Mechanical Data	
	Cellular Dual-Band Straight Dipole Whip Applications LTE, UMTS, GSM, LPWA Use with MAG Series Remote Mount Base	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Base Screw
		824 - 960	1.5	-3.9	Termination	Screw Base
		1710 - 1990	1.5	-1.5	Dimensions	60.5 mm x 10.0 mm
		Polarization	Linear		Op. Temp	-40 °C to +80 °C
		Electrical Type	Dipole			
		Radiation Pattern	Omnidirectional			
		Impedance (Ohms)	50			

ANT-ELE-S01-012	Overview	Electric Data			Mechanical Data	
	Cellular Dual-Band Straight Dipole Whip Applications LTE, UMTS, GSM, LPWA Use with MAG Series Remote Mount Base	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Base Screw
		824 - 960	2.0	3.2	Termination	Screw Base
		1710 - 1990	2.0	4.4	Dimensions	278.7 mm x 9.5 mm
		Polarization	Linear		Op. Temp	-40 °C to +80 °C
		Electrical Type	Dipole			
		Radiation Pattern	Omnidirectional			
		Impedance (Ohms)	50			





ANT-5GMWP1-SMA	Overview	Electric Data				Mechanical Data	
	5G Cellular Sub-6 Midband Multi-band Hinged Dipole Whip Applications 5G, LTE, LTE-M (Cat-M1), NB-IoT, CBRS	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Connector Mount
		3300-3800	1.9	5.9	80	Termination	SMA Plug
		3700-4200	2.2	4.7	71	Dimensions	195.0 mm x Ø13.0 mm
		4940-4990	1.4	3.2	83	Op. Temp	-40 °C to +65 °C
		Polarization		Linear			
		Electrical Type		Dipole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


ANT-5GMWS1-SMA	Overview	Electric Data				Mechanical Data	
	5G Cellular Sub-6 Midband Multi-band Hinged Dipole Blade Applications 5G, LTE, LTE-M (Cat-M1), NB-IoT, CBRS	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Connector Mount
		3300-3800	1.7	5.9	74	Termination	SMA Plug
		3700-4200	3.3	5.4	63	Dimensions	208.60 mm x 21.9 mm x 11.5 mm
		4940-4990	3.4	2.3	50	Op. Temp	-20 °C to +65 °C
		Polarization		Linear			
		Electrical Type		Dipole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


ANT-5GWWS6-*	Overview	Electric Data				Mechanical Data	
	5G Cellular Sub-6 Midband Multi-band Hinged Dipole Blade Applications 5G, LTE, LTE-M (Cat-M1), NB-IoT, CBRS	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Connector Mount
		617-698	1.6	5.3	76	Termination	SMA Plug RP-SMA Plug
		698-960	2.1	6.0	70	Dimensions	135.6 mm x 24.1 mm x 11.0 mm
		1695-2700	1.9	8.9	80	Op. Temp	-40 °C to +85 °C
		3300-4200	1.8	5.5	80		
		4400-6000	2.0	4.9	70		
		Polarization		Linear			
		Wavelength		1/2			
		Electrical Type		Dipole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


# CELLULAR - EXTERNAL - REMOTE MOUNT MONOPOLE ANTENNAS


ANT-410-PW-QW-*	Overview	Electric Data				Mechanical Data	
	410 MHz Straight Monopole Whip Applications Band 31, Band 87, Band 88, LTE, 5G NR, 410 MHz to 430 MHz, LTE-M, NB-IoT, mMTC	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Panel Mount
		410	1.8	4.1	80	Termination	U.FL-Type Plug
							Unterminated Cable
		Polarization		Linear		Dimensions	177.2 mm x 14.5 mm
		Electrical Type		Monopole		Op. Temp	-40 °C to +90 °C
		Radiation Pattern		Omnidirectional		Cable Length	216.0 mm
		Impedance (Ohms)		50		Cable Type*	1.32 mm RG-174
						Ground Plane	102 mm x 102 mm


ANT-450-PW-QW-*	Overview	Electric Data				Mechanical Data	
	450 MHz Straight Monopole Whip Applications Band 72, Band 73, LTE, 5G NR, 450 MHz to 470 MHz, LTE-M, NB-IoT, mMTC	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Panel Mount
		450	1.3	3.4	72	Termination	U.FL-Type Plug
							Unterminated Cable
		Polarization		Linear		Dimensions	167.0 mm x 14.5 mm
		Electrical Type		Monopole		Op. Temp	-40 °C to +90 °C
		Radiation Pattern		Omnidirectional		Cable Length	216.0 mm
		Impedance (Ohms)		50		Cable Type*	1.32 mm RG-174
						Ground Plane	102 mm x 102 mm


ANT-B28-PW-QW-*	Overview	Electric Data				Mechanical Data	
	5G/LTE Band 28 Straight Monopole Whip Applications 5G/LTE Band 28, 700 MHz to 810 MHz, 5G NR Sub-6, LTE-M (Cat-M1), mMTC, NB-IoT	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Panel Mount
		700-810	2.7	1.7	73	Termination	U.FL-Type Plug
							Unterminated
		Polarization		Linear		Dimensions	98.4 mm x 14.5 mm
		Electrical Type		Monopole		Op. Temp	-40 °C to +90 °C
		Radiation Pattern		Omnidirectional		Cable Length	216.0 mm
		Impedance (Ohms)		50		Cable Type*	1.32 mm RG-174
						Ground Plane	102 mm x 102 mm

ANT-B13-PW-QW-*	Overview	Electric Data				Mechanical Data	
	LTE Band 13 Straight Monopole Whip Applications LTE Band 13, 740 MHz to 790 MHz, LTE-M (Cat-M1), 5G NR, mMTC, NB-IoT	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Panel Mount
		740-790	2.0	1.7	77	Termination	U.FL-Type Plug
							Unterminated
		Polarization		Linear		Dimensions	98.4 mm x 14.5 mm
		Electrical Type		Monopole		Op. Temp	-40 °C to +90 °C
		Radiation Pattern		Omnidirectional		Cable Length	216.0 mm
		Impedance (Ohms)		50		Cable Type*	1.32 mm RG-174
						Ground Plane	102 mm x 102 mm


ANT-B14-PW-QW-*	Overview	Electric Data				Mechanical Data	
	5G/LTE Band 14 Straight Monopole Whip Applications 5G/LTE Band 14, 750 MHz to 800 MHz, 5G NR Sub-6, LTE-M (Cat-M1), mMTC, NB-IoT	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Panel Mount
		750-800	2.0	1.9	80	Termination	U.FL-Type Plug
							Unterminated
		Polarization		Linear		Dimensions	94.2 mm x 14.5 mm
		Electrical Type		Monopole		Op. Temp	-40 °C to +90 °C
		Radiation Pattern		Omnidirectional		Cable Length	216.0 mm
		Impedance (Ohms)		50		Cable Type*	1.32 mm RG-174
						Ground Plane	102 mm x 102 mm


ANT-B20-PW-QW-*	Overview	Electric Data				Mechanical Data	
	5G/LTE Band 20 Straight Monopole Whip Applications 5G/LTE Band 20, 790 MHz to 870 MHz, 5G NR Sub-6, LTE-M (Cat-M1), mMTC, NB-IoT	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Panel Mount
		790-870	2.5	1.6	72	Termination	U.FL-Type Plug
							Unterminated
		Polarization		Linear		Dimensions	89.7 mm x 14.5 mm
		Electrical Type		Monopole		Op. Temp	-40 °C to +90 °C
		Radiation Pattern		Omnidirectional		Cable Length	216.0 mm
		Impedance (Ohms)		50		Cable Type*	1.32 mm RG-174
						Ground Plane	102 mm x 102 mm

ANT-B5-PW-QW-*	Overview	Electric Data				Mechanical Data	
	5G/LTE Band 5 Straight Monopole Whip Applications 5G/LTE Band 5, 800 MHz to 900 MHz, 5G NR Sub-6, LTE-M (Cat-M1), mMTC, NB-IoT	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Panel Mount
		800-900	2.0	1.2	65	Termination	U.FL-Type Plug
							Unterminated
		Polarization		Linear		Dimensions	83.5 mm x 14.5 mm
		Electrical Type		Monopole		Op. Temp	-40 °C to +90 °C
		Radiation Pattern		Omnidirectional		Cable Length	216.0 mm
		Impedance (Ohms)		50		Cable Type*	1.32 mm RG-174
						Ground Plane	102 mm x 102 mm


ANT-B8-PW-QW-*	Overview	Electric Data				Mechanical Data	
	5G/LTE Band 8 Straight Monopole Whip Applications 5G/LTE Band 8, 870 MHz to 960 MHz, 5G NR Sub-6, LTE-M(-Cat-M1), mMTC, NB-IoT	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Panel Mount
		870-960	2.0	1.6	68	Termination	U.FL-Type Plug
							Unterminated
		Polarization		Linear		Dimensions	80.5 mm x 14.5 mm
		Electrical Type		Monopole		Op. Temp	-40 °C to +90 °C
		Radiation Pattern		Omnidirectional		Cable Length	216.0 mm
		Impedance (Ohms)		50		Cable Type*	1.32 mm RG-174
						Ground Plane	102 mm x 102 mm


# CELLULAR - EXTERNAL - REMOTE MOUNT DIPOLE ANTENNAS


ANT-5GW-MMG1-SMA-*	Overview	Electric Data				Mechanical Data	
	5G/LTE Multi-band Dipole Whip Applications 5G/LTE Multi-band, 5G NR Sub-6, LTE-M (Cat-M1), NB-IoT	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Magnetic
		617-698	3.6	-0.4	45	Termination	SMA Plug
		698-803	2.3	2.5	80	Dimensions	82.8 mm x Ø30 mm
		791-894	2.0	2.5	78	Op. Temp	-20 °C to +80 °C
		832-1518	2.9	2.5	61	Cable Length*	1 m, 2 m, 3 m
		1525-1661	3.1	-1.5	29	Cable Type	RG-174/U
		1695-2200	2.7	2.1	43		
		2300-2690	2.2	1.7	36		
		3300-4200	2.1	3.5	28		
		Polarization		Linear			
		Electrical Type		Dipole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			

L9000175-01	Overview	Electric Data				Mechanical Data	
	Cellular Multi-Band Straight Dipole Blade Applications LTE, UMTS, GSM	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Adhesive
		617-698	2.5	4.2	56	Termination	SMA Plug
		698-803	1.6	4.9	62	Dimensions	115.0 mm x 22.0 mm x 6.3 mm
		791-960	2.2	4.9	62	Op. Temp	-40 °C to +85 °C
		1710-2200	1.5	3.9	42	Cable Length*	2.0 m
		2300-2400	1.5	1.8	27	Cable Type	RG-174/U
		2496-2690	1.5	4.5	30		
		3300-3800	1.4	1.3	13		
		1553-1609	1.7	4.2	50		
		3550-3700	1.3	0	10		
		3700-4200	1.4	-0.6	8		
		4940-4990	1.5	-3.3	5		
		Polarization		Linear			
		Electrical Type		Dipole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			

L9000174-01	Overview	Electric Data				Mechanical Data	
	Cellular Multi-band- Straight Dipole Blade Applications LTE, UMTS, GSM	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Adhesive
		617-698	2.4	3.7	69	Termination	SMA Plug
		698-803	1.9	3.8	71	Dimensions	104.0 mm x 17.0 mm x 4.2 mm
		791-960	2.1	2.0	71	Op. Temp	-40 °C to +85 °C
		1710-2200	1.5	6.2	45	Cable Length*	2.0 m
		2300-2400	1.4	3.9	40	Cable Type	RG-174/U
		2496-2690	1.5	4.3	37		
		3300-3800	1.2	5.2	22		
		1553-1609	1.6	3.1	40		
		3550-3700	1.3	4.9	21		
		3700-4200	1.5	3.6	19		
		4940-4990	1.5	-1.9	12		
		Polarization		Linear			
		Electrical Type		Dipole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


ANT-5GW-MMG2-SMA-*	Overview	Electric Data				Mechanical Data	
	5G/LTE Multi-band Dipole Whip Applications 5G/LTE Multi-band, 5G NR Sub-6, LTE-M (Cat-M1), NB-IoT	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Magnetic
		617-698	5.7	-0.5	42	Termination	SMA Plug
		698-803	3.1	3.4	87	Dimensions	88.5 mm x Ø29 mm
		791-894	1.6	3.4	93	Op. Temp	-20 °C to +80 °C
		832-1518	2.8	3.3	76	Cable Length*	1 m, 2 m or 3 m
		1525-1661	2.8	0.7	44	Cable Type	RG-174/U
		1695-2200	2.5	3.2	60		
		2300-2690	2.3	3.6	51		
		3300-4200	2.4	4.7	44		
		44000-5000	2.4	2.4	34		
		Polarization		Linear			
		Electrical Type		Dipole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


ANT-DB1-HDP-*	Overview	Electric Data			Mechanical Data	
	Cellular Multi-band Straight Dipole Blade Applications LTE-M, NB-IoT, LoRaWAN, Sigfox, 2G cellular, Bluetooth, Zigbee, IEEE 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Adhesive
		824-960	1.5	0.2	Termination	RP-SMA Plug
		1710-1990	1.9	-3.3		SMA Plug
		2400-2480	1.9	0.0		TNC Plug
		Polarization		Linear	Dimensions	132.3 mm x 20.0 mm x 12.1 mm
		Electrical Type		Dipole	Op. Temp	-40 °C to +80 °C
		Radiation Pattern		Omnidirectional	Cable Length	3 m
		Impedance (Ohms)		50	Cable Type	RG-174


ANT-DB1-VDP-*	Overview	Electric Data			Mechanical Data	
	Cellular Multi-band Straight Dipole Blade Applications LTE-M, NB-IoT, LoRaWAN, Sigfox, 2G cellular, Bluetooth, Zigbee, IEEE 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Adhesive
		824-960	1.5	-1.8	Termination	RP-SMA Plug
		1710-1990	1.9	-1.7		SMA Plug
		2400-2485	1.9	-1.3		TNC Plug
		Polarization		Linear	Dimensions	115.0 mm x 22.0 mm x 5.7 mm
		Electrical Type		Dipole	Op. Temp	-40 °C to +80 °C
		Radiation Pattern		Omnidirectional	Cable Length	3.0 m
		Impedance (Ohms)		50	Cable Type	RG-174/U





# CELLULAR - EXTERNAL LOW-PROFILE OMNI ANTENNAS


ANT-5GW-SPNF1	Overview	Electric Data				Mechanical Data	
	5G/LTE Multi-band Dipole Dome  Applications 5G/LTE Multi-band, 5G NR Sub-6, LTE-M (Cat-M1), mMTC, NB-IoT	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Panel Mount
		617-698	7.0	1.3	56	Termination	N Jack
		698-803	3.0	3.3	89	Dimensions	70.8 mm x Ø40.2 mm
		791-960	3.0	3.3	92	Op. Temp	-30 °C to +70 °C
		1710-2200	1.7	5.1	89	Ground Plane	300 mm x 300 mm
		2300-2400	1.6	4.5	96		
		2496-2690	1.7	5.1	96		
		3300-3800	4.1	6.5	92		
		3550-3700	4.1	6.5	93		
		3700-4200	3.6	6.8	94		
		4400-5000	1.8	8.4	90		
		Ground Plane Independent					
		Polarization		Linear			
		Electrical Type		Dipole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


FTRA6171M5PB-001 (Black) FTRA6171M5PW-001 (White)	Overview	Electric Data				Mechanical Data	
	5G Cellular Multi-band Outdoor Monopole Dome  Applications 5G NR, 4G LTE, CBRS, mMTC, LPWA, LTE-M (Cat-M1), NB-IoT, GNSS, Wi-Fi 7/6E	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Panel Mount
		617-960	2.5	4.5	80	Termination	N-Type female
		1427-1695	4.0	5.0	50	Dimension	92xØ45mm
		1695-2700	2.0	5.5	80	Op. Temp	-40 °C to +85 °C
		3300-4200	2.0	6.0	80	IP Rating	IP67
		4400-6000	2.5	6.0	80		
		6000-6500	3.0	6.5	-		
		6500-7125	3.0	7.5	-		
		Ground Plane Required					
		Polarization		Linear			
		Electrical Type		Monopole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


FTRA6171M6PBN-001 (Black) FTRA6171M6PWN-001 (White)		Overview	Electric Data				Mechanical Data	
		5G Cellular Multi-band Outdoor Monopole Dome  Applications 5G NR, 4G LTE, CBRS, mMTC, LPWA, LTE-M (Cat-M1), NB-IoT, GNSS, Wi-Fi 7/6E	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Panel Mount
			617-960	2.5	0.2	59	Termination	N-Type female
			1427-1695	2.0	1.6	94	Dimension	113xØ47.3mm
			1695-2700	2.0	3.3	86	Op. Temp	-40°C to +85°C
			3300-4200	2.5	6.1	95	IP Rating	IP67
			4400-6000	3.5	7.5	84		
			6000-6500	3.5	7.9	78		
			6500-7125	3.5	8.6	87		
			Ground Plane Independent					
			Polarization		Linear			
			Electrical Type		Monopole			
			Radiation Pattern		Omnidirectional			
			Impedance (Ohms)		50			


TRA6927M3NB-001 (Black) TRA6927M3NW-001 (White)		Overview	Electric Data				Mechanical Data	
		Cellular Multi-band Outdoor Monopole Dome  Applications 4G LTE, mMTC, LTE-M (Cat-M1), NB-IoT, LPWA, Sigfox, LoRaWAN, Wi-Fi 4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	NMO Base
			698-806	2.5	3.5	90	Termination	Push Pin
			806-960	2.0	3.5	90	Dimension	83.8xØ36.6mm
			1710-2110	2.0	5.5	91	Op. Temp	-40°C to +85°C
			2110-2170	2.5	4.6	80	IP Rating	IP67
			2300-2700	2.0	4.6	80		
			Ground Plane Required					
			Polarization		Linear			
			Electrical Type		Monopole			
			Radiation Pattern		Omnidirectional			
			Impedance (Ohms)		50			


TRA6927M3PB-001 (Black) TRA6927M3PW-001 (White)	Overview	Electric Data				Mechanical Data	
	Cellular Multi-band Outdoor Monopole Dome  Applications 4G LTE, mMTC, LTE-M (Cat-M1), NB-IoT, LPWA, Sigfox, LoRaWAN, Wi-Fi 4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Panel w. screw
		698-806	2.5	3.5	90	Termination	N-Type female
		806-960	2.0	3.5	90	Dimension	83.8xØ36.6mm
		1710-2110	2.0	5.5	91	Op. Temp	-40°C to +85°C
		2110-2170	2.5	4.6	80	IP Rating	IP67
		2300-2700	2.0	4.6	80		
		Ground Plane Required					
		Polarization		Linear			
		Electrical Type		Monopole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


TRA6927M3NBN-001 (Black) TRA6927M3NWN-001 (White)	Overview	Electric Data			Mechanical Data	
	Cellular Multi-band Outdoor Monopole Dome	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Base
		698-960	2.5	0.0	Termination	Push Pin
		1710-2700	2.0	2.9	Dimension	83.8xØ36.6mm
	Applications 4G LTE, mMTC, LTE-M (Cat-M1), NB-IoT, LPWA, Sigfox, LoRaWAN, Wi-Fi 4	Ground Plane Independent			Op. Temp	-40 °C to +85 °C
		Polarization		Linear	IP Rating	IP67
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


TRA6927M3PBN-001 (Black) TRA6927M3PWN-001 (White)	Overview	Electric Data			Mechanical Data	
	Cellular Multi-band Outdoor Monopole Dome	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Panel w. screw
		698-960	2.5	0.0	Termination	N-Type female
		1710-2700	2.0	2.9	Dimension	83.8xØ36.6mm
	Applications 4G LTE, mMTC, LTE-M (Cat-M1), NB-IoT, LPWA, Sigfox, LoRaWAN, Wi-Fi 4	Ground Plane Independent			Op. Temp	-40°C to +85°C
		Polarization		Linear	IP Rating	IP67
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


HCF69273BN-60A (Black) HCF69273WN-60A (White)	Overview	Electric Data			Mechanical Data	
	4G Cellular Multi-band Outdoor Monopole Dome with Pigtail  Applications 4G LTE, LTE-M (Cat-M1), NB-IoT, LPWA, Sigfox, LoRaWAN, Wi-Fi 4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Panel w. screw
		698-824	2.6	1.5	Termination	SMA male
		824-894	2.6	1.2	Dimension	80xØ37mm
		880-960	2.6	1.2	Op. Temp	-30°C to +70°C
		1690-1880	2.6	3.3	Cable Length	608mm
		1850-1990	2.0	3.4	Cable Type	RG-58*
		1920-2170	2.0	3.6	IP Rating	IP67
		2300-2500	2.0	3.5		
		2500-2700	2.0	3.8		
		Ground Plane Independent				
		Polarization		Linear		
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


FTRA6971M5PB-001 (Black) FTRA6971M5PW-001 (White)	Overview	Electric Data				Mechanical Data	
	5G Cellular Multi-band Outdoor Monopole Dome  Applications 5G NR, 4G LTE, CBRS, mMTC, LPWA, LTE-M (Cat-M1), NB-IoT, GNSS, Wi-Fi 7/6E	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Panel Mount
		698-960	2.3	4.3	80	Termination	N-Type female
		1427-1695	3.0	5.4	80	Dimension	84xØ45mm
		1695-2700	2.0	5.7	80	Op. Temp	-40°C to +85°C
		3300-4200	2.0	6.2	80	IP Rating	IP67
		4400-6000	2.5	5.6	75		
		6000-6500	3.0	5.7	-		
		6500-7125	3.0	7.2	-		
		Ground Plane Required					
		Polarization		Linear			
		Electrical Type		Monopole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


FTRA6971M6PBN-001 (Black) FTRA6971M6PWN-001 (White)		Overview	Electric Data				Mechanical Data	
		5G Cellular Multi-band Outdoor Monopole Dome  Applications 5G NR, 4G LTE, CBRS, mMTC, LPWA, LTE-M (Cat-M1), NB-IoT, GNSS, Wi-Fi 7/6E	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Panel Mount
			698-960	2.5	0.4	61	Termination	N-Type female
			1427-1695	2.0	1.1	87	Dimension	96.5xØ47.3mm
			1695-2700	2.0	2.7	93	Op. Temp	-40°C to +85°C
			3300-4200	2.5	5.7	96	IP Rating	IP67
			4400-6000	3.5	6.6	80		
			6000-6500	3.5	7.4	80		
			6500-7125	3.5	8.1	88		
			Ground Plane Independent					
			Polarization		Linear			
			Electrical Type		Monopole			
			Radiation Pattern		Omnidirectional			
			Impedance (Ohms)		50			

TRA8063M3NB-001 (Black) TRA8063M3NW-001 (White)		Overview	Electric Data				Mechanical Data	
		Cellular Multi-band Outdoor Monopole Dome  Applications LTE, UMTS, LTE-M (Cat-M1), NB-IoT, LPWA, Sigfox, LoRaWAN	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	NMO Base
			806-896	2.0	4.0	89	Termination	Push Pin
			1850-1990	2.0	3.5	73	Dimension	83.8x Ø36.6mm
			2500-2700	2.0	3.0	77	Op. Temp	-40°C to +85°C
			Ground Plane Independent				IP Rating	IP67
			Polarization		Linear			
			Electrical Type		Monopole			
			Radiation Pattern		Omnidirectional			
			Impedance (Ohms)		50			


TRA8063M3PW-001 (White)		Overview	Electric Data				Mechanical Data	
		Cellular Multi-band Outdoor Monopole Dome  Applications LTE, UMTS, LTE-M (Cat-M1), NB-IoT, LPWA, Sigfox, LoRaWAN	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Panel w. Screw
			806-896	2.0	4.0	89	Termination	N-Type female
			1850-1990	2.0	3.5	73	Dimension	69.9xØ36.6mm
			2500-2700	2.0	3.0	77	Op. Temp	-40°C to +85°C
			Ground Plane Required				IP Rating	IP67
			Polarization		Linear			
			Electrical Type		Monopole			
			Radiation Pattern		Omnidirectional			
			Impedance (Ohms)		50			


TRA806/17103 (White) TRAB806/17103 (Black)	Overview	Electric Data			Mechanical Data	
	Cellular Multi-band Outdoor Monopole Dome  Applications LTE-M (Cat-M1), NB-IoT, LPWA, UMTS, Wi-Fi 4, 2.4GHz ISM, GNSS	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Base
		806-896	2.0	5.9	Termination	Push Pin
		890-960	2.0	5.8	Dimension	58.4xØ36.6mm
		1575.42	2.0	5.1	Op. Temp	-30°C to +70°C
		1710-1880	2.0	4.2	IP Rating	IP67
		1850-1990	2.0	4.2		
		1990-2170	2.0	4.4		
		2400-2500	2.0	3.0		
		Ground Plane Required				
		Polarization		Linear		
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		

TRA806/17103P (White) TRAB806/17103P (Black)	Overview	Electric Data			Mechanical Data	
	Cellular Multi-band Outdoor Monopole Dome  Applications LTE-M (Cat-M1), NB-IoT, LPWA, UMTS, Wi-Fi 4, 2.4GHz ISM, GNSS	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Panel w. Screw
		806-896	2.0	5.9	Termination	N-Type female
		890-960	2.0	5.8	Dimension	80xØ36.6mm
		1575.42	2.0	5.1	Op. Temp	-30°C to +70°C
		1710-1880	2.0	4.2	IP Rating	IP67
		1850-1990	2.0	4.2		
		1990-2170	2.0	4.4		
		2400-2500	2.0	3.0		
		Ground Plane Required				
		Polarization		Linear		
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


TRA821/18503P	Overview	Electric Data			Mechanical Data	
	Cellular Multi-band Outdoor Monopole Dome  Applications UMTS, LTE-M (Cat-M1), NB-IoT	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Panel w. Screw
		821-896	2.1	3.0	Termination	N-Type female
		1850-1990	2.1	3.0	Dimension	80.3xØ36.6mm
		Polarization		Linear	Op. Temp	-30°C to +70°C
		Ground Plane Required			IP Rating	IP67
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


# CELLULAR - EXTERNAL - REMOTE MOUNT DOME/PUCK ANTENNAS

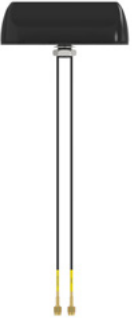
ANT-5GW-SPS1-*	Overview	Electric Data				Mechanical Data	
	5G/LTE Multi-band Dipole Dome Applications 5G/LTE Multi-band, 5G NR Sub-6, LTE-M (Cat-M1), mMTC, NB-IoT	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Panel Mount
		410-426	1.8	-0.1	33	Termination	SMA Plug
		450-470	2.9	-4.2	8	Dimensions	23.3 mm x Ø54.7 mm
		617-960	3.0	5.4	27	Op. Temp	-40 °C to +70 °C
		1695-2200	2.2	3.8	26	Cable Length*	1 m, 2 m or 3 m
		2300-2400	1.3	4.2	52	Cable Type	RG-174/U
		2496-2690	1.6	2.7	33	Ground Plane	300 mm x 300 mm
		3300-4200	1.6	2.7	32		
		4400-5925	1.6	5.1	39		
		Polarization		Linear			
		Electrical Type		Dipole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			

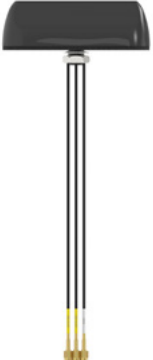
LPS69223NT-61SMAM LPS69223NT-91NM	Overview	Electric Data			Mechanical Data	
	4G Cellular Multi-band Outdoor Monopole Puck	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Panel w. screw
		698-806	3.0	2.9	Termination*	SMA Plug
		824-894	3.0	1.8		N-Type male
		880-960	3.0	2.1	Dimension	31xØ127mm
	Applications LTE, UTMS, LTE-M (Cat-M1), NB-IoT, LPWA, Sigfox, LoRaWAN	1710-1880	3.0	4.5	Op. Temp	-30 °C to +70 °C
		1850-1990	3.0	4.3	Cable Length*	610mm
		1910-2170	3.0	4.3		910mm
		Polarization		Linear	Cable Type	RG316
		Electrical Type		Monopole	IP Rating	IP67
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		




LPS69273NT-61SMAM LPS69273NT-61RTNM	Overview	Electric Data			Mechanical Data	
	4G Cellular Multi-band Outdoor Monopole Puck  Applications 4G LTE, LTE-M (Cat-M1), NB-IoT, LPWA, Sigfox, LoRaWAN, Wi-Fi 4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Panel w. screw
		698-806	2.4	2.1	Termination*	SMA Plug
		824-894	1.1	0.7		RTNC Plug
		880-960	2.3	1.7	Dimension	31xØ127mm
		1710-1880	5.5	5.4	Op. Temp	-30°C to +70°C
		1850-1990	4.4	4.6	Cable Length	610mm
		1910-2170	4.0	4.5	Cable Type	RG316
		2300-2500	3.8	3.4	IP Rating	IP67
		2500-2700	3.8	3.7		
		Polarization		Linear		
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		

L000321-01	Overview	Electric Data			Mechanical Data	
	Cellular Multi-band 3-port Cellularx1, Wi-Fi1, GNSSx1 Outdoor Dome  Applications 5G NR, 4G LTE, CBRS, NB-IoT, LTE-M (Cat-M1), LPWA, Sigfox, LoRaWAN, Wi-Fi 4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Panel w. screw
		698-960	3.5	1.8	Termination	SMA Plug
		1559-1606	2.0	3.0	Dimension	26xØ90.2mm
		1690-2700	1.5	6.0	Op. Temp	-40°C to +85°C
		3300-3800	1.5	6.0	Cable Length	1000mm
		2400-2500	1.5	3.0	Cable Type	RG-174
		5150-5900	1.5	4.0	IP Rating	IP67
		Polarization		Linear		
		Electrical Type		PIFA		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


L000322-01	Overview	Electric Data				Mechanical Data	
	Cellular Multi-band 2-port Cellularx2 Outdoor Monopole Fin	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Panel w. screw
		698-960	2.0	2.8	40	Termination	SMA Plug
		1690-2700	2.0	3.0	50	Dimension	150X40x50mm
		3300-3800	2.0	3.0	35	Op. Temp	-40°C to +85°C
	Applications 5G NR, 4G LTE, CBRS, NB-IoT, LTE-M (Cat-M1), LPWA, Sigfox, LoRaWAN, Wi-Fi 4	Polarization		Linear		Cable Length	1000mm
		Electrical Type		Monopole		Cable Type	RG-174
		Radiation Pattern		Omnidirectional		IP Rating	IP67
		Impedance (Ohms)		50			


L000322-02	Overview	Electric Data				Mechanical Data	
	Cellular Multi-band 3-port Cellularx2, GNSSx1 Outdoor Monopole Fin	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Panel w. screw
		698-960	2.0	2.8	40	Termination	SMA Plug
		1690-2700	2.0	3.0	50	Dimension	150X40x50mm
		3300-3800	2.0	3.0	35	Op. Temp	-40°C to +85°C
	Applications 5G NR, 4G LTE, CBRS, NB-IoT, LTE-M (Cat-M1), LPWA, Sigfox, LoRaWAN, Wi-Fi 4, GNSS	1559-1606	2.0	3.0	40	Cable Length	1000mm
		Polarization		Linear/RHCP		Cable Type	RG-174
		Electrical Type		Monopole		IP Rating	IP67
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


LPS88213NT-61SMAM	Overview	Electric Data				Mechanical Data	
	Cellular Multi-band Outdoor Monopole Puck	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)		Mounting Type	Panel w. screw
		880-960	3.0	2.5		Termination	SMA Plug
		1710-1880	3.0	5.0		Dimension	26xØ90mm
		1850-1990	3.0	3.9		Op. Temp	-30°C to +70°C
	Applications LTE, UMTS, mMTC, NB-IoT, LTE-M (Cat-M1), LPWA, Sigfox, LoRaWAN	1910-2170	3.0	3.9		Cable Length	610mm
		Polarization		Linear		Cable Type	RG316
		Electrical Type		Monopole		IP Rating	IP67
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


# CELLULAR - EXTERNAL - INFRASTRUCTURE


## OUTDOOR OMNI BATON ANTENNAS


ANT-5GW-IPW2-NP	Overview	Electric Data				Mechanical Data	
	5G/LTE Outdoor Cellular Dipole Applications 5G/LTE, LTE-M (Cat-M1), NB-IoT, CBRS	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Connector Mount
		617-698	8.1	1.0	54	Termination	N Plug
		698-803	8.5	1.6	56	Dimension	132.0 mm x Ø24.0 mm
		791-960	3.8	1.6	56	Op. Temp	-30 °C to +70 °C
		1710-2200	4.6	4.3	41		
		2300-2400	2.1	7.6	40		
		2496 - 2690	2.2	8.0	40		
		3300-3800	1.6	2.4	36		
		3550 - 3700	1.6	2.4	77		
		3700-4200	1.8	2.4	68		
		4400-5000	2.7	3.7	54		
		Polarization		Linear			
		Wavelength		1/2			
		Electrical Type		Dipole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


ANT-5GW-IPW1-NP	Overview	Electric Data				Mechanical Data	
	5G/LTE Outdoor Cellular Dipole Applications 5G/LTE, LTE-M (Cat-M1), NB-IoT, CBRS	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Connector Mount
		617-698	1.9	1.8	68	Termination	N Plug
		698-803	1.9	2.8	82	Dimension	178.0 mm x Ø25.0 mm
		791-960	3.1	2.3	69	Op. Temp	-40 °C to +70 °C
		1710-2200	4.1	3.8	81		
		2300-2400	4.8	3.9	80		
		2496-2690	3.6	3.0	68		
		3300-3800	1.8	5.4	88		
		3550-3700	1.1	5.4	96		
		3700-4200	1.5	6.2	83		
		4400-5000	1.9	7.6	78		
		Polarization		Linear			
		Wavelength		1/2			
		Electrical Type		Dipole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


ANT-5GW-IPW3-NP	Overview	Electric Data				Mechanical Data	
	5G Cellular Multi-band Outdoor Dipole Blade  Applications 5G NR, 4G LTE, LTE-M (Cat-M1), NB-IoT, Sub-1 GHz, LPWA, Sigfox, LoRaWAN, CBRS	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Connector mount
		617-698	1.9	3.1	73	Termination	N-Type Plug
		698-803	2.2	4.4	70	Dimension	176.4xØ21mm
		791-894	2.0	4.8	59	Op. Temp	-40°C to +85°C
		832-1518	4.8	6.1	52	IP Rating	IP67
		1525-1661	1.9	5.7	75		
		1695-2200	2.4	8.0	77		
		2300-2690	2.4	5.6	75		
		3300-4200	2.0	4.4	74		
		4400-5000	2.2	5.8	69		
		5150-5925	2.2	7.2	66		
		Polarization		Linear			
		Electrical Type		Dipole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


OC69271-*	Overview	Electric Data				Mechanical Data	
	4G Cellular Multi-band Outdoor Dipole Fiberglass Baton  Applications 4G LTE, mMTC, LPWA, Sigfox, LoRaWAN, NB-IoT, LTE-M (Cat-M1), Wi-Fi 4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Pole/Mast Mount
		698-960	2.5	1.5	76	Termination	N-Type female
		1710-1990	2.0	3.5	87		N-Type male
		1920-2170	2.0	3.5	87	Dimension	248xØ24.5mm
		2100-2500	2.0	3.5	87	Op. Temp	-30°C to +70°C
		2500-2690	2.0	3.5	87		
		Polarization		Linear			
		Electrical Type		Dipole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


L000158-01	Overview	Electric Data				Mechanical Data	
	5G Cellular Multi-band Outdoor Dipole Fiberglass Baton  Applications 5G NR, 4G LTE, CBRS, mMTC, LPWA, Sigfox, LoRaWAN, NB-IoT, LTE-M (Cat-M1), Wi-Fi 4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Pole/Mast Mount
		698-960	2.5	1.5	76	Termination	N-Type male
		1710-1990	2.0	3.5	87	Dimension	248xØ31.8mm
		1920-2170	2.0	3.5	87	Op. Temp	-40°C to +70°C
		2100-2500	2.0	3.5	87	IP Rating	IP67
		2500-2690	2.0	3.5	87		
		3300-4200	2.5	5.0	81		
		Polarization		Linear			
		Electrical Type		Dipole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


OC69421-*	Overview	Electric Data				Mechanical Data	
	5G Cellular Multi-band Outdoor Dipole Fiberglass Baton  Applications 5G NR, 4G LTE, CBRS, mMTC, LPWA, Sigfox, LoRaWAN, NB-IoT, LTE-M (Cat-M1), Wi-Fi 4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Pole/Mast Mount
		698-960	2.5	1.5	76	Termination	N-Type female
		1710-1990	2.0	3.5	87		N-Type Male
		1920-2170	2.0	3.5	87	Dimension	248xØ24.5mm
		2100-2500	2.0	3.5	87	Op. Temp	-30°C to +70°C
		2500-2690	2.0	3.5	87		
		3300-4200	2.5	5.0	81		
		Polarization		Linear			
		Electrical Type		Dipole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


FG7466	Overview	Electric Data			Mechanical Data	
	746-796MHz Single-band Outdoor Dipole Fiberglass Baton	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		746-796	1.5	6.0	Termination	N-Type female
		Polarization		Linear	Dimensions	1549xØ33mm
	Applications LTE, ISM, LMR for Public Safety	Electrical Type		Dipole	Op. Temp	-30 °C to +70°C
		Radiation Pattern		Omnidirectional	IP Rating	IP67
		Impedance (Ohms)		50		

FG821-18503	Overview	Electric Data			Mechanical Data	
	Cellular Multi-band Outdoor Dipole Fiberglass Baton	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		806-896	2.0	0	Termination	N-Type female
		1850-1990	2.0	3.0	Dimensions	349xØ33mm
	Applications UMTS, mMTC, LPWA, Sigfox, LoRaWAN, NB-IoT, LTE-M (Cat-M1)	Polarization		Linear	Op. Temp	-30°C to +70°C
		Electrical Type		Dipole	IP Rating	IP67
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		

FG16397	Overview	Electric Data			Mechanical Data	
	Cellular Multi-band Outdoor Dipole Fiberglass Baton	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		806-896	2.0	2.0	Termination	N-Type female
		890-960	2.0	1.0	Dimensions	355.6xØ33mm
		1850-1990	2.0	3.3	Op. Temp	-30°C to +70°C
	Applications UMTS, mMTC, LPWA, Sigfox, LoRaWAN, NB-IoT, LTE-M (Cat-M1), Wi-Fi 4	2400-2500	2.0	2.0	IP Rating	IP67
		Polarization		Linear		
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


S3307BPNE	Overview	Electric Data			Mechanical Data	
	3.5GHz Outdoor Dipole Fiberglass Baton	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		3300-3800	2.0	9.0	Termination	N-Type female
		Polarization		Linear	Dimensions	716xØ43.2mm
	Applications CBRS	Electrical Type		Dipole	Op. Temp	-40°C to +70°C
		Radiation Pattern		Omnidirectional	IP Rating	IP67
		Impedance (Ohms)		50		


OC35506P-FNF	Overview	Electric Data			Mechanical Data	
	3.5GHz Outdoor Dipole Fiberglass Baton	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		3550-3700	1.5	6.8	Termination	N-Type female
		Polarization		Linear	Dimensions	257xØ25.4mm
	Applications CBRS	Electrical Type		Dipole	Op. Temp	-30 °C to +70 °C
		Radiation Pattern		Omnidirectional	IP Rating	IP67
		Impedance (Ohms)		50		


ANT-5GW-IPW1-NP	Overview	Electric Data				Mechanical Data	
	C-V2X Outdoor Dipole Applications C-V2X, C-V2I, DSRC	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Connector Mount
		5850-5925	1.6	4.8	67	Termination	N Plug
		Polarization		Linear		Dimensions	178.0 mm x Ø25.0 mm
		Wavelength		1/2		Op. Temp	-40 °C to +70 °C
		Electrical Type		Dipole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			





# CELLULAR - EXTERNAL - INFRASTRUCTURE FIXED WIRELESS ACCESS MIMO ANTENNAS

L000320-01/L000320-03*	Overview	Electric Data				Mechanical Data	
	5G Cellular Multi-band MIMO 2-port Cellularx2, Outdoor Dipole FWA Baton	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Pole/Mast Mount
		617-960	2.5	3.0	78	Termination*	N-Type female
		1427-2700	2.0	5.6	78		SMA Male
	Applications 5G NR, 4G LTE, CBRS, mMTC, LPWA, Sigfox, LoRaWAN, NB-IoT, LTE-M (Cat-M1), Wi-Fi 6, GNSS	3300-4800	2.0	4.0	63	Dimensions	554xØ74mm
		4900-6000	2.5	4.6	63	Cable Length*	500mm
		Polarization		Linear			5000 mm
		Electrical Type		Dipole		Op. Temp	-40°C to +85°C
		Radiation Pattern		Omnidirectional		IP Rating	IP67
		Impedance (Ohms)		50			


L000320-02/L000320-04*	Overview	Electric Data				Mechanical Data	
	5G Cellular Multi-band MIMO 3-port Cellularx2, GNSSx1 Outdoor Dipole FWA Baton	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Pole/Mast Mount
		617-960	2.5	3.0	78	Termination*	N-Type female
		1427-2700	2.0	5.6	78		SMA Male
	Applications 5G NR, 4G LTE, CBRS, mMTC, LPWA, Sigfox, LoRaWAN, NB-IoT, LTE-M (Cat-M1), Wi-Fi 6	3300-4800	2.0	4.0	63	Dimensions	554xØ74mm
		4900-6000	2.5	4.6	63	Cable Length*	500mm
		1559-1610	2.0	32			5000 mm
		Polarization		Linear		Op. Temp	-40°C to +85°C
		Electrical Type		Dipole		IP Rating	IP67
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			

PDD61606C-200SMAM	Overview	Electric Data				Mechanical Data	
	5G Cellular Multi-band 2-port Indoor Monopole Panel  Applications 5G NR, 4G LTE, CBRS, NB-IoT, LTE-M (Cat-M1), LPWA, Sigfox, LoRaWAN, Wi-Fi 6, GNSS	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Desk, Wall, Window
		617-698	3.0	3.6	55	Termination	SMA Plug
		698-960	2.0	3.6	55	Dimension	122x103x22.3
		1452-1496	2.0	4.6	71	Op. Temp	-40°C to +85°C
		1559-1606	2.0	6.1	67	Cable Length	2000mm
		1690-4200	2.0	5.3	57	Cable Type	RG-174
		4200-6000	3.0	5.3	57		
		Polarization		Linear			
		Electrical Type		Dipole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			

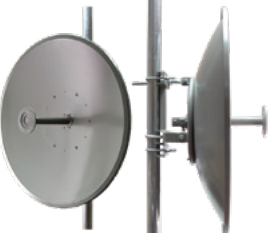
L000306-01	Overview	Electric Data				Mechanical Data	
	5G Cellular Multi-band 4-port Omnidirectional FWA Antenna  Applications 5G NR, 4G LTE, CBRS	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Desk, Wall, Pole
		617-698	2.2	5.2	77	Termination	SMA
		698-960	2.2	5.2	77	Dimension	380x230x30
		1452-1496	2.2	6.5	77	Op. Temp	-40°C to +85°C
		1690-4200	2.2	6.5	77	Cable Length	5000mm
		4200-6000	2.2	6.5	77	Cable Type	LMR 195 equivalent
		Polarization		Dual-Linear (2V, 2H)			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			

L000306-02	Overview	Electric Data				Mechanical Data	
	5G Cellular Multi-band 5-port Omnidirectional FWA Antenna  Applications 5G NR, 4G LTE, CBRS, GNSS	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Desk, Wall, Pole
		617-698	2.2	5.2	77	Termination	SMA
		698-960	2.2	5.2	77	Dimension	380x230x30
		1427-1496	2.2	6.5	77	Op. Temp	-40°C to +85°C
		1559-1606	2.2	6.5	77	Cable Length	5000mm
		1690-4200	2.2	6.5	77	Cable Type	LMR 195 equivalent
		4200-6000	2.2	6.5	77		
		Polarization		Dual-Linear (2V, 2H)			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			

## CELLULAR - EXTERNAL - INFRASTRUCTURE DIRECTIONAL YAGI ANTENNAS

ANT-DB1-LP-RM-01-N	Overview	Electric Data			Mechanical Data	
	Cellular Multi-band Straight Dipole Log Periodic	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Base Screw
		860 - 960	1.5	8.5	Termination	N Jack
		1710 - 2170	1.5	9.0	Dimensions	395.0 mm x 210.0 mm x 36.5 mm
		2400 - 2485	1.5	9.0	Cable Length	165.0 mm
		Polarization		Linear	Cable Type	RG-303
		Electrical Type		Dipole		
		Radiation Pattern		Directional		
		Impedance (Ohms)		50		

## CELLULAR - EXTERNAL - INFRASTRUCTURE DIRECTIONAL DISH ANTENNAS

HDDA3W-29-DP	Overview	Electric Data			Mechanical Data	
	Wi-Fi/WLAN  Applications 802.11, OFDM, CBRS, ETSI EN 302.326-3 DNI-DN5	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Mast/Bracket Mount
		3300 - 3800	1.8	29	Termination	Type-N Female
		Polarization		Vertical / Horizontal	Dimension	Ø927 mm
		Radiation Pattern		Directional	Op. Temp	-40°C to +70°C
		Impedance (Ohms)		50		





### Optional Radome Cover

HDDA3W antennas are available with an optional fiberglass radome cover for increased protection and reduced wind loading:


**DA5-29RADOME** Fiberglass Radome Cover for 2ft (0.3m) dish


# CELLULAR - EXTERNAL - INFRASTRUCTURE DIRECTIONAL PANEL ANTENNAS


PAS69278P-*	Overview	Electric Data			Mechanical Data	
	4G Cellular Multi-band 2-port MIMO Outdoor Monopole Flat Panel  Applications 4G LTE, mMTC, NB-IoT, LTE-M (Cat-M1), LPWA, Sigfox, LoRaWAN, DAS	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Wall/Ceiling Mount
		698-960	1.8	10.0	Termination*	N-Type female
		1710-2700	1.5	10.0		4.3-10 female
					Dimension	295x295x82
		Polarization		Linear	Op. Temp	-30°C to +70°C
		Radiation Pattern		Directional	Cable Length*	300mm
		Impedance (Ohms)		50		910mm
					IP Rating	IP55


PAV69278-*	Overview	Electric Data			Mechanical Data	
	4G Cellular Multi-band Outdoor Monopole Flat Panel  Applications 4G LTE, mMTC, NB-IoT, LTE-M (Cat-M1), LPWA, Sigfox, LoRaWAN, DAS	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Wall/Ceiling Mount
		698-960	1.9	7.6	Termination*	N-Type female
		1710-2700	1.8	8.1		4.3-10 female
					Dimension	250x249x62
		Polarization		Linear	Op. Temp	-30°C to +70°C
		Radiation Pattern		Directional	Cable Length*	300mm
		Impedance (Ohms)		50		N/A
					IP Rating	IP67


# CELLULAR - EXTERNAL - INFRASTRUCTURE CEILING MOUNT DAS ANTENNAS


CFSA35606P-* (Ceiling Tile) CFSA35606P1-* (Hard Ceiling)		Overview	Electric Data			Mechanical Data	
	Cellular Multi-band Indoor Monopole Dome	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Ceiling Mount	
		350-380	2.5	4.5	Termination*	N-Type female	
		380-520	2.0	4.4		4.3-10 female	
		600-698	2.0	3.7	Dimension	7.6xØ270mm	
		698-806	2.0	4.0	Op. Temp	-30°C to +70°C	
		806-894	2.0	4.2	Cable Length*	300mm	
		894-960	2.0	4.6			
		1350-1550	2.0	5.6			
		1690-1880	2.0	5.4			
		1850-1990	2.0	4.1			
		1910-2180	2.0	5.0			
		2300-2700	2.0	5.7			
		3300-4200	2.0	6.8			
		4900-5925	2.0	7.3			
		Polarization		Linear			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			

CMS38606-* CMS38606P-* (Low PIM)		Overview	Electric Data			Mechanical Data	
	Cellular Multi-band Outdoor Monopole Dome	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Ceiling Mount	
		380-520	3.0	3.1	Termination*	N-Type female	
		600-806	2.0	2.7		4.3-10 female	
		806-960	2.0	2.9	Dimension	133xØ298mm	
		1395-1435	2.0	5.4	Op. Temp	-30°C to +70°C	
		1690-2200	2.0	6.1	Cable Length*	300mm	
		2200-4300	2.0	7.0	Cable Type		
		4300-6000	2.0	6.1	IP Rating	IP67	
		Polarization		Linear			
		Radiation Pattern		Omnidirectional			
	Impedance (Ohms)	50					
Applications DAS, UHF, 5G/4G LTE, NB-IoT, LTE-M (Cat-M1), LPWA, LoRaWAN							


CFS60383P-*	Overview	Electric Data			Mechanical Data	
	Cellular Multi-band Indoor Monopole Dome  Applications DAS, 5G/4G LTE, CBRS, NB-IoT, LTE-M (Cat-M1), LPWA, LoRaWAN	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Ceiling Mount
		600-698	1.8	3.5	Termination*	N-Type female
		698-806	1.8	3.6		4.3-10 female
		824-894	1.8	3.6	Dimension	117x180x7.6
		880-960	1.8	5.4	Op. Temp	-30°C to +70°C
		1350-1550	1.8	5.2	Cable Length*	300mm
		1690-1880	1.8	4.4		
		1850-1990	1.8	4.1		
		1910-2180	1.8	5.3		
		2300-2500	1.8	6.3		
		2500-2700	1.8	7.1		
		3300-3800	2.0	4.4		
		Polarization		Linear		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


CLS69273- CLS69273P-* (Low PIM)	Overview	Electric Data			Mechanical Data	
	Cellular Multi-band Indoor Monopole Dome  Applications DAS, 4G LTE, NB-IoT, LTE-M (Cat-M1), LPWA, LoRaWAN	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Ceiling Mount
		698-806	2.0	3.0	Termination*	N-Type female
		824-894	2.0	3.0		4.3-10 female
		880-960	2.0	4.1	Dimension	47.5xØ250mm
		1695-1880	2.0	5.6	Op. Temp	-30°C to +70°C
		1850-1990	2.0	7.0	Cable Length*	300mm
		1910-2170	2.0	7.0		
		2300-2500	2.0	6.7		
		2500-2700	2.0	7.3		
		Polarization		Linear		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


CMD69273-* CMD69273P-* (Low PIM)		Overview	Electric Data			Mechanical Data	
	Multi-band MIMO 2-port Indoor Monopole Dome  Applications DAS, 4G LTE, NB-IoT, LTE-M (Cat-M1), LPWA, LoRaWAN	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Ceiling Mount	
		698-806	2.0	3.9	Termination*	N-Type	
		824-894	2.0	3.8		4.3-10 female	
		880-960	2.0	3.5		4.1-9.5 female	
		1710-1880	2.0	6.8	Dimension	43.5xØ219mm	
		1850-1990	2.0	5.1	Op. Temp	-30 °C to +70 °C	
		1910-2170	2.0	4.7	Cable Length*	300mm	
		2300-2500	2.0	6.3		460mm	
		2500-2700	2.0	7.4			
		Polarization		Linear			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


CFS69271-FSMAF	Overview	Electric Data				Mechanical Data	
	Cellular Multi-band Indoor Monopole Dome	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Ceiling Mount
		698-806	2.1	1.5	80	Termination	SMA female
		824-960	2.1	1.5	80	Dimension	100x164x1.6
		1710-1880	2.1	3.0	85	Op. Temp	-40 °C to +70 °C
	Applications DAS, 5G/4G LTE, CBRS, NB-IoT, LTE-M (Cat-M1), LPWA, LoRaWAN	1850-1990	2.1	3.0	85	Cable Length	300mm
		1920-2170	2.1	3.0	85		
		2500-2700	2.1	4.5	85		
		Polarization		Linear			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			





CFS69383P-*	Overview	Electric Data			Mechanical Data	
	Cellular Multi-band Indoor Monopole Dome  Applications DAS, 5G/4G LTE, CBRS, NB-IoT, LTE-M (Cat-M1), LPWA, LoRaWAN	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Ceiling Mount
		698-806	1.8	4.0	Termination*	N-Type female
		824-894	1.8	4.0		4.3-10 female
		880-960	1.8	5.5	Dimension	117x180x7.6
		1350-1550	1.8	5.3	Op. Temp	-30°C to +70°C
		1690-1880	1.8	4.7	Cable Length*	300mm
		1850-1990	1.8	4.9		
		1910-2170	1.8	4.9		
		2300-2500	1.8	5.2		
		2500-2700	1.8	5.6		
		3300-3800	2.0	5.3		
		Polarization		Linear		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


CMQ69273P-* (Low PIM)	Overview	Electric Data			Mechanical Data	
	Multi-band MIMO 4-port Indoor Monopole Dome  Applications DAS, 4G LTE, NB-IoT, LTE-M (Cat-M1), LPWA, LoRaWAN	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Ceiling Mount
		698-806	2.0	5.4	Termination*	N-Type female
		824-894	2.0	4.7		4.3-10 female
		880-960	2.0	4.2	Dimension	55.5xØ330mm
		1710-1880	2.0	6.0	Op. Temp	-30°C to +70°C
		1850-1990	2.0	5.4	Cable Length*	300mm
		1910-2170	2.0	5.4		
		2300-2500	2.0	6.0		
		2500-2700	2.0	5.1		
		Polarization		Linear		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		

CFD69383P-* (Ceiling Tile) CFD69383P1-* (Hard Ceiling)	Overview	Electric Data			Mechanical Data	
	Multi-band MIMO 2-port Indoor Monopole Dome  Applications DAS, 5G/4G LTE, CBRS, NB-IoT, LTE-M (Cat-M1), LPWA, LoRaWAN	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Ceiling Mount
		698-806	1.5	3.8	Termination*	N-Type female 4.3-10 female
		824-894	1.5	3.7	Dimension	7.6xØ250mm
		880-960	1.5	4.2	Op. Temp	-30°C to +70°C
		1350-1550	2.0	5.0	Cable Length*	300mm
		1690-1880	1.8	4.7		2000mm
		1850-1990	1.8	4.3		
		1910-2180	1.8	6.0		
		2300-2500	1.8	5.0		
		2500-2700	1.8	5.7		
		3300-3800	2.0	5.1		
		3800-4000	2.0	5.4		
		Polarization		Linear		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


CFSA69383P-* (Ceiling Tile) CFSA69383P1-* (Hard Ceiling)	Overview	Electric Data			Mechanical Data	
	Cellular Multi-band Indoor Monopole Dome  Applications DAS, 5G/4G LTE, CBRS, NB-IoT, LTE-M (Cat-M1), LPWA, LoRaWAN	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Ceiling Mount
		698-806	1.5	3.5	Termination*	N-Type female 4.3-10 female
		824-894	1.5	3.1	Dimension	7.6xØ180mm
		880-960	1.5	4.1	Op. Temp	-30°C to +70°C
		1350-1550	2.0	5.6	Cable Length*	300mm
		1690-1880	1.5	4.3		
		1850-1990	1.5	4.7		
		1910-2180	1.5	4.7		
		2300-2500	1.5	5.1		
		2500-2700	1.5	5.8		
		3300-3800	1.8	3.0		
		3800-4000	2.0	3.2		
		Polarization		Linear		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


CMD69423P-* (Low PIM)	Overview	Electric Data			Mechanical Data	
	Multi-band MIMO 2-port Indoor Monopole Dome	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Ceiling Mount
		698-806	2.0	3.9	Termination*	N-Type female
		824-960	2.0	5.3		4.3-10 female
		1350-1550	2.0	6.0	Dimension	43.5xØ219mm
		1690-2180	2.0	6.1	Op. Temp	-30°C to +70°C
	Applications DAS, 4G LTE, NB-IoT, LTE-M (Cat-M1), LPWA, LoRaWAN	2300-2700	2.0	6.8	Cable Length*	300mm
		3300-4200	2.0	6.7	Cable Type	
		Polarization		Linear		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


CFSA69594P-* (Ceiling Tile) CFSA69594P1-* (Hard Ceiling)	Overview	Electric Data			Mechanical Data	
	Cellular Multi-band Indoor Monopole Dome	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Ceiling Mount
		698-824	1.7	3.7	Termination*	N-Type female
		824-894	1.7	3.4		4.3-10 female
		880-960	1.7	3.2	Dimension	7.6xØ180mm
		1350-1550	2.0	4.5	Op. Temp	-30°C to +70°C
	Applications DAS, 5G/4G LTE, CBRS, NB-IoT, LTE-M (Cat-M1), LPWA, LoRaWAN	1690-1880	1.7	5.4	Cable Length*	300mm
		1850-1990	1.7	5.6		
		1910-2200	1.7	5.6		
		2300-2700	1.7	5.6		
		3300-4000	1.7	4.3		
		4000-4200	2.5	4.1		
		5150-5925	2.0	4.9		
		Polarization		Linear		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		

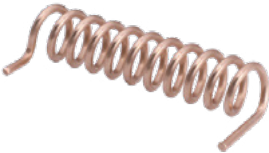
CFD69716P-* (Ceiling Tile) CFD69716P1-* (Hard Ceiling)		Overview	Electric Data			Mechanical Data	
		Multi-band MIMO 2-port Indoor Monopole Dome	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Ceiling Mount
			698-824	1.5	3.3	Termination*	N-Type female 4.3-10 female
			824-894	1.5	2.8	Dimension	7.6xØ250mm
			880-960	1.5	2.7	Op. Temp	-30°C to +70°C
			1350-1550	1.2	4.3	Cable Length*	300mm
		Applications DAS, 5G/4G LTE, CBRS, NB-IoT, LTE-M (Cat-M1), LPWA, LoRaWAN	1690-1880	1.5	3.4		
			1850-1990	1.5	3.8		
			1910-2180	1.5	5.7		
			2300-2700	1.6	5.4		
			3300-3800	1.4	5.5		
			3800-4200	1.4	5.3		
			5150-5925	1.7	5.6		
			5925-7125	1.7	5.4		
			Polarization		Linear		
			Radiation Pattern		Omnidirectional		
			Impedance (Ohms)		50		

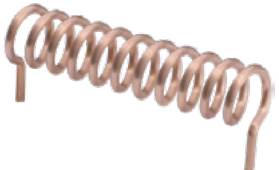
# SUB-1 GHZ - INTERNAL SURFACE MOUNT ANTENNAS


ANT-433-USP	Overview	Electric Data			Mechanical Data	
	433 MHz Monopole Chip Applications LoRaWAN, Weightless-P, Remote Control	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Surface Mount
		433	1.9	-9.8	Termination	Solder pad
		Polarization		Linear	Dimension	12.7 mm x 9.1 mm x 2.6 mm
		Electrical Type		Monopole	Op. Temp	-40 °C to +130 °C
		Radiation Pattern		Omnidirectional	Ground Plane	39 mm x 80 mm
		Impedance (Ohms)		50		


ANT-433-USP410	Overview	Electric Data			Mechanical Data	
	433 MHz Monopole Chip Applications LoRaWAN, Weightless-P, Remote Control	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Surface Mount
		433	2.2	-8.0	Termination	Solder pad
		Polarization		Linear	Dimension	13.2 mm x 9.1 mm x 2.9 mm
		Electrical Type		Monopole	Op. Temp	-40 °C to +130 °C
		Radiation Pattern		Omnidirectional	Ground Plane	38 mm x 84 mm
		Impedance (Ohms)		50		


ANT-433-SP	Overview	Electric Data			Mechanical Data	
	433 MHz Monopole Chip Applications LoRaWAN, Weightless-P, Remote Control	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Surface Mount
		433	1.9	-6.4	Termination	Solder pad
		Polarization		Linear	Dimension	27.9 mm x 13.7 mm x 1.5 mm
		Electrical Type		Monopole	Op. Temp	-40 °C to +130 °C
		Radiation Pattern		Omnidirectional	Ground Plane	38 mm x 84 mm
		Impedance (Ohms)		50		


ANT-433-HESM	Overview	Electric Data			Mechanical Data	
	433 MHz Straight Monopole Helical Applications LoRaWAN, Weightless-P, Remote Control	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Surface Mount
		433	2.0	1.9	Termination	Solder pad
		Polarization		Linear	Dimension	38.1 mm x 8.9 mm
		Electrical Type		Monopole	Op. Temp	-40 °C to +85 °C
		Radiation Pattern		Omnidirectional	Ground Plane	76 mm x 190 mm
		Impedance (Ohms)		50		


ANT-433-HETH	Overview	Electric Data			Mechanical Data	
	433 MHz Straight Monopole Helical  Applications LoRaWAN, Weightless-P, Remote Control	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Through Hole
		433	2.0	1.9	Termination	Solder Pin
		Polarization		Linear	Dimension	38.1 mm x 8.9 mm
		Electrical Type		Monopole	Op. Temp	-40 °C to +85 °C
		Radiation Pattern		Omnidirectional	Ground Plane	58 mm x 88 mm
		Impedance (Ohms)		50		


2108991-1	Overview	Electric Data				Mechanical Data	
	868 MHz or 915 MHz Monopole PCB chip  Applications LPWA, LoRaWAN, Sigfox, Weightless-P, Wi-Fi HaLow, ISM	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Surface Mount
		698-746	3.5	0.2	50	Termination	Solder pad
		734-746	1.5	0.1	60	Dimension	18x9x1.57mm
		787-894	3.5	0.5	50	Op. Temp	-40 °C to +85 °C
		824-960	3.5	1.2	57	Ground Plane	112x20 mm
		Polarization		Linear			
		Electrical Type		Monopole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			

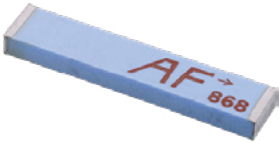
ANT-868-JJB-HT-T	Overview	Electric Data			Mechanical Data	
	868 MHz Straight Monopole Dome  Applications LoRaWAN, Sigfox, Weightless-P	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Through Hole
		868	2.0	-10.5	Termination	Solder Pin
		Polarization		Linear	Dimension	15.5 mm x Ø7.1 mm
		Electrical Type		Monopole	Op. Temp	-40 °C to + 90 °C
		Radiation Pattern		Omnidirectional	Ground Plane	89 mm x 89 mm
		Impedance (Ohms)		50		


ANT-868-JJB-ST	Overview	Electric Data			Mechanical Data	
	868 MHz Straight Monopole Dome  Applications LoRaWAN, Sigfox, Weightless-P	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Through Hole
		868	2.0	-8.9	Termination	Solder Pin
		Polarization		Linear	Dimension	17.6 mm x Ø7.0 mm
		Electrical Type		Monopole	Op. Temp	-40 °C to + 90 °C
		Radiation Pattern		Omnidirectional	Ground Plane	89 mm x 89 mm
		Impedance (Ohms)		50		


ANT-868-JJB-RA	Overview	Electric Data			Mechanical Data	
	868 MHz Right Angle Monopole Dome Applications LoRaWAN, Sigfox, Weightless-P	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Through Hole
		868	2.0	-1.0	Termination	Solder Pin
		Polarization		Linear	Dimension	14.5 mm x 7.0 mm
		Electrical Type		Monopole	Op. Temp	-40 °C to + 90 °C
		Radiation Pattern		Omnidirectional	Ground Plane	38 mm x 84 mm
		Impedance (Ohms)		50		


ANT-868-VHETH	Overview	Electric Data			Mechanical Data	
	868 MHz Straight Monopole Vertical Helical Applications LoRaWAN, Sigfox, Weightless-P	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Through Hole
		862 - 876	2.7	-0.7	Termination	Solder Pin
		Polarization		Linear	Dimension	44.3 mm x Ø7.0 mm
		Electrical Type		Monopole	Op. Temp	-40 °C to + 80 °C
		Radiation Pattern		Omnidirectional	Ground Plane	100 mm x 100 mm
		Impedance (Ohms)		50		


ANT-868-USP-T	Overview	Electric Data			Mechanical Data	
	868 MHz Monopole Chip Applications LoRaWAN, Sigfox, Weightless-P	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Surface Mount
		868	1.9	0.2	Termination	Solder pad
		Polarization		Linear	Dimension	12.7 mm x 9.1 mm x 2.6 mm
		Electrical Type		Monopole	Op. Temp	-40 °C to +130 °C
		Radiation Pattern		Omnidirectional	Ground Plane	39 mm x 80 mm
		Impedance (Ohms)		50		

ANT-868-CHP-T	Overview	Electric Data			Mechanical Data	
	868 MHz Monopole Ceramic Chip Applications LoRaWAN, Sigfox, Weightless-P	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Surface Mount
		868	2.0	0.5	Termination	Solder pad
		Polarization		Linear	Dimension	3.0 mm x 16.0 mm x 1.7 mm
		Electrical Type		Monopole	Op. Temp	-40 °C to +85 °C
		Radiation Pattern		Omnidirectional	Ground Plane	38 mm x 84 mm
		Impedance (Ohms)		50		


ANT-868-USP410	Overview	Electric Data			Mechanical Data	
	868 MHz Monopole Chip Applications LoRaWAN, Sigfox, Weightless-P	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Surface Mount
		868	2.1	0.7	Termination	Solder pad
		Polarization		Linear	Dimension	13.2 mm x 9.1 mm x 2.9 mm
		Electrical Type		Monopole	Op. Temp	-40 °C to +130 °C
		Radiation Pattern		Omnidirectional	Ground Plane	38 mm x 84 mm
		Impedance (Ohms)		50		


ANT-868-SP	Overview	Electric Data			Mechanical Data	
	868 MHz Monopole Chip Applications LoRaWAN, Sigfox, Weightless-P	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Surface Mount
		868	1.9	1.1	Termination	Solder pad
		Polarization		Linear	Dimension	27.9 mm x 13.7 mm x 1.5 mm
		Electrical Type		Monopole	Op. Temp	-40 °C to +130 °C
		Radiation Pattern		Omnidirectional	Ground Plane	38 mm x 84 mm
		Impedance (Ohms)		50		


ANT-868-CPA	Overview	Electric Data			Mechanical Data	
	868 MHz Radiating Ceramic Patch Applications LoRaWAN, Sigfox, Weightless-P	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Through Hole
		868	9.5	1.4	Termination	Solder Pin
		Polarization		RHCP	Dimension	25.0 mm x 25.0 mm x 4.0 mm
		Electrical Type		Radiating Patch	Op. Temp	-40 °C to +85 °C
		Radiation Pattern		Directional	Ground Plane	70 mm x 70 mm
		Impedance (Ohms)		50		


ANT-868-HETH	Overview	Electric Data			Mechanical Data	
	868 MHz Straight Monopole Helical Applications LoRaWAN, Sigfox, Weightless-P	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Through Hole
		868	2.2	5.6	Termination	Solder Pin
		Polarization		Linear	Dimension	25.4 mm x 8.9 mm
		Electrical Type		Monopole	Op. Temp	-40 °C to +85 °C
		Radiation Pattern		Omnidirectional	Ground Plane	38 mm x 84 mm
		Impedance (Ohms)		50		





ANT-868-HESM	Overview	Electric Data			Mechanical Data	
	868 MHz Straight Monopole Helical Applications LoRaWAN, Sigfox, Weightless-P	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Surface Mount
		868	2.2	5.6	Termination	Solder pad
		Polarization		Linear	Dimension	25.4 mm x 8.9 mm
		Electrical Type		Monopole	Op. Temp	-40 °C to +85 °C
		Radiation Pattern		Omnidirectional	Ground Plane	38 mm x 84 mm
		Impedance (Ohms)		50		


1513168-1	Overview	Electric Data			Mechanical Data	
	915 MHz Monopole Chip Applications LoRaWAN, Sigfox, Weightless-P, Wi-Fi HaLow	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Tab Mount
		902-928	2.0	0.0	Termination	Solder pad
		Polarization		Linear	Dimension	38.1x15.24x1.57 mm
		Electrical Type		Monopole	Op. Temp	-40 °C to +85 °C
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


ANT-915-VHETH	Overview	Electric Data			Mechanical Data	
	915 MHz Straight Monopole Vertical Helical Applications LoRaWAN, Sigfox, Weightless-P, Wi-Fi HaLow	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Through Hole
		902 - 930	2.3	-2.5	Termination	Solder Pin
		Polarization		Linear	Dimension	44.3 mm x Ø7.0 mm
		Electrical Type		Monopole	Op. Temp	-40 °C to + 80 °C
		Radiation Pattern		Omnidirectional	Ground Plane	100 mm x 100 mm
		Impedance (Ohms)		50		

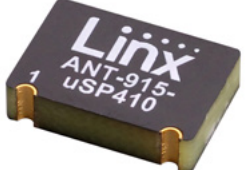
ANT-916-JJB-HT-T	Overview	Electric Data			Mechanical Data	
	915 MHz Straight Monopole Dome Applications LoRaWAN, Sigfox, Weightless-P, Wi-Fi HaLow	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Through Hole
		915	2.0	-12.3	Termination	Solder Pin
		Polarization		Linear	Dimension	15.5 mm x 7.1 mm
		Electrical Type		Monopole	Op. Temp	-40 °C to + 90 °C
		Radiation Pattern		Omnidirectional	Ground Plane	89 mm x 89 mm
		Impedance (Ohms)		50		


ANT-916-JJB-ST	Overview	Electric Data			Mechanical Data	
	915 MHz Straight Monopole Dome Applications LoRaWAN, Sigfox, Weightless-P, Wi-Fi HaLow	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Through Hole
		915	2.0	-10.2	Termination	Solder Pin
		Polarization		Linear	Dimension	17.6 mm x 7.0 mm
		Electrical Type		Monopole	Op. Temp	-40 °C to + 90 °C
		Radiation Pattern		Omnidirectional	Ground Plane	89 mm x 89 mm
		Impedance (Ohms)		50		


ANT-916-JJB-RA	Overview	Electric Data			Mechanical Data	
	915 MHz Right Angle Monopole Dome Applications LoRaWAN, Sigfox, Weightless-P, Wi-Fi HaLow	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Through Hole
		915	2.0	-0.5	Termination	Solder Pin
		Polarization		Linear	Dimension	14.5 mm x 7.0 mm
		Electrical Type		Monopole	Op. Temp	-40 °C to + 90 °C
		Radiation Pattern		Omnidirectional	Ground Plane	38 mm x 84 mm
		Impedance (Ohms)		50		


ANT-916-USP	Overview	Electric Data			Mechanical Data	
	915 MHz Monopole Chip Applications LoRaWAN, Sigfox, Weightless-P, Wi-Fi HaLow	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Surface Mount
		915	1.9	0.3	Termination	Solder pad
		Polarization		Linear	Dimension	12.7 mm x 9.1 mm x 2.6 mm
		Electrical Type		Monopole	Op. Temp	-40 °C to +130 °C
		Radiation Pattern		Omnidirectional	Ground Plane	39 mm x 80 mm
		Impedance (Ohms)		50		


ANT-916-CHP-T	Overview	Electric Data			Mechanical Data	
	915 MHz Monopole Ceramic Chip Applications LoRaWAN, Sigfox, Weightless-P, Wi-Fi HaLow	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Surface Mount
		915	2.0	0.5	Termination	Solder pad
		Polarization		Linear	Dimension	3.0 mm x 16.0 mm x 1.7 mm
		Electrical Type		Monopole	Op. Temp	-40 °C to +85 °C
		Radiation Pattern		Omnidirectional	Ground Plane	38 mm x 84 mm
		Impedance (Ohms)		50		

ANT-915-USP410	Overview	Electric Data			Mechanical Data	
	915 MHz Monopole Chip Applications LoRaWAN, Sigfox, Weightless-P, Wi-Fi HaLow	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Surface Mount
		915	2.7	0.9	Termination	Solder pad
		Polarization		Linear	Dimension	13.2 mm x 9.1 mm x 2.9 mm
		Electrical Type		Monopole	Op. Temp	-40 °C to +130 °C
		Radiation Pattern		Omnidirectional	Ground Plane	38 mm x 84 mm
		Impedance (Ohms)		50		


ANT-916-SP	Overview	Electric Data			Mechanical Data	
	915 MHz Monopole Chip Applications LoRaWAN, Sigfox, Weightless-P, Wi-Fi HaLow	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Surface Mount
		915	1.9	1.4	Termination	Solder pad
		Polarization		Linear	Dimension	27.9 mm x 13.7 mm x 1.5 mm
		Electrical Type		Monopole	Op. Temp	-40 °C to +130 °C
		Radiation Pattern		Omnidirectional	Ground Plane	38 mm x 84 mm
		Impedance (Ohms)		50		


ANT-915-CPA	Overview	Electric Data			Mechanical Data	
	915 MHz Radiating Ceramic Patch Applications LoRaWAN, ISM	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Through Hole
		915	1.2	1.5	Termination	Solder Pin
		Polarization		RHCP	Dimension	25.0 mm x 25.0 mm x 4.0 mm
		Electrical Type		Radiating Patch	Op. Temp	-40 °C to +85 °C
		Radiation Pattern		Directional	Ground Plane	40 mm x 40 mm
		Impedance (Ohms)		50		


ANT-916-HESM	Overview	Electric Data			Mechanical Data	
	915 MHz Straight Monopole Helical Applications LoRaWAN, Sigfox, Weightless-P, Wi-Fi HaLow	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Surface Mount
		915	1.5	6.4	Termination	Solder pad
		Polarization		Linear	Dimension	25.4 mm x 8.9 mm
		Electrical Type		Monopole	Op. Temp	-40 °C to +85 °C
		Radiation Pattern		Omnidirectional	Ground Plane	38 mm x 84 mm
		Impedance (Ohms)		50		


ANT-916-HETH	Overview	Electric Data			Mechanical Data	
	915 MHz Straight Monopole Helical Applications LoRaWAN, Sigfox, Weightless-P, Wi-Fi HaLow	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Through Hole
		915	1.5	6.4	Termination	Solder Pin
		Polarization		Linear	Dimension	25.4 mm x 8.9 mm
		Electrical Type		Monopole	Op. Temp	-40 °C to + 85 °C
		Radiation Pattern		Omnidirectional	Ground Plane	38 mm x 84 mm
		Impedance (Ohms)		50		


# SUB-1 GHZ - INTERNAL FPC ANTENNAS


ANT-433-FPC-UFL-100	Overview	Electric Data			Mechanical Data	
	433 MHz Cellular Multi-band Dipole Flexible Patch Applications LoRaWAN, Weightless-P, Remote Control	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Adhesive
		410 - 430	4.1	-5.4	Termination	U.FL-Type Plug
		430 - 435	2.5	-6.0	Dimension	47.0 mm x 17.0 mm x 0.2 mm
		450 - 470	3.4	-2.4	Op. Temp	-40 °C to +75 °C
		Polarization		Linear	Cable Length	100.0 mm
		Wavelength		1/2	Cable Type	1.13 mm
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		

2108793-1*	Overview	Electric Data				Mechanical Data	
	868 MHz/ 915 MHz 2.4 GHz Multi- band Dipole Flexible Patch FPC Applications LPWA, LoRaWAN, Sigfox, Weightless-P, Wi-Fi HaLow	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Adhesive
		824-960	2.1	2.1	75	Termination*	MMCX plug
		2400-2500	1.7	2.0	65	Dimension	140x20x0.17
		Polarization		Linear		Op. Temp	-40 °C to +85 °C
		Electrical Type		Dipole		Cable Length*	185 mm
		Radiation Pattern		Omnidirectional			255 mm
		Impedance (Ohms)		50		Cable Type	RG-178


2195849-1*	Overview	Electric Data				Mechanical Data	
	868 MHz / 915 MHz Multi- band Dipole Flexible Patch FPC Applications LPWA, LoRaWAN, Sigfox, Weightless-P, Wi-Fi HaLow	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Adhesive
		863-928	2.2	-0.3	34	Termination*	U.FL-Type plug
							MHF4 Plug
						Dimension	38x9x0.2
						Op. Temp	-40 °C to +85 °C
						Cable Length*	50mm
		Polarization		Linear			100mm
		Electrical Type		Dipole			150mm
		Radiation Pattern		Omnidirectional			200mm
		Impedance (Ohms)		50		Cable Type	1.13mm


L9000128-01	Overview	Electric Data			Mechanical Data	
	868 MHz/ 915 MHz Multi-band Dipole Flexible Patch  Applications LoRaWAN, Weightless-P, Remote Control	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Adhesive
		862 - 876	2.0	-3.2	Termination	U.FL-Type Plug
		902 - 930	1.6	-3.0	Dimension	39.0 mm x 15.0 mm x 0.2 mm
					Op. Temp	-40 °C to +85 °C
		Polarization		Linear	Cable Length	100.0 mm
		Wavelength		1/2	Cable Type	1.13 mm
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


2195835-1*	Overview	Electric Data				Mechanical Data	
	868 MHz 915 MHz Multi- band Dipole Flexible Patch FPC  Applications LPWA, LoRaWAN, Sigfox, Weightless-P, Wi-Fi HaLow	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Adhesive
		863-928	2.3	1.4	35	Termination*	U.FL-Type plug
							MHF4 Plug
						Dimension	38x9x0.2mm
						Op. Temp	-40 °C to +85 °C
						Cable Length*	50mm
		Polarization		Linear			100mm
		Electrical Type		Dipole			150mm
		Radiation Pattern		Omnidirectional			200mm
		Impedance (Ohms)		50		Cable Type	1.13mm


2118898-1*	Overview	Electric Data				Mechanical Data	
	915 MHz 2.4 GHz Multi- band Dipole Rigid Patch PCB  Applications LPWA, LoRaWAN, Sigfox, Weightless-P, Wi-Fi HaLow	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Adhesive
		902-928	2.6	3.6	85	Termination*	MMCX plug
		2400-2483	2.9	4.0	65	Dimension	140x20x0.25
		Polarization		Linear		Op. Temp	-40 °C to +85 °C
		Electrical Type		Dipole		Cable Length*	185 mm
		Radiation Pattern		Omnidirectional			255 mm
		Impedance (Ohms)		50		Cable Type	RG-178


# SUB-1 GHZ - EXTERNAL - TERMINAL MOUNT HINGED/90° MONOPOLE ANTENNAS


ANT-450-HSW-*	Overview	Electric Data				Mechanical Data	
	450 MHz Hinged Monopole Whip	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Connector Mount
		410-427	1.2	3.1	98	Termination*	N-Type Plug
		450-467.5	1.6	2.3	85		TNC Plug
	Applications LTE 450MHz, Band 72, Band 73, Band 31 for NB-IoT	Polarization		Linear		Dimension*	205x20.1mm
		Electrical Type		Monopole			201.6x14.4
		Radiation Pattern		Omnidirectional		Op. Temp	-40 °C to +85 °C
		Impedance (Ohms)		50			


2195892-1	Overview	Electric Data			Mechanical Data	
	433 MHz Right Angle Monopole Whip	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector mount
		423-443	3.1	-3.5	Termination	SMA Plug
		Polarization		Linear	Dimension	47x7.8mm
	Applications ISM 433MHz	Electrical Type		Monopole	Op. Temp	-40 °C to +85 °C
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


ANT-433-CW-RAH-*	Overview	Electric Data			Mechanical Data	
	433 MHz Right Angle Monopole Whip	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector Mount
		433	1.9	-5.0	Termination*	RP-SMA Plug
		Polarization		Linear		SMA Plug
	Applications LoRaWAN, Weightless-P, Remote Control	Wavelength		1/4	Dimensions	47.0 mm x 16.1 mm
		Electrical Type		Monopole	Op. Temp	-40 °C to +90 °C
		Radiation Pattern		Omnidirectional	Ground Plane	102 mm x 102 mm
		Impedance (Ohms)		50		


ANT-433-CW-RCS-*	Overview	Electric Data			Mechanical Data	
	433 MHz Right Angle Monopole Whip Applications LoRaWAN, Weightless-P, Remote Control	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector Mount
		433	2.0	-2.9	Termination*	RP-SMA Plug
		Polarization		Linear		SMA Plug
		Wavelength		1/4	Dimensions	53.5 mm x 16.6 mm
		Electrical Type		Monopole	Op. Temp	-20 °C to +85 °C
		Radiation Pattern		Omnidirectional	Ground Plane	102 mm x 102 mm
		Impedance (Ohms)		50		


ANT-433-PW-RA	Overview	Electric Data			Mechanical Data	
	433 MHz Tilt/ Swivel Monopole Whip Applications LoRaWAN, Weightless-P, Remote Control	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	PCB Screw
		433	2.0	-0.7	Termination*	Screw Lug
		Polarization		Linear	Dimensions	131.5 mm x 7.0 mm
		Wavelength		1/4	Op. Temp	-20 °C to +60 °C
		Electrical Type		Monopole	Ground Plane	62.2 mm x 100.3 mm
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


ANT-433-CW-HWR-*	Overview	Electric Data			Mechanical Data	
	433 MHz Tilt/ Swivel Monopole Whip Applications LoRaWAN, Weightless-P, Remote Control	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector Mount
		433	2.0	1.1	Termination*	RP-SMA Plug
		Polarization		Linear		SMA Plug
		Wavelength		1/4	Dimensions	142.0 mm x 10.0 mm
		Electrical Type		Monopole	Op. Temp	-30 °C to +80 °C
		Radiation Pattern		Omnidirectional	Ground Plane	102 mm x 102 mm
		Impedance (Ohms)		50		

ANT-450-RHR-SMA	Overview	Electric Data				Mechanical Data	
	450 MHz Right Angle Monopole Whip Applications Band 72, Band 73, Band 31, LTE, 5G NR, 450 MHz to 470 MHz, LTE-M (Cat-M1), NB-IoT	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Connector Mount
		450-470	2.1	-4.6	12	Termination	RP-SMA Plug
		Polarization		Linear			SMA Plug
		Electrical Type		Monopole		Dimensions	51.2 mm x 18.2 mm x 9.0 mm
		Radiation Pattern		Omnidirectional		Op. Temp	-20 °C to +85 °C
		Impedance (Ohms)		50		Ground Plane	102 mm x 102 mm


ANT-868-CW-RAH-*	Overview	Electric Data			Mechanical Data	
	868 MHz Right Angle Monopole Whip Applications LoRaWAN, Sigfox, Weightless-P	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector Mount
		868	1.9	0.6	Termination*	RP-SMA Plug
		Polarization		Linear		SMA Plug
		Wavelength		1/4	Dimensions	47.0 mm x 16.1 mm
		Electrical Type		Monopole	Op. Temp	-40 °C to +90 °C
		Radiation Pattern		Omnidirectional	Ground Plane	102 mm x 102 mm
		Impedance (Ohms)		50		


ANT-868-CW-RCS-*	Overview	Electric Data			Mechanical Data	
	868 MHz Right Angle Monopole Whip Applications LoRaWAN, Sigfox, Weightless-P	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector Mount
		868	2.0	3.6	Termination*	RP-SMA Plug
		Polarization		Linear		SMA Plug
		Wavelength		1/4	Dimensions	53.5 mm x 16.6 mm
		Electrical Type		Monopole	Op. Temp	-20 °C to +85 °C
		Radiation Pattern		Omnidirectional	Ground Plane	102 mm x 102 mm
		Impedance (Ohms)		50		


ANT-868-PW-RA	Overview	Electric Data			Mechanical Data	
	868 MHz Tilt/ Swivel Monopole Whip Applications LoRaWAN, Sigfox, Weightless-P	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	PCB Screw
		868	1.9	4.0	Termination*	Screw Lug
		Polarization		Linear	Dimensions	99.0 mm x 7.0 mm
		Wavelength		1/4	Op. Temp	-20 °C to +60 °C
		Electrical Type		Monopole	Ground Plane	62.2 mm x 100.3 mm
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


ANT-868-CW-RCL-SMA	Overview	Electric Data			Mechanical Data	
	868 MHz Right Angle Monopole Whip Applications LoRaWAN, Sigfox, Weightless-P	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector Mount
		868	1.9	4.1	Termination*	SMA Plug
		Polarization		Linear	Dimensions	96.0 mm x 16.6 mm
		Wavelength		1/4	Op. Temp	-20 °C to +85 °C
		Electrical Type		Monopole	Ground Plane	102 mm x 102 mm
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		




ANT-916-PW-RA	Overview	Electric Data			Mechanical Data	
	915 MHz Tilt/ Swivel Monopole Whip  Applications LoRaWAN, Sigfox, Weightless-P, Wi-Fi HaLow	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	PCB Screw
		915	1.9	0.0	Termination*	Screw Lug
		Polarization		Linear	Dimensions	99.0 mm x 7.0 mm
		Wavelength		1/4	Op. Temp	-20 °C to +60 °C
		Electrical Type		Monopole	Ground Plane	62.2 mm x 100.3 mm
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


ANT-916-CW-RAH-*	Overview	Electric Data			Mechanical Data	
	915 MHz Right Angle Monopole Whip  Applications LoRaWAN, Sigfox, Weightless-P, Wi-Fi HaLow	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector Mount
		915	1.9	2.2	Termination*	RP-SMA Plug
		Polarization		Linear		SMA Plug
		Wavelength		1/4	Dimensions	47.0 mm x 16.1 mm
		Electrical Type		Monopole	Op. Temp	-40 °C to +90 °C
		Radiation Pattern		Omnidirectional	Ground Plane	102 mm x 102 mm
		Impedance (Ohms)		50		


ANT-916-CW-RCS-*	Overview	Electric Data			Mechanical Data	
	915 MHz Right Angle Monopole Whip  Applications LoRaWAN, Sigfox, Weightless-P, Wi-Fi HaLow	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector Mount
		915	1.9	3.3	Termination*	RP-SMA Plug
		Polarization		Linear		SMA Plug
		Wavelength		1/4	Dimensions	53.5 mm x 16.6 mm
		Electrical Type		Monopole	Op. Temp	-20 °C to +85 °C
		Radiation Pattern		Omnidirectional	Ground Plane	102 mm x 102 mm
		Impedance (Ohms)		50		


ANT-916-CW-RCL-*	Overview	Electric Data			Mechanical Data	
	915 MHz Right Angle Monopole Whip  Applications LoRaWAN, Sigfox, Weightless-P, Wi-Fi HaLow	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector Mount
		915	1.8	4.2	Termination*	RP-SMA Plug
		Polarization		Linear		SMA Plug
		Wavelength		1/4	Dimensions	96.0 mm x 16.6 mm
		Electrical Type		Monopole	Op. Temp	-20 °C to +70 °C
		Radiation Pattern		Omnidirectional	Ground Plane	102 mm x 102 mm
		Impedance (Ohms)		50		


# SUB-1 GHZ - EXTERNAL - TERMINAL MOUNT MONOPOLE ANTENNAS


ANT-410-CW-QW-SMA	Overview	Electric Data				Mechanical Data	
	410 MHz Straight Monopole Whip Applications Band 31, Band 87, Band 88, LTE, 5G NR, 410 MHz to 430 MHz, LTE-M, NB-IoT, mMTC	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Connector Mount
		410	1.8	4.1	80	Termination	SMA Plug
		Polarization		Linear		Dimension	177.2 mm x 14.5 mm
		Electrical Type		Monopole		Op. Temp	-40 °C to +90 °C
		Radiation Pattern		Omnidirectional		Ground Plane	102 mm x 102 mm
		Impedance (Ohms)		50			


ANT-433-CW-RH-*	Overview	Electric Data				Mechanical Data	
	433 MHz Straight Monopole Whip Applications LoRaWAN, Weightless-P, Remote Control	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)		Mounting Type	Connector Mount
		433	1.9	-5.6		Termination*	RP-SMA Plug
		Polarization		Linear			SMA Plug
		Wavelength		1/4		Dimensions	51.0 mm x 8.5 mm
		Electrical Type		Monopole		Op. Temp	-40 °C to +90 °C
		Radiation Pattern		Omnidirectional		Ground Plane	102 mm x 102 mm
		Impedance (Ohms)		50			


ANT-433-PW-LP	Overview	Electric Data				Mechanical Data	
	433 MHz Straight Monopole Whip Applications LoRaWAN, Weightless-P, Remote Control	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)		Mounting Type	PCB Screw
		433	1.9	-1.9		Termination*	Screw Lug
		Polarization		Linear		Dimensions	50.5 mm x 10.4 mm
		Wavelength		1/4		Op. Temp	-20 °C to +85 °C
		Electrical Type		Monopole		Ground Plane	38.1 mm x 83.8 mm
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


ANT-433-CW-HW-*	Overview	Electric Data			Mechanical Data	
	433 MHz Straight Monopole Whip Applications LoRaWAN, Weightless-P, Remote Control	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector Mount
		433	2.0	0.0	Termination*	RP-SMA Plug
		Polarization		Linear		SMA Plug
		Electrical Type		Monopole	Dimensions	120.0 mm x 10.7 mm
		Radiation Pattern		Omnidirectional	Op. Temp	-20 °C to +85 °C
		Impedance (Ohms)		50	Ground Plane	102 mm x 102 mm


ANT-433-CW-HD-*	Overview	Electric Data			Mechanical Data	
	433 MHz Straight Monopole Whip Applications LoRaWAN, Weightless-P, Remote Control	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector Mount
		433	2.0	0.7	Termination*	RP-SMA Plug
		Polarization		Linear		SMA Plug
		Electrical Type		Monopole	Dimensions	88.0 mm x 13.5 mm
		Radiation Pattern		Omnidirectional	Op. Temp	-30 °C to +70 °C
		Impedance (Ohms)		50	Ground Plane	102 mm x 102 mm

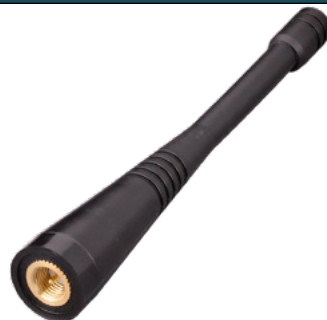
ANT-433-CW-QW-*	Overview	Electric Data			Mechanical Data	
	433 MHz Straight Monopole Whip Applications LoRaWAN, Weightless-P, Remote Control	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector Mount
		433	2.0	3.3	Termination*	RP-SMA Plug
		Polarization		Linear		SMA Plug
		Electrical Type		Monopole	Dimension	173.4 mm x 14.5 mm
		Radiation Pattern		Omnidirectional	Op. Temp	-40 °C to + 90 °C
		Impedance (Ohms)		50	Ground Plane	102 mm x 102 mm


ANT-450-CW-QW-SMA	Overview	Electric Data				Mechanical Data	
	450 MHz Straight Monopole Whip Applications Band 72, Band 73,LTE, 5G NR, 450 MHz to 470 MHz, LTE-M, NB-IoT, mMTC	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Connector Mount
		450	1.3	3.4	72	Termination	SMA Plug
		Polarization		Linear		Dimension	167.0 mm x 14.5 mm
		Electrical Type		Monopole		Op. Temp	-40 °C to +90 °C
		Radiation Pattern		Omnidirectional		Ground Plane	102 mm x 102 mm
		Impedance (Ohms)		50			


ANT-450-RHS-*	Overview	Electric Data				Mechanical Data	
	5G/LTE Band 28 Straight Monopole Whip Applications Band 72, Band 73, Band 31, LTE, 5G NR, 450 MHz to 470 MHz, LTE-M (Cat-M1), NB-IoT	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Connector Mount
		450-470	2.1	-8.2	5	Termination	RP-SMA Plug
		Polarization		Linear			SMA Plug
		Electrical Type		Monopole		Dimensions	51.8 mm x Ø9.0 mm
		Radiation Pattern		Omnidirectional		Op. Temp	-20 °C to +85 °C
		Impedance (Ohms)		50		Ground Plane	102 mm x 102 mm


ANT-490-CW-QW-SMA	Overview	Electric Data				Mechanical Data	
	490 MHz Straight Monopole Whip Applications LoRaWAN	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Connector Mount
		490	2.0	1.3	72	Termination*	SMA Plug
		Polarization		Linear		Op. Temp	-40 °C to +90 °C
		Electrical Type		Monopole		Ground Plane	102 mm x 102 mm
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


ANT-B28-CW-QW-SMA	Overview	Electric Data				Mechanical Data	
	5G/LTE Band 28 Straight Monopole Whip Applications 5G/LTE Band 28, 700MHz to 810 MHz, 5G NR Sub-6, LTE-M (Cat-M1), mMTC, NB-IoT	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Connector Mount
		700 - 810	2.7	1.7	73	Termination	SMA Plug
		Polarization		Linear		Dimension	98.4 mm x 14.5 mm
		Electrical Type		Monopole		Op. Temp	-40 °C to +90 °C
		Radiation Pattern		Omnidirectional		Ground Plane	102 mm x 102 mm
		Impedance (Ohms)		50			


ANT-B13-CW-QW-SMA	Overview	Electric Data				Mechanical Data	
	LTE Band 13 Straight Monopole Whip Applications LTE Band 13, 740 MHz to 790 MHz, LTE-M (Cat-M1), 5G NR, mMTC, NB-IoT	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Connector Mount
		740-790	2.0	1.7	77	Termination	SMA Plug
		Polarization		Linear		Dimension	98.4 mm x 14.5 mm
		Electrical Type		Monopole		Op. Temp	-40 °C to +90 °C
		Radiation Pattern		Omnidirectional		Ground Plane	102 mm x 102 mm
		Impedance (Ohms)		50			


ANT-B14-CW-QW-SMA	Overview	Electric Data				Mechanical Data	
	5G/LTE Band 14 Straight Monopole Whip Applications 5G/LTE Band 14, 750 MHz to 800 MHz, 5G NR Sub-6, LTE-M (Cat-M1), mMTC, NB-IoT	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Connector Mount
		750 - 800	2.0	1.9	80	Termination	SMA Plug
		Polarization		Linear		Dimension	94.2 mm x 14.5 mm
		Electrical Type		Monopole		Op. Temp	-40 °C to +90 °C
		Radiation Pattern		Omnidirectional		Ground Plane	102 mm x 102 mm
		Impedance (Ohms)		50			


ANT-B20-CW-QW-SMA	Overview	Electric Data				Mechanical Data	
	5G/LTE Band 20 Straight Monopole Whip Applications 5G/LTE Band 20, 790 MHz to 870 MHz, 5G NR Sub 6, LTE-M (Cat-M1), mMTC, NB-IoT	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Connector Mount
		790 - 870	2.5	1.6	72	Termination	SMA Plug
		Polarization		Linear		Dimension	89.7 mm x 14.5 mm
		Electrical Type		Monopole		Op. Temp	-40 °C to +90 °C
		Radiation Pattern		Omnidirectional		Ground Plane	102 mm x 102 mm
		Impedance (Ohms)		50			


ANT-B5-CW-QW-SMA	Overview	Electric Data				Mechanical Data	
	5G/LTE Band 5 Straight Monopole Whip Applications 5G/LTE Band 5, 800MHz to 900 MHz, 5G NR Sub-6, LTE-M(Cat-M1), mMTC, NB-IoT	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Connector Mount
		800-900	2.0	1.2	65	Termination	SMA Plug
		Polarization		Linear		Dimension	83.5 mm x 14.5 mm
		Electrical Type		Monopole		Op. Temp	-40 °C to +90 °C
		Radiation Pattern		Omnidirectional		Ground Plane	102 mm x 102 mm
		Impedance (Ohms)		50			


ANT-868-CW-RH-*	Overview	Electric Data				Mechanical Data	
	868 MHz Straight Monopole Whip Applications LoRaWAN, Sigfox, Weightless-P	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)		Mounting Type	Connector Mount
		868	1.9	-1.5		Termination*	RP-SMA Plug
		Polarization		Linear			SMA Plug
		Wavelength		1/4		Dimensions	51.0 mm x 8.5 mm
		Electrical Type		Monopole		Op. Temp	-30 °C to +90 °C
		Radiation Pattern		Omnidirectional		Ground Plane	102 mm x 102 mm
		Impedance (Ohms)		50			


ANT-868-CW-HD-SMA	Overview	Electric Data			Mechanical Data	
	868 MHz Straight Monopole Whip Applications LoRaWAN, Sigfox, Weightless-P	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector Mount
		868	2.0	-0.3	Termination*	SMA Plug
		Polarization		Linear	Dimensions	75.0 mm x 13.5 mm
		Electrical Type		Monopole	Op. Temp	-30 °C to +70 °C
		Radiation Pattern		Omnidirectional	Ground Plane	102 mm x 102 mm
		Impedance (Ohms)		50		


ANT-868-CW-HW-*	Overview	Electric Data			Mechanical Data	
	868 MHz Straight Dipole Whip Applications LoRaWAN, Sigfox, Weightless-P	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector Mount
		868	2.0	0.0	Termination*	RP-SMA Plug
		Polarization		Linear		SMA Plug
		Electrical Type		Monopole	Dimensions	135.5 mm x 10.7 mm
		Radiation Pattern		Omnidirectional	Op. Temp	-20 °C to +85 °C
		Impedance (Ohms)		50	Ground Plane	102 mm x 102 mm


ANT-868-PW-LP	Overview	Electric Data			Mechanical Data	
	868 MHz Straight Monopole Whip Applications LoRaWAN, Sigfox, Weightless-P	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	PCB Screw
		868	1.9	2.1	Termination*	Screw Lug
		Polarization		Linear	Dimensions	50.5 mm x 10.4 mm
		Wavelength		1/4	Op. Temp	-20 °C to +85 °C
		Electrical Type		Monopole	Ground Plane	38.1 mm x 83.8 mm
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


ANT-868-CW-QW-*	Overview	Electric Data				Mechanical Data	
	868 MHz Straight Monopole Whip Applications LoRaWAN, Sigfox, Weightless-P	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Connector Mount
		868	2.0	1.2	65	Termination*	RP-SMA Plug
		Polarization		Linear			SMA Plug
		Electrical Type		Monopole		Dimensions	83.5 mm x 14.5 mm
		Radiation Pattern		Omnidirectional		Op. Temp	-40 °C to +90 °C
		Impedance (Ohms)		50		Ground Plane	102 mm x 102 mm


ANT-868-NUB-*	Overview	Electric Data				Mechanical Data	
	868 MHz Monopole Whip Applications LoRaWAN, Sigfox, Weightless-P	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)		Mounting Type	Connector Mount
		868	1.7	4.2		Termination*	RP-SMA Plug
		Polarization		Linear			SMA Plug
		Electrical Type		Monopole		Dimensions	19.7 mm x Ø7.0 mm
		Radiation Pattern		Omnidirectional		Op. Temp	-40 °C to +105 °C
		Impedance (Ohms)		50		Ground Plane	102 mm x 102 mm


L9000140-01	Overview	Electric Data				Mechanical Data	
	868 MHz/915 MHz LPWA Helical Monopole Applications LoRaWAN, Sigfox, Weightless-P, Wi-Fi HaLow	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)		Mounting Type	PCB Screw
		868	2.5	5.8		Termination*	Screw Lug
		915	1.7	6.8		Dimensions	46.9 mm x Ø6.0 mm
		Polarization		Linear		Op. Temp	-40 °C to +85 °C
		Wavelength		1/4			
		Electrical Type		Monopole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			

ANT-B8-CW-QW-SMA	Overview	Electric Data				Mechanical Data	
	5G/LTE Band 8 Straight Monopole Whip Applications 5G/LTE Band 8, 870 MHz to 960 MHz, 5G NR Sub-6, LTE-M (Cat-M1), mMTC, NB-IoT	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Connector Mount
		870-960	2.0	1.6	68	Termination	SMA Plug
		Polarization		Linear		Dimension	80.5 mm x 14.5 mm
		Electrical Type		Monopole		Op. Temp	-40 °C to +90 °C
		Radiation Pattern		Omnidirectional		Ground Plane	102 mm x 102 mm
		Impedance (Ohms)		50			


ANT-916-CW-RH-*	Overview	Electric Data			Mechanical Data	
	915 MHz Straight Monopole Whip Applications LoRaWAN, Sigfox Weightless-P, Wi-Fi HaLow	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector Mount
		915	1.9	-1.3	Termination*	RP-SMA Plug
		Polarization		Linear		SMA Plug
		Wavelength		1/4	Dimensions	51.0 mm x 8.5 mm
		Electrical Type		Monopole	Op. Temp	-40 °C to +90 °C
		Radiation Pattern		Omnidirectional	Ground Plane	102 mm x 102 mm
		Impedance (Ohms)		50		


ANT-916-CW-HD	Overview	Electric Data			Mechanical Data	
	915 MHz Straight Monopole Whip Applications LoRaWAN, Sigfox, Weightless-P, Wi-Fi HaLow	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector Mount
		915	2.0	-0.3	Termination*	RP-SMA Plug
		Polarization		Linear	Dimensions	65.0 mm x 13.5 mm
		Electrical Type		Monopole	Op. Temp	-30 °C to +70 °C
		Radiation Pattern		Omnidirectional	Ground Plane	102 mm x 102 mm
		Impedance (Ohms)		50		

ANT-916-CW-HW-*	Overview	Electric Data			Mechanical Data	
	915 MHz Straight Dipole Whip Applications LoRaWAN, Sigfox, Weightless-P, Wi-Fi HaLow	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector Mount
		915	2.0	1.2	Termination*	RP-SMA Plug
		Polarization		Linear		SMA Plug
		Electrical Type		Monopole	Dimensions	120.0 mm x 10.7 mm
		Radiation Pattern		Omnidirectional	Op. Temp	-20 °C to +85 °C
		Impedance (Ohms)		50	Ground Plane	102 mm x 102 mm


ANT-916-PW-LP	Overview	Electric Data			Mechanical Data	
	915 MHz Straight Monopole Whip Applications LoRaWAN, Sigfox, Weightless-P, Wi-Fi HaLow	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	PCB Screw
		915	1.9	2.4	Termination*	Screw Lug
		Polarization		Linear	Dimensions	50.5 mm x 10.4 mm
		Wavelength		1/4	Op. Temp	-20 °C to +85 °C
		Electrical Type		Monopole	Ground Plane	38.1 mm x 83.8 mm
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		





ANT-916-CW-QW-*	Overview	Electric Data				Mechanical Data	
	915 MHz Straight Monopole Whip Applications LoRaWAN, Sigfox, Weightless-P, Wi-Fi HaLow	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Connector Mount
		915	2.0	1.6	68	Termination*	RP-SMA Plug
		Polarization		Linear			SMA Plug
		Electrical Type		Monopole		Dimension	80.5 mm x 14.5 mm
		Radiation Pattern		Omnidirectional		Op. Temp	-40 °C to +90 °C
		Impedance (Ohms)		50		Ground Plane	102 mm x 102 mm

ANT-915-NUB-*	Overview	Electric Data				Mechanical Data	
	915 MHz Monopole Whip Applications LoRaWAN, Sigfox, Weightless-P, Wi-Fi HaLow	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)		Mounting Type	Connector Mount
		915	2.6	3.9		Termination*	RP-SMA Plug
		Polarization		Linear			SMA Plug
		Electrical Type		Monopole		Dimensions	17.7 mm x Ø7.0 mm
		Radiation Pattern		Omnidirectional		Op. Temp	-40 °C to +90 °C
		Impedance (Ohms)		50		Ground Plane	102 mm x 102 mm


# SUB-1 GHZ LPWA & ISM - EXTERNAL - REMOTE MOUNT - MONOPOLE ANTENNAS


ANT-433-PW-QW-*	Overview	Electric Data			Mechanical Data	
	433 MHz Straight Monopole Whip Applications LoRaWAN, Weightless-P, Remote Control	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Panel Mount
		433	2.0	3.3	Termination*	U.FL-Type Plug
		Polarization		Linear		Unterminated Cable
		Wavelength		1/4	Dimensions	173.4 mm x 14.5 mm
		Electrical Type		Monopole	Op. Temp	-40 °C to +90 °C
		Radiation Pattern		Omnidirectional	Cable Length	216.0 mm
		Impedance (Ohms)		50	Cable Type*	RG-174
					Ground Plane	102 mm x 102 mm


ANT-490-PW-QW-*	Overview	Electric Data			Mechanical Data	
	490 MHz Straight Monopole Whip Applications LoRaWAN	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Panel Mount
		490	2.0	1.3	Termination*	U.FL-Type Plug
		Polarization		Linear		Unterminated Cable
		Wavelength		1/4	Dimensions	157.7 mm x 14.5 mm
		Electrical Type		Monopole	Op. Temp	-40 °C to +90 °C
		Radiation Pattern		Omnidirectional	Cable Length	216.0 mm
		Impedance (Ohms)		50	Cable Type*	1.32 mm
						RG-174
					Ground Plane	102 mm x 102 mm


ANT-868-PW-QW-*	Overview	Electric Data				Mechanical Data	
	868 MHz Straight Monopole Whip Applications LoRaWAN, Sigfox, Weightless-P	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Panel Mount
		868	2.0	1.2	65	Termination*	U.FL-Type Plug
		Polarization		Linear			Unterminated Cable
		Wavelength		1/4		Dimensions	83.5 mm x 14.5 mm
		Electrical Type		Monopole		Op. Temp	-40 °C to +90 °C
		Radiation Pattern		Omnidirectional		Cable Length	216.0 mm
		Impedance (Ohms)		50		Cable Type*	1.32 mm
							RG-174
						Ground Plane	102 mm x 102 mm


# SUB-1 GHZ LPWA & ISM - EXTERNAL REMOTE MOUNT DIPOLE ANTENNAS


ANT-433-WRT-*	Overview	Electric Data			Mechanical Data	
	433 MHz Straight Dipole Dome  Applications LoRaWAN, Weightless-P, Remote Control	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Panel Mount
		433	1.9	-0.9	Termination*	RP-SMA Plug
						SMA Plug
		Polarization		Linear	Dimensions	26.8 mm x 19.0 mm
		Wavelength		1/2	Op. Temp	-30 °C to +90 °C
		Electrical Type		Dipole	Cable Length*	216.0 mm
		Radiation Pattern		Omnidirectional	Cable Type	RG-174
		Impedance (Ohms)		50	Ground Plane	102 mm x 102 mm


ANT-433-MHW-*	Overview	Electric Data			Mechanical Data	
	433 MHz Dipole Adhesive  Applications LoRaWAN, Weightless-P, Remote Control	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Adhesive
		433	1.9	1.2	Termination*	RP-SMA Plug
						SMA Plug
		Polarization		Linear	Dimensions	145.0 mm x 15.5 mm x 9.7 mm
		Wavelength		1/2	Op. Temp	-20 °C to + 70 °C
		Electrical Type		Dipole	Cable Length	4.6 m
		Radiation Pattern		Omnidirectional		2.0 m
		Impedance (Ohms)		50	Cable Type	RG-174/U


L9000175-01 (RP-SMA) L9000176-01 (SMA)	Overview	Electric Data			Mechanical Data	
	LPWA Multi-band Straight Dipole Adhesive  Applications LoRaWAN, Sigfox, Weightless-P, Wi-Fi HaLow	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Adhesive
		862 - 876	1.8	4.5	Termination*	RP-SMA Plug
		902 - 930	2.1	3.5		SMA Plug
		Polarization		Linear	Dimensions	115.0 mm x 22.0 mm x 6.3 mm
		Wavelength		1/2	Op. Temp	-40 °C to +85 °C
		Electrical Type		Dipole	Cable Length	2.0 m
		Radiation Pattern		Omnidirectional	Cable Type	RG-174/U
		Impedance (Ohms)		50		


ANT-5GW-MMG1-SMA-*	Overview	Electric Data			Mechanical Data	
	LPWA Multi-band Straight Dipole Magnetic Mount Whip  Applications LoRaWAN, Sigfox, Weightless-P, Wi-Fi HaLow	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Magnetic
		862 - 876	2.0	2.0	Termination*	SMA Plug
		902 - 930	2.1	2.3	Dimensions	82.8 mm x Ø30.0 mm
		Polarization		Linear	Op. Temp	-20 °C to +80 °C
		Wavelength		1/2	Cable Length	1 m, 2 m, 3 m
		Electrical Type		Dipole	Cable Type	RG-174/U
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


L9000174-01	Overview	Electric Data			Mechanical Data	
	LPWA Dual-Band Straight Dipole Adhesive  Applications LoRaWAN, Sigfox, Weightless-P, Wi-Fi HaLow	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Adhesive
		862 - 876	1.8	0.6	Termination*	SMA Plug
		902 - 930	1.9	0.4	Dimensions	104.0 mm x 17.0 mm x 4.2 mm
		Polarization		Linear	Op. Temp	-40 °C to +85 °C
		Wavelength		1/2	Cable Length	2.0 m
		Electrical Type		Dipole	Cable Type	RG-174/U
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


ANT-868-ID-1000-*	Overview	Electric Data			Mechanical Data	
	868 MHz Straight Dipole Whip  Applications LoRaWAN, Sigfox, Weightless-P	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Bracket Mount
		868	1.9	0.6	Termination*	RP-SMA Plug
						SMA Plug
		Polarization		Linear	Dimensions	124.6 mm x 31.2 mm x 11.9 mm
		Wavelength		1/2	Op. Temp	-40 °C to +80 °C
		Electrical Type		Dipole	Cable Length	1.0 m
		Radiation Pattern		Omnidirectional		2.0 m
		Impedance (Ohms)		50	Cable Type	RG-58/U


ANT-868-MHW-*	Overview	Electric Data			Mechanical Data	
	868 MHz Dipole Adhesive Applications LoRaWAN, Sigfox, Weightless-P	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Adhesive
		868	1.3	4.0	Termination*	RP-SMA Plug SMA Plug
		Polarization		Linear	Dimensions	138.0 mm x 15.5 mm x 9.7 mm
		Wavelength		1/2	Op. Temp	-20 °C to + 70 °C
		Electrical Type		Dipole	Cable Length	4.6 m
		Radiation Pattern		Omnidirectional		2.0 m
		Impedance (Ohms)		50	Cable Type	RG-174/U


ANT-868-WRT-*	Overview	Electric Data			Mechanical Data	
	868 MHz Straight Dipole Dome Applications LoRaWAN, Sigfox, Weightless-P	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Panel Mount
		868	1.9	1.5	Termination*	RP-SMA Plug SMA Plug U.FL-Type Plug
		Polarization		Linear	Dimensions	10.0 mm x 19.0 mm
		Wavelength		1/2	Op. Temp	-40 °C to +90 °C
		Electrical Type		Dipole	Cable Length*	216.0 mm
		Radiation Pattern		Omnidirectional	Cable Type	RG-174
		Impedance (Ohms)		50		

ANT-5GW-MMG2-SMA-*	Overview	Electric Data				Mechanical Data	
	2400 MHz Straight Dipole Whip Applications Bluetooth, Zigbee, 802.15.4, Wi-Fi 4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Magnetic Mount
		868-915	2.2	2.8		Termination	SMA Plug
		Polarization		Linear		Dimension	88.5 mm x Ø29.0 mm
		Wavelength		1/2		Op. Temp	-20 °C to +80 °C
		Electrical Type		Dipole		Cable Length*	1 m, 2 m, 3 m
		Radiation Pattern		Omnidirectional		Cable Type	RG-174/U
		Impedance (Ohms)		50			


0600-00025	Overview	Electric Data				Mechanical Data	
	902-928MHz Dipole Duck/ Whip with Pigtail Applications LTE, ISM, mMTC, LTE-M (Cat-M1), NB-IoT, LPWA, Sigfox, LoRaWAN	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Connector Mount
		902-928	2.0	2.0		Termination	MMCX Plug
		Polarization		Linear		Dimension	165x12.9mm
		Electrical Type		Dipole		Op. Temp	-20 °C to +65 °C
		Radiation Pattern		Omnidirectional		Cable Length	127 mm
		Impedance (Ohms)		50		Cable Type	RG-178


ANT-916-WRT-*	Overview	Electric Data			Mechanical Data	
	915 MHz Straight Dipole Dome Applications LoRaWAN, Sigfox, Weightless-P, Wi-Fi HaLow	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Panel Mount
		915	1.9	-0.1	Termination*	RP-SMA Plug
						SMA Plug
		Polarization		Linear	Dimensions	10.0 mm x 19.0 mm
		Wavelength		1/2	Op. Temp	-40 °C to +90 °C
		Electrical Type		Dipole	Cable Length*	216.0 mm
		Radiation Pattern		Omnidirectional	Cable Type	RG-174
		Impedance (Ohms)		50	Ground Plane	102 mm x 102 mm


ANT-916-ID-1000-*	Overview	Electric Data			Mechanical Data	
	915 MHz Straight Dipole Whip Applications LoRaWAN, Sigfox, Weightless-P, Wi-Fi HaLow	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Bracket Mount
		915	1.9	1.6	Termination*	RP-SMA Plug
						SMA Plug
		Polarization		Linear	Dimensions	124.6 mm x 31.2 mm x 11.9 mm
		Wavelength		1/2	Op. Temp	-40 °C to +80 °C
		Electrical Type		Dipole	Cable Length	1.0 m
		Radiation Pattern		Omnidirectional		2.0 m
		Impedance (Ohms)		50	Cable Type	RG-58/U


ANT-916-MHW-*	Overview	Electric Data			Mechanical Data	
	915 MHz Dipole Adhesive Applications LoRaWAN, Sigfox, Weightless-P, Wi-Fi HaLow	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Adhesive
		915	1.9	5.4	Termination*	RP-SMA Plug
						SMA Plug
		Polarization		Linear	Dimensions	138.0 mm x 15.5 mm x 9.7 mm
		Wavelength		1/2	Op. Temp	-20 °C to + 70 °C
		Electrical Type		Dipole	Cable Length	4.6 m
		Radiation Pattern		Omnidirectional		2.0 m
		Impedance (Ohms)		50	Cable Type	RG-174/U


# SUB-1 GHZ - EXTERNAL - TERMINAL MOUNT DIPOLE ANTENNAS


ANT-433-OC-LG-*	Overview	Electric Data			Mechanical Data	
	433 MHz Tilt/ Swivel Dipole Whip Applications LoRaWAN, Remote Control	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector Mount
		433	2.1	0.7	Termination*	RP-SMA Plug
		Polarization		Linear		SMA Plug
		Wavelength		1/2	Dimensions	193.5xØ10.0mm
		Electrical Type		Dipole	Op. Temp	-20 °C to +85 °C
		Radiation Pattern		Omnidirectional	Ground Plane	102 mm x 102 mm
		Impedance (Ohms)		50		

IN7-3RD-SMA	Overview	Electric Data			Mechanical Data	
	698-806MHz Hinged Dipole Duck/Whip Applications LTE, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector Mount
		698-806	1.5	3.0	Termination	SMA Plug
		Polarization		Linear	Dimension	157xØ15.2mm
		Wavelength		1/2	Op. Temp	-10 °C to +60 °C
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


001-0028	Overview	Electric Data			Mechanical Data	
	863-870MHz Dipole Duck/ Whip Applications LTE, ISM, mMTC, LTE-M (Cat-M1), NB-IoT, LPWA, Sigfox, LoRaWAN	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector Mount
		863-870	2.0	2.0	Termination	RP-SMA Plug
		Polarization		Linear	Dimension	197xØ13mm
		Wavelength		1/2	Op. Temp	-20 °C to +65 °C
		Electrical Type		Dipole	IP Rating	IP65
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


ANT-868-CW-HWR-*	Overview	Electric Data			Mechanical Data	
	868 MHz Tilt/ Swivel Dipole Whip Applications LoRaWAN, Sigfox, Weightless-P	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector Mount
		868	2.0	-2.3	Termination*	RP-SMA Plug
		Polarization		Linear		SMA Plug
		Wavelength		1/2	Dimensions	142.0xØ10.0mm
		Electrical Type		Dipole	Op. Temp	-30 °C to +80 °C
		Radiation Pattern		Omnidirectional	Ground Plane	102 mm x 102 mm
		Impedance (Ohms)		50		


ANT-868-OC-LG-*	Overview	Electric Data			Mechanical Data	
	868 MHz Tilt/ Swivel Dipole Whip Applications LoRaWAN, Sigfox, Weightless-P	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector Mount
		868	2.3	0.4	Termination*	RP-SMA Plug
		Polarization		Linear		SMA Plug
		Wavelength		1/2	Dimensions	193.5xØ10.0mm
		Electrical Type		Dipole	Op. Temp	-20 °C to +85 °C
		Radiation Pattern		Omnidirectional	Ground Plane	102 mm x 102 mm
		Impedance (Ohms)		50		


ANT-868-PML-*	Overview	Electric Data			Mechanical Data	
	868 MHz Tilt/ Swivel Dipole Whip Applications LoRaWAN, Sigfox, Weightless-P	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Panel Mount
		868	1.9	-2.0	Termination*	U.FL-Type Plug
		Polarization		Linear		Unterminated Cable
		Wavelength		1/2	Dimensions	150.3xØ12.1mm
		Electrical Type		Dipole	Op. Temp	-40 °C to +90 °C
		Radiation Pattern		Omnidirectional	Cable Length	305.0 mm
		Impedance (Ohms)		50	Cable Type*	RG-178
						1.32 mm
					Ground Plane	102 mm x 102 mm





ANT-8/9-IPW1-SMA	Overview	Electric Data			Mechanical Data	
	868 MHz/915 MHz LPWA Tilt/Swivel Dipole Blade Applications LoRaWAN, Sigfox, Weightless-P, Wi-Fi HaLow	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector Mount
		868	1.6	2.9	Termination*	SMA Plug
		915	3.2	2.5	Dimensions	203.0 mm x 13.2 mm x 13.2 mm
		Polarization		Linear	Op. Temp	-30 °C to +70 °C
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


0600-00024	Overview	Electric Data			Mechanical Data	
	902-928MHz Straight Dipole Duck/Whip Applications LTE, ISM, mMTC, LTE-M (Cat-M1), NB-IoT, LPWA, Sigfox, LoRaWAN	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector Mount
		902-928	2.0	2.0	Termination	SMA Plug
		Polarization		Linear	Dimension	209.5xØ13mm
		Wavelength		1/2	Op. Temp	-20 °C to +65 °C
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


001-0002-L	Overview	Electric Data			Mechanical Data	
	902-928MHz Hinged Dipole Duck/Whip Applications LTE, ISM, mMTC, LTE-M (Cat-M1), NB-IoT, LPWA, Sigfox, LoRaWAN	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector Mount
		902-928	2.5	2.0	Termination	RP-SMA Plug
		Polarization		Linear	Dimension	196xØ12.5mm
		Wavelength		1/2	Op. Temp	-20 °C to +65 °C
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		

001-0011	Overview	Electric Data			Mechanical Data	
	902-928MHz Outdoor Dipole Duck/Whip Applications LTE, ISM, mMTC, LTE-M (Cat-M1), NB-IoT, LPWA, Sigfox, LoRaWAN	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector Mount
		902-928	2.5	2.0	Termination	RP-SMA Plug
		Polarization		Linear	Dimension	204xØ13mm
		Wavelength		1/2	Op. Temp	-40 °C to +85 °C
		Electrical Type		Dipole	IP Rating	IP67
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


ANT-916-PML-*	Overview	Electric Data			Mechanical Data	
	915 MHz Tilt/ Swivel Dipole Whip  Applications LoRaWAN, Sigfox, Weightless-P, Wi-Fi HaLow	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Panel Mount
		915	1.9	-0.4	Termination*	U.FL-Type Plug
		Polarization		Linear		Unterminated Cable
		Wavelength		1/2	Dimensions	150.3 mm x 12.1 mm
		Electrical Type		Dipole	Op. Temp	-40 °C to +90 °C
		Radiation Pattern		Omnidirectional	Cable Length	305.0 mm
		Impedance (Ohms)		50	Cable Type*	RG-178
						1.32 mm
					Ground Plane	102 mm x 102 mm


ANT-916-CW-HWR-*	Overview	Electric Data			Mechanical Data	
	915 MHz Tilt/ Swivel Dipole Whip  Applications LoRaWAN, Sigfox, Weightless-P, Wi-Fi HaLow	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector Mount
		915	2.0	1.2	Termination*	RP-SMA Plug
		Polarization		Linear		SMA Plug
		Wavelength		1/2	Dimensions	142.0 mm x 10.0 mm
		Electrical Type		Dipole	Op. Temp	-30 °C to +80 °C
		Radiation Pattern		Omnidirectional	Ground Plane	102 mm x 102 mm
		Impedance (Ohms)		50		


ANT-916-OC-LG-*	Overview	Electric Data			Mechanical Data	
	915 MHz Tilt/ Swivel Dipole Whip  Applications LoRaWAN, Sigfox, Weightless-P, Wi-Fi HaLow	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector Mount
		915	2.0	2.2	Termination*	RP-SMA Plug
		Polarization		Linear		SMA Plug
		Wavelength		1/2	Dimensions	193.5 mm x 10.0 mm
		Electrical Type		Dipole	Op. Temp	-20 °C to +85 °C
		Radiation Pattern		Omnidirectional	Ground Plane	102 mm x 102 mm
		Impedance (Ohms)		50		


ANT-915-IPW1-RPS	Overview	Electric Data			Mechanical Data	
	915 MHz LPWA Tilt/Swivel Dipole Blade Applications LoRaWAN, Sigfox, Weight- less-P, Wi-Fi HaLow	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector Mount
		915	1.8	2.7	Termination*	RP-SMA Plug
		Polarization		Linear	Dimensions	203.0 mm x 13.2 mm x 13.2 mm
		Electrical Type		Dipole	Op. Temp	-30 °C to +70 °C
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


# SUB-1 GHZ - EXTERNAL LOW-PROFILE OMNI ANTENNAS


ETRA7603 (White) ETRAB7603 (Black)	Overview	Electric Data			Mechanical Data	
	760-870MHz Monopole Dome	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Base
		760-870	2.1	3.0	Termination	Push Pin
	Applications LTE, ISM, LMR for public safety	Polarization		Linear	Dimension	68.6xØ36.6mm
		Electrical Type		Monopole	Op. Temp	-40°C to +85°C
		Radiation Pattern		Omnidirectional	IP Rating	IP67
		Impedance (Ohms)		50		


TRA7603 (White) TRAB7603 (Black)	Overview	Electric Data			Mechanical Data	
	760-870MHz Monopole Dome	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Base
		760-870	2.1	3.0	Termination	Push Pin
	Applications LTE, ISM, LMR for public safety	Polarization		Linear	Dimension	69.9xØ36.6mm
		Electrical Type		Monopole	Op. Temp	-40°C to +85°C
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


TRAB7603P (Black)	Overview	Electric Data			Mechanical Data	
	760-870MHz Monopole Dome	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Panel w. Screw
		760-870	2.1	3.0	Termination	N-Type female
	Applications LTE, ISM, LMR for public safety	Polarization		Linear	Dimension	54.4xØ36.6mm
		Electrical Type		Monopole	Op. Temp	-40°C to +85°C
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


ETRA8063 (White) ETRAB8063 (Black)	Overview	Electric Data			Mechanical Data	
	806-866MHz Monopole Dome	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Base
		806-866	2.1	3.0	Termination	Push Pin
	Applications LTE, ISM, LMR for public safety	Polarization		Linear	Dimension	68.6xØ36.6mm
		Electrical Type		Monopole	Op. Temp	-40°C to +85°C
		Radiation Pattern		Omnidirectional	IP Rating	IP67
		Impedance (Ohms)		50		


TRA8063N (White)	Overview	Electric Data			Mechanical Data	
	806-866MHz Monopole Dome	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Base
		806-866	2.1	3.0	Termination	Push Pin
	Applications LTE, ISM, LMR for public safety	No ground plane required			Dimension	69.9xØ36.6mm
		Polarization		Linear	Op. Temp	-40°C to +85°C
		Electrical Type		Monopole	IP Rating	IP67
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


TRA8063 (White) TRAB8063 (Black)	Overview	Electric Data			Mechanical Data	
	806-870MHz Monopole Dome	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Base
		806-870	2.1	3.0	Termination	Push Pin
	Applications LTE, ISM, LMR for public safety	Polarization		Linear	Dimension	69.9xØ36.6mm
		Electrical Type		Monopole	Op. Temp	-40°C to +85°C
		Radiation Pattern		Omnidirectional	IP Rating	IP67
		Impedance (Ohms)		50		


TRAB8213 (Black)	Overview	Electric Data			Mechanical Data	
	821-896MHz Monopole Dome	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Base
		821-896	2.1	3.0	Termination	Push Pin
	Applications LTE, ISM, LMR for public safety	Polarization		Linear	Dimension	69.9xØ36.6mm
		Electrical Type		Monopole	Op. Temp	-40°C to +85°C
		Radiation Pattern		Omnidirectional	IP Rating	IP67
		Impedance (Ohms)		50		


TRAB8213NP (Black)	Overview	Electric Data			Mechanical Data	
	821-896MHz Monopole Dome	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Panel w. Screw
		821-896	2.1	3.0	Termination	N-Type female
		No ground plane required			Dimension	69.9xØ36.6mm
	Applications LTE, ISM, LMR for public safety	Polarization		Linear	Op. Temp	-40°C to +85°C
		Electrical Type		Monopole	IP Rating	IP67
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


ETRA8213 (White) ETRA8213 (Black)	Overview	Electric Data			Mechanical Data	
	821-896MHz Monopole Dome	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Base
		821-896	2.1	3.0	Termination	Push Pin
		Polarization		Linear	Dimension	68.6xØ36.6mm
	Applications LTE, ISM, LMR for public safety	Electrical Type		Monopole	Op. Temp	-40°C to +85°C
		Radiation Pattern		Omnidirectional	IP Rating	IP67
		Impedance (Ohms)		50		


ETRA821/18503 (Black)	Overview	Electric Data			Mechanical Data	
	824/1850MHz Monopole Dome	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Base
		821-896	2.1	3.0	Termination	Push Pin
		1850-1990	2.1	3.0	Dimension	68.6xØ36.6mm
	Applications LTE-M (Cat-M1), NB-IoT, UMTS, ISM, LMR for public safety	Polarization		Linear	Op. Temp	-40°C to +85°C
		Electrical Type		Monopole	IP Rating	IP67
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


ANT-8/9-SPNF2	Overview	Electric Data			Mechanical Data	
	868 MHz 915 MHz Dipole Dome	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Panel Mount
		868	1.7	3.3	Termination*	N Jack
		915	2.1	3.4	Dimensions	83.1 mm x Ø42.0 mm
	Applications LoRaWAN, Sigfox, Weightless-P	Polarization		Linear	Op. Temp	-40 °C to +85 °C
		Wavelength		1/2	Ground Plane	300 mm x 300 mm
		Electrical Type		Dipole	IP Rating	IP67
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


ANT-5GW-SPNF1	Overview	Electric Data			Mechanical Data	
	868 & 915 MHz Dipole Dome Applications LoRaWAN, Sigfox, Weightless-P	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Panel Mount
		868	2.3	3.0	Termination*	N Jack
		915	2.9	3.1	Dimensions	70.8 mm x Ø40.2 mm
		Polarization		Linear	Op. Temp	-30 °C to +70 °C
		Wavelength		1/2	Ground Plane	300 mm x 300 mm
		Electrical Type		Dipole	IP Rating	IP67
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		

ETRA8903 (Black)	Overview	Electric Data			Mechanical Data	
	890-960 MHz Monopole Dome Applications LTE, ISM, LMR for public safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	NMO Base	NMO Base
		890-960	2.1	3.0	Push Pin	Push Pin
		Polarization		Linear	Dimensions	68.6xØ36.6mm
		Electrical Type		Monopole	-40 °C to +85 °C	-40 °C to +85 °C
		Radiation Pattern		Omnidirectional	IP Rating	IP67
		Impedance (Ohms)		50		


TRA8903 (White) TRAB8903 (Black)	Overview	Electric Data			Mechanical Data	
	890-960 MHz Monopole Dome Applications LTE, ISM, LMR for public safety LTE-M (Cat-M1), NB-IoT, LPWA	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO or P Mount TRA9023
		890-960	2.1	3.0	Termination	Push Pin
		Polarization		Linear	Dimension	69.9xØ36.6mm
		Electrical Type		Monopole	Op. Temp	-40 °C to +85 °C
		Radiation Pattern		Omnidirectional	IP Rating	IP67
		Impedance (Ohms)		50		


TRA8903N (White) TRAB8903N (Black)	Overview	Electric Data			Mechanical Data	
	890-960 MHz Monopole Dome	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Base
		890-960	2.1	3.0	Termination	Push Pin
	Applications LTE, ISM, LMR for public safety LTE-M (Cat-M1), NB-IoT, LPWA	No ground plane required			Dimension	69.9xØ36.6mm
		Polarization		Linear	Op. Temp	-40°C to +85°C
		Electrical Type		Monopole	IP Rating	IP67
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


TRA8903P (White) TRAB8903P (Black)	Overview	Electric Data			Mechanical Data	
	890-960 MHz Monopole Dome	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Panel w. Screw
		890-960	2.1	3.0	Termination	N-Type female
	Applications LTE, ISM, LMR for public safety LTE-M (Cat-M1), NB-IoT, LPWA	Polarization		Linear	Dimension	69.9xØ36.6mm
		Electrical Type		Monopole	Op. Temp	-40°C to +85°C
		Radiation Pattern		Omnidirectional	IP Rating	IP67
		Impedance (Ohms)		50		

TRA8903NP (White) TRAB8903NP (Black)	Overview	Electric Data			Mechanical Data	
	890-960 MHz Dipole Dome	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Panel w. Screw
		890-960	2.1	3.0	Termination	N-Type female
	Applications LTE, ISM, LMR for public safety LTE-M (Cat-M1), NB-IoT, LPWA	No ground plane required			Dimension	69.9xØ36.6mm
		Polarization		Linear	Op. Temp	-40°C to +85°C
		Electrical Type		Monopole	IP Rating	IP67
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		



TRA9023 (White) TRAB9023 (Black)	Overview	Electric Data			Mechanical Data	
	902-928 MHz Monopole Dome	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO or P Mount
		902-928	2.1	3.0	Termination	Push Pin
	Applications LTE, ISM, LMR for public safety LTE-M (Cat-M1), NB-IoT, LPWA	Polarization		Linear	Dimension	69.9xØ36.6mm
		Electrical Type		Monopole	Op. Temp	-40°C to +85°C
		Radiation Pattern		Omnidirectional	IP Rating	IP67
		Impedance (Ohms)		50		

TRA9023P (White) TRAB9023P (Black)	Overview	Electric Data			Mechanical Data	
	902-928 MHz Monopole Dome	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Panel w. Screw
		902-928	2.0	3.0	Termination	N-Type female
	Applications LTE, ISM, LMR for public safety LTE-M (Cat-M1), NB-IoT, LPWA	Polarization		Linear	Dimension	69.9xØ36.6mm
		Electrical Type		Monopole	Op. Temp	-40°C to +85°C
		Radiation Pattern		Omnidirectional	IP Rating	IP67
		Impedance (Ohms)		50		

TRA9023N (White) TRAB9023N (Black)	Overview	Electric Data			Mechanical Data	
	902-928 MHz Monopole Dome	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Mountable or P Mount
		902-928	2.0	3.0	Termination	Push Pin
	Applications LTE, ISM, LMR for public safety LTE-M (Cat-M1), NB-IoT, LPWA	No ground plane required			Dimension	69.9xØ36.6mm
		Polarization		Linear	Op. Temp	-40°C to +85°C
		Electrical Type		Monopole	IP Rating	IP67
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


<b>TRA9023NP (White)</b> <b>TRAB9023NP (Black)</b>	<b>Overview</b>	<b>Electric Data</b>			<b>Mechanical Data</b>	
		Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Panel w. Screw
		902-928	2.1	3.0	Termination	N-Type female
		No ground plane required			Dimension	69.9xØ36.6mm
		Polarization		Linear	Op. Temp	-40°C to +85°C
		Electrical Type		Monopole	IP Rating	IP67
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		




<b>TRA9020S3PBN-001 (Black)</b> <b>TRA9020S3PWN-001 (White)</b>	<b>Overview</b>	<b>Electric Data</b>			<b>Mechanical Data</b>	
		Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Panel w. Screw
		902-928	2.0	3.0	Termination	N-Type female
		No ground plane required			Dimension	107xØ36.6mm
		Polarization		Linear	Op. Temp	-40°C to +85°C
		Electrical Type		Monopole	IP Rating	IP67
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		




# SUB-1 GHZ - EXTERNAL - REMOTE MOUNT DOME/PUCK ANTENNAS


ANT-5GW-SPS1-*	Overview	Electric Data			Mechanical Data	
	433 MHz Dipole Puck Applications LoRaWAN, Weightless-P, Remote Control	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Panel Mount
		410 - 430	2.3	-0.1	Termination*	SMA Plug
		430 - 435	1.7	-1.3	Dimensions	23.3 mm x Ø54.7 mm
		Polarization		Linear	Op. Temp	-40 °C to +70 °C
		Wavelength		1/2	Cable Length*	1 m, 2 m or 3 m
		Electrical Type		Dipole	Cable Type	RG-174/U
		Radiation Pattern		Omnidirectional	Ground Plane	300 mm x 300 mm
		Impedance (Ohms)		50	IP Rating	IP67


ANT-5GW-SPS1-*	Overview	Electric Data			Mechanical Data	
	868 MHz 915 MHz Dipole Puck Applications LoRaWAN, Sigfox, Weightless-P	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Panel Mount
		868	1.6	5.1	Termination*	SMA Plug
		915	2.4	5.2	Dimensions	23.3 mm x Ø54.7 mm
		Polarization		Linear	Op. Temp	-40 °C to +70 °C
		Wavelength		1/2	Cable Length*	1 m, 2 m or 3 m
		Electrical Type		Dipole	Cable Type	RG-174/U
		Radiation Pattern		Omnidirectional	Ground Plane	300 mm x 300 mm
		Impedance (Ohms)		50	IP Rating	IP67


# SUB-1 GHZ - EXTERNAL - INFRASTRUCTURE


## OUTDOOR OMNI BATON ANTENNAS


S8060B	Overview	Electric Data			Mechanical Data	
	806-868MHz Outdoor Dipole Baton	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		806-868	1.5	2.0	Termination	N-Type female
	Applications mMTC, LPWA, Sigfox, LoRaWAN, Weightless-P, Wi-Fi HaLow	Polarization		Linear	Dimension	445xØ50.8mm
		Wavelength		1/2	Op. Temp	-40°C to +70°C
		Electrical Type		Dipole	Cable Length	304.8mm
		Radiation Pattern		Omnidirectional	Cable Type	RG-58
		Impedance (Ohms)		50		


FG8060	Overview	Electric Data			Mechanical Data	
	806-866MHz Outdoor Fiberglass Dipole Baton	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		806-866	2.0	2.0	Termination	N-Type female
	Applications mMTC, LPWA, Sigfox, LoRaWAN, Weightless-P, Wi-Fi HaLow	Polarization		Linear	Dimension	330xØ33mm
		Wavelength		1/2	Op. Temp	-30°C to +70°C
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


FG8063	Overview	Electric Data			Mechanical Data	
	806-866MHz Outdoor Fiberglass Dipole Baton	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		806-866	2.0	5.0	Termination	N-Type female
	Applications mMTC, LPWA, Sigfox, LoRaWAN, Weightless-P, Wi-Fi HaLow	Polarization		Linear	Dimension	594xØ33mm
		Wavelength		1/2	Op. Temp	-30°C to +70°C
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


FG8066	Overview	Electric Data			Mechanical Data	
	806-866MHz Outdoor Fiberglass Dipole Baton	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		806-866	2.0	8.0	Termination	N-Type female
	Applications mMTC, LPWA, Sigfox, LoRaWAN, Weightless-P, Wi-Fi HaLow	Polarization		Linear	Dimension	1651xØ33mm
		Wavelength		1/2	Op. Temp	-30°C to +70°C
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


FG8240	Overview	Electric Data			Mechanical Data	
	824-896MHz Out-door Fiberglass Dipole Baton  Applications mMTC, LPWA, Sigfox, LoRaWAN, Weightless-P, Wi-Fi HaLow	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		824-896	2.0	2.0	Termination	N-Type female
		Polarization		Linear	Dimension	339xØ33mm
		Wavelength		1/2	Op. Temp	-30°C to +70°C
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


FG8243	Overview	Electric Data			Mechanical Data	
	824-896MHz Outdoor Fiberglass Dipole Baton  Applications mMTC, LPWA, Sigfox, LoRaWAN, Weightless-P, Wi-Fi HaLow	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		824-896	2.0	4.5	Termination	N-Type female
		Polarization		Linear	Dimension	589xØ33mm
		Wavelength		1/2	Op. Temp	-30°C to +70°C
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


FG8246	Overview	Electric Data			Mechanical Data	
	824-896MHz Outdoor Fiberglass Dipole Baton  Applications mMTC, LPWA, Sigfox, LoRaWAN, Weightless-P, Wi-Fi HaLow	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		824-896	2.0	8.0	Termination	N-Type female
		Polarization		Linear	Dimension	1651xØ33mm
		Wavelength		1/2	Op. Temp	-30°C to +70°C
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


OF84005-FNF	Overview	Electric Data			Mechanical Data	
	840-870MHz Outdoor Dipole Baton  Applications mMTC, LPWA, Sigfox, LoRaWAN, Weightless-P, Wi-Fi HaLow	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		840-870	1.8	5.4	Termination	N-Type female
		Polarization		Linear	Dimension	629xØ25.4mm
		Wavelength		1/2	Op. Temp	-40°C to +70°C
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


OD9-5	Overview	Electric Data			Mechanical Data	
	860-960MHz Outdoor Dipole Baton	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		860-960	2.0	5.0	Termination	N-Type female
	Applications mMTC, LPWA, Sigfox, LoRaWAN, Weightless-P, Wi-Fi HaLow	Polarization		Linear	Dimension	610xØ38mm
		Wavelength		1/2	Op. Temp	-45°C to +70°C
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


OD9-6	Overview	Electric Data			Mechanical Data	
	860-960MHz Out-door Dipole Baton	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		860-960	2.0	6.0	Termination	N-Type female
	Applications mMTC, LPWA, Sigfox, LoRaWAN, Weightless-P, Wi-Fi HaLow	Polarization		Linear	Dimension	1700xØ38mm
		Wavelength		1/2	Op. Temp	-45°C to +70°C
		Electrical Type		Dipole	Cable Length	457.2mm
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


OD9-8	Overview	Electric Data			Mechanical Data	
	860-960MHz Outdoor Dipole Baton	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		860-960	2.0	8.0	Termination	N-Type female
	Applications mMTC, LPWA, Sigfox, LoRaWAN, Weightless-P, Wi-Fi HaLow	Polarization		Linear	Dimension	2600xØ38mm
		Wavelength		1/2	Op. Temp	-45°C to +70°C
		Electrical Type		Dipole	Cable Length	457.2mm
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


OD9-11D1	Overview	Electric Data			Mechanical Data	
	860-960MHz Outdoor Dipole Baton	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		860-960	1.5	11.0	Termination	N-Type female
	Applications mMTC, LPWA, Sigfox, LoRaWAN, Weightless-P, Wi-Fi HaLow	Polarization		Linear	Dimension	3400x38mm
		Wavelength		1/2	Op. Temp	-45°C to +70°C
		Electrical Type		Dipole		
		Down Tilt		1°		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


OF86315-FNF	Overview	Electric Data			Mechanical Data	
	863-928MHz Outdoor Dipole Baton	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		863-876	1.65	5.3	Termination	N-Type female
		902-928	1.65	5.6	Dimension	629xØ25.4mm
	Applications mMTC, LPWA, Sigfox, LoRaWAN, Weightless-P, Wi-Fi HaLow	Polarization		Linear	Op. Temp	-40°C to +70°C
		Wavelength		1/2	IP Rating	IP67
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		

ANT-5GW-IPW1-NP	Overview	Electric Data			Mechanical Data	
	868 MHz/915 MHz LPWA Outdoor Dipole	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector Mount
		868	1.9	1.2	Termination*	N Plug
		915	2.7	1.6	Dimensions	178.0 mm x Ø25.0 mm
	Applications LoRaWAN, Sigfox, Weightless-P, Wi-Fi HaLow	Polarization		Linear	Op. Temp	-40 °C to +70 °C
		Electrical Type		Dipole	IP Rating	IP67
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


ANT-5GW-IPW3-NP	Overview	Electric Data				Mechanical Data	
	868MHz 915MHz Outdoor Dipole Whip	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Connector mount
		862-876	1.5	3.9	51	Termination	N-Type Plug
		902-930	2.4	5.2	51	Dimension	176.4xØ21mm
	Applications LPWA, LoRaWAN, Sigfox, Weightless-P, Wi-Fi HaLow	Polarization		Linear		Op. Temp	-40°C to +85°C
		Wavelength		1/2		IP Rating	IP67
		Electrical Type		Dipole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


ANT-5GW-IPW2-NP	Overview	Electric Data			Mechanical Data	
	868 MHz/915 MHz LPWA Outdoor Dipole Applications LoRaWAN, Sigfox, Weightless-P, Wi-Fi HaLow	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector Mount
		868	1.9	0.6	Termination*	N Plug
		915	1.7	1.5	Dimensions	132.0 mm x Ø24.0 mm
		Polarization		Linear	Op. Temp	-40 °C to +70 °C
		Electrical Type		Dipole	IP Rating	IP67
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


FG8960	Overview	Electric Data			Mechanical Data	
	896-940MHz Outdoor Fiberglass Dipole Baton Applications mMTC, LPWA, Sigfox, LoRaWAN, Weightless-P, Wi-Fi HaLow	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		896-940	2.0	2.0	Termination	N-Type female
		Polarization		Linear	Dimension	343xØ33mm
		Wavelength		1/2	Op. Temp	-30 °C to +70 °C
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


FG8963	Overview	Electric Data			Mechanical Data	
	896-940MHz Outdoor Fiberglass Dipole Baton Applications mMTC, LPWA, Sigfox, LoRaWAN, Weightless-P, Wi-Fi HaLow	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		896-940	2.0	5.0	Termination	N-Type female
		Polarization		Linear	Dimension	603xØ33mm
		Wavelength		1/2	Op. Temp	-30 °C to +70 °C
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		





FG8966	Overview	Electric Data			Mechanical Data	
	896-940MHz Outdoor Fiberglass Dipole Baton  Applications mMTC, LPWA, Sigfox, LoRaWAN, Weightless-P, Wi-Fi HaLow	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		896-940	2.0	8.0	Termination	N-Type female
		Polarization		Linear	Dimension	1651xØ33mm
		Wavelength		1/2	Op. Temp	-30°C to +70°C
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


S8960B	Overview	Electric Data			Mechanical Data	
	896-960MHz Outdoor Dipole Baton  Applications mMTC, LPWA, Sigfox, LoRaWAN, Weightless-P, Wi-Fi HaLow	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		896-960	1.5	2.0	Termination	N-Type female
					Dimension	445xØ50.8mm
		Polarization		Linear	Op. Temp	-40°C to +70°C
		Wavelength		1/2	Cable Length	304.8mm
		Electrical Type		Dipole	Cable Type	RG-58
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		

S8963B	Overview	Electric Data			Mechanical Data	
	896-960MHz Outdoor Dipole Baton  Applications mMTC, LPWA, Sigfox, LoRaWAN, Weightless-P, Wi-Fi HaLow	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		896-960	1.5	5.0	Termination	N-Type female
					Dimension	780xØ50.8mm
		Polarization		Linear	Op. Temp	-40°C to +70°C
		Wavelength		1/2	Cable Length	304.8mm
		Electrical Type		Dipole	Cable Type	RG-58
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


S8964B	Overview	Electric Data			Mechanical Data	
	896-960MHz Out-door Dipole Baton	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		896-960	1.5	6.0	Termination	N-Type female
	Applications mMTC, LPWA, Sigfox, LoRaWAN, Weightless-P, Wi-Fi HaLow	Polarization		Linear	Dimension	1070xØ50.8
		Wavelength		1/2	Op. Temp	-40°C to +70°C
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


FG9020	Overview	Electric Data			Mechanical Data	
	902-928MHz Outdoor Fiberglass Dipole Baton	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		902-928	2.0	2.0	Termination	N-Type female
	Applications mMTC, LPWA, Sigfox, LoRaWAN, Weightless-P, Wi-Fi HaLow	Polarization		Linear	Dimension	340xØ33mm
		Wavelength		1/2	Op. Temp	-30°C to +70°C
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


FG9023	Overview	Electric Data			Mechanical Data	
	902-928MHz Outdoor Fiberglass Dipole Baton	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		902-928	2.0	5.0	Termination	N-Type female
	Applications mMTC, LPWA, Sigfox, LoRaWAN, Weightless-P, Wi-Fi HaLow	Polarization		Linear	Dimension	587xØ33mm
		Wavelength		1/2	Op. Temp	-30°C to +70°C
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		

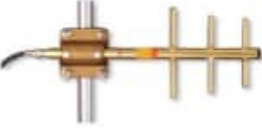
FG9026	Overview	Electric Data			Mechanical Data	
	902-928MHz Outdoor Fiberglass Dipole Baton	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		902-928	1.5	8.0	Termination	N-Type female
	Applications mMTC, LPWA, Sigfox, LoRaWAN, Weightless-P, Wi-Fi HaLow	Polarization		Linear	Dimension	1550xØ33mm
		Wavelength		1/2	Op. Temp	-30°C to +70°C
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


# SUB-1 GHZ - EXTERNAL - INFRASTRUCTURE DIRECTIONAL YAGI ANTENNAS


PC806N	Overview	Electric Data			Mechanical Data	
	806-866MHz Outdoor 6-element Yagi  Applications LTE, ISM, LMR for Public Safety, Sigfox, LoRaWAN, Weightless-P	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		806-866	3.0	10.5	Termination	N-Type female
		Polarization		Linear	Dimension	629mm long
		Electrical Type		Yagi	Op. Temp	-30°C to +70°C
		Radiation Pattern		Directional	Cable Length	483mm
		Impedance (Ohms)		50	Wind Survival	125 mph


PC8010N	Overview	Electric Data			Mechanical Data	
	806-869MHz Outdoor 10-element Yagi  Applications LTE, ISM, LMR for Public Safety, Sigfox, LoRaWAN, Weightless-P	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		806-869	3.0	13.0	Termination	N-Type female
		Polarization		Linear	Dimension	1168mm long
		Electrical Type		Yagi	Op. Temp	-30°C to +70°C
		Radiation Pattern		Directional	Cable Length	483mm
		Impedance (Ohms)		50	Wind Survival	125 mph

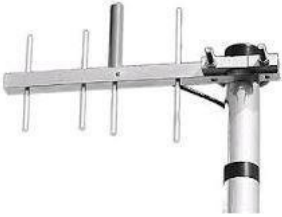
YS8063	Overview	Electric Data			Mechanical Data	
	806-896MHz Outdoor 3-element Yagi  Applications LTE, ISM, LMR for Public Safety, Sigfox, LoRaWAN, Weightless-P	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		806-896	2.0	8.0	Termination	N-Type female
		Polarization		Linear	Dimension	425.5mm long
		Electrical Type		Yagi	Op. Temp	-50°C to +85°C
		Radiation Pattern		Directional	Wind Survival	150mph
		Impedance (Ohms)		50		


Y8063 YB8063-L (Black)	Overview	Electric Data			Mechanical Data	
	806-896MHz Outdoor 3-element Yagi  Applications LTE, ISM, LMR for Public Safety, Sigfox, LoRaWAN, Weightless-P	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		806-896	2.0	8.15	Termination	N-Type female
		Polarization		Linear	Dimension	425mm long
		Electrical Type		Yagi	Op. Temp	-30°C to +70°C
		Radiation Pattern		Directional	Wind Survival	100 mph
		Impedance (Ohms)		50		


YS8066	Overview	Electric Data			Mechanical Data	
	806-896MHz Out-door 6-element Yagi  Applications LTE, ISM, LMR for Public Safety, Sig-fox, LoRaWAN, Weightless-P	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		806-896	2.0	11.0	Termination	N-Type female
		Polarization		Linear	Dimension	425.5mm long
		Electrical Type		Yagi	Op. Temp	-50°C to +85°C
		Radiation Pattern		Directional	Wind Survival	150mph
		Impedance (Ohms)		50		


Y80612	Overview	Electric Data			Mechanical Data	
	806-896MHz Outdoor 12-element Yagi  Applications LTE, ISM, LMR for Public Safety, Sigfox, LoRaWAN, Weightless-P	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		806-896	2.0	13.0	Termination	N-Type female
		Polarization		Linear	Dimension	1242mm long
		Electrical Type		Yagi	Op. Temp	-30°C to +70°C
		Radiation Pattern		Directional		
		Impedance (Ohms)		50		


Y8066 YB8066-L (Black)	Overview	Electric Data			Mechanical Data	
	806-896MHz Outdoor 6-element Yagi  Applications LTE, ISM, LMR for Public Safety, Sigfox, LoRaWAN, Weightless-P	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		806-896	2.0	11.0	Termination	N-Type female
		Polarization		Linear	Dimension	703mm long
		Electrical Type		Yagi	Op. Temp	-30°C to +70°C
		Radiation Pattern		Directional	Wind Survival	150 mph
		Impedance (Ohms)		50		


PC804N PC804SMM96	Overview	Electric Data			Mechanical Data	
	806-902MHz Outdoor 4-element Yagi  Applications LTE, ISM, LMR for Public Safety, Sigfox, LoRaWAN, Weightless-P	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		806-902	2.0	8.0	Termination	N-Type female
						SMA male
		Polarization		Linear	Dimension	330mm long
		Electrical Type		Yagi	Op. Temp	-30°C to +70°C
		Radiation Pattern		Directional	Cable Length	483mm
		Impedance (Ohms)		50	Wind Survival	125 mph


PC8910N	Overview	Electric Data			Mechanical Data	
	806-869MHz Outdoor 10-element Yagi  Applications LTE, ISM, LMR for Public Safety, Sigfox, LoRaWAN, Weightless-P	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		896-940	2.0	13.0	Termination	N-Type female
		Polarization		Linear	Dimension	1052mm long
		Electrical Type		Yagi	Op. Temp	-30°C to +70°C
		Radiation Pattern		Directional	Cable Length	483mm
		Impedance (Ohms)		50	Wind Survival	125 mph


PC906N	Overview	Electric Data			Mechanical Data	
	896-940MHz Outdoor 6-element Yagi  Applications LTE, ISM, LMR for Public Safety, Sigfox, LoRaWAN, Weightless-P	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		896-940	2.0	8.5	Termination	N-Type female
		Polarization		Linear	Dimension	629mm long
		Electrical Type		Yagi	Op. Temp	-30°C to +70°C
		Radiation Pattern		Directional	Cable Length	483mm
		Impedance (Ohms)		50	Wind Survival	125 mph

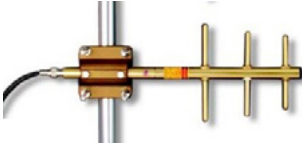
YA9-13	Overview	Electric Data			Mechanical Data	
	860-960MHz Outdoor 15-element Yagi  Applications LTE, ISM, LMR for Public Safety, Sigfox, LoRaWAN, Weightless-P	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		860-960	1.5	13.0	Termination	N-Type female
		Polarization		Linear	Dimension	1450mm long
		Electrical Type		Yagi	Op. Temp	-45°C to +70°C
		Radiation Pattern		Directional	Wind Survival	125mph
		Impedance (Ohms)		50		


YA9-11	Overview	Electric Data			Mechanical Data	
	860-960MHz Outdoor 8-element Yagi  Applications LTE, ISM, LMR for Public Safety, Sigfox, LoRaWAN, Weightless-P	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		860-960	1.5	11.0	Termination	N-Type female
		Polarization		Linear	Dimension	900mm long
		Electrical Type		Yagi	Op. Temp	-45°C to +70°C
		Radiation Pattern		Directional	Wind Survival	125mph
		Impedance (Ohms)		50		

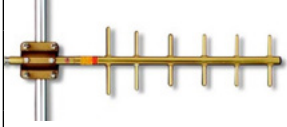
YA9-9	Overview	Electric Data			Mechanical Data	
	860-960MHz Outdoor 5-element Yagi Applications LTE, ISM, LMR for Public Safety, Sigfox, LoRaWAN, Weightless-P	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		860-960	1.5	9.0	Termination	N-Type female
		Polarization		Linear	Dimension	500mm long
		Electrical Type		Yagi	Op. Temp	-45°C to +70°C
		Radiation Pattern		Directional	Cable Length	457mm
		Impedance (Ohms)		50	Wind Survival	125mph


YF880012-61NF	Overview	Electric Data			Mechanical Data	
	880-960MHz Outdoor 7-element Yagi Applications LTE, ISM, LMR for Public Safety, Sigfox, LoRaWAN, Weightless-P	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		880-960	1.5	12.2	Termination	N-Type female
		Polarization		Linear	Dimension	610mm long
		Electrical Type		Yagi	Op. Temp	-30°C to +70°C
		Radiation Pattern		Directional	Cable Length	610mm
		Impedance (Ohms)		50	Cable Type	RG213
					Wind Survival	136mph


YF88008-61NF	Overview	Electric Data			Mechanical Data	
	880-960MHz Outdoor 3-element Yagi Applications LTE, ISM, LMR for Public Safety, Sigfox, LoRaWAN, Weightless-P	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		880-960	1.5	8.1	Termination	N-Type female
		Polarization		Linear	Dimension	305mm long
		Electrical Type		Yagi	Op. Temp	-30°C to +70°C
		Radiation Pattern		Directional	Cable Length	610mm
		Impedance (Ohms)		50	Cable Type	RG213
					Wind Survival	136mph


Y8963	Overview	Electric Data			Mechanical Data	
	896-970MHz Outdoor 3-element Yagi Applications LTE, ISM, LMR for Public Safety, Sigfox, LoRaWAN, Weightless-P	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		896-970	2.0	8.0	Termination	N-Type female
		Polarization		Linear	Dimension	425mm long
		Electrical Type		Yagi	Op. Temp	-30°C to +70°C
		Radiation Pattern		Directional	Wind Survival	150 mph
		Impedance (Ohms)		50		


YS8963	Overview	Electric Data			Mechanical Data	
	896-970MHz Outdoor 3-element Yagi  Applications LTE, ISM, LMR for Public Safety, Sigfox, LoRaWAN, Weightless-P	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		896-970	2.0	8.0	Termination	N-Type female
		Polarization		Linear	Dimension	425.5mm long
		Electrical Type		Yagi	Op. Temp	-30°C to +70°C
		Radiation Pattern		Directional	Wind Survival	150mph
		Impedance (Ohms)		50		


Y8966 YB8966-L (Black)	Overview	Electric Data			Mechanical Data	
	896-970MHz Outdoor 6-element Yagi  Applications LTE, ISM, LMR for Public Safety, Sigfox, LoRaWAN, Weightless-P	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		896-970	2.0	9.0	Termination	N-Type female
		Polarization		Linear	Dimension	703mm long
		Electrical Type		Yagi	Op. Temp	-30°C to +70°C
		Radiation Pattern		Directional	Wind Survival	150 mph
		Impedance (Ohms)		50		


YS8966	Overview	Electric Data			Mechanical Data	
	896-970MHz Outdoor 6-element Yagi  Applications LTE, ISM, LMR for Public Safety, Sigfox, LoRaWAN, Weightless-P	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		896-970	3.0	9.0	Termination	N-Type female
		Polarization		Linear	Dimension	704.9mm long
		Electrical Type		Yagi	Op. Temp	-30°C to +70°C
		Radiation Pattern		Directional	Wind Survival	150mph
		Impedance (Ohms)		50		

Y89612	Overview	Electric Data			Mechanical Data	
	896-970MHz Outdoor 12-element Yagi  Applications LTE, ISM, LMR for Public Safety, Sigfox, LoRaWAN, Weightless-P	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		896-970	2.0	11.0	Termination	N-Type female
		Polarization		Linear	Dimension	1245mm long
		Electrical Type		Yagi	Op. Temp	-30°C to +70°C
		Radiation Pattern		Directional	Wind Survival	100 mph
		Impedance (Ohms)		50		

YS89612	Overview	Electric Data			Mechanical Data	
	896-970MHz Outdoor 12-element Yagi  Applications LTE, ISM, LMR for Public Safety, Sigfox, LoRaWAN, Weightless-P	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		896-970	3.0	13.0	Termination	N-Type female
		Polarization		Linear	Dimension	1829mm long
		Electrical Type		Yagi	Op. Temp	-30°C to +70°C
		Radiation Pattern		Directional	Wind Survival	150mph
		Impedance (Ohms)		50		


PC904N	Overview	Electric Data			Mechanical Data	
	896-980MHz Outdoor 4-element Yagi  Applications LTE, ISM, LMR for Public Safety, Sigfox, LoRaWAN, Weightless-P	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		896-980	3.0	8.0	Termination	N-Type female
		Polarization		Linear	Dimension	330mm long
		Electrical Type		Yagi	Op. Temp	-30°C to +70°C
		Radiation Pattern		Directional	Cable Length	483mm
		Impedance (Ohms)		50	Wind Survival	125 mph


PC9013N	Overview	Electric Data			Mechanical Data	
	902-928MHz Outdoor 13-element Yagi  Applications LTE, ISM, LMR for Public Safety, Sigfox, LoRaWAN, Weightless-P	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		902-928	3.0	13.0	Termination	N-Type female
		Polarization		Linear	Dimension	1359mm long
		Electrical Type		Yagi	Op. Temp	-30°C to +70°C
		Radiation Pattern		Directional	Cable Length	483mm
		Impedance (Ohms)		50	Wind Survival	125 mph


PC9010N	Overview	Electric Data			Mechanical Data	
	928-960MHz Outdoor 10-element Yagi  Applications LTE, ISM, LMR for Public Safety, Sigfox, LoRaWAN, Weightless-P	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		928-960	3.0	12.0	Termination	N-Type female
		Polarization		Linear	Dimension	1168mm long
		Electrical Type		Yagi	Op. Temp	-30°C to +70°C
		Radiation Pattern		Directional	Cable Length	483mm
		Impedance (Ohms)		50	Wind Survival	125 mph





# SUB-1 GHZ - EXTERNAL - INFRASTRUCTURE DIRECTIONAL PANEL ANTENNAS


S8658PL12NF S8658PR12NF	Overview	Electric Data			Mechanical Data	
	865-868MHz Panel Antenna	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Wall/Ceiling Mount
	Applications	865 - 868	1.4	8.5	Termination	N-Type female
	ISM, RFID, LPWA, LoRaWAN, Sigfox, Weightless-P, Wi-Fi HaLow	Polarization*		RHCP or LHCP	Dimension	259x259x34
		Radiation Pattern		Directional	Op. Temp	-30°C to +70°C
		Impedance (Ohms)		50	IP Rating	IP54


S8655P-*	Overview	Electric Data			Mechanical Data	
	865-870MHz Panel Antenna	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Wall/Ceiling Mount
	Applications	865 - 870	1.5	5.0	Termination*	N-Type female
	ISM, RFID, LPWA, LoRaWAN, Sigfox, Weightless-P, Wi-Fi HaLow					SMA female
						RP-SMA female
						RP-TNC
		Polarization*		RHCP or LHCP	Dimension	132x132x18
		Radiation Pattern		Directional	Op. Temp	-30°C to +70°C
		Impedance (Ohms)		50	IP Rating	IP67


S8656XRRN	Overview	Electric Data			Mechanical Data	
	865-870MHz Panel Antenna	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Wall/Ceiling Mount
	Applications	865 - 870	1.5	6.0	Termination	N-Type female
	ISM, RFID, LPWA, LoRaWAN, Sigfox, Weightless-P, Wi-Fi HaLow	Polarization*		RHCP	Dimension	193x193x25
		Radiation Pattern		Directional	Op. Temp	-30°C to +70°C
		Impedance (Ohms)		50	IP Rating	IP67


PAL86518H-FNF PAR86518H-FNF	Overview	Electric Data			Mechanical Data	
	865-956MHz Wideband Outdoor Monopole Flat Panel	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Wall/Ceiling Mount
	Applications	865 - 956	1.5	8.5	Termination	N-Type female
	ISM, RFID, LPWA, LoRaWAN, Sigfox, Weightless-P, Wi-Fi HaLow	Polarization*		RHCP or LHCP	Dimension	259x259x34
		Radiation Pattern		Directional	Op. Temp	-25°C to +70°C
		Impedance (Ohms)		50	IP Rating	IP67


S8658WPL12NF S8658WPR12NF	Overview	Electric Data			Mechanical Data	
	865-960MHz Wideband Outdoor Monopole Flat Panel  Applications ISM, RFID, LPWA LoRaWAN, Sigfox, Weightless-P, Wi- Fi HaLow	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Wall/Ceiling Mount
		865 - 960	1.4	8.5	Termination	N-Type female
		Polarization*		RHCP or LHCP	Dimension	259x259x34
		Radiation Pattern		Directional	Op. Temp	-30°C to +70°C
		Impedance (Ohms)		50	IP Rating	IP54


S9025P-*	Overview	Electric Data			Mechanical Data	
	902-928MHz Mini Outdoor Monopole Flat Panel  Applications ISM, RFID, LPWA LoRaWAN, Sigfox, Weightless-P, Wi- Fi HaLow	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Wall/Ceiling Mount
		902-928	1.5	5.5	Termination*	N-Type female
						RP-TNC female
						RP-SMA female
						SMA female
		Polarization*		RHCP or LHCP	Dimension	132x132x18
		Radiation Pattern		Directional	Op. Temp	-30°C to +70°C
		Impedance (Ohms)		50	IP Rating	IP67


S9026XRRN	Overview	Electric Data			Mechanical Data	
	902-928MHz Outdoor Monopole Flat Panel  Applications ISM, RFID, LPWA LoRaWAN, Sigfox, Weightless-P, Wi- Fi HaLow	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Wall/Ceiling Mount
		902-928	1.5	6.0	Termination	N-Type female
		Polarization*		RHCP	Dimension	193x193x24
		Radiation Pattern		Directional	Op. Temp	-30°C to +70°C
		Impedance (Ohms)		50	IP Rating	IP67


PA9-12	Overview	Electric Data			Mechanical Data	
	900-928MHz Wideband Outdoor Monopole Flat Panel  Applications ISM, RFID, LPWA LoRaWAN, Sigfox, Weightless-P, Wi- Fi HaLow	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Wall/Ceiling Mount
		900-928	1.5	12.0	Termination	N-Type female
		Polarization		Linear	Dimension	411x373x36
		Radiation Pattern		Directional	Op. Temp	-30°C to +70°C
		Impedance (Ohms)		50	IP Rating	IP67

PNL90206BC-183SMAM	Overview	Electric Data			Mechanical Data	
	902-928MHz UHF Near Field Outdoor Monopole Flat Panel  Applications ISM, RFID, LPWA LoRaWAN, Sigfox, Weightless-P, Wi- Fi HaLow	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Wall/Ceiling Mount
		902-928	1.5	6.0	Termination	SMA male
		Polarization*		LHCP or Dual Slant	Dimension	261x261x66
		Radiation Pattern		Directional	Op. Temp	-20 °C to +60 °C
		Impedance (Ohms)		50	Cable Length*	283mm


S9028P-*	Overview	Electric Data			Mechanical Data	
	902-928MHz Outdoor Monopole Flat Panel  Applications ISM, RFID, LPWA LoRaWAN, Sigfox, Weightless-P, Wi- Fi HaLow	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Wall/Ceiling Mount
		902-928	1.5	8.0	Termination	N-Type female
		Polarization*		RHCP or LHCP	Dimension	203x305x51
		Radiation Pattern		Directional	Op. Temp	-30 °C to +70 °C
		Impedance (Ohms)		50	IP Rating	IP67

PAV90209H-FNF	Overview	Electric Data			Mechanical Data	
	902-928MHz Wideband Outdoor Monopole Flat Panel  Applications ISM, RFID, LPWA LoRaWAN, Sigfox, Weightless-P, Wi- Fi HaLow	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Wall/Ceiling Mount
		902-928	1.3	9.0	Termination	N-Type female
		Polarization*		Linear	Dimension	259x259x34
		Radiation Pattern		Directional	Op. Temp	-40 °C to +85 °C
		Impedance (Ohms)		50	IP Rating	IP67


PAL90209H-FNF	Overview	Electric Data			Mechanical Data	
	902-928MHz Wideband Outdoor Monopole Flat Panel  Applications ISM, RFID, LPWA LoRaWAN, Sigfox, Weightless-P, Wi- Fi HaLow	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Wall/Ceiling Mount
		902-928	1.3	9.0	Termination	N-Type female
		Polarization*		LHCP	Dimension	259x259x34
		Radiation Pattern		Directional	Op. Temp	-40 °C to +70 °C
		Impedance (Ohms)		50	IP Rating	IP67

PAL902010-FNF	Overview	Electric Data			Mechanical Data	
	902-928MHz Wideband Outdoor Monopole Flat Panel  Applications ISM, RFID, LPWA LoRaWAN, Sigfox, Weightless-P, Wi-Fi HaLow	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Wall/Ceiling Mount
		902-928	1.5	9.6	Termination	N-Type female
		Polarization*		LHCP	Dimension	305x305x34
		Radiation Pattern		Directional	Op. Temp	-40°C to +70°C
		Impedance (Ohms)		50	IP Rating	IP67


# WI-FI / WLAN - INTERNAL SURFACE MOUNT ANTENNAS

1513353-1	Overview	Electric Data				Mechanical Data	
	Wi-Fi/WLAN 2.4GHz Monopole Tabbed PCB  Applications Wi-Fi 4, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Surface Mount
		2400-2483	2.0	2.0	80	Termination	Solder pad
		Polarization		Linear		Dimension	12.7x12.7x0.78
		Electrical Type		Monopole		Op. Temp	-40°C to +85°C
		Radiation Pattern		Omnidirectional		Ground Plane	30mm
		Impedance (Ohms)		50			


  


2108790-1*	Overview	Electric Data				Mechanical Data	
	Wi-Fi/WLAN 2.4GHz Monopole PCB chip  Applications Wi-Fi 4, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Surface Mount
		2400-2483	2.0	0.4	60	Termination	Solder pad
						Dimension	18.9x6.2x0.76
		Polarization		Linear		Op. Temp	-40°C to +85°C
		Electrical Type		Monopole		Ground Plane	29x37mm
		Radiation Pattern		Omnidirectional		Packaging	*-1 Bulk
		Impedance (Ohms)		50			*-2 T&R


  


2108789-1*	Overview	Electric Data				Mechanical Data	
	Wi-Fi/WLAN 2.4GHz Monopole PCB chip  Applications Wi-Fi 4, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Surface Mount
		2400-2483	1.8	1.0	60	Termination	Solder pad
						Dimension	8.45x6.4x0.79
		Polarization		Linear		Op. Temp	-40°C to +85°C
		Electrical Type		Monopole		Ground Plane	29x27mm
		Radiation Pattern		Omnidirectional		Packaging*	*-1 Bulk
		Impedance (Ohms)		50			*-2 T&R


  


1513430-1*	Overview	Electric Data				Mechanical Data	
	Wi-Fi/WLAN 2.4GHz Monopole PCB chip  Applications Wi-Fi 4, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Surface Mount
		2400-2483	2.0	0	65	Termination	Solder pad
						Dimension	12.9x3.76x0.79
		Polarization		Linear		Op. Temp	-40°C to +85°C
		Electrical Type		Monopole		Ground Plane	30x35mm
		Radiation Pattern		Omnidirectional		Packaging*	*-1 T&R
		Impedance (Ohms)		50			*-2 Bulk


1513431-1*	Overview	Electric Data				Mechanical Data	
	Wi-Fi/WLAN 2.4GHz Monopole PCB chip  Applications Wi-Fi 4, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Surface Mount
		2400-2483	2.0	0	65	Termination	Solder pad
						Dimension	12.9x3.76x0.79
		Polarization		Linear		Op. Temp	-40°C to +85°C
		Electrical Type		Monopole		Ground Plane	30x35mm
		Radiation Pattern		Omnidirectional		Packaging*	*-1 T&R
		Impedance (Ohms)		50			*-2 Bulk


1513504-1	Overview	Electric Data				Mechanical Data	
	Wi-Fi/WLAN Monopole Over-molded Stamped Metal  Applications U-NII, 802.11, Bluetooth, Zigbee	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Surface Mount
		2400-2483.5	2.5	2.0	70	Termination	Solder pad
		Polarization		Linear		Dimension	16x16x6mm
		Electrical Type		Monopole		Op. Temp	-40°C to +85°C
		Radiation Pattern		Omnidirectional		Ground Plane	35mm
		Impedance (Ohms)		50		Packaging	Tape & Reel

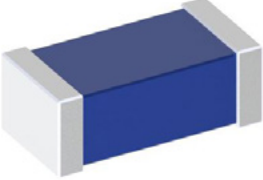
2118908-2*	Overview	Electric Data				Mechanical Data	
	Wi-Fi/WLAN Tri-Band Monopole PCB chip  Applications Wi-Fi7, Wi-Fi 6E, Wi-Fi 6, Wi-Fi 5, Wi-Fi 4, U-NII, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Surface Mount
		2400-2500	2.0	2.3	80	Termination	Solder pad
		5150-5875	2.5	2.8	85	Dimension	18.9x6.2x0.76
		5925-7125	2.5	2.3	80	Op. Temp	-40°C to +85°C
		Polarization		Linear		Ground Plane	35x33mm
		Electrical Type		Monopole		Packaging	*-1 Bulk
		Radiation Pattern		Omnidirectional			*-2 T&R
		Impedance (Ohms)		50			

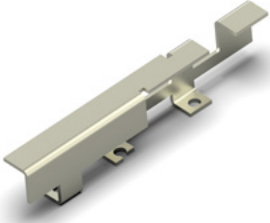
2108891-1	Overview	Electric Data				Mechanical Data	
	Wi-Fi/WLAN Tri-Band Monopole Tabbed PCB  Applications Wi-Fi7, Wi-Fi 6E, Wi-Fi 6, Wi-Fi 5, Wi-Fi 4, U-NII, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Surface Mount
		2400-2500	2.0	1.3	60	Termination	Solder pad
		5150-5875	2.0	3.4	59	Dimension	30x10x0.78mm
		5925-7125	2.0	4.3	62	Op. Temp	-40°C to +85°C
		Polarization		Linear		Ground Plane	29.5x29mm
		Electrical Type		Monopole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			

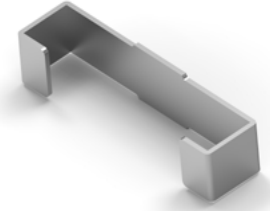
ANT-W63-MSA-TH1	Overview	Electric Data				Mechanical Data	
	Wi-Fi/WLAN Multi-band Stamped Metal Monopole  Applications Wi-Fi 6E, Wi-Fi 6, Wi-Fi 5, Wi-Fi 4, U-NII, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Through-hole
		2400 -2500	2.9	3.5	54	Termination*	Solder Pin
		5150 - 5895	1.9	3.8	61	Dimensions	15.0 mm x 17.2 mm x 9.8 mm
		5950 - 7125	3.2	3.8	55	Op. Temp	-40 °C to +85 °C
		Polarization		Linear		Ground Plane	40 mm x 50 mm
		Wavelength		1/4			
		Electrical Type		Monopole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


ANT-DB1-nSP250-T	Overview	Electric Data				Mechanical Data	
	Wi-Fi/WLAN Dual-Band Monopole Chip  Applications Wi-Fi 5, Wi-Fi 4, U-NII, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Surface Mount
		2400-2500	2.0	2.7	65	Termination	Solder pad
		5150-5725	2.2	4.3	60	Dimensions	9.6 mm x 8.4 mm x 1.1 mm
		5725-5850	2.4	3.7	70	Op. Temp	-40 °C to +130 °C
		Polarization		Linear		Ground Plane	40 mm x 20 mm
		Electrical Type		Monopole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			

1513164-1	Overview	Electric Data				Mechanical Data	
	Wi-Fi/WLAN Dual-Band Monopole Over-molded Stamped Metal  Applications Wi-Fi 6, Wi-Fi 5, Wi-Fi 4, U-NII, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Surface Mount
		2400-2483	2.5	1.0	55	Termination	Solder pad
		5150-5875	2.5	4.0	70	Dimension	16x16x6mm
		Polarization		Linear		Op. Temp	-40°C to +85°C
		Electrical Type		Monopole		Ground Plane	35mm
		Radiation Pattern		Omnidirectional		Packaging	Tape & Reel
		Impedance (Ohms)		50			


2108838-1	Overview	Electric Data				Mechanical Data	
	Wi-Fi/WLAN Single-Band Monopole Ceramic Chip  Applications Wi-Fi 4, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Surface Mount
		2400-2483	2.0	2.4	57%	Termination	Solder pad
		Polarization		Linear		Dimension	3.2x1.6x1.2mm
		Electrical Type		Monopole		Op. Temp	-40°C to +85°C
		Radiation Pattern		Omnidirectional		Ground Plane	10x30mm
		Impedance (Ohms)		50		Packaging	Tape & Reel

2108517-2	Overview	Electric Data				Mechanical Data	
	Wi-Fi/WLAN Dual-Band Monopole Stamped Metal  Applications Wi-Fi 6, Wi-Fi 5, Wi-Fi 4, U-NII, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Surface Mount
		2400-2500	2.5	3.0	60	Termination	Solder pad
		4900-5875	2.5	3.0	58	Dimension	22.75x2.4x4.8
		Polarization		Linear		Op. Temp	-40°C to +85°C
		Electrical Type		Monopole		Ground Plane	
		Radiation Pattern		Omnidirectional		Packaging*	Tape & Reel
		Impedance (Ohms)		50			


2108964-1	Overview	Electric Data				Mechanical Data	
	Wi-Fi/WLAN Dual-Band Monopole Stamped Metal  Applications Wi-Fi 6, Wi-Fi 5, Wi-Fi 4, U-NII, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Surface Mount
		2400-2500	2.0	2.7	55	Termination	Solder pad
		4900-5875	2.0	4.3	50	Dimension	10x2.5x2.5mm
		Polarization		Linear		Op. Temp	-40°C to +85°C
		Electrical Type		Monopole		Ground Plane	35mm
		Radiation Pattern		Omnidirectional		Packaging	Tape & Reel
		Impedance (Ohms)		50			

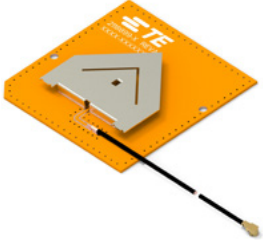
2108832-1	Overview	Electric Data				Mechanical Data	
	Wi-Fi/WLAN Single-Band Monopole Ceramic Chip  Applications Wi-Fi 4, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Surface Mount
		2400-2500	2.8	1.8	82%	Termination	Solder pad
		Polarization		Linear		Dimension	3.0x1.5x1.2mm
		Electrical Type		Monopole		Op. Temp	-40°C to +85°C
		Radiation Pattern		Omnidirectional		Ground Plane	10x30mm
		Impedance (Ohms)		50		Packaging	Tape & Reel





2118316-1	Overview	Electric Data				Mechanical Data	
	Wi-Fi/WLAN Dual-Band Monopole Stamped Metal  Applications Wi-Fi 6, Wi-Fi 5, Wi-Fi 4, U-NII, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Surface Mount
		4900-5875	2.5	4.9	80	Termination	Solder pad
		Polarization		Linear		Dimension	11x4.3x4.9 mm
		Electrical Type		Monopole		Op. Temp	-40°C to +85°C
		Radiation Pattern		Omnidirectional		Packaging*	Tape & Reel
		Impedance (Ohms)		50			Tray


## Wi-Fi / WLAN - INTERNAL FPC ANTENNAS


2108937-2*	Overview	Electric Data				Mechanical Data	
	Wi-Fi/WLAN Tri-Band and GNSS Dipole Flexible Patch FPC  Applications GNSS, Wi-Fi7, Wi-Fi 6E, Wi-Fi 6, Wi-Fi 5, Wi-Fi 4, U-NII, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Adhesive Mount
		1559-1610	1.7	1.2	61	Termination	U.FL-Type plug
		2400-2500	1.6	0.4	59	Dimension	50.0x15.0x0.15
		5150-5875	1.8	0.6	49	Op. Temp	-40°C to +85°C
		5925-7125	1.4	4.2	48	Cable Length*	100 mm
		Polarization		Linear			50 mm
		Wavelength		1/2			150 mm
		Electrical Type		Dipole			200 mm
		Radiation Pattern		Omnidirectional		Cable Type	1.13mm
		Impedance (Ohms)		50			

2118899-1*	Overview	Electric Data				Mechanical Data	
	Slim Dual Band Wi-Fi & Bluetooth  Applications Wi-Fi 5, Wi-Fi 4, U-NII, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Adhesive Mount
		1559-1610	1.7	1.2	61	Termination	MHF-Type plug
		2400-2500	1.6	0.4	59		MHF4L-Type plug
						Dimension	54.5x54.5x3.8 mm
		Polarization		Linear			-40°C to +85°C
		Electrical Type		Dipole		Cable Length*	278 mm
		Radiation Pattern		Omnidirectional			480 mm
		Impedance (Ohms)		50		Cable Type	1.13mm


2344657-2*	Overview	Electric Data				Mechanical Data	
	<p>Wi-Fi/WLAN Tri-Band Dipole Flexible Patch FPC</p> <p>Applications Wi-Fi7, Wi-Fi 6E, Wi-Fi 6, Wi-Fi 5, Wi-Fi 4, U-NII, 802.11, Bluetooth, Zigbee, 802.15.4</p>	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Adhesive
		2400-2500	2.7	1.1	61	Termination*	U.FL-Type plug
		5150-5875	2.1	4.9	72		MHF4 plug
		5925-7125	2.1	5.3	66	Dimension	35.0x8.0x0.2
						Op. Temp	-40°C to +85°C
						Cable Length*	100 mm
							50 mm
		Polarization		Linear			150 mm
		Wavelength		1/2			200 mm
		Electrical Type		Dipole			250 mm
		Radiation Pattern		Omnidirectional		Cable Type*	1.13mm
		Impedance (Ohms)		50			0.81mm


2108792-2*	Overview	Electric Data				Mechanical Data	
	<p>Wi-Fi/WLAN Tri-Band Dipole Flexible Patch FPC</p> <p>Applications Wi-Fi7, Wi-Fi 6E, Wi-Fi 6, Wi-Fi 5, Wi-Fi 4, U-NII, 802.11, Bluetooth, Zigbee, 802.15.4</p>	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Adhesive
		2400-2500	2.1	4.9	73	Termination*	U.FL-Type plug
		5150-5875	2.1	3.5	62		MHF4 plug
		5925-7125	1.7	4.5	69	Dimension	40.0x10.0x0.12
						Op. Temp	-40°C to +85°C
						Cable Length*	50 mm
		Polarization		Linear			100 mm
		Wavelength		1/2			112 mm
		Electrical Type		Dipole			150 mm
		Radiation Pattern		Omnidirectional			200 mm
		Impedance (Ohms)		50		Cable Type	1.13mm


ANT-W63-FPC-UFL-100	Overview	Electric Data				Mechanical Data	
	Wi-Fi/WLAN Multi-band Dipole Flexible Patch  Applications Wi-Fi 6E, Wi-Fi 6, Wi-Fi 5, Wi-Fi 4, U-NII, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Adhesive Mount
		2400 - 2485	1.2	6.1	80	Termination	U.FL-Type Plug
		5150 - 5850	3.3	6.1	74	Dimensions	110.0 mm x 20.0 mm x 0.2 mm
		5925 - 7125	2.6	6.9	69	Op. Temp	-40 °C to +85 °C
		Polarization		Linear		Cable Length	110.0 mm
		Wavelength		1/2		Cable Type	1.13 mm
		Electrical Type		Dipole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


2344656-2*	Overview	Electric Data				Mechanical Data	
	Wi-Fi/WLAN Dual-Band Dipole Flexible Patch FPC  Applications Wi-Fi 6, Wi-Fi 5, Wi-Fi 4, U-NII, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Adhesive
		2400-2500	2.0	2.5	80	Termination*	U.FL-Type plug
		5150-5875	2.0	7.0	80		MHF4 plug
						Dimension	30.0x9.5x0.2
						Op. Temp	-40 °C to +85 °C
						Cable Length*	100 mm
		Polarization		Linear			50 mm
		Wavelength		1/2			150 mm
		Electrical Type		Dipole			200 mm
		Radiation Pattern		Omnidirectional		Cable Type*	1.13mm
		Impedance (Ohms)		50			0.81mm


# Wi-Fi / WLAN - INTERNAL RIGID PCB ANTENNAS


2118907-2*	Overview	Electric Data				Mechanical Data	
	Wi-Fi/WLAN Tri-Band Dipole Rigid Patch PCB  Applications Wi-Fi7, Wi-Fi 6E, Wi-Fi 6, Wi-Fi 5, Wi-Fi 4, U-NII, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Adhesive Mount
		2400-2500	1.4	3.0	82	Termination*	U.FL-Type plug
		5150-5875	1.6	3.1	73		MHF4 plug
		5925-7125	1.9	3.5	75	Dimension	29.6x41.2x0.34
						Op. Temp	-40°C to +85°C
						Cable Length*	50 mm
		Polarization		Linear			100 mm
		Wavelength		1/2			115 mm
		Electrical Type		Dipole			150 mm
		Radiation Pattern		Omnidirectional			200 mm
		Impedance (Ohms)		50		Cable Type*	1.13mm
							1.37mm


1-2118909-2*	Overview	Electric Data				Mechanical Data	
	Wi-Fi/WLAN Tri-Band Dipole Rigid Patch PCB  Applications Wi-Fi7, Wi-Fi 6E, Wi-Fi 6, Wi-Fi 5, Wi-Fi 4, U-NII, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Adhesive Mount
		2400-2500	1.9	4.3	80	Termination*	U.FL-Type plug
		5150-5875	1.8	4.3	69		MHF plug
		5925-7125	2.2	5.0	66	Dimension	40x8x1.0mm
						Op. Temp	-40°C to +85°C
		Polarization		Linear		Cable Length*	100 mm
		Wavelength		1/2			50 mm
		Electrical Type		Dipole			150 mm
		Radiation Pattern		Omnidirectional			200 mm
		Impedance (Ohms)		50		Cable Type*	1.13mm


2108857-2*	Overview	Electric Data				Mechanical Data	
	Wi-Fi/WLAN Tri-Band Dipole Rigid Patch PCB  Applications Wi-Fi7, Wi-Fi 6E, Wi-Fi 6, Wi-Fi 5, Wi-Fi 4, U-NII, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Adhesive Mount
		2400-2500	2.0	2.5	71	Termination*	U.FL-Type plug
		5150-5875	2.2	4.6	71		MHF4 plug
		5925-7125	2.0	5.0	77	Dimension	30x7x0.78mm
						Op. Temp	-40°C to +85°C
						Cable Length*	100 mm
		Polarization		Linear			50 mm
		Wavelength		1/2			150 mm
		Electrical Type		Dipole			200 mm
		Radiation Pattern		Omnidirectional		Cable Type*	1.37mm
		Impedance (Ohms)		50			0.81mm


2108858-2*	Overview	Electric Data				Mechanical Data	
	Wi-Fi/WLAN Tri-Band Dipole Rigid Patch PCB  Applications Wi-Fi7, Wi-Fi 6E, Wi-Fi 6, Wi-Fi 5, Wi-Fi 4, U-NII, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Adhesive Mount
		2400-2500	2.7	0.7	55	Termination*	U.FL-Type plug
		5150-5875	2.5	4.4	63		MHF4 plug
		5925-7125	2.5	4.4	55	Dimension	32x7x0.78mm
						Op. Temp	-40°C to +85°C
						Cable Length*	100 mm
		Polarization		Linear			50 mm
		Wavelength		1/2			150 mm
		Electrical Type		Dipole			200 mm
		Radiation Pattern		Omnidirectional		Cable Type*	1.37 mm
		Impedance (Ohms)		50			0.81 mm


2344655-2*	Overview	Electric Data				Mechanical Data	
	Wi-Fi/WLAN Tri-Band Dipole Rigid Patch PCB  Applications Wi-Fi 7, Wi-Fi 6E, Wi-Fi 6, Wi-Fi 5, Wi-Fi 4, U-NII, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Adhesive Mount
		2400-2500	2.7	1.4	62	Termination*	U.FL-Type plug
		5150-5875	1.8	3.7	78		MHF4 plug
		5925-7125	1.8	5.9	75	Dimension	33x8x1.0mm
						Op. Temp	-40°C to +85°C
						Cable Length*	100 mm
		Polarization		Linear			50 mm
		Wavelength		1/2			150 mm
		Electrical Type		Dipole			200 mm
		Radiation Pattern		Omnidirectional		Cable Type*	1.13 mm
		Impedance (Ohms)		50			0.81 mm


ANT-W63-FPC-LH*	Overview	Electric Data				Mechanical Data	
	Wi-Fi/WLAN Multi-band Dipole Flexible Patch Orthogonal Cable  Applications Wi-Fi 6E, Wi-Fi 6, Wi-Fi 5, Wi-Fi 4, U-NII, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Adhesive Mount
		2400 - 2485	1.4	4.5	90	Termination*	U.FL-Type plug
		5150 - 5895	1.7	6.3	84		MHF4 plug
		5950 - 7125	1.8	10.1	78	Dimension	45.0 mm x 7.0 mm x 0.1 mm
		Polarization		Linear		Op. Temp	-40°C to +85°C
		Wavelength		1/2		Cable Length*	50 mm, 100.0mm, 150 mm, 200mm
		Electrical Type		Dipole		Cable Type*	1.13 mm
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


ANT-W63-FPC-LV*	Overview	Electric Data				Mechanical Data	
	Wi-Fi/WLAN Multi-band Dipole Flexible Patch Inline Cable  Applications Wi-Fi 6E, Wi-Fi 6, Wi-Fi 5, Wi-Fi 4, U-NII, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Adhesive Mount
		2400 - 2485	1.5	4.8	79	Termination*	U.FL-Type plug
		5150 - 5895	1.6	6.3	82		MHF4 plug
		5950 - 7125	1.5	7.4	77	Dimension	45.0 mm x 7.0 mm x 0.1 mm
		Polarization		Linear		Op. Temp	-40°C to +85°C
		Wavelength		1/2		Cable Length*	50 mm, 100.0mm, 150 mm, 200mm
		Electrical Type		Dipole		Cable Type*	1.13 mm
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			

ANT-W63-FPC-SH*	Overview	Electric Data				Mechanical Data	
	Wi-Fi/WLAN Multi-band Dipole Flexible Patch Orthogonal Cable  Applications Wi-Fi 6E, Wi-Fi 6, Wi-Fi 5, Wi-Fi 4, U-NII, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Adhesive Mount
		2400 - 2485	1.5	4.7	90	Termination*	U.FL-Type plug
		5150 - 5895	1.6	7.8	83		MHF4 plug
		5950 - 7125	1.8	8.5	81	Dimension	25.3 mm x 20.3 mm x 0.1 mm
						Op. Temp	-40°C to +85°C
		Polarization		Linear		Cable Length*	50 mm, 100.0mm, 150 mm, 200mm
		Wavelength		1/2		Cable Type*	1.13 mm
		Electrical Type		Dipole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


ANT-W63-FPC-SAH*	Overview	Electric Data				Mechanical Data	
	Wi-Fi/WLAN Multi-band Dipole Flexible Patch Orthogonal Cable  Applications Wi-Fi 6E, Wi-Fi 6, Wi-Fi 5, Wi-Fi 4, U-NII, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Adhesive Mount
		2400 - 2485	3.4	0.6	32	Termination*	U.FL-Type plug
		5150 - 5895	3.4	7.2	64		MHF4 plug
		5950 - 7125	2.4	6.3	53	Dimension	12.4 mm x 12.0 mm x 0.1 mm
						Op. Temp	-40°C to +85°C
		Polarization		Linear		Cable Length*	50 mm, 100.0 mm, 150 mm
		Wavelength		1/2		Cable Type*	0.81 mm
		Electrical Type		Dipole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			

L9000203-01	Overview	Electric Data				Mechanical Data	
	Wi-Fi/WLAN Multi-band Dipole Flexible Patch  Applications Wi-Fi 6E, Wi-Fi 6, Wi-Fi 5, Wi-Fi 4, U-NII, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Adhesive Mount
		2400 - 2485	2.4	3.2	61	Termination*	U.FL-Type Plug
		5150 - 5850	1.4	7.7	72	Dimensions	42.0 mm x 12.0 mm x 0.2 mm
		5925 - 7125	2.4	8.4	57	Op. Temp	-40 °C to +80 °C
		Polarization		Linear		Cable Length	100.0 mm
		Wavelength		1/2		Cable Type	1.13 mm
		Electrical Type		Dipole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			

ANT-W63RPC1*	Overview	Electric Data				Mechanical Data	
	Wi-Fi/WLAN Dual-Band Adhesive Dipole Rigid PCB  Applications Wi-Fi 5, Wi-Fi 4, U-NII, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Connector Mount
		2400 - 2485	1.8	3.7	69	Termination*	RP-SMA Plug
		5150 - 5850	2.1	6.1	69		SMA Plug
		5925 - 7125	1.6	5.9	66	Dimensions	43.0 mm x 11.0 mm x 1.3 mm
		Polarization		Linear		Op. Temp	-40 °C to +85 °C
		Wavelength		1/2		Cable Length	150 mm, 100 mm, 200 mm
		Electrical Type		Dipole		Cable Type	1.13 mm
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


2344654-2*	Overview	Electric Data				Mechanical Data	
	Wi-Fi/WLAN Dual-Band Dipole Rigid Patch PCB  Applications Wi-Fi 6, Wi-Fi 5, Wi-Fi 4, U-NII, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Adhesive Mount
		2400-2500	3.0	1.5	60	Termination*	U.FL-Type Plug
		5150-5875	3.0	5.7	70		MHF4 Plug
						Dimension	30x9.5x1.0mm
						Op. Temp	-40°C to +85°C
						Cable Length*	100 mm
							50 mm
		Polarization		Linear			150 mm
		Wavelength		1/2			200 mm
		Electrical Type		Dipole			350 mm
		Radiation Pattern		Omnidirectional		Cable Type*	1.13 mm
		Impedance (Ohms)		50			0.81 mm


# Wi-Fi / WLAN - EXTERNAL - TERMINAL MOUNT HINGED/90° MONOPOLE ANTENNAS


ANT-W63-MON-*	Overview	Electric Data				Mechanical Data	
	Wi-Fi 6E/Wi-Fi 6 Multi-band Hinged Monopole Whip  Applications Wi-Fi 6E, Wi-Fi 6, Wi-Fi 5, Wi-Fi 4, U-NII, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Connector mount
		2400 - 2485	2.4	3.2	65	Termination	RP-SMA Plug
		5150 - 5850	2.3	4.2	62		SMA Plug
		5925 - 7125	2.0	3.4	51	Dimensions	72.0 mm x Ø9.5 mm
		Polarization		Linear		Op. Temp	-40 °C to +130 °C
		Wavelength		1/4		Ground Plane	102 mm x 102 mm
		Electrical Type		Monopole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			





# Wi-Fi / WLAN - EXTERNAL - TERMINAL MOUNT HINGED/90° DIPOLE ANTENNAS


2195899-1	Overview	Electric Data				Mechanical Data	
	Wi-Fi/WLAN 2.4GHz Hinged Dipole Whip  Applications Wi-Fi 4, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Connector mount
		2400-2500	1.6	4.9	85	Termination	RP-SMA Plug
		Polarization		Linear		Dimension	159xØ13mm
		Electrical Type		Dipole		Op. Temp	-40°C to +85°C
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


RD2458-*	Overview	Electric Data				Mechanical Data	
	Wi-Fi/WLAN Dual-band Indoor Dipole Whip  Applications Wi-Fi 6, Wi-Fi 5, Wi-Fi 4, U-NII, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)		Mounting Type	Connector mount
		2400-2500	1.5	3.0		Termination*	SMA male
		5150-5725	1.5	5.0			RP-TNC male
		Polarization		Linear			RP-SMA male
		Electrical Type		Dipole			N-Type male
		Radiation Pattern		Omnidirectional		Dimension	155xØ12.7mm
		Impedance (Ohms)		50		Op. Temp	-10°C to +70°C


2108936-1* 2108936-2*	Overview	Electric Data				Mechanical Data	
	Wi-Fi/WLAN Dual band Hinged Di-pole Whip  Applications Wi-Fi 6, Wi-Fi 5, Wi-Fi 4, U-NII, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Connector mount
		2400-2500	1.6	2.2	85	Termination*	SMA Plug
		5150-5875	1.7	3.7	72		RP-SMA plug
		Electrical Type		Dipole		Dimension	109xØ10mm
		Radiation Pattern		Omnidirectional		Op. Temp	-40°C to +85°C
		Impedance (Ohms)		50			
		Impedance (Ohms)		50			


001-0009	Overview	Electric Data				Mechanical Data	
	Wi-Fi/WLAN Dual band Indoor Hinged Dipole Whip  Applications Wi-Fi 6, Wi-Fi 5, Wi-Fi 4, U-NII, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)		Mounting Type	Connector mount
		2400-2500	2.0	2.0		Termination	RP-SMA plug
		5150-5875	2.0	2.0		Dimension	137xØ13mm
		Polarization		Linear		Op. Temp	-40°C to +85°C
		Electrical Type		Dipole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


2108923-1* 2108923-3*	Overview	Electric Data				Mechanical Data	
	Wi-Fi/WLAN Triband Hinged Dipole Blade  Applications Wi-Fi7, Wi-Fi 6E, Wi-Fi 6, Wi-Fi 5, Wi-Fi 4, U-NII, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Connector mount
		2400-2500	1.6	2.3	82	Termination*	SMA Plug
		5150-5875	1.8	3.2	80		RP-SMA Plug
		5925-7125	1.9	2.5	78	Dimension	135.8x19.9x10
		Polarization		Linear		Op. Temp	-40°C to +85°C
		Electrical Type		Dipole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


2108923-2* 2108923-4*	Overview	Electric Data				Mechanical Data	
	Wi-Fi/WLAN Triband Hinged Dipole Blade  Applications Wi-Fi7, Wi-Fi 6E, Wi-Fi 6, Wi-Fi 5, Wi-Fi 4, U-NII, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Connector mount
		2400-2500	1.6	2.3	82	Termination*	SMA Plug
		5150-5875	1.8	3.2	80		RP-SMA plug
		5925-7125	1.9	2.5	78	Dimension	135.8x19.9x10
		Polarization		Linear		Op. Temp	-40°C to +85°C
		Electrical Type		Dipole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


ANT-W63WS5-*	Overview	Electric Data				Mechanical Data	
	Wi-Fi/WLAN Triband Hinged Dipole Blade  Applications Wi-Fi7, Wi-Fi 6E, Wi-Fi 6, Wi-Fi 5, Wi-Fi 4, U-NII, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Connector mount
		2400-2500	1.3	8.4	72	Termination*	SMA Plug
		5150-5875	2.0	4.9	65		RP-SMA plug
		5925-7125	2.1	4.0	61	Dimension	135.6x24.1x11
		Polarization		Linear		Op. Temp	-40°C to +85°C
		Electrical Type		Dipole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


001-0012	Overview	Electric Data			Mechanical Data	
	Wi-Fi/WLAN Dual band Hinged Dipole Whip  Applications Wi-Fi 6, Wi-Fi 5, Wi-Fi 4, U-NII, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector mount
		2400-2500	2.5	2.0	Termination	RP-SMA plug
		4910-5850	2.5	2.0	Dimension	114xØ13mm
		Polarization		Linear	Op. Temp	-40°C to +85°C
		Electrical Type		Dipole	IP Rating	IP67
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


MAF94051 (Black) MAF94110 (White)	Overview	Electric Data			Mechanical Data	
	Wi-Fi/WLAN Dual band Hinged Di-pole Whip  Applications Wi-Fi 6, Wi-Fi 5, Wi-Fi 4, U-NII, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector mount
		2400-2500	2.0	2.1	Termination	RP-SMA plug
		4900-5875	2.0	3.4	MAF94271	SMA Plug
		Polarization		Linear	Dimension	95.9xØ9.3mm
		Electrical Type		Dipole	Op. Temp	-40°C to +85°C
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


MAF94271	Overview	Electric Data			Mechanical Data	
	Wi-Fi/WLAN Dual band Hinged Dipole Whip  Applications Wi-Fi 6, Wi-Fi 5, Wi-Fi 4, U-NII, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector mount
		2400-2500	2.0	2.1	Termination	SMA plug
		4900-5875	2.0	3.4	Dimension	95.9xØ9.3mm
		Polarization		Linear	Op. Temp	-40°C to +85°C
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


ANT-DB1-RAF-*	Overview	Electric Data			Mechanical Data	
	Wi-Fi/WLAN Dual-Band Tilt/Swivel Dipole Whip	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector mount
		2400 - 2485	1.9	2.5	Termination	RP-SMA Plug
		5150 - 5850	1.9	4.6		SMA Plug
	Applications Wi-Fi 5, Wi-Fi 4, U-NII, 802.11, Bluetooth, Zigbee, 802.15.4	Polarization		Linear	Dimensions	104.9 mm x 11.0 mm
		Wavelength		1/2		
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		

ANT-DB1-LCD-*	Overview	Electric Data				Mechanical Data	
	Wi-Fi/WLAN Dual-Band Hinged Dipole Whip	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Connector mount
		2400 - 2485	2.0	2.8	85	Termination	RP-SMA Plug
		5150 - 5725	2.0	4.5	70		SMA Plug
	Applications Wi-Fi 5, Wi-Fi 4, U-NII,802.11, Bluetooth, Zigbee, 802.15.4	5725 - 5850	2.0	2.9	65	Dimensions	83.1 mm x 10.0 mm
		Polarization		Linear		Op. Temp	-40 °C to +80 °C
		Electrical Type		Dipole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


ANT-W63WS1-*	Overview	Electric Data				Mechanical Data	
	Wi-Fi/WLAN Multi-band Hinged Dipole Blade	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Connector Mount
		2400 - 2485	2.3	7.7	58	Termination	RP-SMA Plug SMA Plug
		5150 - 5850	1.7	5.8	62	Dimensions	85.5 mm x 16.4 mm x 11.5 mm
	Applications Wi-Fi 6E, Wi-Fi 6, Wi-Fi 5, Wi-Fi 4, U-NII, 802.11, Bluetooth, Zigbee, 802.15.4	5925 - 7125	2.3	4.7	59	Op. Temp	-20 °C to +65 °C
		Polarization		Linear			
		Wavelength		1/2			
		Electrical Type		Dipole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


ANT-W63WS2-*	Overview	Electric Data				Mechanical Data	
	Wi-Fi/WLAN Multi-band Hinged Dipole Blade  Applications Wi-Fi 6E, Wi-Fi 6, Wi-Fi 5, Wi-Fi 4, U-NII, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Connector Mount
		2400 - 2485	1.5	2.1	83	Termination	RP-SMA Plug SMA Plug
		5150 - 5850	1.5	4.7	89	Dimensions	133.5 mm x 20.1 mm x 10.0 mm
		5925 - 7125	1.5	4.8	84	Op. Temp	-30 °C to +85 °C
		Polarization		Linear			
		Wavelength		1/2			
		Electrical Type		Dipole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


ANT-W63WS3-SMA	Overview	Electric Data				Mechanical Data	
	Wi-Fi/WLAN Multi-band Hinged Dipole Blade  Applications Wi-Fi 6E, Wi-Fi 6, Wi-Fi 5, Wi-Fi 4, U-NII, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Connector Mount
		2400 - 2485	2.3	2.4	40	Termination	SMA Plug
		5150 - 5850	1.8	5.0	66	Dimensions	135.7 mm x 20.1 mm x 10.0mm
		5925 - 7125	3.5	5.3	58	Op. Temp	-20 °C to +65 °C
		Polarization		Linear			
		Wavelength		1/2			
		Electrical Type		Dipole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


ANT-W63WS4-*	Overview	Electric Data				Mechanical Data	
	Wi-Fi/WLAN Multi-band Hinged Dipole Blade  Applications Wi-Fi 6E, Wi-Fi 6, Wi-Fi 5, Wi-Fi 4, U-NII, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Connector Mount
		2400 - 2485	1.2	2.6	80	Termination	RP-SMA Plug SMA Plug
		5150 - 5850	1.6	5.5	83	Dimensions	179.6 mm x 22.0 mm x 13.0 mm
		5925 - 7125	1.8	5.5	74	Op. Temp	-20 °C to +65 °C
		Polarization		Linear			
		Wavelength		1/2			
		Electrical Type		Dipole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


# Wi-Fi/WLAN - EXTERNAL - REMOTE MOUNT DIPOLE ANTENNAS


ANT-DB1-LPD-125	Overview	Electric Data				Mechanical Data	
	Wi-Fi 6E/Wi-Fi 6 Multi-band Hinged Dipole Blade	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Panel Mount
		2400 - 2485	1.5	2.8	85	Termination	U.FL-Type Plug
		5150 - 5850	1.5	4.5	63	Dimensions	88.0 mm x Ø9.4 mm
	Applications Wi-Fi 6E, Wi-Fi 6, Wi-Fi 5, Wi-Fi 4, U-NII, 802.11, Bluetooth, Zigbee, 802.15.4	Polarization		Linear		Op. Temp	-20 °C to +85 °C
		Wavelength		1/2		Cable Length	125.0 mm
		Electrical Type		Dipole		Cable Type	1.13 mm
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


ANT-DB1-WRT-MON-*	Overview	Electric Data			Mechanical Data	
	Wi-Fi/WLAN Dual-Band Straight Dipole Dome	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Panel mount
		2400 - 2485	2.0	1.0	Termination	RP-SMA Plug SMA Plug U.FL-Type Plug MHF3 Plug MHF4 Plug
		5725 - 5850	2.0	2.8	Dimensions	26.8 mm x Ø19.0 mm
	Applications Wi-Fi 5, Wi-Fi 4, 802.11, Bluetooth, Zigbee, 802.15.4	Polarization		Linear	Op. Temp	-40 °C to +85 °C
		Wavelength		1/4	Cable Length	216.0 mm
		Electrical Type		Monopole	Cable Type	RG-174
		Radiation Pattern		Omnidirectional	Ground Plane	102 mm x 102 mm
		Impedance (Ohms)		50		

L9000175-01 (RP-SMA) L9000176-01 (SMA)	Overview	Electric Data			Mechanical Data	
	Wi-Fi/WLAN Multi-band Straight Dipole Adhesive	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Adhesive
		2400 - 2485	1.5	2.4	Termination	RP-SMA Plug SMA Plug
		5150 - 5850	1.4	-0.6	Dimensions	115.0 mm x 22.0 mm x 6.3 mm
	Applications Wi-Fi 5, Wi-Fi 4, U-NII, 802.11, Bluetooth, Zigbee, 802.15.4	Polarization		Linear	Op. Temp	-40 °C to +85 °C
		Wavelength		1/2	Cable Length	2.0 m
		Electrical Type		Dipole	Cable Type	RG-174/U
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		

L9000174-01	Overview	Electric Data			Mechanical Data	
	Wi-Fi/WLAN Multi-band Straight Dipole Adhesive  Applications Wi-Fi 5, Wi-Fi 4, U-NII, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Adhesive
		2400 - 2485	1.5	4.0	Termination	SMA Plug
		5150 - 5850	1.4	1.5	Dimensions	104.0x17.0x4.2 mm
		Polarization		Linear	Op. Temp	-40 °C to +85 °C
		Wavelength		1/2	Cable Length	2.0 m
		Electrical Type		Dipole	Cable Type	RG-174/U
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


ANT-DB1-WRT-*	Overview	Electric Data			Mechanical Data	
	Wi-Fi/WLAN Dual-Band Straight Dipole Dome  Applications Wi-Fi 5, Wi-Fi 4, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Panel Mount
		2400 - 2485	1.9	3.2	Termination	RP-SMA Plug SMA Plug U.FL-Type Plug MHF4 Type Plug
		5150 - 5850	3.7	6.8	Dimensions	10.0 x Ø19.0 mm
		5925 - 7125	4.0	7.0	Op. Temp	-40 °C to +90 °C
		Polarization		Linear	Cable Length	216.0 mm
		Wavelength		1/2	Cable Type	RG-174, 1.13 mm, 1.32 mm
		Electrical Type		Dipole	Ground Plane	102 mm x 102 mm
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


ANT-W63-WRT-*	Overview	Electric Data			Mechanical Data	
	Wi-Fi/WLAN Dual-Band Straight Dipole Dome  Applications Wi-Fi 6E, Wi-Fi 6, Wi-Fi 5, Wi-Fi 4, U-NII, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Panel Mount
		2400 - 2485	1.5	4.5	Termination	RP-SMA Plug SMA Plug U.FL-Type Plug MHF4 Type Plug
		5150 - 5850	1.4	4.5	Dimensions	27 x Ø19 mm
		5925 - 7125	2.2	6.4	Op. Temp	-40 °C to +90 °C
		Polarization		Linear	Cable Length	216.0 mm
		Wavelength		1/2	Cable Type	RG-174, 1.13 mm, 1.32 mm
		Electrical Type		Dipole	Ground Plane	102 mm x 102 mm
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


2195935-*	Overview	Electric Data			Mechanical Data	
	Wi-Fi/WLAN Chassis Mount Stamped Metal Snap-In  Applications Wi-Fi 6E, Wi-Fi 6, Wi-Fi 5, Wi-Fi 4, U-NII, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Snap-In
		2400 - 2500	2.0	0.4	Termination*	MHF Type Plug MHF4 Type Plug
		5150 - 5875	1.8	2.0	Dimensions	29 x 12 x 10mm
		5925 - 7125	1.9	3.4	Op. Temp	-40 to +85°C
					Cable Length*	90mm
						130mm
		Polarization				210mm
		Radiation Pattern				360mm
		Impedance (Ohms)			Cable Type	1.13mm





# WI-FI / WLAN - EXTERNAL LOW-PROFILE OMNI ANTENNAS


TRA24003 (White) TRAB24003 (Black)	Overview	Electric Data			Mechanical Data	
	Wi-Fi/WLAN 2.4GHz Monopole Dome  Applications Wi-Fi 4, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Base
		2400-2500	2.1	3.0	Termination	Push Pin
		Polarization		Linear	Dimensions	83.6xØ36.6mm
		Wavelength		1/4	Op. Temp	-40°C to +85°C
		Electrical Type		Monopole	IP Rating	IP67
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


TRA24003P (White) TRAB24003P (Black)	Overview	Electric Data			Mechanical Data	
	Wi-Fi/WLAN 2.4GHz Monopole Dome  Applications Wi-Fi 4, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Panel w. Screw
		2400-2500	2.1	3.0	Termination	N Type female
		Polarization		Linear	Dimensions	58.4xØ36.6mm
		Wavelength		1/4	Op. Temp	-40°C to +85°C
		Electrical Type		Monopole	IP Rating	IP67
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


TRA24003NP (White) TRAB24003NP (Black)	Overview	Electric Data			Mechanical Data	
	Wi-Fi/WLAN 2.4GHz Monopole Dome  Applications Wi-Fi 4, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Panel w. Screw
		2400-2500	2.1	3.0	Termination	N Type female
		No Ground plane required			Dimensions	58.4xØ36.6mm
		Polarization		Linear	Op. Temp	-40°C to +85°C
		Wavelength		1/4	IP Rating	IP67
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		

TRA24-49003 (White) TRAB24-49003 (Black)	Overview	Electric Data			Mechanical Data	
	Wi-Fi/WLAN Dual Band Monopole Dome  Applications Wi-Fi 6, Wi-Fi 5, Wi-Fi 4, U-NII, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Base
		2400-2500	2.1	0.7	Termination	Push pin
		4900-5850	3.1	0.9	Dimensions	58.4xØ36.6mm
		Polarization		Linear	Op. Temp	-40°C to +85°C
		Wavelength		1/4	IP Rating	IP67
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


TRA24-49003P (White) TRAB24-49003P (Black)	Overview	Electric Data			Mechanical Data	
	Wi-Fi/WLAN Dual Band Monopole Dome  Applications Wi-Fi 6, Wi-Fi 5, Wi-Fi 4, U-NII, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Panel w. Screw
		2400-2500	2.1	0.7	Termination	N Type female
		4900-5850	3.1	0.9	Dimensions	69.8xØ36.6mm
		Polarization		Linear	Op. Temp	-40°C to +85°C
		Wavelength		1/4	IP Rating	IP67
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


TRA58003 (White) TRAB58003 (Black)	Overview	Electric Data			Mechanical Data	
	Wi-Fi/WLAN 5GHz Monopole Dome  Applications Wi-Fi 5, U-NII, 802.11ac, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Base
		4900-6000	1.25	5.0	Termination	Push Pin
		Polarization		Linear	Dimensions	69.9xØ36.6mm
		Wavelength		1/4	Op. Temp	-40°C to +85°C
		Electrical Type		Monopole	IP Rating	IP67
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


TRA58003P (White)	Overview	Electric Data			Mechanical Data	
	Wi-Fi/WLAN 5GHz Monopole Dome  Applications Wi-Fi 5, U-NII, 802.11ac, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Panel w. Screw
		4900-6000	1.25	5.0	Termination	N Type female
		Polarization		Linear	Dimensions	96.9xØ36.6mm
		Wavelength		1/4	Op. Temp	-40°C to +85°C
		Electrical Type		Monopole	IP Rating	IP67
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


ANT-W63-SPNF1	Overview	Electric Data				Mechanical Data	
	Wi-Fi/WLAN Triband Dipole Dome  Applications Wi-Fi7, Wi-Fi 6E, Wi-Fi 6, Wi-Fi 5, Wi-Fi 4, U-NII, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Panel mount
		2400-2500	1.4	4.5	89	Termination	N Jack
		5150-5875	2.0	7.2	85	Dimensions	80.0xØ54.0mm
		5950-7125	1.9	7.6	87	Op. Temp	-40°C to +85°C
		Polarization		Linear		IP Rating	IP67
		Wavelength		1/2			
		Electrical Type		Dipole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			

# WI-FI / WLAN - EXTERNAL - REMOTE MOUNT DOME/PUCK OMNI ANTENNAS


VLQ24593BN4N-* (Black) VLQ24593WN4N-518BA (White)	Overview	Electric Data			Mechanical Data	
	Wi-Fi/WLAN Dual Band 4-port MIMO Monopole Dome  Applications Wi-Fi 6, Wi-Fi 5, Wi-Fi 4, U-NII, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Panel w. Screw
		2400-2500	2.0	2.2	Termination*	SMA Plug, RP-SMA plug
		4900-5850	2.0	2.5	Dimensions	38.5xØ127mm
		Polarization		Linear	Op. Temp	-35°C to +75°C
		Wavelength		1/4	Cable Length*	5180mm 2130mm
		Electrical Type		Monopole	Cable Type	RG-58
		Radiation Pattern		Omnidirectional	IP Rating	IP67
		Impedance (Ohms)		50		


VMJ24493B-518RSMM (Black) VMJ24493W-518RSMM (White)	Overview	Electric Data			Mechanical Data	
	Wi-Fi/WLAN Dual Band*2, GNSS*1, 3-port MIMO Monopole Dome  Applications Wi-Fi 6, Wi-Fi 5, Wi-Fi 4, U-NII, 802.11, Bluetooth, Zigbee, 802.15.4, GNSS	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Panel w. Screw
		2400-2500	2.0	5.1	Termination	SMA Plug
		4900-5850	2.0	6.9	Dimension	38.5xØ127mm
		1559-1607	2.0	28.0	Op. Temp	-35°C to +75°C
		Polarization		Linear/RHCP	Cable Length	5182mm
		Wavelength		1/4	Cable Type	RG-174
		Electrical Type		Monopole	IP Rating	IP67
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


VMD24493RSM-366	Overview	Electric Data			Mechanical Data	
	Wi-Fi/WLAN Dual Band 2-port MIMO Monopole Dome  Applications Wi-Fi 6, Wi-Fi 5, Wi-Fi 4, U-NII, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Panel w. Screw
		2400-2500	2.0	4.0	Termination	RP-SMA plug
		4900-5850	2.0	4.0	Dimensions	31.7xØ127mm
		Polarization		Linear	Op. Temp	-35°C to +75°C
		Wavelength		1/4	Cable Length	3660mm
		Electrical Type		Monopole	Cable Type	RG-58
		Radiation Pattern		Omnidirectional	IP Rating	IP67
		Impedance (Ohms)		50		


ANT-5GW-SPS1-*	Overview	Electric Data			Mechanical Data	
	<p>Wi-Fi/WLAN Dual-Band Dipole Puck</p> <p>Applications Wi-Fi 5, Wi-Fi 4, U-NII, 802.11, Bluetooth, Zigbee, 802.15.4</p>	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Panel Mount
		2400 - 2485	1.5	3.4	Termination	SMA Plug
		5150 - 5850	1.5	5.1	Dimensions	23.3xØ54.7 mm
		5925 - 7125	1.4	4.0	Op. Temp	-40 °C to +70 °C
		Polarization		Linear	Cable Length*	1m, 2m or 3m
		Wavelength		1/2	Cable Type	RG-174/U
		Electrical Type		Dipole	Ground Plane	300 mm x 300 mm
		Radiation Pattern		Omnidirectional	IP Rating	IP65 / IP67
		Impedance (Ohms)		50		


# WI-FI / WLAN - EXTERNAL - INFRASTRUCTURE OUTDOOR OMNI BATON ANTENNAS


S2403B-*	Overview	Electric Data			Mechanical Data	
	Wi-Fi/WLAN 2.4GHz Single-band Outdoor Dipole Baton  Applications Wi-Fi 4, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		2400-2500	1.8	3.0	Termination*	N-Type male N-Type female
		Polarization		Linear	Dimensions	294xØ28.6mm
		Wavelength		1/2	Op. Temp	-40°C to +70°C
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


OC24005-*	Overview	Electric Data			Mechanical Data	
	Wi-Fi/WLAN 2.4GHz Single-band Outdoor Dipole Baton  Applications Wi-Fi 4, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		2400-2500	1.7	5.0	Termination*	N-Type female N-Type male
		Polarization		Linear	Dimensions	297xØ32mm
		Wavelength		1/2	Op. Temp	-30°C to +70°C
		Electrical Type		Dipole	IP Rating	IP67
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


FG24005	Overview	Electric Data			Mechanical Data	
	Wi-Fi/WLAN 2.4GHz Single-band Outdoor Fiberglass Dipole Baton  Applications Wi-Fi 4, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		2400-2500	2.0	5.0	Termination	N-Type female
		Polarization		Linear	Dimensions	349.3xØ33mm
		Wavelength		1/2	Op. Temp	-30°C to +70°C
		Electrical Type		Dipole	IP Rating	IP67
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


OD24M-5	Overview	Electric Data			Mechanical Data	
	Wi-Fi/WLAN 2.4GHz Single-band Outdoor Dipole Baton  Applications Wi-Fi 4, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		2400-2500	2.0	5.0	Termination	N-Type female
		Polarization		Linear	Dimensions	355xØ15mm
		Wavelength		1/2	Op. Temp	-30°C to +70°C
		Electrical Type		Dipole	IP Rating	IP67
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


OC24006-*	Overview	Electric Data			Mechanical Data	
	Wi-Fi/WLAN 2.4GHz Single-band Outdoor Dipole Baton  Applications Wi-Fi 4, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		2400-2500	2.0	6.0	Termination	N-Type female N-Type male
		Polarization		Linear	Dimensions	328xØ44.5mm
		Wavelength		1/2	Op. Temp	-30°C to +70°C
		Electrical Type		Dipole	IP Rating	IP67
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


S2406BFNM	Overview	Electric Data			Mechanical Data	
	Wi-Fi/WLAN 2.4GHz Single-band Outdoor Dipole Baton  Applications Wi-Fi 4, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		2400-2500	1.7	8.0	Termination	N-Type male
		Polarization		Linear	Dimensions	495xØ19mm
		Wavelength		1/2	Op. Temp	-40°C to +70°C
		Electrical Type		Dipole	IP Rating	IP67
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


FG24008	Overview	Electric Data			Mechanical Data	
	Wi-Fi/WLAN 2.4GHz Single-band Outdoor Fiberglass Dipole Baton  Applications Wi-Fi 4, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		2400-2500	2.0	8.0	Termination	N-Type female
		Polarization		Linear	Dimensions	624xØ33mm
		Wavelength		1/2	Op. Temp	-30°C to +70°C
		Electrical Type		Dipole	IP Rating	IP67
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		

OD24-7D5	Overview	Electric Data			Mechanical Data	
	Wi-Fi/WLAN 2.4GHz Single-band Outdoor Dipole Baton  Applications Wi-Fi 4, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		2400-2500	1.5	7.0	Termination	N-Type female
		Polarization		Linear	Dimensions	540xØ15mm
		Wavelength		1/2	Op. Temp	-30°C to +70°C
		Electrical Type		Dipole	IP Rating	IP67
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


OD24-9 OD24M-9	Overview	Electric Data			Mechanical Data	
	Wi-Fi/WLAN 2.4GHz Single-band Outdoor Dipole Baton  Applications Wi-Fi 4, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		2400-2500	1.5	9.0	Termination	N-Type female N-Type male
		Polarization		Linear	Dimensions	690xØ15mm
		Wavelength		1/2	Op. Temp	-30°C to +70°C
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


OD58M-12	Overview	Electric Data			Mechanical Data	
	Wi-Fi/WLAN 2.4GHz Single-band Outdoor Dipole Baton  Applications Wi-Fi 4, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		2400-2500	1.5	12.0	Termination	N-Type male
		Polarization		Linear	Dimensions	698.5xØ21mm
		Wavelength		1/2	Op. Temp	-40°C to +70°C
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


OD24-12PF	Overview	Electric Data			Mechanical Data	
	Wi-Fi/WLAN 2.4GHz Single-band Outdoor Dipole Baton  Applications Wi-Fi 4, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		2400-2500	1.5	12.0	Termination	N-Type female
		Polarization		Linear	Dimensions	1220xØ15mm
		Wavelength		1/2	Op. Temp	-30°C to +70°C
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


OC24527-FNF	Overview	Electric Data			Mechanical Data	
	Wi-Fi/WLAN Dual-band Outdoor Dipole Baton  Applications Wi-Fi6, Wi-Fi 5, Wi-Fi 4, U-NII, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		2400-2500	2.0	4.5	Termination	N-Type female
		5150-5875	2.0	7.5	Dimensions	280xØ25.4mm
		Polarization		Linear	Op. Temp	-30°C to +70°C
		Wavelength		1/2	IP Rating	IP67
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		





OC24519-FNM	Overview	Electric Data			Mechanical Data	
	Wi-Fi/WLAN Dual-band Outdoor Dipole Baton	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		2400-2500	1.5	7.5	Termination	N-Type male
		5250-5925	2.0	9.0	Dimensions	376.8xØ32mm
	Applications Wi-Fi6, Wi-Fi 5, Wi-Fi 4, U-NII, 802.11, Bluetooth, Zigbee, 802.15.4	Polarization		Linear	Op. Temp	-30 °C to +70 °C
		Wavelength		1/2	IP Rating	IP67
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


ANT-5GW-IPW2-NP	Overview	Electric Data				Mechanical Data	
	Wi-Fi/WLAN Outdoor Multi-band Dipole	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Connector mount
		2400 - 2485	1.7	1.6	39	Termination	N Plug
		5150 - 5850	1.7	5.0	62	Dimension	132.0xØ24.0mm
	Applications Wi-Fi 6E, Wi-Fi 6, Wi-Fi 5, Wi-Fi 4, U-NII, 802.11, Bluetooth, Zigbee, 802.15.4	5925 - 7125	2.8	5.6	52	Op. Temp	-30 °C to +70 °C
		Polarization		Linear		IP Rating	IP67
		Electrical Type		Dipole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


ANT-W63-IPW1-NP	Overview	Electric Data				Mechanical Data	
	Wi-Fi/WLAN Outdoor Multi-band Dipole	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Connector mount
		2400 - 2485	4.1	3.2	64	Termination	N Plug
		5150 - 5850	2.0	8.7	82	Dimension	178.0xØ25.0mm
	Applications Wi-Fi 6E, Wi-Fi 6, Wi-Fi 5, Wi-Fi 4, U-NII, 802.11, Bluetooth, Zigbee, 802.15.4	5925 - 7125	2.3	5.5	72	Op. Temp	-40 °C to +70 °C
		Polarization		Linear		IP Rating	IP67
		Electrical Type		Dipole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


ANT-5GW-IPW3-NP	Overview	Electric Data				Mechanical Data	
	Wi-Fi/WLAN Triband Outdoor Dipole Whip	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Connector mount
		2400-2485	2.2	4.4	61	Termination	N-Type Plug
		5150-5850	2.2	7.2	66	Dimension	176.4xØ21mm
		5925-7125	2.9	4.1	52	Op. Temp	-40°C to +85°C
	Applications Wi-Fi 7, Wi-Fi 6E, Wi-Fi 6, Wi-Fi 5, Wi-Fi 4, U-NII, 802.11, Bluetooth, Zigbee, 802.15.4	Polarization		Linear		IP Rating	IP67
		Electrical Type		Dipole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			

S5156WBSFNM	Overview	Electric Data			Mechanical Data	
	Wi-Fi/WLAN 5GHz Single-band Outdoor Dipole Baton  Applications Wi-Fi 5, U-NII, 802.11ac	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		4900-5000	2.0	7.0	Termination	N-Type female
		5000-5850	2.0	8.0	Dimensions	292xØ25.4mm
		Polarization		Linear	Op. Temp	-30 °C to +65 °C
		Wavelength		1/2	IP Rating	IP54
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


S4906WBFNF S4906WBFNM	Overview	Electric Data			Mechanical Data	
	Wi-Fi/WLAN 5GHz Single- band Outdoor Dipole Baton  Applications Wi-Fi 5, U-NII, 802.11ac	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		4900-5875	2.0	8.0	Termination	N-Type female N-Type male
		Polarization		Linear	Dimensions	292xØ25.4mm
		Wavelength		1/2	Op. Temp	-30°C to +65°C
		Electrical Type		Dipole	IP Rating	IP54
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


S4908WBFNF S4908WBFNM	Overview	Electric Data			Mechanical Data	
	Wi-Fi/WLAN 5GHz Single-band Outdoor Dipole Baton  Applications Wi-Fi 5, U-NII, 802.11ac	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		4900-5875	2.0	10.0	Termination	N-Type female N-Type male
		Polarization		Linear	Dimensions	498xØ25.4mm
		Wavelength		1/2	Op. Temp	-30°C to +65°C
		Electrical Type		Dipole	IP Rating	IP54
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


OC51505-*	Overview	Electric Data			Mechanical Data	
	Wi-Fi/WLAN 5GHz Single-band Outdoor Dipole Baton  Applications Wi-Fi 5, U-NII, 802.11ac	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		5150-5875	2.0	5.0	Termination	N-Type female
		Polarization		Linear	Dimensions	200xØ25.4mm
		Wavelength		1/2	Op. Temp	-30°C to +70°C
		Electrical Type		Dipole	IP Rating	IP67
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


OC515010H-FNM	Overview	Electric Data			Mechanical Data	
	Wi-Fi/WLAN 5GHz Single-band Outdoor Dipole Baton  Applications Wi-Fi 5, U-NII, 802.11ac	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		5150-5875	2.0	10.0	Termination	N-Type male
		Polarization		Linear	Dimensions	451xØ25.4mm
		Wavelength		1/2	Op. Temp	-30°C to +70°C
		Electrical Type		Dipole	IP Rating	IP67
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


# WI-FI / WLAN - EXTERNAL - INFRASTRUCTURE DIRECTIONAL PANEL ANTENNAS


MD24-12	Overview	Electric Data			Mechanical Data	
	Wi-Fi/WLAN 2.4GHz Single-band Directional Outdoor Mini Flat Panel  Applications Wi-Fi 4, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Mast/Bracket Mount
		2400-2483	1.5	11.0	Termination	N-Type female
		Polarization		Linear	Dimension	102x102x102
		Wavelength		1/4	Op. Temp	-40°C to +70°C
		Electrical Type		Monopole		
		Radiation Pattern		Directional		
		Impedance (Ohms)		50		


PA24-19	Overview	Electric Data			Mechanical Data	
	Wi-Fi/WLAN 2.4GHz Single-band Directional Outdoor Flat Panel  Applications Wi-Fi 4, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Mast/Bracket Mount
		2400-2483	1.5	19.0	Termination	N-Type female
		Polarization		Linear	Dimension	389x368x20
		Wavelength		1/4	Op. Temp	-40°C to +70°C
		Electrical Type		Monopole		
		Radiation Pattern		Directional		
		Impedance (Ohms)		50		


S2401240P12NF	Overview	Electric Data			Mechanical Data	
	Wi-Fi/WLAN 2.4GHz Single-band Directional Outdoor Flat Panel  Applications Wi-Fi 4, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Wall/Ceiling Mount
		2400-2500	1.5	12.0	Termination	N-Type female
		Polarization		Linear	Dimension	153x153x32
		Wavelength		1/4	Op. Temp	-30°C to +70°C
		Electrical Type		Monopole	Cable Length	300mm
		Radiation Pattern		Directional		
		Impedance (Ohms)		50		


PA58-24	Overview	Electric Data			Mechanical Data	
	Wi-Fi/WLAN 5GHz Single-band Directional Outdoor Flat Panel  Applications Wi-Fi 5, U-NII, 802.11ac	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Mast/Bracket Mount
		5150-5825	2.0	24.0	Termination	N-Type female
		Polarization		Linear	Dimension	390x371x21
		Wavelength		1/4	Op. Temp	-40°C to +70°C
		Electrical Type		Monopole		
		Radiation Pattern		Directional		
		Impedance (Ohms)		50		


S24493TS36RSM	Overview	Electric Data			Mechanical Data	
	<b>Wi-Fi/WLAN</b> Dual-band 3-port MIMO Indoor Dipole Flat Panel  <b>Applications</b> Wi-Fi 6, Wi-Fi 5, Wi-Fi 4, U-NII, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Wall/Ceiling Mount
		2400-2500	2.0	3.0	Termination	RP-SMA plug
		4900-5900	2.0	4.0	Dimensions	308x22x92mm
		Polarization		Linear	Op. Temp	-30°C to +70°C
		Wavelength		1/2		
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


S24517PT36RSM	Overview	Electric Data			Mechanical Data	
	<b>Wi-Fi/WLAN</b> Dual-band, 4-port MIMO Directional Outdoor Flat Panel  <b>Applications</b> Wi-Fi 6, Wi-Fi 5, Wi-Fi 4, U-NII, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Wall/Mast Mount
		2400-2500	2.0	8.0	Termination	RP-SMA plug
		5100-5900	2.0	10.7	Dimension	259x259x34
		Polarization		Linear	Op. Temp	-30°C to +65°C
		Wavelength		1/4	Cable Length	914mm
		Electrical Type		Monopole	IP Rating	IP67
		Radiation Pattern		Directional		
		Impedance (Ohms)		50		


PDM24519-FNF	Overview	Electric Data			Mechanical Data	
	<b>Wi-Fi/WLAN</b> Dual-band, 3-port MIMO Directional Outdoor Flat Panel  <b>Applications</b> Wi-Fi 6, Wi-Fi 5, Wi-Fi 4, U-NII, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Wall/Ceiling Mount
		2400-2500	2.0	8.0	Termination*	N-Type female
		5150-5900	2.0	9.0	Dimension	178x305x25
		Polarization		Linear	Op. Temp	-30°C to +70°C
		Wavelength		1/4	IP Rating	IP67
		Electrical Type		Monopole		
		Radiation Pattern		Directional		
		Impedance (Ohms)		50		


PDM245115H-FNF	Overview	Electric Data			Mechanical Data	
	Wi-Fi/WLAN Dual-band, 4-port MIMO Directional Outdoor Flat Panel  Applications Wi-Fi 6, Wi-Fi 5, Wi-Fi 4, U-NII, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Wall/Ceiling Mount
		2400-2500	1.6	14.0	Termination	N-Type female
		5150-5700	2.0	14.5	Dimension	507x368x21.1
		5700-5900	1.5	14.5	Op. Temp	-40°C to +70°C
		Polarization		Linear	IP Rating	IP67
		Wavelength		1/4		
		Electrical Type		Monopole		
		Radiation Pattern		Directional		
		Impedance (Ohms)		50		

PDQ24496-FNF PDQ24496-91NF	Overview	Electric Data			Mechanical Data	
	Wi-Fi/WLAN Dual-band, 4-port MIMO Directional Outdoor Flat Panel  Applications Wi-Fi 6, Wi-Fi 5, Wi-Fi 4, U-NII, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Wall/Ceiling Mount
		2400-2500	2.0	6.8	Termination	N-Type female
		4950-5950	2.0	6.5	Dimension	254x254x41
		Polarization		Linear	Op. Temp	-40°C to +70°C
		Wavelength		1/4	Cable Length*	910mm N/A
		Electrical Type		Monopole	IP Rating	IP67
		Radiation Pattern		Directional		
		Impedance (Ohms)		50		

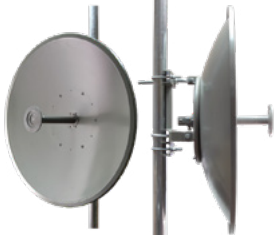
PDQ24499-91NM	Overview	Electric Data			Mechanical Data	
	Wi-Fi/WLAN Dual-band, 4-port MIMO Directional Outdoor Flat Panel  Applications Wi-Fi 6, Wi-Fi 5, Wi-Fi 4, U-NII, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Wall/Ceiling Mount
		2400-2500	2.0	8.6	Termination	N-Type male
		4950-5950	2.0	9.4	Dimension	254x254x41
		Polarization		Linear	Op. Temp	-40°C to +70°C
		Wavelength		1/4	Cable Length	910mm
		Electrical Type		Monopole	IP Rating	IP67
		Radiation Pattern		Directional		
		Impedance (Ohms)		50		


PDM24499-FNF	Overview	Electric Data			Mechanical Data	
	Wi-Fi/WLAN Dual-band, 4-port MIMO Directional Outdoor Flat Panel  Applications Wi-Fi 6, Wi-Fi 5, Wi-Fi 4, U-NII, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Wall/Ceiling Mount
		2400-2500	2.0	8.6	Termination*	N-Type female
		4900-5950	2.0	9.6	Dimension	305x178x26
		Polarization		Linear	Op. Temp	-30°C to +70°C
		Wavelength		1/4	IP Rating	IP67
		Electrical Type		Monopole		
		Radiation Pattern		Directional		
		Impedance (Ohms)		50		


PDQ244915-*	Overview	Electric Data			Mechanical Data	
	Wi-Fi/WLAN Dual-band, 4-port MIMO Directional Outdoor Flat Panel  Applications Wi-Fi 6, Wi-Fi 5, Wi-Fi 4, U-NII, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Wall/Ceiling Mount
		2400-2500	2.0	11.1	Termination*	N-Type female N-Type male
		4950-5950	2.0	15.0	Dimension	374x412x36
		Polarization		Linear	Op. Temp	-30°C to +70°C
		Wavelength		1/4	Cable Length*	910mm
		Electrical Type		Monopole	IP Rating	IP67
		Radiation Pattern		Directional		
		Impedance (Ohms)		50		

PSQ24495-*	Overview	Electric Data			Mechanical Data	
	Wi-Fi/WLAN Dual-band, 4-port MIMO Directional Outdoor Flat Panel  Applications Wi-Fi 6, Wi-Fi 5, Wi-Fi 4, U-NII, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Wall/Ceiling Mount
		2400-2490	2.0	6.6	Termination*	N-Type female N-Type male RP-SMA plug
		4900-6000	2.0	7.7	Dimension	202x200x40
		Polarization		Dual Slant	Op. Temp	-30°C to +70°C
		Wavelength		1/4	Cable Length	910mm
		Electrical Type		Monopole	IP Rating	IP67
		Radiation Pattern		Directional		
		Impedance (Ohms)		50		

# WI-FI / WLAN - EXTERNAL - INFRASTRUCTURE DIRECTIONAL DISH ANTENNAS

HDDA3W-29-DP	Overview	Electric Data			Mechanical Data	
	Wi-Fi/WLAN  Applications 802.11, OFDM, CBRS, ETSI EN 302.326-3 DN1- DN5	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Mast/Bracket Mount
		3300 - 3800	1.8	29	Termination	Type-N Female
		Polarization		Vertical / Horizontal	Dimension	Ø927 mm
		Radiation Pattern		Directional	Op. Temp	-40°C to +70°C
		Impedance (Ohms)		50		

HDDA5W-29-*	Overview	Electric Data			Mechanical Data	
	Wi-Fi/WLAN  Applications 802.11, OFDM, CBRS, ETSI EN 302.326-3 DN1- DN5	Frequency (MHz)	VSWR (Max)	Peak Gain* (dBi)	Mounting Type	Mast/Bracket Mount
		4900-5875	1.8	29/32	Termination*	Type-N Female 2 x Type-N Female
		Polarization		Vertical / Horizontal	Dimension	Ø648 mm
		Radiation Pattern		Directional		Ø927 mm
		Impedance (Ohms)		50	Op. Temp	-40°C to +70°C

HDDA5W-32-*	Overview	Electric Data			Mechanical Data	
	Wi-Fi/WLAN  Applications 802.11, OFDM, CBRS, ETSI EN 302.326-3 DN1- DN5	Frequency (MHz)	VSWR (Max)	Peak Gain* (dBi)	Mounting Type	Mast/Bracket Mount
		4900-5875	1.8	29/32	Termination*	Type-N Female 2 x Type-N Female
		Polarization		Vertical / Horizontal	Dimension	Ø648 mm
		Radiation Pattern		Directional		Ø927 mm
		Impedance (Ohms)		50	Op. Temp	-40°C to +70°C



## Optional Radome Cover


HDDA3W and HDDA5W antennas are available with an optional fiberglass radome cover for increased protection and reduced wind loading:

**DA5-29RADOME** Fiberglass Radome Cover for 2ft (0.3m) dish


**DA5-32RADOME** Fiberglass Radome Cover for 3ft (0.6m) dish




## WI-FI / WLAN - EXTERNAL - INFRASTRUCTURE DIRECTIONAL YAGI ANTENNAS


YE240015	Overview	Electric Data			Mechanical Data	
	Wi-Fi/WLAN 2.4GHz Single-band Directional Outdoor Yagi  Applications Wi-Fi 4, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Mast/Bracket Mount
		2400-2485	2.0	14.5	Termination	N-Type female
		Polarization		Linear	Dimension	447mm long
		Wavelength		1/4	Op. Temp	-30°C to +70°C
		Electrical Type		Monopole	Wind Survival	150 mph
		Radiation Pattern		Directional		
		Impedance (Ohms)		50		


## WI-FI / WLAN - EXTERNAL - INFRASTRUCTURE CEILING MOUNT DAS ANTENNAS


CMM24513S4-91RSM	Overview	Electric Data				Mechanical Data	
	Wi-Fi/ WLAN Dual Band 4-port MIMO Indoor Monopole Dome  Applications Wi-Fi 6, Wi-Fi 5, Wi-Fi 4, U-NII, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Ceiling Mount
		2400-2500	2.0	2.9	73	Termination	RP-SMA male
		5150-5875	2.0	3.3	89	Dimensions	43.5x 219mm
		Polarization		Linear		Op. Temp	-30°C to +70°C
		Wavelength		1/4		Cable Length	910mm
		Electrical Type		Monopole		Cable Type	RG-58
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


## 2.4 GHZ ISM - INTERNAL SURFACE MOUNT ANTENNAS


ANT-2.45-CHP-T	Overview	Electric Data			Mechanical Data	
	2400 MHz Monopole Ceramic Chip  Applications Bluetooth, Zigbee, 802.15.4, Wi-Fi 4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Surface Mount
		2400 - 2485	2.0	0.5	Termination	Solder Pad
		Polarization		Linear	Dimensions	2.2 mm x 6.5 mm x 1.0 mm
		Wavelength		1/4	Op. Temp	-30 °C to +70 °C
		Electrical Type		Monopole	Ground Plane	30 mm x 30 mm
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


L9000015-01	Overview	Electric Data				Mechanical Data	
	2400 MHz Radiating Ceramic Patch  Applications Bluetooth, Zigbee, 802.15.4, Wi-Fi 4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Through Hole
		2400 - 2485	2.7	5.5	88	Termination	Solder Pin
		Polarization		RHCP		Dimensions	20.0 mm x 20.0 mm x 4.0mm
		Wavelength		1/4		Op. Temp	-40 °C to +85 °C
		Electrical Type		Radiating Patch		Ground Plane	40 mm x 40 mm
		Radiation Pattern		Directional			
		Impedance (Ohms)		50			

ANT-DB1-nSP250-T	Overview	Electric Data				Mechanical Data	
	2400 MHz Monopole Chip  Applications Bluetooth, Zigbee, 802.15.4, Wi-Fi 4, 802.11	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Surface Mount
		2400 - 2485	2.0	2.7	65	Termination	Solder Pad
		Polarization		Linear		Dimensions	9.6 mm x 8.4 mm x 1.1 mm
		Wavelength		1/4		Op. Temp	-40 °C to +130 °C
		Electrical Type		Monopole		Ground Plane	40 mm x 20 mm
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


ANT-2.4-USP-T	Overview	Electric Data			Mechanical Data	
	2400 MHz Monopole Chip  Applications Bluetooth, Zigbee, 802.15.4, Wi-Fi 4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Surface Mount
		2400 - 2485	2.0	3.8	Termination	Solder Pad
		Polarization		Linear	Dimensions	12.7 mm x 9.1 mm x 1.6 mm
		Wavelength		1/4	Op. Temp	-40 °C to +130 °C
		Electrical Type		Monopole	Ground Plane	19.6 mm x 38.7 mm
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		

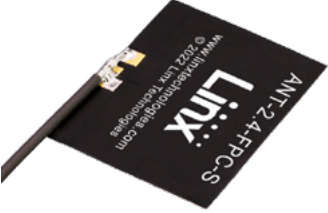
ANT-2.4-JJB-ST	Overview	Electric Data			Mechanical Data	
	2400 MHz Straight Monopole Dome  Applications Bluetooth, Zigbee, 802.15.4, Wi-Fi 4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Through Hole
		2400 - 2485	2.0	-1.5	Termination	Solder Pin
		Polarization		Linear	Dimensions	17.6 mm x 7.0 mm
		Wavelength		1/4	Op. Temp	-40 °C to +90 °C
		Electrical Type		Monopole	Ground Plane	89 mm x 89 mm
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


ANT-2.4-JJB-RA	Overview	Electric Data			Mechanical Data	
	2400 MHz Right Angle Monopole Dome  Applications Bluetooth, Zigbee, 802.15.4, Wi-Fi 4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Through Hole
		2400 - 2485	2.0	3.3	Termination	Solder Pin
		Polarization		Linear	Dimensions	14.5 mm x 7.0 mm
		Wavelength		1/4	Op. Temp	-40 °C to +90 °C
		Electrical Type		Monopole	Ground Plane	38 mm x 84 mm
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


ANT-2.4-MSA-TH1	Overview	Electric Data			Mechanical Data	
	2400 MHz Monopole Stamped Metal  Applications Bluetooth, Zigbee, 802.15.4, Wi-Fi 4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Through Hole
		2400 - 2500	1.3	3.7	Termination	Solder Pin
		Polarization		Linear	Dimensions	16.7 mm x 5.8 mm x 5.4 mm
		Wavelength		1/4	Op. Temp	-40 °C to +85 °C
		Electrical Type		Monopole	Ground Plane	40 mm x 50 mm
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


## 2.4 GHZ ISM - INTERNAL FPC ANTENNAS

ANT-2.4-FPC-SAH*	Overview	Electric Data			Mechanical Data	
	2400 MHz Multi-band Dipole Flexible Patch Orthogonal Cable  Applications Bluetooth, Zigbee, 802.15.4, Wi-Fi 4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Adhesive Mount
		2400 - 2500	4.1	0.1	Termination	U.FL-Type Plug MHF4 Plug
		Polarization		Linear	Dimensions	45.2 mm x 7.2 mm x 0.1 mm
		Wavelength		1/2	Op. Temp	-40 °C to +85 °C
		Electrical Type		Dipole	Cable Length*	50.0 mm, 100 mm, 150 mm
		Radiation Pattern		Omnidirectional	Cable Type	0.81 mm
		Impedance (Ohms)		50		


ANT-2.4-FPC-SF*	Overview	Electric Data			Mechanical Data	
	2400 MHz Multi-band Dipole Flexible Patch Flag Style  Applications Bluetooth, Zigbee, 802.15.4, Wi-Fi 4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Adhesive Mount
		2400 - 2500	1.9	3.9	Termination	U.FL-Type Plug MHF4 Plug
		Polarization		Linear	Dimensions	25.4 mm x 20.1 mm x 0.1 mm
		Wavelength		1/2	Op. Temp	-40 °C to +85 °C
		Electrical Type		Dipole	Cable Length*	50 mm, 100 mm, 150 mm, 200 mm
		Radiation Pattern		Omnidirectional	Cable Type	1.13 mm
		Impedance (Ohms)		50		


ANT-2.4-FPC-SH*	Overview	Electric Data			Mechanical Data	
	2400 MHz Multi-band Dipole Flexible Patch Orthogonal Cable  Applications Bluetooth, Zigbee, 802.15.4, Wi-Fi 4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Adhesive Mount
		2400 - 2500	1.4	4.0	Termination	U.FL-Type Plug MHF4 Plug
		Polarization		Linear	Dimensions	25.4 mm x 20.1 mm x 0.1 mm
		Wavelength		1/2	Op. Temp	-40 °C to +85 °C
		Electrical Type		Dipole	Cable Length*	50 mm, 100 mm, 150 mm, 200 mm
		Radiation Pattern		Omnidirectional	Cable Type	1.13 mm
		Impedance (Ohms)		50		


ANT-2.4-FPC-LV*	Overview	Electric Data			Mechanical Data	
	2400 MHz Multi-band Dipole Flexible Patch Inline Cable  Applications Bluetooth, Zigbee, 802.15.4, Wi-Fi 4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Adhesive Mount
		2400 - 2500	1.7	4.3	Termination	U.FL-Type Plug MHF4 Plug MMCX
		Polarization		Linear	Dimensions	45.2 mm x 7.2 mm x 0.1 mm
		Wavelength		1/2	Op. Temp	-40 °C to +85 °C
		Electrical Type		Dipole	Cable Length*	50 mm, 100 mm, 150 mm, 200 mm
		Radiation Pattern		Omnidirectional	Cable Type	1.13 mm
		Impedance (Ohms)		50		


ANT-2.4-FPC-LH*	Overview	Electric Data			Mechanical Data	
	2400 MHz Multi-band Dipole Flexible Patch Orthogonal Cable  Applications Bluetooth, Zigbee, 802.15.4, Wi-Fi 4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Adhesive Mount
		2400 - 2500	1.4	6.1	Termination	U.FL-Type Plug MHF4 Plug MMCX Plug
		Polarization		Linear	Dimensions	45.2 mm x 7.2 mm x 0.1 mm
		Wavelength		1/2	Op. Temp	-40 °C to +85 °C
		Electrical Type		Dipole	Cable Length*	50 mm, 100 mm, 150 mm, 200 mm
		Radiation Pattern		Omnidirectional	Cable Type	1.13 mm
		Impedance (Ohms)		50		

## 2.4 GHZ ISM - EXTERNAL - TERMINAL MOUNT MONOPOLE ANTENNAS


ANT-2.4-PW-LP	Overview	Electric Data			Mechanical Data	
	2400 MHz Straight Monopole Whip  Applications Bluetooth, Zigbee, 802.15.4, Wi-Fi 4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	PCB Screw
		2400 - 2485	1.9	-1.9	Termination	Screw Lug
		Polarization		Linear	Dimension	50.5 mm x 10.4 mm
		Wavelength		1/4	Op. Temp	-20 °C to +85 °C
		Electrical Type		Monopole	Ground Plane	38.1 mm x 83.8 mm
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


ANT-2.4-CW-RH-*	Overview	Electric Data			Mechanical Data	
	2400 MHz Straight Monopole Whip  Applications Bluetooth, Zigbee, 802.15.4, Wi-Fi 4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector mount
		2400 - 2485	2.0	-0.9	Termination	RP-SMA Plug SMA Plug
		Polarization		Linear	Dimension	27.0 mm x 7.8 mm
		Wavelength		1/4	Op. Temp	-30 °C to 90 °C
		Electrical Type		Monopole	Ground Plane	102 mm x 102 mm
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		

ANT-2.4-CW-QW-*	Overview	Electric Data			Mechanical Data	
	2400 MHz Straight Monopole Whip  Applications Bluetooth, Zigbee, 802.15.4, Wi-Fi 4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector mount
		2400 - 2485	1.9	1.1	Termination	RP-SMA Plug SMA Plug
		Polarization		Linear	Dimension	105.0 mm x 14.5 mm
		Wavelength		1/2	Op. Temp	-40 °C to +90 °C
		Electrical Type		Monopole	Ground Plane	102 mm x 102 mm
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


L9000099-01	Overview	Electric Data			Mechanical Data	
	2400 MHz Helical Monopole  Applications Bluetooth, Zigbee, 802.15.4, Wi-Fi 4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	PCB Screw
		2400 - 2485	2.0	4.5	Termination	Screw Lug
		Polarization		Linear	Dimension	46.9 mm x Ø6.0 mm
		Wavelength		1/4	Op. Temp	-40 °C to +85 °C
		Electrical Type		Monopole	Ground Plane	40 mm x 80 mm
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


## 2.4 GHZ ISM- EXTERNAL - TERMINAL MOUNT HINGED/90° MONOPOLE ANTENNAS


ANT-2.4-CW-RCS-*	Overview	Electric Data			Mechanical Data	
	2400 MHz Right Angle Monopole Whip  Applications Bluetooth, Zigbee, 802.15.4, Wi-Fi 4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector mount
		2400 - 2485	1.9	-0.2	Termination	RP-SMA Plug SMA Plug
		Polarization		Linear	Dimension	53.5 mm x 16.6 mm
		Wavelength		1/4	Op. Temp	-20 °C to +85 °C
		Electrical Type		Monopole	Ground Plane	102 mm x 102 mm
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		

ANT-2.4-CW-RAH-*	Overview	Electric Data			Mechanical Data	
	2400 MHz Right Angle Monopole Whip  Applications Bluetooth, Zigbee, 802.15.4, Wi-Fi 4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector mount
		2400 - 2485	2.0	1.6	Termination	RP-SMA Plug SMA Plug
		Polarization		Linear	Dimension	25.6 mm x 17.1 mm
		Wavelength		1/4	Op. Temp	-40 °C to +90 °C
		Electrical Type		Monopole	Ground Plane	102 mm x 102 mm
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


## 2.4 GHZ ISM - EXTERNAL - TERMINAL MOUNT HINGED/90° DIPOLE ANTENNAS


ANT-2.4-CW-RCL-*	Overview	Electric Data			Mechanical Data	
	2400 MHz Right Angle Dipole Whip  Applications Bluetooth, Zigbee, 802.15.4, Wi-Fi 4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector mount
		2400 - 2485	1.9	1.1	Termination	RP-SMA Plug SMA Plug
		Polarization		Linear	Dimension	88.0 mm x 16.6 mm
		Wavelength		1/2	Op. Temp	-20 °C to +85 °C
		Electrical Type		Dipole	Ground Plane	102 mm x 102 mm
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


ANT-2.4-CW-RCT-*	Overview	Electric Data			Mechanical Data	
	2400 MHz Right Angle Dipole Whip  Applications Bluetooth, Zigbee, 802.15.4, Wi-Fi 4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector mount
		2400 - 2485	1.9	2.2	Termination	RP-SMA Plug SMA Plug
		Polarization		Linear	Dimension	113.0 mm x 10.0 mm
		Wavelength		1/2	Op. Temp	-40 °C to +90 °C
		Electrical Type		Dipole	Ground Plane	102 mm x 102 mm
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


ANT-DB1-LCD-*	Overview	Electric Data			Mechanical Data	
	2400 MHz Hinged Dipole Whip  Applications Bluetooth, Zigbee, 802.15.4, Wi-Fi 4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector mount
		2400 - 2485	2.0	2.8	Termination	RP-SMA Plug SMA Plug
		Polarization		Linear	Dimension	83.1 mm x 10.0 mm
		Wavelength		1/2	Op. Temp	-40 °C to +80 °C
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		





ANT-2.4-CW-HWR-*	Overview	Electric Data			Mechanical Data	
	2400 MHz Tilt/ Swivel Dipole Whip  Applications Bluetooth, Zigbee, 802.15.4, Wi-Fi 4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector mount
		2400 - 2485	2.0	3.2	Termination	RP-SMA Plug SMA Plug
		Polarization		Linear	Dimension	142.0 mm x 10.0 mm
		Wavelength		1/2	Op. Temp	-30 °C to +80 °C
		Electrical Type		Dipole	Ground Plane	102 mm x 102 mm
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


ANT-2.4-OC-LG-*	Overview	Electric Data			Mechanical Data	
	2400 MHz Tilt/ Swivel Dipole Whip  Applications Bluetooth, Zigbee, 802.15.4, Wi-Fi 4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector mount
		2400 - 2485	2.0	4.0	Termination	RP-SMA Plug SMA Plug
		Polarization		Linear	Dimension	193.5 mm x 10.0 mm
		Wavelength		1/2	Op. Temp	-20 °C to +85 °C
		Electrical Type		Dipole	Ground Plane	102 mm x 102 mm
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		

IN24-5RD-*	Overview	Electric Data			Mechanical Data	
	Wi-Fi/WLAN 2.4GHz Hinged Dipole Whip  Applications Wi-Fi 4, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector mount
		2400-2485	1.5	5.5	Termination	SMA Plug RP-SMA Plug RP-TNC Plug
		Polarization		Linear	Dimensions	205x 14.5mm
		Wavelength		1/4	Op. Temp	-10° C to +70° C
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


WXR2400TN	Overview	Electric Data			Mechanical Data	
	Wi-Fi/WLAN 2.4GHz Hinged Dipole Whip  Applications Wi-Fi 4, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector mount
		2400-2500	2.0	1.0	Termination	TNC plug
		Polarization		Linear	Dimensions	177.8x
		Wavelength		1/2	Op. Temp	-40°C to +85°C
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


001-0001-L	Overview	Electric Data			Mechanical Data	
	Wi-Fi/WLAN 2.4GHz Hinged Dipole Whip  Applications Wi-Fi 4, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector mount
		2400-2500	2.5	2.0	Termination	RP-SMA Plug
		Polarization		Linear	Dimension	105x 10mm
		Wavelength		1/2	Op. Temp	-20°C to +65°C
		Electrical Type		Dipole	IP Rating	IP67
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


0600-00039	Overview	Electric Data			Mechanical Data	
	Wi-Fi/WLAN 2.4GHz Hinged Dipole Whip  Applications Wi-Fi 4, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector mount
		2400-2500	2.0	2.0	Termination	RP-TNC plug
		Polarization		Linear	Dimension	120x 13mm
		Wavelength		1/2	Op. Temp	-30°C to +70°C
		Electrical Type		Dipole	IP Rating	IP67
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


001-0010	Overview	Electric Data			Mechanical Data	
	Wi-Fi/WLAN 2.4GHz Hinged Dipole Whip  Applications Wi-Fi 4, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector mount
		2400-2500	2.5	2.0	Termination	RP-SMA plug
		Polarization		Linear	Dimension	114x 13mm
		Wavelength		1/2	Op. Temp	-40°C to +85°C
		Electrical Type		Dipole	IP Rating	IP67
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		

## 2.4 GHZ ISM - EXTERNAL - TERMINAL MOUNT DIPOLE ANTENNAS


ANT-ELE-S01-011	Overview	Electric Data			Mechanical Data	
	2400 MHz Straight Dipole Whip  Applications Bluetooth, Zigbee, 802.15.4, Wi-Fi 4 Use with MAG Series Remote Mount Base	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Base Screw
		2400 - 2485	2.0	-	Termination	Screw Base
		Polarization		Linear	Dimension	25.9 mm x 10.0 mm
		Wavelength		1/2	Op. Temp	-40 °C to +80 °C
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


ANT-2.4-CW-CT-*	Overview	Electric Data			Mechanical Data	
	2400 MHz Straight Dipole Whip  Applications Bluetooth, Zigbee, 802.15.4, Wi-Fi 4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector mount
		2400 - 2485	1.9	2.8	Termination	RP-SMA Plug SMA Plug
		Polarization		Linear	Dimension	113.0 mm x 10.0 mm
		Wavelength		1/2	Op. Temp	-40 °C to +90 °C
		Electrical Type		Dipole	Ground Plane	102 mm x 102 mm
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		

ANT-2.4-CW-HW-*	Overview	Electric Data			Mechanical Data	
	2400 MHz Straight Dipole Whip  Applications Bluetooth, Zigbee, 802.15.4, Wi-Fi 4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector mount
		2400 - 2485	2.0	3.2	Termination	RP-SMA Plug SMA Plug
		Polarization		Linear	Dimension	120.0mmx10.7mm
		Wavelength		1/2	Op. Temp	-30 °C to +85 °C
		Electrical Type		Dipole	Ground Plane	102 mm x 102 mm
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


ANT-2.4-CW-HW-T	Overview	Electric Data			Mechanical Data	
	2400 MHz Straight Dipole Whip, added UV resistance  Applications Bluetooth, Zigbee, 802.15.4, Wi-Fi 4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector mount
		2400 - 2485	2.0	3.2	Termination	RP-SMA Plug SMA Plug
		Polarization		Linear	Dimension	120.0mmx107mm
		Wavelength		1/4	Op. Temp	-30 °C to +85 °C
		Electrical Type		Monopole	Ground Plane	102 mm x 102 mm
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


## 2.4 GHZ ISM - EXTERNAL - REMOTE MOUNT MONOPOLE ANTENNAS


ANT-2.4-WRT-MON-*	Overview	Electric Data			Mechanical Data	
	2400 MHz Straight Monopole Dome  Applications Bluetooth, Zigbee, 802.15.4, Wi-Fi 4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Panel Mount
		2400 - 2485	1.9	0.8	Termination	RP-SMA Plug SMA Plug U.FL-Type Plug
		Polarization		Linear	Dimension	26.8 mm x 19.0 mm
		Wavelength		1/4	Op. Temp	-40 °C to +85 °C
		Electrical Type		Monopole	Cable Length	216.0 mm
		Radiation Pattern		Omnidirectional	Cable Type	1.32 mm RG-174
		Impedance (Ohms)		50	Ground Plane	102 mm x 102 mm


ANT-2.4-PW-QW-*	Overview	Electric Data			Mechanical Data	
	2400 MHz Straight Monopole Whip  Applications Bluetooth, Zigbee, 802.15.4, Wi-Fi 4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Panel Mount
		2400 - 2485	1.9	1.6	Termination	U.FL-Type Plug Unterminated Cable
		Polarization		Linear	Dimension	105.0 mm x 14.5 mm
		Wavelength		1/2	Op. Temp	-40 °C to +90 °C
		Electrical Type		Monopole	Cable Length	216.0 mm
		Radiation Pattern		Omnidirectional	Cable Type	1.32 mm RG-174
		Impedance (Ohms)		50	Ground Plane	102 mm x 102 mm


## 2.4 GHZ ISM - EXTERNAL - REMOTE MOUNT DIPOLE ANTENNAS


ANT-5GW-MMG1-SMA-*	Overview	Electric Data			Mechanical Data	
	2400 MHz Straight Dipole Whip  Applications Bluetooth, Zigbee, 802.15.4, Wi-Fi 4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Magnetic Mount
		2400 - 2485	1.8	0.7	Termination	SMA Plug
		Polarization		Linear	Dimension	82.8 mm x Ø30.0 mm
		Wavelength		1/2	Op. Temp	-20 °C to +80 °C
		Electrical Type		Dipole	Cable Length*	1 m, 2 m, 3 m
		Radiation Pattern		Omnidirectional	Cable Type	RG-174/U
		Impedance (Ohms)		50		


ANT-2.4-PML-*	Overview	Electric Data			Mechanical Data	
	2400 MHz Tilt/ Swivel Dipole Whip  Applications Bluetooth, Zigbee, 802.15.4, Wi-Fi 4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Panel Mount
		2400 - 2485	1.9	2.4	Termination	U.FL-Type Plug Unterminated Cable
		Polarization		Linear	Dimension	150.3 mm x 12.1 mm
		Wavelength		1/2	Op. Temp	-40 °C to +90 °C
		Electrical Type		Dipole	Cable Length	305.0 mm
		Radiation Pattern		Omnidirectional	Cable Type	1.32 mm RG-178
		Impedance (Ohms)		50	Ground Plane	102 mm x 102 mm


ANT-2.4-LPW-125	Overview	Electric Data			Mechanical Data	
	2400 MHz Hinged Dipole Whip  Applications Bluetooth, Zigbee, 802.15.4, Wi-Fi 4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Panel Mount
		2400 - 2485	1.5	2.8	Termination	U.FL-Type Plug
		Polarization		Linear	Dimension	88.0 mm x 9.4 mm
		Wavelength		1/2	Op. Temp	-20 °C to +85 °C
		Electrical Type		Dipole	Cable Length	125.0 mm
		Radiation Pattern		Omnidirectional	Cable Type	1.13 mm
		Impedance (Ohms)		50		

ANT-5GW-MMG2-SMA-*	Overview	Electric Data			Mechanical Data	
	2400 MHz Straight Dipole Whip  Applications Bluetooth, Zigbee, 802.15.4, Wi-Fi 4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Magnetic Mount
		2400 - 2485	2.2	2.8	Termination	SMA Plug
		Polarization		Linear	Dimension	88.5 mm x Ø29.0 mm
		Wavelength		1/2	Op. Temp	-20 °C to +80 °C
		Electrical Type		Dipole	Cable Length*	1 m, 2 m, 3 m
		Radiation Pattern		Omnidirectional	Cable Type	RG-174/U
		Impedance (Ohms)		50		


ANT-2.4-ID-1000-*	Overview	Electric Data			Mechanical Data	
	2400 MHz Straight Dipole Whip  Applications Bluetooth, Zigbee, 802.15.4, Wi-Fi 4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Bracket Mount
		2400 - 2485	1.9	3.0	Termination	RP-SMA Plug SMA Plug
		Polarization		Linear	Dimension	119.4 mm x 31.2 mm x 12.4 mm
		Wavelength		1/2	Op. Temp	-40 °C to +80 °C
		Electrical Type		Dipole	Cable Length*	1.0 m 2.0 m
		Radiation Pattern		Omnidirectional	Cable Type	RG-58/U
		Impedance (Ohms)		50		


ANT-2.4-WRT-*	Overview	Electric Data			Mechanical Data	
	2400 MHz Straight Dipole Dome  Applications Bluetooth, Zigbee, 802.15.4, Wi-Fi 4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Panel Mount
		2400 - 2485	1.9	3.5	Termination	RP-SMA Plug SMA Plug U.FL-Type Plug
		Polarization		Linear	Dimension	10.0 mm x 19.0 mm
		Wavelength		1/2	Op. Temp	-40 °C to +90 °C
		Electrical Type		Dipole	Cable Length	216.0 mm
		Radiation Pattern		Omnidirectional	Cable Type	1.32 mm RG-174
		Impedance (Ohms)		50		


0600-00040	Overview	Electric Data			Mechanical Data	
	Wi-Fi/WLAN 2.4GHz Swivel Dipole Whip with Pigtail  Applications Wi-Fi 4, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector mount
		2400-2500	2.0	2.0	Termination	MHF-Type plug
		Polarization		Linear	Dimension	137xØ13mm
		Wavelength		1/2	Op. Temp	-20°C to +65°C
		Electrical Type		Dipole	Cable Length	152mm
		Radiation Pattern		Omnidirectional	Cable Type	1.37mm
		Impedance (Ohms)		50		

0600-00039	Overview	Electric Data			Mechanical Data	
	Wi-Fi/WLAN 2.4GHz Swivel Dipole Whip with Pigtail  Applications Wi-Fi 4, 802.11, Bluetooth, Zigbee, 802.15.4	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector mount
		2400-2500	2.0	5.0	Termination	MMCX plug
		Polarization		Linear	Dimension	166xØ13mm
		Wavelength		1/2	Op. Temp	-20°C to +65°C
		Electrical Type		Dipole	Cable Length	127mm
		Radiation Pattern		Omnidirectional	Cable Type	RG-178
		Impedance (Ohms)		50		


# GPS/GNSS - INTERNAL - SURFACE MOUNT HIGH PRECISION ANTENNAS


2108844-1	Overview	Electric Data			Mechanical Data	
	L1/E1/G1/B1, L2/E6/G2/B3, L5/E5/G3/B2/IRNSS Passive Ceramic Patch  Applications Navigation, Location, Timing, GNSS, QZSS	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Through Hole with adhesive
		1164-1255	1.3	5.4	Termination	Solder Pin
		1559-1610	1.4	6.0	Dimension	41x41x13mm
		Polarization		RHCP	Op. Temp	-40 °C to +85 °C
		Wavelength		1/4	Ground Plane	150x150mm
		Electrical Type		Radiating Patch		
		Radiation Pattern		Directional		
		Impedance (Ohms)		50		


2108840-1	Overview	Electric Data			Mechanical Data	
	L1/E1/G1/B1, L2/E6/G2/B3, E5b/G3, Passive Ceramic Patch  Applications Navigation, Location, Timing, GNSS, QZSS	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Through Hole with adhesive
		1194-1255	1.3	5.1	Termination*	Solder Pin
		1559-1610	1.4	5.6	Dimension	41x41x13mm
		Polarization		RHCP	Op. Temp	-40 °C to +85 °C
		Wavelength		1/4	Ground Plane	150x150mm
		Electrical Type		Radiating Patch		
		Radiation Pattern		Directional		
		Impedance (Ohms)		50		


2108848-1	Overview	Electric Data			Mechanical Data	
	L1/E1/G1/B1, L2/E6/G2, Passive Ceramic Patch  Applications Navigation, Location, Timing, GNSS, QZSS	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Through Hole with adhesive
		1215-1250	1.2	4.2	Termination	Solder Pin
		1559-1610	1.3	6.0	Dimension	33x33x15mm
		Polarization		RHCP	Op. Temp	-40 °C to +85 °C
		Wavelength		1/4	Ground Plane	150x150mm
		Electrical Type		Radiating Patch		
		Radiation Pattern		Directional		
		Impedance (Ohms)		50		





2108847-1	Overview	Electric Data			Mechanical Data	
	L1/E1/G1/B1, L2/E6/G2/B3 Passive Ceramic Patch  Applications Navigation, Location, Timing, GNSS, QZSS	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Through Hole with adhesive
		1215-1250	1.4	3.9	Termination	Solder Pin
		1559-1610	1.4	2.7	Dimension	41x41x8mm
		Polarization		RHCP	Op. Temp	-40 °C to +85 °C
		Wavelength		1/4	Ground Plane	150x150mm
		Electrical Type		Radiating Patch		
		Radiation Pattern		Directional		
		Impedance (Ohms)		50		

ANT-GNCP-TH25AL12	Overview	Electric Data			Mechanical Data	
	L1/E1/B1 L2/L2C Multi-band Ceramic Patch  Applications Location, Timing, GPS, Galileo, Other, Beidou, QZSS	Band (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Through Hole
		1228	12.1	-1.9	Termination	Solder Pin
		1246/1248	4.5	-0.9	Dimension	25.1 mm x 25.1 mm x 8.0 mm
		1561	5.0	0.9	Op. Temp	-40 °C to +105 °C
		1575	5.0	3.1	Ground Plane	70 mm x 70 mm
		1601/1602	2.1	4.0		
		Polarization		RHCP		
		Wavelength		1/4		
		Electrical Type		Radiating Patch		
		Radiation Pattern		Directional		
		Impedance (Ohms)		50		


ANT-GNCP-TH258L15	Overview	Electric Data			Mechanical Data	
	L1/L5/E1/B1 Multi-band Ceramic Patch  Applications Location, Timing, GPS, Galileo, Other, Beidou, QZSS	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Through Hole
		1553.10 - 1608.68	5.9	5.6	Termination	Solder Pin
		1170 - 1183	6.4	1.0	Dimension	25.1 mm x 25.1 mm x 8.0 mm
		Polarization		RHCP	Op. Temp	-40 °C to +105 °C
		Wavelength		1/4	Ground Plane	70 mm x 70 mm
		Electrical Type		Radiating Patch		
		Radiation Pattern		Directional		
		Impedance (Ohms)		50		


ANT-GNSSCP-SM12L1	Overview	Electric Data			Mechanical Data	
	L1/E1/B1 Dual-Band Ceramic Patch  Applications Location, Timing, GPS, Galileo, Other, Beidou, QZSS	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Surface Mount
		1567.24 - 1583.6	7.0	2.9	Termination	Solder Pad
		1593.31 - 1608.68	6.1	1.0	Dimension	12.0 mm x 12.0 mm x 4.0 mm
		Polarization		RHCP	Op. Temp	-40 °C to +105 °C
		Wavelength		1/4	Ground Plane	50 mm x 50 mm
		Electrical Type		Radiating Patch		
		Radiation Pattern		Directional		
		Impedance (Ohms)		50		


ANT-GNSSCP-TH18L1	Overview	Electric Data			Mechanical Data	
	L1/E1/B1 Multi-band Ceramic Patch  Applications Location, Timing, GPS, Galileo, Other, Beidou, QZSS	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Through Hole
		1567.24 - 1583.6	2.8	5.1	Termination	Solder Pin
		1587.69 - 1591.79	3.2	2.8	Dimension	18.0 mm x 18.0 mm x 4.0 mm
		1593.31 - 1608.68	2.9	4.0	Op. Temp	-40 °C to +105 °C
		Polarization		RHCP	Ground Plane	70 mm x 70 mm
		Wavelength		1/4		
		Electrical Type		Radiating Patch		
		Radiation Pattern		Directional		
		Impedance (Ohms)		50		


ANT-GNSSCP-TH25L1	Overview	Electric Data			Mechanical Data	
	L1/E1/B1 Multi-band Ceramic Patch Applications Location, Timing, GPS, Galileo, Other, Beidou, QZSS	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Through Hole
		1567.24 - 1583.6	5.6	3.5	Termination	Solder Pin
		1587.69 - 1591.79	2.1	4.0	Dimension	25.1 mm x 25.1 mm x 4.0 mm
		1593.31 - 1608.68	1.7	4.0	Op. Temp	-40 °C to +105 °C
		Polarization		RHCP	Ground Plane	70 mm x 70 mm
		Wavelength		1/4		
		Electrical Type		Radiating Patch		
		Radiation Pattern		Directional		
		Impedance (Ohms)		50		


# GPS/GNSS - INTERNAL - REMOTE MOUNT ACTIVE ANTENNAS


ANT-GNCP-C25L125100	Overview	Electric Data			Mechanical Data	
	L1/E1/B1 L2/E5/B2B L5/E5/B2A Multi-band Active Ceramic Patch with integrated low noise amplifier (LNA)  Applications Location, Timing, GPS, Galileo, Other, Beidou, QZSS	Band (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Surface Mount
		1176	2.2	30.8	Termination	MHF1/U.FL-Type Plug
		1202/1207	1.4	18.2	Dimension	25.0 mm x 25.0 mm x 12.0 mm
		1228	1.6	25.0	Op. Temp	-40 °C to +85 °C
		1246/1248	1.3	10.2	Cable Length	100 mm
		1561	1.4	31.5	Cable Type	1.13 mm
		1575	1.7	31.6		
		1601/1602	1.4	28.4		
		Polarization		RHCP		
		Wavelength		1/4		
		Electrical Type		Radiating Patch		
		Radiation Pattern		Directional		
		Impedance (Ohms)		50		


ANT-GNCP-C25L15100	Overview	Electric Data			Mechanical Data	
	L1/E1/B1 L5/E5/B2A Multi-band Active Ceramic Patch with integrated low noise amplifier (LNA)  Applications Location, Timing, GPS, Galileo, Other, Beidou, QZSS	Band (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Surface Mount
		1176	1.8	27.3	Termination	MHF1/U.FL-Type Plug
		1561	1.3	20.2	Dimension	25.1 mm x 25.1 mm x 12.0 mm
		1575	1.3	31.7	Op. Temp	-40 °C to +85 °C
		1601/1602	1.2	14.8	Cable Length	100 mm
		Polarization		RHCP	Cable Type	1.13 mm
		Wavelength		1/4		
		Electrical Type		Radiating Patch		
		Radiation Pattern		Directional		
		Impedance (Ohms)		50		


2108854-1	Overview	Electric Data			Mechanical Data	
	<p>L1/E1/G1/B1, L2/E6/G2/B3, Active Ceramic Patch with integrated LNA</p> <p>Applications Navigation, Location, Timing, GNSS, QZSS</p>	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Adhesive
		1194-1255	1.2	32.8	Termination	U.FL-Type Plug
		1559-1610	1.4	35.2	Dimension	43x43x18mm
		Polarization		RHCP	Op. Temp	-40 °C to +85 °C
		Wavelength		1/4	Cable Length	100mm
		Electrical Type		Radiating Patch	Cable Type	1.13mm
		Radiation Pattern		Directional		
		Impedance (Ohms)		50		


2108853-1	Overview	Electric Data			Mechanical Data	
	<p>L1/E1/G1/B1, L2/E6/G2/B3, Active Ceramic Patch with integrated LNA</p> <p>Applications Navigation, Location, Timing, GNSS, QZSS</p>	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Adhesive
		1194-1255	1.3	32.7	Termination	U.FL-Type Plug
		1559-1610	1.2	33.5	Dimension	43x43x13mm
		Polarization		RHCP	Op. Temp	-40 °C to +85 °C
		Wavelength		1/4	Cable Length	100mm
		Electrical Type		Radiating Patch	Cable Type	1.13mm
		Radiation Pattern		Directional		
		Impedance (Ohms)		50		


ANT-GNCP-C25L12100	Overview	Electric Data			Mechanical Data	
	<p>L1/E1/B1 I2/E5/ B2B Multi-band Active Ceramic Patch with integrated low noise amplifier (LNA)</p> <p>Applications Location, Timing, GPS, Galileo, Other, Beidou, QZSS</p>	Band (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Surface Mount
		1202/1207	2.3	29.6	Termination	MHF1/U.FL-Type Plug
		1228	2.3	29.6	Dimension	25.1 mm x 25.1 mm x 12.0 mm
		1246/1248	1.5	17.1	Op. Temp	-40 °C to +85 °C
		1561	1.6	23.8	Cable Length	100 mm
		1575	1.6	33.0	Cable Type	1.13 mm
		1601/1602	1.4	29.2		
		Polarization		RHCP		
		Wavelength		1/4		
		Electrical Type		Radiating Patch		
		Radiation Pattern		Directional		
		Impedance (Ohms)		50		


2108852-1*	Overview	Electric Data			Mechanical Data	
	L1/E1/G1/B1, Active Ceramic Patch with integrated LNA  Applications Navigation, Location, Timing, GNSS, QZSS	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Adhesive
		1559-1610	3.3	34.0	Termination	U.FL-Type Plug
		Polarization		RHCP	Dimension	25x25x10.5mm
		Wavelength		1/4	Op. Temp	-40 °C to +85 °C
		Electrical Type		Radiating Patch	Cable Length*	100mm 40mm
		Radiation Pattern		Directional	Cable Type	1.13mm
		Impedance (Ohms)		50		


ANT-GNCP-CA158L160	Overview	Electric Data			Mechanical Data	
	L1/E1/B1 Multi-band Active Ceramic Patch with integrated low noise amplifier (LNA)  Applications Location, Timing, GPS, Galileo, Other, Beidou, QZSS	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Surface Mount
		1559.05 - 1563.14	3.5	6.7	Termination	U.FL-Type Plug
		1567.24 - 1583.60	2.4	13.9	Dimension	15.0 mm x 15.0 mm x 6.6 mm
		1587.69 - 1591.79	1.5	13.9	Op. Temp	-40 °C to +85 °C
		1593.31 - 1608.68	1.4	12.4	Cable Length	60 mm
		Polarization		RHCP	Cable Type	1.13 mm
		Wavelength		1/4		
		Electrical Type		Radiating Patch		
		Radiation Pattern		Directional		
		Impedance (Ohms)		50		


ANT-GNCP-CA188L165	Overview	Electric Data			Mechanical Data	
	L1/E1/B1 Multi-band Active Ceramic Patch with integrated low noise amplifier (LNA)  Applications Location, Timing, GPS, Galileo, Other, Beidou, QZSS	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Surface Mount
		1559.05 - 1563.14	1.1	10.6	Termination	U.FL-Type Plug
		1567.24 - 1583.60	1.1	13.7	Dimension	18.0 mm x 18.0 mm x 7.1 mm
		1587.69 - 1591.79	1.1	14.1	Op. Temp	-40 °C to +85 °C
		1593.31 - 1608.68	1.1	14.1	Cable Length	65 mm
		Polarization		RHCP	Cable Type	1.13 mm
		Wavelength		1/4		
		Electrical Type		Radiating Patch		
		Radiation Pattern		Directional		
		Impedance (Ohms)		50		

ANT-GNCP-C185L160	Overview	Electric Data			Mechanical Data	
	L1/E1/B1 Multi-band Active Ceramic Patch with integrated low noise amplifier (LNA)  Applications Location, Timing, GPS, Galileo, Other, Beidou, QZSS	Band (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Surface Mount
		1561	1.6	9.3	Termination	MHF1/U.FL-Type Plug
		1575	1.7	16.3	Dimension	18.0 mm x 18.0 mm x 4.5 mm
		1601/1602	1.7	13.8	Op. Temp	-40 °C to +85 °C
		Polarization		RHCP	Cable Length	60 mm
		Wavelength		1/4	Cable Type	0.81 mm
		Electrical Type		Radiating Patch		
		Radiation Pattern		Directional		
		Impedance (Ohms)		50		

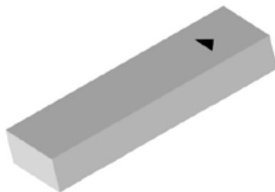
ANT-GNCP-C106L160	Overview	Electric Data			Mechanical Data	
	L1/E1/B1 Multi-band Active Ceramic Patch with integrated low noise amplifier (LNA)  Applications Location, Timing, GPS, Galileo, Other, Beidou, QZSS	Band (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Surface Mount
		1561	1.8	14.1	Termination	MHF1/U.FL-Type Plug
		1575	2.1	24.4	Dimension	10.0 mm x 10.0 mm x 6.0 mm
		1601/1602	3.1	26.4	Op. Temp	-40 °C to +85 °C
		Polarization		RHCP	Cable Length	60 mm
		Wavelength		1/4	Cable Type	0.81 mm
		Electrical Type		Radiating Patch		
		Radiation Pattern		Directional		
		Impedance (Ohms)		50		


ANT-GNCP-C357L160	Overview	Electric Data			Mechanical Data	
	L1/E1/B1 Multi-band Active Ceramic Patch with integrated low noise amplifier (LNA)  Applications Location, Timing, GPS, Galileo, Other, Beidou, QZSS	Band (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Surface Mount
		1561	1.5	27.2	Termination	MHF1/U.FL-Type Plug
		1575	1.7	34.7	Dimension	35.0 mm x 35.0 mm x 6.9 mm
		1601/1602	1.3	34.0	Op. Temp	-40 °C to +85 °C
		Polarization		RHCP	Cable Length	60 mm
		Wavelength		1/4	Cable Type	1.13 mm
		Electrical Type		Radiating Patch		
		Radiation Pattern		Directional		
		Impedance (Ohms)		50		


ANT-GNCP-C257L160	Overview	Electric Data			Mechanical Data	
	L1/E1/B1 Multi-band Active Ceramic Patch with integrated low noise amplifier (LNA)  Applications Location, Timing, GPS, Galileo, Other, Beidou, QZSS	Band (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Surface Mount
		1561	1.5	27.8	Termination	MHF1/U.FL-Type Plug
		1575	1.7	34.5	Dimension	25.1 mm x 25.1 mm x 7.4 mm
		1601/1602	2.1	36.1	Op. Temp	-40 °C to +85 °C
		Polarization		RHCP	Cable Length	60 mm
		Wavelength		1/4	Cable Type	1.13 mm
		Electrical Type		Radiating Patch		
		Radiation Pattern		Directional		
		Impedance (Ohms)		50		


2108912-1	Overview	Electric Data			Mechanical Data	
	L1/E1/B1, Active Ceramic Patch with integrated LNA  Applications Navigation, Location, Timing, GNSS, QZSS	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Adhesive
		1565-1585	2.0	11.1	Termination	U.FL-Type Plug
		Polarization		RHCP	Dimension	12x12x5.2mm
		Wavelength		1/4	Op. Temp	-40 °C to +85 °C
		Electrical Type		Radiating Patch	Cable Length	55mm
		Radiation Pattern		Directional	Cable Type	1.13mm
		Impedance (Ohms)		50		

## GPS/GNSS - INTERNAL OTHER GPS/GNSS


2108824-1	Overview	Electric Data				Mechanical Data	
	L1/E1/G1/B1, Monopole Ceramic Chip  Applications Navigation, Location, Timing, GNSS, QZSS	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Surface Mount
		1559-1610	1.7	2.9	80	Termination	Solder pad
		Polarization		Linear		Dimension	10x3x1.5mm
		Wavelength		1/4		Op. Temp	-40 °C to +85 °C
		Electrical Type		Monopole		Ground Plane	80x40mm
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


2118900-1	Overview	Electric Data				Mechanical Data	
	LL1/E1/G1/B1, Monopole PCB chip  Applications Navigation, Location, Timing, GNSS, QZSS	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Surface Mount
		1560-1602	2.0	1.0	60	Termination	Solder Pin
		Polarization		Linear		Dimension	10x10x1.0mm
		Wavelength		1/4		Op. Temp	-40°C to +85°C
		Electrical Type		Monopole		Ground Plane	100x100mm
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			

ANT-GNL1-nSP	Overview	Electric Data				Mechanical Data	
	L1/E1/G1/B1, Monopole PCB chip  Applications Navigation, Location, Timing, GNSS, QZSS	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Surface Mount
		1561	1.4	4.4	64	Termination	Solder Pin
		1575	1.4	4.4	64	Dimension	9.6x8.4x0.9mm
		1601/1602	1.3	3.6	63	Op. Temp	-40°C to 130°C
		Polarization		Linear		Ground Plane	40x70mm
		Wavelength		1/4			
		Electrical Type		Monopole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


1513634-1	Overview	Electric Data				Mechanical Data	
	L1/E1/B1, Monopole Over-molded Stamped Metal  Applications Navigation, Location, Timing, GNSS, QZSS	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Surface Mount
		1565-1585	3.0	0	50	Termination	Solder pad
		Polarization		RHCP		Dimension	6.05xØ16mm
		Wavelength		1/4		Op. Temp	-40°C to +85°C
		Electrical Type		Monopole		Ground Plane	50x50mm
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			




L90003**-01 L00051*-01	Overview	Electric Data				Mechanical Data	
	L1/E1/B1, Monopole Over-molded Stamped Metal  Applications Navigation, Location, Timing, GNSS, QZSS	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Adhesive
		1559-1563	2.7	5.0	60	Termination*	U.FL-Type Plug MHF4-Type Plug
		1559-1592	2.7	5.2	62	Cable Length*	50mm
		1598-1606	2.3	3.1	39		100mm
		Polarization		Linear			150mm
		Wavelength		1/2			200mm
		Electrical Type		Dipole		Dimension	13 x 13 x 0.1mm
		Radiation Pattern		Omnidirectional		Op. Temp	-40°C to +85°C
		Impedance (Ohms)		50			


L0005**-01	Overview	Electric Data				Mechanical Data	
	L1/E1/B1, Monopole Over-molded Stamped Metal  Applications Navigation, Location, Timing, GNSS, QZSS	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Adhesive
		1164-1189	2.4	-0.2	26	Termination*	U.FL-Type Plug MHF4-Type Plug
		1559-1592	2.2	3.3	46	Cable Length*	50mm
		1598-1606	1.4	3.0	43		100mm
		Polarization		Linear			150mm
		Wavelength		1/2			200mm
		Electrical Type		Dipole		Dimension	25 x 25 x 0.1mm
		Radiation Pattern		Omnidirectional		Op. Temp	-40°C to +85°C
		Impedance (Ohms)		50			


## GPS/GNSS - EXTERNAL - TERMINAL MOUNT


GPSU15M	Overview	Electric Data				Mechanical Data	
	L1/E1/G1/B1, Radiating Patch Puck with integrated LNA  Applications Navigation, Location, Timing, GNSS, QZSS	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Noise Figure (dB)	Mounting Type	NMO base
		1561-1589	2.0	27	1.5	Termination	Push pin
		Polarization		RHCP		Dimension	38.1xØ68.2mm
		Radiation Pattern		Directional		Op. Temp	-40 °C to +85 °C
		Impedance (Ohms)		50			


## GPS/GNSS - EXTERNAL - REMOTE MOUNT


2108855-1	Overview	Electric Data				Mechanical Data	
	L1/E1/G1/B1, L2/E6/G2/B3, L5/E5/G3/B2/IRNSS, Radiating Patch Puck with integrated LNA  Applications Navigation, Location, Timing, GNSS, QZSS	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Noise Figure (dB)	Mounting Type	Magnetic
		1164-1255	1.3	31.3	1.9	Termination	SMA Plug
		1559-1610	1.4	26.7	1.6	Dimension	82x60x22.5mm
		Polarization		RHCP		Op. Temp	-40 °C to +85 °C
		Wavelength		1/4		Cable Length	5M
		Electrical Type		Radiating Patch		Cable Type	RG-174
		Radiation Pattern		Directional			
		Impedance (Ohms)		50			


ANT-GNRM-L15A-*	Overview	Electric Data				Mechanical Data	
	1553 MHz Radiating Patch Puck with LNA  Applications GPS, Galileo, Other, COMPASS, Beidou	Band (MHz)	VSWR (Max)	Peak Gain (dBi)		Mounting Type	Magnetic
		1176	1.3	28.9		Termination	SMA Plug
		1561	1.3	27.2		Dimensions	40.5 mm x 38.0 mm x 16.3 mm
		1575	1.3	30.5		Op. Temp	-40 °C to +85 °C
		1601/1602	1.2	30.5		Cable Length*	1 m, 3 m, 5 m
		Polarization		RHCP		Cable Type	RG-174
		Wavelength		1/4			
		Electrical Type		Radiating Patch			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


ANT-GNRM-L125A-*	Overview	Electric Data			Mechanical Data	
	11553 MHz Radiating Patch Puck with LNA  Applications GPS, Galileo, Other, COMPASS, Beidou	Band (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Magnetic
		1176	1.4	29.8	Termination	SMA Plug
		1202/1207	1.6	31.5	Dimension	45.0 mm x 35.0 mm x 15.0 mm
		1228	1.6	31.0	Op. Temp	-40 °C to +85 °C
		1246/1248	1.5	23.3	Cable Length	1 m, 3 m, 5 m
		1561	1.2	30.7	Cable Type	RG-174
		1575	1.2	31.7		
		1601/1602	1.3	30.6		
		Polarization		RHCP		
		Wavelength		1/2		
		Electrical Type		Radiating Patch		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


ANT-GNRM-L12A-*	Overview	Electric Data			Mechanical Data	
	1553 MHz Radiating Patch Puck with LNA  Applications GPS, Galileo, Other, COMPASS, Beidou	Band (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Magnetic
		1202/1207	1.7	25.0	Termination	SMA Plug
		1228	1.6	27.4	Dimension	40.5 mm x 38.0 mm x 16.3 mm
		1246/1248	1.1	23.4	Op. Temp	-40 °C to +85 °C
		1561	1.5	28.4	Cable Length	1 m, 3 m, 5 m
		1575	1.5	32.4	Cable Type	RG-174
		1601/1602	1.2	32.2		
		Polarization		RHCP		
		Wavelength		1/2		
		Electrical Type		Radiating Patch		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		

ANT-GPS-SH2-*	Overview	Electric Data			Mechanical Data	
	1553 MHz Radiating Patch Puck  Applications GPS, Galileo, Other, COMPASS, Beidou	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Magnetic
		1553 - 1609	1.5	5.0	Termination	SMA Plug MCX Plug MMCX Plug
		Polarization		RHCP	Dimension	45.0 mm x 36.5 mm x 12.5 mm
		Wavelength		1/2	Op. Temp	-40 °C to +85 °C
		Electrical Type		Radiating Patch	Cable Length	3.0 m
		Radiation Pattern		Omnidirectional	Cable Type	RG-174U
		Impedance (Ohms)		50		

2195891-1	Overview	Electric Data				Mechanical Data	
	L1/E1/G1/ B1, Radiating Patch Puck with integrated LNA  Applications Navigation, Location, Timing, GNSS, QZSS	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Noise Figure (dB)	Mounting Type	Magnetic
		1559-1610	1.9	29.4	1.4	Termination	SMA Plug
		Polarization		RHCP		Dimension	50x38x17mm
		Wavelength		1/4		Op. Temp	-40 °C to +85 °C
		Electrical Type		Radiating Patch		Cable Length	3M
		Radiation Pattern		Directional		Cable Type	RG-174
		Impedance (Ohms)		50			


GNS1559MPF-100SMAM	Overview	Electric Data				Mechanical Data	
	LL1/E1/G1/ B1, Radiating Patch Puck with integrated LNA  Applications Navigation, Location, Timing, GNSS, QZSS	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Noise Figure (dB)	Mounting Type	Screw
		1559-1563	2.1	30.7	2.5	Termination	SMA Plug
		1574-1576	2.4	31.9	2.5	Dimension	14.9xØ48.8mm
		1598-1605	1.8	31.5	2.5	Op. Temp	-35 °C to +75 °C
		Polarization		RHCP		Cable Length	100cm
		Wavelength		1/4		Cable Type	RG-174
		Electrical Type		Radiating Patch		IP Rating	IP67
		Radiation Pattern		Directional			
		Impedance (Ohms)		50			


ANT-GNRM-L1A-*	Overview	Electric Data			Mechanical Data	
	1553 MHz Radiating Patch Puck with LNA  Applications GPS, Galileo, Other, COMPASS, Beidou	Band (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Magnetic
		1561	1.3	32.8	Termination	SMA Plug
		1575	1.5	33.5	Dimension	45.0 mm x 35.0 mm x 15.0 mm
		1601/1602	1.2	33.4	Op. Temp	-40 °C to +85 °C
		Polarization		RHCP	Cable Length*	1 m, 3 m, 5 m
		Wavelength		1/2	Cable Type	RG-174
		Electrical Type		Radiating Patch		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


GPS15MGSM*	Overview	Electric Data				Mechanical Data	
	L1/E1, Radiating Patch Puck with integrated LNA  Applications Navigation, Location, Timing, GNSS, QZSS	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Noise Figure (dB)	Mounting Type	Magnetic
		1574-1576	2.0	29	1.5	Termination*	SMA Plug
		Polarization		RHCP		Dimension	44x36x14mm
		Wavelength		1/4		Op. Temp	-40 °C to +85 °C
		Electrical Type		Radiating Patch		Cable Length	7010cm
		Radiation Pattern		Directional		Cable Type	RG-174
		Impedance (Ohms)		50		IP Rating	IP67


# VEHICLE - EXTERNAL - SINGLE PORT


## VHF ANTENNAS


CW42 CW42S (Spring)	Overview	Electric Data			Mechanical Data	
	VHF 42-48MHz Outdoor Monopole Whip  Applications LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Mount
		42-48	2.0	4.0	Termination	NMO
		Polarization		Linear	Dimension	1371x36.6
		Wavelength		1/4	Op. Temp	-40°C to +85°C
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


QWFT120-L QWFTB120 (Black)	Overview	Electric Data			Mechanical Data	
	118-970MHz VHF/UHF Outdoor Monopole Whip  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Mount
		118-970	2.0	2.0	Termination	NMO
		Polarization		Linear	Dimension	610x36.6mm
		Wavelength		1/4	Op. Temp	-30°C to +70°C
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		

B1322N	Overview	Electric Data			Mechanical Data	
	VHF 132-174MHz Outdoor Dipole Whip  Applications LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Mount
		132-174	2.0	2.4	Termination	Push pin
		Polarization		Linear	Dimension	1016x22mm
		Wavelength		1/2	Op. Temp	-40°C to +85°C
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		

B1322W B1322WS (Spring) BB1322WS (Black)	Overview	Electric Data			Mechanical Data	
	VHF 132-174MHz Outdoor Dipole Whip  Applications LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Mount
		132-174	2.0	Unity	Termination	NMO
		Polarization		Linear	Dimension	1016x22mm
		Wavelength		1/2	Op. Temp	-40°C to +85°C
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		

B1323-L B1323S (Spring)	Overview	Electric Data			Mechanical Data	
	VHF 132-174MHz Outdoor Dipole Whip  Applications LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Mount
		132-174	2.0	3.0	Termination	NMO
		Polarization		Linear	Dimension	1016x22mm
		Wavelength		1/4	Op. Temp	-40°C to +85°C
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		

B132S-L (Spring)	Overview	Electric Data			Mechanical Data	
	VHF 132-525MHz Outdoor Dipole Whip  Applications LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Mount
		132-525	2.0	2.0	Termination	NMO
		Polarization		Linear	Dimension	534x36.6mm
		Wavelength		1/4	Op. Temp	-40°C to +85°C
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		

B1360W B1360WS (Spring) BB1360W (Black) BB1360WS (Black, Spring)	Overview	Electric Data			Mechanical Data	
	VHF 136-174MHz Outdoor Dipole Whip  Applications LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Mount
		136-174	2.0	2.0	Termination	Push pin
		Polarization		Linear	Dimension	494x36.6mm
		Wavelength		1/2	Op. Temp	-40°C to +85°C
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


<b>QW144</b> <b>QWB144 (Black)</b>	<b>Overview</b>	<b>Electric Data</b>			<b>Mechanical Data</b>	
		Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Mount
		144-152	2.0	2.0	Termination	NMO
		Polarization		Linear	Dimension	483x36.6mm
		Wavelength		1/4	Op. Temp	-30°C to +70°C
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


<b>QW152-L</b> <b>QWB152-L (Black)</b>	<b>Overview</b>	<b>Electric Data</b>			<b>Mechanical Data</b>	
		Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Mount
		144-152	2.0	2.0	Termination	NMO
		Polarization		Linear	Dimension	457x36.6mm
		Wavelength		1/4	Op. Temp	-30°C to +70°C
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


<b>B1442N</b> <b>B1442NS (Spring)</b> <b>BB1442NS-L (Black, Spring)</b>	<b>Overview</b>	<b>Electric Data</b>			<b>Mechanical Data</b>	
		Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Mount
		144-174	2.0	2.4	Termination	NMO
		Polarization		Linear	Dimension	1346x36.6
		Wavelength		1/2	Op. Temp	-40°C to +85°C
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


<b>B1443-L</b> <b>B1443S (Spring)</b> <b>BB1443 (Black)</b> <b>BB1443S (Black, Spring)</b>	<b>Overview</b>	<b>Electric Data</b>			<b>Mechanical Data</b>	
		Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO base
		144-174	2.0	3.0	Termination	Push pin
		Polarization		Linear	Dimension	1356x36.6
		Wavelength		5/8	Op. Temp	-40°C to +85°C
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		





CW1503	Overview	Electric Data			Mechanical Data	
	VHF 150-162MHz Outdoor Dipole Whip  Applications LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Mount
		150-162	2.0	3.0	Termination	NMO
		Polarization		Linear	Dimension	1231x36.6
		Wavelength		5/8	Op. Temp	-40°C to +85°C
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		

A150-L A150S-L (Spring)	Overview	Electric Data			Mechanical Data	
	VHF 150-174MHz Monopole Whip  Applications LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Mount
		150-174		Unity	Termination	NMO
		Polarization		Linear	Dimension	508mm long
		Wavelength		1/4	Op. Temp	-40°C to +85°C
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


QW162	Overview	Electric Data			Mechanical Data	
	VHF 162-174MHz Outdoor Monopole Whip  Applications LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Mount
		162-174	2.0	2.0	Termination	NMO
		Polarization		Linear	Dimension	432x36.6mm
		Wavelength		1/4	Op. Temp	-30°C to +70°C
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


B2002N	Overview	Electric Data			Mechanical Data	
	VHF 200-225MHz Outdoor Dipole Whip  Applications LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Mount
		200-225	2.0	2.4	Termination	NMO
		Polarization		Linear	Dimension	800x36.6mm
		Wavelength		1/2	Op. Temp	-40°C to +85°C
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


B2003S (Spring)	Overview	Electric Data			Mechanical Data	
	VHF 200-225MHz Outdoor Dipole Whip  Applications LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Mount
		200-225	2.0	3.0	Termination	NMO
		Polarization		Linear	Dimension	889x36.6mm
		Wavelength		1/2	Op. Temp	-40°C to +85°C
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


QW220 QWB220 (Black)	Overview	Electric Data			Mechanical Data	
	VHF 220-225MHz Outdoor Monopole Whip  Applications LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Mount
		220-225	2.0	2.0	Termination	NMO
		Polarization		Linear	Dimension	318x36.6mm
		Wavelength		1/4	Op. Temp	-30°C to +70°C
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


## VEHICLE - EXTERNAL - SINGLE PORT UHF ANTENNAS


L000410-01	Overview	Electric Data			Mechanical Data	
	UHF 380-430MHz Outdoor Monopole Whip  Applications UHF, TETRA, Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Stud/Screw Mount
		380-430	1.6	4.0	Termination	M6 Stud
		Polarization		Linear	Dimension	149x3.2 mm
		Electrical Type		Monopole	Op. Temp	-30°C to +70°C
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


QWB406-L	Overview	Electric Data			Mechanical Data	
	UHF 406-430MHz Outdoor Monopole Whip  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Mount
		406-430	2.0	2.0	Termination	NMO
		Polarization		Linear	Dimension	179x36.6mm
		Wavelength		1/4	Op. Temp	-30°C to +70°C
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


B4063 B4063S (Spring)	Overview	Electric Data			Mechanical Data	
	UHF 406-430MHz Outdoor Dipole Whip  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Mount
		406-430	2.0	3.0	Termination	NMO
		Polarization		Linear	Dimension	381x36.6mm
		Wavelength		5/8	Op. Temp	-40°C to +85°C
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


B4065C B4065CNS (Spring)	Overview	Electric Data			Mechanical Data	
	UHF 406-430MHz Outdoor Dipole Whip  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Mount
		406-430	2.0	3.0	Termination	NMO
		Polarization		Linear	Dimension	1003x36.6
		Wavelength		5/8	Op. Temp	-40°C to +85°C
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


QW430 QWB430 (Black)	Overview	Electric Data			Mechanical Data	
	UHF 430-450MHz Outdoor Monopole Whip  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Mount
		430-450	2.0	2.0	Termination	NMO
		Polarization		Linear	Dimension	165x36.6mm
		Wavelength		1/4	Op. Temp	-30°C to +70°C
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


B4302N BB4302N (Black)	Overview	Electric Data			Mechanical Data	
	UHF 430-450MHz Outdoor Dipole Whip  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Mount
		430-450	2.0	2.4	Termination	NMO
		Polarization		Linear	Dimension	890x36.6mm
		Wavelength		1/2	Op. Temp	-40°C to +85°C
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


B4303S (Spring) BB4303 (Black)	Overview	Electric Data			Mechanical Data	
	UHF 430-450MHz Outdoor Dipole Whip  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Mount
		430-450	2.0	3.0	Termination	NMO
		Polarization		Linear	Dimension	356x36.6mm
		Wavelength		5/8	Op. Temp	-40°C to +85°C
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


B4305CN B4305CNS (Spring)	Overview	Electric Data			Mechanical Data	
	UHF 430-450MHz Outdoor Dipole Whip  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Mount
		430-450	2.0	5.0	Termination	NMO
		Polarization		Linear	Dimension	890x36.6mm
		Wavelength		1/2	Op. Temp	-40°C to +85°C
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


QW450 QWB450-L (Black)	Overview	Electric Data			Mechanical Data	
	UHF 450-470MHz Outdoor Monopole Whip  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Mount
		450-470	2.0	2.0	Termination	NMO
		Polarization		Linear	Dimension	153x36.6mm
		Wavelength		1/4	Op. Temp	-30°C to +70°C
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


B4502N BB4502N-L (Black) B4502NS (Spring) BB4502NS (Black, Spring)	Overview	Electric Data			Mechanical Data	
	UHF 450-470MHz Outdoor Dipole Whip  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Mount
		450-470	2.0	2.4	Termination	NMO
		Polarization		Linear	Dimension	318x36.6mm
		Wavelength		1/2	Op. Temp	-40°C to +85°C
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


B4503-L BB4503 (Black)	Overview	Electric Data			Mechanical Data	
	UHF 450-470MHz Outdoor Dipole Whip  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Mount
		450-470	2.0	3.0	Termination	NMO
		Polarization		Linear	Dimension	330x36.6mm
		Wavelength		5/8	Op. Temp	-40°C to +85°C
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


B4503S (Spring) BB4503S (Black, Spring)	Overview	Electric Data			Mechanical Data	
	UHF 450-470MHz Outdoor Dipole Whip  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Mount
		450-470	2.0	3.0	Termination	NMO
		Polarization		Linear	Dimension	330x36.6mm
		Wavelength		5/8	Op. Temp	-40°C to +85°C
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


B4505C BB4505C (Black)	Overview	Electric Data			Mechanical Data	
	UHF 450-470MHz Outdoor Dipole Whip  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Mount
		450-470	2.0	5.0	Termination	NMO
		Polarization		Linear	Dimension	890x36.6mm
		Wavelength		1/2	Op. Temp	-40°C to +85°C
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


B4505CS (Spring) BB4505CS (Black, Spring)	Overview	Electric Data			Mechanical Data	
	UHF 450-470MHz Outdoor Dipole Whip  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Mount
		450-470	2.0	5.0	Termination	NMO
		Polarization		Linear	Dimension	890x36.6mm
		Wavelength		1/2	Op. Temp	-40°C to +85°C
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


B4505CN BB4505CN (Black)	Overview	Electric Data			Mechanical Data	
	UHF 450-470MHz Outdoor Dipole Whip  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Mount
		450-470	2.0	5.0	Termination	NMO
		Polarization		Linear	Dimension	890x36.6mm
		Wavelength		1/2	Op. Temp	-40°C to +85°C
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


B4505CNS (Spring) BB4505CNS (Black, Spring)	Overview	Electric Data			Mechanical Data	
	UHF 450-470MHz Outdoor Dipole Whip  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Mount
		450-470	2.0	5.0	Termination	NMO
		Polarization		Linear	Dimension	940x36.6mm
		Wavelength		1/2	Op. Temp	-40°C to +85°C
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


B4705CNS (Spring)	Overview	Electric Data			Mechanical Data	
	UHF 470-490MHz Outdoor Dipole Whip  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Mount
		450-470	2.0	5.0	Termination	NMO
		Polarization		Linear	Dimension	839x36.6mm
		Wavelength		5/8	Op. Temp	-40°C to +85°C
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


B4705CNS (Spring)	Overview	Electric Data			Mechanical Data	
	UHF 470-490MHz Outdoor Dipole Whip  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Mount
		450-470	2.0	5.0	Termination	NMO
		Polarization		Linear	Dimension	839x36.6mm
		Wavelength		5/8	Op. Temp	-40°C to +85°C
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


A450 (Chrome) AB450 (Black)	Overview	Electric Data			Mechanical Data	
	UHF 450-470MHz Monopole Whip  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Mount
		450-470	2.0	Unity	Termination	NMO
		Polarization		Linear	Dimension	152.4mm long
		Wavelength		1/4	Op. Temp	-40°C to +85°C
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


L000410-01	Overview	Electric Data			Mechanical Data	
	UHF 450-470 MHz Outdoor Monopole Whip  Applications UHF, FirstNet, Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Stud/Screw Mount
		450-470	1.2	4..9	Termination	M6 Stud
		Polarization		Linear	Dimension	130x3.2 mm
		Electrical Type		Monopole	Op. Temp	-30°C to +70°C
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		

L000410-02	Overview	Electric Data			Mechanical Data	
	UHF 450-470 MHz Outdoor Monopole Whip  Applications UHF, FirstNet, Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Stud/Screw Mount
		450-470	1.2	4..9	Termination	M6 Stud
		Polarization		Linear	Dimension	130x3.2 mm
		Electrical Type		Monopole	Op. Temp	-30°C to +70°C
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		

EB4500	Overview	Electric Data			Mechanical Data	
	UHF 450-512MHz Outdoor Monopole Whip  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Mount
		450-512	2.0	3.0	Termination	NMO
		Polarization		Linear	Op. Temp	-40°C to +85°C
		Wavelength		1/4		
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		

QW470-L QWB470 (Black)	Overview	Electric Data			Mechanical Data	
	UHF 470-490MHz Outdoor Monopole Whip  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Mount
		470-490	2.0	2.0	Termination	NMO
		Polarization		Linear	Dimension	153x36.6mm
		Wavelength		1/4	Op. Temp	-30°C to +70°C
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


L000410-03	Overview	Electric Data			Mechanical Data	
	UHF 470-512 MHz Outdoor Monopole Whip  Applications UHF, FirstNet, Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Stud/Screw Mount
		470-512	1.6	5.2	Termination	M6 Stud
		Polarization		Linear	Dimension	122x3.2 mm
		Electrical Type		Monopole	Op. Temp	-30°C to +70°C
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


QW490	Overview	Electric Data			Mechanical Data	
	UHF 490-512MHz Outdoor Monopole Whip  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Stud/Screw Mount
		490-512	2.0	2.0	Termination	Push Pin
		Polarization		Linear	Dimension	153x36.6mm
		Wavelength		1/4	Op. Temp	-30°C to +70°C
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		





# VEHICLE - EXTERNAL - SINGLE PORT

## 7/8/900 MHZ ANTENNAS

L000410-04	Overview	Electric Data			Mechanical Data	
	UHF 740-960 MHz Outdoor Monopole Whip  Applications UHF, FirstNet, Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Stud/Screw Mount
		740-960	2.3	4.3	Termination	M6 Stud
		Polarization		Linear	Dimension	122x3.2 mm
		Electrical Type		Monopole	Op. Temp	-30°C to +70°C
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		

B7603-L	Overview	Electric Data			Mechanical Data	
	760-870MHz Outdoor Dipole Whip  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Mount
		760-870	2.2	4.0	Termination	NMO
		Polarization		Linear	Dimension	165x36.6mm
		Wavelength		5/8	Op. Temp	-40°C to +85°C
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		

BB7603R (Black)	Overview	Electric Data			Mechanical Data	
	760-870MHz Outdoor Dipole Whip  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Mount
		760-870	2.2	4.0	Termination	NMO
		Polarization		Linear	Dimension	165x36.6mm
		Wavelength		5/8	Op. Temp	-40°C to +85°C
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


B7603-L	Overview	Electric Data			Mechanical Data	
	760-870MHz Outdoor Dipole Whip  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Mount
		760-870	2.2	4.0	Termination	NMO
		Polarization		Linear	Dimension	165x36.6mm
		Wavelength		5/8	Op. Temp	-40°C to +85°C
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


<b>QW760</b> <b>QWB760 (Black)</b>	<b>Overview</b>	<b>Electric Data</b>			<b>Mechanical Data</b>	
		Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Mount
		760-870	2.0	2.0	Termination	NMO
		Polarization		Linear	Dimension	98.5x36.6mm
		Wavelength		1/4	Op. Temp	-30°C to +70°C
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


<b>BB7603R (Black)</b>	<b>Overview</b>	<b>Electric Data</b>			<b>Mechanical Data</b>	
		Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Mount
		760-870	2.2	4.0	Termination	NMO
		Polarization		Linear	Dimension	165x36.6mm
		Wavelength		5/8	Op. Temp	-40°C to +85°C
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


<b>QW8063-L</b> <b>QWB8063 (Black)</b>	<b>Overview</b>	<b>Electric Data</b>			<b>Mechanical Data</b>	
		Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Mount
		806-866	1.5	3.0	Termination	NMO
		Applications		Linear	Dimension	413x36.6mm
		Wavelength		1/4	Op. Temp	-30°C to +70°C
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		

<b>B8065C</b> <b>BB8065C (Black)</b>	<b>Overview</b>	<b>Electric Data</b>			<b>Mechanical Data</b>	
		Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Mount
		806-866	2.0	5.0	Termination	NMO
		Polarization		Linear	Dimension	457x36.6mm
		Wavelength		1/2	Op. Temp	-40°C to +85°C
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		

B8065CN B8065CNS (Spring)	Overview	Electric Data			Mechanical Data	
	806-866MHz Outdoor Dipole Whip  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Mount
		806-866	2.1	5.0	Termination	NMO
		Polarization		Linear	Dimension	457x36.6mm
		Wavelength		1/2	Op. Temp	-40°C to +85°C
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		

B8065C BB8065C (Black)	Overview	Electric Data			Mechanical Data	
	806-866MHz Outdoor Dipole Whip  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Mount
		806-866	2.0	5.0	Termination	NMO
		Polarization		Linear	Dimension	457x36.6mm
		Wavelength		1/2	Op. Temp	-40°C to +85°C
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		

QW800 QWB800-L (Black)	Overview	Electric Data			Mechanical Data	
	806-896MHz Outdoor Monopole Whip  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Mount
		806-896	2.0	2.0	Termination	NMO
		Polarization		Linear	Dimension	127x36.6mm
		Wavelength		1/4	Op. Temp	-30°C to +70°C
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		

EB8965C (Black)	Overview	Electric Data			Mechanical Data	
	UHF 806-896MHz Outdoor Monopole Whip  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Mount
		806-896	2.0	3.0	Termination	NMO
		Polarization		Linear	Op. Temp	-40°C to +85°C
		Wavelength		1/2		
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		

<b>A8063-L (Chrome)</b> <b>AB8063-L (Black)</b> <b>AB8063C (Black, Collinear)</b>	<b>Overview</b>	<b>Electric Data</b>			<b>Mechanical Data</b>	
		Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Mount
		806-896	2.0	3.0	Termination	NMO
		Polarization		Linear	Dimension	355.6mm long
		Wavelength		1/4	Op. Temp	-40°C to +85°C
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		



806-896MHz  
Monopole Whip

Applications  
LTE, ISM, LMR  
for Public Safety

<b>A8963-L</b> <b>AB8963S (Black, Spring)</b> <b>AB8963C (Black, Collinear)</b>	<b>Overview</b>	<b>Electric Data</b>			<b>Mechanical Data</b>	
		Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Mount
		896-970	2.0	3.0	Termination	NMO
		Polarization		Linear	Dimension	330.2mm long
		Wavelength		1/4	Op. Temp	-40°C to +85°C
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		



896-970MHz  
Monopole Whip


Applications  
LTE, ISM, LMR  
for Public Safety


<b>B8965C</b> <b>BB8965C (Black)</b>	<b>Overview</b>	<b>Electric Data</b>			<b>Mechanical Data</b>	
		Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Mount
		896-970	2.1	5.0	Termination	NMO
		Polarization		Linear	Dimension	375x36.6mm
		Wavelength		1/2	Op. Temp	-40°C to +85°C
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		





896-970MHz  
Outdoor Dipole  
Whip

Applications  
LTE, ISM, LMR  
for Public Safety


B8965CN BB8965CN (Black)	Overview	Electric Data			Mechanical Data	
	896-970MHz Outdoor Dipole Whip  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Mount
		896-970	2.1	5.0	Termination	NMO
		Polarization		Linear	Dimension	349x36.6mm
		Wavelength		1/2	Op. Temp	-40°C to +85°C
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


B8965CNN B8965CNS	Overview	Electric Data			Mechanical Data	
	896-970MHz Outdoor Dipole Whip  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Mount
		896-970	2.1	5.0	Termination	NMO
		Polarization		Linear	Dimension	349x36.6mm
		Wavelength		1/2	Op. Temp	-40°C to +85°C
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


QW8963	Overview	Electric Data			Mechanical Data	
	896-970MHz Outdoor Monopole Whip  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Mount
		896-970	1.5	3.0	Termination	NMO
		Applications		Linear	Dimension	368x36.6mm
		Wavelength		1/4	Op. Temp	-30°C to +70°C
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


QW900 QWB900 (Black)	Overview	Electric Data			Mechanical Data	
	896-970MHz Outdoor Monopole Whip  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Mount
		896-970	1.5	2.0	Termination	NMO
		Polarization		Linear	Dimension	76x36.6mm
		Wavelength		1/4	Op. Temp	-30°C to +70°C
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		

# VEHICLE - EXTERNAL - MULTI-BAND VHF, UHF, 7/8/900 MHZ SINGLE PORT ANTENNAS


WPD136M6C-001	Overview	Electric Data			Mechanical Data	
	Vehicular VHF/ UHF Multi- band Outdoor Monopole Whip  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Mount
		136-174	2.5	0.2	Termination	NMO
		380-520	2.5	4.8	Dimensions	508x63.5mm
		760-870	2.5	8.1	Op. Temp	-40°C to +85°C
		Polarization		Linear	IP Rating	IP66
		Wavelength		1/2		
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


L000340-01	Overview	Electric Data			Mechanical Data	
	Vehicular VHF/ UHF Multi- band Outdoor Monopole Whip  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Stud/Screw Mount
		150-160	2.5	0.52	Termination	M6 Stud
		450-485	2.5	3.8	Dimension	416x14.5mm
		485-512	3.0	2.94	Op. Temp	-40°C to +85°C
		745-806	2.0	3.40	IP Rating	IP67
		806-870	2.5	3.40		
		Polarization		Linear		
		Wavelength		1/4		
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


ANT-DB1-RMS-*	Overview	Electric Data			Mechanical Data	
	Cellular Dual-Band Straight Mono- pole Whip Applications LTE, UMTS, GSM	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Panel Mount
		824-960	1.5	-0.6	Termination	RP-SMA Plug
		1710-1990	2.0	5.3		SMA Plug
		Polarization		Linear		TNC Plug
		Electrical Type		Monopole	Dimensions	77.8 mm x 29.0 mm
		Radiation Pattern		Omnidirectional	Op. Temp	-40 °C to +80 °C
		Impedance (Ohms)		50	Cable Length	4.3 m
					Cable Type	RG-58

ANT-DB1-RMT-*	Overview	Electric Data			Mechanical Data	
	Cellular Dual-Band Straight Monopole Whip Applications LTE, UMTS, GSM	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Panel Mount
		860-960	1.5	-0.6	Termination	RP-SMA Plug
		1710-1880	2.7	5.3		SMA Plug
		Polarization		Linear		TNC Plug
		Electrical Type		Monopole	Dimensions	93.7 mm x 27.5 mm
		Radiation Pattern		Omnidirectional	Op. Temp	-40 °C to +80 °C
		Impedance (Ohms)		50	Cable Length	4.3 m
					Cable Type	RG-58

## VEHICLE - EXTERNAL - MULTI-PORT UHF, CELLULAR, WI-FI, GNSS, BLUETOOTH ANTENNAS


FHQ69273CD-518VC4	Overview	Electric Data			Mechanical Data	
	Vehicular Multi-band MIMO 4-port  - Cellular x 1 - Wi-Fi x 1 - GNSS x 1 - UHF x 1  Outdoor Fin  Applications 4G LTE, LTE-M (Cat-M1), Wi-Fi 6, GPS, UHF for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Roof mount with screw
		380-430	2.0	2.0	Termination	SMA Plug
		698-960	2.0	4.0	Dimension	160x98x70mm
		1710-2700	2.0	6.4	Op. Temp	-30 °C to +70 °C
		2400-2500	2.0	7.1	Cable Length	5182mm
		4900-5875	2.0	7.8	Cable Type	RG-174
		1575.42	1.5	30	IP Rating	IP67
		Polarization		Linear/RHCP		
		Wavelength		1/4		
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


L000434-07	Overview	Electric Data				Mechanical Data	
	Vehicular Multi-port MIMO 4-port*  - Cellular x 4  Applications 5G/4G LTE, CBRS, LTE-M (Cat-M1), ISM  *Supplied with 5m extension cable	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Panel w. screw
		617-960	1.8	4.0	42	Termination	SMA
		1427-1511	1.8	8.0	41	Dimension	66.5 x 187mm
		1690-2700	1.6	8.0	61	Op. Temp	-40°C to +85°C
		3300-4200	1.4	8.0	61	Cable Length	5000mm
		4400-6000	1.6	9.0	54	Cable Type	0.195 Inch
		6000-7125	1.7	7.0	49	IP Rating	IP67
		Polarization		Linear			
		Electrical Type		Monopole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


L000434-04 (Black, SMA) L000434-06 (White, SMA) L000434-05 (Black, FAKRA)	Overview	Electric Data				Mechanical Data	
	Vehicular Multi-port MIMO 8-port*  - Cellular x 4 - Wi-Fi x 2 - GNSS x 1 - Bluetooth x 1  Applications 5G/4G LTE, CBRS, LTE-M (Cat-M1), ISM, Wi-Fi 6E, GNSS, Bluetooth  *Supplied with 5m extension cable	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Panel w. screw
		617-960	1.8	4.0	42	Termination	SMA
		1427-1511	1.8	8.0	41		FAKRA
		1690-2700	1.6	8.0	61	Dimension	66.5 x 187mm
		3300-4200	1.4	8.0	61	Op. Temp	-40°C to +85°C
		4400-6000	1.6	9.0	54	Cable Length	5000mm
		6000-7125	1.7	7.0	49	Cable Type	0.195 Inch
		2400-2500	1.4	7.5	50	IP Rating	IP67
		4900-6000	1.5	8.5	51		
		6000-7125	1.5	9.5	53		
		Bluetooth 2400-2500	1.5	6.0	54		
		1176.45	2.0	28	-		
		1561-1602	2.0	28	-		
		Polarization		Linear			
		Electrical Type		Monopole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			





<b>L000434-01 (Black, SMA)</b> <b>L000434-02 (Black, FAKRA)</b> <b>L000434-03 (White, SMA)</b>	Overview	Electric Data				Mechanical Data	
		Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Panel w. screw
	Vehicular Multi-port MIMO 9-port*  - Cellular x 4 - Wi-Fi x 4 - GNSS x 1  Applications 5G/4G LTE, CBRS, LTE-M (Cat-M1), ISM, Wi-Fi 6E, GNSS  *Supplied with 5m extension cable	617-960	1.8	4.0	42	Termination	SMA
		1427-1511	1.8	8.0	41		FAKRA
		1690-2700	1.6	8.0	61	Dimension	66.5 x 187mm
		3300-4200	1.4	8.0	61	Op. Temp	-40°C to +85°C
		4400-6000	1.6	9.0	54	Cable Length	5000mm
		6000-7125	1.7	7.0	49	Cable Type	0.195 Inch
		2400-2500	1.4	7.5	50	IP Rating	IP67
		4900-6000	1.5	8.5	51		
		6000-7125	1.5	9.5	53		
		1176.45	2.0	28	-		
		1561-1602	2.0	28	-		
		Polarization		Linear			
		Electrical Type		Monopole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


<b>L000434-08</b>	Overview	Electric Data				Mechanical Data	
		Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Panel w. screw
	Vehicular Multi-port MIMO 14-port*  - Cellular x 4 - Wi-Fi x 8 - GNSS x 1 - Bluetooth x 1  Applications 5G/4G LTE, CBRS, LTE-M (Cat-M1), ISM, Wi-Fi 6E, GNSS, Bluetooth  *Supplied with 5m extension cable	617-960	1.8	4.0	42	Termination	SMA
		1427-1511	1.8	8.0	41	Dimension	66.5 x 187mm
		1690-2700	1.6	8.0	61	Op. Temp	-40°C to +85°C
		3300-4200	1.4	8.0	61	Cable Length	5000mm
		4400-6000	1.6	9.0	54	Cable Type	0.195 Inch
		6000-7125	1.7	7.0	49	IP Rating	IP67
		2400-2500	1.4	7.5	50		
		4900-6000	1.5	8.5	51		
		6000-7125	1.5	9.5	53		
		Bluetooth 2400-2500	1.5	6.0	54		
		1176.45	2.0	28	-		
		1561-1602	2.0	28	-		
		Polarization		Linear			
		Electrical Type		Monopole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


VFH69383B22JU-518J	Overview	Electric Data			Mechanical Data	
	Vehicular Multi-band MIMO 6-port  - Cellular x 2 - Wi-Fi x 2 - GNSS x 1 - UHF x 1  Outdoor Monopole Fin  Applications 5G/4G LTE, CBRS, LTE-M (Cat-M1), ISM, Wi-Fi 6, GNSS, UHF LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Panel w. screw
		380-520	2.5	2.8	Termination	SMA Plug
		698-806	2.4	1.3	Dimension	179x63x48mm
		824-894	2.5	2.0	Op. Temp	-30 °C to +70 °C
		880-960	2.5	2.1	Cable Length	5180mm
		1690-3800	2.0	7.6	Cable Type	RG-174
		2400-2500	2.0	3.9	IP Rating	IP69K
		4900-6000	2.0	7.7		
		1559-1606	2.0	30		
		Polarization		Linear/RHCP		
		Wavelength		1/4		
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


VFQ69383B11JU-518J	Overview	Electric Data			Mechanical Data	
	Vehicular Multi-band MIMO 4-port  - Cellular x 1 - Wi-Fi x 1 - GNSS x 1 - UHF x 1  Outdoor Monopole Fin  Applications 5G/4G LTE, CBRS, LTE-M (Cat-M1), ISM, Wi-Fi 6, GNSS, UHF LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Panel w. screw
		380-520	2.5	3.9	Termination	SMA Plug
		698-806	2.5	2.0	Dimension	179x63x48mm
		824-894	2.5	1.4	Op. Temp	-30 °C to +70 °C
		880-960	2.5	1.5	Cable Length	5180mm
		1690-3800	2.5	7.0	Cable Type	RG-174
		2400-2500	2.0	5.3	IP Rating	IP69K
		4900-6000	2.0	5.9		
		1559-1606	2.0	30		
		Polarization		Linear/RHCP		
		Wavelength		1/4		
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


<b>FHQ69273CE-518QMAM*</b> <b>FHQ69273CE-518VC5*</b>	Overview	Electric Data			Mechanical Data	
	 <p>Vehicular Multi-band MIMO 4-port</p> <ul style="list-style-type: none"> <li>- Cellular x 1</li> <li>- Wi-Fi x 1</li> <li>- GPS x 1</li> <li>- UHF x 1</li> </ul> <p>Outdoor Monopole Fin</p> <p>Applications 4G LTE, LTE-M (Cat-M1), Wi-Fi 6, GPS, UHF for Public Safety</p>	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Roof mount with screw
		430-520	2.0	2.6	Termination*	QMA Plug SMA Plug RP-SMA Plug
		698-960	2.0	4.0	Dimension	160x98x70mm
		1710-2700	2.0	6.4	Op. Temp	-30 °C to +70 °C
		2400-2500	2.0	7.1	Cable Length	5182mm
		4900-5875	2.0	7.8	Cable Type	RG-174
		1575.42	1.5	30	IP Rating	IP67
		Polarization		Linear/RHCP		
		Wavelength		1/4		
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


<b>MTRA61274CB2-001 (Black)</b> <b>MTRA61274CW2-001 (White)</b>	Overview	Electric Data			Mechanical Data	
	 <p>Vehicular Multi-band MIMO 2-port</p> <ul style="list-style-type: none"> <li>- Cellular x 2</li> </ul> <p>Outdoor Fin</p> <p>Applications 5G NR, 4G LTE, LTE-M (Cat-M1), ISM, Wi-Fi</p>	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Panel w. screw
		617-698	1.4	3.2	Termination	SMA Plug
		698-824	1.8	4.0	Dimension	130x84x95mm
		824-894	1.9	4.0	Op. Temp	-30 °C to +70 °C
		880-960	1.9	3.4	Cable Length	610mm
		1350-1550	1.5	4.7	Cable Type	RG-58
		1690-1880	1.3	4.1	IP Rating	IP67
		1850-1990	1.4	4.1		
		1910-2180	1.8	4.2		
		2300-2500	1.8	4.0		
		2500-2700	1.9	3.4		
		Polarization		Linear		
		Wavelength		1/4		
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


L000423-02 (Black, SMA, FAKRA, TNC) L000423-03 (Black, SMA)		Overview	Electric Data				Mechanical Data	
	Vehicular Multi-port MIMO 6-port*  - Cellular x 2 - Wi-Fi x 2 - GNSS x 1 - Whip Port x 1**  Applications 5G/4G LTE, CBRs, LTE-M (Cat-M1), ISM, Wi-Fi 6E, GNSS, Bluetooth  *Supplied with 5m extension cable  **Choice of 5 additional whip antennas available	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Panel w. screw	
		617-960	3.0	3.7	70	Termination*	SMA, FAKRA, TNC	
		1427-1511	2.5	2.0	37		SMA	
		1690-4000	2.0	4.6	63	Dimension	245 X 63 X 84 mm	
		4000-7125	2.0	3.3	52	Op. Temp	-40°C to +85°C	
		2400-2500	2.0	3.0	56	Cable Length	5000 mm	
		4900-6000	2.0	4.8	59	Cable Type	0.195 Inch	
		6000-7125	2.0	2.5	56	IP Rating	IP67	
		1176.45	4.8	28	-			
		1561-1602	1.8	28	-			
		Polarization		Linear				
		Electrical Type		Monopole				
		Radiation Pattern		Omnidirectional				
		Impedance (Ohms)		50				


L000423-01 (Black, SMA)		Overview	Electric Data				Mechanical Data	
	Vehicular Multi-port MIMO 6-port*	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Panel w. screw	
		617-960	3.0	3.7	70	Termination*	SMA	
		1427-1511	2.5	2.0	37	Dimension	245 X 63 X 84 mm	
		- Cellular x 2 - Wi-Fi x 3 - GNSS x 1	1690-4000	2.0	4.6	63	Op. Temp	-40°C to +85°C
		4000-7125	2.0	3.3	52	Cable Length	5000 mm	
		Applications 5G/4G LTE, CBRS, LTE-M (Cat-M1), ISM, Wi-Fi 6E, GNSS, Bluetooth	2400-2500	2.0	3.0	56	Cable Type	0.195 Inch
		4900-6000	2.0	4.8	59	IP Rating	IP67	
		6000-7125	2.0	2.5	56			
		1176.45	4.8	28	-			
		*Supplied with 5m extension cable	1561-1602	1.8	28	-		
	**Choice of 5 additional whip antennas available	Polarization		Linear				
		Electrical Type		Monopole				
		Radiation Pattern		Omnidirectional				
		Impedance (Ohms)		50				

L000423-02 (Black, SMA, FAKRA,TNC) L000423-03 (Black, SMA)		Overview	Electric Data				Mechanical Data	
	Vehicular Multi-port MIMO 7-port*  - Cellular x 2 - Wi-Fi x 2 - GNSS x 2 - Whip Port x 1**  Applications 5G/4G LTE, CBRS, LTE-M (Cat-M1), ISM, Wi-Fi 6E, GNSS, Bluetooth  *Supplied with 5m extension cable  **Choice of 5 additional whip antennas available	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Panel w. screw	
		617-960	3.0	3.7	70	Termination*	SMA, FAKRA, TNC	
		1427-1511	2.5	2.0	37		SMA	
		1690-4000	2.0	4.6	63	Dimension	245 X 63 X 84 mm	
		4000-7125	2.0	3.3	52	Op. Temp	-40°C to +85°C	
		2400-2500	2.0	3.0	56	Cable Length	5000 mm	
		4900-6000	2.0	4.8	59	Cable Type	0.195 Inch	
		6000-7125	2.0	2.5	56	IP Rating	IP67	
		1176.45	4.8	28	-			
		1561-1602	1.8	28	-			
		Polarization		Linear				
		Electrical Type		Monopole				
		Radiation Pattern		Omnidirectional				
		Impedance (Ohms)		50				


L000423-04 (Black, SMA, TNC)		Overview	Electric Data				Mechanical Data	
	<div>Vehicular Multi-port MIMO 8-port*</div> <div>- Cellular x 2</div> <div>- Wi-Fi x 4</div> <div>- GNSS x 1</div> <div>- Whip Port x 1**</div> <div>Applications</div> <div>5G/4G LTE, CBRS, LTE-M (Cat-M1), ISM, Wi-Fi 6E, GNSS, Bluetooth</div> <div>*Supplied with 5m extension cable</div> <div>**Choice of 5 additional whip antennas available</div>	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Panel w. screw	
		617-960	3.0	3.7	70	Termination*	SMA, TNC	
		1427-1511	2.5	2.0	37	Dimension	245 X 63 X 84 mm	
		1690-4000	2.0	4.6	63	Op. Temp	-40°C to +85°C	
		4000-7125	2.0	3.3	52	Cable Length	5000 mm	
		2400-2500	2.0	3.0	56	Cable Type	0.195 Inch	
		4900-6000	2.0	4.8	59	IP Rating	IP67	
		6000-7125	2.0	2.5	56			
		1176.45	4.8	28	-			
		1561-1602	1.8	28	-			
		Polarization		Linear				
		Electrical Type		Monopole				
		Radiation Pattern		Omnidirectional				
		Impedance (Ohms)		50				


<b>L000423-04 (Black, SMA)</b> <b>L000423-05 (Black, SMA, QMA)</b> <b>L000423-06 (Black, SMA, TNC)</b>	Overview	Electric Data				Mechanical Data	
		Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Panel w. screw
	Vehicular Multi-port MIMO 9-port  - Cellular x 2 - Wi-Fi x 4 - GNSS x 2 - Whip Port x 1  Applications 5G/4G LTE, CBRS, LTE-M (Cat-M1), ISM, Wi-Fi 6E, GNSS, Bluetooth  *Supplied with 5m extension cable  **Choice of 5 additional whip antennas available	617-960	3.0	3.7	70	Termination*	SMA, TNC
		1427-1511	2.5	2.0	37		SMA, QMA
		1690-4000	2.0	4.6	63	Dimension	245 X 63 X 84 mm
		4000-7125	2.0	3.3	52	Op. Temp	-40°C to +85°C
		2400-2500	2.0	3.0	56	Cable Length	5000 mm
		4900-6000	2.0	4.8	59	Cable Type	0.195 Inch
		6000-7125	2.0	2.5	56	IP Rating	IP67
		1176.45	4.8	28	-		
		1561-1602	1.8	28	-		
		Polarization		Linear			
		Electrical Type		Monopole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			

<b>VQJ69595B-92VC1*</b> <b>VQJ69595B-92FAK*</b>	Overview	Electric Data			Mechanical Data	
		Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Double-sided Tape
	Covert Vehicular Multi-band MIMO 4-port  - Cellular x 2 - Wi-Fi x 1 - GNSS x 1  Outdoor Monopole Trigger  Applications 4G LTE, LTE-M (Cat-M1), ISM, Wi-Fi 6, GNSS	698-960	3.1	5.0	Termination	SMA Plug FAKRA Jack
		1710-2620	3.1	5.0	Dimension	132x59x123
		2620-2700	3.1	5.0	Op. Temp	-40°C to +85°C
		2400-2500	3.1	5.0	Cable Length	914mm
		4900-5900	3.1	5.0	Cable Type	RG-174
		1559-1606	2.0	30	IP Rating	IP67
		Polarization		Linear/RHCP		
		Wavelength		1/4		
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


VPJ69595B-92VC1* VPJ69595B-92FAK*	Overview	Electric Data			Mechanical Data	
	Covert Vehicular Multi-band MIMO 5-port  - Cellular x 2 - Wi-Fi x 2 - GNSS x 1  Outdoor Monopole Trigger  Applications 4G LTE, LTE-M (Cat-M1), ISM, Wi-Fi 6, GNSS	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Double-sided Tape
		698-960	3.1	5.0	Termination	SMA Plug FAKRA Jack
		1710-2620	3.1	5.0	Dimension	132x59x123
		2620-2700	3.1	5.0	Op. Temp	-40 °C to +85 °C
		2400-2500	3.1	5.0	Cable Length	914mm
		4900-5900	3.1	5.0	Cable Type	RG-174
		1559-1606	2.0	30	IP Rating	IP67
		Polarization		Linear/RHCP		
		Wavelength		1/4		
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


VFD69383B1NJN-518Q (Black) VFD69383W1NJN-518Q (White)	Overview	Electric Data			Mechanical Data	
	Vehicular Multi-band MIMO 2-port  - Cellular x 1 - GNSS x 1  Outdoor Monopole Fin  Applications 5G/4G LTE, CBRs, LTE-M (Cat-M1), ISM, Wi-Fi 4, GNSS	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Panel w. screw
		698-806	2.5	1.3	Termination	SMA Plug
		824-894	2.0	2.0	Dimension	179x63x48mm
		880-960	2.0	2.0	Op. Temp	-30 °C to +70 °C
		1690-1880	2.0	4.3	Cable Length	5180mm
		1850-1990	2.0	3.8	Cable Type	0.195 Inch
		1910-2180	2.1	3.8	IP Rating	IP69K
		2300-2500	2.0	5.1		
		2500-2700	2.0	5.5		
		3300-3800	2.0	7.0		
		1559-1606	2.0	30		
		Polarization		Linear/RHCP		
		Wavelength		1/4		
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


VFD69383B2NNN-518R (Black) VFD69383W2NNN-518R (White)	Overview	Electric Data			Mechanical Data	
		Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Panel w. screw
	Vehicular Multi-band MIMO 2-port  - Cellular x 2  Outdoor Monopole Fin  Applications 5G/4G LTE, CBRS, LTE-M (Cat-M1), ISM, Wi-Fi 4	698-806	2.5	1.8	Termination	SMA Plug
		824-894	2.2	1.8	Dimension	179x63x48mm
		880-960	2.3	2.1	Op. Temp	-30 °C to +70 °C
		1690-1880	2.0	4.9	Cable Length	5180mm
		1850-1990	2.0	3.9	Cable Type	0.195 Inch
		1910-2180	2.1	3.9	IP Rating	IP69K
		2300-2500	2.0	3.9		
		2500-2700	2.0	4.7		
		3300-3800	2.0	7.2		
		Polarization		Linear		
		Wavelength		1/4		
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


VFT69383B2NJN-518Q (Black) VFT69383W2NJN-518Q (White)	Overview	Electric Data			Mechanical Data	
		Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Panel w. screw
	Vehicular Multi-band MIMO 3-port  - Cellular x 2 - GNSS x 1  Outdoor Monopole Fin  Applications 5G/4G LTE, CBRS, , LTE-M (Cat-M1), ISM, GNSS	698-806	2.5	2.0	Termination	SMA Plug
		824-894	2.2	1.3	Dimension	179x63x48mm
		880-960	2.2	2.2	Op. Temp	-30 °C to +70 °C
		1690-1880	2.0	4.7	Cable Length	5180mm
		1850-1990	2.0	3.6	Cable Type	0.195 Inch
		1910-2180	2.2	3.4	IP Rating	IP69K
		2300-2500	2.1	5.1		
		2500-2700	2.0	5.1		
		3300-3800	2.0	7.5		
		1559-1606	2.0	30		
		Polarization		Linear/RHCP		
		Wavelength		1/4		
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		

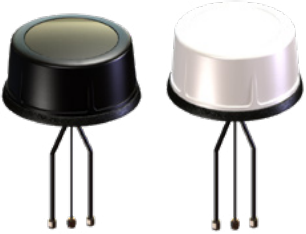



VFT69383B11JN-518L (Black) VFT69383W11JN-518L (White)	Overview	Electric Data			Mechanical Data	
	Vehicular Multi-band MIMO 3-port  - Cellular x 1 - Wi-Fi x 1 - GNSS x 1  Outdoor Monopole Fin  Applications 5G/4G LTE, CBRS, LTE-M (Cat-M1), ISM, Wi-Fi 6, GNSS	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Panel w. screw
		698-806	2.5	0.8	Termination	SMA Plug
		824-894	2.0	1.4	Dimension	179x63x48mm
		880-960	2.0	2.3	Op. Temp	-30 °C to +70 °C
		1690-3800	2.1	7.3	Cable Length	5180mm
		2400-2500	2.0	3.9	Cable Type	0.195 Inch
		4900-6000	2.0	5.4	IP Rating	IP69K
		1559-1606	2.0	30		
		Polarization		Linear/RHCP		
		Wavelength		1/4		
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


VFQ69383B21JN-518L (Black) VFQ69383W21JN-518L (White)	Overview	Electric Data			Mechanical Data	
	Vehicular Multi-band MIMO 4-port  - Cellular x 2 - Wi-Fi x 1 - GNSS x 1  Outdoor Monopole Fin  Applications 5G/4G LTE, CBRS, LTE-M (Cat-M1), ISM, Wi-Fi 6, GNSS	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Panel w. screw
		698-806	2.5	1.2	Termination	SMA Plug
		824-894	2.1	1.1	Dimension	179x63x48mm
		880-960	2.2	1.8	Op. Temp	-30 °C to +70 °C
		1690-3800	2.1	7.4	Cable Length	5180mm
		2400-2500	2.0	3.1	Cable Type	0.195 Inch
		4900-6000	2.0	7.0	IP Rating	IP69K
		1559-1606	2.0	30		
		Polarization		Linear/RHCP		
		Wavelength		1/4		
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


VFH69383B23JW-518J	Overview	Electric Data			Mechanical Data	
	Vehicular Multi-band MIMO 6-port  - Cellular x 2 - Wi-Fi x 3 - GNSS x 1  Outdoor Monopole Fin  Applications 5G/4G LTE, CBRS, LTE-M (Cat-M1), ISM, Wi-Fi 6, GNSS	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Panel w. screw
		698-806	2.5	2.5	Termination	SMA Plug
		824-894	2.5	2.5	Dimension	179x63x48mm
		880-960	2.5	2.5	Op. Temp	-30 °C to +70 °C
		1690-3800	2.0	7.4	Cable Length	5180mm
		2400-2500	2.0	4.0	Cable Type	0.195 Inch
		4900-6000	2.0	6.4	IP Rating	IP69K
		1559-1606	2.0	30		
		Polarization		Linear/RHCP		
		Wavelength		1/4		
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


VFP69383B22JN-*	Overview	Electric Data			Mechanical Data	
	Vehicular Multi-band MIMO 6-port  - Cellular x 2 - Wi-Fi x 2 - GNSS x 1 - UHF x 1  Outdoor Monopole Fin  Applications 5G/4G LTE, CBRS, LTE-M (Cat-M1), ISM, Wi-Fi 6, GNSS, UHF LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Panel w. screw
		698-806	2.5	1.6	Termination	SMA Plug
		824-894	2.1	1.4	Dimension	179x63x48mm
		880-960	2.2	1.5	Op. Temp	-30 °C to +70 °C
		1690-3800	2.1	7.2	Cable Length	5180mm
		2400-2500	2.0	3.1		910mm
		4900-6000	2.0	7.5	Cable Type	0.195 Inch
		1559-1606	2.0	30	IP Rating	IP69K
		Polarization		Linear/RHCP		
		Wavelength		1/4		
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


VLT69273B2NJ-518A (Black) VLT69273W2NJ-518A (White)	Overview	Electric Data			Mechanical Data	
	Vehicular Multi-band MIMO 3-port  - Cellular x 2 - GNSS x 1  Outdoor Monopole Dome  Applications 4G LTE, LTE-M (Cat-M1), ISM, Wi-Fi 4, GNSS	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Panel w. screw
		698-960	2.0	2.3	Termination	SMA Plug
		1710-1880	2.0	4.6	Dimension	75x132mm
		1850-1990	2.0	4.8	Op. Temp	-30 °C to +70 °C
		1910-2170	2.0	5.0	Cable Length	5182mm
		2300-2500	2.0	4.9	Cable Type	RG-58 RG-174 (GNSS)
		2500-2700	2.0	5.7	IP Rating	IP67
		1559-1610	2.0	30		
		Polarization		Linear/RHCP		
		Wavelength		1/4		
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


VLT69273B2NG-518A	Overview	Electric Data			Mechanical Data	
	Vehicular Multi-band MIMO 3-port  - Cellular x 2 - GPS x 1  Outdoor Monopole Dome  Applications 4G LTE, LTE-M (Cat-M1), ISM, Wi-Fi 4, GPS	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Panel w. screw
		698-960	2.0	2.6	Termination	SMA Plug
		1710-2700	2.0	4.7	Dimension	75x132mm
		1575.42	2.0	30	Op. Temp	-30 °C to +70 °C
		Polarization		Linear/RHCP	Cable Length	5182mm
		Wavelength		1/4	Cable Type	RG-58 RG-174 (GPS)
		Electrical Type		Monopole	IP Rating	IP67
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


VLT69273B11G-518A	Overview	Electric Data			Mechanical Data	
	Vehicular Multi-band MIMO 3-port  - Cellular x 1 - Wi-Fi x 1 - GPS x 1  Outdoor Monopole Dome  Applications 4G LTE, LTE-M (Cat-M1), ISM, Wi-Fi 6, GPS	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Panel w. screw
		698-960	2.0	2.6	Termination	SMA Plug RP-SMA Plug
		1710-2700	2.0	4.7	Dimension	75x132mm
		2300-2700	2.0	4.9	Op. Temp	-30 °C to +70 °C
		4900-5900	2.0	6.0	Cable Length	5182mm
		1575.42	1.5	30	Cable Type	RG-58 RG-174 (GPS)
		Polarization		Linear/RHCP	IP Rating	IP67
		Wavelength		1/4		
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		

VLQ69273W22N-518A	Overview	Electric Data			Mechanical Data	
	Vehicular Multi-band MIMO 4-port - Cellular x 2 - Wi-Fi x 2 Outdoor Monopole Dome Applications 4G LTE, LTE-M (Cat-M1), ISM, Wi-Fi 6	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Panel w. screw
		698-960	2.0	3.2	Termination	SMA Plug RP-SMA Plug
		1710-2700	2.0	4.5	Dimension	75x132mm
		2300-2700	2.0	5.5	Op. Temp	-30 °C to +70 °C
		4900-5900	2.0	6.3	Cable Length	5182mm
		Polarization		Linear	Cable Type	RG-58
		Wavelength		1/4	IP Rating	IP67
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


VLQ69273B21J-518A (Black) VLQ69273W21J-518A (White)	Overview	Electric Data			Mechanical Data	
	Vehicular Multi-band 4-port - Cellular x 2 - Wi-Fi x 1 - GNSS x 1 Outdoor Monopole Dome Applications 4G LTE, LTE-M (Cat-M1), ISM, Wi-Fi 6, GNSS	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Panel w. screw
		698-960	2.0	3.3	Termination	SMA Plug RP-SMA Plug
		1710-2700	2.0	4.6	Dimension	75x132mm
		2300-2700	2.0	5.5	Op. Temp	-30 °C to +70 °C
		4900-5900	2.0	5.3	Cable Length	5182mm
		1559-1610	2.0	30	Cable Type	RG-58 RG-174 (GNSS)
		Polarization		Linear/RHCP	IP Rating	IP67
		Wavelength		1/4		
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


VLQ69273B21G-518A (Black) VLQ69273W21G-518A (White)	Overview	Electric Data			Mechanical Data	
	Vehicular Multi-band 4-port - Cellular x 2 - Wi-Fi x 1 - GPS x 1 Outdoor Monopole Dome Applications 4G LTE, LTE-M (Cat-M1), ISM, Wi-Fi 6, GPS	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Panel w. screw
		698-960	1.8	3.3	Termination	SMA Plug RP-SMA Plug
		1710-2700	1.8	4.6	Dimension	75x132mm
		2300-2700	1.6	5.5	Op. Temp	-30 °C to +70 °C
		4900-5900	1.7	5.3	Cable Length	5182mm
		1575.42	1.5	30	Cable Type	RG-58 RG-174 (GPS)
		Polarization		Linear/RHCP	IP Rating	IP67
		Wavelength		1/4		
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


VHP69273B22J-518A (Black) VHP69273W22J-518A (White)	Overview	Electric Data			Mechanical Data	
	Vehicular Multi-band 5-port  - Cellular x 2 - Wi-Fi x 2 - GNSS x 1  Outdoor Monopole Dome  Applications 4G LTE, LTE-M (Cat-M1), ISM, Wi-Fi 6, GNSS	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Panel w. screw
		698-960	2.0	4.1	Termination	SMA Plug
		1710-2700	2.0	5.9	Dimension	87x132mm
		2300-2700	2.0	6.2	Op. Temp	-30 °C to +70 °C
		4900-5900	2.0	6.5	Cable Length	5182mm
		1559-1606	2.0	30	Cable Type	RG-58 RG-174 (GNSS)
		Polarization		Linear/RHCP	IP Rating	IP67
		Wavelength		1/4		
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


VHP69273B22G-518A (Black) VHP69273W22G-518A (White)		Overview	Electric Data			Mechanical Data	
	Vehicular Multi-band 5-port  - Cellular x 2 - Wi-Fi x 2 - GPS x 1  Outdoor Monopole Dome  Applications 4G LTE, LTE-M (Cat-M1), ISM, Wi-Fi 6, GPS	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Panel w. screw	
		698-960	2.0	4.1	Termination	SMA Plug	
		1710-2700	2.0	5.9	Dimension	87x132mm	
		2300-2700	2.0	6.2	Op. Temp	-30°C to +70°C	
		4900-5900	2.0	6.5	Cable Length	5182mm	
		1575.42	1.5	30	Cable Type	RG-58 RG-174 (GPS)	
		Polarization		Linear/RHCP	IP Rating	IP67	
		Wavelength		1/4			
		Electrical Type		Monopole			
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			


# PUBLIC SAFETY/LMR - EXTERNAL VHF PORTABLE/HANDHELD ANTENNAS

EXC000SM-L	Overview	Electric Data			Mechanical Data	
	VHF 118-480MHz Straight Monopole Duck/ Whip  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector Mount
		118-480	1.5	-	Termination	SMA male
		Polarization		Linear	Dimension	165x16.3mm
		Wavelength		1/4	Op. Temp	-40°C to +85°C
		Electrical Type		Monopole	IP Rating	IP67
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


EXH150KR	Overview	Electric Data			Mechanical Data	
	VHF 145- 155MHz Straight Monopole Duck/ Whip  Applications LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector Mount
		145-155	1.5	-	Termination	KR
		Polarization		Linear	Dimension	267x12.7mm
		Wavelength		1/4	Op. Temp	-40°C to +85°C
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


EXS150SFU	Overview	Electric Data			Mechanical Data	
	VHF 150- 162MHz Straight Monopole Duck/ Whip  Applications LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector Mount
		150-162	1.5	-	Termination	SMA female
		Polarization		Linear	Dimension	112x12.7mm
		Wavelength		1/4	Op. Temp	-40°C to +85°C
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		

EXH155*	Overview	Electric Data			Mechanical Data	
	VHF 150-160MHz Straight Monopole Duck/Whip  Applications LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector Mount
		150-160	1.5	-	Termination	KR, MX, SMA
		Polarization		Linear	Dimension	267x12.7mm
		Wavelength		1/4	Op. Temp	-40°C to +85°C
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


EXH160*	Overview	Electric Data			Mechanical Data	
	VHF 155-165MHz Straight Monopole Duck/Whip  Applications LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector Mount
		155-165	1.5	-	Termination	MX, SFU
		Polarization		Linear	Dimension	267x12.7mm
		Wavelength		1/4	Op. Temp	-40°C to +85°C
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		

# PORTABLE/HANDHELD RADIO - EXTERNAL VHF PORTABLE/HANDHELD HINGED ANTENNAS


EXR150BN	Overview	Electric Data			Mechanical Data	
	VHF 150-166MHz Monopole Duck/ Whip  Applications LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector Mount
		150-166	1.5	-	Termination	BNC male
		Polarization		Linear	Dimension	203x12.7mm
		Wavelength		1/4	Op. Temp	-40°C to +85°C
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


EXR154-6BN	Overview	Electric Data			Mechanical Data	
	VHF 154-160MHz Monopole Duck/ Whip  Applications LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector Mount
		154-160	1.5	-	Termination	BNC male
		Polarization		Linear	Dimension	203x12.7mm
		Wavelength		1/4	Op. Temp	-40°C to +85°C
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


# PUBLIC SAFETY/LMR - EXTERNAL UHF PORTABLE/HANDHELD ANTENNAS


EXC400BNX	Overview	Electric Data			Mechanical Data	
	UHF 400- 420MHz Straight Monopole Duck/ Whip  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector Mount
		400-420	1.5	-	Termination	BNC male
		Polarization		Linear	Dimension	178x16.3mm
		Wavelength		1/4	Op. Temp	-40°C to +85°C
		Electrical Type		Monopole	IP Rating	IP67
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		





EXC420BNX EXC420SM	Overview	Electric Data			Mechanical Data	
	UHF 420-450MHz Straight Monopole Duck/Whip  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector Mount
		420-450	1.5	-	Termination	BNC male SMA male
		Polarization		Linear	Dimension	174x16.3mm
		Wavelength		1/4	Op. Temp	-40°C to +85°C
		Electrical Type		Monopole	IP Rating	IP67
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


EXC450*	Overview	Electric Data			Mechanical Data	
	UHF 450-470MHz Straight Monopole Duck/Whip  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector Mount
		450-470	1.5	-	Termination	MD, MX, PL SMA, TNC, BNC
		Polarization		Linear	Dimension	173x16.3mm
		Wavelength		1/4	Op. Temp	-40°C to +85°C
		Electrical Type		Monopole	IP Rating	IP67
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


EXC470MX	Overview	Electric Data			Mechanical Data	
	UHF 470-512MHz Straight Monopole Duck/Whip  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector Mount
		470-512	1.5	-	Termination	MX
		Polarization		Linear	Dimension	168x12.7mm
		Wavelength		1/4	Op. Temp	-40°C to +85°C
		Electrical Type		Monopole	IP Rating	IP67
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


EXD400MD	Overview	Electric Data			Mechanical Data	
	UHF 400-420MHz Straight Monopole Duck/Whip  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector Mount
		400-420	1.5	-	Termination	MD
		Polarization		Linear	Dimension	96.5x12.7mm
		Wavelength		1/4	Op. Temp	-40°C to +85°C
		Electrical Type		Monopole	IP Rating	IP67
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		

EXD420*	Overview	Electric Data			Mechanical Data	
	UHF 420-450MHz Straight Monopole Duck/Whip  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector Mount
		420-450	1.5	-	Termination	KR SMA TNC
		Polarization		Linear	Dimension	91.2x12.7mm
		Wavelength		1/4	Op. Temp	-40°C to +85°C
		Electrical Type		Monopole	IP Rating	IP67
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


G420BN	Overview	Electric Data			Mechanical Data	
	UHF 420-450MHz Straight Monopole Duck/Whip  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector Mount
		420-450	1.5	2.5	Termination	BNC male
		Polarization		Linear	Dimension	254x12.7mm
		Wavelength		1/4	Op. Temp	-40°C to +85°C
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


EXD450*	Overview	Electric Data			Mechanical Data	
	UHF 450-470MHz Straight Monopole Duck/Whip  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector Mount
		450-470	1.5	-	Termination	MD, MX SMA, TNC, BNC
		Polarization		Linear	Dimension	98.6x12.7mm
		Wavelength		1/4	Op. Temp	-40°C to +85°C
		Electrical Type		Monopole	IP Rating	IP67
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		

G450*	Overview	Electric Data			Mechanical Data	
	UHF 450-470MHz Straight Monopole Duck/Whip  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector Mount
		450-470	1.5	2.5	Termination	BNC male TNC male
		Polarization		Linear	Dimension	254x12.7mm
		Wavelength		1/4	Op. Temp	-40°C to +85°C
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


EXD470MX	Overview	Electric Data			Mechanical Data	
	UHF 470-512MHz Straight Monopole Duck/Whip  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector Mount
		470-512	1.5	-	Termination	MX
		Polarization		Linear	Dimension	91.4x12.7mm
		Wavelength		1/4	Op. Temp	-40°C to +85°C
		Electrical Type		Monopole	IP Rating	IP67
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


## PUBLIC SAFETY/LMR - EXTERNAL UHF HINGED PORTABLE/HANDHELD ANTENNAS


EXR420BN EXR420TN-001	Overview	Electric Data			Mechanical Data	
	UHF 420-450MHz Monopole Duck/Whip  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector Mount
		420-450	1.5	-	Termination	BNC male TNC male
		Polarization		Linear	Dimension	170x12.7mm
		Wavelength		1/4	Op. Temp	-40°C to +85°C
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


EXR450BN EXR450TN	Overview	Electric Data			Mechanical Data	
	UHF 450-470MHz Monopole Duck/Whip  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector Mount
		450-470	1.5	-	Termination	BNC male TNC male
		Polarization		Linear	Dimension	216x12.7mm
		Wavelength		1/4	Op. Temp	-40°C to +85°C
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


# PUBLIC SAFETY/LMR - EXTERNAL 8/900 MHZ PORTABLE/HANDHELD ANTENNAS


EXE806*	Overview	Electric Data			Mechanical Data	
	806-866MHz Straight Dipole Duck/Whip  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector Mount
		806-866	1.5	-	Termination	BNC male SMA female
		Polarization		Linear	Dimension	216x12.7mm
		Wavelength		1/2	Op. Temp	-40°C to +85°C
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


EXC806*	Overview	Electric Data			Mechanical Data	
	806-866MHz Straight Monopole Duck/ Whip  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector Mount
		806-866	1.5	-	Termination	MD SMA female
		Polarization		Linear	Dimension	117x12.7mm
		Wavelength		1/4	Op. Temp	-40°C to +85°C
		Electrical Type		Monopole	IP Rating	IP67
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		

EXP806MD	Overview	Electric Data			Mechanical Data	
	806-866MHz Straight Monopole Duck/ Whip  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector Mount
		806-866	1.5	-	Termination	MD
		Polarization		Linear	Dimension	175x12.7mm
		Wavelength		1/4	Op. Temp	-40°C to +85°C
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


EXS806SF	Overview	Electric Data			Mechanical Data	
	806-866MHz Straight Monopole Duck/ Whip  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector Mount
		806-866	1.5	-	Termination	SMA female
		Polarization		Linear	Dimension	46.5x12.7mm
		Wavelength		1/4	Op. Temp	-40°C to +85°C
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		

EXE821TN	Overview	Electric Data			Mechanical Data	
	824MHz Straight Dipole Duck/ Whip  Applications LTE, LMR, ISM for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector Mount
		824-896	1.5	-	Termination	TNC male
		Polarization		Linear	Dimension	203x12.7mm
		Wavelength		1/2	Op. Temp	-40°C to +85°C
		Electrical Type		Dipole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


EXC902MD*	Overview	Electric Data			Mechanical Data	
	902-960MHz Straight Monopole Duck/ Whip  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector Mount
		902-960	1.5	-	Termination	MD SMA male BNC male
		Polarization		Linear	Dimension	92.7x13.5mm
		Wavelength		1/4	Op. Temp	-40°C to +85°C
		Electrical Type		Monopole	IP Rating	IP67
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


EXC1000BN	Overview	Electric Data			Mechanical Data	
	1000MHz Straight Monopole Duck/ Whip  Applications LTE, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector Mount
		1000	1.5	-	Termination	BNC male
		Polarization		Linear	Dimension	83.8x12.7mm
		Wavelength		1/4	Op. Temp	-40°C to +85°C
		Electrical Type		Monopole	IP Rating	IP67
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		



## PUBLIC SAFETY/LMR - EXTERNAL 8/900 MHZ PORTABLE HINGED ANTENNAS



EXR902*	Overview	Electric Data			Mechanical Data	
	902MHz Monopole Duck/Whip  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector Mount
		902-960	1.5	-	Termination	TNC male BNC male
		Polarization		Linear	Dimension	177x12.7mm
		Wavelength		1/4	Op. Temp	-40°C to +85°C
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		

## PUBLIC SAFETY/LMR - EXTERNAL VHF LOW-PROFILE ANTENNAS


ETRAB1440	Overview	Electric Data			Mechanical Data	
	VHF 144-148MHz Monopole Dome  Applications LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Base
		144-148	2.0	2.15	Termination	Push Pin
		Polarization		Linear	Dimension	60.3mm
		Wavelength		1/4	Op. Temp	-40°C to +85°C
		Electrical Type		Monopole	IP Rating	IP67
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


ETRA1500 (White) ETRAB1500 (Black)	Overview	Electric Data			Mechanical Data	
	VHF 150-155MHz Monopole Dome  Applications LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Base
		150-155	2.0	2.15	Termination	Push Pin
		Polarization		Linear	Dimension	60.3mm
		Wavelength		1/4	Op. Temp	-40°C to +85°C
		Electrical Type		Monopole	IP Rating	IP67
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


ETRA1550 (White) ETRAB1550 (Black)	Overview	Electric Data			Mechanical Data	
 	VHF 155-160MHz Monopole Dome  Applications LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Base
		155-160	2.0	2.15	Termination	Push Pin
		Polarization		Linear	Dimension	60.3mm
		Wavelength		1/4	Op. Temp	-40°C to +85°C
		Electrical Type		Monopole	IP Rating	IP67
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		

ETRAB1650	Overview	Electric Data			Mechanical Data	
 	VHF 165-170MHz Monopole Dome  Applications LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Base
		165-170	2.0	2.15	Termination	Push Pin
		Polarization		Linear	Dimension	60.3mm
		Wavelength		1/4	Op. Temp	-40°C to +85°C
		Electrical Type		Monopole	IP Rating	IP67
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


# PUBLIC SAFETY/LMR - EXTERNAL UHF LOW-PROFILE ANTENNAS


TRAB3003	Overview	Electric Data			Mechanical Data	
	UHF 300-305MHz Monopole Dome  Applications LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Base
		300-305	1.5	3.0	Termination	Push Pin
		Polarization		Linear	Dimension	82.6x36.6mm
		Wavelength		1/4	Op. Temp	-40°C to +85°C
		Electrical Type		Monopole	IP Rating	IP67
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


TRAB3803	Overview	Electric Data			Mechanical Data	
	UHF 380-400MHz Monopole Dome  Applications LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Base
		380-400	2.0	3.0	Termination	Push Pin
		Polarization		Linear	Dimension	82.6x36.6mm
		Wavelength		1/4	Op. Temp	-40°C to +85°C
		Electrical Type		Monopole	IP Rating	IP67
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


UTRA4061S2NB-001	Overview	Electric Data			Mechanical Data	
	UHF 406-440MHz Monopole Dome  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Base
		406-440	2.5	2.9	Termination	Push Pin
		No Ground Plane Required			Dimension	86.3x36.6mm
		Polarization		Linear	Op. Temp	-40°C to +85°C
		Wavelength		1/4	IP Rating	IP67
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		





TRA4103	Overview	Electric Data			Mechanical Data	
	UHF 410-430MHz Monopole Dome  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Base
		410-430	2.0	3.0	Termination	Push Pin
		Polarization		Linear	Dimension	82.6x36.6mm
		Wavelength		1/4	Op. Temp	-40°C to +85°C
		Electrical Type		Monopole	IP Rating	IP67
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


ETRA4103 (White) ETRAB4103 (Black)	Overview	Electric Data			Mechanical Data	
	UHF 410-430MHz Monopole Dome  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Base
		410-430	2.1	3.0	Termination	Push Pin
		Polarization		Linear	Dimension	88.9x36.6mm
		Wavelength		1/4	Op. Temp	-40°C to +85°C
		Electrical Type		Monopole	IP Rating	IP67
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


TRA4103P (White) TRAB4103P (Black)	Overview	Electric Data			Mechanical Data	
	UHF 410-430MHz Monopole Dome  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Panel w. screw
		410-430	2.0	3.0	Termination	N-Type
		Polarization		Linear	Dimension	108x36.6mm
		Wavelength		1/4	Op. Temp	-40°C to +85°C
		Electrical Type		Monopole	IP Rating	IP67
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


ETRAB4303	Overview	Electric Data			Mechanical Data	
	UHF 430-450MHz Monopole Dome  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Base
		430-450	2.1	3.0	Termination	Push Pin
		Polarization		Linear	Dimension	88.9x36.6mm
		Wavelength		1/4	Op. Temp	-40°C to +85°C
		Electrical Type		Monopole	IP Rating	IP67
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


TRA4303 (White) TRAB4303 (Black)	Overview	Electric Data			Mechanical Data	
	UHF 430-450MHz Monopole Dome  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Base
		430-450	2.0	3.0	Termination	Push Pin
		Polarization		Linear	Dimension	82.6x36.6mm
		Wavelength		1/4	Op. Temp	-40°C to +85°C
		Electrical Type		Monopole	IP Rating	IP67
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


TRA4303P (White) TRAB4303P (Black)	Overview	Electric Data			Mechanical Data	
	UHF 430-450MHz Monopole Dome  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Panel w. screw
		430-450	2.0	3.0	Termination	N-Type
		Polarization		Linear	Dimension	108x36.6mm
		Wavelength		1/4	Op. Temp	-40°C to +85°C
		Electrical Type		Monopole	IP Rating	IP67
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


<b>UTRA430IS3NB-001 (Black)</b> <b>UTRA430IS3NW-001 (White)</b>	Overview	Electric Data			Mechanical Data	
	 <p>UHF 430-490MHz Monopole Dome</p> <p>Applications LTE, ISM, LMR for Public Safety</p>	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Base
		430-490	2.5	3.6	Termination	Push Pin
		No ground plane required			Dimension	86.3x36.6mm
		Polarization		Linear	Op. Temp	-40°C to +85°C
		Wavelength		1/4	IP Rating	IP67
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


<b>TRA4500N</b>	Overview	Electric Data			Mechanical Data	
	 <p>UHF 450-470MHz Monopole Dome</p> <p>Applications LTE, ISM, LMR for Public Safety</p>	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Panel w. screw
		450-470	2.0	3.0	Termination	Push Pin
		No Ground Plane is required.			Dimension	88.9x36.6mm
		Polarization		Linear	Op. Temp	-40°C to +85°C
		Wavelength		1/4	IP Rating	IP67
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


<b>ETRA4503 (White)</b> <b>ETRAB4503 (Black)</b>	Overview	Electric Data			Mechanical Data	
	 <p>UHF 450-470MHz Monopole Dome</p> <p>Applications LTE, ISM, LMR for Public Safety</p>	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Base
		450-470	2.1	3.0	Termination	Push Pin
		Polarization		Linear	Dimension	88.9x36.6mm
		Wavelength		1/4	Op. Temp	-40°C to +85°C
		Electrical Type		Monopole	IP Rating	IP67
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


<b>ETRAB4500N</b>	Overview	Electric Data			Mechanical Data	
	 <p>UHF 450-470MHz Monopole Dome</p> <p>Applications LTE, ISM, LMR for Public Safety</p>	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Base
		450-470	2.1	3.0	Termination	Push Pin
		Polarization		Linear	Dimension	88.9x36.6mm
		Wavelength		1/4	Op. Temp	-40°C to +85°C
		Electrical Type		Monopole	IP Rating	IP67
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


TRA4503 (White) TRAB4503 (Black)	Overview	Electric Data			Mechanical Data	
	UHF 450-470MHz Monopole Dome  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Base
		450-470	2.0	3.0	Termination	Push Pin
		Polarization		Linear	Dimension	82.6x36.6mm
		Wavelength		1/4	Op. Temp	-40°C to +85°C
		Electrical Type		Monopole	IP Rating	IP67
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


TRA4503P	Overview	Electric Data			Mechanical Data	
	UHF 450-470MHz Monopole Dome  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Panel w. screw
		450-470	2.0	3.0	Termination	N-Type
		Polarization		Linear	Dimension	108x36.6mm
		Wavelength		1/4	Op. Temp	-40°C to +85°C
		Electrical Type		Monopole	IP Rating	IP67
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


TRA4501S3CW-004	Overview	Electric Data			Mechanical Data	
	UHF 450-470MHz Monopole Dome  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Base
		450-470	2.0	3.0	Termination	Push Pin
		Polarization		Linear	Dimension	82.6x36.6mm
		Wavelength		1/4	Op. Temp	-40°C to +85°C
		Electrical Type		Monopole	IP Rating	IP67
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		

TRA4501S3CW-005	Overview	Electric Data			Mechanical Data	
	UHF 450-470MHz Monopole Dome  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Panel w. screw
		450-470	2.0	3.0	Termination	Push Pin
		Polarization		Linear	Dimension	82.6x36.6mm
		Wavelength		1/4	Op. Temp	-40°C to +85°C
		Electrical Type		Monopole	IP Rating	IP67
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


UTRA4502S3NB-001 UTRA4502S3NW-001	Overview	Electric Data			Mechanical Data	
	UHF 450-512MHz Monopole Dome  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Base
		450-512	2.5	4.1	Termination	Push Pin
		No ground plane required			Dimension	86.3x36.6mm
		Polarization		Linear	Op. Temp	-40°C to +85°C
		Wavelength		1/4	IP Rating	IP67
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


ETRAB4703	Overview	Electric Data			Mechanical Data	
	UHF 470-490MHz Monopole Dome  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Base
		470-490	2.1	3.0	Termination	Push Pin
		Polarization		Linear	Dimension	88.9x36.6mm
		Wavelength		1/4	Op. Temp	-40°C to +85°C
		Electrical Type		Monopole	IP Rating	IP67
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


TRA4703 (White) TRAB4703 (Black)	Overview	Electric Data			Mechanical Data	
	UHF 470-490MHz Monopole Dome  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Base
		470-490	2.0	3.0	Termination	Push Pin
		Polarization		Linear	Dimension	82.6x36.6mm
		Wavelength		1/4	Op. Temp	-40°C to +85°C
		Electrical Type		Monopole	IP Rating	IP67
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


ETRAB4903	Overview	Electric Data			Mechanical Data	
	UHF 490-512MHz Monopole Dome  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Base
		490-512	2.1	3.0	Termination	Push Pin
		Polarization		Linear	Dimension	88.9x36.6mm
		Wavelength		1/4	Op. Temp	-40°C to +85°C
		Electrical Type		Monopole	IP Rating	IP67
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


# PUBLIC SAFETY/LMR - EXTERNAL TUNABLE LOW-PROFILE ANTENNAS


TRAT1420 (White) TRABT1420 (Black)	Overview	Electric Data			Mechanical Data	
	VHF 142-160MHz Monopole Dome  Applications LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Base
		142-160	2.0	0	Termination	Push Pin
		Polarization		Linear	Dimension	88.9x82.6mm
		Wavelength		1/4	Op. Temp	-30°C to +70°C
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		

TRABT1420P	Overview	Electric Data			Mechanical Data	
	VHF 142-160MHz Monopole Dome  Applications LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Panel w. screw
		142-160	2.0	0	Termination	N-Type
		Polarization		Linear	Dimension	108x82.6mm
		Wavelength		1/4	Op. Temp	-30°C to +70°C
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		

TRAT1500 (White) TRABT1500 (Black)	Overview	Electric Data			Mechanical Data	
	VHF 150-168MHz Monopole Dome  Applications LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Base
		150-168	2.0	0	Termination	Push Pin
		Polarization		Linear	Dimension	88.9x82.6mm
		Wavelength		1/4	Op. Temp	-30°C to +70°C
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		

TRAT1500P	Overview	Electric Data			Mechanical Data	
	VHF 150-168MHz Monopole Dome  Applications LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Panel w. screw
		150-168	2.0	0	Termination	N-Type
		Polarization		Linear	Dimension	108x82.6mm
		Wavelength		1/4	Op. Temp	-30°C to +70°C
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


TRAT1560 TRABT1560	Overview	Electric Data			Mechanical Data	
	VHF 156-172MHz Monopole Dome  Applications LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	NMO Base
		156-172	2.0	0	Termination	Push Pin
		Polarization		Linear	Dimension	88.9x82.6mm
		Wavelength		1/4	Op. Temp	-30°C to +70°C
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


TRABT2100	Overview	Electric Data			Mechanical Data	
	VHF 210-225MHz Monopole Dome  Applications LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Panel w. screw
		210-225	2.0	0	Termination	Push Pin
		Polarization		Linear	Dimension	88.9x82.6mm
		Wavelength		1/4	Op. Temp	-30°C to +70°C
		Electrical Type		Monopole		
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		





# PUBLIC SAFETY - EXTERNAL - INFRASTRUCTURE


## VHF OUTDOOR OMNI BATON ANTENNAS


FG1400	Overview	Electric Data			Mechanical Data	
	VHF 140-144MHz Outdoor Fiberglass Dipole Baton  Applications VHF, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		140-144	2.0	2.0	Termination	N-Type female
		Polarization		Linear	Dimension	1095x33mm
		Wavelength		1/2	Op. Temp	-30°C to +70°C
		Electrical Type		Dipole	Wind Survival	125Mph
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


FG1403	Overview	Electric Data			Mechanical Data	
	VHF 140-144MHz Outdoor Fiberglass Dipole Baton  Applications VHF, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		140-144	2.0	5.0	Termination	N-Type female
		Polarization		Linear	Dimension	1778x33mm
		Wavelength		1/2	Op. Temp	-30°C to +70°C
		Electrical Type		Dipole	Wind Survival	125Mph
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


FG1443	Overview	Electric Data			Mechanical Data	
	VHF 144-148MHz Outdoor Fiberglass Dipole Baton  Applications VHF, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		144-148	2.0	5.0	Termination	N-Type female
		Polarization		Linear	Dimension	2781x33mm
		Wavelength		1/2	Op. Temp	-30°C to +70°C
		Electrical Type		Dipole	Wind Survival	125Mph
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


FG1480	Overview	Electric Data			Mechanical Data	
	VHF 148-152MHz Outdoor Fiberglass Dipole Baton  Applications VHF, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		148-152	2.0	2.0	Termination	N-Type female
		Polarization		Linear	Dimension	1854x33mm
		Wavelength		1/2	Op. Temp	-30°C to +70°C
		Electrical Type		Dipole	Wind Survival	125Mph
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


FG1520	Overview	Electric Data			Mechanical Data	
	VHF 152-156MHz Outdoor Fiberglass Dipole Baton  Applications VHF, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		148-152	2.0	2.0	Termination	N-Type female
		Polarization		Linear	Dimension	1791x33mm
		Wavelength		1/2	Op. Temp	-30°C to +70°C
		Electrical Type		Dipole	Wind Survival	125Mph
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


FG1523	Overview	Electric Data			Mechanical Data	
	VHF 152-156MHz Outdoor Fiberglass Dipole Baton  Applications VHF, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		152-156	2.0	5.0	Termination	N-Type female
		Polarization		Linear	Dimension	2782x33mm
		Wavelength		1/2	Op. Temp	-30°C to +70°C
		Electrical Type		Dipole	Wind Survival	125Mph
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


FG1560	Overview	Electric Data			Mechanical Data	
	VHF 156-162MHz Outdoor Fiberglass Dipole Baton  Applications VHF, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		156-162	2.0	2.0	Termination	N-Type female
		Polarization		Linear	Dimension	1727x33mm
		Wavelength		1/2	Op. Temp	-30°C to +70°C
		Electrical Type		Dipole	Wind Survival	125Mph
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


FG1563	Overview	Electric Data			Mechanical Data	
	VHF 156-162MHz Outdoor Fiberglass Dipole Baton  Applications VHF, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		156-162	2.0	5.0	Termination	N-Type female
		Polarization		Linear	Dimension	2718x33mm
		Wavelength		1/2	Op. Temp	-30°C to +70°C
		Electrical Type		Dipole	Wind Survival	125Mph
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


FG1620	Overview	Electric Data			Mechanical Data	
	VHF 162-168MHz Outdoor Fiberglass Dipole Baton  Applications VHF, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		162-168	2.0	2.0	Termination	N-Type female
		Polarization		Linear	Dimension	1727x33mm
		Wavelength		1/2	Op. Temp	-30°C to +70°C
		Electrical Type		Dipole	Wind Survival	125Mph
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


FG1623	Overview	Electric Data			Mechanical Data	
	VHF 162-168MHz Outdoor Fiberglass Dipole Baton  Applications VHF, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		162-168	2.0	2.0	Termination	N-Type female
		Polarization		Linear	Dimension	2718x33mm
		Wavelength		1/2	Op. Temp	-30°C to +70°C
		Electrical Type		Dipole	Wind Survival	125Mph
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		

FG1683	Overview	Electric Data			Mechanical Data	
	VHF 168-174MHz Outdoor Fiberglass Dipole Baton  Applications VHF, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		168-174	2.0	5.0	Termination	N-Type female
		Polarization		Linear	Dimension	2718x33mm
		Wavelength		1/2	Op. Temp	-30°C to +70°C
		Electrical Type		Dipole	Wind Survival	125Mph
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		

FG2170	Overview	Electric Data			Mechanical Data	
	VHF 216-221MHz Outdoor Fiberglass Dipole Baton  Applications VHF, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		216-221	2.0	2.0	Termination	N-Type female
		Polarization		Linear	Dimension	1728x33mm
		Wavelength		1/2	Op. Temp	-30°C to +70°C
		Electrical Type		Dipole	Wind Survival	125Mph
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


FG2173	Overview	Electric Data			Mechanical Data	
	VHF 216-221MHz Outdoor Fiberglass Dipole Baton  Applications VHF, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		216-221	2.0	5.0	Termination	N-Type female
		Polarization		Linear	Dimension	2718x33mm
		Wavelength		1/2	Op. Temp	-30°C to +70°C
		Electrical Type		Dipole	Wind Survival	125Mph
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


FG2200	Overview	Electric Data			Mechanical Data	
	VHF 220-225MHz Outdoor Fiberglass Dipole Baton  Applications VHF, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		220-225	2.0	2.0	Termination	N-Type female
		Polarization		Linear	Dimension	1728x33mm
		Wavelength		1/2	Op. Temp	-30°C to +70°C
		Electrical Type		Dipole	Wind Survival	125Mph
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


FG2203	Overview	Electric Data			Mechanical Data	
	VHF 220-225MHz Outdoor Fiberglass Dipole Baton  Applications VHF, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		220-225	2.0	5.0	Termination	N-Type female
		Polarization		Linear	Dimension	2718x33mm
		Wavelength		1/2	Op. Temp	-30°C to +70°C
		Electrical Type		Dipole	Wind Survival	125Mph
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


# PUBLIC SAFETY - EXTERNAL - INFRASTRUCTURE


## UHF OUTDOOR OMNI BATON ANTENNAS


FG3803	Overview	Electric Data			Mechanical Data	
	380-406MHz Outdoor Fiberglass Dipole Baton  Applications UHF, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		380-406	2.0	5.0	Termination	N-Type female
		Polarization		Linear	Dimension	1461x33mm
		Wavelength		1/2	Op. Temp	-30°C to +70°C
		Electrical Type		Dipole	Wind Survival	125Mph
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


FG4063	Overview	Electric Data			Mechanical Data	
	406-416MHz Outdoor Fiberglass Dipole Baton  Applications UHF, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		406-416	2.0	5.0	Termination	N-Type female
		Polarization		Linear	Dimension	1461x33mm
		Wavelength		1/2	Op. Temp	-30°C to +70°C
		Electrical Type		Dipole	Wind Survival	125Mph
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


FG4065	Overview	Electric Data			Mechanical Data	
	406-416MHz Outdoor Fiberglass Dipole Baton  Applications UHF, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		406-416	2.0	7.0	Termination	N-Type female
		Polarization		Linear	Dimension	1943x33mm
		Wavelength		1/2	Op. Temp	-30°C to +70°C
		Electrical Type		Dipole	Wind Survival	125Mph
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


FG4103	Overview	Electric Data			Mechanical Data	
	410-420MHz Outdoor Fiberglass Dipole Baton  Applications UHF, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		410-420	2.0	5.0	Termination	N-Type female
		Polarization		Linear	Dimension	1905x33mm
		Wavelength		1/2	Op. Temp	-30°C to +70°C
		Electrical Type		Dipole	Wind Survival	125Mph
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		

FG4205	Overview	Electric Data			Mechanical Data	
	420-430MHz Outdoor Fiberglass Dipole Baton  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		420-430	2.0	7.0	Termination	N-Type female
		Polarization		Linear	Dimension	1931x33mm
		Wavelength		1/2	Op. Temp	-30°C to +70°C
		Electrical Type		Dipole	Wind Survival	125Mph
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


FG4300	Overview	Electric Data			Mechanical Data	
	430-450MHz Outdoor Fiberglass Dipole Baton  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		430-450	2.0	2.0	Termination	N-Type female
		Polarization		Linear	Dimension	661x33mm
		Wavelength		1/2	Op. Temp	-30°C to +70°C
		Electrical Type		Dipole	Wind Survival	125Mph
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


FG4303	Overview	Electric Data			Mechanical Data	
	430-450MHz Outdoor Fiberglass Dipole Baton  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		430-440	2.0	5.0	Termination	N-Type female
		Polarization		Linear	Dimension	1118x33mm
		Wavelength		1/2	Op. Temp	-30°C to +70°C
		Electrical Type		Dipole	Wind Survival	125Mph
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


FG4305	Overview	Electric Data			Mechanical Data	
	430-450MHz Outdoor Fiberglass Dipole Baton  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		430-440	2.0	7.0	Termination	N-Type female
		Polarization		Linear	Dimension	1931x33mm
		Wavelength		1/2	Op. Temp	-30°C to +70°C
		Electrical Type		Dipole	Wind Survival	125Mph
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


FG4400	Overview	Electric Data			Mechanical Data	
	440-450MHz Outdoor Fiberglass Dipole Baton  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		440-450	2.0	2.0	Termination	N-Type female
		Polarization		Linear	Dimension	661x33mm
		Wavelength		1/2	Op. Temp	-30°C to +80°C
		Electrical Type		Dipole	Wind Survival	125Mph
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		





FG4403	Overview	Electric Data			Mechanical Data	
	440-450MHz Outdoor Fiberglass Dipole Baton  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		440-450	2.0	5.0	Termination	N-Type female
		Polarization		Linear	Dimension	1118x33mm
		Wavelength		1/2	Op. Temp	-30°C to +80°C
		Electrical Type		Dipole	Wind Survival	125Mph
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


FG4405	Overview	Electric Data			Mechanical Data	
	440-450MHz Outdoor Fiberglass Dipole Baton  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		440-450	2.0	7.0	Termination	N-Type female
		Polarization		Linear	Dimension	1931x33mm
		Wavelength		1/2	Op. Temp	-30°C to +80°C
		Electrical Type		Dipole	Wind Survival	125Mph
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


FG4503	Overview	Electric Data			Mechanical Data	
	450-460MHz Outdoor Fiberglass Dipole Baton  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		450-460	2.0	5.0	Termination	N-Type female
		Polarization		Linear	Dimension	1118x33mm
		Wavelength		1/2	Op. Temp	-30°C to +70°C
		Electrical Type		Dipole	Wind Survival	125Mph
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


FG4505	Overview	Electric Data			Mechanical Data	
	450-460MHz Outdoor Fiberglass Dipole Baton  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		450-460	2.0	7.0	Termination	N-Type female
		Polarization		Linear	Dimension	1931x33mm
		Wavelength		1/2	Op. Temp	-30°C to +70°C
		Electrical Type		Dipole	Wind Survival	125Mph
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


FG4507	Overview	Electric Data			Mechanical Data	
	450-460MHz Outdoor Fiberglass Dipole Baton  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		450-460	2.0	9.0	Termination	N-Type female
		Polarization		Linear	Dimension	2718x33mm
		Wavelength		1/2	Op. Temp	-30°C to +70°C
		Electrical Type		Dipole	Wind Survival	125Mph
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


FG4500	Overview	Electric Data			Mechanical Data	
	450-470MHz Outdoor Fiberglass Dipole Baton  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		450-470	1.5	2.0	Termination	N-Type female
		Polarization		Linear	Dimension	510x33mm
		Wavelength		1/2	Op. Temp	-30°C to +85°C
		Electrical Type		Dipole	Wind Survival	125Mph
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		

FG4505W	Overview	Electric Data			Mechanical Data	
	450-470MHz Outdoor Fiberglass Dipole Baton  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		450-470	2.0	7.0	Termination	N-Type female
		Polarization		Linear	Dimension	1931x33mm
		Wavelength		1/2	Op. Temp	-30°C to +70°C
		Electrical Type		Dipole	Wind Survival	125Mph
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		

FG4603	Overview	Electric Data			Mechanical Data	
	UHF 460-470MHz Outdoor Fiberglass Dipole Baton  Applications UHF, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		460-470	2.0	5.0	Termination	N-Type female
		Polarization		Linear	Dimension	1118x33mm
		Wavelength		1/2	Op. Temp	-30°C to +70°C
		Electrical Type		Dipole	Wind Survival	125Mph
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		

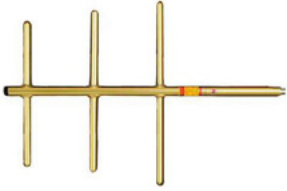
FG4605	Overview	Electric Data			Mechanical Data	
	UHF 460-470MHz Outdoor Fiberglass Dipole Baton  Applications UHF, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		460-470	2.0	7.0	Termination	N-Type female
		Polarization		Linear	Dimension	1943x33mm
		Wavelength		1/2	Op. Temp	-30°C to +70°C
		Electrical Type		Dipole	Wind Survival	125Mph
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		

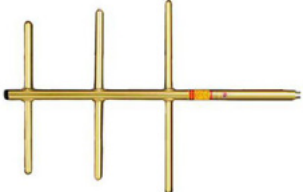
FG4607	Overview	Electric Data			Mechanical Data	
	UHF 460-470MHz Outdoor Fiberglass Dipole Baton  Applications UHF, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		460-470	2.0	9.0	Termination	N-Type female
		Polarization		Linear	Dimension	2718x33mm
		Wavelength		1/2	Op. Temp	-30°C to +70°C
		Electrical Type		Dipole	Wind Survival	125Mph
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


FG4700	Overview	Electric Data			Mechanical Data	
	UHF 470-490MHz Outdoor Fiberglass Dipole Baton  Applications UHF, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		470-490	1.5	2.0	Termination	N-Type female
		Polarization		Linear	Dimension	1118x33mm
		Wavelength		1/2	Op. Temp	-30°C to +70°C
		Electrical Type		Dipole	Wind Survival	125Mph
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		

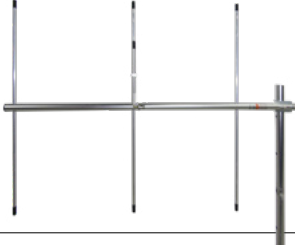
# PUBLIC SAFETY - EXTERNAL - INFRASTRUCTURE


## VHF DIRECTIONAL YAGI ANTENNAS


Y1363	Overview	Electric Data			Mechanical Data	
	VHF 136-150MHz Outdoor 3-element Yagi  Applications VHF, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		136-150	3.0	7.1	Termination	N-Type female
		Polarization		Linear	Dimension	1054mm long
		Wavelength		1/2	Op. Temp	-30°C to +70°C
		Electrical Type		Yagi	Wind Survival	150 mph
		Radiation Pattern		Directional		
		Impedance (Ohms)		50		


Y1503	Overview	Electric Data			Mechanical Data	
	VHF 150-174MHz Outdoor 3-element Yagi  Applications VHF, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		150-174	3.0	7.1	Termination	N-Type female
		Polarization		Linear	Dimension	1054mm long
		Wavelength		1/2	Op. Temp	-30°C to +70°C
		Electrical Type		Yagi	Wind Survival	150 mph
		Radiation Pattern		Directional		
		Impedance (Ohms)		50		

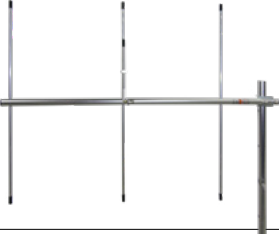
Y1505	Overview	Electric Data			Mechanical Data	
	VHF 150-174MHz Outdoor 5-element Yagi  Applications VHF, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		150-174	2.0	9.2	Termination	N-Type female
		Polarization		Linear	Dimension	1829mm long
		Wavelength		1/2	Op. Temp	-30°C to +70°C
		Electrical Type		Yagi	Wind Survival	150 mph
		Radiation Pattern		Directional		
		Impedance (Ohms)		50		

YS1503 YS1503W	Overview	Electric Data			Mechanical Data	
	VHF 150-174MHz Outdoor 3-element Yagi  Applications VHF, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		150-174	2.0	7.1	Termination	N-Type female
		Polarization		Linear	Dimension	1054mm long
		Wavelength		1/2	Op. Temp	-30°C to +70°C
		Electrical Type		Yagi	Wind Survival	150 mph
		Radiation Pattern		Directional		
		Impedance (Ohms)		50		

YS1505	Overview	Electric Data			Mechanical Data	
	VHF 150-174MHz Outdoor 5-element Yagi  Applications VHF, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		150-174	2.0	9.2	Termination	N-Type female
		Polarization		Linear	Dimension	1829mm long
		Wavelength		1/2	Op. Temp	-30°C to +70°C
		Electrical Type		Yagi	Wind Survival	150 mph
		Radiation Pattern		Directional		
		Impedance (Ohms)		50		

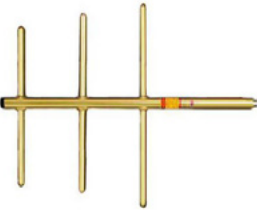
YS2163	Overview	Electric Data			Mechanical Data	
	VHF 216-225MHz Outdoor 3-element Yagi  Applications VHF, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		216-225	2.0	7.1	Termination	N-Type female
		Polarization		Linear	Dimension	1054mm long
		Wavelength		1/2	Op. Temp	-30°C to +70°C
		Electrical Type		Yagi	Wind Survival	120 mph
		Radiation Pattern		Directional		
		Impedance (Ohms)		50		

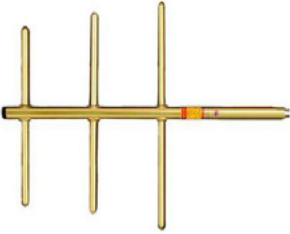
YS2165	Overview	Electric Data			Mechanical Data	
	VHF 216-225MHz Outdoor 5-element Yagi  Applications VHF, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		216-225	2.0	11.2	Termination	N-Type female
		Polarization		Linear	Dimension	1829mm long
		Wavelength		1/2	Op. Temp	-30°C to +70°C
		Electrical Type		Yagi	Wind Survival	150 mph
		Radiation Pattern		Directional		
		Impedance (Ohms)		50		


YS2203	Overview	Electric Data			Mechanical Data	
	VHF 220-250MHz Outdoor 3-element Yagi  Applications VHF, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		220-250	2.0	7.1	Termination	N-Type female
		Polarization		Linear	Dimension	1054mm long
		Wavelength		1/2	Op. Temp	-30°C to +70°C
		Electrical Type		Yagi	Wind Survival	120 mph
		Radiation Pattern		Directional		
		Impedance (Ohms)		50		


## PUBLIC SAFETY - EXTERNAL - INFRASTRUCTURE

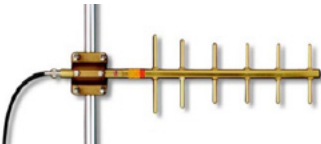
### UHF DIRECTIONAL YAGI ANTENNAS


Y3803	Overview	Electric Data			Mechanical Data	
	UHF 380-406MHz Outdoor 3-element Yagi  Applications UHF, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		380-406	2.0	9.2	Termination	N-Type female
		Polarization		Linear	Dimension	512mm long
		Wavelength		1/2	Op. Temp	-30°C to +70°C
		Electrical Type		Yagi		
		Radiation Pattern		Directional		
		Impedance (Ohms)		50		

Y4063	Overview	Electric Data			Mechanical Data	
	UHF 406-430MHz Outdoor 3-element Yagi  Applications UHF, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		406-430	2.0	7.1	Termination	N-Type female
		Polarization		Linear	Dimension	579mm long
		Wavelength		1/2	Op. Temp	-30°C to +70°C
		Electrical Type		Yagi	Wind Survival	125 mph
		Radiation Pattern		Directional		
		Impedance (Ohms)		50		

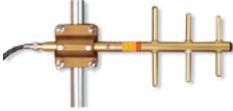
YS4065	Overview	Electric Data			Mechanical Data	
	UHF 406-430MHz Outdoor 5-element Yagi  Applications UHF, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		406-430	2.0	9.2	Termination	N-Type female
		Polarization		Linear	Dimension	939.8mm long
		Wavelength		1/2	Op. Temp	-30°C to +70°C
		Electrical Type		Yagi	Wind Survival	150 mph
		Radiation Pattern		Directional		
		Impedance (Ohms)		50		

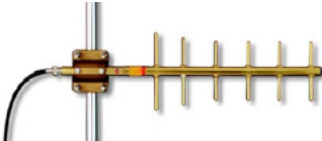
YS4066	Overview	Electric Data			Mechanical Data	
	UHF 406-430MHz Outdoor 6-element Yagi  Applications UHF, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		406-430	2.0	10.2	Termination	N-Type female
		Polarization		Linear	Dimension	1118mm long
		Wavelength		1/2	Op. Temp	-30°C to +70°C
		Electrical Type		Yagi	Wind Survival	150 mph
		Radiation Pattern		Directional		
		Impedance (Ohms)		50		


Y4066	Overview	Electric Data			Mechanical Data	
	UHF 406-430MHz Outdoor 6-element Yagi  Applications UHF, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		406-430	1.5	12.2	Termination	N-Type female
		Polarization		Linear	Dimension	1223mm long
		Wavelength		1/2	Op. Temp	-40°C to +85°C
		Electrical Type		Yagi	Wind Survival	125 mph
		Radiation Pattern		Directional		
		Impedance (Ohms)		50		

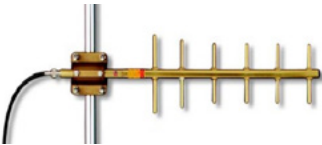
YS4303	Overview	Electric Data			Mechanical Data	
	UHF 430-450MHz Outdoor 3-element Yagi  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		430-450	2.0	7.1	Termination	N-Type female
		Polarization		Linear	Dimension	515mm long
		Wavelength		1/2	Op. Temp	-30°C to +70°C
		Electrical Type		Yagi	Wind Survival	125 mph
		Radiation Pattern		Directional		
		Impedance (Ohms)		50		





Y4303	Overview	Electric Data			Mechanical Data	
	UHF 430-450MHz Outdoor 3-element Yagi  Applications LTE, ISM, UHF, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		430-450	2.0	7.1	Termination	N-Type female
		Polarization		Linear	Dimension	485.8mm long
		Wavelength		1/2	Op. Temp	-30°C to +70°C
		Electrical Type		Yagi	Wind Survival	125 mph
		Radiation Pattern		Directional		
		Impedance (Ohms)		50		


Y4306	Overview	Electric Data			Mechanical Data	
	UHF 430-450MHz Outdoor 6-element Yagi  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		430-450	2.0	12.2	Termination	N-Type female
		Polarization		Linear	Dimension	1024mm long
		Wavelength		1/2	Op. Temp	-40°C to +85°C
		Electrical Type		Yagi	Wind Survival	125 mph
		Radiation Pattern		Directional		
		Impedance (Ohms)		50		

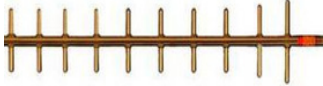
YS4306	Overview	Electric Data			Mechanical Data	
	UHF 430-450MHz Outdoor 6-element Yagi  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		430-450	2.0	12.2	Termination	N-Type female
		Polarization		Linear	Dimension	1124mm long
		Wavelength		1/2	Op. Temp	-30°C to +70°C
		Electrical Type		Yagi	Wind Survival	150 mph
		Radiation Pattern		Directional		
		Impedance (Ohms)		50		


Y4506	Overview	Electric Data			Mechanical Data	
	UHF 450-470MHz Outdoor 6-element Yagi  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		450-470	2.0	12.2	Termination	N-Type female
		Polarization		Linear	Dimension	1024mm long
		Wavelength		1/2	Op. Temp	-40°C to +85°C
		Electrical Type		Yagi	Wind Survival	125 mph
		Radiation Pattern		Directional		
		Impedance (Ohms)		50		


Y45012	Overview	Electric Data			Mechanical Data	
	UHF 450-470MHz Outdoor 12-element Yagi  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		450-470	2.0	13.0	Termination	N-Type female
		Polarization		Linear	Dimension	1729mm long
		Wavelength		1/2	Op. Temp	-30°C to +70°C
		Electrical Type		Yagi	Wind Survival	150 mph
		Radiation Pattern		Directional		
		Impedance (Ohms)		50		

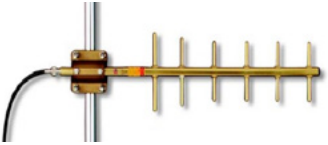
YF45018-61NF	Overview	Electric Data			Mechanical Data	
	UHF 450-490MHz Outdoor Folded Yagi  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		450-490	2.0	9.1	Termination	N-Type female
		Polarization		Linear	Dimension	457mm long
		Wavelength		1/2	Op. Temp	-30°C to +70°C
		Electrical Type		Yagi	Wind Survival	136 mph
		Radiation Pattern		Directional		
		Impedance (Ohms)		50		

YS4503	Overview	Electric Data			Mechanical Data	
	UHF 450-470MHz Silver Series Outdoor 3-element Yagi  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		450-470	2.0	9.1	Termination	N-Type female
		Polarization		Linear	Dimension	512.8mm long
		Wavelength		1/2	Op. Temp	-30°C to +70°C
		Electrical Type		Yagi	Wind Survival	150 mph
		Radiation Pattern		Directional		
		Impedance (Ohms)		50		

Y45010	Overview	Electric Data			Mechanical Data	
	UHF 450-470MHz Outdoor 10-element Yagi  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		450-470	2.0	11.5	Termination	N-Type female
		Polarization		Linear	Dimension	1473mm long
		Wavelength		1/2	Op. Temp	-30°C to +70°C
		Electrical Type		Yagi	Wind Survival	150 mph
		Radiation Pattern		Directional		
		Impedance (Ohms)		50		

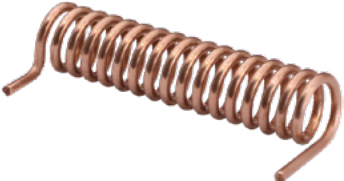
YF450112-61NF	Overview	Electric Data			Mechanical Data	
	UHF 450-490MHz Outdoor Folded Yagi  Applications LTE, ISM, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		450-490	1.8	12.2	Termination	N-Type female
		Polarization		Linear	Dimension	1067mm long
		Wavelength		1/2	Op. Temp	-30°C to +70°C
		Electrical Type		Yagi	Wind Survival	136 mph
		Radiation Pattern		Directional		
		Impedance (Ohms)		50		

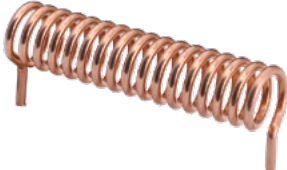
YS4705	Overview	Electric Data			Mechanical Data	
	UHF 470-490MHz Silver Series Outdoor 3-element Yagi  Applications UHF, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		470-490	2.0	11.2	Termination	N-Type female
		Polarization		Linear	Dimension	939.8mm long
		Wavelength		1/2	Op. Temp	-30°C to +70°C
		Electrical Type		Yagi		
		Radiation Pattern		Directional		
		Impedance (Ohms)		50		


Y4706	Overview	Electric Data			Mechanical Data	
	UHF 470-512MHz Outdoor 6-element Yagi  Applications UHF, LMR for Public Safety	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Pole/Mast Mount
		470-512	2.0	12.2	Termination	N-Type female
		Polarization		Linear	Dimension	1024mm long
		Wavelength		1/2	Op. Temp	-40°C to +85°C
		Electrical Type		Yagi	Wind Survival	125 mph
		Radiation Pattern		Directional		
		Impedance (Ohms)		50		

# OTHERS - INTERNAL


## 315 MHZ


ANT-315-HESM	Overview	Electric Data		Mechanical Data	
	315 MHz Straight Monopole Helical  Applications Remote Control	Frequency (MHz)	VSWR (Max)	Mounting type	Through Hole
		315	2.0	Termination	Solder pad
		Polarization	Linear	Dimensions	38.1 mm x 8.9 mm
		Wavelength	1/4	Op. Temp	-40 °C to +85 °C
		Electrical type	Monopole	Ground Plane	76.2 mm x 241.3 mm
		Radiation pattern	Omnidirectional		
		Impedance (Ohms)	50		


ANT-315-HETH	Overview	Electric Data		Mechanical Data	
	315 MHz Straight Monopole Helical  Applications Remote Control	Frequency (MHz)	VSWR (Max)	Mounting type	Through Hole
		315	2.0	Termination	Solder Pin
		Polarization	Linear	Dimensions	38.1 mm x 8.9 mm
		Wavelength	1/4	Op. Temp	-40 °C to +85 °C
		Electrical type	Monopole	Ground Plane	76.2 mm x 241.3 mm
		Radiation pattern	Omnidirectional		
		Impedance (Ohms)	50		


ANT-315-SP	Overview	Electric Data		Mechanical Data	
	315 MHz Monopole Chip  Applications Remote Control	Frequency (MHz)	VSWR (Max)	Mounting type	Surface mount
		315	1.9	Termination	Solder pad
		Polarization	Linear	Dimensions	27.9 mm x 13.7 mm x 1.5 mm
		Wavelength	1/4	Op. Temp	-40 °C to +130 °C
		Electrical type	Monopole	Ground Plane	38 mm x 84 mm
		Radiation pattern	Omnidirectional		
		Impedance (Ohms)	50		


## OTHERS - EXTERNAL - 315 MHZ


ANT-315-PW-LP	Overview	Electric Data			Mechanical Data	
	315 MHz Straight Monopole Whip  Applications Remote Control	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	PCB Screw
		315	1.9	-4.0	Termination	Screw Lug
		Polarization		Linear	Dimensions	50.5 mm x 10.4 mm
		Wavelength		1/4	Op. Temp	-20 °C to +85 °C
		Electrical Type		Monopole	Ground Plane	38.1 mm x 83.8 mm
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


ANT-315-PW-RA	Overview	Electric Data			Mechanical Data	
	315 MHz Tilt/ Swivel Monopole Whip  Applications Remote Control	Frequency (MHz)	VSWR (Max)		Mounting Type	PCB Screw
		315	2.0		Termination	Screw Lug
		Polarization		Linear	Dimensions	131.5 mm x 7.0 mm
		Wavelength		1/4	Op. Temp	-20 °C to +60 °C
		Electrical type		Monopole	Ground Plane	62.2 mm x 100.3 mm
		Radiation pattern		Omnidirectional		
		Impedance (Ohms)		50		


ANT-315-CW-HD	Overview	Electric Data			Mechanical Data	
	315 MHz Straight Monopole Whip  Applications Remote Control	Frequency (MHz)	VSWR (Max)		Mounting type	Connector Mount
		315	2.0		Termination	RP-SMA Plug
		Polarization		Linear	Dimensions	117.0 mm x 13.5 mm
		Wavelength		1/4	Op. Temp	-30 °C to +70 °C
		Electrical type		Monopole	Ground Plane	102 mm x 102 mm
		Radiation pattern		Omnidirectional		
		Impedance (Ohms)		50		

ANT-315-CW-RH-*	Overview	Electric Data			Mechanical Data	
	315 MHz Straight Monopole Whip  Applications Remote Control	Frequency (MHz)	VSWR (Max)		Mounting type	Connector Mount
		315	1.9		Termination	RP-SMA Plug SMA Plug
		Polarization		Linear	Dimensions	51.0 mm x 8.5 mm
		Wavelength		1/4	Op. Temp	-40 °C to +90 °C
		Electrical type		Monopole	Ground Plane	102 mm x 102 mm
		Radiation pattern		Omnidirectional		
		Impedance (Ohms)		50		


ANT-315-CW-RCS	Overview	Electric Data		Mechanical Data	
	315 MHz Right Angle Monopole Whip  Applications Remote Control	Frequency (MHz)	VSWR (Max)	Mounting type	Connector Mount
		315	2.0	Termination	RP-SMA Plug
		Polarization	Linear	Dimensions	53.5 mm x 16.6 mm
		Wavelength	1/4	Op. Temp	-20 °C to +85 °C
		Electrical type	Monopole	Ground Plane	102 mm x 102 mm
		Radiation pattern	Omnidirectional		
		Impedance (Ohms)	50		


ANT-315-CW-HW-*	Overview	Electric Data			Mechanical Data	
	315 MHz Straight Monopole Whip  Applications Remote Control	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector Mount
		315	2.0	0.0	Termination	RP-SMA Plug SMA Plug
		Polarization		Linear	Dimensions	120.0 mm x 10.7 mm
		Wavelength		1/4	Op. Temp	-20 °C to +80 °C
		Electrical Type		Monopole	Ground Plane	102 mm x 102 mm
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


ANT-315-CW-HWR-*	Overview	Electric Data			Mechanical Data	
	315 MHz Tilt/Swivel Monopole Whip  Applications Remote Control	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector Mount
		315	2.0	0.0	Termination	RP-SMA Plug SMA Plug
		Polarization		Linear	Dimensions	142.0 mm x 10.0 mm
		Wavelength		1/4	Op. Temp	-30 °C to +80 °C
		Electrical Type		Monopole	Ground Plane	102 mm x 102 mm
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


ANT-418-CW-HWR-*	Overview	Electric Data			Mechanical Data	
	418 MHz Tilt/Swivel Monopole Whip  Applications Medical, PMR, Personal Mobile Radio, LTE Band 87, LTE Band 88	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector Mount
		418	2.0	0.7	Termination	RP-SMA Plug SMA Plug
		Polarization		Linear	Dimensions	142.0 mm x 10.0 mm
		Wavelength		1/4	Op. Temp	-30 °C to +80 °C
		Electrical Type		Monopole	Ground Plane	102 mm x 102 mm
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		

## OTHERS - INTERNAL - NFC


L000641-01	Overview	Electric Data		Mechanical Data	
	13.56 MHz NFC, RFID, Coil Antenna	Frequency (MHz)		Mounting type	Surface mount
		13.56		Termination	Solder pad
		Polarization	Linear	Dimensions	7.8x7x5 mm
		Electrical type	Monopole	Op. Temp	-40 °C to +85 °C
		Self Inductance (La)	4.7 uH		
		Read Distance	35 mm		


L000642-01	Overview	Electric Data		Mechanical Data	
	13.56 MHz NFC, RFID, FPC Antenna	Frequency (MHz)		Mounting type	Adhesive
		13.56		Termination	Solder pad
		Polarization	Linear	Dimensions	31x26x0.28 mm
		Electrical type	Monopole	Op. Temp	-40 °C to +85 °C
		Self Inductance (La)	1.0 uH		
		Read Distance	57 mm		

L000643-01	Overview	Electric Data		Mechanical Data	
	13.56 MHz NFC, RFID, FPC Antenna	Frequency (MHz)		Mounting type	Adhesive
		13.56		Termination	Solder pad
		Polarization	Linear	Dimensions	41x43x0.33 mm
		Electrical type	Monopole	Op. Temp	-40 °C to +85 °C
		Self Inductance (La)	0.9 uH		
		Read Distance	78 mm		


L000644-01	Overview	Electric Data		Mechanical Data	
	13.56 MHz NFC, RFID, FPC Antenna	Frequency (MHz)		Mounting type	Adhesive
		13.56		Termination	Connector
		Polarization	Linear	Dimensions	70x20x0.15 mm
		Electrical type	Monopole	Op. Temp	-40 °C to +85 °C
		Self Inductance (La)	2.0 uH		
		Read Distance	88 mm		

## OTHERS - INTERNAL - 403 MHZ

ANT-403-SP		Overview	Electric Data		Mechanical Data	
	403 MHz Monopole Chip	Frequency (MHz)	VSWR (Max)	Mounting type	Surface mount	
		403	1.9	Termination	Solder pad	
		Polarization	Linear	Dimensions	27.9 mm x 13.7 mm x 1.5 mm	
		Wavelength	1/4	Op. Temp	-40 °C to +130 °C	
		Electrical type	Monopole	Ground Plane	38 mm x 84 mm	
		Radiation pattern	Omnidirectional			
		Impedance (Ohms)	50			


ANT-403-USP-T	Overview	Electric Data			Mechanical Data	
 <p>Linx ANT-403-USP</p>	403 MHz Monopole Chip	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Surface Mount
		403	2.0	-8.7	Termination	Solder Pad
		Polarization	Linear		Dimensions	12.7 mm x 9.1 mm x 2.6 mm
		Wavelength	1/4		Op. Temp	-40 °C to +130 °C
		Electrical Type	Monopole		Ground Plane	39 mm x 80 mm
		Radiation Pattern	Omnidirectional			
		Impedance (Ohms)	50			


## OTHERS - EXTERNAL - 410 MHZ

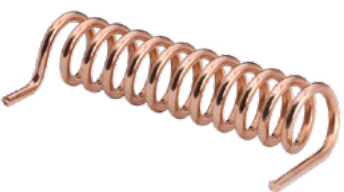
ANT-418-WRT-*	Overview	Electric Data			Mechanical Data	
	410 MHz to 430 MHz Straight Dipole Dome  Applications Medical, PMR, Personal Mobile Radio, LTE Band 87, LTE Band 88	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Panel Mount
		410	2.5	-0.5	Termination	U.FL-Type Plug RP-SMA Plug SMA Plug
		Polarization	Linear		Dimensions	27.0 mm x Ø19.0 mm
		Wavelength	1/2		Op. Temp	-40 °C to +90 °C
		Electrical Type	Dipole		Cable Length	150 mm, 216.0 mm, 250 mm
		Radiation Pattern	Omnidirectional		Cable Type*	1.32 mm, RG-174
		Impedance (Ohms)	50		Ground Plane	102 mm x 102 mm

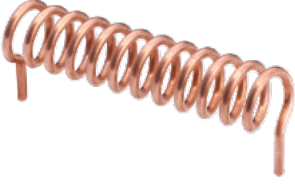


## OTHERS - INTERNAL - 418 MHZ


ANT-418-USP-T	Overview	Electric Data			Mechanical Data	
	418 MHz Monopole Chip  Applications Medical, PMR, Personal Mobile Radio, LTE Band 87, LTE Band 88	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Surface Mount
		418	2.0	-8.9	Termination	Solder Pad
		Polarization		Linear	Dimensions	12.7 mm x 9.1 mm x 2.6 mm
		Wavelength		1/4	Op. Temp	-40 °C to +130 °C
		Electrical Type		Monopole	Ground Plane	39 mm x 80 mm
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


ANT-418-SP	Overview	Electric Data			Mechanical Data	
	418 MHz Straight Monopole Helical  Applications Medical, PMR, Personal Mobile Radio, LTE Band 87, LTE Band 88	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Surface Mount
		418	1.9	-8.0	Termination	Solder Pad
		Polarization		Linear	Dimensions	27.9 mm x 13.7 mm x 1.5 mm
		Wavelength		1/4	Op. Temp	-40 °C to +85 °C
		Electrical Type		Monopole	Ground Plane	38 mm x 84 mm
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


ANT-418-HESM	Overview	Electric Data			Mechanical Data	
	418 MHz Straight Monopole Helical  Applications Medical, PMR, Personal Mobile Radio, LTE Band 87, LTE Band 88	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Surface Mount
		418	2.0	1.7	Termination	Solder Pad
		Polarization		Linear	Dimensions	38.1 mm x 8.9 mm
		Wavelength		1/4	Op. Temp	-40 °C to +85 °C
		Electrical Type		Monopole	Ground Plane	76.2 mm x 190.5 mm
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


ANT-418-HETH	Overview	Electric Data			Mechanical Data	
	418 MHz Straight Monopole Helical  Applications Medical, PMR, Personal Mobile Radio, LTE Band 87, LTE Band 88	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Through Hole
		418	2.0	1.7	Termination	Solder Pin
		Polarization		Linear	Dimensions	38.1 mm x 8.9 mm
		Wavelength		1/4	Op. Temp	-40 °C to +85 °C
		Electrical Type		Monopole	Ground Plane	76.2 mm x 190.5 mm
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


## OTHERS - EXTERNAL - 418 MHZ


ANT-418-CW-RAH	Overview	Electric Data			Mechanical Data	
	418 MHz Right Angle Monopole Whip  Applications Medical, LTE Band 87, LTE Band 88	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector Mount
		418	1.9	-6.1	Termination	RP-SMA Plug
		Polarization		Linear	Dimensions	47.0 mm x 16.1 mm
		Wavelength		1/4	Op. Temp	-40 °C to +90 °C
		Electrical Type		Monopole	Ground Plane	102 mm x 102 mm
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


ANT-418-CW-RH-*	Overview	Electric Data			Mechanical Data	
	418 MHz Straight Monopole Whip  Applications Medical, LTE Band 87, LTE Band 88	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector Mount
		418	1.9	-6.7	Termination	RP-SMA Plug SMA Plug
		Polarization		Linear	Dimensions	51.0 mm x 8.5 mm
		Wavelength		1/4	Op. Temp	-40 °C to +90 °C
		Electrical Type		Monopole	Ground Plane	102 mm x 102 mm
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


ANT-418-CW-RCS	Overview	Electric Data		Mechanical Data	
	418 MHz Right Angle Monopole Whip  Applications Medical, LTE Band 87, LTE Band 88	Frequency (MHz)	VSWR (Max)	Mounting type	Connector Mount
		418	2.0	Termination	RP-SMA Plug
		Polarization	Linear	Dimensions	53.5 mm x 16.6 mm
		Wavelength	1/4	Op. Temp	-20 °C to +85 °C
		Electrical type	Monopole	Ground Plane	102 mm x 102 mm
		Radiation pattern	Omnidirectional		
		Impedance (Ohms)	50		


ANT-418-CW-HD	Overview	Electric Data			Mechanical Data	
	418 MHz Straight Monopole Whip  Applications Medical, Mobile Radio, LTE Band 87, LTE Band 88	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector Mount
		418	2.0	-1.8	Termination	RP-SMA Plug
		Polarization		Linear	Dimensions	90.0 mm x 13.5 mm
		Wavelength		1/4	Op. Temp	-30 °C to +70 °C
		Electrical Type		Monopole	Ground Plane	102 mm x 102 mm
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


ANT-418-PW-LP	Overview	Electric Data			Mechanical Data	
	418 MHz Straight Monopole Whip  Applications Medical, LTE Band 87, LTE Band 88	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	PCB Screw
		418	1.9	-1.0	Termination	Screw Lug
		Polarization		Linear	Dimensions	50.5 mm x 10.4 mm
		Wavelength		1/4	Op. Temp	-20 °C to +85 °C
		Electrical Type		Monopole	Ground Plane	38.1 mm x 83.8 mm
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


ANT-418-WRT-*	Overview	Electric Data			Mechanical Data	
	418 MHz Straight Dipole Dome  Applications Medical, LTE Band 87, LTE Band 88	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Panel Mount
		418	1.9	-1.3	Termination	U.FL-Type Plug RP-SMA Plug SMA Plug
		Polarization		Linear	Dimensions	26.8 mm x 19.0 mm
		Wavelength		1/2	Op. Temp	-40 °C to +90 °C
		Electrical Type		Dipole	Cable Length	216.0 mm
		Radiation Pattern		Omnidirectional	Cable Type*	RG-174
		Impedance (Ohms)		50	Ground Plane	102 mm x 102 mm

ANT-418-CW-HW-*	Overview	Electric Data			Mechanical Data	
	418 MHz Straight Monopole Whip  Applications Medical, LTE Band 87, LTE Band 88	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector Mount
		418	2.0	0.0	Termination	RP-SMA Plug SMA Plug
		Polarization		Linear	Dimensions	120.0 mm x 10.7 mm
		Wavelength		1/4	Op. Temp	-20 °C to +85 °C
		Electrical Type		Monopole	Ground Plane	102 mm x 102 mm
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


ANT-418-PW-RA	Overview	Electric Data			Mechanical Data	
	418 MHz Tilt/Swivel Monopole Whip  Applications Medical, LTE Band 87, LTE Band 88	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	PCB Screw
		418	2.0	2.0	Termination	Screw Lug
		Polarization		Linear	Dimensions	131.5 mm x 7.0 mm
		Wavelength		1/4	Op. Temp	-20 °C to +60 °C
		Electrical Type		Monopole	Ground Plane	63.5 mm x 101.6 mm
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		

ANT-418-MHW-RPS-*	Overview	Electric Data			Mechanical Data	
	418 MHz Dipole Adhesive  Applications Medical, LTE Band 87, LTE Band 88	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Adhesive
		418	1.9	2.1	Termination	RP-SMA Plug SMA Plug
		Polarization		Linear	Dimensions	150.0 mm x 15.5 mm x 9.7 mm
		Wavelength		1/2	Op. Temp	-20 °C to + 70 °C
		Electrical Type		Dipole	Ground Plane	63.5 mm x 101.6 mm
		Radiation Pattern		Omnidirectional	Cable Length*	4.6 m 2.0 m
		Impedance (Ohms)		50	Cable Type	RG-174

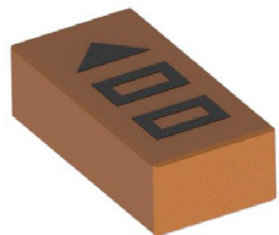
ANT-418-CW-QW-*	Overview	Electric Data			Mechanical Data	
	418 MHz Straight Monopole Whip  Applications Medical, LTE Band 87, LTE Band 88	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector Mount
		418	2.0	2.9	Termination	RP-SMA Plug SMA Plug
		Polarization		Linear	Dimensions	177.2 mm x 14.5 mm
		Wavelength		1/4	Op. Temp	-40 °C to +90 °C
		Electrical Type		Monopole	Ground Plane	102 mm x 102 mm
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


ANT-418-PW-QW-*	Overview	Electric Data			Mechanical Data	
	418 MHz Straight Monopole Whip  Applications Medical, LTE Band 87, LTE Band 88	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Panel Mount
		418	2.0	2.9	Termination	U.FL-Type Plug Unterminated Cable
		Polarization		Linear	Dimensions	178.0 mm x 14.5 mm
		Wavelength		1/4	Op. Temp	-40 °C to +90 °C
		Electrical Type		Monopole	Cable Length	216.0 mm
		Radiation Pattern		Omnidirectional	Cable Type*	1.32 mm RG-174
		Impedance (Ohms)		50	Ground Plane	102 mm x 102 mm


## OTHERS - INTERNAL - 458 MHZ

ANT-458-SP	Overview	Electric Data			Mechanical Data	
 <p>458 MHz Monopole Chip</p> <p>Applications Short Range Devices, Low Power Radio Solutions (LPRS)</p>		Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Surface Mount
		458	1.9	-5.4	Termination	Solder Pad
		Polarization		Linear	Dimensions	27.9 mm x 13.7 mm x 1.5 mm
		Wavelength		1/4	Op. Temp	-40 °C to +85 °C
		Electrical Type		Monopole	Ground Plane	38 mm x 84 mm
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		


## OTHERS - INTERNAL - UWB


2108851-1	Overview	Electric Data				Mechanical Data	
 <p>Ultra-Wide Band 5.9-8.3GHz Monopole Ceramic Chip</p> <p>Applications Distance sensing, Indoor location</p>		Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Surface Mount
		5900-8300	2.1	4.1	74	Termination	Solder Pad
		Polarization		Linear		Dimension	4x2x1.2mm
		Wavelength		1/4		Op. Temp	-40 °C to +85 °C
		Electrical Type		Monopole		Ground Plane	20x24mm
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			

2108971-1*	Overview	Electric Data				Mechanical Data	
 <p>Ultra-Wide Band 3.1-8.5GHz Dipole FPC</p> <p>Applications Distance sensing, Indoor location</p>		Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Adhesive
		3100-5000	1.8	1.7	76	Termination	U.FL-Type Plug
		5900-8500	1.9	4.3	80	Dimension	24.1x35.1x0.15
		Polarization		Linear		Op. Temp	-40 °C to +85 °C
		Wavelength		1/2		Cable Length*	50 mm 100 mm 150 mm 200 mm
		Electrical Type		Dipole		Cable Type*	1.37mm
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			

2108965-1*	Overview	Electric Data				Mechanical Data	
	Ultra-Wide Band 5.9-8.5GHz Dipole FPC  Applications Distance sensing, Indoor location	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Efficiency (%)	Mounting Type	Adhesive
		5900-8500	2.1	4.2	78	Termination	U.FL-Type Plug
						Dimension	15.6x18.6x0.15
		Polarization		Linear		Op. Temp	-40 °C to +85 °C
		Wavelength		1/2		Cable Length*	50 mm 100 mm 150 mm 200 mm
		Electrical Type		Dipole		Cable Type*	1.37mm
		Radiation Pattern		Omnidirectional			
		Impedance (Ohms)		50			

## OTHERS - EXTERNAL - 1400 MHZ

ANT-1.4-CW-HW-*	Overview	Electric Data			Mechanical Data	
	1400 MHz Straight Dipole Whip	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector Mount
		1400	2.0	0.7	Termination	RP-SMA Plug SMA Plug
		Polarization		Linear	Dimensions	120.0 mm x 10.7 mm
		Wavelength		1/2	Op. Temp	-20 °C to +85 °C
		Electrical Type		Dipole	Ground Plane	102 mm x 102 mm
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		

ANT-1.4-CW-HWR-*	Overview	Electric Data			Mechanical Data	
	1400 MHz Tilt/ Swivel Dipole Whip	Frequency (MHz)	VSWR (Max)	Peak Gain (dBi)	Mounting Type	Connector Mount
		1400	2.0	2.4	Termination	RP-SMA Plug SMA Plug
		Polarization		Linear	Dimensions	142.0 mm x 10.0 mm
		Wavelength		1/2	Op. Temp	-30 °C to +80 °C
		Electrical Type		Dipole	Ground Plane	102 mm x 102 mm
		Radiation Pattern		Omnidirectional		
		Impedance (Ohms)		50		

# ASSOCIATED PRODUCTS

## Antenna Mounts

TE's range of antenna mounts includes options for fixed, mobile and temporary applications.

High quality materials and advanced testing has resulted in a range of mounting options that are designed offer maximum performance and reliability in challenging environments.

TE's antenna mounts can either mate directly with the antenna or allow the antenna to be mounted to fixed assets such as poles, masts and ceilings depending on the application.

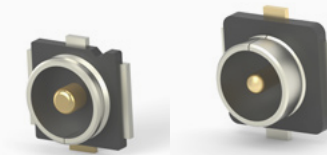


## RF Coax and Micro Coax Connectors

TE's RF coax and micro-coax connectors can offer improved electrical performance to connect a RF cable assembly or antenna to a main printed circuit board in very broad range of applications.

Our micro-coax connectors can be drop-in replacements for existing RF receptacles in the market so customers may not need to change their PCB layout. Micro-coax receptacles can be supplied with competitive price and fast delivery.

With these standard RF receptacles and connectors, existing antenna and RF cable assembly portfolio, TE can provide a complete RF solution.



## RF Coax and Micro Coax Assemblies

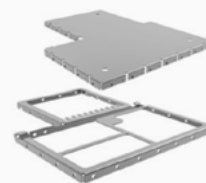
TE's RF coax and micro-coax cable assemblies pair with our micro-coax receptacles and antennas to offer an end-to-end RF solution that is competitively priced. These products can provide improved electrical performance to make a reliable RF or wireless connection to a main printed circuit board in a very broad range of applications, including consumer electronics, wearables, infotainment, medical systems, smart home appliances. TE's global footprint, engineering and manufacturing expertise can enable fast delivery of samples and mass production product.

The cable assemblies can address industry standards and can be mated with micro-coax receptacles from other suppliers.



## Board-Level Shielding (BLS)

As complexity and functionality increases, there is a growing need for thinner devices with multiple antennas, higher data rates and increased operating frequencies. EMI (Electromagnetic Interference) shields from TE are stamped one and two piece metal shields that help provide isolation of board level components, minimize crosstalk and reduce EMI susceptibility without impacting system speed.





# CELLULAR LTE & 5G NR FREQUENCY BAND GUIDE

Operating Band #	Uplink Operating Band (MHz)	Downlink Operating Band (MHz)	Overall Operating Band (MHz)	Total Bandwidth (MHz)	LTE-M	LTE NB-IoT	5G NB-IoT
1	1920 - 1980	2110 - 2170	1920 - 2170	250	x	x	x
2	1850 - 1910	1930 - 1990	1850 - 1990	140	x	x	x
3	1710 - 1785	1805 - 1880	1710 - 1880	170	x	x	x
4	1710 - 1755	2110 - 2155	1710 - 2155	445	x	x	
5	824 - 849	869 - 894	824 - 894	70	x	x	x
7	2500 - 2570	2620 - 2690	2500 - 2690	190	x	x	x
8	880 - 915	925 - 960	880 - 960	80	x	x	x
9	1749.9 - 1784.9	1844.9 - 1879.9	1749.9 - 1879.9	130			
10	1710 - 1770	2110 - 2170	1710 - 2170	460			
11	1427.9 - 1447.9	1475.9 - 1495.9	1427.9 - 1495.9	68	x	x	
12	699 - 716	729 - 746	699 - 746	47	x	x	x
13	777 - 787	746 - 756	746 - 787	41	x	x	
14	788 - 798	758 - 768	758 - 798	40	x	x	x
17	704 - 716	734 - 746	704 - 746	42		x	
18	815 - 830	860 - 875	815 - 875	60	x	x	x
19	830 - 845	875 - 890	830 - 890	60	x	x	
20	832 - 862	791 - 821	791 - 862	71	x	x	x
21	1447.9 - 1462.9	1495.9 - 1510.9	1447.9 - 1510.9	63	x	x	
22	3410 - 3490	3510 - 3590	3410 - 3590	180			
24	1626.5 - 1660.5	1525 - 1559	1525 - 1660.5	135.5			
25	1850 - 1915	1930 - 1995	1850 - 1995	145	x	x	x
26	814 - 849	859 - 894	814 - 894	80	x	x	
27	807 - 824	852 - 869	807 - 869	62	x		
28	703 - 748	758 - 803	703 - 803	100	x	x	x
29	N/A	717 - 728	717 - 728	11			
30	2305 - 2315	2350 - 2360	2305 - 2360	55			

## LTE-only Bands

## Both LTE and 5G NR Bands

LTE: 3GPP TS 36.101 V16.5.0 (2020-03), 5G NR: TS 38.104 V16.3.0 (2020-03)

# CELLULAR LTE & 5G NR FREQUENCY BAND GUIDE

Operating Band #	Uplink Operating Band (MHz)	Downlink Operating Band (MHz)	Overall Operating Band (MHz)	Total Bandwidth (MHz)	LTE-M	LTE NB-IoT	5G NB-IoT
30	2305 - 2315	2350 - 2360	2305 - 2360	55			
31	452.5 - 457.5	462.5 - 467.5	452.5 - 467.5	15	x	x	
32	N/A	1452 - 1496	1452 - 1496	44			
33	1900 - 1920	1900 - 1920	1900 - 1920	20			
34	2010 - 2025	2010 - 2025	2010 - 2025	15			
35	1850 - 1910	1850 - 1910	1850 - 1910	60			
36	1930 - 1990	1930 - 1990	1930 - 1990	60			
37	1910 - 1930	1910 - 1930	1910 - 1930	20			
38	2570 - 2620	2570 - 2620	2570 - 2620	50			
39	1880 - 1920	1880 - 1920	1880 - 1920	40			
40	2300 - 2400	2300 - 2400	2300 - 2400	100			
41	2496 - 2690	2496 - 2690	2496 - 2690	194		x	x
42	3400 - 3600	3400 - 3600	3400 - 3600	200		x	
43	3600 - 3800	3600 - 3800	3600 - 3800	200		x	
44	703 - 803	703 - 803	703 - 803	100			
45	1447 - 1467	1447 - 1467	1447 - 1467	20			
46	5150 - 5925	5150 - 5925	5150 - 5925	775			
47	5855 - 5925	5855 - 5925	5855 - 5925	70			
48	3550 - 3700	3550 - 3700	3550 - 3700	150			
49	3550 - 3700	3550 - 3700	3550 - 3700	150			
50	1432 - 1517	1432 - 1517	1432 - 1517	85			
51	1427 - 1432	1427 - 1432	1427 - 1432	5			
52	3300 - 3400	3300 - 3400	3300 - 3400	100			
53	2483.5 - 2495	2483.5 - 2495	2483.5 - 2495	11.5			
65	1920 - 2010	2110 - 2200	1920 - 2200	280		x	x
66	1710 - 1780	2110 - 2200	1710 - 2200	490	x	x	x
67	N/A	738 - 758	738 - 758	20			
68	698 - 728	753 - 783	698 - 783	85			
69	N/A	2570 - 2620	2570 - 2620	50			
70	1695 - 1710	1995 - 2020	1695 - 2020	325		x	x

## LTE-only Bands

## Both LTE and 5G NR Bands

LTE: 3GPP TS 36.101 V16.5.0 (2020-03), 5G NR: TS 38.104 V16.3.0 (2020-03)

# CELLULAR LTE & 5G NR FREQUENCY BAND GUIDE

Operating Band #	Uplink Operating Band (MHz)	Downlink Operating Band (MHz)	Overall Operating Band (MHz)	Total Bandwidth (MHz)	LTE-M	LTE NB-IoT	5G NB-IoT
71	663 – 698	617 – 652	617 – 698	81	x	x	x
72	451 – 456	461 – 466	451 – 466	15	x	x	
73	450 – 455	460 – 465	450 – 465	15	x	x	
74	1427 – 1470	1475 – 1518	1427 – 1518	91	x	x	x
75	N/A	1432 – 1517	1432 – 1517	85			
76	N/A	1427 – 1432	1427 – 1432	5			
n77	3300 – 4200	3300 – 4200	3300 – 4200	900			
n78	3300 – 3800	3300 – 3800	3300 – 3800	500			
n79	4400 – 5000	4400 – 5000	4400 – 5000	600			
n80	1710 – 1785	N/A	1710 – 1785	75			
n81	880 – 915	N/A	880 – 915	35			
n82	832 – 862	N/A	832 – 862	30			
n83	703 – 748	N/A	703 – 748	45			
n84	1920 – 1980	N/A	1920 – 1980	60			
85	698 – 716	728 – 746	698 – 746	48	x	x	
n86	1710 – 1780	N/A	1710 – 1780	70			
87	410 – 415	420 – 425	410 – 425	15	x	x	
88	412 – 417	422 – 427	412 – 427	15	x	x	
n89	824 – 849	N/A	824 – 849	25			
n90	2496 – 2690	2496 – 2690	2496 – 2690	194			x
n91	832 – 862	1427 – 1432	832 – 1432	600			
n92	832 – 862	1432 – 1517	832 – 1517	685			
n93	880 – 915	1427 – 1432	880 – 1432	552			
n94	880 – 915	1432 – 1517	880 – 1517	637			
n95	2010 – 2025	N/A	2010 – 2025	15			
n96	5925 – 7125	5925 – 7125					

LTE-only Bands

5G NR-only Bands

Both LTE and 5G NR Bands

LTE: 3GPP TS 36.101 V16.5.0 (2020-03), 5G NR: TS 38.104 V16.3.0 (2020-03)

# GNSS FREQUENCY BAND GUIDE

System/Band	Center Frequency (MHz)	Bandwidth (MHz)	Low Frequency (MHz)	High Frequency (MHz)	Band Group
Beidou B1I	1561	4.092	1559	1563	L1
Beidou B1C	1575	32.736	1559	1592	L1
GALILEO-E1	1575.42	24.552	1563.14	1587.70	L1
GPS L1C/A	1575.42	24	1563.42	1587.42	L1
GPS L1C	1575.42	30.96	1559.94	1590.90	L1
QZSS L1	1575.42	24	1563.42	1587.42	L1
G1 (CDMA) L1	1601	not provided			L1
G1 (FDMA) L1	1602	8.00	1598	1606	L1
G1 (CDMA) L3	1202	not provided			L2
Beidou B2B	1207	20.46	1197	1218	L2
GALILEO-E5b	1207.14	20.46	1196.91	1217.37	L2
GPS L2	1228	24	1215	1240	L2
QZSS L2C	1227.6	24	1215.60	1239.60	L2
G1 (FDMA) L2	1246	5.00	1243	1248	L2
G1 (CDMA) L2	1248	not provided		1250	L2
Beidou B2A	1176	20.46	1166.22	1186.68	L5
GALILEO-E5a	1176.45	20.46	1166.22	1186.68	L5
GPS L5	1176.45	24	1164.45	1188.45	L5
NavIC L5	1176.45	24	1164.45	1188.45	L5
QZSS L5	1176.45	24.9	1164	1189	L5
Beidou B3I	1269	20.46	1258.29	1278.75	L6
GALILEO-E6	1279	40.92	1258.29	1299.21	L6
QZSS E6/LEX	1278.75	42	1257	1300	L6
NavIC S	2492.028	16.5	2483	2501	S

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## ASSOCIATED PRODUCTS AND RESOURCES

### Antennas

Landing Page: [www.te.com/antennas](http://www.te.com/antennas)

### Board Level Shields (BLS)

Landing Page: [www.te.com/bls](http://www.te.com/bls)

### Grounding (Spring Fingers)

Landing Page: [www.te.com/products/spring-fingers](http://www.te.com/products/spring-fingers)

### Discrete Wire Connectors

Landing pages: [www.te.com/products/ct](http://www.te.com/products/ct)  
[www.te.com/products/minict](http://www.te.com/products/minict)  
<http://www.te.com/products/hpi>  
<http://www.te.com/lowpowerdrawer>

### SIM Card Connectors

Landing page: [www.te.com/products/sim](http://www.te.com/products/sim)

### Fine Pitch Board-to-Board Connectors

Landing page: [www.te.com/products/fine-pitch](http://www.te.com/products/fine-pitch)

### RF & Coax Connectors

Landing page: [www.te.com/rf](http://www.te.com/rf)

### Battery Connectors

Landing Pages: [www.te.com/products/mobile-battery-connector](http://www.te.com/products/mobile-battery-connector)  
[www.te.com/products/batterypack](http://www.te.com/products/batterypack)

### Flexible Printed Circuit (FPC) Connectors

Landing page: [www.te.com/products/fpc](http://www.te.com/products/fpc)

### High Frequency Relays

Landing page: [www.te.com/hf-relays](http://www.te.com/hf-relays)

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[www.te.com/products/usb-type-c](http://www.te.com/products/usb-type-c)

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