



MOBILE BROADBAND WIRELESS ANTENNAS

RUGGED SOLUTIONS FOR MOBILE APPLICATIONS

- Permanent, Temporary and Covert Installations
- Wideband and Multi-band Technologies
- Voice, Video and Data Support
- Supporting 700 MHz LTE, 800/900 MHz, 3G, 4G, Wi-Fi and WiMAX Broadband Wireless Networks
- Attractive, low profile designs
- GPS Support capability also available



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BMAXC24505



BMAXC233805



GMLFML195C



MLFML195C



MVP



MTPM800



MMF

Technical Data

Maximum Power: 100 watts
Polarization: Vertical
Nominal Impedance: 50 ohms
Radiator Material: .100" OD black plated stainless steel
Spring: Black pated stainless steel
Base Coil Housing: Molded polymer with a plated insert ring and a spring-loaded contact pin
Phasing Coil Housing: Molded polymer jacket with copper, nickel and chrome plated bushing
Rod Ferrule: 5/16" -24 thread; bright black plated
Mount Method: Mates with 1-1/8"-18 thread mounts PCTEL high efficiency mounts recommended

BMAXC Molded Base Antennas

The BMAXC antennas feature a rugged molded polymer base, plated spring-loaded contact pin and .100" diameter stainless steel whip for long-lasting, trouble-free operation. These wideband antennas are optimized for broad-band wireless frequencies, including 802.11b, g and WiMAX and cover all the specified frequencies without field tuning.

Features

- Molded polymer base provides ruggedness and durability in harsh mobile environments.
- Wideband performance provide coverage of specified frequencies without field tuning; no rod cutting is required.
- Spring-loaded gold plated contact pin

Electrical Specifications

Model Number	Frequency Range	Max Gain*	Max. VSWR	Rod Type
BMAXC233805	2.3-3.8 GHz	5 dBi	1.5:1	Collinear/Closed
BMAXC24505	2.2-2.9 GHz	5 dBi	1.5:1	Collinear/Closed
BMAXC24503	2.2-2.9 GHz	3 dBi	2.0:1	Collinear/Closed

Mechanical Specifications

Model Number	Antenna Height at lowest frequency
BMAXC233805	4.75" (120.60 mm)
BMAXC24505	7.50" (190.50 mm)
BMAXC24503	5.25" (133.35 mm)

Recommended High Efficiency Mount Options

Model Number	Description
MLFML195C	Permanent 3/4" hole mount for frequencies over 800 MHz. Accommodates surfaces up to 0.046" thick. Includes 17 feet of Pro-Flex Plus 195 cable and loose Male TNC connector.**
(B)GMLFML195C	Magnetic base mount for frequencies over 800 MHz. Includes 12 foot of Pro-Flex Plus 195 cable and attached male TNC connector**. Available in black or chrome finish.
MVP	Vandal-proof 5/8" hole permanent mount. Accommodates surfaces up to 1/2" thick. N female bulkhead termination. Purchase mating N Male terminated cable assembly separately.
MMF	Permanent 3/4" hole mount for frequencies over 800 MHz. Accommodates surfaces up to .06" thick. Right angle Male SMA termination. Purchase mating Female SMA terminated cable assembly separately.
MTPM800	Permanent 5/8" hole permanent mount. Accommodates surfaces up to 1/2" thick. N female bulkhead termination. Purchase mating N Male terminated cable assembly separately

* Measured on a 4 x 4 foot ground plane

** Other connectors and cable types/lengths available through product configurator.

Elevated Feed Mobile Data Antennas

These elevated feed mobile antennas are designed for installations requiring elevation of the antenna over surrounding objects that could prevent true omnidirectional coverage. They are ideal for public safety vehicles with overhead light bars that often obstruct the RF signal. They are designed to operate both on and off a ground plane without degradation in VSWR performance.

Features

- Feed point is elevated above its mounting surface, easily clearing the overhead light bars in police and ambulance vehicles which often obstruct the RF signal.
- Quiet, closed coil trilinear rod.
- Excellent VSWR performance on or off a ground plane.
- Rugged molded polymer elevated feed housing and stainless steel spring and rod, for maximum resistance to every day wear and tear. Mates with all 1-1/8"-18 thread mounts, including 3/4" mounts.
- High frequency microwave mounts utilize Pro-Flex™ Plus 195 low loss coaxial cable for optimal performance at microwave frequencies.



MEFC24005

MEFC58005HF



Technical Data

Maximum Power: 50 watts (MEFC24005 only) 10 watts (all other models)
Polarization: Vertical
Nominal Impedance: 50 Ohm
VSWR: <1.5:1
Return Loss: < 10 dB
Radome Material: UV stable ABS
Radiator Material: .100" OD stainless steel; bright (MEFC) or black finish (BMEFC)
Mount Method: Compatible with most 1-1/8"-18 thread mounts. See recommended mount options for each model.*

Mounting Options

Antenna Model	Recommended Mount Model(s)	Options
(B)MEFC24005	MLFML195C	Low frequency 3/4" hole permanent mount, 17 ft. Pro-Flex™ Plus 195, TNC male standard
(B)MEFC24005	GMLFML195C	Low frequency magnetic mount, 12 ft. Pro-Flex™ Plus 195, TNC male standard
(B)MEFC24005	MVP	Permanent Mount, 5/8" hole; 1-1/8"-18 thread; thick plate mount
(B)MEFC49005HF (B)MEFC58005HF MEFC2427HF	MHFML195C*	Permanent Mount, 17 ft. Pro-Flex™ Plus 195, TNC male loose
(B)MEFC49005HF (B)MEFC58005HF MEFC2427HF	GMHFML195C*	Magnetic Mount, 12 ft. Pro-Flex™ Plus 195, TNC male attached
(B)MEFC49005HF (B)MEFC58005HF MEFC2427HF	MVPHF	Permanent Mount, 5/8" hole; 1-1/8"-18 thread; thick plate mount

* Models (B)MEFC49005HF and (B)MEFC58005HF must be ordered with recommended mount(s) listed above. Consult factory for other connector options offered with these mounts.

Antenna Electrical Specifications

Model	Frequency Range	Gain (ground Plane)	Gain (no Ground Plane)	Horizontal Beamwidth @1/2 Power	Vertical Beamwidth @1/2 Power
(B)MEFC24005*	2.4-2.5 GHz	5 dBi	3.5 dBi	360°	45°
(B)MEFC49005HF	4.9-5.0 GHz	5.5 dBi	5.5 dBi	360°	18°
(B)MEFC58005HF	5.7-5.8 GHz	5.5 dBi	5.5 dBi	360°	18°
MEFC2427HF	2.4-2.7 GHz	5 dBi	5 dBi	360°	26°

Mechanical Specifications

Model	Antenna Height	Weight (Mass)	Temperature Range	Wind Loading (Frontal) @ 125mph	Bending Moment @ 125 mph
(B)MEFC24005*	16" (40.6 cm)	0.5 lbs (0.227 kg)	-40° C to +70° C	3.1 lbf.	18.6 in-lb
(B)MEFC49005HF	12" (30.4 cm)	0.5 lbs (0.227 kg)	-40° C to +70° C	3.1 lbf.	18.6 in-lb
(B)MEFC58005HF	12" (30.4 cm)	0.5 lbs (0.227 kg)	-40° C to +70° C	3.1 lbf.	18.6 in-lb
MEFC2427HF	13.6" (34.54 cm)	0.5 lbs (0.227 kg)	-40° C to +70° C	3.1 lbf.	18.6 in-lb

*Prefix "B" indicates all black finish.

BMLPV UHF
Model

MLPV800



WMLPVDB800/1900S



BMLPV800HD



Technical Data

Maximum Power: 150 watts (all models, except UHF and dual band models) 100 watts (UHF and dual band models)
Polarization: Vertical
Nominal Impedance: 50 Ohm
VSWR: < 1.5:1 < 2.0:1 (dual-band and UHF models)
Ingress Protection: IP66
Color (add to prefix to indicate choice): Black over chrome (prefix not needed), black over black (B) or white over chrome (W).
Mount Method: Compatible with most 1-1/8" - 18 thread mounts, including 3/4" hole mounts

Mobile Low Profile Vertical Antennas

The MLPV antennas provide superior pattern coverage for mobile and fixed applications from 380 MHz to 5.8 GHz. Their design provides industry leading wideband performance and reliability, with minimum loss and no tuning required. Dual band versions (MLPVDB series) are also available. All models feature an attractive, compact housing environmentally tested for both indoor or outdoor applications.

Features

- Attractive, low profile design for maximum overhead clearance
- Industry leading wideband performance provides outstanding coverage across multiple frequency bands with no tuning required
- Mates with all 1-1/8"-18 thread mounts, including 3/4" mounts
- Wideband, multi-band and no ground plane models available
- Black over chrome base standard. Also available in white over chrome or black over black base
- "Easy grip" HD models available

Mounting

The following mounts are recommended with the MLPV antennas on the next page:

Model	Options
MLFML195C	High performance permanent 3/4" hole, 1-1/8"-18 thread mount. Includes 17 ft of Pro-Flex™ Plus 195 cable. Loose TNC male connector included.
GMLFML195C	High performance permanent 3-1/4" diameter magnetic base, 1-1/8"-18 thread mount. Includes 12 ft of Pro-Flex™ Plus 195 cable terminated with TNC male connector (attached).
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.*
MVP	5/8" hole, vandal proof mount. No cable.*
MMF	3/4" hole, 1-1/8"-18 mount for frequencies above 1 GHz. Terminates in an SMA, male connector. No cable.*

*Order cable assembly separately.

Antenna Electrical Specifications

Model*	Frequency Range	Bandwidth	Gain***
MLPV380	380-410 MHz	30 MHz	Unity
MLPV406	406-440 MHz	34 MHz	Unity
MLPV430	430-480 MHz	50 MHz	Unity
MLPV450	450-512 MHz	62 MHz	Unity
MLPV698	698-806 MHz	108 MHz	Unity
MLPV700	740-870 MHz	130 MHz	3 dBi***
MLPV800	806-960 MHz	154 MHz	3 dBi***
BMLPV800HD	806-960 MHz	154 MHz	3 dBi***
BMLPVDB700/2500	698-960 MHz and 1710-2500 MHz	262 MHz and 790 MHz	3 dBi/4 dBi
MLPVDB800/1900	806-960 MHz and 1710-1990 MHz	154 MHz and 280 MHz	3 dBi/4 dBi
BMLPVDB800/1900HD	806-960 MHz and 1710-1990 MHz	154 MHz and 280 MHz	3 dBi/4 dBi
MLPVDB800/1900S	806-960 MHz and 1710-2500 MHz	154 MHz and 790 MHz	3 dBi/4 dBi
MLPVDB902/2400	902-928 MHz and 2400-2500 MHz	26 MHz and 100 MHz	3 dBi/4 dBi
MLPVDB902/2400S	902-928 MHz and 2400-2500 MHz	26 MHz and 100 MHz	3 dBi/4 dBi
MLPV1700	1700-2700 MHz	1000 MHz	4 dBi***
MLPVDB2458	2.4-2.5 GHz and 4.9-5.9 GHz	100 MHz / 1000 MHz	3 dBi/4 dBi
MLPV4900	4.9-5.9 GHz	1000 MHz	4 dBi

Mechanical Specifications

Model (all colors)*	Antenna Dimensions	Weight (Mass)	Temperature Range
MLPV380	3.38" H x 1.5" OD	0.31 lbs (.14 kg)	-40° C to 70° C
MLPV406	3.38" H X 1.5" OD	0.31 lbs (.14 kg)	-40° C to 70° C
MLPV430	3.38" H X 1.5" OD	0.31 lbs (.14 kg)	-40° C to 70° C
MLPV450	3.38" H X 1.5" OD	0.31 lbs (.14 kg)	-40° C to 70° C
MLPV698	3.38" H X 1.5" OD	0.31 lbs (.14 kg)	-40° C to 70° C
MLPV700	2.4" H X 1.5" OD	0.29 lbs (0.13 kg)	-40° C to 70° C
MLPV800	2.4" H X 1.5" OD	0.29 lbs (0.13 kg)	-40° C to 70° C
BMLPV800HD	2.4" H x 1.5" W x 1.7" D (at the base)	0.44 lbs (0.19 kg)	-40° C to 70° C
BMLPVDB700/2500	2.4" H x 1.5" OD	0.29 lbs (0.13 kg)	-40° C to 70° C
MLPVDB800/1900	2.4" H X 1.5" OD	0.29 lbs (0.13 kg)	-40° C to 70° C
BMLPV800/1900HD	2.4" H x 1.5" W x 1.7" D (at the base)	0.44 lbs (0.19 kg)	-40° C to 70° C
MLPVDB800/1900S	1.79" H x 1.5" OD	0.29 lbs (0.13 kg)	-40° C to 70° C
MLPVDB902/2400	2.4" H X 1.5" OD	0.29 lbs (0.13 kg)	-40° C to 70° C
MLPVDB902/2400S	1.79" H x 1.5" OD	0.29 lbs (0.13 kg)	-40° C to 70° C
MLPV1700	1.79" H x 1.5" OD	0.34 lbs (0.15 kg)	-40° C to 70° C
MLPVDB2458	1.79" H x 1.5" OD (at the base)	0.34 lbs (0.15 kg)	-40° C to 70° C
MLPV4900**	1.79" H x 1.5" OD (at the base)	0.34 lbs (0.15 kg)	-40° C to 70° C

* To order black over black version, add the prefix "B" to the part number. To order the white over chrome version, add the prefix "W" to the part number. Not all models are available in black or white. Call Customer Service for availability.

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

BMLPV900NGP or
BMLPV2400NGPBMLPV900NGPVP
or BMLPV2400NGP
with mount

MLPV4900NGP

MLPV4900NGP
connector
interface

Technical Data

Maximum Power: 100 watts
Polarization: Vertical
Nominal Impedance: 50 Ohm
VSWR: < 2.0:1
Ingress Protection: IP66
Color: Black over black
Mount Method: Compatible with 1-1/8" - 18 thread mounts, including 3/4" hole mounts. See Mounting for recommended mounts.

No Ground Plane Low Profile Vertical Antennas

These 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 MVP mount for permanent installations.

Features

- Attractive, low profile design for maximum overhead clearance
- Industry leading performance provides outstanding coverage across multiple frequency bands without a ground plane
- Mates with all 1-1/8"-18 thread mounts, including 3/4" mounts

Mounting

The following mounts are recommended for the MLPV4900NGP only:

Model	Options
MTPMHF	High frequency 5/8" hole, 1-1/8"-18 thread mount for surfaces up to 1-inch thick. N female connector. No cable.*
MVPHF	High frequency 5/8" hole, 1-1/8"-18 thread. Vandal proof mount for surfaces 1/2 to 1-inch thick. M to N female connector. No cable.*
MHFML195C	High performance permanent 3/4" hole, 1-1/8"-18 thread mount. Includes 17 ft of Pro-Flex™ Plus 195 cable. TNC male connector included (loose).
GMHFML195C	High performance 3-1/4" diameter magnetic base, 1-1/8"-18 thread mount. Includes 12 ft of Pro-Flex™ Plus 195 cable terminated with TNC male connector (attached).

The following mounts are recommended for the MLPV2400NGP and MLPV900NGP:

Model	Options
MLFML195C	Permanent mount for frequencies from 800 MHz to 3.0 GHz, 1-1/8"-18 thread. Includes 17 ft of Pro-Flex™ Plus 195 cable. TNC male connector included (loose).
MVP	5/8" hole, vandal proof mount. No cable.

Antenna Electrical Specifications

Model	Frequency Range	Bandwidth	Gain*
BMLPV900NGP	902-928 MHz	26 MHz	Unity
MLPV2400NGP	2.4-2.5 GHz	100 MHz	3 dBi
MLPV4900NGP**	4.9-5.0 GHz	100 MHz	3 dBi

Mechanical Specifications

Model (all colors)	Antenna Dimensions	Weight (Mass)	Temperature Range
BMLPV900NGP	3.38" H x 1.5" OD	0.31 lbs (.14 kg)	-40° C to 70° C
MLPV2400NGP	3.38" H x 1.5" OD	0.31 lbs (.14 kg)	-40° C to 70° C
MLPV4900NGP**	2.4" H X 1.5" OD	0.29 lbs (0.13 kg)	-40° C to 70° C

* Measured on a 4 foot diameter ground plane.

** Model MLPV4900NGP features a custom connector interface that requires installation on PCTEL high frequency mounts. See above chart for recommended options.

Note: to order antenna with built-in permanent mount, please add suffix "VP" to the antenna part number. For example, BMLPV900NGPVP indicates a 900 MHz NGP antenna with built-in permanent N female bulkhead mount.

Elevated Feed Point Antenna with N female Termination

The ASPG918 elevated feed point antenna provides omnidirectional coverage without a ground plane, allowing maximum installation flexibility on various parts of the vehicle. This model is terminated with an N female bulkhead for maximum connection flexibility when used with a separate cable assembly.

Features

- Black DURA-COAT™ finish complements new vehicle styling
- High Performance - elevated feed point design provides omnidirectional coverage when off-roof mounting is required
- Versatile - ground plane independent design allow installation where necessary, for both mobile or fixed applications
- Problem Solver - corrects coverage problems caused by the wrong positioning of rooftop antennas
- Built-in N female bulkhead allows connection to various cable types for maximum installation flexibility and greater performance optimization (cable assemblies must be purchased separately)



ASPG918 - 7/8-15/16" hole mount antenna with integral N female connector for fixed installation applications



Antenna Electrical Specifications

Model	Frequency Range	Bandwidth	Gain	Rod/Coil Type
ASPG918	890-960 MHz	58 MHz	3 dB	Collinear, open

Mechanical Specifications

Model	Antenna Height
ASPG918*	Approximately 24"

Technical Data

Maximum Power: 10 watts
Polarization: Vertical
Nominal Impedance: 50 ohms
VSWR: < 2.0:1
Radiator Material: One piece stainless steel collinear with black DURA-COAT™ finish.
Spring: Stainless steel, black DURA-COAT™
Base: N female bulkhead. Cable assembly with mating N male connector on one end is required for operation. Cable assemblies sold separately.
Extension Housing Materials: Black poly carbonate and black polycarbonate-blend resins
Mount Method: 7/8-5/16" through hole mounting. Antenna includes N female termination. Cable assembly sold separately.



MN9155



Technical Data

Maximum Power: 100 watts
Polarization: Vertical, linear
Nominal Impedance: 50 ohms
VSWR: < 1.5:1
Base: Molded Makrolon polycarbonate; black
Radiator Material: .100" diameter, 17-7 PH stainless steel rod; bright chrome finish
Bushing: Nickel plated brass
Mount Method: N male connector built in

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

Antenna Electrical Specifications

Model	Frequency Range	Gain
MN9153	902-928 MHz	3 dB (with a ground plane)
MN9155	902-928 MHz	5 dB (with a ground plane)

Mechanical Specifications

Model	Antenna Height
MN9153	13.2"
MN9155	22.5"

High Frequency Mounts

3/4" hole; 1-1/8"-18 thread; Crimp on

Model	Mount Type	Coax	Connector
MMF	Permanent microwave mount for frequencies from 800 MHz to 3.0 GHz for up to .06" thick roof surfaces.	None	Male SMA*
MHFML195C**	Permanent microwave mount for frequencies from 3.0 GHz to 5.8 GHz for up to 0.046" thick roof surfaces	17 ft. Pro-Flex™ Plus 195	Loose TNC male standard. Other connector options (NF, NM, RPC) are available.
GMHFML195C**	Magnetic base microwave mount for frequencies from 3.0 GHz	12 ft. Pro-Flex™ Plus 195	Attached TNC male standard. Contact factory for other connector options.
MLFML195C	Permanent mount for frequencies from 800 MHz to 3.0 GHz for up to 0.046" thick roof surfaces	17 ft. Pro-Flex™ Plus 195	Loose TNC male standard. Contact factory for other connector options.
MHFPP240C**	Permanent mount for frequencies from 800 MHz to 3.0 GHz for up to 0.046" thick roof surfaces	17 ft. Pro-Flex™ Plus 240	Loose TNC male standard. Contact factory for other connector options.
GMHFPP240C**	Magnetic mount for frequencies from 800 MHz to 3.0 GHz for up to 0.046" thick roof surfaces	12 ft. Pro-Flex™ Plus 240	Loose TNC male standard. Contact factory for other connector options.
GMLFML195C	Magnetic base mount for frequencies from 800 MHz to 3.0 GHz	12 ft. Pro-Flex™ Plus 195	Attached TNC male standard. Contact factory for other connector options.



MMF



MHFML195C



GMHFML195C



MLFML195C



MHFPP240C



GMLFML195C

High Frequency Mounts For Thick Roof Surfaces

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

Model	Mount Type	Coax	Connector
MTPMHF**	Permanent microwave mount for frequencies from 3.0 GHz to 5.8 GHz. For surfaces up to 1-inch thick.	None	N female* connector
MVPHF**	Vandal-proof microwave mount for frequencies from 3.0 GHz to 5.8 GHz. For surfaces up to 1/2-inch thick.	None	M to N female* connector

* Cable assembly with mating connector sold separately.

** High frequency mount to be used with (B)MEFC49005HF, (B)MEFC58005HF, MEFC2327HF and MLPV4900NGP



MTPMHF



MVPHF

For other connector options, please refer to the Mobile Antenna Mounts Configurator Part Number Guide.

Miniature Magnetic Mount Antennas (Cellular/PCS and 2.4 GHz)

Our BMMG antennas feature a miniature magnetic mount base and cable fully integrated into their base. They are compact, easy to install and are available with a variety of connector options.

Features

- One piece construction for easy transport and installation
- Black coated whip assembly and machined polymer base provides minimum visibility
- No tuning required



BMMG824/1900



BMMG24005



Technical Data

Maximum Power: 50 watts
Nominal Impedance: 50 ohms
VSWR: < 1.5:1
Radiator Material: .062" diameter stainless steel, black chrome finish
Base: Machined polymer
Bushing: Black chrome triple-plated brass
Antenna Base: Molded acrylonitrile butadiene styrene
Mounting Base: Black coated stainless steel
Magnet Mounting Force: 5 lbs minimum
Mount Method: Built-in magnetic base

Antenna Electrical Specifications

Model	Frequency Range	Gain
BMMG824/1900ML195*	824-896 MHz/1850-1990 MHz	2 dBi/6 dBi
BMMG24005ML195*	2400-2484 MHz	5 dBi

Mechanical Specifications

Model	Antenna Height	Rod/Coil Type	Cable
BMMG824/1900ML195*	10.5"	Collinear/Open	12' Pro-Flex™ Plus 195
BMMG24005ML195*	9"	Trilinear/Open	Pro-Flex™ Plus 195

* Consult Customer Service for connector options and specify choice when placing your order. Please add \$2.00 for N connector option.

3947D GPS/Cellular/3G/2.4 GHz Combined Covert/Dash Antenna

The 3947D GPS, Quad Cellular, 3G & 2.4 GHz ISM Band antenna is an excellent choice for Telematics systems requiring dependable and highly accurate positioning data. It is also ideal for clear and consistent host-to-vehicle communications.



Antenna Electrical Specifications (Cellular/3G/2.4 GHz)

Frequencies: 824-960 MHz 1710-2200 MHz 2400-2500 MHz
Nominal Impedance: 50 Ohm
VSWR: ≤1.5:1
Nominal Gain: 2 dBi

Features

- GPS, Quad-band Cellular & 2.4 GHz band reception
- Semi-flexible for covert installations
- Excellent out-of-band signal rejection
- High gain active GPS antenna
- Easy to install

Antenna Response (GPS)

Frequency Range	Nominal Gain	Noise Figure (typical)	Polarization	VSWR
1575.42 MHz	28 dB	1.5 dB	Right Hand Circular	≤1.5:1

Antenna Electrical Specifications (GPS)

Voltage	Current Draw
3 - 5 VDC	9.0 mA @ 3.5V

Mechanical Specifications

Antenna Dimensions	Housing	Cable	Connectors
5.2" x 2.3" x .3" (132.1 x 58.9 x 8.5mm)	Lexan® covered urethane foam	Two 9.8' (3 meters) RG174	2 x SMA male

Environmental Specifications

Temperature Range
-40°C to +85°C operating

Inside Window Glass Mount



APDM5920U, vertical installation.
The antenna can also be
installed horizontally.



Technical Data

Maximum Power: 10 watts
Polarization: Linear, horizontal or vertical
Nominal Impedance: 50 ohms
VSWR: < 2.0:1
Radiator Material: ABS
Coax Cable: 10 ft RG-174/U cable (bottom fed)
Connector SAP (female FME)
Mounting Method: Normount® Z500 tape

This vertical or horizontal polarization antenna is designed for inside glass mount installations operating in the 800 MHz cellular, 900 MHz trunking, 1800 MHz DCS and 1900 MHz PCS bands without the need for tuning. Its tape mount easily attaches to a vehicle's windshield or other glass surfaces making the antenna ideal for public safety or other applications requiring an unobtrusive design.

Features

- Quad Band – covers 800 MHz cellular, 900 MHz trunking, 1800 MHz DCS, and 1900 MHz PCS
- Low Profile – “sleek” appearance blends well with car dash interior
- Efficient – simple mounting method allows installation in minutes without holes
- Economical – one antenna serves the function of four, minimizing installation and inventory requirements
- Antenna can be oriented vertically or horizontally for maximum installation flexibility

Antenna Electrical Specifications

Model	Frequency Range	Gain	Bandwidth
APDM5920U	824-960/1710-1990 MHz	Unity	136/280 MHz

Mechanical Specifications

Model	Antenna Dimensions
APDM5920U	0.5” D x 5.9” L

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3930D Quad-band Cellular + 3G Dash/Covert Mount & Embedded Antenna

The 3930D Quad-band Cellular + 3G Covert Antenna provides exceptional signal reception globally across public 2G and 3G Cellular wireless networks. The antenna is tuned to receive 824-894 MHz (cell), 890-960 MHz (GSM), 1710-1880 MHz (European), and 1850-1990 MHz (N. American) frequencies, as well as 1885-2200 MHz (US & Euro 3G/UMTS/W-CDMA) band. Housed in an ultra-thin, semi-flexible Lexan® covered urethane foam package for covert, dash-mount and embedded installations, the 3930D Quad-band Cellular + 3G covert antenna is the perfect solution for cutting-edge Telematics, Wireless Remote Monitoring and M2M Platforms.

Features

- Quad-band cellular and 3G (UMTS/ W-CDMA) reception
- Ultra-thin semi-flexible for covert installations
- Easy to install
- Ideal for in-vehicle covert installations, telematics, wireless remote monitoring and M2M platforms

Mechanical Specifications

Antenna Dimensions	Housing	Cable	Connector
5.45" x 1.58" x .18" (138.4 x 40.1 x 4.57mm)	Lexan® covered urethane foam	9.8' (3 meters) RG174	SMA male

Environmental Specifications

Temperature Range	Humidity
-40°C to +85°C operating	95% max (non-condensing)



Antenna Electrical Specifications

Frequencies: 824-894 MHz (Cellular) 890-960 MHz (GSM) 1710-1880 MHz (Europe) 1850-1990 MHz (N. America) 1885-2200 MHz (US & EU 3G)
Nominal Impedance: 50 Ohm
VSWR: <2:1



3938D Ultra Compact 2.4 GHz Covert Mount Antenna

The 3938D ultra compact 2.4 GHz Covert Mount Antenna provides exceptional signal reception on the 2.4 GHz ISM band. The 3938D is composed of an ultra compact semi-flexible coated PCB for covert applications. Ideal for telematics and M2M platforms

Features

- 2.4 GHz ISM Band reception
- Ultra-compact, semi-flexible PCB
- Coated PCB or packaged form factor
- Covert and dash mount
- Easy to install
- Side exit cable



RF/Electrical Specifications

Frequency Range	Nominal Gain	Nominal Impedance	VSWR
2.4-2.5 GHz	2 dBi	50 Ohms	≤ 2.0

Mechanical Specifications

Antenna Dimensions (L x W x H)	Housing Material	Cable	Connector
2.17" x .67" x .025" (55.1 x 17.0 x .64 mm)	Black solder masked PCB	6" (15 cm) RG-174	MCX Right Angle

Environmental Specifications

Temperature Range	Humidity
-40°C to +85°C operating	95% max (non condensing)

GPS HIGH PERFORMANCE PLATFORM

The GPSHPSM high performance GPS Multi-Band antenna platform is PCTEL's most durable and versatile design for vehicular applications. This platform offers multi-band coverage, superior GPS LNA technology, easy to install design, and "top shelf" materials to provide maximum durability and performance for Mission Critical communications.

Features

- No tune, multi-band coverage: 700/800 MHz Public Safety, 800 MHz Cellular/SMR, 900 MHz GSM/ISM, 1800-2100 MHz GSM/PCS, 3G, 4G, 2.4/5.8 GHz WiFi and 2.3-5.8 GHz Public Safety and WiMAX broadband wireless frequencies
- 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
- 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



Electrical Specifications - GPS Antenna

Frequency Band: 1575.42 MHz (GPS L1)
Amplifier Gain: 26 dB +/- 3 dBic
Nominal Impedance: 50 ohms
Output VSWR: 1.5:1 typical
DC Current: 20 mA Nominal; < 30 mA @ -40°C to +85°C
DC Voltage: 3-13.5 V
Noise Figure: 1.8dB Typical
Out-of-Band Signal Rejection: > 40 dB rejection @ +/- 50 MHz from center frequency

Electrical Specifications - RF Antennas

Available Models: GPSHPSM/SM/SM (Black Radome) WGPSHP (White Radome)	Operating Frequencies	Polarization	Nominal Impedance	Gain ¹ (Typical)	Maximum Power	VSWR
Voice/Data RF Element	698-2500 MHz 3300-3800 MHz	Vertical, linear	50 ohms	4-5 dBi	50 watts	< 2.0:1
Broadband Wireless RF Element	1.7-2.8 GHz 4.9-5.9 GHz	Vertical, linear	50 ohms	4-5 dBi	50 watts	< 2.0:1

Mechanical and Environmental Specifications

Dimensions	Coax (3)	Connectors
5.2" OD x 2.8" H (132 OD x 71 H mm)	17 feet Pro-Flex Plus 195 (Voice/Data/WiMAX elements); 17 feet Pro-Flex Plus 195 (Broadband Wireless Element); 17 feet RG-174/U (GPS L1)	SMA Plug (Male) standard

Radome / Baseplate Construction	Mounting Method	Operating / Storage Temperature	Ingress Protection
Black ² or White UV stable CYCOLOY C6200	3/4-inch hole, 3/4-inch long (.75") zinc stud mount with dual jam nuts (included)	-40°C to +85°C	IP67
Zinc baseplate over- molded with black TPE, SANTOPRENE gasket			

¹ Measured on a 4-foot diameter ground plane. Gain value is measured at the base of the antenna (no cable loss included).

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



Radome shown in white.
Black radome is standard.



Electrical Specifications GPS Antenna

Frequency Band: 1575.42 MHz (GPS L1)
Amplifier Gain: 26 dB +/- 3 dBic
Nominal Impedance: 50 ohms
Output VSWR: 1.5:1 typical
DC Current: 20 mA Nominal; < 30 mA @ -40°C to +85°C
DC Voltage: 3-13.5 V
Noise Figure: 1.8dB Typical
Out-of-Band Signal Rejection: > 40 dB rejection @ +/- 50 MHz from center frequency

GPS HIGH PERFORMANCE MULTI-BAND MIMO

The GPSHPMIMO GPS Multi-Band antenna utilizes PCTEL's most durable and versatile design for vehicular applications requiring MIMO for WiFi applications. This platform offers multi-band coverage, superior GPS LNA technology, an easy to install design, and "top shelf" materials to provide maximum durability and performance for mobile data and video communications.

Features

- No tune, multi-band coverage: 700/800 MHz Public Safety, 800 MHz Cellular/SMR, 900 MHz GSM/ISM, 1800-2100 MHz GSM/PCS, 3G, 4G, 2.4/5.8 GHz WiFi and 2.3-5.8 GHz Public Safety and WiMAX broadband wireless frequencies
- 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
- 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

Electrical Specifications - RF Antennas

Model GPSHPMIMO	Operating Frequencies	Polarization	Nominal Impedance	Typical Gain ¹	Max. Power	VSWR
Voice/Data RF Element	698-2500 MHz 3300-3800 MHz	Vertical, linear	50 ohms	1-2 dBi 2-3 dBi	50 Watts	< 2.0:1
Broadband Wireless RF Element #1	1.7-2.8 GHz 4.9-5.9 GHz	Vertical, linear	50 ohms	2-3 dBi 3-4 dBi	50 Watts	< 2.0:1
Broadband Wireless RF Element #2	1.7-2.8 GHz 4.9-5.9 GHz	Horizontal, linear	50 ohms	2-3 dBi 3-4 dBi	50 Watts	< 2.0:1

Mechanical Specifications

Dimensions	Coax (4)	Connectors
5.2" OD x 2.8" H (132 OD x 71 H mm)	17 feet Pro-Flex Plus 195 (Voice/Data RF Element); 17 feet Pro-Flex Plus 195 (Broadband Wireless Element #1) 17 feet Pro-Flex Plus 195 (Broadband Wireless Element #2) 17 feet RG-174/U (GPS L1)	SMA Plug (Male) standard

Mechanical and Environmental Specifications

Radome / Baseplate Construction	Mounting Method	Operating / Storage temperature	Ingress Protection
Black, UV stable CYCOLOY C6200 Radome	3/4-inch hole, 3/4 inch long (.75") zinc stud mount with dual jam nuts (included)	-40°C to +85°C	IP67
Zinc baseplate over- molded with black TPE, SANTOPRENE gasket			

¹ Measured on a 4-foot diameter ground plane. Gain value is measured at the base of the antenna (no cable loss included). For other connector options, please refer to GPS Multi-Band Mobile Antenna Configurator Part Number Guide for Quad-Band Models.

GPS+ Combination Antennas

The 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.

Features

- Combination GPS/mobile antenna design provides GPS tracking coverage and voice/data wireless coverage capabilities for fleet monitoring or fleet tracking applications.
- UV-stable housing features attractive industrial design that is available in off-white or black textured finishes.
- 3 or 5 Vdc operating voltage supply enables operation with most GPS systems on the market.
- Several models are available, including trunk lid mount, permanent stud mount, mirror mount or magnet mount versions. The variety of mounts provides flexibility and versatility to end users.
- Various connector options are available for both the GPS antenna and the mobile antenna’s permanent mount.



Magnet Mount Model



Permanent Stud Mount Model

Low Noise Amplifier Specifications

Frequency Band: 1575.42 MHz
Amplifier Gain: 26 dB +/- 3
Polarization: Right hand circular
Nominal Impedance: 50 ohms
Output VSWR: 1.5:1, typical
DC Current: 20 mA Nominal; <30 mA @ -40° C to +85° C
DC Voltage: 3-5.5V (internal regulated)
Axial Ratio: < 3.0 dB @ boresight
Noise Figure: 1.8 typical
Filtering: Hybrid (including pre-selector)
Out-of-band Rejection: >40 dB @ +/- 50 MHz



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

Mechanical Specifications

Housing Material	Housing Dimensions	Mobile Antenna Mount Interface	Cable	Cable Pull Force	Mounting Options
Black or off-white, UV-stable polycarbonate	2.25" W x 4.25" L x 1.25" H	1-1/8"-18 thread mount	17' RG-174 (GPS antenna side) 17' RG-58/U (mobile antenna side)	5 kgf, minimum (magnetic mount models)	Stud, mirror, trunk or magnet

Environmental Specifications

Burn-out Protection	Operating Temperature Range	Storage Temperature Range
Protected from damage by RF signals when the power received by the antenna is no greater than +17 dBm, maximum	-40° C to +85° C	-40° C to +100° C

To order, please follow the following part number configuration:

Color*	Mount type	GPS Connector	Mobile Antenna Connector
	<i>Add the appropriate suffix (choose from the list below) to indicate your choice of mount:</i>	<i>Specify your GPS connector of choice by adding the connector abbreviation from the list below to the part number.</i>	<i>Choose among any of the connector options available below for the BM mounts with RG-58 cable:</i>
Black	GPSPMM (for magnet mount)	Male TNC (MC), Male SMA (MSMA), Male SMC (MSMC)	Male SMA (MSMA), Male N (NM), TNC (C), Reverse Polarity SMA (MSMARP)
	GPSPSM (for stud mount)	Male TNC (MC), Male SMA (MSMA), MCX, Right angle MMCX plug (RAMMCX), Right angle SMB plug (RASBP)	Reverse Polarity SMA (MSMARP) Mini-UHF (PL) BNC (BN) TNC (C) Male N (NM) Male SMA (MSMA) Right Angle Male SMA (RAMSMA)
	GPSPMR (for mirror mount)	Male TNC (MC)	Male N (NM)
	GPSPTM (for trunk mount)	Right angle SMB plug (RASBP)	N/C

*White radome is a special order item. Contact Customer Service for details.

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

PCTMDL Low Profile GPS Multi-band Antenna

The Medallion™ GPS Multi-Band antenna features an attractive modern design in a rugged low profile housing. This antenna offers multi-band coverage of GSM 850, GSM 900, GSM 1800, GSM 1900, 3G, WiFi/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 WiFi/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



Electrical Specifications - RF Antennas

Model PCTMDL	Operating Frequencies	Polarization	Nominal Impedance	Gain* (Typical)	VSWR	Max. Power
Voice/Data RF Element	806-960 MHz/ 1710-2170 MHz	Vertical, linear	50 ohms	2.8dBi (806-960 MHz) / 3.3dBi (1710-2170 MHz)	< 2.0:1	20 Watts
Broadband Wireless RF Element	2.3 - 2.6 GHz	Vertical, linear	50 ohms	3.9dBi	< 2.0:1	10 Watts

Mechanical Specifications

Housing Material	Dimensions	Coax (3)**	Connectors
UV Resistant, Black ABS	5.1" x 4.95" x 1.7" (129.6 x 125.8 x 43.1 mm)	17 feet RG-58/U (GSM lead) 17 feet RG-58/U (WiFi/WiMAX lead) 17 feet RG-174/U (GPS lead)	SMA Plug (Male) standard*

Environmental Specifications

Operating / Storage temperature	Weight	Humidity	Ingress Protection
-40°C to +85°C	1.96 lbs 31.9 oz	95%	IP56



Electrical Specifications - GPS Antenna

Frequency Band: 1575.42 MHz (GPS L1)
GPS Antenna Gain: 3.5dBic
Amplifier Gain: 27dB
Nominal Impedance: 50 ohms
Output VSWR: 1.5:1 typical
DC Current: 20 mA Nominal; < 30 mA @ -40°C to +85°C
DC Voltage: 3-5.5 V
Noise Figure: 1.6dB Typical
Grounding Protection: DC grounded (both antennas)
Out-of-Band Signal Rejection: 20dB @ +/- 100 MHz from center frequency typical

*Measured on a 4x4 ft ground plane.

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



"Sharkfin" Multi-band Antenna



Technical Data

Maximum Power: 10 watts
Polarization: Right hand circular
Input Impedance: 50 ohms
VSWR: < 1.8:1 (GPS) < 2.0:1 (RF)
Azimuth Coverage (GPS): 360°
Elevation Coverage (GPS): Hemispherical
Operating Supply Voltage: 2.7 - 5.5 V
Housing: Black, UV protected ABS
Housing Dimensions (major axis x minor axis x height): 3.8 x 2.4 x 2.8 inches 97 x 60 x 70 mm
Cable: 10 feet RG-174
Mount Method: Through hole mounting

Sharkfin Multi-band Roof Mount Antennas

The Sharkfin antennas provide multi-band omnidirectional coverage in an attractive, low profile housing. The tri-band and quad-band models also provide GPS navigation support capability. Their low profile through-hole footprint offers an attractive antenna design that provides optimal sealing for leakage resistance.

Features

- Low, aerodynamic profile eliminates wind noise commonly experienced with external mount vehicular applications
- Overmolded gasket design provides optimal sealing from condensation and water ingress
- Integrated antenna mast design provides secure installation to the vehicle
- UV stability for outdoor applications
- GPS navigation support on select models

GPS Antenna Electrical Specifications

Operating Frequency	Nominal Gain	Gain - Antenna Element	Noise Figure
L1: 1575.42	24 dB	3.5 dBic	2.0 dB nominal

Multi-band Antenna Electrical Specifications

Model	Operating Frequencies	Antenna Gain
GPSQB and GPSTB	824-896 MHz (AMPS); 1850-1990 MHz (PCS) 2.4-2.5 GHz (WiFi) (GPSQB only)	Unity

Model*	Frequencies Covered	Number of Pigtails
GPSQB	AMPS/PCS/GPS/WiFi	3
GPSTB	AMPS/PCS/GPS	2

Environmental Specifications

Operating Temperature Range	Humidity Rating	Ingress Protection
-40° C to +85° C	95%	IP56

***To order, please follow the following part number configuration:**

Base Model	GPS Connector Code	AMPS/PCS Connector Code	Wi-Fi Connector Code
<i>Example:</i> GPSQB	<i>Choose among:</i> Right angle SMB Plug (RASBJ) Male SMA (MSMA) Female FME (FFME)	<i>Choose among:</i> Male SMA (MSMA) Male TNC (C) Female TNC (FC) Female FME (FFME)	<i>Choose among:</i> Reverse Polarity TNC (RPC) Male TNC (C) Reverse Polarity Male SMA (RPMMSMA)

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