



MOBILE ANTENNAS

BMLPV5000 5G NR Low-Profile Antenna



The BMLPV5000 low-profile vertical antenna supports the high speed requirements of complex RF communication systems used for Intelligent Transportation Systems (ITS), and IIoT applications. This antenna supports the world's leading 5G NR devices supporting frequencies from 600 MHz to 6 GHz frequencies. It features an attractive, compact housing that makes the antenna ideal for indoor or outdoor applications requiring minimum visibility to the antenna. PCTEL's high efficiency permanent mount is recommended for most efficient performance.



BMLPV5000

Features

- Attractive, low-profile design
- Multiple band coverage with no tuning required
- Can be used for mobile and fixed base applications
- Environmentally tested to MIL-STD-810G
- N female termination option (-VP) available



GMLFML195C
high efficiency magnetic
mount (sold separately)



MLFML195C
MLF high efficiency mount
(sold separately)

STANDARD CONFIGURATION

Model	Cable	Connector	Mount
BMLPV5000	Pro-Flex™ Plus 195 or PFP240 high frequency cables are recommended with this antenna. Cable assemblies or mount/cable assemblies are sold separately.	Various connector options are offered with PCTEL high frequency mounts (sold separately)	For optimal performance, use higher frequency rated mounts (e.g. MLFML195C or GMLFML195C). Mounts sold separately.
BMLPV5000-VP		N Female	Built-in N connector accommodates surfaces up to 1/2-in thick

ELECTRICAL SPECIFICATIONS (ALL FREQUENCIES)

Frequency Range (MHz)	Max. Gain*	Maximum Power	Polarization	Nominal Impedance	VSWR*	Average Efficiency
618-960	2.6 dBi	150 watts	Vertical, linear	50 ohms	< 2.0	60%
1427-1518	-0.2 dBi				< 2.5	30%
1710-2170	1.0 dBi				< 2.5	46%
2300-2700	1.6 dBi				< 3.0	61%
3300-4200	2.3 dBi				< 1.5	31%
4400-5000	1.2 dBi				< 3.0	26%
4900-5985	3.1 dBi				< 2.5	40%

MECHANICAL & ENVIRONMENTAL SPECIFICATIONS

Model	Dimensions	Weight (Mass)	Temperature Range	Ingress Protection	Housing Color
BMLPV5000	3.38 H x 1.43 in OD in (8.59 x 3.63 cm)	0.29 lbs (0.13 kg)	-40°F to +158°F (-40°C to +70°C)	IP67**	Black
BMLPV5000-VP	4.40 H x 1.43 in OD in (11.18 x 3.63 cm)	0.31 lbs (0.14 kg)			

* Measured on a 1x1 ft ground plane, when installed on GMLFML195 high frequency magnetic mount with 12-ft Pro-Flex Plus 195 cable. Gain is ground plane dependent.

** When installed per PCTEL installation instructions on a roof top surface.

Low-Profile Antennas - MLPV Series, High Efficiency



PCTEL's BMLPV-MBLTE-HP antenna provides superior system efficiency and pattern coverage for mobile and fixed applications operating in 4G LTE frequencies. Its design provides industry leading multi-band performance and reliability, with minimum loss and no tuning required. Featuring an attractive, compact housing, this antenna is designed and environmentally tested to withstand severe vibration conditions, making it suitable for rail, mining, and construction applications.

Features

- Precision machined element delivers superior efficiency over PCB elements
- PTFE and Air dielectric utilized to minimize insertion losses and maximize radiated power
- No solder joint design for extreme vibration installations
- Integrated mount simplifies installation and service
- Non-truncated element design provides stable performance to the lowest LTE frequencies
- Built-in N Female termination accommodates thick surface mounting installations



BMLPV-MBLTE-HP

STANDARD CONFIGURATION

Model	Cable	Connector	Mount
BMLPV-MBLTE-HP	Mating N Male cable assembly sold separately	N Female bulkhead	Built-in 5/8" hole; 1-1/8" thread N Female bulkhead suitable for installation surfaces up to 1/2" thick

ELECTRICAL SPECIFICATIONS (ALL FREQUENCIES)

Model	Frequency Range	Efficiency	Gain	Maximum Power	Polarization	Nominal Impedance	VSWR
BMLPV-MBLTE-HP	600-960 MHz /	>80%	3 dBi	150 watts	Vertical, linear	50 ohms	3.0:1
	1710-2170 MHz /	>80%	3 dBi	150 watts	Vertical, linear	50 ohms	< 2.5:1
	2300-2700 MHz	>80%	3 dBi	150 watts	Vertical, linear	50 ohms	< 2.5:1

MECHANICAL & ENVIRONMENTAL SPECIFICATIONS

Model	Dimensions	Weight (Mass)	Temperature Range	Ingress Protection
BMLPV-MBLTE-HP	1.44 x 3.54 in (3.65 x 9.00 cm)	0.40 lbs (0.18 kg)	-40°F to +158°F (-40°C to +70°C)	IP66

Low-Profile Antennas - MLPV Series

PCTEL's MLPV antennas provide superior pattern coverage for mobile and fixed applications from 380 MHz to 6 GHz. Their design provides industry leading wideband performance and reliability, with minimum loss and no tuning required. Multi-band versions are also available. All models feature an attractive, compact housing environmentally tested for both indoor or out. Antennas can be purchased separately, or as a kit assembly with the MVPHP mount for permanent installations (VP option).

Features

- Attractive, low-profile design for maximum overhead clearance
- Industry leading wideband performance provides outstanding coverage across multiple frequency bands with no tuning required
- Wideband, multi-band, and no ground plane models available
- "Easy grip" HD models available
- N Female termination option available on select models (VP Option)



WMLPVDB2458VP

STANDARD CONFIGURATION

MLPV antennas mate with 1-1/8"-18 thread mounts, including mounts (sold separately). For models operating at frequencies over 600 MHz, high frequency mounts are recommended:

MLFML195C: High performance permanent mount 3/4" hole, 1-1/8"-18 thread interface. Includes 17 ft of Pro-Flex™ Plus 195 cable. Loose TNC male connector included. Optimized for frequencies over 600 MHz. Configurable.

GMLFML195C: High performance magnetic mount 3-1/4" diameter base, 1-1/8"-18 thread interface. Includes 12 ft of Pro-Flex™ Plus 195 cable terminated with TNC male connector (attached). Optimized for frequencies over 600 MHz. Configurable.

MTPM800: 5/8" hole, 1-1/8"-18 thread mount for surfaces up to 1/2-inch thick. Terminates in an N Female connector. No cable.** Supports 24 MHz - 6 GHz.

MVPHP: 5/8" hole, vandal proof mount. No cable.** Supports 24 MHz - 6 GHz. Add suffix "VP" to the MLPV part number to have this mount permanently installed at the factory. VP option will not be removable from factory installed "VP" antennas. (example: BMLPVDB800/1900SVP.)

MMF: 3/4" hole, 1-1/8"-18 mount. Terminates in an SMA, Male connector. No cable.** Supports 24 MHz - 6 GHz.

MMF-VP: 3/4" hole vandal-proof mount for frequencies from 0 GHz to 6 GHz. 1-1/8"-18 thread interface. Terminates in SMA, Male connector. No cable**. Accommodates surfaces up to .09-inch thick.

ELECTRICAL SPECIFICATIONS

Model	Frequency Range	Gain*	VSWR	Maximum Power	Nominal Impedance	Polarization
MLPV380	380-410 MHz	Unity	< 2.0:1	100 watts	50 ohms	Vertical
MLPV406	406-440 MHz	Unity	< 2.0:1	100 watts	50 ohms	Vertical
MLPV430	430-480 MHz	Unity	< 2.0:1	100 watts	50 ohms	Vertical
MLPV450	450-512 MHz	Unity	< 2.0:1	100 watts	50 ohms	Vertical
BMLPVMB/LTE	600-690 MHz/698-960 MHz/1710-2700 MHz	3 dBi	3.0:1/< 2.5:1/< 2.5:1	100 watts	50 ohms	Vertical
WMLPVMB/LTE	600-690 MHz/698-960 MHz/1710-2700 MHz	3 dBi	3.0:1/< 2.5:1/< 2.5:1	100 watts	50 ohms	Vertical
LPBMLPVMB/LTE	698-3800 MHz	3 dBi	< 2.0:1	100 watts	50 ohms	Vertical
MLPV700	740-870 MHz	3 dBi	< 2.0:1	100 watts	50 ohms	Vertical
MLPV800	806-960 MHz	3 dBi	< 2.0:1	100 watts	50 ohms	Vertical
BMLPV800HD	806-960 MHz	3 dBi	< 2.0:1	100 watts	50 ohms	Vertical
MLPVDB800/1900	806-960 MHz & 1710-1990 MHz	3 dBi/4 dBi	< 2.0:1	100 watts	50 ohms	Vertical
BMLPVDB800/1900HD	806-960 MHz & 1710-1990 MHz	3 dBi/4 dBi	< 2.0:1	100 watts	50 ohms	Vertical
WMLPVDB800/1900S	806-960 MHz & 1710-2500 MHz	3 dBi/4 dBi	< 2.0:1	100 watts	50 ohms	Vertical
MLPVDB800/1900S	806-960 MHz & 1710-2500 MHz	3 dBi/4 dBi	< 2.0:1	100 watts	50 ohms	Vertical
MLPV1700	1.7-2.7 GHz	4 dBi	< 2.0:1	100 watts	50 ohms	Vertical
MLPVDB2458	2.4-2.5 GHz & 4.9-5.9 GHz	3 dBi/4 dBi	< 2.0:1	100 watts	50 ohms	Vertical
BMLPV4900	4.9-5.9 GHz	4 dBi	< 1.5:1	150 watts	50 ohms	Vertical

* Measured on a 1 x 1 foot diameter ground plane. Gain is ground plane dependent. **Order cable assembly separately.

Low-Profile Antennas - MLPV Series



MECHANICAL SPECIFICATIONS

Model	Dimensions	Weight	Housing Material	Color Options**
MLPV380	3.38 H x 1.50 OD in (8.59 x 3.81 cm)	0.31 lbs (.14 kg)	XENOY 5720U-7014, UV-Stable	Black-Chrome, Black
MLPV406	3.38 H x 1.50 OD in (8.59 x 3.81 cm)	0.31 lbs (.14 kg)	XENOY 5720U-7014, UV-Stable	Black-Chrome, Black
MLPV430	3.38 H x 1.50 OD in (8.59 x 3.81 cm)	0.31 lbs (.14 kg)	XENOY 5720U-7014, UV-Stable	Black-Chrome, Black
MLPV450	3.38 H x 1.50 OD in (8.59 x 3.81 cm)	0.31 lbs (.14 kg)	XENOY 5720U-7014, UV-Stable	Black-Chrome, Black
BMLPVMB/LTE	2.40 H X 1.50 OD in (6.10 x 3.81 cm)	0.29 lbs (0.13 kg)	XENOY 5720U-7014, UV-Stable	Black
WMLPVMB/LTE	2.40 H X 1.50 OD in (6.10 x 3.81 cm)	0.29 lbs (0.13 kg)	XENOY 5720U-7014, UV-Stable	White-Chrome
LPBMLPVMB/LTE	2.40 H X 1.50 OD in (6.10 x 3.81 cm)	0.29 lbs (0.13 kg)	XENOY 5720U-7014, UV-Stable	Black-Chrome
MLPV700	2.40 H X 1.50 OD in (6.10 x 3.81 cm)	0.29 lbs (0.13 kg)	XENOY 5720U-7014, UV-Stable	Black-Chrome, Black, White-Chrome
MLPV800	2.40 H X 1.50 OD in (6.10 x 3.81 cm)	0.29 lbs (0.13 kg)	XENOY 5720U-7014, UV-Stable	Black-Chrome; Black; White-Chrome
BMLPV800HD	At base: 2.40 H x 1.50 W x 1.70 D in (6.10 x 3.81 x 4.32 cm)	0.44 lbs (0.19 kg)	XENOY 5720U-7014, UV-Stable	Black
MLPVDB800/1900	2.40 H X 1.50 OD in (6.10 x 3.81 cm)	0.29 lbs (0.13 kg)	XENOY 5720U-7014, UV-Stable	Black-Chrome, Black, White-Chrome
BMLPVDB800/1900HD	At base: 2.40 H x 1.50 W x 1.70 D in (6.10 x 3.81 x 4.32 cm)	0.44 lbs (0.19 kg)	XENOY 5720U-7014, UV-Stable	Black
WMLPVDB800/1900S	1.79 H x 1.50 OD in (4.55 x 3.81 cm)	0.29 lbs (0.13 kg)	XENOY 5720U-7014, UV-Stable	White-Chrome
MLPVDB800/1900S	1.79 H x 1.50 OD in (4.55 x 3.81 cm)	0.29 lbs (0.13 kg)	XENOY 5720U-7014, UV-Stable	Black-Chrome
MLPV1700	1.79 H x 1.50 OD in (4.55 x 3.81 cm)	0.34 lbs (0.15 kg)	XENOY 5720U-7014, UV-Stable	Black-Chrome, Black, White-Chrome
MLPVDB2458	1.79 H x 1.50 OD in (4.55 x 3.81 cm)	0.34 lbs (0.15 kg)	XENOY 5720U-7014, UV-Stable	Black-Chrome, Black, White-Chrome
BMLPV4900	1.79 H x 1.50 OD in (4.55 x 3.81 cm)	0.34 lbs (0.15 kg)	XENOY 5720U-7014, UV-Stable	Black

ENVIRONMENTAL SPECIFICATIONS (ALL MODELS)

Temperature Range	Ingress Protection
-40°C to +85°	IP67****

*** Black-Chrome is standard for all MLPV models, unless otherwise indicated.
 For all black option, add prefix "B" to the MLPV part number. Example: BMLPV800.
 For White-Chrome option, add prefix "W" to the MLPV part number. Example: WMLPV800.
 **** When installed and tested according to PCTEL installation instructions.

No Ground Plane MLPV Low-Profile Vertical Antennas

PCTEL's low-profile antennas provide superior pattern coverage for mobile and fixed applications. The no ground plane design provides industry leading performance and reliability, with minimum loss and no tuning required. This antenna series features an attractive, compact housing ideal for both indoor or outdoor applications. Antennas can be purchased separately, or as a kit assembly with the MVPHP mount for permanent installations (VP option).

Features

- Attractive, low-profile design for maximum overhead clearance
- Industry leading performance provides outstanding coverage across multiple frequency bands without a ground plane
- IP67 rated for ingress protection against severe environmental conditions
- Mates with all 1-1/8"-18 thread mounts, including 3/4" mounts
- N Female termination option available on select models (VP Option)



BMLPV900NGPVP



BMLPVMBLTENG

STANDARD CONFIGURATION

MLPV antennas mate with 1-1/8"-18 thread mounts, including 3/4" mounts (sold separately). For models operating at frequencies over 600 MHz, high frequency mounts are recommended:

MLFML195C: High performance permanent mount 3/4" hole, 1-1/8"-18 thread interface. Includes 17 ft of Pro-Flex™ Plus 195 cable. Loose TNC male connector included. Optimized for frequencies over 600 MHz. Configurable.

GMLFML195C: High performance magnetic mount 3-1/4" diameter base, 1-1/8"-18 thread interface. Includes 12 ft of Pro-Flex™ Plus 195 cable terminated with TNC male connector (attached). Optimized for frequencies over 600 MHz. Configurable.

MTPM800: 5/8" hole, 1-1/8"-18 thread mount for surfaces up to 1/2-inch thick. Terminates in an N Female connector. No cable.** Supports 24 MHz - 6 GHz.

MVPHP: 5/8" hole, vandal proof mount. No cable.** Supports 24 MHz - 6 GHz. Add suffix "VP" to the MLPV part number to have this mount permanently installed at the factory. VP option will not be removable from factory installed "VP" antennas. (example: BMLPV900VP)

MMF: 3/4" hole, 1-1/8"-18 mount. Terminates in an SMA, Male connector. No cable.** Supports 24 MHz - 6 GHz.

MMF-VP: 3/4" hole vandal-proof mount for frequencies from 0 GHz to 6 GHz. 1-1/8"-18 thread interface. Terminates in SMA, Male connector. No cable**. Accommodates surfaces up to .09-inch thick.

ELECTRICAL SPECIFICATIONS

Model	Frequency Range	Gain*	VSWR	Maximum Power	Nominal Impedance	Polarization
BMLPV900NGP	902-928 MHz	Unity	< 2.0:1	100 watts	50 ohms	Vertical, linear
BMLPV2400NGP	2400-2500 MHz	3 dBi	< 2.0:1	100 watts	50 ohms	Vertical, linear
BMLPVMBLTENG	698-960 MHz / 1710-2700 MHz	3 dBi	< 2.0:1	100 watts	50 ohms	Vertical, linear
WMLPVMBLTENG	698-960 MHz / 1710-2700 MHz	3 dBi	< 2.0:1	100 watts	50 ohms	Vertical, linear

MECHANICAL & ENVIRONMENTAL SPECIFICATIONS

Model	Dimensions	Weight	Housing Material	Temperature Range	Color
BMLPV900NGP	1.50 OD x 3.38 H in (3.81 x 8.59 cm)	0.31 lbs (.14 kg)	Chrome Coil - Bushing ZINC Top Cover - ZINC DIECAST	-40° C to +85° C	Black
BMLPV2400NGP	1.50 OD x 3.38 H in (3.81 x 8.59 cm)	0.31 lbs (.14 kg)		-40° C to +85° C	Black
BMLPVMBLTENG	1.44 OD x 3.54 H in (3.66 x 8.99 cm)	0.40 lbs (0.18 kg)		-40° C to +85° C	Black
WMLPVMBLTENG	1.44 OD x 3.54 H in (3.66 x 8.99 cm)	0.40 lbs (0.18 kg)		-40° C to +85° C	White over Chrome

*Measured on a 4 foot diameter ground plane. Gain is ground plane dependent.

Ultra-Wideband High Performance Low-Profile Antenna



This PCTEL antenna offers ultra-wideband coverage, easy to install design, and "top shelf" materials to provide maximum durability and performance for mobile communications.

Features

- No tune, multi-band coverage: 4G LTE (600 MHz to 6 GHz)
- Highly efficient, carrier grade design to support modern voice/data mobile networks
- Metal 3/4-inch stud mount with slotted jam nut provides single cable exit for easier installation and/or antenna replacement
- Attractive, low-profile design for maximum installation flexibility without antenna orientation restrictions
- IP67* compliant design with custom overmolded gasket provides maximum protection against water or dust ingress under severe environmental conditions (when properly installed on a rooftop surface)
- High performance, low loss cable and high quality connectors for maximum RF system efficiency



PCTUWB-W

STANDARD CONFIGURATION

Model	Cable	Connector	Mount
PCTUWB-W	17 feet Pro-Flex™ Plus low loss RG-58 cable	SMA Plug (Male) standard	Built-in 3/4-inch long (.75") zinc stud mount with dual jam nuts for 3/4-inch holes

ELECTRICAL SPECIFICATIONS

Model	Frequency Range	Average Gain**	VSWR	Maximum Power	Nominal Impedance	Polarization
PCTUWB-W	600-960 MHz 1710-2700 MHz 3300-3800 MHz 4.9-5.9 GHz	1.7-2.2 dBi 1.7-2.8 dBi 2.5-3 dBi 3-3.5 dBi	< 2.0 < 2.0 < 2.0 < 2.0	50 watts	50 ohms	Vertical, linear

MECHANICAL & ENVIRONMENTAL SPECIFICATIONS

Model	Dimensions	Housing Material	Ingress protection	Temperature Range
PCTUWB-W	5.2 OD x 2.8 H in (13.2 x 7.1 cm)	White UV-Stable Polycarbonate	IP67*	-40°C to +85°C

* When properly installed per PCTEL instructions.

** Measured on a 4-foot diameter ground plane. Gain value is measured at the end of the 17 foot coax.

Dual 5G LTE Multi-Band Antenna

The Trooper™ antenna platform supports the high speed requirements of complex RF communication systems used for Intelligent Transportation Systems (ITS), and IIoT applications. Its compact footprint makes this antenna ideal for installation on surfaces with limited surface space, including leading public safety vehicle rooftops and Industrial lot (IIoT) cabinet installations.

Features

- No tune, multi-band coverage: dual port 5G LTE elements
- Metal 3/4-inch stud mount with slotted jam nut provides single cable exit for easier installation and/or antenna replacement
- IP67 compliant design provides maximum protection against water or dust ingress under severe environmental conditions*
- UV-resistant black or white housing options complement most vehicular aesthetic requirements



PCTHPDLTE-LTB and PCTHPDLTE-LTW

STANDARD CONFIGURATION

Model	Cable	Connector	Mount	Housing Color
PCTHPDLTE-LTB	Two-17 feet Pro-Flex™ Plus 195 (LTE)	SMA Plug	1-inch hole, 3/4-inch long (.75") zinc stud mount with jam nut	Black
PCTHPDLTE-LTW	Two-17 feet Pro-Flex™ Plus 195 (LTE)	SMA Plug	1-inch hole, 3/4-inch long (.75") zinc stud mount with jam nut	White

ELECTRICAL SPECIFICATIONS - RF ANTENNAS

Elements	F1 (MHz)	F2 (MHz)	SWR**	Gain (dB)***			Efficiency***		Polarization	Nominal Impedance	Maximum Power
				Max	Typical	Range (±)	Avg	Range (±)			
LTE Primary (1&2)	617	698	2.2	4.0	2.2	1.8	54%	19%	Linear	50 ohms	50 watts
	698	802	1.6	5.0	4.0	0.9	68%	5%			
	824	960	1.4	5.5	4.3	1.2	61%	5%			
	1710	2200	1.4	6.5	5.5	0.9	78%	3%			
	2300	2690	1.5	8.8	6.8	1.9	78%	4%			
	3400	3800	1.8	6.8	6.1	0.7	73%	3%			
	5150	5950	1.4	10.1	8.6	1.5	81%	13%			

ELECTRICAL SPECIFICATIONS - RF ANTENNAS, continued

Minimum Isolation (dB)**

Elements	LTE Primary (1&2)	
LTE Primary (1&2)	617-960 MHz	9.0
	1.71-2.7 GHz	15.0
	3.3-3.59 GHz	32.0

MECHANICAL SPECIFICATIONS

Dimensions (W x H)	Weight	Radome Construction	Operating/Storage Temperature	Gasket Design & Construction
4.05 W x 3.46 H in (10.3 x 8.8 cm)	2.0 lbs	UV-Stable Rugged Thermoplastics ***	-40°C to +85°C	Contour matching, conformable, thermoplastic-elastomer gasket designed to seal between radome and baseplate. Gasket flexes and conforms to contoured surfaces. Baseplate has a 3M™ VHB mounting pad for anti-rotation.

* If installed according to PCTEL's installation instructions ** SWR and isolation measured with 17-ft cables and 2-ft ground plane *** Gain and efficiency measured with no cable and 2-ft ground plane. 3M is a registered trade mark of 3M Company.

Multi-Band LTE MIMO & 802.11ac Antennas with High Rejection GPS/GLONASS



The Trooper™ TRP-20INT antenna platform supports the high speed requirements of complex RF communication systems used for Intelligent Transportation Systems (ITS), and IIoT applications. Their purpose-designed footprint allows seamless installation on new leading 2020 public safety sports utility vehicles with narrow ridged rooftops. These antennas feature two 5G elements compatible with the world's leading cellular routers supporting 600 MHz to 6 GHz frequencies. In addition, PCTEL's proprietary high-rejection multi GNSS technology is included for high precision tracking and asset management.



TRP-20INT

Features

- No field tune, multi-band coverage: dual LTE, optional Wi-Fi, and GPS L1/GLONASS frequencies.
- Designed for raised rooftop rib installation - optimizes RF performance by eliminating the shadow interference from the rooftop ribs often experienced with recessed location installations.
- Patent-pending flexible gasket geometry – adds installation flexibility along the center rib of the vehicle's rooftop, with improved clearance for mounting hardware.
- Patent-pending, watershed conformable gasket construction – reduces freeze-thaw potential and optimizes the seal between the radome and baseplate for reliable ingress protection*.



STANDARD CONFIGURATION

Model	Elements	Cable	Connector**	Mount	Housing Color
TRP-20INT-3-B	LTE (2) GNSS (1)	Two-17 feet Pro-Flex™ Plus 195 (LTE) One-17 feet RG-174/U (GNSS)	SMA Plug (LTE) SMA Plug (GNSS)	1-inch hole, 3/4-inch long (.75") zinc stud mount with jam nut	Black
TRP-20INT-5-B	LTE (2) Wi-Fi (2) GNSS (1)	Two-17 feet Pro-Flex™ Plus 195 (LTE) Two-17 feet Pro-Flex™ Plus 195 (802.11ac Wi-Fi) One-17 feet RG-174/U (GNSS)	SMA Plug (LTE) Reverse Polarity SMA Plug (Wi-Fi) SMA Plug (GNSS)		
TRP-20INT-6-B	LTE (2) Wi-Fi (3) GNSS (1)	Two-17 feet Pro-Flex™ Plus 195 (LTE) Three-17 feet Pro-Flex™ Plus 195 (802.11ac Wi-Fi) One-17 feet RG-174/U (GNSS)	SMA Plug (LTE) Reverse Polarity SMA Plug (Wi-Fi) SMA Plug (GNSS)		
TRPS-20INT-2458B	Wi-Fi (1) GNSS (1)	One-17 feet Pro-Flex™ Plus 195 (Wi-Fi) One-17 feet RG-174/U (GNSS)	QMA Male QMA Male		

ELECTRICAL SPECIFICATIONS - RF ANTENNAS

Elements	F1 (MHz)	F2 (MHz)	SWR***	Gain (dB)****			Efficiency****		Polarization	Nominal Impedance	Maximum Power
				Max	Typical	Range (±)	Avg	Range (±)			
LTE Primary (1&2)	617	698	2.2	4.0	2.2	1.8	54%	19%	Linear	50 ohms	50 watts
	698	802	1.6	5.0	4.0	0.9	68%	5%			
	824	960	1.4	5.5	4.3	1.2	61%	5%			
	1710	2200	1.4	6.5	5.5	0.9	78%	3%			
	2300	2690	1.5	8.8	6.8	1.9	78%	4%			
	3400	3800	1.8	6.8	6.1	0.7	73%	3%			
Wi-Fi	5150	5950	1.4	10.1	8.6	1.5	81%	13%			
	2400	2500	1.2	9.4	9.0	0.4	81%	3%			
	4900	5900	1.4	9.4	8.9	0.5	70%	12%			

* If installed according to PCTEL's installation instructions ** Consult Customer Service for other connector options
 *** SWR and isolation measured with 17-ft cables and 2-ft ground plane **** Gain and efficiency measured with no cable and 2-ft ground plane.

Multi-Band LTE MIMO & 802.11ac Antennas with High Rejection GPS/GLONASS



ELECTRICAL SPECIFICATIONS - RF ANTENNAS, continued

Minimum Isolation (dB)***

Elements	LTE Primary (1&2)		Wi-Fi	
LTE Primary (1&2)	617-960 MHz	9.0	698-960 MHz	20.0
	1.71-2.7 GHz	15.0	1.71-2.7 GHz	17.0
	3.3-3.59 GHz	32.0	3.3-5.9 GHz	35.0
Wi-Fi			2.4-2.5 GHz	21.0
			4.9-5.9 GHz	27.0

ELECTRICAL SPECIFICATIONS - GNSS ANTENNA

Frequency Range	Amplifier Gain	Nominal Impedance	Output VSWR	DC Current	DC Voltage	Noise Figure
1565-1608 MHz	@ 3.0 VDC: 26 dB (typical)	50 ohms	2.0:1 (maximum)	25 mA (typical)	2.8-6.0 V (operating) ≤ 12.0 V (survivability)	< 2.0 dB (typical)

ELECTRICAL SPECIFICATIONS - GNSS ANTENNA, continued

Out-of-Band Rejection	Nominal Gain	Polarization
$f_0 = 1586 \text{ MHz} / f_0 \pm 50 \text{ MHz}: \geq 60 \text{ dBc} / f_0 \pm 60 \text{ MHz}: \geq 70 \text{ dBc}$	3 dBic @ 90° / -2 dBic @ 20°	Right hand circular

MECHANICAL SPECIFICATIONS

Dimensions (W x H)	Weight	Radome Construction	Operating/Storage Temperature	Gasket Design & Construction
4.05 W x 3.46 H in (10.3 x 8.8 cm)	2.6 lbs (TRP-20INT-3-B) 3.2 lbs (TRP-20INT-5-B) 3.4 lbs (TRP-20INT-6-B)	UV-Stable Rugged Thermoplastics	-40°C to +85°C	Patent-pending flexible geometry gasket designed for optimal seal between the radome and the base plate. This thermoplastic-elastomer gasket is flexible and conformable for maximum placement flexibility along the middle ridges of the vehicle. Baseplate includes 3M™ VHB mounting pad for more secure installations and rotation prevention.
4.05 W x 4.7 L x 2.75 H in (10.3 x 7 x 11.9 cm)				

*** SWR and isolation measured with 17-ft cables and 2-ft ground plane
3M is a registered trade mark of 3M Company.

5G & 4G Dual LTE with 802.11ac Option



The Coach™ multi-band antenna platform supports the high speed requirements of complex RF communication systems used for Intelligent Transportation Systems (ITS), and IIoT applications. These antennas feature two 5G elements compatible with the world's leading cellular routers that support 600 MHz to 6 GHz frequencies.

Features

- No tune, multi-band coverage: dual port 5G LTE elements; Wi-Fi options available
- Metal 1-inch stud mount with slotted jam nut provides single cable exit for easier installation and/or antenna replacement
- IP67 compliant design provides maximum protection against water or dust ingress under severe environmental conditions*
- High performance, low loss cable and high quality connectors for maximum RF system efficiency
- UV-resistant black or white housing options complement most vehicular aesthetic requirements



PCTHPDLTE-SF



BPCTHPDLTE-SF

STANDARD CONFIGURATION

Model	Connector	Cable	Mount
PCTHPDLTEMIMO-SF	MSMA (LTE) RP-MSMA (Wi-Fi)	Two-17 feet Pro-Flex™ Plus 195 (LTE) Two-17 feet Pro-Flex™ Plus 195 (Wi-Fi)	Built-in 3/4-inch long (.75") zinc stud mount with jam nut for 1-inch hole
PCTHPDLTE-SF	MSMA (LTE)	Two-17 feet Pro-Flex™ Plus 195 (LTE)	
PCTHPDLTEWIFI-SF	MSMA (LTE) RP-MSMA (Wi-Fi)	Two-17 feet Pro-Flex™ Plus 195 (LTE) One-17 feet Pro-Flex™ Plus 195 (Wi-Fi)	

ELECTRICAL SPECIFICATIONS - RF ANTENNAS

Elements	Frequency Range (MHz)		SWR**	Gain (dB)***			Efficiency***		Polarization	Nominal Impedance	Maximum Power
	Low	High		Max.	Typical	Range (±)	Avg.	Range (±)			
LTE 1&2	617	698	2.4	3.8	2.4	1.4	55%	19%	Linear	50 ohms	50 watts
	698	802	1.7	5.2	4.1	1.1	68%	6%			
	824	960	1.3	6.2	4.3	1.9	61%	12%			
	1710	2200	1.5	7.5	6.0	1.5	78%	11%			
	2300	2690	1.6	8.9	7.1	1.8	78%	8%			
	3400	3800	1.9	5.4	4.7	0.6	57%	5%			
	5150	5950	1.7	8.1	6.8	1.3	59%	10%			
Wi-Fi (all)	2400	2500	1.1	9.4	9.0	0.4	81%	3%			
	4900	5925	1.4	9.4	8.9	0.5	70%	12%			

* When installed on a sealed surface according to PCTEL installation instructions
 ** VSWR measured with 17-ft of cable and 2-ft ground plane *** Gain and efficiency values measured at the base of the antenna (no cable included)

5G & 4G Dual LTE with 802.11ac Option



ISOLATION SPECIFICATIONS

Minimum Isolation (dB)
(measured with 17-ft of cable and 2-ft ground plane)

Elements	LTE Primary (1&2)		Wi-Fi	
LTE 1&2	617-960MHz	9	617-960MHz	20.0
	1.71-2.7GHz	15	1.71-2.7GHz	17.0
	3.3-5.9 GHz	32	3.3-5.9 GHz	35.0
Wi-Fi			2.4-2.5GHz	25.0
			4.9-5.9GHz	32.0

MECHANICAL & ENVIRONMENTAL SPECIFICATIONS

Dimensions	Weight	Gasket Design & Construction	Temperature Range	Radome Construction
5.2 x 3.4 in (132 x 94 mm)	2.3 lbs (1.0 kg)	Contour matching, conformable, thermoplastic-elastomer gasket designed to seal between radome and baseplate. Gasket flexes and conforms to contoured surfaces. Baseplate has a 3M™ VHB mounting pad for anti-rotation.	-40°C to +85°C	UV-Stable CYCOLOY C6200

LTE MIMO Multi-Band Antenna with Magnetic Base



PCTEL's magnetic LTE MIMO multi-band antenna provides optimal 4G LTE MIMO coverage in a single, low-profile housing.

Features

- No tune, multi-band coverage: 4G LTE
- Magnetically mounted using heavy-duty internal rare earth magnets
- Rubber pad on the bottom of the antenna prevents slippage and protects the mounting surface
- Attractive low-profile housing for added overhead clearance
- IP67 compliant design provides maximum protection against water or dust ingress under severe environmental conditions***
- High performance, low loss cable and high quality connectors for maximum RF system efficiency
- UV-resistant black or white housing options complement most vehicular aesthetic requirements



PCTHPDLTE-SF-MM



BPCTHPDLTE-SF-MM

STANDARD CONFIGURATION

Model	Cable	Connector	Mount	Housing Color
PCTHPDLTE-SF-MM	Two-17 feet Pro-Flex™ Plus 195	SMA Plug	Magnet Mount	White
BPCTHPDLTE-SF-MM	Two-17 feet Pro-Flex™ Plus 195	SMA Plug	Magnet Mount	Black

ELECTRICAL SPECIFICATIONS (BOTH MODELS)

Elements	Frequency Range	Gain*	VSWR**	Polarization	Nominal Impedance	Maximum Power
4G LTE Elements (2 each)	698-960 MHz / 1710-2170 MHz / 2300-2700 MHz	2.5 dBi	< 2.0:1	Vertical, linear	50 ohms	50 watts

MECHANICAL & ENVIRONMENTAL SPECIFICATIONS (BOTH MODELS)

Dimensions	Gasket Design & Construction	Ingress Protection	Temperature Range	Radome & Baseplate Construction
5.2 x 3.4 in (132 x 94 mm)	Anti-skid liner installed at contact surface to ensure a high friction and mar-free magnetic mount.	IP67***	-40°C to +85°C	UV-Stable Rugged Thermoplastics

* Measured on a 4-foot diameter ground plane. Gain value is measured at the base of the antenna (no cable loss included).

** VSWR < 2:1 across all bands when measured on 1-ft diameter ground plane with 17-ft cable.

When measured on 1-ft diameter ground plane with 1-ft cable, VSWR < 2:1 698-960MHz, <2:1 1710-2170MHz, and < 2.5:1 2170-2700MHz.

*** When properly installed on a vehicle rooftop per PCTEL installation instructions. 3M is a trademark of 3M Company.

Coach™ Multi-Band MIMO Antennas for 802.11ac Permanent Mount Applications

The PCTHPMIMO-SF platform enables high data rate connectivity for fleet, rail, mass transit, public safety, and M2M applications. Each low-profile antenna model supports dual-band 2.4/5 GHz MIMO for 802.11n and 802.11ac WLAN standards, combining multiple antenna elements into one IP67-rated housing. A single stud mount cable exit simplifies permanent installations. Black or white radome options are available. This platform is also available in magnetic mount configurations.

Features

- Multi-band coverage of 2.3-2.8 GHz and 4.9-5.9 GHz frequencies
- Dual-band integrated elements terminated with high performance, low loss RG-58/U stranded cable and high quality connector for maximum RF system efficiency
- Metal stud mount with slotted jam nut provides single cable exit for easier installation and/or antenna replacement
- Attractive low-profile design for maximum installation flexibility without antenna orientation restrictions
- IP67 compliant design with custom overmolded gasket provides maximum protection against water or dust ingress under severe environmental conditions**
- UV-resistant black or white housing options complement most vehicular aesthetic requirements



PCTHPMIMO-6-SF



PCTHPMIMO-4-SF

STANDARD CONFIGURATION

Model	Cable	Connector	Mount	MIMO Elements
PCTHPMIMO-6-SF	Six (6) 17-foot RG-316 cable leads	Reverse Polarity SMA Male	1-inch hole (25.4 mm) slotted stud mount with 3/4-16 UNF slotted hex-nut	6
PCTHPMIMO-4-SF	Four (4) 17-foot Pro-Flex™ Plus 195 stranded cable leads	Reverse Polarity SMA Male	1-inch hole (25.4 mm) slotted stud mount with 3/4-16 UNF slotted hex-nut	4
PCTHPMIMO-3-SF	Three (3) 17-foot Pro-Flex™ Plus 195 stranded cable leads	Reverse Polarity SMA Male	1-inch hole (25.4 mm) slotted stud mount with 3/4-16 UNF slotted hex-nut	3
PCTHPMIMO-2-SF	Two (2) 17-foot Pro-Flex™ Plus 195 stranded cable leads	Reverse Polarity SMA Male	1-inch hole (25.4 mm) slotted stud mount with 3/4-16 UNF slotted hex-nut	2

ELECTRICAL SPECIFICATIONS

Model	Frequency Range	Gain*	VSWR	Polarization	In-Band Isolation Between Elements	E-Plane Beamwidth	Maximum Power
PCTHPMIMO-6-SF	2.3-2.8 GHz / 4.9-5.9 GHz	1.5 dBi / 0.5 dBi	< 2.0:1	Vertical, linear	23 dB, 26 dB	30°, 25°	25 watts
PCTHPMIMO-4-SF	2.3-2.8 GHz / 4.9-5.9 GHz	1.5 dBi / 0.5 dBi	< 1.8:1	Vertical, linear	23 dB, 26 dB	30°, 25°	25 watts
PCTHPMIMO-3-SF	2.3-2.8 GHz / 4.9-5.9 GHz	1.5 dBi / 0.5 dBi	< 1.8:1	Vertical, linear	23 dB, 26 dB	30°, 25°	25 watts
PCTHPMIMO-2-SF	2.3-2.8 GHz / 4.9-5.9 GHz	1.5 dBi / 0.5 dBi	< 1.8:1	Vertical, linear	23 dB, 26 dB	30°, 25°	25 watts

MECHANICAL & ENVIRONMENTAL SPECIFICATIONS (ALL MODELS)

Model	Dimensions	Radome & Baseplate Construction	Temperature Range	Ingress Protection
PCTHPMIMO-6-SF	5.3 x 3.5 in (136.5 x 89.7 mm)	White UV-Stable Rugged Thermoplastics***	-40° to +80° C	IP67**
PCTHPMIMO-4-SF	5.4 x 2.7 in (137 x 67 mm)	White UV-Stable Rugged Thermoplastics***	-40° to +80° C	IP67**
PCTHPMIMO-3-SF	5.4 x 2.7 in (137 x 67 mm)	White UV-Stable Rugged Thermoplastics***	-40° to +80° C	IP67**
PCTHPMIMO-2-SF	5.4 x 2.7 in (137 x 67 mm)	White UV-Stable Rugged Thermoplastics***	-40° to +80° C	IP67**

* Measured at the end of the coax, ** When properly installed on rooftop surface, according to PCTEL installation instructions *** Black radome option available. Add "B" prefix to part number for black radome option.



Multi-Band MIMO Antennas for 802.11ac Temporary Mount Applications

The PCTHPMIMO-SF-MM platform enables high data rate connectivity for fleet, rail, mass transit, public safety, and M2M applications. Each low-profile antenna model supports dual-band 2.4/5 GHz MIMO for 802.11n and 802.11ac WLAN standards, combining multiple antenna elements into one IP67-rated housing. This platform features heavy-duty rare earth magnets for secure, temporary installations. Black or white radome options, as well as permanent mount configurations are also available.

Features

- Multi-band coverage of 2.4-2.5 GHz and 4.9-5.9 GHz frequencies
- Dual-band integrated elements terminated with high performance, low loss RG-58/U stranded cable and high quality connector for maximum RF system efficiency
- Magnetically mounted using heavy-duty internal rare earth magnets
- Rubber pad on the bottom of the antenna prevents slippage and protects the mounting surface
- Attractive low-profile design for maximum installation flexibility without antenna orientation restrictions
- IP67 compliant design with custom overmolded gasket provides maximum protection against water or dust ingress under severe environmental conditions***
- UV-resistant white or black housing complements most vehicular aesthetic requirements



PCTHPMIMO-4-MM



BPCTHPMIMO-4-MM

STANDARD CONFIGURATION

Model	Cable	Connector	Mount	MIMO Elements
PCTHPMIMO-4-MM	Four (4) 17-foot Pro-Flex™ Plus 195 stranded cable leads	Reverse Polarity SMA Male	Magnet Mount	4
PCTHPMIMO-3-MM	Three (3) 17-foot Pro-Flex™ Plus 195 stranded cable leads	Reverse Polarity SMA Male	Magnet Mount	3
PCTHPMIMO-2-MM	Two (2) 17-foot Pro-Flex™ Plus 195 stranded cable leads	Reverse Polarity SMA Male	Magnet Mount	2

ELECTRICAL SPECIFICATIONS (ALL MODELS)

Frequency Range	Gain*	VSWR	Maximum Power	Polarization	Nominal Impedance
2.4-2.5 GHz / 4.9-5.9 GHz	3-4 dBi	< 2.0:1	25 watts	Vertical, linear	50 ohms

MECHANICAL SPECIFICATIONS & ENVIRONMENTAL SPECIFICATIONS (ALL MODELS)

Dimensions	Housing Material**	Temperature Range	Ingress Protection
3.6 x 5.1 in (9.1 x 12.9 cm)	White UV-stable rugged thermoplastics	-40° to +80° C	IP67***

* Measured at the end of the coax

** Antennas each have black and white color options. To order the black model, please add a "B" before the model number.

*** When properly installed on rooftop surface, according to PCTEL installation instructions



Covert Wi-Fi Glass Mount Antennas

Hush™ Wi-Fi antennas are an excellent choice for 2.4/5 GHz Bluetooth, DSRC, and Wi-Fi hotspot mobile or Industrial IoT networks requiring a discreet, low profile antenna solution. These overmolded indoor/outdoor rated antennas are tape mounted for maximum placement flexibility. They can be installed almost anywhere, including vehicle windows, factory floors, officer vests, backpacks, and utility cabinets.

Features

- Wideband operation (no field tuning required)
- IP67 rated, overmolded design suitable for outdoor installations
- Glass mount installation, inside or outside the vehicle
- Low-profile design for covert applications



Hush™

STANDARD CONFIGURATION

Model	Mounting Method	Cable	Connector
WV-COVWIFI	Glass Mount (VHB Tape)	3 ft RG316	Reverse Polarity SMA Male
WV-COVDB2458	Glass Mount (VHB Tape)	3 ft RG316	Reverse Polarity SMA Male

ELECTRICAL SPECIFICATIONS - RF ANTENNA

Model	Frequency Range	Nominal Impedance	VSWR	Maximum Power	Nominal Gain
WV-COVWIFI	2.3-2.5 GHz	50 Ohm	≤2.0:1	10 watts	2.5 dBi
WV-COVDB2458	2.3-2.5 GHz, 4.9-5.99 GHz	50 Ohm	≤2.0:1	10 watts	6 dBi / 3.5 dBi

MECHANICAL & ENVIRONMENTAL SPECIFICATIONS (ALL MODELS)

Dimensions	Weight	Housing Material	Temperature Range	Ingress Protection*
2.25 L x .75 W x .17 D in (57.1 x 19 x 4.4 mm)	.054 lbs (0.87 oz)	Black, overmolded Polyamide thermoplastic	-40°C to +85°C operating	IP67 (except for the connector which must be routed inside of the vehicle)

Low-Profile Wideband Rail Antennas



The PCT-RSA directional antennas are designed to survive rugged applications and can be roof mounted on locomotive, crew car, or other railroad vehicles exposed to severe vibration and other tough environmental conditions.

Features

- Versatile - may be mounted on locomotive, crew car, or other rugged vehicles
- Rugged - hard coat anodized fully welded aluminum construction
- Low-profile - only approximately 4.4 inches tall
- Field Tunable - optimizes performance in various mounting conditions
- Two-hole Stud Mounting - easy install design



PCT-RSA-220

STANDARD CONFIGURATION

Model	Cable	Connector	Mount
PCT-RSA-160	Sold Separately	Type N Female	Through-hole stud mounting for 1-inch holes
PCT-RSA-220	Sold Separately	Type N Female	Through-hole stud mounting for 1-inch holes

ELECTRICAL SPECIFICATIONS - RF ANTENNA

Model	Frequency Range	Gain*	VSWR	Average Power	Nominal Impedance	Polarization
PCT-RSA-160	158-162 MHz	2 dBi	< 1.5:1	100 watts	50 ohms	Vertical, linear
PCT-RSA-220	217-223 MHz	2 dBi	< 1.5:1	100 watts	50 ohms	Vertical, linear

MECHANICAL & ENVIRONMENTAL SPECIFICATIONS (ALL MODELS)

Model	Dimensions	Temperature Range	Antenna Material
PCT-RSA-160	15.78 L x 4.32 H in (40.08 x 10.9 cm)	-40°C to +85°C	Aluminum, black hard coat anodized
PCT-RSA-220	6.81 L x 4.32 H in (17.2 x 10.9 cm)**	-40°C to +85°C	Aluminum, black hard coat anodized

* Gain is ground plane dependent; more gain can be achieved with larger ground plane. ** Specified height is height above mounting surface.

Wide Spectrum Multi-Band Antenna

PCTEL's PCTWSLMR-2 wide spectrum multi-band antenna supports multi-band radio technology to provide interoperability among emergency management and response personnel, regardless of the frequency band used. It provides outstanding coverage of VHF and UHF bands, including P25, 700 MHz FirstNet Public Safety, and 800/900 MHz frequencies in a ready-to-install, no tune design. This antenna features an extremely flexible and impact resistant design that provides maximum durability for critical communications installations. Its base is designed to interface with standard NMO mobile mounts to facilitate existing installation upgrades on public safety vehicle. For temporary installation, use only with PCTEL PCTMAG-HD-NT mount.

Features

- No tune, multi-band coverage of full spectrum VHF, TETRA/UHF and 700/800/900 MHz frequencies
- Rugged ultra-flexible design for long lasting, reliable emergency response support
- NMO compatible interface for easy installation or upgrade
- Excellent VSWR performance across frequencies for reliable coverage and maximum interoperability



PCTWSLMR-2

PCTMAG-HD-NT
Heavy-Duty Mount
(sold separately)

STANDARD CONFIGURATION

Model	Recommended Mount (Sold Separately)
PCTWSLMR-2	PCTWSLMR mates with 1-1/8"-18 threaded mounts, including NMO 3/4" hole mounts. For temporary installations, PCTMAG-HD-NT extra strength magnetic mount is required (sold separately). NOTE: DO NOT USE WITH MAX-MATICS GPS PLUS ANTENNAS

ELECTRICAL SPECIFICATIONS

Frequency Range	Gain	VSWR	Polarization	Average Power	Nominal Impedance
136-174 MHz / 380-520 MHz / 698-960 MHz	Unity*	< 2.0:1 typical**	Vertical, linear	160 watts	50 ohms

MECHANICAL & ENVIRONMENTAL SPECIFICATIONS

Dimensions	Weight	Radiator	Construction Materials	Ingress Protection	Temperature Range
2 OD x 22 H in including whip (5.08 x 56.4 cm)	1.70 lbs (0.77kg)	SST Coil, Black Chrome Plated	Base Coil: Black ABS plastic with zinc diecast internal bushing	IP56	-40°C to +85°C

* Measured on a 4-foot diameter ground plane. Gain value is measured at the base of the antenna (no cable/connector loss included).

** Measured on a standard NMO mount with 17 feet of RG-58A/U cable. Maximum VSWR 2.5:1.

Wide Spectrum Multi-Band Antenna

PCTEL's PCTWSLMR wide spectrum multi-band antenna supports multi-band radio technology to provide interoperability among emergency management and response personnel, regardless of the frequency band used. It provides outstanding coverage of VHF and UHF bands, including 700 MHz public safety, 800 MHz and 900 MHz frequencies in a ready-to-install, no tune design. Its multi-band elements are housed in a rugged, impact-resistant housing for maximum durability and its base is designed to interface with standard NMO mobile mounts to facilitate existing installation upgrades on public safety vehicles.

Features

- No tune, multi-band coverage of full spectrum VHF, TETRA/UHF and 700/800/900 MHz frequencies
- Rugged construction for long lasting, reliable emergency response support
- NMO compatible interface for easy installation or upgrade
- Stainless steel spring for maximum impact shock absorption
- Excellent VSWR performance across frequencies



PCTWSLMR

PCTMAG-HD Mount
(sold separately)

STANDARD CONFIGURATION

Model	Recommended Mount (Sold Separately)
PCTWSLMR	Mates with 1-1/8"-18 threaded mounts, including NMO 3/4" hole mounts. For temporary installations, PCTMAG-HD-NT extra strength magnetic mount is required (sold separately). NOTE: DO NOT USE WITH MAX-MATICS GPS PLUS ANTENNAS

ELECTRICAL SPECIFICATIONS

Frequency Range	Gain	VSWR	Polarization	Average Power	Nominal Impedance
136-174 MHz / 380-520 MHz / 698-960 MHz	Unity*	< 2.0:1 typical**	Vertical, linear	160 watts	50 ohms

MECHANICAL & ENVIRONMENTAL SPECIFICATIONS

Dimensions	Weight	Radiator	Construction Materials	Ingress Protection	Temperature Range
2 OD x 22 H in including whip (5.08 x 55.88 cm)	1.46 lbs (0.66 kg)	Black e-coated 17-7PH SST	Base Coil: Black ABS plastic with zinc diecast internal bushing Housing: Black aluminum Spring: Black chrome SST	IP56	-40°C to +85°C

* Measured on a 4-foot diameter ground plane. Gain value is measured at the base of the antenna (no cable/connector loss included).

** Measured on a standard NMO mount with 17 feet of RG-58A/U cable. Maximum VSWR 2.5:1.

VHF and UHF Wideband Antennas - No Tune



These PCTEL antennas address equipment inter-operability challenges by providing superior bandwidth coverage without sacrificing antenna performance. Their no tune wideband design eliminates the need to install multiple antennas to cover various VHF or UHF frequency bands, thus reducing installation costs and complexity and improving overall coverage of the desired frequencies.

Features

- Wideband, no tune design for seamless operation and installation ease across multiple frequency bands
- Rugged stainless steel spring and wideband tube assembly for maximum durability and shock absorption
- Thick-wall housing, double-sealed for maximum weatherproofing
- Mates with all 1-1/8" -18 thread mounts, including 3/4" mounts



MWU4002S



MWV1365S

STANDARD CONFIGURATION

Model	Recommended Mounts (Sold Separately)
(B)MWV1365S*	Mates with 1-1/8" -18 thread mounts, including 3/4" mounts
(B)MWU4002S*	Mates with 1-1/8" -18 thread mounts, including 3/4" mounts
MWU4505S	Mates with 1-1/8" -18 thread mounts, including 3/4" mounts
MWU4063S	Mates with 1-1/8" -18 thread mounts, including 3/4" mounts
MWU5002S	Mates with 1-1/8" -18 thread mounts, including 3/4" mounts

ELECTRICAL SPECIFICATIONS

Model	Frequency Range	Gain	VSWR	Maximum Power	Nominal Impedance
(B)MWV1365S*	136-174 MHz	Unity	< 2.0:1	160 watts	50 ohms
(B)MWU4002S*	380-520 MHz	2.0 dB with a ground plane. Unity without a ground plane	< 2.0:1	200 watts	50 ohms
MWU4505S	440-480 MHz	4.5 dB	< 2.0:1	200 watts	50 ohms
MWU4063S	406-470 MHz	3.0 dB	< 2.0:1	200 watts	50 ohms
MWU5002S	567-657 MHz	2.0 dB	< 2.0:1	200 watts	50 ohms

MECHANICAL SPECIFICATIONS

Model	Approximate Whip Length at Lowest Frequency	Temperature Range	Radiator	Housing Material	Spring Material
(B)MWV1365S*	20"	-40°C to +85°C	17-7 PH SST	Black UV-Stable Polymer	SST
(B)MWU4002S*	12"	-40°C to +85°C	17-7 PH SST	Black UV-Stable Polymer	SST
MWU4505S	32"	-40°C to +85°C	17-7 PH SST	Black UV-Stable Polymer	SST
MWU4063S	12"	-40°C to +85°C	17-7 PH SST	Black UV-Stable Polymer	SST
MWU5002S	Less than 9"	-40°C to +85°C	17-7 PH SST	Black UV-Stable Polymer	SST

* This model can be ordered in all black finish. To indicate all black option, add prefix "B" to part number. Example, BMWV1365S.

VHF and UHF Wideband Antennas - Field Tunable

PCTEL's field tunable wideband antennas address equipment interoperability challenges by providing superior bandwidth coverage without sacrificing antenna performance. All models are built to withstand high vibration conditions.

Features

- Outstanding bandwidth performance
- Rugged compact design ideal for high vibration conditions
- Thick-wall housing, double-sealed for maximum weatherproofing
- Mate with all 1-1/8" -18 thread mounts, including 3/4" mounts
- Select models feature a removable whip design for fine tuning or replacement
- Stainless steel spring option offered with select models



MWV1322S

STANDARD CONFIGURATION

Model	Optional Spring Available*	Recommended Mounts (Sold Separately, unless otherwise listed)
MWV1322(S)	Yes	Mates with 1-1/8-inch -18 thread mobile mounts, including 3/4-inch hole mounts
MWV1322HD(S)	Yes	Mates with 1-1/8-inch -18 thread mobile mounts, including 3/4-inch hole mounts
MWB1320	Spring only option	Mates with 1-1/8-inch -18 thread mobile mounts, including 3/4-inch hole mounts
ASPR7495	No	Mates with 1-1/8-inch -18 thread mobile mounts, including 3/4-inch hole mounts
ASPR795	No	Mates with 1-1/8-inch -18 thread mobile mounts, including 3/4-inch hole mounts
ASPC201L	No	3/8-inch hole snap-in mounts, includes 17 ft RG-58/U cable and UHF male connector

ELECTRICAL SPECIFICATIONS

Model	Frequency Range (Field tunable)	Bandwidth	Gain	VSWR	Maximum Power	Nominal Impedance	Antenna Type
MWV1322(S)	132-174 MHz	26 MHz	2.4 dB with ground plane Unity w/o ground plane	< 2.0:1	150 watts	50 ohms	Base loaded 1/2 wave
MWV1322HD(S)	132-174 MHz	26 MHz	2.4 dB with ground plane Unity w/o ground plane	< 2.0:1	150 watts	50 ohms	Base loaded 1/2 wave
MWB1320	132-512 MHz	24 MHz	Unity	< 2.0:1	150 watts	50 ohms	1/4 Wave
ASPR7495	150-512 MHz	24 MHz (406-512 MHz)	Unity	< 2.0:1	150 watts	50 ohms	1/4 Wave
ASPR795	108-512 MHz	100 MHz (406-512 MHz)	Unity	< 1.5:1	150 watts	50 ohms	1/4 Wave
ASPC201L	108-512 MHz	100 MHz (406-512 MHz)	Unity	< 1.5:1	100 watts	50 ohms	1/4 Wave

MECHANICAL SPECIFICATIONS

Model	Approximate Whip Length at Lowest Frequency	Temperature Range	Radiator	Housing Material	Spring Material
MWV1322(S)	48"	-40°C to +85°C	17-7 PH SST	Black UV-Stable Polymer	SST
MWV1322HD(S)	48"	-40°C to +85°C	17-7 PH SST	Black UV-Stable Polymer	SST
MWB1320	22"	-40°C to +85°C	17-7 PH SST	Black UV-Stable Polymer	SST
ASPR7495	16-3/8"	-40°C to +85°C	17-7 PH SST	Black UV-Stable Polymer	SST
ASPR795	26"	-40°C to +85°C	17-7 PH SST	Black UV-Stable Polymer	SST
ASPC201L	26"	-40°C to +85°C	17-7 PH SST	Black UV-Stable Polymer	SST

* To select spring option, add suffix "S" to part number. Example: MWV1322S

Base Loaded Chrome Coil Antennas, No Ground Plane

Designed for installations that lack a suitable ground plane, these PCTEL antennas feature a tapered loading coil jacket with chrome plated fittings and an optional heavy-duty stainless steel spring. The base loaded matching network supports the collinear or trilinear rod sections above without the need of a ground plane.

Features

- No ground plane required
- Rugged construction; optional heavy-duty shock spring
- Sleek, sturdy, sealed phasing coil design
- Mates with all 1-1/8"-18 thread mounts, including 3/4" mounts



MUF4505NGP

STANDARD CONFIGURATION

Model*	Optional Spring Available*	Recommended Mounts (Sold Separately)	Rod/Coil Type
MUF4505NGP(S)	Yes	Mates with 1-1/8"-18 thread mounts, including 3/4" mounts.	Collinear / Closed
MUF8003NGP(S)	Yes	Mates with 1-1/8"-18 thread mounts, including 3/4" mounts.	Collinear / Closed
MUF9103NGP	No	Mates with 1-1/8"-18 thread mounts, including 3/4" mounts.	Collinear / Open
MUF9035NGPS	Spring only option	Mates with 1-1/8"-18 thread mounts, including 3/4" mounts.	Trilinear / Closed

ELECTRICAL SPECIFICATIONS

Model*	Frequency Range	Factory Tuned Frequency	Gain	VSWR	Maximum Power	Nominal Impedance	Antenna Type
MUF4505NGP(S)	450-470 MHz	Field Tunable	5 dB/3 dB	< 1.5:1	200 watts	50 ohms	Base loaded 5/8 wave over a 1/2 wave
MUF8003NGP(S)	806-866 MHz	815 MHz	3 dBi	< 1.5:1	200 watts	50 ohms	Base loaded 1/2 wave
MUF9103NGP	896-940 MHz	898 MHz	3 dBi	< 1.5:1	200 watts	50 ohms	Base loaded 1/2 wave
MUF9035NGPS	896-940 MHz	898 MHz	3 dBi	< 1.5:1	200 watts	50 ohms	Base loaded 1/2 wave

MECHANICAL SPECIFICATIONS

Model*	Approximate Whip Length at Lowest Frequency	Temperature Range	Radiator	Housing Material	Spring Material
MUF4505NGP(S)	33"	-40°C to +85°C	17-7 PH SST	Black UV-Stable Polymer	SST
MUF8003NGP(S)	17.25"	-40°C to +85°C	17-7 PH SST	Black UV-Stable Polymer	SST
MUF9103NGP	17.5"	-40°C to +85°C	17-7 PH SST	Black UV-Stable Polymer	N/A
MUF9035NGPS	27.5"	-40°C to +85°C	17-7 PH SST	Black UV-Stable Polymer	SST

* To select spring option, add suffix "S" to part number. Example: MUF4505NGPS

VHF Base Loaded Chrome Coil Antenna, No Ground Plane



Designed for installations that lack a suitable ground plane, the MHB5802(S) antenna features a tapered loading coil jacket with chrome plated fittings and an optional heavy-duty stainless steel spring. The base loaded matching network supports the collinear or trilinear rod sections above without the need of a ground plane.

Features

- No ground plane required
- Rugged construction; optional heavy-duty shock spring
- Sleek, sturdy, sealed phasing coil design
- Mates with all 1-1/8"-18 thread mounts, including 3/4" mounts
- Field tunable within the specified frequency range



MHB5802S*

STANDARD CONFIGURATION

Model*	Optional Spring Available*	Recommended Mounts (Sold Separately)
MHB5802S	Yes	Mates with 1-1/8"-18 thread mounts, including 3/4" mounts

ELECTRICAL SPECIFICATIONS

Frequency Range	Gain	VSWR
144-174 MHz	Unity with no ground plane 2.4 dB with a ground plane	< 1.5:1 at resonance

ELECTRICAL SPECIFICATIONS, continued

Maximum Power	Nominal Impedance	Antenna Type
200 watts	50 ohms	Base loaded 1/2 Wave

MECHANICAL SPECIFICATIONS

Approximate Whip Length at Lowest Frequency	Temperature Range	Radiator	Housing Material	Spring Material
52"	-40°C to +85°C	17-7PH SST	Black UV-Stable Polymer	SST

* To select spring option, add suffix "S" to part number. Example: MHB5802S

Heavy-Duty Low-Profile Base Gain Antennas

These PCTEL antennas feature a heavy-duty low-profile base with tapered loading coil jacket, chrome plated brass fittings and an optional heavy-duty stainless steel spring. Available with either an open coil rod or our "quiet" closed coil rod design.

Features

- Low-profile, double-sealed housing for maximum weatherproofing
- Plated fittings for superior performance and durability in the toughest environments
- Mates with all 1-1/8"-18 thread mounts, including 3/4" mounts



STANDARD CONFIGURATION

Model	Optional Spring Available*	Recommended Mount (Sold Separately)	Rod/Coil Type
MUF3505S	Spring only option	Mates with 1-1/8"-18 thread mounts, including 3/4" mounts	Collinear / Closed
MUF4065	No	Mates with 1-1/8"-18 thread mounts, including 3/4" mounts	Collinear / Closed
MUF4305	No	Mates with 1-1/8"-18 thread mounts, including 3/4" mounts	Collinear / Closed
MUF4505(S)	Yes	Mates with 1-1/8"-18 thread mounts, including 3/4" mounts	Collinear / Closed
MUF4905	Yes	Mates with 1-1/8"-18 thread mounts, including 3/4" mounts	Collinear / Closed
MUF8105	No	Mates with 1-1/8"-18 thread mounts, including 3/4" mounts	Trilinear / Open
MUF8005	No	Mates with 1-1/8"-18 thread mounts, including 3/4" mounts	Trilinear / Closed
MUF8103	No	Mates with 1-1/8"-18 thread mounts, including 3/4" mounts	Collinear / Open
MUF8325	Yes	Mates with 1-1/8"-18 thread mounts, including 3/4" mounts	Trilinear / Closed
MUF9035	No	Mates with 1-1/8"-18 thread mounts, including 3/4" mounts	Trilinear / Closed



MUF4505

ELECTRICAL SPECIFICATIONS

Model	Frequency Range	Gain	VSWR	Maximum Power	Nominal Impedance	Antenna Type
MUF3505S	350-400 MHz	5 dB	< 1.5:1	200 watts	50 ohms	5/8 wave over a 1/4 wave
MUF4065	406-430 MHz	5 dB	< 1.5:1	200 watts	50 ohms	5/8 wave over a 1/4 wave
MUF4305	430-450 MHz	5 dB	< 1.5:1	200 watts	50 ohms	5/8 wave over a 1/4 wave
MUF4505(S)	450-470 MHz	5 dB	< 1.5:1	200 watts	50 ohms	5/8 wave over a 1/4 wave
MUF4905	490-512 MHz	5 dB	< 1.5:1	200 watts	50 ohms	5/8 wave over a 1/4 wave
MUF8105	806-866 MHz	5 dB	< 1.5:1	200 watts	50 ohms	5/8 wave over a 1/4 wave
MUF8005	806-866 MHz	5 dB	< 1.5:1	200 watts	50 ohms	5/8 wave over a 1/4 wave
MUF8103	806-896 MHz	3 dB	< 1.5:1	200 watts	50 ohms	5/8 wave over a 1/4 wave
MUF8325	825-896 MHz	5 dB	< 1.5:1	200 watts	50 ohms	5/8 wave over a 1/4 wave
MUF9035	896-940 MHz	5 dB	< 1.5:1	200 watts	50 ohms	5/8 wave over a 1/4 wave

MECHANICAL SPECIFICATIONS

Model	Approximate Whip Length at Lowest Frequency	Temperature Range	Radiator	Spring Material	Housing Material
MUF3505S	32"	-40°C to +85°C	17-7 PH SST	SST	Black UV-Stable Polymer
MUF4065	32"	-40°C to +85°C	17-7 PH SST	N/A	Black UV-Stable Polymer
MUF4305	32"	-40°C to +85°C	17-7 PH SST	N/A	Black UV-Stable Polymer
MUF4505(S)	32"	-40°C to +85°C	17-7 PH SST	SST	Black UV-Stable Polymer
MUF4905	32"	-40°C to +85°C	17-7 PH SST	SST	Black UV-Stable Polymer
MUF8105	25"	-40°C to +85°C	17-7 PH SST	N/A	Black UV-Stable Polymer
MUF8005	25"	-40°C to +85°C	17-7 PH SST	N/A	Black UV-Stable Polymer
MUF8103	15.5"	-40°C to +85°C	17-7 PH SST	N/A	Black UV-Stable Polymer
MUF8325	25"	-40°C to +85°C	17-7 PH SST	SST	Black UV-Stable Polymer
MUF9035	25"	-40°C to +85°C	17-7 PH SST	SST	Black UV-Stable Polymer

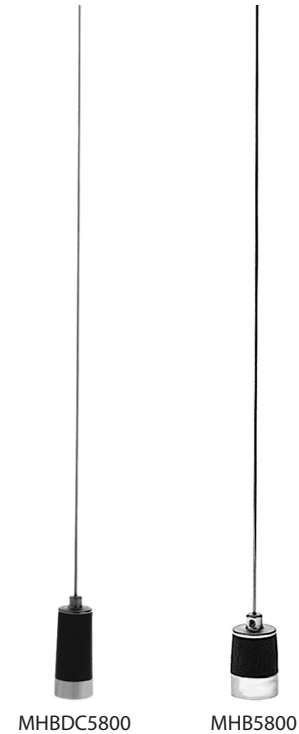
* To select spring option, add suffix "S" to part number. Example: MUF4505S

Base Loaded Field Tunable 3dB Gain Antennas

These 5/8 Wave antennas utilize a chrome coil design with the enhancement of a heavy-duty tapered rod for maximum durability in tough environments.

Features

- The matching coil is supported by a low loss coil for superior performance in heavy-duty applications
- The tapered coil housing design enhances appearance and prevents moisture from entering the load
- Mates with all 1-1/8" -18 thread mounts, including 3/4" mounts



STANDARD CONFIGURATION

Model*	Optional Spring Available*	Recommended Mounts (Sold Separately)
MHB5800132	No	Mates with 1-1/8" -18 thread mounts, including 3/4" mounts
MHBDC5800(S)**	Yes	Mates with 1-1/8" -18 thread mounts, including 3/4" mounts
MHB5800(S)	Yes	Mates with 1-1/8" -18 thread mounts, including 3/4" mounts
MUF4503(S)	Yes	Mates with 1-1/8" -18 thread mounts, including 3/4" mounts

ELECTRICAL SPECIFICATIONS

Model*	Frequency Range	Gain	VSWR	Maximum Power	Nominal Impedance	Antenna Type
MHB5800132	132-174 MHz	3 dB	< 1.5:1	200 watts	50 ohms	Base loaded 5/8 Wave
MHBDC5800(S)**	144-174 MHz	3 dB	< 1.5:1	200 watts	50 ohms	Base loaded 5/8 Wave
MHB5800(S)	144-174 MHz	3 dB	< 1.5:1	200 watts	50 ohms	Base loaded 5/8 Wave
MUF4503(S)	450-470 MHz	3 dB	< 1.5:1	200 watts	50 ohms	Base loaded 5/8 Wave

MECHANICAL SPECIFICATIONS

Model*	Approximate Whip Length at Lowest Frequency	Temperature Range	Radiator	Spring Material	Housing Material
MHB5800132	58"	-40°C to +85°C	17-7 PH SS	N/A	Black UV-Stable Polymer
MHBDC5800(S)**	52"	-40°C to +85°C	17-7 PH SS	SST	Black UV-Stable Polymer
MHB5800(S)	52"	-40°C to +85°C	17-7 PH SS	SST	Black UV-Stable Polymer
MUF4503(S)	16"	-40°C to +85°C	17-7 PH SS	SST	Black UV-Stable Polymer

* To select spring option, add suffix "S" to part number. Example: MUF4503S

Lowband Quarter Wave Antennas



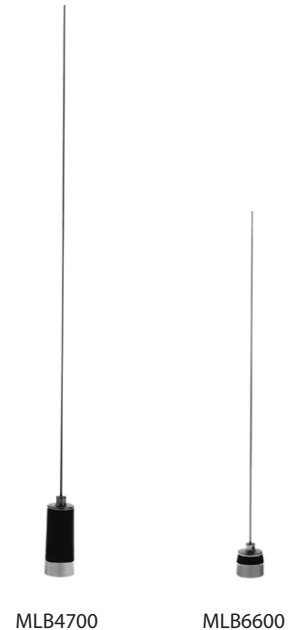
PCTEL's MLB lowband antennas are a popular choice for State Patrol, Land Management and serious CB applications. They provide superior performance for a variety of lowband applications.

Features

- The matching coil is supported by a low-loss coil form to withstand the heaviest shocks
- Durable, attractive housings designed to deter moisture ingress for long lasting, reliable operation
- Mates with all 1-1/8"-18 thread mounts, including 3/4" mounts
- Field tunable within specified frequency range

STANDARD CONFIGURATION

Model*	Optional Spring Available*	Recommended Mounts (Sold Separately)
MLB2700	No	Mates with 1-1/8"-18 thread mounts, including 3/4" mounts
MLB3000	No	Mates with 1-1/8"-18 thread mounts, including 3/4" mounts
MLB3400	No	Mates with 1-1/8"-18 thread mounts, including 3/4" mounts
MLBDC3700(S)**	Yes	Mates with 1-1/8"-18 thread mounts, including 3/4" mounts
MLB4000	No	Mates with 1-1/8"-18 thread mounts, including 3/4" mounts
MLBDC4000(S)**	Yes	Mates with 1-1/8"-18 thread mounts, including 3/4" mounts
MLBDC4700(S)**	Yes	Mates with 1-1/8"-18 thread mounts, including 3/4" mounts
MLB4700(S)	Yes	Mates with 1-1/8"-18 thread mounts, including 3/4" mounts
MLB6600	No	Mates with 1-1/8"-18 thread mounts, including 3/4" mounts



ELECTRICAL SPECIFICATIONS

Model*	Frequency Range	Gain	VSWR	Average Power	Nominal Impedance	Antenna Type
MLB2700	27-31 MHz	Unity	< 1.5:1	200 watts	50 ohm	Base Loaded 1/4 wave
MLB3000	30-35 MHz	Unity	< 1.5:1	200 watts	50 ohm	Base Loaded 1/4 wave
MLB3400	34-40 MHz	Unity	< 1.5:1	200 watts	50 ohm	Base Loaded 1/4 wave
MLBDC3700(S)**	37-40 MHz	Unity	< 1.5:1	500 watts	50 ohm	Base Loaded Tapped 1/4 Wave
MLB4000	40-47 MHz	Unity	< 1.5:1	200 watts	50 ohm	Base Loaded 1/4 wave
MLBDC4000(S)**	40-47 MHz	Unity	< 1.5:1	500 watts	50 ohm	Base Loaded Tapped 1/4 Wave
MLBDC4700(S)**	47-50 MHz	Unity	< 1.5:1	500 watts	50 ohm	Base Loaded Tapped 1/4 Wave
MLB4700(S)	47-54 MHz	Unity	< 1.5:1	200 watts	50 ohm	Base Loaded 1/4 wave
MLB6600	66-132 MHz	Unity	< 1.5:1	200 watts	50 ohm	Full length 1/4 wave

MECHANICAL SPECIFICATIONS

Model*	Approximate Whip Length at Lowest Frequency	Temperature Range	Radiator	Spring Material	Housing Material
MLB2700	52"	-40°C to +85°C	17-7 PH SS	N/A	Black UV-Stable Polymer
MLB3000	52"	-40°C to +85°C	17-7 PH SS	N/A	Black UV-Stable Polymer
MLB3400	52"	-40°C to +85°C	17-7 PH SS	N/A	Black UV-Stable Polymer
MLBDC3700(S)**	52"	-40°C to +85°C	17-7 PH SS	SST	Black UV-Stable Polymer
MLB4000	52"	-40°C to +85°C	17-7 PH SS	N/A	Black UV-Stable Polymer
MLBDC4000(S)**	52"	-40°C to +85°C	17-7 PH SS	SST	Black UV-Stable Polymer
MLBDC4700(S)**	52"	-40°C to +85°C	17-7 PH SS	SST	Black UV-Stable Polymer
MLB4700(S)	52"	-40°C to +85°C	17-7 PH SS	SST	Black UV-Stable Polymer
MLB6600	52"	-40°C to +85°C	17-7 PH SS	N/A	Black UV-Stable Polymer

* To select spring option, add suffix "S" to part number. Example: MLB4700S ** This model is DC grounded

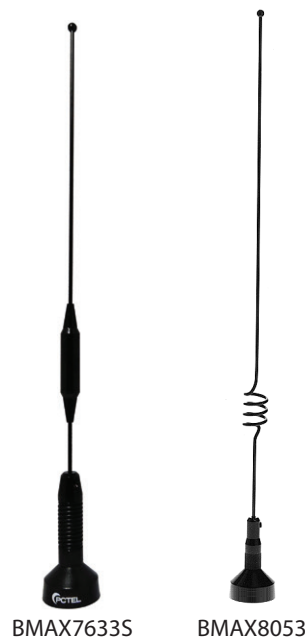
BMAX Molded Base Antennas



These PCTEL antennas feature a rugged molded polymer base, plated springloaded contact pin and .100" diameter stainless steel whip for long-lasting, trouble-free operation. Select models are available with open or closed coil rod, and can be ordered in all black finish. This series offers models for many types of wireless applications, including Wi-Fi and WiMAX mobility, VHF and UHF land mobile radio, 700 Public Safety, 800 MHz and 900 MHz digital radio and AMPS/ PCS voice/data support.

Features

- Molded polymer base provides ruggedness and durability in harsh mobile environments.
- Wideband performance (Wi-Fi and WiMAX models) provide coverage of 2.2 GHz to 2.9 GHz frequencies without tuning. WiMAX model covers 2.3-3.8 GHz frequencies.
- 3 dB or 5 dB models available for most frequency ranges
- Antenna is ready to install; no rod cutting is required (unless otherwise noted)
- Designed to mate with all 1-1/8"-18 thread mounts, including 3/4" mounts
- Spring-loaded gold plated contact pin



BMAX7633S

BMAX8053

STANDARD CONFIGURATION

Model**	Optional Spring Available*	Mount	Rod/Coil Type
(B)MAXMFT(S)	Yes	Mates with 1-1/8"-18 thread mounts, including 3/4" mounts	Straight
(B)MAXSCAN1000(S)	Yes	Mates with 1-1/8"-18 thread mounts, including 3/4" mounts	Collinear / Closed
(B)MAX7603S	Spring only	Mates with 1-1/8"-18 thread mounts, including 3/4" mounts	Collinear / Open
BMAX7633S	Spring only	Mates with 1-1/8"-18 thread mounts, including 3/4" mounts	Collinear / Closed
(B)MAX7635S	Spring only	Mates with 1-1/8"-18 thread mounts, including 3/4" mounts	Trilinear / Closed
BMAX8053(S)	Yes	Mates with 1-1/8"-18 thread mounts, including 3/4" mounts	Collinear / Open
BMAX8155S	Spring only	Mates with 1-1/8"-18 thread mounts, including 3/4" mounts	Collinear / Closed
MAX8375S	Spring only	Mates with 1-1/8"-18 thread mounts, including 3/4" mounts	Trilinear / Closed
BMAX824/1850	No	Mates with 1-1/8"-18 thread mounts, including 3/4" mounts	Collinear / Open
BMAX9155S	Spring only	Mates with 1-1/8"-18 thread mounts, including 3/4" mounts	Collinear / Closed
MAX9053	No	Mates with 1-1/8"-18 thread mounts, including 3/4" mounts	Collinear / Open
BMAXC24503	No	Mates with 1-1/8"-18 thread mounts, including 3/4" mounts; high frequency mounts recommended with this model	Collinear / Closed
BMAXC24505	No	Mates with 1-1/8"-18 thread mounts, including 3/4" mounts high frequency mounts recommended with this model	Collinear / Closed
BMAXC233805	No	Mates with 1-1/8"-18 thread mounts, including 3/4" mounts high frequency mounts recommended with this model	Collinear / Closed

* To select spring option, add suffix "S" to part number. Example: BMAX8053S

** (B) indicates black option available. To select, add prefix "B" to the part number. Example: BMAXMFT

BMAX Molded Base Antennas



ELECTRICAL SPECIFICATIONS

Model*	Frequency Range	Gain	VSWR	Average Power	Nominal Impedance	Factory Tuned Frequency	Antenna Type
(B)MAXMFT(S)	118-940 MHz	Unity	< 1.5:1	200 watts	50 ohms	Field Tunable	1/4 wave
BMAXSCAN1000	150-174 MHz / 450-470 MHz / 800-840 MHz	Unity	< 1.5:1	150 watts	50 ohms	160 MHz	1/4 wave or Collinear array
(B)MAX7603S	760-870 MHz	3 dB	< 1.5:1	100 watts	50 ohms	160/460 MHz / NA	Wideband collinear
BMAX7633S	760-870 MHz	3 dB	< 1.5:1	100 watts	50 ohms	815 MHz	Wideband collinear
(B)MAX7635S	760-870 MHz	5 dB	< 1.9:1	100 watts	50 ohms	815 MHz	Dual 1/2 wave over a 1/4 wave
BMAX8053	806-866 MHz	3 dB	< 1.5:1	100 watts	50 ohms	835 MHz	5/8 wave over a 1/4 wave
BMAX8155S	806-896 MHz	4.5 dB	< 1.5:1	100 watts	50 ohms	835 MHz	Collinear array
MAX8375S	824-896 MHz	5 dB	< 1.5:1	100 watts	50 ohms	835 MHz	5/8 wave over a 1/4 wave
BMAX824/1850	824-896 MHz / 1850-1990 MHz	2.2 dBi / 4 dBi	< 1.5:1	100 watts	50 ohms	Broadband***	Dual-Band Collinear
BMAX9155S	890-945 MHz	4.0 dB	< 1.5:1	100 watts	50 ohms	Broadband***	Collinear array
MAX9053	896-940 MHz	3 dB	< 1.5:1	100 watts	50 ohms	896 MHz	5/8 wave over a 1/4 wave
BMAXC24503	2.2-2.9 GHz	3 dBi	< 1.5:1	100 watts	50 ohms	Broadband***	ISM mobile and WLAN
BMAXC24505	2.2-2.9 GHz	5 dBi	< 1.5:1	100 watts	50 ohms	Broadband***	ISM mobile and WLAN
BMAXC233805	2.3-3.8 GHz	5 dBi	< 1.5:1	100 watts	50 ohms	Broadband***	WiMAX mobile

MECHANICAL SPECIFICATIONS

Model*	Approximate Whip Length at Lowest Frequency	Temperature Range	Radiator	Spring Material	Housing Material
(B)MAXMFT(S)	26"	-40°C to +85°C	17-7PH SST	SST	Black UV-Stable ABS
BMAXSCAN1000	21"	-40°C to +85°C	17-7PH SST	NA	Black UV-Stable ABS
(B)MAX7603S	14"	-40°C to +85°C	17-7PH SST	SST	Black UV-Stable ABS
BMAX7633S	14"	-40°C to +85°C	17-7PH SST	SST	Black UV-Stable ABS
(B)MAX7635S	25"	-40°C to +85°C	17-7PH SST	SST	Black UV-Stable ABS
BMAX8053	13"	-40°C to +85°C	17-7PH SST	SST	Black UV-Stable ABS
BMAX8155S	13"	-40°C to +85°C	17-7PH SST	SST	Black UV-Stable ABS
BMAX824/1850	12"	-40°C to +85°C	17-7PH SST	N/A	Black UV-Stable ABS
BMAX9155S	13"	-40°C to +85°C	17-7PH SST	SST	Black UV-Stable ABS
MAX8375S	13"	-40°C to +85°C	17-7PH SST	SST	Black UV-Stable ABS
MAX9053	11"	-40°C to +85°C	17-7PH SST	N/A	Black UV-Stable ABS
BMAXC24503	5.25"	-40°C to +85°C	17-7PH SST	N/A	Black UV-Stable ABS
BMAXC24505	7.50"	-40°C to +85°C	17-7PH SST	N/A	Black UV-Stable ABS
BMAXC233805	4.75"	-40°C to +85°C	17-7PH SST	N/A	Black UV-Stable ABS

***Broadband antennas are optimized across the entire specified frequency range

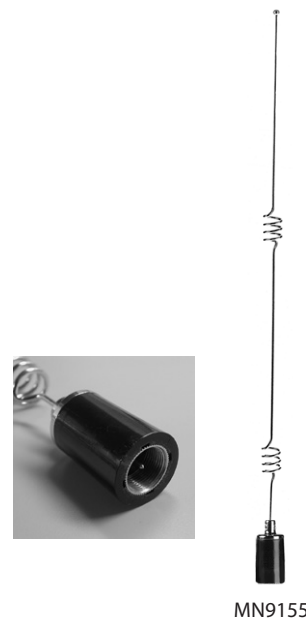
Integrated Connector Antennas



These integrated connector antennas provide a simple and cost effective solution for the 900 MHz ISM band. Featuring an N male connector built into the base, these antennas mount easily to any N female bulkhead or panel mount connector.

Features

- UV-stable polycarbonate base allows years of trouble-free use even in harsh environments
- Broadband frequency coverage. A single antenna covers the entire 900 MHz ISM band
- Integrated N male connector. Eliminates the use of an adapter by allowing direct application to many types of radios



MN9155

STANDARD CONFIGURATION

Model	Mount
MN9153	Direct Mount interface. N male connector built in to interface with N Female connector.
MN9155	Direct Mount interface. N male connector built in to interface with N Female connector.

ELECTRICAL SPECIFICATIONS

Model	Frequency Range	Gain*	VSWR	Maximum Power	Nominal Impedance	Polarization
MN9153	902-928 MHz	3 dBi (with a ground plane)	< 1.5:1	100 watts	50 ohms	Vertical, linear
MN9155	902-928 MHz	5 dBi (with a ground plane)	< 1.5:1	100 watts	50 ohms	Vertical, linear

MECHANICAL SPECIFICATIONS

Model	Height	Radiator	Bushing	Housing Material
MN9153	13.2" (33.5 cm)	.100" diameter, 17-7 PH SST	Nickel plated brass	Black Polycarbonate
MN9155	22.5" (57.1 cm)	.100" diameter, 17-7 PH SST	Nickel plated brass	Black Polycarbonate

* Gain is ground plane dependent. Gain measured on a 1x1-ft ground plane.

Heavy-Duty Flexible Antennas



The PCTP heavy-duty mobile antennas feature a rugged, flexible design that provides long lasting performance and reliability under very extreme environmental conditions.

Features

- Ground plane independent for reliable performance and added installation flexibility
- Heavy-duty, flexible radome design absorbs shock impact for applications requiring a ruggedized antenna solution
- Wideband coverage: ready to use without added field tuning
- UV-stable polyurethane housing withstands severe installation applications. This housing makes the antenna ideal for vehicular installations exposed to extreme temperatures and high vibration conditions, including construction trucks, agriculture tractors and mining vehicles



STANDARD CONFIGURATION

Model	Connector	Mount
PCTP430	TNC Plug (Male)	Direct mount only
PCTP450	TNC Plug (Male)	Direct mount only
PCTP915	TNC Plug (Male)	Direct mount only
PCTP2425	TNC Plug (Male)	Direct mount only
PCTP/4GLTE	TNC Plug (Male)	Direct mount only

ELECTRICAL SPECIFICATIONS

Model	Frequency Range	Gain	VSWR	Nominal Impedance	Maximum Power	Polarization
PCTP430	430-450 MHz	Unity	< 2.5:1	50 ohms	5 watts	Vertical, linear
PCTP450	450-470 MHz	2 dBi	< 2.5:1	50 ohms	5 watts	Vertical, linear
PCTP915	902-928 MHz	2 dBi	< 2.0:1	50 ohms	5 watts	Vertical, linear
PCTP2425	2400-2500 MHz	5 dBi	< 2.0:1	50 ohms	5 watts	Vertical, linear
PCTP/4GLTE	698-960 MHz/1710-2700 MHz	0-2 dBi typical	< 2.5:1 typical	50 ohms	5 watts	Vertical, linear

MECHANICAL & ENVIRONMENTAL SPECIFICATIONS

Model	Dimensions	Housing Material	Ingress Protection	Temperature Range
PCTP430	13 L x 0.62 OD in (330 x 15.74 mm)	Black, UV-stable polyurethane	IP67	-40°C to +85°C
PCTP450	13 L x 0.62 OD in (330 x 15.74 mm)	Black, UV-stable polyurethane	IP67	-40°C to +85°C
PCTP915	13 L x 0.62 OD in (330 x 15.74 mm)	Black, UV-stable polyurethane	IP67	-40°C to +85°C
PCTP2425	13 L x 0.62 OD in (330 x 15.74 mm)	Black, UV-stable polyurethane	IP67	-40°C to +85°C
PCTP/4GLTE	11 L x 0.78 OD in (280 x 20 mm)	Black, UV-stable polyurethane	IP67	-40°C to +85°C

No Ground Plane Elevated Feed Point Antennas



The elevated feed point antennas are designed for those applications that lack a ground plane. They are ideal for mirror or trunk lid mounting or for vehicles with non-metallic surfaces where no ground plane is available.

Features

- Elevated feed point eliminates vehicle "shadow" effect
- Does not require a ground plane; excellent for non-metallic vehicles
- Stainless steel shock spring included on all models
- Mates with all 1-1/8"-18 thread mounts, including 3/4" mounts



BMUF7603

STANDARD CONFIGURATION

Model	Recommended Mount (Sold Separately)	Rod/Coil Type
BMUF8043	Mates with 1-1/8"-18 thread mounts, including 3/4" mounts	Collinear / Open
BMUF8045	Mates with 1-1/8"-18 thread mounts, including 3/4" mounts	Trilinear / Open
BMUF7603	Mates with 1-1/8"-18 thread mounts, including 3/4" mounts	Collinear / Closed
MUF8455*	Mates with 1-1/8"-18 thread mounts, including 3/4" mounts	Trilinear / Closed
(B)MUF9115*	Mates with 1-1/8"-18 thread mounts, including 3/4" mounts	Trilinear / Closed

ELECTRICAL SPECIFICATIONS

Model	Frequency Range	Gain	VSWR	Average Power	Nominal Impedance	Polarization
BMUF8043	825-896 MHz	3 dB	< 1.5:1	125 watts	50 ohms	Vertical, linear
BMUF8045	806-866 MHz	5 dB	< 1.5:1	125 watts	50 ohms	Vertical, linear
BMUF7603	760-870 MHz	3 dB	< 1.5:1	125 watts	50 ohms	Vertical, linear
MUF8455*	825-896 MHz	5 dB	< 1.5:1	125 watts	50 ohms	Vertical, linear
(B)MUF9115*	896-940 MHz	5 dB	< 1.5:1	125 watts	50 ohms	Vertical, linear

MECHANICAL SPECIFICATIONS

Model	Approximate Whip Length at Lowest Frequency	Temperature Range	Radiator	Housing Material
BMUF8043	23"	-40° to + 85°	17-7 PH SST	Black UV-Stable ABS
BMUF8045	33"	-40° to + 85°	17-7 PH SST	Black UV-Stable ABS
BMUF7603	38"	-40° to + 85°	17-7 PH SST	Black UV-Stable ABS
MUF8455*	33"	-40° to + 85°	17-7 PH SST	Black UV-Stable ABS
(B)MUF9115*	32"	-40° to + 85°	17-7 PH SST	Black UV-Stable ABS

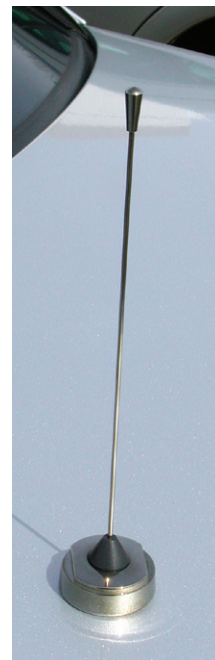
* (B) indicates black option available. To select, add prefix "B" to the part number. Example: BMUF9115

PCTCN Chrome Nut Antennas

PCTEL's high performance chrome nut antenna series offers a durable, super flexible design and reinforced brass button contact for maximum durability against external shock or limited vehicle height clearance. Wideband performance, attractive "Titanium gray" reflective finish and sleek drop shape rod tip, combined with market competitive prices makes this new series one of the best values on the marketplace.

Features

- Optimized bandwidth performance - Only 11 models required to cover all frequencies between 118 MHz and 2.5 GHz
- High-Tech "Titanium gray" reflective plating - Closely mimics the color of the metallic surface on which the antenna is installed, nicely complementing the appearance of public safety, livery and service vehicles
- Gold plated, brass contact button interface - Provides optimized electrical performance, corrosion resistance and maximum 100lb pull force resistance for long lasting, trouble-free operation
- Tear drop style rod tip - Less prone to detachment due to impact (factory tuned models only)
- Heavy-duty zinc die cast base for maximum durability and corrosion resistance under extreme weather conditions
- Mates with all 1-1/8"-18 thread mounts, including 3/4" mounts



ELECTRICAL SPECIFICATIONS - RF ANTENNA

Model	Frequency Range	Factory Tuned Frequency	VSWR*	Average Power	Nominal Impedance	Gain
PCTCNMFT	118-940 MHz	Field Tunable	< 2.0:1	150 watts	50 ohms	Unity
PCTCN1520	152-162 MHz	157 MHz	< 2.0:1	150 watts	50 ohms	Unity
PCTCN1620	162-174 MHz	167 MHz	< 2.0:1	150 watts	50 ohms	Unity
PCTCN3840	380-430 MHz	405 MHz	< 2.0:1	150 watts	50 ohms	Unity
PCTCN4347	430-470 MHz	450 MHz	< 2.0:1	150 watts	50 ohms	Unity
PCTCN4750	470-512 MHz	491 MHz	< 2.0:1	150 watts	50 ohms	Unity
PCTCN7080	740-870 MHz	805 MHz	< 2.0:1	150 watts	50 ohms	Unity
PCTCN8090	806-960 MHz	883 MHz	< 2.0:1	150 watts	50 ohms	Unity
PCTCN8063	806-866 MHz	836 MHz	< 2.0:1	150 watts	50 ohms	3 dB
PCTCN8963	896-940 MHz	918 MHz	< 2.0:1	150 watts	50 ohms	3 dB
PCTCN24005	2.4-2.5 GHz	2.45 GHz	< 2.0:1	150 watts	50 ohms	4.5 dB



MECHANICAL SPECIFICATIONS

Model	Approximate Antenna Height	Mount Nut	Radiator Material
PCTCNMFT	24.0"	Zinc die cast; "Titanium" finish	.062" diameter stainless steel, "Titanium gray" finish
PCTCN1520	18.0"	Zinc die cast; "Titanium" finish	.062" diameter stainless steel, "Titanium gray" finish
PCTCN1620	18.0"	Zinc die cast; "Titanium" finish	.062" diameter stainless steel, "Titanium gray" finish
PCTCN3840	7.38"	Zinc die cast; "Titanium" finish	.062" diameter stainless steel, "Titanium gray" finish
PCTCN4347	6.2"	Zinc die cast; "Titanium" finish	.062" diameter stainless steel, "Titanium gray" finish
PCTCN4750	5.6"	Zinc die cast; "Titanium" finish	.062" diameter stainless steel, "Titanium gray" finish
PCTCN7080	3.3"	Zinc die cast; "Titanium" finish	.062" diameter stainless steel, "Titanium gray" finish
PCTCN8090	3.0"	Zinc die cast; "Titanium" finish	.062" diameter stainless steel, "Titanium gray" finish
PCTCN8063	14.5"	Zinc die cast; "Titanium" finish	.062" diameter stainless steel, "Titanium gray" finish
PCTCN8963	12.0"	Zinc die cast; "Titanium" finish	.062" diameter stainless steel, "Titanium gray" finish
PCTCN24005	8.75"	Zinc die cast; "Titanium" finish	.062" diameter stainless steel, "Titanium gray" finish

* VSWR at resonance is < 1.5:1

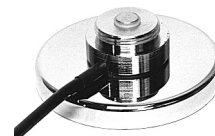
G Series

Black or chrome 3-1/4" diameter magnetic mount; 1-1/8"-18 thread

STANDARD CONFIGURATION

Model	Length of Coax	Coax	Connector*	Type
(R)(B)G-NC	12'	RG-58A/U	None	N/A
(R)(B)GC-NC	12'	RG-58/U	None	N/A
(R)(B)G	12'	RG-58A/U	PL259**	Crimp
(R)GP	12'	RG-58/U	PTFE PL259	Solder
(R)(B)GPL	12'	RG-58/U	Mini-UHF	Crimp
(R)GML195NCP	12'	Pro-Flex™ Plus 195	N	Crimp
(R)(B)GNCP	12'	RG-58/U	N	Crimp

For other cable types, lengths or connector configuration options, contact PCTEL Customer Service.



G

GM Series

Black or chrome 2-3/8" diameter magnetic mount; 1-1/8"-18 thread

STANDARD CONFIGURATION

Model	Length of Coax	Coax	Connector*	Type
(B)GM-NC	12'	RG-58A/U	None	N/A
(B)GMML195-NC	12'	Pro-Flex™ Plus 195	None	N/A
(B)GM	12'	RG-58A/U	PL259*	Crimp
(B)GMBN	12'	RG-58/U	BNC	Crimp
(B)GMC	12'	RG-58/U	TNC	Crimp
(B)GMML195C	12'	Pro-Flex™ Plus 195	TNC	Crimp
BGMFFME	12'	RG-58/U	Female FME**	Crimp
(B)GMMSMA	12'	RG-58/U	Male SMA	Crimp
(B)GMPL	12'	RG-58/U	Mini-UHF	Crimp

For other cable types, lengths or connector configuration options, contact PCTEL Customer Service.



BGM



GM

G-AS Series

Black or Chrome All Surface Tape Mount; 3-1/4" diameter; 1-1/8"-18 thread

STANDARD CONFIGURATION

Model	Length of Coax	Coax	Connector*	Type
G-AS-NC	12'	RF-58A/U	None	N/A



G-AS-NC

* Connectors are shipped loose. Connectors may be attached upon request for an additional charge.** Connectors are attached on these models only.(R) prefix indicates an optional rubber boot(B) prefix indicates black optionFor other connector options, please refer to the Mobile Antenna Mounts Configurator Part Number Guide.

Thick Surface Mounts - BRASS "BMA" Series

3/8" or 3/4" hole; 1-1/8"-18 thread; installs from above; can be used for metal thickness up to 1/8"



BMA

STANDARD CONFIGURATION

Model	Length of Coax	Coax	Connector*	Type
BMA38**	17'	N/A	None	N/A
BMA-NC**	17'	RG-58/U	None	N/A
BMA	17'	RG-58/U	PL259	Solder
BMANCP	17'	RG-58/U	N	Crimp
BMAPL	17'	RG-58/U	Mini-UHF	Crimp

For other cable types, lengths or connector configuration options, contact PCTEL Customer Service.

Thick Surface Mounts - BMATM Series

3/8" or 3/4" hole; 1-1/8"-18 thread; thick plate; installs from below; can be used for metal thickness to 3/16"

STANDARD CONFIGURATION

Model	Length of Coax	Coax	Connector*	Type
BMATM-NC	17'	RG-58/U	None	N/A
BMATMML195NC	17'	Pro-Flex™ Plus 195	None	N/A
BMATM	17'	RG-58/U	PL259	Solder
BMATMCP	17'	RG-58/U	PL259	Crimp
BMATMC	17'	RG-58/U	TNC	Crimp
BMATM38	N/A	None	None	N/A



BMATM

For other cable types, lengths or connector configuration options, contact PCTEL Customer Service.

Thick Surface Mounts - K/KE794 Series

3/4" hole for up to 1/2" Thick Roof Thickness

STANDARD CONFIGURATION

Model	Length of Coax	Coax	Connector*
K794	17'	RG-58/U	None
KE794	30'	RG-58/U	None



K794 Series

For other cable types, lengths or connector configuration options, contact PCTEL Customer Service.

* Connectors are shipped loose. Connectors may be attached upon request for an additional charge
** This mount installs from below. For other connector options, please refer to the Mobile Antenna Mounts Configurator Part Number Guide.

Thick Surface Mounts - BMATM3 Series

3/8" hole; 1-1/8"-18 thread; thick plate; can be used for metal thickness of 1/32"-1/2"



STANDARD CONFIGURATION

Model	Length of Coax	Coax	Connector*	Type
BMATM338	N/A	None*	None	N/A
BMATM3-NC	17'	RG-58/U	None	N/A
BMATM3	17'	RG-58/U	PL259	Solder
BMATM3MSMA	17'	RG-58/U	Male SMA	Crimp
BMATM3PL	17'	RG-58/U	Mini-UHF	Crimp



BMATM338

For other cable types, lengths or connector configuration options, contact PCTEL Customer Service.

Thick Surface Mounts - MTPM Series

5/8" hole; 1-1/8"-18 thread; thick plate mount; can be used for metal thickness of up to 1 inch. MTPM800 accommodates thickness up to 1/2 inch.

STANDARD CONFIGURATION

Model	Coax	Connector*
MTPM	None*	UG363/U
MTPM800	None*	N Female



MTPM



MTPM800

Vandal Proof Mounts - MVP Series

1-1/8"-18 thread; crimp on

STANDARD CONFIGURATION

Model	Termination	Mount	Coax
MVPHP	N Female	5/8" hole vandal-proof permanent mount for frequencies from 0 MHz to 6 GHz. Accommodates surfaces up to 1/2-inch thick.	None. Purchase mating cable assembly separately
MMF-VP	Male SMA	5/8" hole vandal-proof mount for frequencies from 0 MHz to 6 GHz. Accommodates surfaces up to .09-inch thick.	None. Purchase mating cable assembly separately



MVPHP



MMF-VP

*Connectors are shipped loose. Connectors may be attached upon request for an additional charge. For other connector options, please refer to the Mobile Antenna Mounts Configurator Part Number Guide.

NMO Style Mounts - Brass "NMO" Series

Gold Contact Pin and Brass Nut Ring



3/4" hole; 1-1/8"-18 thread; installs from above; can be used for metal thickness to 0.046"

STANDARD CONFIGURATION

Model	Length of Coax	Coax	Connector*	Type
NMO58AU-NC	17'	RG-58A/U	None	N/A
NMO34	NA	N/A	NA	N/A
NMOPFP195-NC	17'	Pro-Flex™ Plus 195	None	N/A
NMO58U-NC	17'	RG-58/U	None	N/A
NMO58UBN	17'	RG-58/U	BNC	Crimp
NMO58UFFME	17'	RG-58/U	Female FME*	Crimp
NMOPFP195FFME	17'	Pro-Flex™ Plus 195	Female FME*	Crimp
NMOPFP195MSMA	17'	Pro-Flex™ Plus 195	Male SMA	Crimp
NMOPFP195RPC	17'	Pro-Flex™ Plus 195	Reverse Polarity TNC	Crimp
NMO58AUSP	17'	RG-58A/U	PL259	Solder
NMO58AUCP	17'	RG-58A/U	PL259	Crimp
NMO58UCP	17'	RG-58/U	PL259	Crimp
NMOPFP195C	17'	Pro-Flex™ Plus 195	TNC	Crimp
NMO58UC	17'	RG-58/U	TNC	Crimp
NMO58AUPL	17'	RG-58A/U	Mini-UHF	Crimp



NMO34

For other cable types, lengths or connector configuration options, contact PCTEL Customer Service.

NMO Style Mounts - Stainless Steel "SM" Series

3/4" hole; 1-1/8"-18 thread; installs from above; can be used for metal thickness to 0.46"

STANDARD CONFIGURATION

Model	Length of Coax	Coax	Connector*	Type
SM34	17'	N/A	None	N/A
SMC-NC	17'	RG-58/U	None	N/A
SM	17'	RG-58A/U	PL259	Solder
SMPL	17'	RG-58/U	Mini-UHF	Crimp
SMC	17'	RG-58/U	TNC	Crimp



SM

For other cable types, lengths or connector configuration options, contact PCTEL Customer Service.

* Connectors are attached on these models only. For all other models, connectors are shipped loose. Connectors may be attached upon request for an additional charge. For other connector options, please refer to the Mobile Antenna Mounts Configurator Part Number Guide.

Heavy-Duty Magnetic Mount Series

Black 3-1/4" diameter magnetic mount; 1-1/8"-18 thread

STANDARD CONFIGURATION

Model	Coax	Connector	Tab	Use with PCTEL Antenna Platforms
PCTMAG-HD	12-foot Pro-Flex Plus 195	Attached TNC Male	18-8 Stainless Steel	PCTCN Chrome Nut or BMAX Molded Coil Antennas
PCTMAG-HD-NT	12-foot Pro-Flex Plus 195	Attached TNC Male	-	PCTWSLMR, MHB and MUF Chrome Coil and MLPV Series

For other cable lengths and connector configuration options, contact PCTEL Customer Service.



PCTMAG-HD



PCTMAG-HD-NT

High Frequency Mounts

1-1/8"-18 thread; Crimp on

STANDARD CONFIGURATION

Model	Mount Type	Coax	Connector*
MMF	3/4" hole permanent microwave mount for frequencies from 0 MHz to 6.0 GHz. Accommodates thickness up to .06 inches.	None. Purchase mating cable assembly separately	Male SMA
MMF-VP	3/4" hole vandal-proof mount for frequencies from 0 GHz to 6 GHz. Accommodates surfaces up to .09-inch thick.	None. Purchase mating cable assembly separately	Male SMA
MLFML195C	3/4" hole permanent mount for frequencies from 0 MHz to 6.0 GHz. Accommodates thickness up to 0.046 inches.	17 ft. Pro-Flex™ Plus 195	Loose TNC Male standard. Contact customer service for other connector options.
GMLFML195C	Magnetic base mount for frequencies from 0 MHz to 6.0 GHz.	12 ft. Pro-Flex™ Plus 195	Attached TNC Male standard. Contact customer service for other connector options.
MLFPFP240C	3/4" hole permanent mount for frequencies from 0 MHz to 6.0 GHz. Accommodates thickness up to 0.046 inches.	17 ft. Pro-Flex™ Plus 240	Loose TNC Male standard. Contact customer service for other connector options.

For other cable lengths and connector configuration options, contact PCTEL Customer Service.



MMF



MMF-VP



MLFML195C



GMLFML195C

High Frequency Mounts For Thick Roof Surfaces

5/8" hole; 1-1/8"-18 thread; Crimp on

STANDARD CONFIGURATION

Model	Mount Type	Coax	Connector
MVPHF	Vandal-proof permanent mount for frequencies from 0 MHz to 6 GHz. Accommodates thickness up to 1/2-inch.	None. Purchase mating cable assembly separately	N Female



MVPHF

K Mounts

3/4" Hole Rooftop Mounts for 800 MHz "Male-Female Contact" Antennas



STANDARD CONFIGURATION

Model	Length of Coax	Coax	Connector*
K166M	17'	RG-58/U	Mini-UHF crimped
K166T	17'	RG-58/U	TNC Male crimped
KD166T	17'	Pro-Flex™ Plus 195	TNC Male crimped
KE166U	17'	Pro-Flex™ Plus 195	FME Female
KE166UMT	17'	Pro-Flex™ Plus 195	FME Female**



K166

3/8" Snap-In Rooftop Mount for Quarter Wave Antennas (sold in packs of 5 units each)

STANDARD CONFIGURATION

Model	Length of Coax	Coax	Connector
K44//5PCK	N/A	Sold Separately	None



K44//5PCK

(B)MBM Series

Black or chrome, 1-1/8"-18 thread; mirror bracket mount

STANDARD CONFIGURATION

Model***	Length of Coax	Coax	Connector*	Type
(B)MBM-NC	17'	RG-58A/U	None	N/A
MBMC-NC	17'	RG-58/U	None	N/A
(B)MBM	17'	RG-58A/U	PL259	Solder
(B)MBMC	17'	RG-58/U	TNC	Crimp
(B)MBMPL	17'	RG-58/U	Mini-UHF	Crimp



BMBM MOUNTS

For other cable types, lengths or connector configuration options, contact PCTEL Customer Service.

* Connectors are shipped loose. Connectors may be attached upon request for an additional charge

** Plus MINI-UHF to FME and TNC to FME adapter loose

*** (B) prefix indicates black option



TGBWP Series

1-1/8"-18 thread; trunk/hood groove bracket mount

STANDARD CONFIGURATION

Model	Length of Coax	Coax	Connector*	Cable Exit Angle	Type
TGBWP45C-NC	17'	RG-58/U	None	45°	N/A
TGBWP45PL	17'	RG-58/U	Mini-UHF	45°	Crimp
TGBWP45FFME	17'	RG-58/U	Female FME*	45°	Crimp



TGBWP45

T Series

1-1/8"-18 thread mount; trunk lid mount

STANDARD CONFIGURATION

Model	Length of Coax	Coax	Connector*	Type
TTT	NA	None	None	N/A
T-NC	17'	RG-58A/U	None	N/A
TC-NC	17'	RG-58/U	None	N/A
T	17'	RG-58A/U	PL259	Solder
TC	17'	RG-58/U	TNC	Crimp
TPL	17'	RG-58/U	Mini-UHF	Crimp



T

BMT Series

Black 1-1/8"-18 thread; all metal trunk lid mount; 17' RG-58/U or RG-58A//U cable options.

For other cable lengths and connector configuration options, contact PCTEL Customer Service.



BMT

* Connectors are shipped loose. Connectors may be attached upon request for an additional charge. For other connector options, please refer to the Mobile Antenna Mounts Configurator Part Number Guide.

Slender Dual Carrier GNSS Multi-Band Antenna, 5G & 4G LTE with 802.11ax



The Trooper™ II dual-carrier antenna platform supports the high speed requirements of complex RF communication systems used for Intelligent Transportation Systems (ITS), and Critical Communications applications. These antennas feature four 5G elements compatible with the world's leading multi-carrier cellular routers that support 600 MHz to 6 GHz frequencies. The platform also incorporates 802.11ax Wi-Fi MIMO connectivity, with four dual band 2.4/5 GHz Wi-Fi elements supporting DSRC 5.99 GHz applications. In addition, PCTEL's proprietary high-rejection multi-GNSS technology is included for high precision tracking and asset management.

Features

- Slender 4.6-inch footprint ideal for installations with limited surface space
- Metal 1-inch stud mount with slotted jam nut provides single cable exit for easier installation and/or antenna replacement
- IP67 compliant design provides maximum protection against water or dust ingress
- Built-in ground plane for maximum placement flexibility
- Proprietary high rejection filtering allows wide-band coverage while achieving superior out-of-band rejection for all GNSS frequencies superior out-of-band rejection for all GNSS frequencies
- Meets AAR certification requirements for rail applications



GL9X1AX-TRB

STANDARD CONFIGURATION

Model	Elements	Cable	Connectors	Mounting Method	Housing Color
GL9X1AX-TRB	LTE (All Ports)	Four 2-ft RG-316	SMA Plug (Male)	1-inch OD, 3/4-inch long (.75") zinc stud mount with jam nut	Black
GL9X1AX-TRW	Wi-Fi (All Ports)	Four 2-ft RG-316	SMA Plug (Male)		White
	GNSS	One 2-ft RG-316	SMA Plug (Male)		

ELECTRICAL SPECIFICATIONS - RF ANTENNAS

Elements	F1	F2	SWR**	Gain (dB)*			Efficiency*		Polarization	Nominal Impedance	Maximum Power
				Max	Typical	Range (±)	Avg	Range (±)			
LTE Primary (1&3)	617	698	2.9	1.9	1.5	0.5	51%	2%	Linear	50 ohms	25 watts
	698	802	2.0	3.0	2.0	1.2	54%	6%			
	824	894	1.7	3.0	2.6	0.1	58%	1%			
	880	960	1.8	3.1	2.6	0.6	56%	1%			
	1710	2200	1.9	4.5	3.9	0.8	48%	3%			
	2300	2690	1.6	4.4	4.0	0.4	47%	1%			
	3400	4200	2.0	5.0	4.5	0.7	27%	2%			
	5150	5950	2.0	5.2	3.6	1.6	35%	2%			
LTE Secondary (2&4)	617	698	5.1	0.5	-6	1.8	29%	12%			
	733	802	2.3	2.0	1.0	1.4	46%	6%			
	824	894	2.9	1.2	1.0	0.8	48%	5%			
	880	960	4.0	1.2	1.0	2.2	37%	6%			
	1805	2200	2.0	5.2	4.1	1.1	41%	4%			
	2300	2690	1.8	5.0	4.8	0.4	40%	4%			
	3400	4200	1.4	5.7	4.7	1.4	29%	4%			
	5150	5950	2.0	6.4	5.0	1.4	43%	4%			
Wi-Fi-V	2400	2500	1.3	2.9	2.6	0.3	46%	1%			
	4900	5900	1.7	4.4	3.4	1.0	33%	3%			
Wi-Fi-H	2400	2500	1.3	2.8	2.3	0.5	48%	1%			
	4900	5900	1.9	3.2	1.9	1.3	31%	6%			

* Gain and efficiency measured with 2-ft RG-316 cables and no ground plane. A 2-ft ground plane would increase average gain values by approximately 0.5 dB.

** Typical SWR measured with 2-ft RG-316 cables and no ground plane.

Slender Dual Carrier GNSS Multi-Band Antenna, 5G & 4G LTE with 802.11ax



ELECTRICAL SPECIFICATIONS - RF ANTENNAS, continued

Minimum Isolation (dB)***

Elements	LTE Primary (1&3)		LTE Secondary (2&4)		Wi-Fi	
LTE Primary (1&3)	600-960 MHz	15.0	600-960 MHz	13.0	617-960 MHz	25.0
	1.71-2.7 GHz	20.0	1.71-2.7 GHz	18.0	1.71-2.7 GHz	20.0
	3.4-4.2 GHz	40.0	3.4-4.2 GHz	25.0	3.3-5.9 GHz	25.0
	5.15-5.95 GHz	45.0	5.15-5.95 GHz	35.0		
LTE Secondary (2&4)			600-960 MHz	15.0	617-960 MHz	25.0
			1.71-2.7 GHz	20.0	1.71-2.7 GHz	17.0
			3.4-4.2 GHz	20.0	3.3-5.9 GHz	25.0
			5.15-5.95 GHz	35.0		
Wi-Fi					2.4-2.5 GHz	15.0
					4.9-5.9 GHz	30.0

ELECTRICAL SPECIFICATIONS - GNSS ANTENNA

Frequency Band	Amplifier Gain	Output VSWR	DC Current	DC Voltage	Noise Figure:	Out-of-Band Rejection:
1565-1608 MHz	@ 3.0 VDC: 26 dB (typical)	2.0:1 (maximum)	25 mA (typical)	2.8-6.0 V (operating) ≤ 12.0 V (survivability)	< 2.0 dB (typical)	f ₀ = 1586 MHz f ₀ ± 50 MHz: ≥ 60 dBc f ₀ ± 60 MHz: ≥ 70 dBc

ELECTRICAL SPECIFICATIONS - GNSS ANTENNA

Frequency Band	Nominal Gain	Polarization	Nominal Impedance
1565-1608 MHz	3 dBic @ 90° -2 dBic @ 20°	Right hand circular	50 ohms

MECHANICAL SPECIFICATIONS AND ENVIRONMENTAL SPECIFICATIONS (ALL MODELS)

Dimensions (L x W x H)	Weight	Housing Material	Temperature Range	Gasket Design & Construction
10.5 x 4.6 x 3.5 in (267 x 117 x 90 mm)	2 lbs (.91 kg)	UV-Stable Rugged Thermoplastics	-40°C to +85°C	Contour matching, conformable, thermoplastic-elastomer gasket designed to seal between radome and baseplate. Gasket flexes and conforms to contoured surfaces. Baseplate has a 3M™ VHB mounting pad for anti-rotation.

***Measured with 2-ft RG-316 cables and no ground plane



Multi-Band LTE MIMO & 802.11ac Antennas with High Rejection GPS/GLONASS, Compact Footprint

The Trooper™ antenna platform supports the high speed requirements of complex RF communication systems used for Intelligent Transportation Systems (ITS), and IIoT applications. Its compact footprint makes this antenna ideal for installation on surfaces with limited surface space, including leading public safety vehicle rooftops and Industrial IoT (IIoT) cabinet installations. These antennas feature two 5G elements compatible with the world's leading cellular routers supporting 600 MHz to 6 GHz frequencies. In addition, PCTEL's proprietary high-rejection multi GNSS technology is included for high precision tracking and asset management.



GLHPDLTE-LTB and
GLHPDLTE-LTW

Features

- No tune, multi-band coverage: dual LTE, 802.11ac Wi-Fi and GPS L1/GLONASS frequencies
- Metal 3/4-inch stud mount with slotted jam nut provides single cable exit for easier installation and/or antenna replacement
- IP67 compliant design provides maximum protection against water or dust ingress under severe environmental conditions*
- UV-resistant black or white housing options complement most vehicular aesthetic requirements
- Meets AAR certification requirements for rail applications

STANDARD CONFIGURATION

Model	Cable	Connector**	Mount	Housing Color
GLHPDLTE-LTB	Two-17 feet Pro-Flex™ Plus 195 (LTE) One-17 feet RG-174/U (GNSS)	SMA Plug (LTE) SMA Plug (GNSS)	1-inch hole, 3/4-inch long (.75") zinc stud mount with jam nut	Black
GLHPDLTE-LTW	Two-17 feet Pro-Flex™ Plus 195 (LTE) One-17 feet RG-174/U (GNSS)	SMA Plug (LTE) SMA Plug (GNSS)	1-inch hole, 3/4-inch long (.75") zinc stud mount with jam nut	White
GLHPDLTEMIMO-LTB	Two-17 feet Pro-Flex™ Plus 195 (LTE) Two-17 feet Pro-Flex™ Plus 195 (802.11ac Wi-Fi) One-17 feet RG-174/U (GNSS)	SMA Plug (LTE) Reverse Polarity SMA Plug (Wi-Fi) SMA Plug (GNSS)	1-inch hole, 3/4-inch long (.75") zinc stud mount with jam nut	Black
GLHPDLTEMIMO-LTW	Two-17 feet Pro-Flex™ Plus 195 (LTE) Two-17 feet Pro-Flex™ Plus 195 (802.11ac Wi-Fi) One-17 feet RG-174/U (GNSS)	SMA Plug (LTE) Reverse Polarity SMA Plug (Wi-Fi) SMA Plug (GNSS)	1-inch hole, 3/4-inch long (.75") zinc stud mount with jam nut	White
GLHPDM3-LTB	Two-17 feet Pro-Flex™ Plus 195 (LTE) Three-17 feet Pro-Flex™ Plus 195 (802.11ac Wi-Fi) One-17 feet RG-174/U (GNSS)	SMA Plug (LTE) Reverse Polarity SMA Plug (Wi-Fi) SMA Plug (GNSS)	1-inch hole, 3/4-inch long (.75") zinc stud mount with jam nut	Black
GLHPDM3-LTW	Two-17 feet Pro-Flex™ Plus 195 (LTE) Three-17 feet Pro-Flex™ Plus 195 (802.11ac Wi-Fi) One-17 feet RG-174/U (GNSS)	SMA Plug (LTE) Reverse Polarity SMA Plug (Wi-Fi) SMA Plug (GNSS)	1-inch hole, 3/4-inch long (.75") zinc stud mount with jam nut	White

* If installed according to PCTEL's installation instructions ** Consult Customer Service for other connector options

Multi-Band LTE MIMO & 802.11ac Antennas with High Rejection GPS/GLONASS, Compact Footprint



ELECTRICAL SPECIFICATIONS - RF ANTENNAS

Elements	F1 (MHz)	F2 (MHz)	SWR***	Gain (dB)****			Efficiency****		Polarization	Nominal Impedance	Maximum Power
				Max	Typical	Range (±)	Avg	Range (±)			
LTE Primary (1&2)	617	698	2.2	4.0	2.2	1.8	54%	19%	Linear	50 ohms	50 watts
	698	802	1.6	5.0	4.0	0.9	68%	5%			
	824	960	1.4	5.5	4.3	1.2	61%	5%			
	1710	2200	1.4	6.5	5.5	0.9	78%	3%			
	2300	2690	1.5	8.8	6.8	1.9	78%	4%			
	3400	3800	1.8	6.8	6.1	0.7	73%	3%			
	5150	5950	1.4	10.1	8.6	1.5	81%	13%			
Wi-Fi	2400	2500	1.2	9.4	9.0	0.4	81%	3%			
	4900	5900	1.4	9.4	8.9	0.5	70%	12%			

ELECTRICAL SPECIFICATIONS - RF ANTENNAS, continued

Minimum Isolation (dB)***

Elements	LTE Primary (1&2)		Wi-Fi	
LTE Primary (1&2)	617-960 MHz		698-960 MHz	20.0
	1.71-2.7 GHz		1.71-2.7 GHz	17.0
	3.3-3.59 GHz		3.3-5.9 GHz	35.0
Wi-Fi			2.4-2.5 GHz	21.0
			4.9-5.9 GHz	27.0

ELECTRICAL SPECIFICATIONS - GNSS ANTENNA

Frequency Range	Amplifier Gain	Nominal Impedance	Output VSWR	DC Current	DC Voltage	Noise Figure
1565-1608 MHz	@ 3.0 VDC: 26 dB (typical)	50 ohms	2.0:1 (maximum)	25 mA (typical)	2.8-6.0 V (operating) ≤ 12.0 V (survivability)	< 2.0 dB (typical)

ELECTRICAL SPECIFICATIONS - GNSS ANTENNA, continued

Out-of-Band Rejection	Nominal Gain	Polarization
$f_0 = 1586 \text{ MHz} / f_0 \pm 50 \text{ MHz}: \geq 60 \text{ dBc} / f_0 \pm 60 \text{ MHz}: \geq 70 \text{ dBc}$	3 dBic @ 90° / -2 dBic @ 20°	Right hand circular

MECHANICAL SPECIFICATIONS

Dimensions (W x H)	Weight	Radome Construction	Operating/Storage Temperature	Gasket Design & Construction
4.05 W x 3.46 H in (10.3 x 8.8 cm)	2.3 lbs (3-port models) 2.9 lbs (5-port models) 3.1 lbs (6-port models)	UV-Stable Rugged Thermoplastics	-40°C to +85°C	Contour matching, conformable, thermoplastic-elastomer gasket designed to seal between radome and baseplate. Gasket flexes and conforms to contoured surfaces. Baseplate has a 3M™ VHB mounting pad for anti-rotation.

*** SWR and isolation measured with 17-ft cables and 2-ft ground plane **** Gain and efficiency measured with no cable and 2-ft ground plane.
3M is a registered trade mark of 3M Company.



Low-Profile Multi-Band LTE MIMO & 802.11ac Antenna with High Rejection GPS/GLONASS

This Trooper™ antenna provides optimal 4G LTE and dual-band 802.11ac Wi-Fi coverage in a single, extra low-profile housing. Its compact footprint makes this antenna ideal for installation on surfaces with limited surface space, including leading public safety vehicle rooftops and many machine-to-machine applications. The antenna also incorporates PCTEL's proprietary high rejection GNSS technology for optimal performance and support of carrier voice and data networks.



GLHPDLTEMIMO-LTB-S

Features

- No tune, multi-band coverage: dual 4G LTE, 802.11ac Wi-Fi and GPS/GLONASS frequencies
- Metal 3/4-inch stud mount with slotted jam nut provides single cable exit for easier installation and/or antenna replacement
- IP67 compliant design provides maximum protection against water or dust ingress under severe environmental conditions*
- Extra low-profile, UV-resistant black or white housing options complement most vehicular aesthetic requirements

STANDARD CONFIGURATION

Model	Cable	Connector	Mount	Housing Color
GLHPDLTEMIMO-LTB-S	Two-17 feet Pro-Flex™ Plus 195 (4G LTE) Two-17 feet Pro-Flex™ Plus 195 (802.11ac Wi-Fi) One-17 feet RG-174/U (GNSS)	SMA Plug (LTE) Reverse Polarity SMA Plug (Wi-Fi) SMA Plug (GNSS)	1-inch hole, 3/4-inch long (.75") zinc stud mount with jam nut	Black

ELECTRICAL SPECIFICATIONS - RF ANTENNA

Model	Elements	Operating Frequencies	Polarization
GLHPDLTEMIMO-LTB-S	4G LTE Elements (2 each) Wi-Fi Elements (2 each)	698-960 MHz/1710-2700 MHz 2.4-2.5 GHz/4.9-5.9 GHz	Vertical, linear

ELECTRICAL SPECIFICATIONS - RF ANTENNA, continued

Model	Nominal Impedance	Gain** (typical)	Maximum Power	VSWR***
GLHPDLTEMIMO-LTB-S	50 ohms	2.5 dBi 3-4 dBi	50 watts	< 2.2:1 < 2.0:1

ELECTRICAL SPECIFICATIONS - GNSS ANTENNA

Frequency Range	Amplifier Gain	Nominal Impedance	Output VSWR	DC Current	DC Voltage	Noise Figure
1565-1608 MHz	@ 3.0 VDC: 26 dB (typical)	50 ohms	2.0:1 (maximum)	25 mA (typical)	2.8-6.0 V (operating) ≤ 12.0 V (survivability)	< 2.0 dB (typical)

* If installed according to PCTEL's installation instructions ** Measured on a 4-foot diameter ground plane. Gain value is measured at the base of the antenna (no cable loss included). *** VSWR < 2:1 across all bands when measured on 1-ft diameter ground plane with 17-ft cable. When measured on 1-ft diameter ground plane with 1-ft cable, VSWR < 2:1 698-960MHz, <2:1 1710-2170MHz, and < 2.5:1 2300-2700MHz.

Low-Profile Multi-Band LTE MIMO & 802.11ac Antenna with High Rejection GPS/GLONASS



ELECTRICAL SPECIFICATIONS - GNSS ANTENNA, continued

Out-of-Band Rejection	Nominal Gain	Polarization
$f_0 = 1586 \text{ MHz} / f_0 \pm 50 \text{ MHz}: \geq 60 \text{ dBc} / f_0 \pm 60 \text{ MHz}: \geq 70 \text{ dBc}$	3 dBic @ 90° / -2 dBic @ 20°	Right hand circular

MECHANICAL SPECIFICATIONS

Dimensions (W x H)	Radome Construction	Operating/Storage Temperature	Gasket Design & Construction
4.05 W x 2.76 H in (10.3 x 7.0 cm)	UV-Stable Rugged Thermoplastics	-40°C to +85°C	Contour matching, conformable, thermoplastic-elastomer gasket designed to seal between radome and baseplate. Gasket flexes and conforms to contoured surfaces. Baseplate has a 3M™ VHB mounting pad for anti-rotation.



Multi-Band Bluetooth/Wi-Fi Antenna with Proprietary High Rejection GPS/GLONASS, Compact Footprint

The GLMBWIFI-QMA provides Bluetooth/Wi-Fi coverage and asset tracking support for public safety vehicles requiring a rugged and lower profile antenna solution for their Wi-Fi hot-spot networks. The GLMBWIFI-QMA features a shorter housing for installations with height clearance limitations, such as public safety motorcycles. When properly installed, this antenna is IP67 compliant for maximum protection against water or dust ingress under severe environmental conditions. The antenna's low loss coax cables are terminated with Male QMA connectors but other connector options and cable lengths are available upon request.

Features

- No tune, dual-band 2.4/5 GHz Wi-Fi and Bluetooth coverage with high rejection GPS L1/GLONASS
- Metal 3/4-inch stud mount with slotted jam nut provides single cable exit for easier installation and/or antenna replacement
- IP67 compliant design provides maximum protection against water or dust ingress under severe environmental conditions*
- Low-profile, UV-resistant housing for low overhead clearance applications



GLMBWIFI-QMA antenna with cables

STANDARD CONFIGURATION

Model	Cable	Connector**	Mount	Housing Color
GLMBWIFI-QMA	One-17 feet PFP240 (BT/Wi-Fi) One-17 feet PFP100 (GNSS)	QMA Plug (BT/Wi-Fi) QMA Plug (GNSS)	1-inch hole, 3/4-inch long (.75") zinc stud mount with jam nut	Black

ELECTRICAL SPECIFICATIONS - RF ANTENNA

Model	Elements	Operating Frequencies	Polarization	Nominal Impedance	Gain***	Maximum Power	VSWR****
GLMBWIFI-QMA	Wi-Fi Element	2.4-2.5 GHz / 4.9-5.9 GHz	Vertical, linear	50 ohms	3.5 dBi 3.2 dBi	50 watts	< 2.0:1 < 2.0:1

* If installed according to PCTEL's installation instructions.

** Consult Customer Service for other connector options.

***Peak gain measured in an anechoic setup/open space with no interference, with the antenna mounted on a 36" diameter ground plane. Measured gain is corrected for the appropriate cable loss.

****Measured in an anechoic setup/open space with no interference, with the antenna mounted on a 36" diameter ground plane.



Multi-Band Bluetooth/Wi-Fi Antenna with Proprietary High Rejection GPS/ GLONASS, Compact Footprint

ELECTRICAL SPECIFICATIONS - GNSS ANTENNA

Frequency Range	Amplifier Gain	Nominal Impedance	Output VSWR	DC Current	DC Voltage	Noise Figure
1565-1608 MHz	@ 3.0 VDC: 26 dB (typical)	50 ohms	2.0:1 (maximum)	25 mA (typical)	2.8-6.0 V (operating) ≤ 12.0 V (survivability)	< 2.0 dB (typical)

ELECTRICAL SPECIFICATIONS - GNSS ANTENNA, continued

Out-of-Band Rejection	Nominal Gain	Polarization
$f_0 = 1586 \text{ MHz} / f_0 \pm 50 \text{ MHz}: \geq 60 \text{ dBc} / f_0 \pm 60 \text{ MHz}: \geq 70 \text{ dBc}$	3 dBic @ 90° / -2 dBic @ 20°	Right hand circular

MECHANICAL SPECIFICATIONS

Dimensions (W x H)	Radome Construction	Operating/Storage Temperature	Gasket Design & Construction
4.05 W x 4.7 L x 2.75 H in (10.3 x 7 x 11.9 cm)	UV-Stable Rugged Thermoplastics	-40°C to +85°C	Contour matching, conformable, thermoplastic-elastomer gasket designed to seal between radome and baseplate. Gasket flexes and conforms to contoured surfaces. Baseplate has a 3M™ VHB mounting pad for anti-rotation.

3M is a trademark of 3M Company.



GNSS L1 L2 L5 Multi-Band Antenna, Dual-Port 4G LTE and 802.11ac MIMO

PCTEL's GL125-DLTEMIMO-SM multi-band antenna meets the stringent requirements of complex RF communication systems in rail transportation applications.

This antenna features two diversity 4G LTE elements that facilitate the high-speed data transmissions needed in dense RF environments used for Positive Train Control (PTC) networks. The platform also incorporates dual band 802.11ac Wi-Fi MIMO connectivity with two Wi-Fi elements. PCTEL's proprietary high-rejection, multi-constellation GNSS L1 L2 L5 technology is also included for high precision location tracking.

Features

- Full Multi-GNSS compatibility, covering global GNSS Systems: 1150-1290 MHz (GPS L2/L5; GALILEO E5A/E5B/E6; GLONASS L2/L3; BEIDOU B2/B3); 1500-1615 MHz (GPS L1; GALILEO E1; GLONASS L1; BEIDOU B1/B1-2)
- AAR Compliant
- Metal 1-inch stud mount with slotted jam nut provides single cable exit for easier installation and/or antenna replacement
- IP67 compliant design provides maximum protection against water or dust ingress under severe environmental conditions (when installed on sealed surface)
- Proprietary high rejection filtering allows wide-band coverage while achieving superior out-of-band rejection for all GNSS frequencies



STANDARD CONFIGURATION

Model	Elements	Cable	Connectors	Mounting Method
GL125-DLTEMIMO	4G LTE (All Ports) Wi-Fi (All Ports) GNSS	Two 2-ft RG-316 Two 2-ft RG-316 One 2-ft RG-316	SMA Male RP SMA Male SMA Male	1-inch OD, 3/4-inch long (.75") zinc stud mount with jam nut (all models)

ELECTRICAL SPECIFICATIONS - RF ANTENNAS

Elements	Frequency Range (MHz)	Max SWR*	Gain (dB)*		Efficiency*	Polarization	Nominal Impedance	Maximum Power
			Max	(Typ. ± Range)	(Avg. ± Range)			
LTE	600-698	< 3.5	2.5	1.5 ± 1.1	55% ± 7%	Linear, Vertical	50 ohms	25 watts
	698-802	< 3.0	2.5	2.0 ± 0.5	55% ± 10%			
	824-960	< 2.5	1.8	1.4 ± 0.9	55% ± 10%			
	1710-2200	< 2.5	5.5	3.5 ± 2.0	65% ± 11%			
	2300-2690	< 2.0	6.2	5.1 ± 0.6	68% ± 9%			
	3400-3800	< 2.0	4.1	3.1 ± 1.0	55% ± 15%			
Wi-Fi	2400-2500	< 2.0	5.0	2.7 ± 2.2	65% ± 5%	Linear, Vertical	50 ohms	25 watts
	4900-5925	< 2.5	6.0	4.0 ± 2.0	45% ± 25%			

*Measured with 3-ft cables without a ground plane

GNSS L1 L2 L5 Multi-Band Antenna, Dual-Port 4G LTE and 802.11ac MIMO



ELECTRICAL SPECIFICATIONS - RF ANTENNAS, continued

Minimum Isolation (dB)

Elements	LTE Primary (1&3)		Wi-Fi	
LTE	600-960 MHz	11.5	600-960 MHz	20.0
	1.71-2.7 GHz	23	1.71-2.7 GHz	17.0
	3.3-3.8 GHz	24	3.3-5.9 GHz	35.0
Wi-Fi			2.4-2.5 GHz	19.0
			4.9-5.9 GHz	30.0

ELECTRICAL SPECIFICATIONS - GNSS ANTENNA (ALL GNSS BANDS)

Frequency Range (MHz)	LNA Gain	Nominal Impedance	Polarization	ESD	VSWR	Noise Figure	DC Voltage	DC Current	Out-of-Band Rejection:
1150-1290 MHz 1500-1615 MHz	28dB ±3 dB	50 ohms	Right Hand Circular	>15kV	< 3.0 (L2-L5 bands) < 2.5 (L1 band)	3.0 dB (typical)	2.5-12.0 VDC	37mA (typical) <50mA (max.)	<1050MHz >80 dB <1450MHz >70 dB <1125MHz >30 dB >1690MHz >30 dB >1350MHz >70 dB >1730MHz >80 dB

ELECTRICAL SPECIFICATIONS - GNSS ANTENNA

Band	Gain @ 10° Elevation	Gain @ 90° Elevation	Axial Ratio @ 90° Elevation
GPS L1	-5 dBic	2 dBic	≤ 2.5 dB
GPS L2	-6 dBic	3 dBic	
GPS L5	-7 dBic	1 dBic	
GLONASS L1	-7 dBic	0 dBic	
GLONASS L2	-8 dBic	0 dBic	
GLONASS L3	-4 dBic	3 dBic	
GALILEO E1	-5 dBic	2 dBic	
GALILEO E5	-4 dBic	3 dBic	
GALILEO E6	-4 dBic	3 dBic	
BEIDOU B1	-4 dBic	3 dBic	
BEIDOU B1-2	-4 dBic	3 dBic	
BEIDOU B2	-5 dBic	2 dBic	
BEIDOU B3	-8 dBic	0 dBic	

MECHANICAL SPECIFICATIONS AND ENVIRONMENTAL SPECIFICATIONS (ALL MODELS)

Dimensions	Weight	Housing Material	Temperature Range
5.1 x 3.6 in (130 x 92 mm)	2.3 lbs (1.04 kg)	Black, UV-Stable Rugged Thermoplastics	-40°C to +85°C

Dual Carrier GNSS Multi-Band Antenna, 5G & 4G LTE with 802.11ax



The Coach™ II dual-carrier antenna platform supports the high speed requirements of complex RF communication systems used for Intelligent Transportation Systems (ITS), and IIoT applications. These antennas feature four 5G elements compatible with the world's leading multi-carrier cellular routers that support 600 MHz to 6 GHz frequencies. The platform also incorporates 802.11ax Wi-Fi MIMO connectivity, with four dual band 2.4/5 GHz Wi-Fi elements supporting DSRC 5.99 GHz applications. In addition, PCTEL's proprietary high-rejection multi-GNSS technology is included for high precision tracking and asset management.



Coach™ II

Features

- Metal 1-inch stud mount with slotted jam nut provides single cable exit for easier installation and/or antenna replacement
- IP67 compliant design provides maximum protection against water or dust ingress under severe environmental conditions (when installed on sealed surface)
- Proprietary high rejection filtering allows wide-band coverage while achieving superior out-of-band rejection for all GNSS frequencies
- Meets AAR certification requirements for rail applications

STANDARD CONFIGURATION

Model	Elements	Cable	Connectors	Mounting Method
GL9X1AX-SF	LTE (All Ports) Wi-Fi (All Ports) GNSS	Four-17 feet (2-ft RG-316/15-ft Pro-Flex™ Plus 195) Four-17 feet (2-ft RG-316/15-ft Pro-Flex™ Plus 195) One-17 feet RG-316	SMA Plug (Male) Reverse Polarity SMA Plug (Male) SMA Plug (Male)	1-inch OD, 3/4-inch long (.75") zinc stud mount with jam nut (all models)
GL7X1AX-SF	LTE (All Ports) Wi-Fi (All Ports) GNSS	Four-17 feet (2-ft RG-316/15-ft Pro-Flex™ Plus 195) Two-17 feet (2-ft RG-316/15-ft Pro-Flex Plus 195) One-17 feet RG-316	SMA Plug (Male) Reverse Polarity SMA Plug (Male) SMA Plug (Male)	
GL4X4-SF-PLK	LTE (All Ports) GNSS	Four-17 feet (2-ft RG-316/15-ft Pro-Flex™ Plus 195) One-17 feet RG-316	SMA Plug (Male) SMA Plug (Male)	

ELECTRICAL SPECIFICATIONS - RF ANTENNAS

Elements	F1	F2	SWR**	Gain (dB)*			Efficiency*		Polarization	Nominal Impedance	Maximum Power
				Max	Typical	Range (±)	Avg	Range (±)			
LTE Primary (1&3)	617	698	2.5	-0.2	-0.9	0.7	33%	3%	Linear	50 ohms	25 watts
	698	802	1.9	1.1	-0.3	1.4	34%	6%			
	824	960	2.0	2.1	0.6	1.6	36%	4%			
	1710	2200	1.6	4.4	2.6	1.9	31%	3%			
	2300	2690	1.4	4.8	2.7	2.1	29%	2%			
	3400	3800	1.4	4.7	2.5	2.2	26%	1%			
	5150	5950	1.3	5.8	1.9	3.9	16%	3%			
LTE Secondary (2&4)	617	698	3.4	-1.4	-3.0	1.6	16%	8%			
	733	802	2.0	0.0	-1.0	0.9	31%	4%			
	824	960	2.7	0.0	-1.6	1.5	28%	8%			
	1805	2200	1.6	1.7	0.9	0.8	29%	4%			
	2300	2690	2.0	1.5	-0.5	2.0	20%	6%			
	3400	3800	1.9	2.2	0.4	1.8	20%	3%			
	5150	5950	1.4	2.6	1.3	1.4	16%	1%			
Wi-Fi	2400	2500	1.3	9.1	7.2	1.9	74%	4%			
	4900	5900	1.5	11.4	9.1	2.3	59%	14%			

* Gain and efficiency measured with no cable and no ground plane ** SWR measured with 17-ft cables and no ground plane

GNSS Multi-Band Antenna, Multi-Port 4G LTE and 802.11ac MIMO Connectivity



ELECTRICAL SPECIFICATIONS - RF ANTENNAS, continued

Minimum Isolation (dB)***

Elements	LTE Primary (1&3)		LTE Secondary (2&4)		Wi-Fi	
LTE Primary (1&3)	617-960 MHz	14.0	698-960 MHz	14.0	698-960 MHz	20.0
	1.71-2.7 GHz	25.0	1.71-2.7 GHz	25.0	1.71-2.7 GHz	17.0
	3.3-3.59 GHz	35.0	3.3-3.59 GHz	27.0	3.3-5.9 GHz	35.0
LTE Secondary (2&4)			698-960 MHz	18.0	698-960 MHz	22.0
			1.71-2.7 GHz	30.0	1.71-2.7 GHz	16.0
			3.3-3.59 GHz	32.0	4.9-5.9 GHz	32.0
Wi-Fi					2.4-2.5 GHz	25.0
					4.9-5.9 GHz	32.0

ELECTRICAL SPECIFICATIONS - GNSS ANTENNA

Frequency Band	Amplifier Gain	Output VSWR	DC Current	DC Voltage	Noise Figure:	Out-of-Band Rejection:
1565-1608 MHz	@ 3.0 VDC: 26 dB (typical)	2.0:1 (maximum)	25 mA (typical)	2.8-6.0 V (operating) ≤ 12.0 V (survivability)	< 2.0 dB (typical)	f ₀ = 1586 MHz f ₀ ± 50 MHz: ≥ 60 dBc f ₀ ± 60 MHz: ≥ 70 dBc

ELECTRICAL SPECIFICATIONS - GNSS ANTENNA

Frequency Band	Nominal Gain	Polarization	Nominal Impedance
1565-1608 MHz	3 dBic @ 90° -2 dBic @ 20°	Right hand circular	50 ohms

MECHANICAL SPECIFICATIONS AND ENVIRONMENTAL SPECIFICATIONS (ALL MODELS)

Dimensions (L x W x H)	Weight (9 ports)	Housing Material	Temperature Range	Gasket Design & Construction
6.93 x 6.09 x 3.01 in (176.0 x 154.8 x 76.5 mm)	4.8 lbs (2.2 kg)	Black or White;**** UV-Stable Rugged Thermoplastics	-40°C to +85°C	Contour matching, conformable, thermoplastic-elastomer gasket designed to seal between radome and baseplate. Gasket flexes and conforms to contoured surfaces. Baseplate has a 3M™ VHB mounting pad for anti-rotation.

*** Isolation measured with 17-ft cables and no ground plane **** For black radome, order P/N GL9X1AX-SF; for white radome, order P/N GL9X1AX-SFW.



GNSS Multi-Band Antennas, 5G & 4G Dual LTE with 802.11ac

The Coach™ multi-band antenna platform supports the high speed requirements of complex RF communication systems used for Intelligent Transportation Systems (ITS), and IIoT applications. These antennas feature two 5G elements compatible with the world's leading cellular routers that support 600 MHz to 6 GHz frequencies. The platform also incorporates 802.11ac Wi-Fi MIMO connectivity, with dual band 2.4/5 GHz Wi-Fi elements supporting DSRC 5.99 GHz applications. In addition, PCTEL's proprietary high-rejection multi GNSS technology is included for high precision tracking and asset management.

Features

- No tune, multi-band coverage
- Metal 1-inch stud mount with slotted jam nut provides single cable exit for easier installation and/or antenna replacement
- IP67 compliant design provides maximum protection against water or dust ingress under severe environmental conditions*
- UV-resistant black or white housing options complement most vehicular aesthetic requirements
- Proprietary filtering design allows wideband coverage while achieving superior out-of-band rejection for GPS/GLONASS



GLHPDLTEMIMO-SF (left)
BGLHPDLTEMIMO-SF (right)

STANDARD CONFIGURATION

Model	Cable	Connectors	Mounting Method
GLHPDLTEMIMO-SF	Two-17 feet Pro-Flex™ Plus 195 (LTE Elements) Two-17 feet Pro-Flex™ Plus 195 (802.11ac Wi-Fi Elements) One-17 feet RG-174/U (GNSS Element)	SMA Plug (LTE) Reverse Polarity SMA Plug (Wi-Fi) SMA Plug (GNSS)	1-inch OD, 3/4-inch long (.75") zinc stud mount with jam nut (all models)
GLHPDLTE-SF	Two-17 feet Pro-Flex™ Plus 195 (LTE Elements) One-17 feet RG-174/U (GNSS Element)	SMA Plug (LTE) SMA Plug (GNSS)	
GLHPDM3-SF	Two-17 feet Pro-Flex™ Plus 195 (LTE Elements) Three-17 feet Pro-Flex™ Plus 195 (802.11ac Wi-Fi Elements) One-17 feet RG-174/U (GNSS Element)	SMA Plug (LTE) Reverse Polarity SMA Plug (Wi-Fi) SMA Plug (GNSS)	

ELECTRICAL SPECIFICATIONS - RF ANTENNAS

Elements	Frequency Range (MHz)		SWR**	Gain (dB)***			Efficiency***		Polarization	Nominal Impedance	Maximum Power
	Low	High		Max.	Typical	Range (±)	Avg.	Range (±)			
LTE 1&2	617	698	2.4	3.8	2.4	1.4	55%	19%	Linear	50 ohms	50 watts
	698	802	1.7	5.2	4.1	1.1	68%	6%			
	824	960	1.3	6.2	4.3	1.9	61%	12%			
	1710	2200	1.5	7.5	6.0	1.5	78%	11%			
	2300	2690	1.6	8.9	7.1	1.8	78%	8%			
	3400	3800	1.9	5.4	4.7	0.6	57%	5%			
	5150	5950	1.7	8.1	6.8	1.3	59%	10%			
Wi-Fi (all)	2400	2500	1.1	9.4	9.0	0.4	81%	3%			
	4900	5925	1.4	9.4	8.9	0.5	70%	12%			

* When installed on a sealed surface according to PCTEL installation instructions ** Measured with 17-ft of cable and 2-ft ground plane *** Gain and efficiency values measured at the base of the antenna (no cable included)

Multi-Band LTE MIMO & 802.11ac Antennas with High Rejection GPS/GLONASS



ISOLATION SPECIFICATIONS

Minimum Isolation (dB)
(measured with 17-ft of cable and 2-ft ground plane)

Elements	LTE Primary (1&2)		Wi-Fi	
LTE 1&2	617-960MHz	9	617-960MHz	20.0
	1.71-2.7GHz	15	1.71-2.7GHz	17.0
	3.3-5.9 GHz	32	3.3-5.9 GHz	35.0
Wi-Fi			2.4-2.5GHz	25.0
			4.9-5.9GHz	32.0

ELECTRICAL SPECIFICATIONS - GNSS ANTENNA

Frequency Band	Amplifier Gain	Output VSWR	DC Current	DC Voltage	Noise Figure	Out-of-Band Rejection
1565-1608 MHz	@ 3.0 VDC: 26 dB (typical)	2.0:1 (maximum)	25 mA (typical)	2.8-6.0 V (operating) ≤ 12.0 V (survivability)	< 2.0 dB (typical)	f ₀ = 1586 MHz f ₀ ± 50 MHz: ≥ 60 dBc f ₀ ± 60 MHz: ≥ 70 dBc

ELECTRICAL SPECIFICATIONS - GNSS ANTENNA

Frequency Band	Nominal Gain	Polarization	Nominal Impedance
1565-1608 MHz	3 dBic @ 90° -2 dBic @ 20°	Right hand circular	50 ohms

MECHANICAL SPECIFICATIONS AND ENVIRONMENTAL SPECIFICATIONS (ALL MODELS)

Dimensions	Weight	Housing Material*****	Temperature Range	Gasket Design & Construction
5.38 x 3.53 in (136.5 x 89.7 mm)	3 lbs (1.4 kg) - 5 ports	White or Black, UV-Stable Rugged Thermoplastics	-40°C to +85°C	Contour matching, conformable, thermoplastic-elastomer gasket designed to seal between radome and baseplate. Gasket flexes and conforms to contoured surfaces. Baseplate has a 3M™ VHB mounting pad for anti-rotation.
	2.6 lbs (0.9 kg) - 3 ports			

3M is a trademark of 3M Company.

**** For black radome option, add a "B" prefix in front of the part number (eg. BGLPHDLTE-SF)

Coach™ 4x4 Wi-Fi, DSRC GNSS Multi-Band Antenna



The GL4X4MIMO-SF antenna enables high data rate connectivity for ITS, DSRC and IIoT applications. This low-profile antenna supports dual-band 2.4/5 GHz MIMO for 802.11p, ac Wi-Fi standards, combining multiple antenna elements into one IP67-rated housing. A single stud mount cable exit simplifies permanent installations. The antenna also incorporates PCTEL's unique high rejection GPS/GLONASS technology for optimal performance and support of carrier voice and data networks.

Features

- Multi-band coverage of 2.4-2.5 GHz and 4.9-5.99 GHz frequencies
- Dual-band integrated elements terminated with high performance, low loss RG-58/U stranded cable and high quality connector for maximum RF system efficiency
- Proprietary filtering design allows wideband coverage while achieving superior out-of-band rejection for all GNSS frequencies
- Metal stud mount with slotted jam nut provides single cable exit for easier installation and/or antenna replacement
- UV-resistant low-profile design for maximum installation flexibility without antenna orientation restrictions
- IP67 compliant design with custom overmolded gasket provides maximum protection against water or dust ingress under severe environmental conditions



GL4X4MIMO-SF

STANDARD CONFIGURATION

Model	Cable	Connectors***	Mounting Method
GL4X4MIMO-SF	Four (4) 17-foot Pro-Flex™ Plus 195 stranded cable leads (Wi-Fi) One (1) 17-foot RG-174/U cable (GNSS)	Reverse Polarity SMA Male SMA Male	1-inch hole (25.4 mm) slotted stud mount with 3/4-16 UNF slotted hex-nut

ELECTRICAL SPECIFICATIONS

Frequency Range	Nominal Gain*	VSWR**	Polarization	In-Band Isolation Between Elements	E-Plane Beamwidth	Maximum Power
2.4-2.5 GHz / 4.9-5.99 GHz	4 dBi / 4 dBi	1.5	Vertical, linear	23 dB, 26 dB	30°, 25°	25 watts

ELECTRICAL SPECIFICATIONS - GNSS ANTENNA

Frequency Band	Amplifier Gain	Output VSWR	DC Current	DC Voltage	Noise Figure	Out-of-Band Rejection
1565-1608 MHz	@ 3.0 VDC: 26 dB (typical)	2.0:1 (maximum)	25 mA (typical)	2.8-6.0 V (operating) ≤ 12.0 V (survivability)	< 2.0 dB (typical)	f ₀ = 1586 MHz f ₀ ± 50 MHz: ≥ 60 dBc f ₀ ± 60 MHz: ≥ 70 dBc

ELECTRICAL SPECIFICATIONS - GNSS ANTENNA (CONTINUED)

Frequency Band	Nominal Gain	Polarization	Nominal Impedance
1565-1608 MHz	3 dBic @ 90° / -2 dBic @ 20°	Right hand circular	50 ohms

MECHANICAL SPECIFICATIONS AND ENVIRONMENTAL SPECIFICATIONS

Dimensions	Radome & Baseplate Construction	Temperature Range	Ingress Protection
5.4 x 2.7 in (137 x 67 mm)	Black UV-Stable Rugged Thermoplastics	-40° to +80° C	IP67***

* Measured with 6-ft cables, no ground plane ** Measured with 17-ft cables *** When installed on rooftop surface, according to PCTEL installation instructions

Multi-Band LTE MIMO & 802.11ac Antennas with High Rejection GPS/GLONASS

The Coach antennas provide optimal 4G LTE and dual-band 802.11ac Wi-Fi coverage in a single, low-profile housing. The antennas also incorporate PCTEL's unique high rejection GPS/GLONASS technology for optimal performance and support of carrier voice and data networks.

Features

- No tune, multi-band coverage: dual 4G LTE, dual 802.11ac Wi-Fi, GPS L1, and GLONASS L1 frequencies
- Magnetically mounted using heavy-duty internal rare earth magnets
- Rubber pad on the bottom of the antenna prevents slippage and protects the mounting surface
- Attractive low-profile housing for added overhead clearance
- IP67 compliant design provides maximum protection against water or dust ingress under severe environmental conditions
- High performance, low loss cable and high quality connectors for maximum RF system efficiency
- UV-resistant black or white housing options complement most vehicular aesthetic requirements
- Proprietary filtering design allows wideband coverage while achieving superior out-of-band rejection for all GNSS frequencies



GLHPDLTEMIMO-SF-MM



BGLHPDLTEMIMO-SF-MM

STANDARD CONFIGURATION

Model	Cable	Connectors*	Mounting Method
GLHPDLTEMIMO-SF-MM	Two-17 feet Pro-Flex™ Plus 195 (4G LTE Elements) Two-17 feet Pro-Flex™ Plus 195 (Wi-Fi Elements) One-17 feet RG-174/U (GNSS Element)	SMA Plug (LTE) Reverse Polarity SMA Plug (Wi-Fi) SMA Plug (GNSS)	Magnetic Mount (all models)
GLHPDM3-SF-MM	Two-17 feet Pro-Flex™ Plus 195 (4G LTE Elements) Three-17 feet Pro-Flex™ Plus 195 (Wi-Fi Elements) One-17 feet RG-174/U (GNSS Element)	SMA Plug (LTE) Reverse Polarity SMA Plug (Wi-Fi) SMA Plug (GNSS)	
GLHPDLTE-SF-MM	Two-17 feet Pro-Flex™ Plus 195 (4G LTE Elements) One-17 feet RG-174/U (GNSS Element)	SMA Plug (LTE) SMA Plug (GPS)	

ELECTRICAL SPECIFICATIONS - RF ANTENNAS

Model	Frequency Range	Elements	Polarization	Nominal Impedance	Gain** (typical)	Maximum Power	VSWR***
GLHPDLTEMIMO-SF-MM	698-960 MHz / 1710-2700 MHz	4G LTE Elements (2 each)	Vertical, linear	50 ohms	2.5 dBi	50 watts	< 2.0:1
	2.4-2.5 GHz / 4.9-5.9 GHz	Dual-Band Wi-Fi Elements (2 each)			3-4 dBi		
GLHPDM3-SF-MM	698-960 MHz / 1710-2700 MHz	4G LTE Elements (2 each)	Vertical, linear	50 ohms	2.5 dBi	50 watts	< 2.0:1
	2.4-2.5 GHz / 4.9-5.9 GHz	Wi-Fi Elements (3 each)			3-4 dBi		
GLHPDLTE-SF-MM	698-960 MHz / 1710-2700 MHz	4G LTE Elements (2 each)	Vertical, linear	50 ohms	2.5 dBi 2.5 dBi	50 watts	< 2.0:1

Multi-Band LTE MIMO & 802.11ac Antennas with High Rejection GPS/GLONASS



ELECTRICAL SPECIFICATIONS - GNSS ANTENNA

Frequency Band	Amplifier Gain	Output VSWR	DC Current	DC Voltage
1565-1608 MHz	@ 3.0 VDC: 26 dB (typical)	2.0:1 (maximum)	25 mA (typical)	2.8-6.0 V (operating) ≤ 12.0 V (survivability)

ELECTRICAL SPECIFICATIONS - GNSS ANTENNA

Noise Figure	Out-of-Band Rejection	Nominal Gain	Polarization	Nominal Impedance
< 2.0 dB (typical)	f ₀ = 1586 MHz f ₀ ± 50 MHz: ≥ 60 dBc f ₀ ± 60 MHz: ≥ 70 dBc	3 dBic @ 90° -2 dBic @ 20°	Right hand circular	50 ohms

MECHANICAL & ENVIRONMENTAL SPECIFICATIONS (ALL MODELS)

Dimensions	Housing Material	Temperature Range	Gasket Design & Construction
5.1 OD x 3.6 H in (13 x 9.2 cm)	White or Black**** UV-Stable Rugged Thermoplastics	-40°C to +85°C	Anti-skid liner installed at contact surface to ensure a high friction and mar-free magnetic mount.

* Consult Customer Service for other connector options.

** Measured on a 4-foot diameter ground plane. Gain value is measured at the base of the antenna (no cable loss included).

*** VSWR < 2:1 across all bands when measured on 1-ft diameter ground plane with 17-ft cable.

When measured on 1-ft diameter ground plane with 1-ft cable, VSWR < 2:1 698-960MHz, <2:1 1710-2170MHz, and < 2.5:1 2300-2700MHz.

****Black radome option also available. Add "B" in front of the part number for black radome option.



Multi-Band LTE MIMO Antenna with High Rejection GPS/GLONASS, Heavy-Duty

The Rhino dual LTE antenna provides optimal 4G LTE coverage in a single, low-profile housing. The antenna also incorporates PCTEL's unique high rejection GPS/GLONASS technology for optimal performance and support of carrier voice and data networks. Glass reinforced Polycarbonate housing and heavy-duty metal base plate makes this antenna extremely rugged and ideal for heavy equipment applications susceptible to high shock impact, including mining, agriculture, construction and defense vehicles.

Features

- No tune, multi-band coverage: dual 4G LTE and GPS L1/Galileo, and GLONASS L1 frequencies
- Ruggedized UV-resistant, fiberglass reinforced housing for added impact shock absorption and integrity in high vibration installations
- IP67 compliant design provides maximum protection against water or dust ingress under severe environmental conditions*
- RF240 low loss pigtails for LTE and high quality connectors for maximum RF system efficiency
- Metal 1-inch stud mount with slotted jam nut provides single cable exit for easier installation and/or antenna replacement
- Proprietary filtering design allows wideband coverage while achieving superior out-of-band rejection for all GNSS frequencies



HDGLDLTE-LFF

STANDARD CONFIGURATION

Model	Cables	Connectors**	Mounting Method
HDGLDLTE-LFF	Two 1-foot PFP240 low loss (LTE) One 1-foot RG-174/U (GNSS)	Male SMA (LTE) Male SMA (GNSS)	1-inch OD, 3/4-inch long (.75") zinc stud mount with jam nut for permanent mount installations

ELECTRICAL SPECIFICATIONS - RF ANTENNA

Frequency Range	Elements	Polarization	Nominal Impedance	Gain*** (typical)	Maximum Power	VSWR
698-960 MHz / 1710-2700 MHz	4G LTE Elements (2 each)	Vertical, linear	50 ohms	2.5 dBi	50 watts	< 2.0:1

ELECTRICAL SPECIFICATIONS - GNSS ANTENNA

Frequency Band	Amplifier Gain	Output VSWR	DC Current	DC Voltage	Noise Figure:	Out-of-Band Rejection:
1565-1608 MHz	@ 3.0 VDC: 26 dB (typical)	2.0:1 (maximum)	25 mA (typical)	2.8-6.0 V (operating) ≤ 12.0 V (survivability)	< 2.0 dB (typical)	f ₀ = 1586 MHz f ₀ ± 50 MHz: ≥ 60 dBc f ₀ ± 60 MHz: ≥ 70 dBc

* When properly installed on a vehicle rooftop per PCTEL installation instructions.

** Consult Customer Service for other connector options

*** Measured on a 4-foot diameter ground plane. Gain value is measured at the base of the antenna (no cable loss included).



Multi-Band LTE MIMO Antenna with High Rejection GPS/GLONASS, Heavy-Duty

ELECTRICAL SPECIFICATIONS - GNSS ANTENNA

Frequency Band	Nominal Gain	Polarization	Nominal Impedance
1565-1608 MHz	3 dBic @ 90° -2 dBic @ 20°	Right hand circular	50 ohms

MECHANICAL & ENVIRONMENTAL SPECIFICATIONS

Dimensions	Housing Material	Gasket Design & Construction	Temperature Range	Ingress Protection
10.04 L x 3.9 H x 2.19 W in (255 x 100 x 55.8 mm)	Off-White GFR-PC (Polycarbonate)	Contour matching, conformable, thermoplastic-elastomer gasket designed to seal between radome and baseplate. Gasket flexes and conforms to contoured surfaces. Baseplate has a 3M™ VHB mounting pad for anti-rotation.	-40°C to +85°C	IP67****

**** When installed according to the manufacturer's installation instructions.

GNSS+ Combination Antennas with High Rejection Technology



The Max-Matics™ GNSS+ High Rejection combination antennas have been designed to provide maximum performance and versatility for telematics applications, including fleet monitoring and asset tracking.

By combining the high performance of a GNSS antenna with the flexibility to add virtually any PCTEL permanent mount compatible mobile antenna, the GNSS+ provides reliable, real-time wireless voice and data coverage for fleet monitoring applications. This antenna is designed to facilitate installation. It includes all necessary hardware for “blind” installations when removal of the vehicle’s headliner is not desired.

Its precise performance and ease of installation provides outstanding value and flexibility for the most demanding wireless mobile applications.



GNSSPSM-S1-S1

Features

- Combination GNSS/mobile antenna design provides GPS/QZSS/GALILEO/GLONASS tracking coverage and voice/data wireless coverage capabilities for fleet monitoring or fleet tracking applications
- UV-stable housing features attractive industrial design
- Proprietary filtering design allows wideband coverage while achieving superior out-of-band rejection for all GNSS frequencies
- Various connector options are available for both the GNSS antenna and the mobile antenna’s permanent mount

STANDARD CONFIGURATION

Model	Cable	Connector*	Mount	Mobile Antenna Mount Interface
GNSSPSM-S1-S1	17' RG-174 (GNSS antenna side) 17' RG-58/U (mobile antenna side)	SMA Plug (GNSS) SMA Plug (Mobile)	3/4-inch hole permanent stud	1-1/8"-18 thread mount

ELECTRICAL SPECIFICATIONS - GNSS ANTENNA

Frequency Band	LNA Gain	Element Gain	Polarization	Out of Band Rejection
1565-1610 MHz	@ 3.0VDC: 26dB (typical)	3 dBic @ 90° -2 dBic @ 20°	Right hand circular	f0 = 1586 MHz f0 ± 50MHz : ≥ 60dBc f0 ± 60MHz : ≥ 70dBc

ELECTRICAL SPECIFICATIONS - GNSS ANTENNA, continued

Current Draw	DC Voltage	Noise Figure	VSWR	Nominal Impedance
< 25 mA (typical)	2.8-6.0 V (operating) ≤ 12.0 V (survivability)	< 2.0 dB (typical)	2.0:1 (maximum)	50 ohms

MECHANICAL & ENVIRONMENTAL SPECIFICATIONS

Dimensions	Housing Material	Storage Temperature Range	Operating Temperature Range	Burn-out Protection
2.25W x 4.25 L x 1.25 H in (57 x 107 x 31.75 mm)	Black UV-Stable Polycarbonate	-40°C to +85°C	-40°C to +85°C	Protected from damage by RF signals when the power received by the antenna is no greater than +17 dBm, maximum

* Consult Customer Service for other connector options.



GNSS-HR26PM Low-Profile Antenna with High Rejection GNSS Technology

The GNSS-HR26PM vehicle tracking antenna features a light, low-profile housing that is ideal for fleet management applications. Its radome is molded from high grade polymer resin for maximum UV and abrasion resistance under severe environmental conditions. Its electrically shielded LNA PCB assembly and ceramic filter are designed to provide proprietary high out-of-band rejection for optimal integration in congested wireless installations.



GNSS-HR26PM

Features

- GPS L1 & GLONASS L1 Frequencies
- Proprietary filtering design allows wideband coverage while achieving superior out-of-band rejection for all GNSS frequencies
- Rugged, low-profile housing for minimum visibility
- 26 dB gain
- ESD protection
- IP56 ingress protection

STANDARD CONFIGURATION

Model	Cable	Connector**	Mount
GNSS-HR26PM	5 Meters RG174 (16.4 Feet)	SMA Plug	1/2-inch built-in threaded stud mount for 1-inch diameter mounting holes. For up to 1/4-inch (6mm) surfaces

ELECTRICAL SPECIFICATIONS - GNSS ANTENNA

Frequency Band	LNA Gain	Element Gain	Polarization	Out of Band Rejection	VSWR
1565-1610 MHz	@ 3.0VDC: 26dB (typical)	-2 dBic @ 20°	Right hand circular	f ₀ = 1586 MHz f ₀ ± 50MHz : ≥ 60dBc f ₀ ± 60MHz : ≥ 70dBc	2.0:1 maximum

ELECTRICAL SPECIFICATIONS - GNSS ANTENNA, continued

Current Draw	DC Voltage	Noise Figure	Nominal Impedance
< 25 mA (typical)	2.8-6.0 V (operating) ≤ 12.0 V (survivability)	< 2.0 dB (typical)	50 ohms

MECHANICAL SPECIFICATIONS

Dimensions	Weight	Housing Material
2.5" OD x 0.5" D (63.5 x 12.7 mm)	25 grams	Black, UV-Stable ASA

ENVIRONMENTAL SPECIFICATIONS

Temperature Range	Humidity	Mechanical Shock	Fluid Shower
-40°C to +85°C (operating)	95%	25 g maximum	Water, salt mist, windshield wiper fluid, detergent with wax: no degradation

*When installed according to the manufacturer's installation instructions.
** Consult Customer Service for other connector options.



8171D-HR Low-Profile Tracking Antenna with High Rejection GNSS Technology

The 8171D-HR-DH-W High Rejection GPS/GLONASS Antenna is a dual-band antenna covering both GPS L1 and GLONASS L1 frequencies. PCTEL's proprietary filtering design allows wideband coverage while achieving superior out-of-band rejection. This antenna comes in an all-plastic, non-corrosive low-profile package for vehicle mounting or fixed installations. This antenna is ideal for any global GPS/GLONASS tracking or time synchronization application that requires an externally mounted antenna.



8171D-HR

Features

- GPS L1 & GLONASS L1 frequencies
- Proprietary filtering design allows wideband coverage while achieving superior out-of-band rejection for all GNSS frequencies 26dB LNA Gain
- Low noise figure < 2.0dB
- IP67, low-profile design**

STANDARD CONFIGURATION

Model	Connector	Mount
8171D-HR	TNC Female	3/4" thru-hole or bracket mount*

ELECTRICAL SPECIFICATIONS - GNSS ANTENNA

Frequency Band	LNA Gain	Element Gain	Polarization	Out of Band Rejection
1565-1610 MHz	@ 3.0 VDC: 26 dB (typical)	2 dBic @ 90°	Right hand circular	f0 = 1586 MHz f0 ± 50 MHz: ≥ 60 dBc f0 ± 60 MHz: ≥ 70 dBc

ELECTRICAL SPECIFICATIONS - GNSS ANTENNA, continued

Current Draw	DC Voltage	Noise Figure	Nominal Impedance
< 25 mA (typical)	2.8-6.0 V (operating) ≤ 12.0 V (survivability)	< 2.0 dB (typical)	50 ohms

MECHANICAL SPECIFICATIONS

Dimensions	Weight	Housing Material	Shock	Vibration
2.36" Dia x 0.83" H (60 x 21 mm)	0.1 lbs (50 g)	Black, Lexan EXL9330	Vertical axis 50G, other axes 30G	3 axis, sweep = 15 min 10 – 200 Hz log sweep: 3G

ENVIRONMENTAL SPECIFICATIONS

Temperature Range	Ingress Protection
-40°C to +85°C operating	IP67**

* Order MMK1925 for compatible mounting.

** When installed according to manufacturer's installation instructions.



8178D-HR Low-Profile, High Gain Antenna with High Rejection GNSS Technology

The 8178D-HR High Rejection, High Gain GPS/GLONASS Antenna is a dual-band antenna covering both GPS L1 and GLONASS L1 frequencies. PCTEL's proprietary filtering design allows wideband coverage while achieving superior out-of-band rejection. This antenna comes in an all-plastic, non-corrosive low-profile package for vehicle mounting or fixed installations. This antenna is ideal for any global GPS/GLONASS tracking or time synchronization application that requires an externally mounted antenna and an extended run of cable.



8178D-HR

Features

- GPS L1 & GLONASS L1 frequencies
- Proprietary filtering design allows wideband coverage while achieving superior out-of-band rejection for all GNSS frequencies
- 40dB LNA gain
- Low noise figure < 2.0dB
- IP67, low-profile design**

STANDARD CONFIGURATION

Model	Connector	Mount
8178D-HR	TNC Female	3/4-inch thru-hole or bracket mount*

ELECTRICAL SPECIFICATIONS - GNSS ANTENNA

Frequency Band	LNA Gain	Element Gain	Polarization	Out of Band Rejection
1565-1610 MHz	@ 3.0 VDC: 40 dB (typical)	2 dBic @ 90°	Right hand circular	f0 = 1586 MHz f0 ± 50 MHz: ≥ 60 dBc f0 ± 60 MHz: ≥ 70 dBc

ELECTRICAL SPECIFICATIONS - GNSS ANTENNA, continued

Current Draw	DC Voltage	Noise Figure	Nominal Impedance
< 28mA (typical)	2.8-6.0V (operating) ≤ 12.0V (survivability)	< 2.0 dB (typical)	50 ohms

MECHANICAL & ENVIRONMENTAL SPECIFICATIONS

Dimensions	Weight	Housing Material	Shock	Vibration	Temperature Range	Ingress Protection
2.36 OD x 0.83 H in (60 x 21 mm)	0.1 lbs (50 g)	Black, Lexan EXL9330	Vertical axis 50G, other axes 30G	3 axis, sweep = 15 min 10 – 200 Hz log sweep: 3G	-40°C to +85°C operating	IP67**

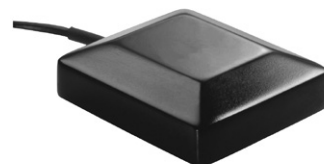
* Order MMK1925 for compatible mounting.

** When installed according to the manufacturer's installation instructions.



GNSS26GMMMSMA Glass Mount Antenna with High Rejection GNSS Technology

The GNSS26GMMMSMA glass mount is GNSS antenna utilizes an electrically shielded LNA PCB assembly and ceramic filter designed to provide proprietary high out-of-band rejection for optimal integration in congested RF installations. The assembly is permanently encased in a compact, UV-stable radome, making it ideal for concealed vehicle tracking applications.



GNSS26GMMMSMA

Features

- GPS L1 & GLONASS L1 Frequencies
- Proprietary filtering design allows wideband coverage while achieving superior out-of-band rejection for all GNSS frequencies
- High bond tape for vehicle windshield glass installation
- Rugged, low-profile housing for minimum visibility
- 26 dB gain
- ESD protection

STANDARD CONFIGURATION

Model	Cable	Connector*	Mount
GNSS26GMMMSMA	17 feet RG-174/U	SMA Plug	High Bond tape for glass mounting

ELECTRICAL SPECIFICATIONS - GNSS ANTENNA

Frequency Band	LNA Gain	Element Gain	Polarization	Out of Band Rejection	VSWR
1565-1610 MHz	@ 3.0VDC: 26dB (typical)	2 dBic @ 90°	Right hand circular	f ₀ = 1586 MHz f ₀ ± 50MHz : ≥ 60dBc f ₀ ± 60MHz : ≥ 70dBc	2.0:1 maximum

ELECTRICAL SPECIFICATIONS - GNSS ANTENNA, continued

Current Draw	DC Voltage	Noise Figure	Nominal Impedance
< 25 mA (typical)	2.8-6.0 V (operating) ≤ 12.0 V (survivability)	< 2.0 dB (typical)	50 ohms

MECHANICAL & ENVIRONMENTAL SPECIFICATIONS

Dimensions	Weight	Housing Material	Temperature Range	Humidity	High Bond Tape Specifications
2.22 L x 1.97 w x .59 in (56.2 x 50 x 14.9 mm)	25 grams	Black, UV-stable plastic	-40°C to +85°C	95%	Conformable foam Acrylic adhesive Moisture and Solvent resistant High Shear and peel adhesion

* Consult Customer Service for other connector options.

8111D-HR GNSS Magnetic High Rejection Tracking Antenna



PCTEL's GNSS High Rejection Magnetic Mount Tracking Antenna is a full GNSS band antenna covering GPS L1, GLONASS L1, Galileo E1 and Beidou B1 satellite frequency bands. PCTEL's proprietary filtering design allows wideband coverage while achieving superior out-of-band rejection. This antenna is ideal for any global GNSS tracking application that requires an externally mounted antenna. Using internal magnets or screw mount holes, the antenna can be installed almost anywhere on a vehicle allowing for greater flexibility.



8111D-HR

Features

- GPS L1, GLONASS L1, Galileo E1 and Beidou B1 frequencies
- Industry leading out-of-band rejection
- 26 dB LNA gain
- Magnet or screw mount design options
- IP67, low-profile design**

STANDARD CONFIGURATION

Model	Cable	Connector*	Mount
8111D-HR	16.4' (5 meters) highly flexible 174 sized cable	SMA Plug	Magnetic (5 lb lift-off force) or permanent (pre-threaded for 3 x M2.5 screws)

ELECTRICAL SPECIFICATIONS - GNSS ANTENNA

Frequency Band	LNA Gain	Element Gain	Polarization	Out of Band Rejection
1561-1608 MHz	@ 3.0 VDC: 26 dB (typical)	3 dBic @ 90° -2 dBic @ 20°	Right hand circular	f ₀ = 1586 MHz f ₀ ± 50 MHz: ≥ 60 dBc f ₀ ± 60 MHz: ≥ 70 dBc

ELECTRICAL SPECIFICATIONS - GNSS ANTENNA, continued

Current Draw	DC Voltage	Noise Figure	VSWR	Nominal Impedance
< 25 mA (typical)	2.8-6.0 V (operating) ≤ 12.0 V (survivability)	< 2.0 dB (typical)	≤ 1.5:1 (at connector)	50 ohms

MECHANICAL & ENVIRONMENTAL SPECIFICATIONS

Dimensions	Weight	Housing Material	Shock	Vibration	Temperature Range	Ingress Protection
1.77 L x 2.01 W x .47 D in (45 x 51 x 12 mm)	0.26 lbs (120 g)	Black, Lexan EXL9330	Vertical axis 50G, other axes 30G	3 axis, sweep = 15 min 10 – 200 Hz log sweep: 3G	-40°C to +85°C operating	IP67**

* Consult Customer Service for other connector options. ** When installed according to the manufacturer's installation instructions.



Multi-Band LTE & 802.11ac MIMO Antennas with High Rejection GPS

This Wi-Fi MIMO antenna provides optimal 4G LTE and dual-band 802.11ac Wi-Fi coverage in a single 4-port, low-profile housing. The antenna also incorporates a high rejection GPS LNA assembly for optimal performance and support of carrier voice and data networks.

Features

- No tune, multi-band coverage: 4G LTE, 802.11ac Wi-Fi MIMO and GPS L1 frequencies
- Metal 3/4-inch stud mount with slotted jam nut provides single cable exit for easier installation and/or antenna replacement
- IP67 compliant design*
- High performance, low loss cable and high quality connectors
- UV-resistant black or white housing options



GPSHPMIMO-LTB



GPSHPMIMO-LTW

STANDARD CONFIGURATION

Model	Cable (Both Models)	Connectors**	Mounting Method	Housing Color
GPSHPMIMO-LTB	17 feet Pro-Flex™ Plus 195 (4G LTE Element)	SMA Plug	1-inch hole, 3/4-inch long (.75") zinc stud mount with jam nut	Black
	17 feet Pro-Flex™ Plus 195 (802.11n Wi-Fi Elements - 2 each)	RP-SMA Plug (Wi-Fi)		
GPSHPMIMO-LTW	17 feet RG-174/U (GPS L1)	SMA Plug (GPS)		White

ELECTRICAL SPECIFICATIONS - RF ANTENNAS

Frequency Range	Elements	Polarization	Nominal Impedance	Gain*** (typical)	Maximum Power	VSWR****
698-960 MHz / 1710-2700 MHz / 2300-2700 MHz 2.4-2.5/4.9-5.9 GHz	4G LTE Element 802.11ac Wi-Fi Elements (2 each)	Vertical, linear	50 ohms	2.5 dBi	50 watts	< 2.0:1

ELECTRICAL SPECIFICATIONS - GPS ANTENNA

DC Current:	DC Voltage	Noise Figure	Filtering
20 mA nominal; < 30 mA @ -40°C to +85°C	3.3-12 V	1.8 dB typical	> 40 dB rejection @ ± 50 MHz from center frequency

MECHANICAL & ENVIRONMENTAL SPECIFICATIONS (ALL MODELS)

Dimensions	Housing Material	Temperature Range	Gasket Design & Construction
5.1 x 3.6 in (130 x 92 mm)	Black, UV-Stable Polycarbonate****	-40°C to +85°C	Contour matching, conformable, thermoplastic-elastomer gasket designed to seal between radome and baseplate. Gasket flexes and conforms to contoured surfaces. Baseplate has a 3M™ VHB mounting pad for anti-rotation.

*** When properly installed on a vehicle rooftop per PCTEL installation instructions. ** Consult Customer Service for other connector options.
 *** Measured on a 4-foot diameter ground plane. Gain value is measured at the base of the antenna (no cable loss included). **** VSWR < 2:1 across all bands when measured on 1-ft diameter ground plane with 17-ft cable. When measured on 1-ft diameter ground plane with 1-ft cable, VSWR < 2:1 698-960MHz, < 2:1 1710-2170MHz, and < 2.5:1 2170-2700MHz. 3M is a trademark of 3M Company.

Multi-Band TETRA, LTE Cellular, Wi-Fi Antennas with High Rejection GPS



PCTEL's GPS antenna provides multi-band coverage of TETRA, 700 MHz LTE, GSM, 3G, and Wi-Fi frequencies, in addition to GPS L1 support. Compact and easy to install, this antenna is constructed with high quality components, including a high rejection LNA filter to provide maximum isolation protection for location tracking applications. It is an ideal solution for Mission Critical and Public Safety communications.

Features

- No tune, multi-band coverage: 380-430 MHz TETRA, 700-2500 MHz LTE/3G, 2.3-2.5 GHz Wi-Fi broadband wireless frequencies and GPS L1 tracking
- Attractive, low-profile, UV-resistant housing for maximum overhead clearance
- IP67 compliant design*
- High performance, low loss cable and high quality connectors
- High performance GPS assembly for superior out-of-band rejection; provides optimal performance in multi-band installations



GPSHP-UWB

STANDARD CONFIGURATION

Model	Cable	Connectors**	Mounting Method
GPSHP-UWB	7.8" (200 mm) Pro-Flex™ Plus 195 (TETRA 380-430 MHz) 5.9" (150 mm) Pro-Flex™ Plus 195 (698-2500 MHz) 6.8" (175 mm) Pro-Flex™ Plus 195 (2.3-2.5 GHz); 10.6" (270 mm) RG-174/U (GPS L1)	SMA Plug SMA Plug SMA Plug SMA Plug	3/4-inch hole, 3/4-inch long (.75") zinc stud mount with dual jam nuts (included)

ELECTRICAL SPECIFICATIONS - RF ANTENNAS

Frequency Range	Polarization	Nominal Impedance	Gain*** (typical)	Maximum Power	VSWR****
380-430 MHz / 698-2500 MHz / 2.3-2.5 GHz	Vertical, linear	50 ohms	1 dBi 3 dBi 4 dBi	50 watts	< 2.5:1 (max) < 1.68:1 (avg) < 2.0:1

ELECTRICAL SPECIFICATIONS - GPS ANTENNA

Frequency Band	DC Current:	DC Voltage	Noise Figure	Filtering
1575.42 MHz (GPS L1)	20 mA nominal; < 30 mA @ -40°C to +85° C	3-13.5 V	1.8 dB typical	> 40 dB rejection @ ± 50 MHz from center frequency

MECHANICAL & ENVIRONMENTAL SPECIFICATIONS

Dimensions	Baseplate Construction***	Radome	Temperature Range
5.2 OD x 3.7 H in (132 OD x 94 H mm)	Zinc baseplate overmolded with black TPE, SANTOPRENE gasket	UV-Stable CYCOLOY C6200 Radome	-40°C to +85°C

* When properly installed on a vehicle rooftop per PCTEL installation instructions.

** Consult Customer Service for other connector options.

*** Measured on a 4-foot diameter ground plane. Gain value is measured at the base of the antenna (no cable loss included).

**** VSWR < 2:1 across all bands when measured on 1-ft diameter ground plane with 17-ft cable. When measured on 1-ft diameter ground plane with 1-ft cable, VSWR < 2:1 698-960MHz, < 2:1 1710-2170MHz, and < 2.5:1 2170-2700MHz.

GPS+ Combination Antennas with High Rejection Technology



PCTEL's Max-Matics™ GPS+ antennas have been designed to provide maximum performance and versatility for telematics applications, including fleet monitoring and asset tracking.

By combining the high performance of a GPS antenna with the flexibility to add virtually any PCTEL permanent mount compatible mobile antenna, the GPS+ provides reliable, real-time wireless voice and data coverage for fleet monitoring applications. This antenna is designed to facilitate installation. It includes all necessary hardware for "blind" installations when removal of the vehicle's headliner is not desired.

Its precise performance and ease of installation provides outstanding value and flexibility for the most demanding wireless mobile applications.



GPSPSM

Features

- Combination GPS/mobile antenna design provides GPS tracking coverage and voice/data wireless coverage capabilities
- UV-stable housing features attractive industrial design

STANDARD CONFIGURATION

Model	Cable	Connector*	Mount	Mobile Antenna Mount Interface
GPSPSM	17' RG-174 (GPS antenna side) 17' RG-58/U (mobile antenna side)	SMA Plug (GPS) SMA Plug (Mobile)*	3/4-inch hole permanent stud	1-1/8"-18 thread mount

ELECTRICAL SPECIFICATIONS - GPS ANTENNA

Frequency Band	Amplifier Gain	Axial Ratio	Polarization	Out of Band Rejection
1575.42 MHz	@ 3.0VDC: 26dB (typical)	< 3.0 dB @ boresight	Right hand circular	> 40 dB @ ± 50 MHz

ELECTRICAL SPECIFICATIONS - GPS ANTENNA, continued

Filtering	DC Current	DC Voltage	Noise Figure	Output VSWR	Nominal Impedance
Hybrid (including pre-selector)	20 mA Nominal; < 30 mA @ -40°C to +85°C	3.5-5V (internal regulated)	1.8 typical	1.5:1, typical	50 ohms

*Consult Customer Service for other connector options.

GPS+ Combination Antennas with High Rejection Technology



MECHANICAL & ENVIRONMENTAL SPECIFICATIONS

Dimensions	Housing Material	Temperature Range	Burn-out Protection
2.25 W x 4.25 L x 1.25 H in (5.7 x 10.8 x 3.1 cm)	Black UV-Stable Polycarbonate	-40°C to +85°C	Protected from damage by RF signals when the power received by the antenna is no greater than +17 dBm, maximum

To order, please follow the part number configuration:

Mount Type	GPS Connector	Mobile Antenna Connector
<i>Begin with this part number:</i> GPSPSM	<i>Specify your GPS connector of choice by adding the connector abbreviation from the list below to the part number:</i> Male TNC (MC) Male SMA (MSMA) MCX Right angle MMCX plug (RAMMCX) Right angle SMB plug (RASBP)	<i>Choose among any of the connector options available below for the RG-58 cable:</i> Reverse Polarity SMA (MSMARP) Mini-UHF (PL) BNC (BN) TNC (C) Male N (NM) Male SMA (MSMA) Right Angle Male SMA (RAMSMA)

Low-Profile High Performance GPS L1 Through-Hole Mount Antennas



The Max-Matics™ Shield Permanent mount antennas are designed for fleet management and asset tracking applications requiring a low-profile and compact footprint while supporting precision GPS operation. This antenna platform offers two high gain antenna options and outstanding out-of-band rejection performance for ideal RF system interoperability when installed along other RF radiators.

Features

- Industry leading out-of-band rejection performance
- Rugged, low-profile housing for minimum visibility
- ESD protection
- 26 dB or high gain 35dB gain options
- Permanent through hole design with slotted jam nut for installation ease



3226MSMA

STANDARD CONFIGURATION

Model	Cable	Connector*	Mount
3226MSMA	17 ft RG-174	SMA Plug	Through-hole for 1-inch diameter mounting holes Metal thread length: approximately 1/2" (12mm) Accommodates surface thickness up to 1/4" (6mm) (all models)
3235MSMA	17 ft RG-174	SMA Plug	

ELECTRICAL SPECIFICATIONS - GPS ANTENNA

Model	Frequency Band	LNA Gain	Element Gain	Polarization	Out of Band Rejection	DC Current
3226MSMA	1575.42 MHz (GPS L1)	+3.5 dBiC Nominal	26 dB ±3	Right hand circular	> 40 dB @ ±50 MHz	20 mA Nominal < 30 mA @ -40°C to +85°C
3235MSMA	1575.42 MHz (GPS L1)	4 dBiC Nominal	34 dB ±4	Right hand circular	> 40 dB @ ±50 MHz	20 mA Nominal < 30 mA @ -40°C to +85°C

ELECTRICAL SPECIFICATIONS - GPS ANTENNA (BOTH MODELS)

DC Voltage	Noise Figure	VSWR	Nominal Impedance	Axial Ratio	Filtering
3 - 13.5 V	1.8 typical	1.5:1 typical	50 ohms	<3 dB @ boresight	Hybrid (including pre-selector)

MECHANICAL & ENVIRONMENTAL SPECIFICATIONS (ALL MODELS)

Dimensions	Weight (Mass)	Housing Material	Temperature Range	Humidity	Mechanical Shock	Fluid Shower	Ingress Protection
2.5 OD x 0.5 D in (63.5 x 12.7 mm)	25 grams	Black, UV-stable plastic	-40°C to +85°C (operating)	95%	25 g maximum	Water, salt mist, windshield wiper fluid Detergent with wax: no degradation	IP56

* Consult Customer Service for other connector options.



High Rejection Low-Profile Permanent Mount GPS Antenna

The 3971D-HR, low-profile permanent mount GPS antenna provides 28 dB gain and superior out-of-band rejection performance and is the optimum choice for GPS Tracking and Timing applications with high RF fields. It features a precision tuned custom ceramic patch element for maximum signal reception, 15KV ESD circuit protection, a 3 stage LNA circuit and dual high rejection SAW filters. This enables the 3971D-HR to provide a reliable and clear GPS signal while minimizing loss-of-lock, even when conditions are less than ideal. Available in an all-plastic, non-corrosive conical package for vehicle mounting or fixed installations.



3971D-HR

Features

- Weather proof, all-plastic, non-corrosive, low-profile enclosure
- 3/4 inch thru-hole or bracket mount
- High out-of-band rejection for stand-alone or mobile applications where interference is a concern and performance is critical
- Innovative dual SAW filter design
- Voltage range: 2.7 to 5.5 V
- Low current draw: 8 mA @ 3.3 VDC

STANDARD CONFIGURATION

Model	Connector	Mount
3971D-HR	TNC jack	3/4" thru-hole or bracket mount*

ELECTRICAL SPECIFICATIONS - GPS ANTENNA

Frequency Band	LNA Gain	Element Gain	Polarization
1575.42 ± 10 MHz	28 dB	3 dBic @ 90° -2 dBic @ 20°	Right hand circular

ELECTRICAL SPECIFICATIONS - GPS ANTENNA, continued

Out of Band Rejection	Current Draw	DC Voltage	Noise Figure
> 50 dBc @ ± 40 MHz	8 mA @ 3.3 VDC	2.7-5.5 VDC	3.1 dB (typical)

MECHANICAL & ENVIRONMENTAL SPECIFICATIONS

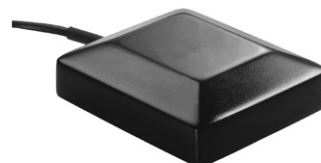
Dimensions	Weight	Housing Material	Temperature Range	Ingress Protection
2.36 OD x .83 H in (60 x 21 mm)	0.11 lbs (50 g)	Black, UV-Stable Polycarbonate	-40°C to +85°C operating	IP67

* Order MMK1925 bracket for compatible mounting.

26 dB Gain GPS L1 Glass Mount Antenna



The AGPS26GMMMSMA glass mount global positioning system (GPS) antenna utilizes an electrically shielded LNA PCB assembly and ceramic filter designed to provide high out-of-band rejection for optimal integration in multi-band installations. The assembly is permanently encased in a compact, UV-stable radome, making it ideal for concealed vehicle tracking applications.



AGPS26GMMMSMA

Features

- Outstanding interference rejection
- High bond tape for vehicle windshield glass installation
- Rugged, low-profile housing for minimum visibility
- 26 dB gain
- ESD protection

STANDARD CONFIGURATION

Model	Cable	Connector*	Mount
AGPS26GMMMSMA	17 feet RG-174/U	SMA Plug	High Bond tape for dashboard glass mounting

ELECTRICAL SPECIFICATIONS - GPS ANTENNA

Nominal Impedance	Element Gain	Frequency Range	Amplifier Gain*	Polarization
50 ohms	At zenith: 3 dBic nominal	1575.42 ± 1 MHz (GPS L1)	Without antenna element and cable: 26 dB ± 3	Right hand circular

ELECTRICAL SPECIFICATIONS - GPS ANTENNA, continued

Polarization	Out of Band Rejection	Noise Figure	Axial Ratio	Current Draw	DC Voltage	VSWR
Right hand circular	40 dB @ ± 50 MHz typical	1.8 typical @ 25°	< 3 dB @ boresight	@ 5 volts: 20 mA Nominal < 30 mA @ -40°C to +85°C (Filter Out-Of-Band)	3-5 V (regulated)	1.5:1 (typical)

MECHANICAL & ENVIRONMENTAL SPECIFICATIONS

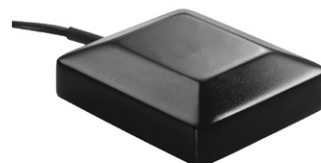
Dimensions	Housing Material	Temperature Range	Humidity
2.22 L x 1.97 W x 0.59 D in (56.3 x 50 x 14.9 mm)	Black, UV-stable plastic	-40°C to +85°C	10 to 95% RH

*Consult Customer Service for other connector options.



High Rejection GPS Magnetic Mount Series

PCTEL's AGPSHP35MMMSMA high rejection magnetic mount global positioning system (GPS) antenna utilizes an electrically shielded LNA PCB assembly and ceramic filter designed to provide high out-of-band rejection for optimal integration in multi-band installations. Its assembly is permanently encased in a compact, UV-stable radome, making it ideal for concealed vehicle tracking applications.



AGPSHP35MMMSMA

Features

- Preselection filter for outstanding interference rejection
- Rugged, low-profile housing for minimum visibility
- ESD/Reverse Polarity/Transit voltage protection

STANDARD CONFIGURATION

Model	Cable	Connector*	Mount
AGPSHP35MMMSMA	17 feet RG-174/U	SMA Plug	2 built-in rare earth Nd magnets

ELECTRICAL SPECIFICATIONS - GPS ANTENNA

Frequency Band	Gain	Amplifier Gain	Polarization	Nominal Impedance	Out of Band Rejection
1575.42 MHz (GPS L1)	4 dBiC Nominal	35 dB \pm 4	Right hand circular	50 ohms	-40 dB @ \pm 50 MHz typical

ELECTRICAL SPECIFICATIONS - GPS ANTENNA, continued

Noise Figure	Axial Ratio	DC Current	DC Voltage	VSWR
1.8 typical @ 25°	3.0 dB typical	20 mA Nominal < 35 mA @ -40°C to +85°C	3-5.5 V (internal regulated)	1.5:1 (typical)

MECHANICAL & ENVIRONMENTAL SPECIFICATIONS

Dimensions	Housing Material	Cable Pull Force	Magnet Pull Force:	Temperature Range	Humidity
2 L x 1.77 W x .55 D in (59.8 x 44.9 x 13.9 mm)	Black, UV-stable plastic	10 lbf, minimum	5 lbf, minimum	-40°C to +85°C	10 to 95% RH

* Consult Customer Service for other connector options.

3911D-HR High Rejection Dual Filter Mobile GPS Antenna for High RF Noise Environments



PCTEL's 3911D-HR low interference GPS Antenna with Dual SAW High Rejection Filters allow excellent performance in high RF noise environments as found on vehicles with multiple antennas. It is ideal for fleet tracking, public safety, transit, precision agricultural and military applications.

The 3911D-HR features ESD circuit protection, an innovative two-stage low noise amplifier and a dual SAW high rejection filter. It also features a custom designed ceramic patch element that minimizes detuning effects caused by adjacent objects. The 3911D-HR provides consistent, clear GPS signal reception while minimizing loss-of-lock in high-RF fields. Housed in a weatherproof magnetic or screw mount enclosure, the 3911D-HR GPS antenna is ideal for demanding vehicle mounted GPS applications.



3911D-HR

Features

- High rejection dual SAW filters allow placement near other transmitting antennas
- Low current: 7.5 mA @ 3.3V
- Wide voltage input range (2.7 - 5 VDC)
- Robust IP67 housing built for various weather conditions

STANDARD CONFIGURATION

Model	Cable	Connector*	Mount
3911D-HR	16.4' (5 meters) highly flexible 174 sized cable	SMA Plug	Magnetic (5 lb lift-off force) or permanent (pre-threaded for 3 x M2.5 screws)

ELECTRICAL SPECIFICATIONS - GPS ANTENNA

Frequency Band	LNA Gain	Element Gain	Polarization	Out of Band Rejection
1575.42 MHz \pm 10 MHz	25 dB @ 3.3 VDC 25.5 dB @ 5 VDC	3 dBic @ 90° -2 dBic @ 20°	Right hand circular	> 50 dBc @ \pm 40 MHz

ELECTRICAL SPECIFICATIONS - GPS ANTENNA, continued

Current Draw	DC Voltage	Noise Figure	VSWR	ESD Circuit Protection:
7.5 mA @ 3.3V 11.5 mA @ 5V	2.7-5 VDC	3.1 dB	\leq 1.5:1 (at connector)	15K volts

MECHANICAL & ENVIRONMENTAL SPECIFICATIONS

Dimensions	Weight	Shock	Vibration	Temperature Range	Ingress Protection
2.05 L x 2.33 W x 0.54 H in (52.1 x 59.2 x 13.6 mm)	.29 lbs (130 g)	Vertical axis 50G, other axes 30G	3 axis, sweep = 15 min 10 – 200 Hz log sweep: 3G	-40°C to +85°C operating	IP67

* For other connector options, please refer to GPS Mobile Antenna Configurator Part Number Guide
** Consult Customer Service for other connector options.

Silhouette Low-Profile Transit Antennas



PCTEL's Silhouette antennas are designed for transit vehicle installations requiring overhead clearance, including buses, fire-fighting engines, railroad equipment, airport service vehicles, and construction equipment. These low-profile multiband antennas provide wideband coverage of specific frequencies without field tuning required. They are housed in a high impact molded ASA radome for long-lasting performance under severe environmental conditions.

Features

- Rugged, high impact molded ASA radome assures long, reliable performance and protection against the elements
- High Performance – when mounted on a flat surface, maximum radiation is vertical and omnidirectional
- Low-profile for minimum exposure to theft or vandalism
- Wideband Coverage – requires no field tuning



ASP574 low-profile transit antenna series for VHF coverage



ASP931 low-profile transit antenna

STANDARD CONFIGURATION

Model	Cable	Connector	Mount
ASPB574 ASP572 ASP772 ASPB572 ASPC572 ASP931 ASPG931	Sold separately.	SO-239 (UHF female, panel mount) UHF female, panel mount (mates with PL259 male) BNC female bulkhead UHF female, panel mount (mates with PL259 male) UHF female, panel mount (mates with PL259 male) N female, panel mount N female, panel mount	Standard 1-5/16" roof hole mount Supplied with screws and weather-proof gasket.

ELECTRICAL SPECIFICATIONS (ALL FREQUENCIES)

Model	Frequency Range	Bandwidth	Gain*	Maximum Power	Polarization	Nominal Impedance	VSWR
ASPB574	148-160 MHz	0.5 MHz	Unity	100 watts	Vertical	50 ohms	< 2.0:1, maximum
ASP572	450-470 MHz	20 MHz	Unity	100 watts	Vertical	50 ohms	< 2.0:1, maximum
ASP772	450-470 MHz	20 MHz	Unity	100 watts	Vertical	50 ohms	< 2.0:1, maximum
ASPB572	470-488 MHz	18 MHz	Unity	100 watts	Vertical	50 ohms	< 2.0:1, maximum
ASPC572	488-512 MHz	24 MHz	Unity	100 watts	Vertical	50 ohms	< 2.0:1, maximum
ASP931	806-894 MHz	88 MHz	Unity	100 watts	Vertical	50 ohms	< 2.0:1, maximum
ASPG931	890-960 MHz	154 MHz	Unity	100 watts	Vertical	50 ohms	< 2.0:1, maximum

MECHANICAL & ENVIRONMENTAL SPECIFICATIONS

Model	Dimensions	Housing Color
ASPB574	4.1 H x 17 x 3.5 in (10.4 x 43.2 x 8.9 cm)	White, high impact molded ASA
ASP572	3.13 H x 8 x 3.5 in (7.9 x 20.3 x 8.9 cm)	
ASP772	3.4 H x 8 x 3.5 in (8.6 x 20.3 x 8.9 cm)	
ASPB572	3.4 H x 8 x 3.5 in (8.6 x 20.3 x 8.9 cm)	
ASPC572	3.4 H x 8 x 3.5 in (8.6 x 20.3 x 8.9 cm)	
ASP931	3.4 H x 8 x 3.5 in (8.6 x 20.3 x 8.9 cm)	
ASPG931	3.4 H x 8 x 3.5 in (8.6 x 20.3 x 8.9 cm)	

* Measured on a 1x1 ft ground plane. Gain is ground plane dependent.

Low-Profile GPS Multi-Band Antennas



PCTEL's Medallion™ GPS multi-band platform features an attractive modern design in a rugged low-profile housing. The antennas offers multi-band coverage of GSM 850, GSM 900, GSM 1800, GSM 1900, 3G, Wi-Fi/WiMAX frequencies, coupled with GPS L1 capability for outstanding value and flexibility.

Features

- No tune, multi-band coverage: GSM 850, GSM 900, GSM 1800, GSM 1900, 3G and
- Wi-Fi/WiMAX frequencies, coupled with GPS L1 frequencies
- Stylish low-profile housing provides "omnidirectional" trouble-free installation while complementing most vehicular aesthetic requirements
- Metal 3/4-inch stud mount with slotted jam nut provides single cable exit for easier installation and/or antenna replacement



PCTMDL

STANDARD CONFIGURATION

Model	Cable	Connector (all cables)**
PCTMDL	(1) Voice/Data: 16.5 ft RG-58/U, (1) Wi-Fi: 17 ft RG-58/U, (1) GPS L1: 17 ft RG-174/U	SMA Plug
PCTMDL-GSM	(1) Voice/Data: 16.5 ft RG-58/U, (1) GPS L1: 17 ft RG-174/U	SMA Plug

ELECTRICAL SPECIFICATIONS - RF ANTENNAS

Model	Frequency Range	Gain* (Typical)	VSWR	Maximum Power	Nominal Impedance	Polarization
PCTMDL	806-960 MHz/1710-2170 MHz 2.3-2.6 GHz	2.8 dBi / 3.3 dBi 3.9 dBi	< 2.0:1 (all bands)	20 watts 10 watts -	50 ohms	Vertical, linear
PCTMDL-GSM	806-960 MHz/1710-2170 MHz	3.5 dBiC / 3.9 dBi	< 2.0:1 (all bands)	20 watts	50 ohms	Vertical, linear

ELECTRICAL SPECIFICATIONS - GPS ANTENNA (ALL MODELS)

Frequency Band	Operating Frequency	Element Gain	GPS Antenna Gain	DC Current	DC Voltage	Noise Figure	Grounding Protection	Filtering
1575.42 MHz (GPS L1)	Voice/Data: 806-960 MHz/1710-2170 MHz Wi-Fi: 2.3-2.6 GHz GPS L1: 1575.42 MHz	27 dB	3.5 dBiC	20 mA Nominal; < 30 mA @ -40°C to +85°C	3-5.5 V	1.6 dB typical	DC grounded (both antennas)	20 dB rejection @ ± 100 MHz from center frequency

MECHANICAL & ENVIRONMENTAL SPECIFICATIONS (ALL MODELS)

Dimensions	Housing Material	Storage Temperature Range	Weight	Humidity	Ingress Protection
5.1 L x 4.95 W x 1.7 D in (129.6 x 125.8 x 43.1 mm)	UV-Resistant, Black ABS	-40°C to +85°C	1.96 lbs 31.9 oz	95%	IP67***

*Measured on a 4x4 ft ground plane at the end of a cable. **Consult Customer Service for other connector options. ***When properly installed on rooftop surface, according to PCTEL installation instructions

GNSS+LTE+Wi-Fi Combination Antenna



PCTEL's GNSS4GBTSM multi-band GPS antenna provides omnidirectional coverage of 4G LTE frequencies plus GPS/GLONASS tracking support. The antenna also provides Bluetooth/Wi-Fi connectivity for wireless hotspot applications and is ideal for mobile or fixed installations requiring voice and data support. Built-in GNSS tracking helps improve operational dispatch and schedule maintenance efficiencies, and the antenna's very low-profile design minimizes its exposure to theft or vandalism.

Features

- Extremely low-profile housing for minimum visibility and maximum overhead clearance
- Multi-band frequency coverage and GNSS support minimize the number of antennas required on the vehicle for easier, more cost effective installations
- UV stability for long lasting outdoor operation
- Adhesive VHB tape layer supports permanent installation and provides added protection to the vehicle's surface



GNSS4GBTSM

STANDARD CONFIGURATION

Model	Cable	Connector	Mount
GNSS4GBTSM	16.5 feet RG-174/U (GNSS) 16.5 feet RG-174/U (4G LTE) 16.5 feet RG-174/U (Wi-Fi)	Male SMA (GNSS) Male SMA (4G LTE) Male RP-SMA (Wi-Fi)	1/2-inch long, 3/4-inch OD through hole mount Mount assembly includes flat adapter shim for installations on existing larger hole diameters. Adhesive VHB tape layer included.
GNSS4GSM	16.5 feet RG-174/U (GNSS) 16.5 feet RG-174/U (4G LTE)	Male SMA (GNSS) Male SMA (4G LTE)	

ELECTRICAL SPECIFICATIONS - RF ANTENNAS

Model	Frequency Range	Nominal Gain*	Polarization	VSWR	Impedance
GNSS4GBTSM	698-960 MHz / 1710-2700 MHz	5 dBi	Linear	< 2.0	50 ohms
	2400-2483.5 MHz	3 dBi	Linear	< 2.0	50 ohms
GNSS4GSM	698-960 MHz / 1710-2700 MHz	5 dBi	Linear	< 2.0	50 ohms

ELECTRICAL SPECIFICATIONS - GNSS ANTENNA

Frequency Range	Band Width	LNA Gain	Polarization	Gain	VSWR	Current Draw	Noise Figure	Impedance
1575.42±1 MHz / 1596 MHz / 1602 MHz	CF ± 5 MHz	28 ± 2 dB	RCHP	5 dBic (Zenith)	< 1.5	< 20 mA @ 5 V	< 2.0 dB (typical)	50 ohms

MECHANICAL & ENVIRONMENTAL SPECIFICATIONS

Dimensions	Weight	Housing Material	Temperature Range	Relative Humidity	Ingress Protection
3.1 OD x 0.59 H in (8 x 1.5 cm)	0.45 lbs (.204 kg)	Black, UV-stable plastic	-40°C to +85°C	Up to 95%	IP67 (when installed on sealed surface)

* Gain will vary depending on frequency and method of installation. Measured on a 9-inch ground plane, not including cable attenuation.

** For other connector options, please refer to GPS Multi-Band Mobile Antenna Configurator Part Number Guide.

GNSS + Dual LTE Combination Antenna



PCTEL's 4GDPSM multi-band GPS antenna provides omnidirectional coverage of 4G LTE frequencies plus GPS/GLONASS tracking support. Built-in GNSS tracking helps improve operational dispatch and schedule maintenance efficiencies, and the antenna's very low-profile design minimizes its exposure to theft or vandalism.

Features

- Attractive, dome shaped low-profile housing for minimum visibility and overhead clearance
- Multi-band frequency coverage and GNSS support minimize the number of antennas required on the vehicle for easier, more cost effective installations
- UV stability for long lasting outdoor operation
- Built-in Silicon rubber gasket for ingress protection



GNSS4GDPSM

STANDARD CONFIGURATION

Model	Elements	Cable	Connector	Mount	Housing Color
GNSS4GDPSM GNSS4GDPSM-W	One GNSS & Two LTE One GNSS & Two LTE	One - 5 meter RG-174/U & Two - 5 meter RG-174/U	SMA Plug (Male) SMA Plug (Male)	Metal 1.57-cm OD, 1.27-cm long stud mount with jam nut	Black White
4GDPSM 4GDPSM-W	Two 4G LTE Two 4G LTE	Two - 5 meter RG-174/U Two - 5 meter RG-174/U	SMA Plug (Male) SMA Plug (Male)	Metal 1.57-cm OD, 1.27-cm long stud mount with jam nut	Black White

ELECTRICAL SPECIFICATIONS - GNSS ANTENNAS

Frequency Range	LNA Gain	Polarization	VSWR	Current Draw	Axial Ratio	Noise Figure	Input Impedance
1575-1610 MHz	@3VDC, 25 ± 3 dB typ @5VDC, 28 ± 3 dB typ	RHCP	< 2.0	13 ± 2mA @ 5VDC	3 dB @ f0 (f0 = 1592.5 MHz)	1.5 dB typical	50 ohms

ELECTRICAL SPECIFICATIONS - 4G LTE ANTENNAS

Model	Frequency Range	Gain* Without Ground Plane	Gain* With 2 ft. Ground Plane	Isolation (dB)	Polarization	VSWR	Impedance
GNSS4GDPSM GNSS4GDPSM-W	698-960 MHz / 1710-2700 MHz	-8.85 dBi -10.97 dBi	-7.16 dBi -11.8 dBi	20 20	Vertical	< 2.0	50 ohms
4GDPSM 4GDPSM-W	698-960 MHz / 1710-2700 MHz	-6.32 dBi -12.05 dBi	8.64 dBi -10.9 dBo	20 20			

MECHANICAL & ENVIRONMENTAL SPECIFICATIONS

Dimensions	Weight	Housing Material	Temperature Range	Ingress Protection
81.5 OD x 40 H mm	4.9 oz (without GNSS) 11.5 oz (with GNSS)	UV-stable plastic	-40°C to +85°C	IP67 (when installed on sealed surface)

* Gain will vary depending on frequency and method of installation. Measured on a 9-inch ground plane, not including cable attenuation.

** For other connector options, please refer to GPS Multi-Band Mobile Antenna Configurator Part Number Guide.

GPS/GSM Multi-Band Magnetic Low-Profile Antenna



The GPSGSMMSMA multi-band GPS magnetic mount antenna provides omnidirectional coverage of GSM frequencies from 824-896 MHz and 1710-1990 MHz plus GPS L1 vehicle tracking support. This low-profile antenna features a magnetic mount base that makes installation and removal quick and simple. The assembly includes an adhesive VHB tape layer for more permanent installations. Its low-profile housing reduces antenna exposure to theft or vandalism. It is ideal for vehicular applications requiring voice coverage and asset tracking support to improve operational dispatch efficiencies. Applications include commercial delivery, maintenance, public safety or mass transit vehicles.



GPSGSMMSMA

Features

- Extremely compact low-profile housing for minimum visibility and maximum overhead clearance
- Multi-band frequency coverage and GPS tracking support minimize the number of antennas required on the vehicle for more cost effective installations
- UV stability for long lasting outdoor applications
- Adhesive VHB tape layer for more permanent installations, if required; tape provides added protection to the vehicle's surface

STANDARD CONFIGURATION

Model	Cable	Connector*	Mount
GPSGSMMSMA	16.4 feet RG-174/U (GPS) 16.4 feet RG-174/U (GSM)	Male SMA (GPS) Male SMA (GSM)	Magnetic mounting Adhesive VHB tape layer included.

ELECTRICAL SPECIFICATIONS - RF ANTENNA

Operating Frequencies	Maximum Gain**	Polarization	VSWR
824-896 MHz 1710-1990 MHz	2 dBi	Linear (GSM frequencies)	< 2.5:1 (GSM)

ELECTRICAL SPECIFICATIONS - GPS ANTENNA

Frequency Band	Current Draw	LNA Gain	Polarization	VSWR	Maximum Power (GSM)	Input Impedance
L1: 1575.42 ± 3 MHz	< 15 mA @ 3-5V	25 ± 3 dB	Right hand circular (GPS)	< 1.5:1 (GPS)	8 Watts	50 Ohms

MECHANICAL & ENVIRONMENTAL SPECIFICATIONS

Dimensions	Weight	Temperature Range	Magnet Pull Force	Housing Material
2.8 x 2.4 x 0.5 in (7.2 x 6.2 x 1.4 cm)	0.4 lbs (.181 kg)	-40°C to +85°C	2.8 lbf, minimum	Black UV-resistant plastic

* Consult Customer Service for other connector options.

** Gain will vary depending on frequency and method of installation. Measured on a 9-inch ground plane, not including cable attenuation. The top of the antenna housing must be directed toward the sky, as indicated by the "AIRWARD" on the antenna radome.

Mobile Mount, Low-Profile Active, 28 dB GPS Antenna



PCTEL's GPS active NMO mount antenna provides superior performance with the industry's smallest NMO mountable footprint. The GPS-NMO antenna features a custom tuned frequency ceramic patch element, 15 KV ESD circuit protection, a two stage low noise amplifier and a SAW filter, that provides excellent out-of-band signal rejection performance and consistently clear signal while minimizing loss-of-lock.

The GPS-NMO features an attractive, compact housing environmentally tested for both fixed or mobile applications. Its innovative tab design supports higher reliability and repeatable performance at GPS frequencies than button pin designs can provide. The product is available in black or white housing options to suit a wide variety of installation applications.



GPS-NMO

GPS-NMO-W
(White)

Features

- Attractive, low-profile design for maximum overhead clearance
- 2.7-5 Volt operation
- 15 KV ESD circuit protection
- Mates with all 1-1/8"-18 thread NMO mounts, including 3/4" mounts

STANDARD CONFIGURATION

Model	Mount	Housing Color
GPS-NMO GPS-NMO-W	Compatible with all 1-1/8"-18 thread NMO mounts, including 3/4" mounts	Black White

ELECTRICAL SPECIFICATIONS - GPS ANTENNA

Frequency Band	LNA Gain	Element Gain	Noise Figure	Out of Band Rejection
1575.42MHz \pm 10 MHz	@ 3.3VDC: 28 dB @ 5VDC: 30 dB	1 dBic	1.5 dB (typical)	\pm 15 MHz: 5 dB \pm 20 MHz: 10 dB \pm 30 MHz: 32 dB \pm 40 MHz: 40 dB

ELECTRICAL SPECIFICATIONS - GPS ANTENNA, continued

Current Draw	DC Voltage	Nominal Impedance	Polarization
9 mA @ 3.3V 15 mA @ 5V	2.7 - 5 VDC	50 ohms	Right hand circular

MECHANICAL & ENVIRONMENTAL SPECIFICATIONS

Dimensions	Weight	Shock	Vibration	Temperature	Humidity
1.5 OD x 1.8 H in (38 x 46 mm)	0.15 lbs (0.07 kg)	Vertical axis 50G, Other axes 30G	3 axis, sweep = 60 min 3 - 500 Hz random vibration	-40°C to +85°C operating	95% max (non condensing)



Multiple Mount GPS L1 GPS Antenna

The AGPS26 global positioning system (GPS) antenna features an electrically shielded LNA PCB assembly that is permanently encased in a UV-stable, black radome. Providing 26 dB of gain and 3 to 5 Vdc operation, this active GPS antenna provides outstanding GPS support for many vehicle tracking applications. This magnetic mount antenna can be ordered with additional screw or tape mount hardware for maximum installation flexibility.



AGPS26MM

Features

- Rugged, low-profile housing for minimum visibility
- Various mount options for maximum versatility. Magnetic mount standard. Screw or tape mount hardware optional.
- Wide variety of connector options provide greater flexibility and compatibility with most GPS systems

STANDARD CONFIGURATION

Model	Cable	Connector*	Mount
AGPS26MM	17 feet RG-174/U	SMA Plug	Magnet

ELECTRICAL SPECIFICATIONS

Frequency Band	Gain	VSWR	Nominal Impedance
1575.42 ± 1.023 MHz	Typical at zenith: +5.0 dBic (-1.0 dBic minimum at 10° elevation)	< 2.0:1 maximum	50 ohms

ELECTRICAL SPECIFICATIONS, continued

Amplifier Gain	Polarization	Out of Band Rejection
26 dB	Right hand circular	fo=1575.42 MHz fo ± 20 MHz: 7 dB typical fo ± 50 MHz: 20 dB typical fo ± 100 MHz: 30 dB typical

ELECTRICAL SPECIFICATIONS, continued

Noise Figure	Axial Ratio	Current Draw	DC Voltage
1.8 dB typical 2.2 dB maximum	3.0 dB typical	20 mA, maximum at 3-5 Vdc (9 mA typical)	3-5 Vdc: 50 mV p-p ripple (max)

MECHANICAL & ENVIRONMENTAL SPECIFICATIONS

Dimensions	Weight	Housing Material	Temperature Range	Humidity
2 L x 1.77 W x 0.55 D in (50.8 x 44.9 x 13.9 mm)	4.09 ± 0.35 oz	Black, UV-stable plastic, ABS	-40°C to +85°C	10 to 95% RH

* Consult Customer Service for other connector options.