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## MOBILE ANTENNAS

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## Heavy Duty Low Profile Base Gain Antennas

These 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 weather-proofing
- Plated fittings for superior performance and durability in the toughest environments
- Mates with all 1-1/8”-18 thread mounts, including 3/4” mounts

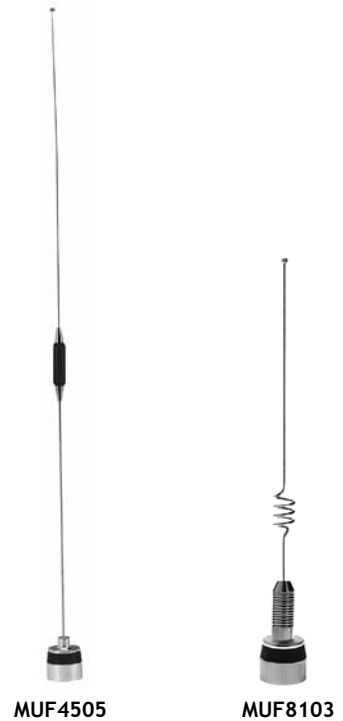
### Antenna Electrical Specifications

Model	Frequency Range	Factory Tuned Frequency	Gain	Rod/Coil Type
MUF3505(S)	350-400 MHz	Antennas are field tunable within the specified frequency range.	5 dB	Collinear/Closed
MUF4065(S)	406-430 MHz		5 dB	Collinear/Closed
MUF4505(S)	450-470 MHz		5 dB	Collinear/Closed
MUF4705(S)	470-490 MHz		5 dB	Collinear/Closed
MUF4905(S)	490-512 MHz		5 dB	Collinear/Closed
MUF8105(S)	806-866 MHz	815 MHz	5 dB	Trilinear/Open
MUF8005(S)	806-866 MHz	815 MHz	5 dB	Trilinear/Closed
MUF8103(S)	806-896 MHz	815 MHz	3 dB	Collinear/Open
MUF8003(S)	806-896 MHz	815 MHz	3 dB	Collinear/Closed
MUF8325(S)	825-896 MHz	835 MHz	5 dB	Trilinear/Closed
MUF9035(S)	896-940 MHz	898 MHz	5 dB	Trilinear/Closed

### Mechanical Specifications

Model	Antenna Length at lowest frequency
MUF3505(S)	Approximately 32”
MUF4065(S)	Approximately 32”
MUF4505(S)	Approximately 32”
MUF4705(S)	Approximately 32”
MUF4905(S)	Approximately 32”
MUF8105(S)	Approximately 25”
MUF8005(S)	Approximately 25”
MUF8103(S)	Approximately 15.5”
MUF8003(S)	Approximately 15.5”
MUF8325(S)	Approximately 25”
MUF9035(S)	Approximately 25”

\*Suffix “S” indicates spring.



### Technical Data

<b>Maximum Power:</b> 200 watts
<b>Nominal Impedance:</b> 50 ohms
<b>VSWR at Resonance:</b> < 1.5:1
<b>Radiator Material:</b> .100” diameter stainless steel
<b>Optional Spring:</b> Stainless steel
<b>Phasing Coil Housing:</b> Low profile molded polymer jacket with copper, nickel and chrome plated bushing
<b>Base Coil Housing:</b> Low profile molded polymer with copper, nickel and chrome plated bushing
<b>Antenna Type:</b> 3 dB: 5/8 wave over a 1/4 wave 5 dB: 5/8 wave over a 1/4 wave

## VHF and UHF Wideband Antennas - No Tune

These 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

- 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 operates with or without a ground plane without compromising VSWR performance.



\*MWU4002S operates without a ground plane without compromising VSWR performance.



### Technical Data

<b>Maximum Power:</b> 200 watts (UHF) 160 watts (VHF)
<b>Nominal Impedance:</b> 50 ohms
<b>VSWR:</b> < 2.0:1
<b>Radiator Material:</b> .100" diameter stainless steel
<b>Spring:</b> Stainless steel
<b>Phasing Coil Housing:</b> Molded polymer jacket with bright or black chrome plated bushing
<b>Base Coil Housing:</b> Molded polymer jacket with copper, nickel and chrome plated bushing

### Antenna Electrical Specifications

Model	Frequency Range	Bandwidth	Gain
(B)MWV1365S**	136-174 MHz	38 MHz	Unity
(B)MWU4002S**	380-520 MHz	140 MHz	2.0 dB with a ground plane Unity without a ground plane
MWU4505(S)	440-480 MHz	40 MHz	4.5 dB
MWB4505	450-470 MHz	20 MHz	5 dB
MWU4063S**	406-470 MHz	64 MHz	3 dB

### Mechanical Specifications

Model	Antenna Height at lowest frequency
(B)MWV1365S	Approximately 20"
(B)MWU4002S	Less than 12"
MWU4505(S)	Approximately 32"
MWB4505	Approximately 32"
MWU4063S	Approximately 12"

\*Prefix "B" indicates black. Suffix "S" indicates spring.

\*\*This model includes a spring.

## VHF and UHF Wideband Antennas - Field Tunable

These field tune antennas address equipment inter-operability 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
- 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.
- MWV1322HD(S) operates without a ground plane without compromising VSWR performance.

### Antenna Electrical Specifications

Model	Frequency Range	Bandwidth	Gain
MWV1322(S)*	132-174 MHz	26 MHz	2.4 dB with a ground plane (Unity without a ground plane)
MWV1322HD(S)*	132-174 MHz	26 MHz	2.4 dB with a ground plane (Unity without a ground plane)
MWB1320**	132-512 MHz	24 MHz	Unity
ASPR7495	150-512 MHz, field tunable	24 MHz (406-512 MHz)	Unity
ASPR795	108-512 MHz, field tunable	100 MHz (406-512 MHz)	Unity
ASPC201L***	108-512 MHz, field tunable	100 MHz (406-512 MHz)	Unity
ASPE7495****	150-512 MHz, field tunable	100 MHz (406-512 MHz)	Unity

### Mechanical Specifications

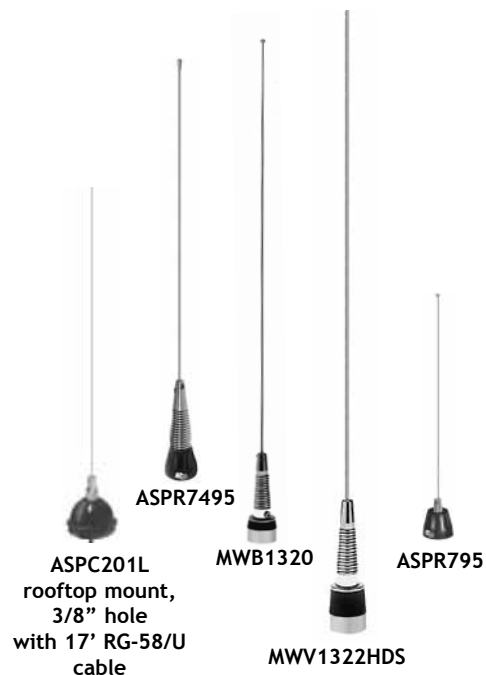
Model	Whip Length at lowest frequency
MWV1322(S)	Approximately 48"
MWV1322HD(S)	Approximately 48"
MWB1320	Approximately 22"
ASPR7495	16-3/8"
ASPR795	26"
ASPC201L	26"
ASPE7495	16-3/8"

\*Suffix "S" indicates spring.

\*\*Model MWB1320 comes with spring and requires a ground plane.

\*\*\* Model ASPC201L includes 17 ft RG-58/U cable and UHF male connector.

\*\*\*\*Model includes elastomer spring.



### Technical Data

<b>Maximum Power:</b> 150 watts 100 watts (ASPC201L)
<b>Nominal Impedance:</b> 50 ohms
<b>VSWR at Resonance:</b> < 1.5:1 (ASPR795 and ASPC201L) < 2.0:1 (all other models)
<b>Radiator Material:</b> 0.125" diameter, 17-7PH stainless steel (Models MWV1322HD(S) and ASPR7495 only) 0.072" diameter, 17-7PH stainless (ASPC201L) 0.046" diameter, stainless steel (ASPR795) .100"-.062" diameter tapered stainless steel (all other models)
<b>Spring Material (if available with the antenna):</b> Stainless steel
<b>Base and Fittings:</b> Aluminum, plated steel and brass (ASPR795)
<b>Base Coil Housing:</b> Molded polymer jacket with copper, nickel and chrome plated bushing
<b>Antenna Type:</b> Base loaded 1/2 wave (MWV models) 1/4 Wave (all models)
<b>Mounting Method:</b> 1-1/8" -18 thread mobile mounts, including 3/4" hole mounts (all models except ASPC201L) 3/8" hole snap-in mounts (ASPC201L only)

## Dual Band VHF/UHF Collinear Antenna

The MBD1444(S) antenna offers VHF and UHF dual band coverage with 2 dB gain (at VHF) and 5 dB gain (at UHF frequencies). The antenna features a tapped coil design to maximize bandwidth. A shock spring is available for heavy duty applications.



MDB1444S

### Features

- VHF/UHF dual band coverage
- 2 dB Gain at VHF frequencies; 5 dB gain at UHF frequencies
- Model designed for business or amateur bands
- Mates with all 1-1/8"-18 thread mounts, including 3/4" mounts

### Antenna Electrical Specifications

Model	Frequency Range	Factory Tuned Frequency	Gain
MDB1444(S)*	144-148 MHz 440-448 MHz	146 MHz 444 MHz	2 dB (VHF) 5 dB (UHF)



### Technical Data

<b>Maximum Power:</b> 200 watts
<b>Nominal Impedance:</b> 50 ohms
<b>VSWR at Resonance:</b> < 1.5:1 (UHF models) < 2:1 (VHF models)
<b>Radiator Material:</b> .100"-.062" diameter stainless steel
<b>Optional Spring:</b> Stainless steel
<b>Phasing Coil Housing:</b> Molded polymer jacket with bright or black chrome plated bushing
<b>Loading Coil:</b> Tinned copper wire wound on a low-loss coil form
<b>Base Coil Housing:</b> Molded polymer jacket with copper, nickel and chrome plated bushing
<b>Antenna Type:</b> VHF: 1/2 wave UHF: 5/8 wave over a 1/2 wave

### Mechanical Specifications

Model	Antenna Height at lowest frequency
MDB1444(S)*	Approximately 38"

\* Suffix "S" indicates spring, which is not a retrofit option. Please indicate at time of order.

## 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

### Antenna Electrical Specifications

Model	Frequency Range	Factory Tuned Frequency	Gain
MHB5802(S)*	144-174 MHz	Field tunable within specified frequency range	Unity no ground plane (2.4 dB with a ground plane)



MHB5802S



### Mechanical Specifications

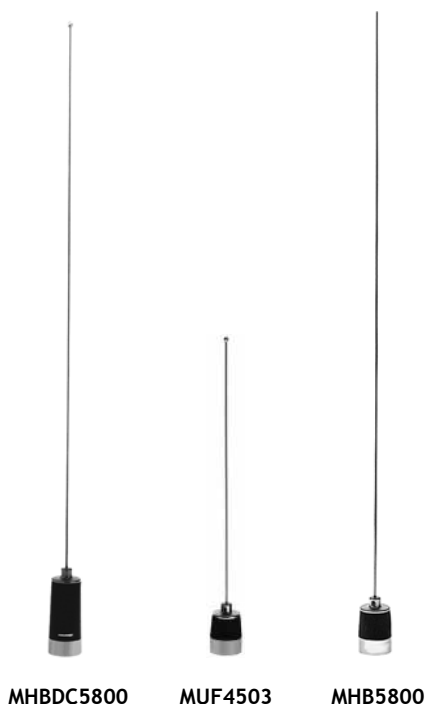
Model	Antenna Height at lowest frequency
MHB5802(S)*	Approximately 52"

### Technical Data

<b>Maximum Power:</b> 200 watts
<b>Nominal Impedance:</b> 50 ohms
<b>VSWR at Resonance:</b> < 1.5:1
<b>Radiator Material:</b> .100"-.062" diameter tapered
<b>Optional Spring:</b> Stainless steel
<b>Base Coil Housing:</b> Molded polymer jacket with copper, nickel and chrome plated bushing
<b>Antenna Type:</b> Base loaded 1/2 Wave

\*Suffix "S" (Spring) is not a retrofit option, please indicate at time of order.





**Technical Data**

<b>Maximum Power:</b> 200 watts
<b>Nominal Impedance:</b> 50 ohms
<b>VSWR at Resonance:</b> < 1.5:1
<b>Radiator Material:</b> .100"-.062" diameter stainless steel
<b>Grounding:</b> DC Grounded (MHBDC model only)
<b>Optional Spring:</b> Stainless steel
<b>Base Coil Housing:</b> Molded polymer jacket with copper, nickel and chrome plated bushing
<b>Antenna Type:</b> Base loaded 5/8 Wave

## 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 shick 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

### Antenna Electrical Specifications

Model	Frequency Range	Factory Tuned Frequency	Gain with/without Ground Plane
MHB5800132(S)	132-174 MHz	Field tunable	3 dB
MHBDC5800(S)**	144-174 MHz	Field tunable	3 dB
MHB5800(S)*	144-174 MHz	Field tunable	3 dB
MUF3003(S)	300-325 MHz	Field tunable	3 dB
MUF4063(S)*	406-430 MHz	Field tunable	3 dB
MUF4303(S)*	430-450 MHz	Field tunable	3 dB
MUF4503(S)*	450-470 MHz	Field tunable	3 dB
MUF4703(S)*	470-490 MHz	Field tunable	3 dB
MUF4903(S)*	490-512 MHz	Field tunable	3 dB

### Mechanical Specifications

Model	Antenna Height at lowest frequency
MHB5800132(S)	Approximately 58"
MHBDC5800(S)**	Approximately 52"
MHB5800(S)*	Approximately 52"
MUF3003(S)	Approximately 16"
MUF4063(S)*	Approximately 16"
MUF4303(S)*	Approximately 16"
MUF4503(S)*	Approximately 16"
MUF4703(S)*	Approximately 16"
MUF4903(S)*	Approximately 16"

\* Suffix "S" indicates spring and is not a retrofit option, please indicate at time of order.

\*\* MHBDC5800(S) has a 5 MHz bandwidth @ 1.5:1 VSWR. This is a DC grounded antenna

## Base Loaded Chrome Coil Antennas, No Ground Plane

Designed for installations that lack a suitable ground plane, these 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

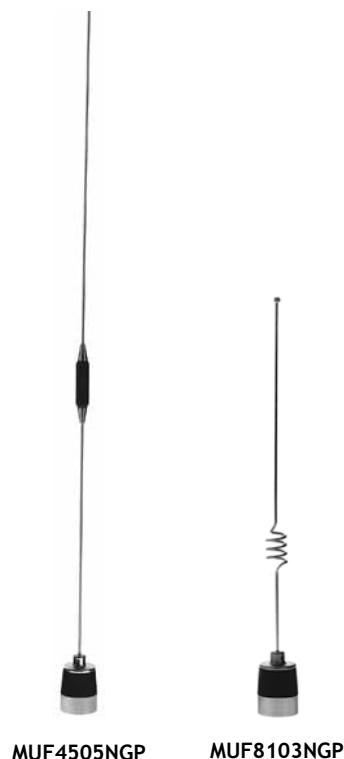
### Antenna Electrical Specifications

Model	Frequency Range	Factory Tuned Frequency	Gain with/without Ground Plane	Rod/Coil Type
MUF4065NGP(S)*	406-430 MHz	Field tunable	5 dB/3 dB	Collinear/Closed
MUF4305NGP*	430-450 MHz	Field tunable	5 dB/3 dB	Collinear/Closed
MUF4505NGP(S)*	450-470 MHz	Field tunable	5 dB/3 dB	Collinear/Closed
MUF8103NGP	806-866 MHz	815 MHz	3 dB	Collinear/Open
MUF8003NGP(S)	806-866 MHz	815 MHz	3 dB	Collinear/Closed
MUF9000NGP	896-940 MHz	898 MHz	Unity	Straight
MUF9103NGP	896-940 MHz	898 MHz	3 dB	Collinear/Open
MUF9035NGP(S)	896-940 MHz	898 MHz	5 dB	Trilinear/Closed
MUF9025NGPS	896-940 MHz	915 MHz	5 dB	Trilinear/Open

### Mechanical Specifications

Model	Antenna Height at lowest frequency
MUF4065NGP(S)*	Approximately 33"
MUF4305NGP*	Approximately 33"
MUF4505NGP(S)*	Approximately 33"
MUF8103NGP	Approximately 17.25"
MUF8003NGP(S)	Approximately 17.25"
MUF9000NGP	Approximately 17.25"
MUF9103NGP	Approximately 17.5"
MUF9035NGP(S)	Approximately 27.5"
MUF9025NGPS	Approximately 27.5"

\*Suffix "S" indicates spring



### Technical Data

<b>Maximum Power:</b> 200 watts
<b>Nominal Impedance:</b> 50 ohms
<b>VSWR at Resonance:</b> < 1.5:1
<b>Radiator Material:</b> .100"-.062" diameter stainless steel
<b>Optional Spring:</b> Stainless steel
<b>Phasing Coil Housing:</b> Molded polymer jacket with copper, nickel and chrome plated bushing
<b>Base Housing Coil:</b> Tapered jacket with copper, nickel and chrome plated bushing
<b>Mount Method:</b> Compatible with 3/4" hole mounts
<b>Antenna Type:</b> Base loaded 1/2 wave (800 MHz, 900 MHz and unity gain models) Base loaded 5/8 wave over a 1/2 wave (all other models)

## 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.



BMLPV UHF Model



MLPV800



WMLPVDB800/1900S



BMLPV800HD



### Technical Data

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

### 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 BMLPV2400NGP



BMLPV900NGPVP 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.

## Silhouette Transit Antennas

The 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 multi-band 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. A GPS multi-band model is also available.

### 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
- Disguised Appearance - 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

### Antenna Electrical Specifications

Model	Frequency Range	Bandwidth	Gain
ASPB574	148-160 MHz	0.5 MHz	Unity
ASPC574	160-174 MHz	0.5 MHz	Unity
ASP572	450-470 MHz	20 MHz	Unity
ASP772	450-470 MHz	20 MHz	Unity
ASPB572	470-488 MHz	18 MHz	Unity
ASPC572	488-512 MHz	24 MHz	Unity
ASP764	764-806 MHz	42 MHz	Unity
ASP931	806-894 MHz	88 MHz	Unity
ASPG931	890-960 MHz	154 MHz	Unity

### Mechanical Specifications

Model	Termination	Dimensions
ASPB574	SO-239 (UHF female, panel mount)	4.1" H x 17" L x 3.5" W
ASPC574	SO-239 (UHF female, panel mount)	4.1" H x 17" L x 3.5" W
ASP572	UHF female, panel mount (mates with PL259 male)	3.13" H x 8" L x 3.5" W
ASP772	BNC female bulkhead	3.4" H x 8" L x 3.5" W
ASPB572	UHF female, panel mount (mates with PL259 male)	3.4" H x 8" L x 3.5" W
ASPC572	UHF female, panel mount (mates with PL259 male)	3.4" H x 8" L x 3.5" W
ASP764	N female, panel mount	3.4" H x 8" L x 3.5" W
ASP931	N female, panel mount	3.4" H x 8" L x 3.5" W
ASPG931	N female, panel mount	3.4" H x 8" L x 3.5" W



### Technical Data

<b>Maximum Power:</b> 100 watts
<b>Polarization:</b> Vertical
<b>Nominal Impedance:</b> 50 ohms
<b>VSWR:</b> < 2.0:1, maximum
<b>Radome Material:</b> White, high impact molded ASA
<b>Cable:</b> Sold separately. Call factory for cable assembly options.
<b>Mount Method:</b> Standard 1-5/16" roof hole mount Supplied with screws and weather-proof gasket.





## 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 GPS Antenna

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

### 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 GHz - 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

\*Measured on a 4x4 ft ground plane.

\*\*Standard model. Contact Customer Service to request other connector options.

## Sharkfin Multi-band Roof Mount Antenna

The GPSDBHF Sharkfin antenna provides multi-band omnidirectional coverage in an attractive, low profile housing. Its 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



“Sharkfin” Multi-band Antenna

### Multi-band Antenna Electrical Specifications

Model	Operating Frequencies	Antenna Gain
GPSDBHF	2.4 GHz-2.5 GHz (Wi-Fi); 4.9-5.9 GHz (Public Safety/WiMAX)	Unity

### Mechanical Specifications

Model	Frequencies Covered	Number of Pigtails
GPSDBHF	Wi-Fi/Public Safety/WiMAX	1*

### Environmental Specifications

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

**\*\*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> GPSDBHF	<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 (RPMSMA)

\* NOTE: Includes a single pigtail terminated with Reverse Polarity, Reverse Threaded Male SMA plug. Call factory for other connector options. This model does not include GPS.

\*\* If your connector preference is not listed, please consult factory for availability.



### Technical Data

<b>Maximum Power:</b> 5 watts
<b>Input Impedance:</b> 50 ohms
<b>VSWR:</b> < 2.0:1
<b>Grounding Protection:</b> DC grounded
<b>Housing:</b> Black, UV protected ABS
<b>Housing Dimensions (major axis x minor axis x height):</b> 97 mm (3.8”) x 60 mm (2.4”) x 70 mm (2.8”)
<b>Cable:</b> 12 ft Pro-Flex™ Plus 195, black
<b>Mount Method:</b> 0.75” through hole mounting
<b>Ingress Protection:</b> IP56



## Covert Antennas

## Inside Window Glass Mount



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

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



## Technical Data

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

## 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

Normount® is a registered trademark of Norton, a Saint-Gobain Co.

## 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

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

## Covert Antennas

## 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)

## AGPS26GMMSMA - 26 dB Gain GPS L1 Glass Mount Antenna

The AGPS26GMMSMA 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.

### Features

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



### Electrical Specifications (Patch)

Center Frequency	Polarization	Nominal Impedance	VSWR	Gain at Zenith	Axial Ratio
1575.42 MHz (GPS L1)	Right hand circular	50 ohm	1.5:1 typical	3 dBiC Nominal	< 3 dB @ boresight

### Mechanical Specifications

Housing	Housing Dimensions (L x W x D)	Mounting Method	Cable	Connector*
Black, UV-stable plastic	2.22" x 1.97" x .59"	High Bond tape for glass mounting	17 feet RG-174/U	Male SMA (attached)

### Environmental Specifications

Operating Temperature Range	Storage Temperature Range	Operating Condition	Storage Condition	High Bond Tape Specifications
-40°C to +85°C	-40°C to +85°C	-40°C to +85°C temperature 10 to 95% RH humidity	-40°C to +85°C temperature 10 to 95% RH humidity	Conformable foam Acrylic adhesive Moisture and Solvent resistant High Shear and peel adhesion



### Electrical Specifications (Filter/LNA)

<b>Center Frequency:</b> 1575.42 +/- 1 MHz (GPS L1)
<b>Amplifier Gain without Antenna Element and Cable:</b> 26 dB +/- 3
<b>Nominal Impedance:</b> 50 ohm
<b>Noise Figure (25°):</b> 1.8 typical
<b>VSWR:</b> 1.5:1 typical
<b>Voltage:</b> 3-5 V (regulated)
<b>DC Current @ 5 Volts:</b> 20 mA Nominal < 30 mA @ -40°C to +85°C (Filter Out-Of-Band)
<b>Filtering:</b> Hybrid (including pre-selector)
<b>Out-of-Band Signal Rejection:</b> 40 dB @ +/-50 MHz typical

## 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.

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

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

### 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

## Lowband Quarter Wave Antennas

The 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 (all models, except MLB6600S)
- 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

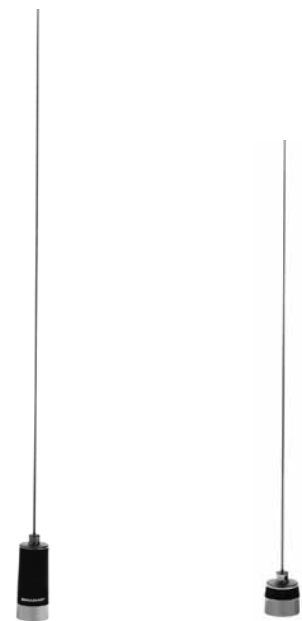
### Antenna Electrical Specifications

Model	Frequency Range	Factory Tuned Frequency	Gain
MLB2700(S)	27-31 MHz	Field Tunable within specified range	Unity
MLBDC2700(S)**	27-31 MHz	Field Tunable within specified range	Unity
MLB3000(S)	30-35 MHz	Field Tunable within specified range	Unity
MLBDC3000(S)**	30-35 MHz	Field Tunable within specified range	Unity
MLBDC3400(S)**	34-37 MHz	Field Tunable within specified range	Unity
MLB3400(S)	34-40 MHz	Field Tunable within specified range	Unity
MLBDC3700(S)**	37-40 MHz	Field Tunable within specified range	Unity
MLB4000(S)	40-47 MHz	Field Tunable within specified range	Unity
MLBDC4000(S)**	40-47 MHz	Field Tunable within specified range	Unity
MLBDC4500(S)**	45-48 MHz	Field Tunable within specified range	Unity
MLBDC4700(S)**	47-50 MHz	Field Tunable within specified range	Unity
MLB4700(S)	47-54 MHz	Field Tunable within specified range	Unity
MLB6600(S)	66-132 MHz	Field Tunable within specified range	Unity

### Mechanical Specifications

Model	Antenna Height at lowest frequency
All models	Approximately 52"

\*Suffix "S" indicates spring  
 \*\* This model is DC grounded



MLB4700

MLB6600



### Technical Data

<b>Maximum Power:</b> 200 watts 500 watts (MLBDC models)
<b>Nominal Impedance:</b> 50 ohm
<b>VSWR at Resonance:</b> < 1.5:1
<b>Radiator Material:</b> .100" - .062" diameter tapered stainless steel
<b>Optional Spring:</b> Stainless steel
<b>Loading Coil:</b> Tinned copper wire wound on a low-loss coil form (All models, except MLB6600S)
<b>Base Coil Housing:</b> Molded polymer with copper, nickel and chrome plated bushing
<b>Lightening Protection:</b> DC grounded (MLBDC models only)
<b>Antenna Type:</b> Base loaded tapped 1/4 wave (MLBDC models) Full length 1/4 wave (MLB6600S) Base loaded 1/4 wave (MLB models)

## Lowband Full Length Quarter Wave Antenna

This is a rugged full length Quarter Wave for lowband applications. It features a high quality stainless steel shock spring.

### Features

- The ultimate in durability for lowband applications
- Stainless steel construction
- 96" tapered stainless steel whip
- Adjustable, die cast zinc mount



MLB3001

### Antenna Electrical Specifications

Model	Frequency Range	Factory Tuned Frequency	Gain
MLB3001	30-54 MHz	Field Tunable	Unity

### Mechanical Specifications

Model	Antenna Height at lowest frequency
MLB3001	Approximately 105"



### Technical Data

<b>Maximum Power:</b> 250 watts
<b>Nominal Impedance:</b> 50 ohm
<b>VSWR at Resonance:</b> < 1.5:1
<b>Radiator Material:</b> .200" - .100" diameter tapered stainless steel
<b>Spring:</b> Stainless steel
<b>Cable Options:</b> MK20 (20' cable) complete with spade lugs installed, and loose solder on PL259 connector.
<b>Mounting Base:</b> 3-1/2" diameter
<b>Antenna Type:</b> Full length 1/4 wave

\*Spring assembly included

## PCTCN Chrome Nut Antennas

Our new 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 12 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 for simple installation and/or replacement.



### Technical Data

<b>Maximum Power:</b> 150 watts
<b>Nominal Impedance:</b> 50 ohms
<b>VSWR at Resonance:</b> < 1.5:1 <b>VSWR across the range of specified frequencies:</b> < 2.0:1
<b>Radiator Material:</b> .062” diameter 17-7ph stainless steel, “Titanium gray” finish
<b>Mount Nut:</b> zinc die cast; “Titanium” finish
<b>Antenna Type:</b> 1/4 Wave (Unity gain models) 5/8 Wave over a 1/4 Wave (3dB gain models) Collinear (4.5 dB model)





## Quarterwave Antennas

## Electrical Specifications

Model	Frequency Range	Factory Tuned Frequency	Gain	Replacement for:
PCTCNMFT	118-940 MHz	Field Tunable	Unity	(B)MFT120
PCTCN1520	152-162 MHz	157 MHz	Unity	BMHB1520, MHB1520
PCTCN1620	162-174 MHz	167 MHz	Unity	MHB1620
PCTCN3840	380-430 MHz	405 MHz	Unity	(B)MUF3800, MUF4060
PCTCN4347	430-470 MHz	450 MHz	Unity	MUF4300, MUF4500
PCTCN4750	470-512 MHz	491 MHz	Unity	MUF4700, MUF4900
PCTCN7080	740-870 MHz	805 MHz	Unity	MUF7000
PCTCN8090	806-960 MHz	883 MHz	Unity	(B)MUF8000, (B)MUF9000
PCTCN8063	806-866 MHz	836 MHz	3 dB	(B)MUF8063
PCTCN8253	824-896 MHz	860 MHz	3 dB	(B)MUF8253
PCTCN8963	896-940 MHz	918 MHz	3 dB	MUF8963
PCTCN24005	2.4-2.5 GHz	2.45 GHz	4.5 dB	MUF24005

## Mechanical Specifications

Model	Antenna Height at lowest frequency
PCTCNMFT	Approximately 24.0"
PCTCN1520	Approximately 21.6"
PCTCN1620	Approximately 21.6"
PCTCN3840	Approximately 7.38"
PCTCN4347	Approximately 6.2"
PCTCN4750	Approximately 5.6"
PCTCN7080	Approximately 3.3"
PCTCN8090	Approximately 3.0"
PCTCN8063	Approximately 14.5"
PCTCN8253	Approximately 14.0"
PCTCN8963	Approximately 12.0"
PCTCN24005	Approximately 8.75"

## BMAX Molded Base Antennas

These antennas feature a rugged molded polymer base, plated spring-loaded contact pin and .100" diameter stainless steel whip for long-lasting, trouble-free operation. 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 WiFi 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.

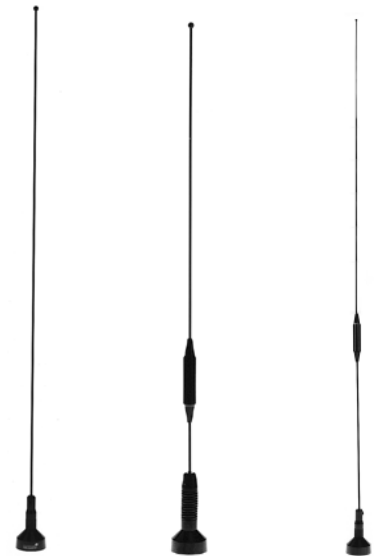
### Features

- 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
- Most models available in bright chrome or black finish
- 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



### Technical Data

<b>Maximum Power:</b> 200 watts(VHF models) 150 watts (UHF models) 100 watts (all other models)
<b>Polarization:</b> Vertical
<b>Nominal Impedance:</b> 50 ohms
<b>VSWR at Resonance:</b> < 1.5:1 (Most models, except as noted below) < 1.9:1 (MAX7635S only) < 2.0:1 [(B)MAX150/450(S) and (B)MAX140/440(S)]
<b>Radiator Material:</b> .100" OD stainless steel; bright (MAXC) or black finish (BMAXC) .062" diameter black stainless steel
<b>Spring:</b> Stainless steel; bright or black finish (not all options available with every model)
<b>Base Coil Housing:</b> Molded polymer with a plated insert ring and a spring-loaded contact pin
<b>Phasing Coil Housing:</b> Molded polymer jacket with copper, nickel and chrome plated bushing
<b>Rod Ferrule:</b> 5/16" -24 thread; bright or black chrome plated finish
<b>Mount Method:</b> Mates with all 1-1/8"-18 thread mounts, including 3/4" mounts



(B)MAXMFT (B)MAX150/450 (B)MAX455



(B)MAXSCAN1000 BMAX824/1850 BMAX8155S



BMAXC233805



BMAXC Antennas

### Antenna Electrical Specifications

Model	Frequency Range	Factory Tuned Frequency	Gain	Rod Type
(B)MAXMFT(S)*	118-940 MHz	Field Tunable	Unity	Straight
(B)MAX150D(S)*	150-174 MHz	160 MHz	Unity	Collinear/Open
BMAX150/450(S)*	150-174 MHz/450-470 MHz	160/460 MHz	Unity	Collinear/Closed
MAXSCAN1000(S)*	150-174 MHz/450-470 MHz/800-840 MHz	160 MHz/460 MHz/n/a	Unity	Collinear/Closed
BMAXSCAN1000	150-174 MHz/450-470 MHz/800-840 MHz	160 MHz/460 MHz/n/a	Unity	Collinear/Closed
MAX455	450-470 MHz	Field Tunable	5 dB	Collinear/Closed
(B)MAX7603S*	760-870 MHz	815 MHz	3 dB	Collinear/Open
BMAX7633S*	760-870 MHz	815 MHz	3 dB	Collinear/Closed
(B)MAX7635S*	760-870 MHz	Broadband**	5 dB	Trilinear/Closed
(B)MAX8055(S)*	806-866 MHz	815 MHz	5 dB	Trilinear/Closed
BMAX8033(S)*	806-866 MHz	835 MHz	3 dB	Collinear/Closed
(B)MAX8053(S)*	806-866 MHz	835 MHz	3 dB	Collinear/Open
BMAX8155S*	806-896 MHz	Broadband**	4.5 dB	Collinear/Closed
BMAX824/1850*	824-896 MHz/1850-1990 MHz	Broadband**	2.2 dBi/4 dBi	Collinear/Open
MAX8375	825-896 MHz	835 MHz	5 dB	Trilinear/Closed
BMAX9105(S)*	870-950 MHz	898 MHz	5 dB	Trilinear/Closed
MAX9105	870-950 MHz	898 MHz	5 dB	Trilinear/Closed
BMAX9155S*	890-945 MHz	Broadband**	4.0 dB	Collinear/Closed
MAX9053	896-940 MHz	896 MHz	3 dB	Collinear/Open
MAX9075	896-940 MHz	896 MHz	5 dB	Trilinear/Open
(B)MAX9085S*	896-940 MHz	896 MHz	5 dB	Trilinear/Closed
(B)MAXC24503*	2.2-2.9 GHz	Broadband**	3 dBi	Collinear/Closed
(B)MAXC24505*	2.2-2.9 GHz	Broadband**	5 dBi	Collinear/Closed
BMAXC233805*	2.3-3.8 GHz	Broadband**	5 dBi	Collinear/Closed

\* Prefix “B” indicates black. Suffix “S” indicates spring.  
 \*\* Optimized across the entire specified frequency range.

## Mechanical Specifications

Model	Antenna Height at lowest frequency	Antenna Type
(B)MAXMFT(S)	Approximately 26"	1/4 wave
(B)MAX150D(S)	Approximately 17"	1/4 wave
BMAX150/450(S)	Approximately 20"	1/4 wave/Collinear array
MAXSCAN1000(S)	Approximately 21"	1/4 wave or Collinear array
(B)MAXSCAN1000	Approximately 21"	1/4 wave or Collinear array
MAX455	Approximately 33"	5/8 wave over a 1/2 wave
(B)MAX7603S	Approximately 14"	Wideband collinear
BMAX7633S	Approximately 14"	Wideband collinear
(B)MAX7635S	Approximately 25"	Dual 1/2 wave over a 1/4 wave
(B)MAX8055(S)	Approximately 24"	Dual 1/2 wave over a 1/4 wave
BMAX8033(S)	Approximately 13"	5/8 wave over a 1/4 wave
(B)MAX8053(S)	Approximately 13"	5/8 wave over a 1/4 wave
BMAX8155S	Approximately 13"	Collinear array
BMAX824/1850	Approximately 12"	Dual Band Collinear
MAX8375	Approximately 13"	5/8 wave over a 1/4 wave
BMAX9105(S)	Approximately 23"	Dual 1/2 wave over a 1/4 wave
MAX9105	Approximately 23"	Dual 1/2 wave over a 1/4 wave
BMAX9155S	Approximately 13"	Collinear array
MAX9053	Approximately 11"	5/8 wave over a 1/4 wave
MAX9075(S)	Approximately 23"	Dual 1/2 wave over a 1/4 wave
MAX9085(S)	Approximately 23"	Dual 1/2 wave over a 1/4 wave
(B)MAXC24503	5.25" (133.35 mm)	ISM mobile and WLAN
(B)MAXC24505	7.50" (190.50 mm)	ISM mobile and WLAN
BMAXC233805	4.75" (12.06 cm)	WiMAX mobile



MMC450



## Field Tunable Molded Base NMO Compatible Antennas

Economical yet durable, the (B)MMC antennas feature insert molded top stud and bottom mounting threads that will not leak water, pull-out or rotate. Additionally, they can be ordered with a black shock spring for a complete black finish.

### Features

- Molded weather-proof matching coil in an attractive black base
- Coil is wound on a low-loss coil form to withstand the heaviest shocks
- Optional 55” whip extends the frequency range down to 144 MHz
- Mates with all 1-1/8” -18 thread mounts, including 3/4” mounts

### Technical Data

<b>Maximum Power:</b> 200 watts
<b>Nominal Impedance:</b> 50 ohms
<b>VSWR at Resonance:</b> < 1.5:1
<b>Radiator Material:</b> .100”-.062” diameter tapered stainless steel; bright or black finish
<b>Optional Spring:</b> Stainless steel (if included with model)
<b>Rod Ferrule:</b> 5/16”-24 thread; bright or black chrome plated brass
<b>Base Coil Housing:</b> Molded polymer jacket with copper, nickel and chrome plated insert ring and stud
<b>Phasing Coil Housing:</b> Molded polymer jacket with bright or black chrome plated brass bushing
<b>Antenna Type:</b> Base loaded 5/8 Wave 5/8 wave over a 5/8 wave (Collinear Model)

### Antenna Electrical Specifications

Model*	Frequency Range	Factory Tuned Frequency	Gain
(B)MMC150(S)	144-174 MHz	Field Tunable	3 dB
BMMC380S	380-400 MHz	Field Tunable	5 dB
(B)MMC450	450-470 MHz	Field Tunable	5 dB

### Mechanical Specifications

Model	Antenna Height at lowest frequency
(B)MMC150(S)	Approximately 59”
BMMC380S	Approximately 40”
(B)MMC450	Approximately 40”

\*Prefix “B” indicates black. Suffix “S” indicates spring.

## Wideband No Tune “Male-Female” Connector Interface Antennas

These antennas feature a male-female contact mount interface that provides positive connection for noise-free cellular or PCS phone operation.

### Features

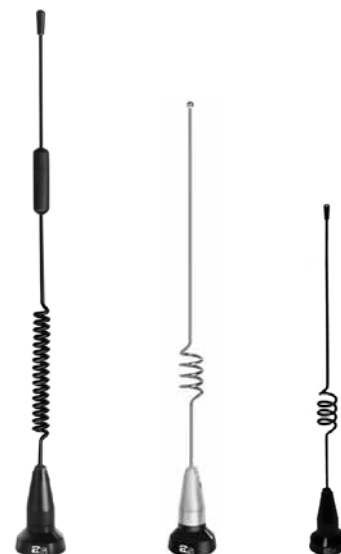
- Noise-free – male-female contact mount interface provides positive connection for noise-free cellular or PCS telephone operation, especially for digital applications
- Rugged one piece construction, including phasing coil
- Patented Whip Design – special phasing coil achieves 3 dB operation at both cellular and PCS frequency bands (dual band model)
- Convenient – whip can be easily removed from base when needed

### Antenna Electrical Specifications

Model	Frequency Range	Bandwidth	Gain	VSWR at Resonance	Maximum Power
ASPA1855	806-869 MHz	63 MHz	3 dB	< 1.5:1	100 watts
ASPA1865	806-869 MHz	63 MHz	3 dB	< 1.5:1	100 watts
ASPD1865	824-894 MHz	70 MHz	3 dB	< 1.9:1	100 watts
ASPDM1965	824-894/ 1850-1990 MHz	70 MHz/ 140 MHz	3 dB/ 3 dB	< 2.0:1	10 watts

### Mechanical Specifications

Model	Finish	Whip Length
ASPA1855	DURA-CON® plated	Approximately 14”
ASPA1865	DURA-COAT™ black	Approximately 14”
ASPD1865	DURA-COAT™ black	Approximately 14.7”
ASPDM1965	DURA-COAT™ black	Approximately 14”



ASPDM1965  
U.S. Patent No. 6,215,451 B1

ASPA1855

ASPD1865



A/S male-female connector interface



### Technical Data

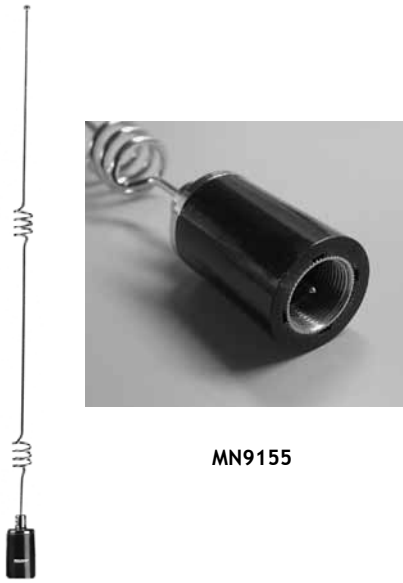
<b>Nominal Impedance:</b> 50 ohms
<b>Radiator Material:</b> Stainless steel DURA-CON® plated or black DURA-COAT™ finish (select models)
<b>Base:</b> Aluminum, brass and plated steel
<b>Mount Method:</b> Compatible with A/S® male-female contact mounts (sold separately)

## 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



### Technical Data

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

### 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"

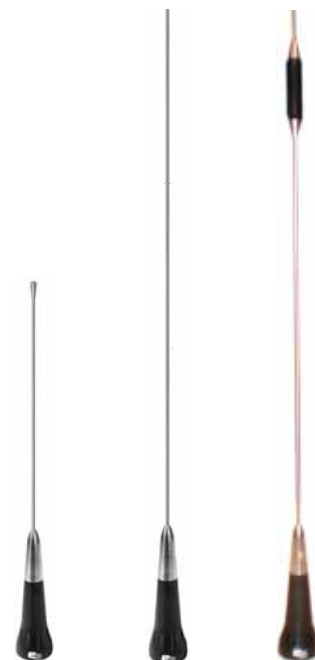
Molded Base Antennas with Rubber “Elastomer” Spring

## Mosaic® Vibration Resistant Collinear Antennas

The Mosaic® high performance collinear antennas provide exceptional coverage of VHF and UHF frequencies with 5 dB or 3 dB gain performance. They feature a black UV stabilized ABS base that resists chalking and provides long lasting operation. Patented DURA-FLEX® elastomer spring eliminates duplex system noise caused by semi-conductive deposits found in traditional coil springs. A springless model is also available.

### Features

- Enhanced Performance - all brass inserts eliminate interference caused by dissimilar metals
- Long Life - black UV stabilized ABS base resists chalking and provides long lasting operation
- Noise-Free - unique patented DURA-FLEX® elastomer spring eliminates duplex system noise caused by semi-conductive deposits found in traditional metal coil springs
- System Oriented - compatible with 1-1/8” -18 thread mobile mounts, including 3/4” hole mounts for easy antenna replacement or upgrade



ASP7795 ASPH7455 ASP76551  
U.S. Patent No. 4,625,213

### Antenna Electrical Specifications

Model	Frequency Range	Gain
ASP7455	138-174 MHz	3 dB
ASPH7455	210-230 MHz	3 dB
ASP76551	445-470 MHz	5 dB
ASP7795	445-470 MHz	3 dB
ASPB76552	470-494 MHz	5 dB

### Mechanical Specifications

Model	Antenna Height
ASP7455	54” max. including spring and coil
ASPH7455	Approximately 27”
ASP76551	Approximately 34”
ASP7795	Approximately 15”
ASPB76552	Approximately 33”



### Technical Data

<b>Maximum Power:</b> 150 watts
<b>Polarization:</b> Vertical
<b>Nominal Impedance:</b> 50 ohms
<b>VSWR at Resonance:</b> < 1.5:1 with a DURA-FLEX® spring
<b>Radiator Material:</b> 0.12” diameter, 17-7PH stainless steel (5 dB models) .100”-.062” diameter, 17-7PH stainless steel (3 dB models)
<b>Spring Material:</b> DURA-FLEX® elastomer (if included)
<b>Transformer:</b> 14 AWG copper clad steel wire, low loss coil, waterproof housing (ASPH7455)
<b>Base Coil:</b> 14 AWG copper clad steel wire, waterproof housing
<b>Phasing Coil:</b> 14 AWG copper wire, encapsulated with radiators
<b>Base and Fittings:</b> All brass
<b>Mount Method:</b> Compatible with 1-1/8” -18 thread mobile mounts, including 3/4” hole mounts



## Elevated Feed Mobile Data Antennas



MEFC24005

MEFC58005HF

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.



### Technical Data

<b>Maximum Power:</b> 50 watts (MEFC24005 only) 10 watts (all other models)
<b>Polarization:</b> Vertical
<b>Nominal Impedance:</b> 50 Ohm
<b>VSWR:</b> <1.5:1
<b>Return Loss:</b> < 10 dB
<b>Radome Material:</b> UV stable ABS
<b>Radiator Material:</b> .100" OD stainless steel; bright (MEFC) or black finish (BMEFC)
<b>Mount Method:</b> 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.

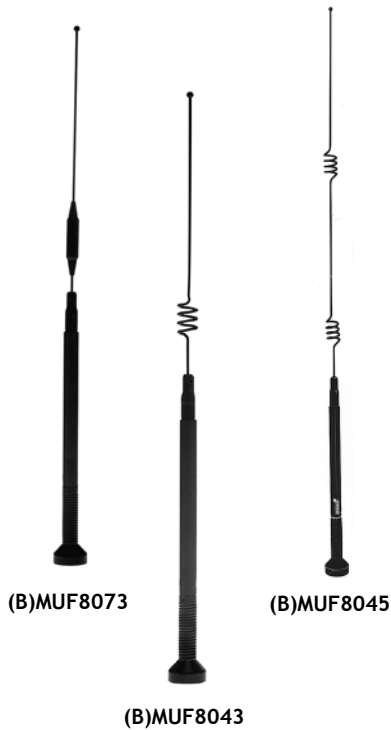
## Antenna Electrical Specifications

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.



## 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 applications 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

### Technical Data

<b>Maximum Power:</b> 125 watts
<b>Polarization:</b> Vertical
<b>Nominal Impedance:</b> 50 ohms
<b>VSWR at Resonance:</b> < 1.5:1
<b>Radiator Material:</b> .100”-.062” diameter stainless steel; bright or black finish
<b>Spring:</b> Stainless steel; bright or black finish
<b>Phasing Coil Housing:</b> Molded polymer jacket with copper, nickel and chrome plated brass bushing
<b>Rod Ferrule:</b> 5/16”-24 thread; bright or black chrome plated brass
<b>Body:</b> UV stable ABS

### Antenna Electrical Specifications

Model*	Frequency Range	Factory Tuned Frequency	Gain	Rod/Coil Type
(B)MUF7603	760-870 MHz	815 MHz	3 dB	Collinear/Closed
(B)MUF8073	806-866 MHz	815 MHz	3 dB	Collinear/Closed
(B)MUF8045	806-866 MHz	815 MHz	5 dB	Trilinear/Open
(B)MUF8043	825-896 MHz	835 MHz	3 dB	Collinear/Open
(B)MUF8455	825-896 MHz	835 MHz	5 dB	Trilinear/Closed
(B)MUF9115	896-940 MHz	898 MHz	5 dB	Trilinear/Closed

### Mechanical Specifications

Model	Antenna Height at lowest frequency
(B)MUF7603	Approximately 38”
(B)MUF8073	Approximately 23”
(B)MUF8045	Approximately 33”
(B)MUF8043	Approximately 23”
(B)MUF8455	Approximately 33”
(B)MUF9115	Approximately 32”

\*Prefix “B” indicates black. Spring included.

## 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

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

## 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.



BMMG824/1900



BMMG24005



### Technical Data

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

### Features

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

### 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.

## Large Magnetic Base Mount Antennas (iDEN, Cellular/PCS)

These magnetic mount antennas are ideal for temporary installations where quick antenna removal may be needed. All models include a wide magnetic base mount and cable integrated into their base.

### Features

- Wideband design: cover all specified frequencies without tuning
- Magnetic base for quick removal. Ideal for test equipment applications.
- Protective surface prevents scratches on the vehicle's surface
- Patented whip design - special phasing coil achieves in-phase signal transmission and reception using two collinear elements at both frequencies (ASPRDM1994 models)
- Cable/connector is fully integrated to the antenna for simple installation and maximum mobility



MDBM800/1900 ASPRDM1994 MDBM824/1850

### Antenna Electrical Specifications

Model	Frequency Range	Gain
ASPRDM1994M	824-894/1850-1990 MHz	3 dB/3 dB
ASPRDM1994S	824-894/1850-1990 MHz	3 dB/3 dB
ASPRDM1994T	824-894/1850-1990 MHz	3 dB/3 dB
ASPRDM1994U	824-894/1850-1990 MHz	3 dB/3 dB
ASPRDM1994PC	824-894/1850-1990 MHz	3 dB/3 dB
MDBM800/1900	824-896/1850-1990 MHz	2 dBi/2 dBi
MDBM824/1850	824-896/1850-1990 MHz	2 dBi/4 dBi



### Technical Data

<b>Maximum Power:</b> 10 watts
<b>Polarization:</b> Vertical
<b>Nominal Impedance:</b> 50 ohms
<b>VSWR:</b> 2.0 across the band (ASPRDM models and MDBM800/1900) <1.9:1 (ASPA1894B) <2.5:1 (MDBM800/1900) <1.5:1 across each band (MDBM824/1850)
<b>Radiator Material:</b> Stainless steel, black chrome plated
<b>Antenna Base:</b> Molded high strength plastic
<b>Mounting Base:</b> Black coated stainless steel
<b>Boot:</b> Rubber
<b>Mounting Force:</b> 105.8 ounces minimum (MDBM800/1900) 300 ounces minimum (MDBM824/1850)
<b>Mount Method:</b> Built-in magnetic base

### Mechanical Specifications

Model	Connector	Antenna Height	Coax Cable (Built-in)
ASPRDM1994M	Mini-UHF male	14.1"	15 ft PRO-FLEX™ PLUS 195, A/U
ASPRDM1994S	SMA male	14.1"	15 ft PRO-FLEX™ PLUS 195, A/U
ASPRDM1994T	TNC male	14.1"	15 ft PRO-FLEX™ PLUS 195, A/U
ASPRDM1994U	SAP	14.1"	15 ft PRO-FLEX™ PLUS 195, A/U
ASPRDM1994PC	SAP with Mini-UHF and TNC adapter	14.1"	15 ft PRO-FLEX™ PLUS 195, A/U
MDBM800/1900	Available with SMA or Mini-UHF(male)	14.37"	13' RG-58/U
MDBM824/1850	Available with SMA or TNC (male)	10.5"	14 ft PRO-FLEX™ PLUS 195



## “On-Glass”<sup>®</sup> Dual Band, Window Mount 3 dB Gain Antennas

Our “On-Glass”<sup>®</sup> Premium antennas have been precision engineered to provide optimal coverage for both iDEN and PCS frequencies in a low profile antenna design. They are available with various connector options.

### Features

- Precision Engineered – 3 dB performance at all specified frequencies in smaller footprint for minimal visual obstruction
- Flexible Foot – firmly adheres to curved glass surfaces for secure vehicular installations
- Patented Whip Design – special phasing coil achieves in-phase signal transmission and reception using 2 collinear elements at both frequencies
- High Performance – patented coupling box provides maximum efficiency while PRO-FLEX<sup>™</sup> PLUS 195 cable minimizes loss
- Convenient – install only one antenna to cover all 800/900 MHz and PCS frequencies, minimizing installation time and costs
- Frequency Tuned Design – optimum performance with no field tuning required
- Straked Whip – for reduced wind noise and better RF reception



### Technical Data

<b>Maximum Power:</b> 10 watts
<b>Nominal Impedance:</b> 50 ohms
<b>VSWR:</b> <1.9:1
<b>Radiator Material:</b> 0.090” 300 series stainless steel with black DURA-COAT <sup>™</sup> finish
<b>Cable:</b> 15 ft PRO-FLEX <sup>™</sup> PLUS 195 cable
<b>Mount Method:</b> Glass mount

### Antenna Electrical Specifications

Model	Frequency Range	Bandwidth	Gain
APDM928M	806-960/1850-1990 MHz	154 MHz/140 MHz	3 dB/3 dB
APDM928S	806-960/1850-1990 MHz	154 MHz/140 MHz	3 dB/3 dB
APDM928T	806-960/1850-1990 MHz	154 MHz/140 MHz	3 dB/3 dB
APDM928U	806-960/1850-1990 MHz	154 MHz/140 MHz	3 dB/3 dB
APDM928	806-960/1850-1990 MHz	154 MHz/140 MHz	3 dB/3 dB
APDM928PCS	806-960/1850-1990 MHz	154 MHz/140 MHz	3 dB/3 dB

### Mechanical Specifications

Model	Connector	Antenna Height
APDM928M	Mini-UHF male	14”
APDM928S	SMA male	14”
APDM928T	TNC male	14”
APDM928U	SAP	14”
APDM928	None	14”
APDM928PCS	SAP with Mini-UHF and TNC adapters	14”

## “On-Glass”® Dual Band, Window Mount Quarter Wave Antennas, Unity Gain

Our “On-Glass”® unity gain quarter wave antennas provide optimal coverage of both iDEN and PCS frequencies in very compact design for minimum visibility. They are available with several connector options.

### Features

- Sleek Appearance – smaller footprint provides minimum visual impact
- Low Profile – short quarter wave design for localized urban areas where higher gain may not be required
- Flexible Foot – improved design adheres better to curved glass surfaces
- Frequency Tuned Design – optimum performance with no field tuning required
- High Performance – patented coupling box provides maximum efficiency while PRO-FLEX™ PLUS 195 cable minimizes loss
- Economical – one antenna serves the function of two, minimizing installation time and inventory requirements



APDM928.1 Series

U.S. Patent No. 4,839,660 and 6,215,241 B1 and other patents pending

### Antenna Electrical Specifications

Model	Frequency Range	Gain	Bandwidth
APDM928.1M	806-960/1850-1990 MHz	Unity/Unity	154 MHz/140 MHz
APDM928.1PCS	806-960/1850-1990 MHz	Unity/Unity	154 MHz/140 MHz
APDM928.1T	806-960/1850-1990 MHz	Unity/Unity	154 MHz/140 MHz
APDM928.1U	806-960/1850-1990 MHz	Unity/Unity	154 MHz/140 MHz

### Mechanical Specifications

Model	Connector
APDM928.1M	Mini-UHF male
APDM928.1PCS	Female FME with Mini-UHF and TNC adapter
APDM928.1T	TNC male
APDM928.1U	FME



### Technical Data

<b>Maximum Power:</b> 10 watts
<b>Nominal Impedance:</b> 50 ohms
<b>VSWR:</b> <1.9:1
<b>Radiator Material:</b> 0.39" flexible plastic
<b>Coax Cable:</b> 15 ft PRO-FLEX™ PLUS 195 cable
<b>Whip Length:</b> 4 inches
<b>Mounting Method:</b> Glass mount





APR852.3

APR852.3 Series  
U.S. Patent No. 4,238,799



## “On-Glass”<sup>®</sup> 3 dB Window Mount Antennas

Our “On-Glass”<sup>®</sup> 3 dB antennas provide optimal coverage of 800 and 900 MHz frequencies with outstanding VSWR performance of <1.5:1. Their patented mount design features a compact coupling box and flexible foot that transmits and receives through glass without holes while firmly adhering to curved glass surfaces.

### Features

- Flexible Foot - improved design adheres better to curved glass surfaces on today’s automobiles
- Optimum Performance - a typical VSWR of less than 1.5:1 across the specified frequencies
- Frequency Tuned Design - optimal performance in virtually every installation with no tuning required
- Hand-adjustable Whip - constant tension keeps whip vertical during normal use, yet whip can be folded down quickly and easily before entering a car wash, without using tools. Whip removal is not required
- Models available with open or enclosed coil straked whips

### Technical Data

<b>Maximum Power:</b> 10 watts (all models except APR series) 35 watts (APR models)
<b>Nominal Impedance:</b> 50 ohms
<b>VSWR:</b> < 1.5:1
<b>Radiator Material:</b> Stainless steel, black DURA-COAT™ finish
<b>Base:</b> Polyurethane molded foot with brass insert and stainless steel hardware
<b>Coax Cable:</b> 15 ft PRO-FLEX™ PLUS 195
<b>Whip Length:</b> Approximately 13” (APD876.3 models) 14.7” (APD873.3 models) 12.7 inches (APR models)
<b>Mounting Method:</b> Glass mount

## Antenna Electrical Specifications

Model	Frequency Range	Gain	Bandwidth
APR852.3	806-869 MHz	3 dB	63 MHz
APR852.3M	806-869 MHz	3 dB	63 MHz
APR852.3N	806-869 MHz	3 dB	63 MHz
APR852.3P	806-869 MHz	3 dB	63 MHz
APR852.3T	806-869 MHz	3 dB	63 MHz
APD876.3M	824-894 MHz	3 dB	70 MHz
APD876.3T	824-894 MHz	3 dB	70 MHz
APRG852.3M	890-960 MHz	3 dB	70 MHz
APRG852.3N	890-960 MHz	3 dB	70 MHz
APRG852.3T	890-960 MHz	3 dB	70 MHz
APRG852.3U	890-960 MHz	3 dB	70 MHz

## Mechanical Specifications

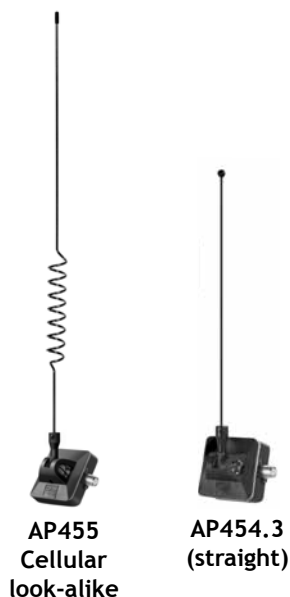
Model	Connector	Whip Style
APR852.3	No connector	Open
APR852.3M	Mini-UHF male	Open
APR852.3N	N male	Open
APR852.3P	UHF male	Open
APR852.3T	TNC male	Open
APD876.3M	Mini-UHF crimp	Enclosed-straked
APD876.3T	TNC Male crimp	Enclosed-straked
APRG852.3M	Mini-UHF male	Open
APRG852.3N	N male	Open
APRG852.3T	TNC male	Open
APRG852.3U	SAP (female FME)	Open

## “On-Glass”<sup>®</sup> Unity Gain Window Mount Antennas

These antennas feature patented “On-Glass”<sup>®</sup> technology that permits RF transmission and reception through glass. They utilize DUO-BOND™ mounting that permits installation without holes, providing a complete seal against moisture and long lasting holding power.

### Features

- Unique - patented “On-Glass”<sup>®</sup> technology transmits and receives through glass
- Efficient - DUO-BOND™ mounting method allows no-hole installation in minutes, with long-lasting holding power
- Weather Proof - water cannot enter vehicle through gasket failure or cable channels
- Effective - mounts high in the vehicle for optimal omnidirectional coverage
- Convenient - whip is easily adjustable to vertical position and is removable for car wash clearance
- Disguise cellular look-alike models available for covert public safety applications



AP455  
Cellular  
look-alike

AP454.3  
(straight)



### Technical Data

<b>Maximum Power:</b> 50 watts
<b>Normal Impedance:</b> 50 ohms
<b>VSWR:</b> < 1.5:1
<b>Radiator Material:</b> Stainless steel, black DURA-COAT™ finish 17-7PH stainless steel encapsulated phasing coil (AP454.5)
<b>Coax Cable: (if included):</b> 15 ft RG-58/U
<b>Required Mounting Footprint:</b> 1.75" square (APR models)
<b>Coupling Unit:</b> DC grounded, shunt-fed
<b>Mounting Method:</b> “On-Glass” <sup>®</sup> mount with black DURA-COAT™ finish and stainless steel hardware and plastic ABS cover

### Antenna Electrical Specifications

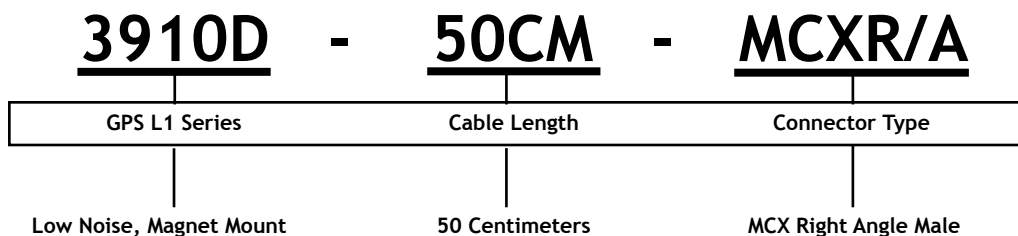
Model	Frequency Range	Gain
APR153	150-174 MHz	Unity
APR152.3	150-174 MHz	Unity
AP454.3	410-512 MHz	Unity
AP455	440-470 MHz	Unity

### Mechanical Specifications

Model	Connector	Antenna Height from Mounting Surface	Rod Type
APR153	PL-259 attached	19.8" perpendicular	Open Coil
APR152.3	PL-259 attached	23.7" perpendicular	Straight Whip
AP454.3	UHF male on cable	8"	Straight
AP455	UHF male on cable	18"	Coil

# GPS Mobile Antenna Configurator Part Number Guide - GPS Only

PCTEL's GPS mobile antennas can be configured with several connector options. Please refer to this template to determine your configurator part number.



GPS L1 EMBEDDED ANTENNA SERIES
*1357D = 13mm Ultra Compact
1857D = 18mm Very Compact
3951D = Low Noise, No Ground Plane
3957D = Value Option, No Ground Plane
3961D = Low Noise, Ground Plane
3967D = Value Option, Ground Plane

GPS L1 HOUSED ANTENNA SERIES
GPS L1 housed antennas may only be configured with lengths under 17 feet. Longer cable options are not available through the configurator.
3226 = High Rejection, Through-hole, 26dB
3235 = High Rejection, Through-Hole, 35dB
AGHP16 = High Rejection, Magnet Mount, 16dB
AGHP35 = High Rejection, Magnet Mount, 35dB
3911D-HR = High Rejection, Magnet Mount
AG26G = High Rejection, Glass Mount, 26dB
3915D-HR = High Rejection, Low Current
3914D = Low Current, Magnet Mount
3910D = Low Noise, Magnet Mount
AG26M = Value Option, Magnet/Screw Mount, 26dB
AG26T = Value Option, Trunk Mount, 26dB
3917D = Value Option, Magnet Mount

CABLE LENGTH **
Cable length can be ordered in inches, centimeters or meters. Note that longer cable lengths will result in added gain loss. Not all models are available with longer cable lengths. Cable type used with all GPS only antennas is RG-174/U.
ex. 18IN = 18 Inches (1 ft. 6 in.)
ex. 150CM = 150 Centimeters (1.5m)
ex. 3M = 3 Meters (300 cm)

CONNECTOR OPTIONS
Broad categories of connector options are listed below. Various attributes of the below are available such as right-angle, reverse polarity, female and bulkhead options.
BNC = BNC Male
N = N Male
FFME = FME Female
MCX = MCX Male
MMCX = MMCX Male
SMA = SMA Male
SMB = SMB Male
SMC = SMC Male
SSMA = SSMA Male
TNC = TNC Male
H.FL, U.FL and W.FL connector options are available for the GPS L1 Embedded Series only.
HFL = H.FL Right Angle
UFL = U.FL Right Angle
WFL = W.FL Right Angle

\*Product only available with H.FL, U.FL and W.FL connector options

\*\*Product cable length will be within +/- 2 inches of the requested length. Not all models are available with longer cable options.



**Technical Data**

<b>Polarization:</b> Right hand circular
<b>Input Impedance:</b> 50 ohms
<b>VSWR:</b> 1.5:1 typical
<b>Axial Ratio:</b> <3 dB @ boresight
<b>Radome Color:</b> Black
<b>RF Cable:</b> 17 ft RG-174
<b>Mount Method:</b> Through-hole for 1-inch diameter mounting holes Metal thread length: approximately 1/2" (12mm) Accommodates surface thickness up to 1/4" (6mm)
<b>Ingress Protection:</b> IP56

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

These GPS vehicle tracking antennas feature light, low profile housings that are highly adaptable for vehicle tracking or marine navigation applications. Their radome is molded from high grade polymer resin for UV and abrasion maximum resistance under severe environmental conditions. These antennas utilize an electrically shielded LNA PCB assembly and ceramic filter designed to provide high out-of-band rejection for optimal integration in multi-band installations.

### Low Noise Amplifier Specifications

Model	Frequency Band	Amplifier Gain	Nominal Impedance	Output VSWR
3226MSMA	1575.42 MHz (GPS L1)	26 dB +/-3	50 ohms	1.5:1 typical
3235MSMA	1575.42 MHz (GPS L1)	34 dB +/-4	50 ohms	1.5:1 typical

Model	DC Current	DC Voltage	Noise Figure	Filtering	Out-of-Band Rejection
3226MSMA	20 mA Nominal < 30 mA @ -40°C to +85°C	3 - 13.5 V	1.8 typical	Hybrid (including pre-selector)	> 40 dB @ +/-50 MHz
3235MSMA	20 mA Nominal < 30 mA @ -40°C to +85°C	3 - 13.5 V	1.8 typical	Hybrid (including pre-selector)	> 40 dB @ +/-50 MHz

### Antenna Electrical Specifications

Model	Frequency	Gain
3226MSMA	1575.42 MHz (GPS L1)	+3.5 dBiC Nominal
3235MSMA	1575.42 MHz (GPS L1)	4 dBiC Nominal

### Mechanical Specifications

Model	Dimensions	Weight (Mass)	Connector
3226MSMA	2.5" OD x 0.5" D	25 grams	Male SMA plug
3235MSMA	2.5" OD x 0.5" D	25 grams	Male SMA plug

### 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

For other connector options, please refer to GPS Mobile Antenna Configurator Part Number Guide

## High Performance GPS Magnetic Mount Series

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

### Features

- Preselection filter for outstanding interference rejection
- Rugged, low profile housing for minimum visibility
- Two gain options for GPS system adaptability
- ESD/Reverse Polarity/Transit voltage protection



### Electrical Specifications (Patch)

Model	Center Frequency	Polarization	Nominal Impedance	VSWR	Gain at Zenith	Axial Ratio
AGPSHP35MM	1575.42 MHz (GPS L1)	Right hand circular	50 ohms	1.5:1 typical	4 dBiC Nominal	3.0 dB typical
AGPSHP16MM	1575.42 MHz (GPS L1)	Right hand circular	50 ohms	1.5:1 typical	4 dBiC Nominal	3.0 dB typical

### Mechanical Specifications

Dimensions (L x W x D)	Weight
2" x 1.77" x .55"	4.09 +/- 0.35 oz

### Environmental Specifications

Operating Temperature Range	Storage Temperature Range	Operating Condition	Storage Condition
-40°C to +85°C	-40°C to +85°C	-40°C to +85°C temperature 10 to 95% RH humidity	-40°C to +85°C temperature 10 to 95% RH humidity

### Electrical Specifications (Filter/LNA)

<b>Housing:</b> Black, UV-stable plastic
<b>Amplifier Gain without Antenna Element and Cable:</b> 35 dB +/-4 (AGPSHP35MM) 16 dB +/-3 (AGPSHP16MM)
<b>Noise Figure (25°):</b> 1.8 typical
<b>Voltage:</b> 3-5.5 V (internal regulated)
<b>DC Current @ 5 Volts:</b> 20 mA Nominal < 35 mA @ -40°C to +85°C (AGPSHP35MM)  20 mA maximum, 5 Vdc, 12 mA typical (AGPSHP16MM)
<b>Filtering:</b> Hybrid (including pre-selector)
<b>Out-of-Band Signal Rejection:</b> -40 dB @ +/-50 MHz typical (AGPSHP35MM) -20 dB @ +/- 50 MHz typical (AGPSHP16MM)
<b>Cable Pull Force:</b> 10 lbf, minimum
<b>Magnet Pull Force:</b> 5 lbf, minimum
<b>Cable:</b> 17 ft RG-174/U
<b>Connector:</b> Male SMA (attached) standard
<b>Mounting Method:</b> 2 built-in rare earth Nd magnets

For other connector options, please refer to GPS Mobile Antenna Configurator Part Number Guide



## AGPS26GMMSMA - 26 dB Gain GPS L1 Glass Mount Antenna

The AGPS26GMMSMA 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.

### Features

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



### Electrical Specifications (Filter/LNA)

<b>Center Frequency:</b> 1575.42 +/-1 MHz (GPS L1)
<b>Amplifier Gain without Antenna Element and Cable:</b> 26 dB +/-3
<b>Nominal Impedance:</b> 50 ohm
<b>Noise Figure (25°):</b> 1.8 typical
<b>VSWR:</b> 1.5:1 typical
<b>Voltage:</b> 3-5 V (regulated)
<b>DC Current @ 5 Volts:</b> 20 mA Nominal < 30 mA @ -40°C to +85°C (Filter Out-Of-Band)
<b>Filtering:</b> Hybrid (including pre-selector)
<b>Out-of-Band Signal Rejection:</b> 40 dB @ +/-50 MHz typical

### Electrical Specifications (Patch)

Center Frequency	Polarization	Nominal Impedance	VSWR	Gain at Zenith	Axial Ratio
1575.42 MHz (GPS L1)	Right hand circular	50 ohm	1.5:1 typical	3 dBiC Nominal	< 3 dB @ boresight

### Mechanical Specifications

Housing	Housing Dimensions (L x W x D)	Mounting Method	Cable	Connector*
Black, UV-stable plastic	2.22" x 1.97" x .59"	High Bond tape for glass mounting	17 feet RG-174/U	Male SMA (attached)

### Environmental Specifications

Operating Temperature Range	Storage Temperature Range	Operating Condition	Storage Condition	High Bond Tape Specifications
-40°C to +85°C	-40°C to +85°C	-40°C to +85°C temperature 10 to 95% RH humidity	-40°C to +85°C temperature 10 to 95% RH humidity	Conformable foam Acrylic adhesive Moisture and Solvent resistant High shear and peel adhesion

For other connector options, please refer to GPS Mobile Antenna Configurator Part Number Guide



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

The 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.



## 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



## Low Noise Amplifier Specifications

<b>Nominal Gain:</b> 25 dB @ 3.3VDC 25.5 dB @ 5VDC
<b>Noise Figure:</b> 3.1 dB
<b>Out-of-Band Signal Rejection:</b> See chart below
<b>Voltage:</b> 2.7-5 VDC
<b>ESD Circuit Protection:</b> 15K volts

## RF/Electrical Specifications

Center Frequency	Nominal Gain	Polarization	Current Draw
1575.42 MHz ± 10 MHz	3 dBic @ 90° -2 dBic @ 20°	Right Hand Circular	7.5 mA @ 3.3V 11.5 mA @ 5V

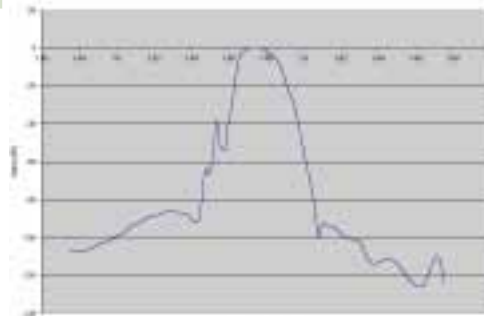
## Mechanical Specifications

Antenna Dimensions	Weight	Shock	Vibration
1.77" x 2.01" x .47" (45 x 51 x 12 mm)	.29 lbs (130 g)	Vertical axis 50G, other axes 30G	3 axis, sweep = 15 min 10 - 200 Hz log sweep: 3G
Cable	Connector	Mounting Method	
16.4' (5 meters) highly-flexible 174 sized cable	SMA standard	Magnetic (5 lb lift-off force) or permanent (pre-threaded for 3 x M2.5 screws)	

## Environmental Specifications

Temperature Range	Weatherproof
-40° C to +85° C operating	IP67

## Out-of-band Filter Rejection



For other connector options, please refer to GPS Mobile Antenna Configurator Part Number Guide





## 3915D-HR Low Power GPS Antenna with Dual High Rejection SAW Filters

The 3915D-HR Very Low Power High Rejection GPS Antenna has one of the industry's lowest power consumption and best out-of-band filter performance. The 3915D-HR features ESD circuit protection, an innovative very low power two-stage low noise amplifier and dual high rejection SAW filters. It also features a custom designed ceramic patch element that minimizes detuning effects caused by adjacent objects. The 3915D-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 3915D-HR is ideal for most demanding, power critical GPS applications.

### Features

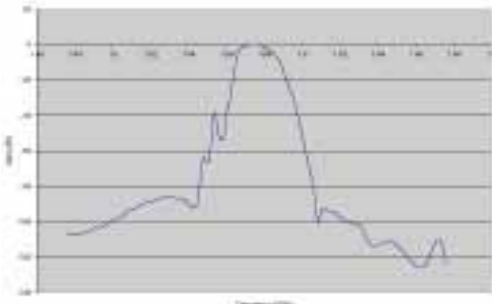
- High rejection dual SAW filters allows placement near other transmitting antennas
- Low current: 1.3 mA @ 3.3V
- 20 dB gain
- Wide voltage input range (2.7 - 5 VDC)
- Robust IP67 housing built for various weather conditions



### Low Noise Amplifier Specifications

<b>Nominal Gain:</b> 20 dB @ 3.3VDC
<b>Noise Figure:</b> 3.6 dB
<b>Out-of-Band Signal Rejection:</b> See chart below
<b>Voltage:</b> 2.7-5 VDC
<b>ESD Circuit Protection:</b> 15K volts

### Out-of-band Filter Rejection



### RF/Electrical Specifications

Center Frequency	Nominal Gain	Polarization	Current Draw
1575.42 MHz ± 10 MHz	3 dBic @ 90° -2 dBic @ 20°	Right Hand Circular	1.3 mA @ 3.3V 2 mA @ 5V

### Mechanical Specifications

Antenna Dimensions	Weight	Shock	Vibration
1.77" x 2.01" x .47" (45 x 51 x 12 mm)	.29 lbs (130 g)	Vertical axis 50G, other axes 30G	3 axis, sweep = 15 min 10 - 200 Hz log sweep: 3G

Cable	Connector	Mounting Method
16.4' (5 meters) highly-flexible 174 sized cable	SMA standard	Magnetic (5 lb lift-off force) or permanent (pre-threaded for 3 x M2.5 screws)

### Environmental Specifications

Temperature Range	Weatherproof
-40°C to +85°C operating	IP67

For other connector options, please refer to GPS Mobile Antenna Configurator Part Number Guide

## 3971D Low Noise Permanent Mount GPS Antenna

The 3971D Low Noise Permanent Mount GPS Antenna has one of the industry's lowest noise figures. It features a precision tuned custom ceramic patch element, ESD circuit protection and a high rejection SAW filter. The 3971D provides clear GPS signal reception while minimizing loss-of-lock even in less than ideal conditions. Available in an all-plastic, non-corrosive low profile package for vehicle mounting in a white or dark gray housing.

### Features

- Weather proof, all-plastic, non-corrosive, low profile enclosure
- Very low noise (0.8 dB) LNA
- 28dB gain @ 3.3V
- Low current: 8mA @ 3.3V
- High rejection SAW filter
- 3/4 inch thru-hole or bracket mount
- Voltage range 2.7 to 5.5 V
- Available in a black or white radome



### RF/Electrical Specifications

Center Frequency	Nominal Gain	Polarization	Current Draw
1575.42 MHz ± 10 MHz	3 dBic @ 90° -2 dBic @ 20°	Right Hand Circular	8 mA @ 3.3V

### Mechanical Specifications

Antenna Dimensions (diameter x height)	Weight	Shock	Vibration
2.36" x .83" (60 x 21 mm)	.11 lbs (50 g)	Vertical axis 50G, other axes 30G	3 axis, sweep = 15 min 10 - 200 Hz log sweep: 3G

Housing	Connector	Mounting Method
GE Lexan® EXL9330	TNC female	3/4" thru-hole or bracket mount*

### Low Noise Amplifier Specifications

<b>Nominal Gain:</b> 28 dB @ 3.3V
<b>Noise Figure:</b> 0.8 dB (typical)
<b>Out-of-Band Signal Rejection:</b> > 30dB @ +/- 30 MHz
<b>Voltage:</b> 2.7-5 VDC

### Environmental Specifications

Temperature Range	Weatherproof
-40°C to +85°C operating	IP67

### Available Models

Part Number	Description
3971D	Black radome
3971D-W	White radome

\*Order MMK1925 bracket for compatible mounting

## 3977D Permanent Mount GPS Antenna

The 3977D permanent mount GPS value antenna provides 28 dB gain and great out-of-band rejection performance. It features a precision tuned custom ceramic patch element for maximum signal reception and 15KV ESD circuit protection. This enables the 3977D to minimize loss-of-lock, even when conditions are less than ideal. Available in an all-plastic, non-corrosive low profile package for vehicle mounting in a white or dark gray housing.



### Features

- Weather proof, all-plastic, non-corrosive, low profile enclosure
- 3/4 inch thru-hole or bracket mount
- Voltage range: 2.7 to 5.5 V
- High gain: 28 dB
- Low noise figure: 1.5 dB
- High out-of-band signal rejection



### Low Noise Amplifier Specifications

<b>Nominal Gain:</b> @ 3.3VDC: 28 dB @ 5VDC: 30 dB
<b>Noise Figure:</b> 1.5 dB (typical)
<b>Out-of-Band Signal Rejection:</b> > 30dB @ +/- 30 MHz
<b>Voltage:</b> 2.7-5 VDC

### RF/Electrical Specifications

Center Frequency	Nominal Gain	Polarization	Current Draw
1575.42 MHz ± 10 MHz	3 dBic @ 90° -2 dBic @ 20°	Right Hand Circular	9 mA @ 3.3V 15 mA @ 5V

### Mechanical Specifications

Antenna Dimensions (diameter x height)	Weight	Shock	Vibration
2.36" x .83" (60 x 21 mm)	.11 lbs (50 g)	Vertical axis 50G, other axes 30G	3 axis, sweep = 15 min 10 - 200 Hz log sweep: 3G
Housing	Connector	Mounting Method	
GE Lexan EXL9330	TNC female	3/4" thru-hole or bracket mount*	

### Environmental Specifications

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

### Available Models

Part Number	Description
3977D	Black radome
3977D-W	White radome

\*Order MMK1925 bracket for compatible mounting

## 3978D High Gain Permanent Mount GPS Antenna

The 3978D high gain permanent mount GPS Antenna provides 40 dB gain and great high out-of-band rejection performance and is the optimum choice for GPS Tracking and Timing applications with long cable runs and stand alone GPS applications. It features a precision tuned custom ceramic patch element for maximum signal reception, 15 KV ESD circuit protection, a very low noise (0.5 dB) 3 stage LNA circuit and a SAW filter. This enables the 3978D 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 low profile package for vehicle mounting.

### Features

- Weather proof, all-plastic, non-corrosive, low profile enclosure
- 3/4 inch thru-hole or bracket mount
- Voltage range: 2.7 to 5.5 V
- High gain: 40 dB (typical)
- Low noise figure 0.5dB



### RF/Electrical Specifications

Center Frequency	Nominal Gain	Polarization	Current Draw
1575.42 MHz ± 10 MHz	3 dBic @ 90° -2 dBic @ 20°	Right Hand Circular	15 mA @ 5.5 VDC



### Mechanical Specifications

Antenna Dimensions (diameter x height)	Weight	Shock	Vibration
2.36" x .83" (60 x 21 mm)	.11 lbs (50 g)	Vertical axis 50G, other axes 30G	3 axis, sweep = 15 min 10 - 200 Hz log sweep: 3G

Housing	Connector	Mounting Method
GE Lexan EXL9330	TNC jack	3/4" thru-hole or bracket mount*

### Low Noise Amplifier Specifications

<b>Nominal Gain:</b> 40 dB
<b>Noise Figure:</b> 0.5 dB (typical)
<b>Out-of-Band Signal Rejection:</b> > 35dB @ +/- 40 MHz
<b>Voltage:</b> 2.7-5.5 VDC
<b>ESD Circuit Protection:</b> 15K volts

### Environmental Specifications

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

### Available Models

Part Number	Description
3978D	Black radome
3978D-W	White radome

\*Order MMK1925 bracket for compatible mounting

## 3997D Low Profile Surface Mount GPS Antenna



The 3997D surface mount GPS Antenna provides high performance in a very small form factor. It features a custom designed ceramic patch element that minimizes detuning effects caused by adjacent objects. This element, along with a low noise amplifier and SAW filter, enables the 3997D to provide a consistent, clear signal while minimizing loss-of-lock when GPS conditions are less than ideal. The 3997D is housed in a very compact all-plastic, non-corrosive low profile package. The 3997D is ideal for permanent installations in asset tracking and timing synchronization where performance and size are critical factors.

### Features

- Weather proof, non-corrosive, GE Lexan EXL9330 enclosure
- Extremely low in-vehicle connector profile
- Small mounting holes
- Voltage range: 2.7 to 5.5 V
- Low noise figure: 1.5 dB
- High out-of-band signal rejection



### Low Noise Amplifier Specifications

<b>Nominal Gain:</b> @ 3.3VDC: 28 dB @ 5VDC: 30 dB
<b>Nominal Impedance:</b> 50 ohm
<b>Noise Figure:</b> 1.5 dB (typical)
<b>Voltage:</b> 2.7-5 VDC
<b>Out-of-band Signal Rejection:</b> > 20dB @ +/- 30 MHz

### RF/Electrical Specifications

Center Frequency	Nominal Gain	Polarization	Current Draw
1575.42 MHz ± 10 MHz	3 dBic @ 90° -2 dBic @ 20°	Right Hand Circular	9 mA @ 3.3V 15 mA @ 5V

### Mechanical Specifications

Antenna Dimensions (diameter x height)	Weight	Shock	Vibration
1.7" x .53" (44.28 x 13.42 mm)	.057 lbs (26 g)	Vertical axis 50G, other axes 30G	3 axis, sweep = 15 min 10 - 200 Hz log sweep: 3G

Housing	Connector	Mounting Method
GE Lexan EXL9330, black	MCX Jack	4 x 4-40 screw mounting holes

### Environmental Specifications

Temperature Range	Humidity
-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.

### 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



### Filter/LNA Antenna Electrical Specifications

Operating Frequency	Noise Figure	Gain	Out-of-Band Signal Rejection
L1: 1575.42 +/- 1.023 MHz	1.8 dB typical 2.2 dB maximum	26 dB	fo=1575.42 MHz fo +/-20 MHz, 7 dB typical fo +/-50 MHz, 20 dB typical fo +/-100 MHz, 30 dB typical



### Technical Data

<b>Polarization:</b> Right hand circular
<b>Input Impedance:</b> 50 ohms
<b>VSWR:</b> < 2.0:1, maximum (Filter/LNA)
<b>Operating Supply Voltage:</b> 3-5 Vdc: 50 mV p-p ripple (max)
<b>Current Consumption:</b> 20 mA, maximum at 3-5 Vdc (9 mA typical)
<b>Housing:</b> Black, UV-stable plastic
<b>Cable:</b> 17 feet RG-174/U
<b>Connectors Options:</b> MSMA standard
<b>Cable Pull Force:</b> 10 lbs, minimum
<b>Magnet Pull Force:</b> 5 lbs, minimum
<b>Mount Method*:</b> Magnet (MM suffix) or adhesive tape (TM)

### Antenna Patch Electrical Specifications

Center Frequency	Gain typical at zenith	Bandwidth	Axial Ratio
1575.42 +/-3 MHz (when covered with a radome and measured on a 2.75 x 2.75 inch ground plane)	+5.0 dBic (-1.0 dBic minimum at 10° elevation)	10 MHz minimum (10 dB return loss)	3.0 dB typical

### Mechanical Specifications

Dimensions	Weight (Mass)
2" x 1.77" x .55"	4.09 +/-0.35 oz

### Environmental Specifications

Operating Condition	Storage Condition
-40°C to +85°C temperature 10 to 95% RH humidity	-40°C to +85°C temperature 10 to 95% RH humidity

\* To select mount preference, add the corresponding suffix to the AGPS series part number. Example: AGPS26MM indicates a magnetic base

For other connector options, please refer to GPS Mobile Antenna Configurator Part Number Guide

## 3910D Very Low Noise Mobile GPS Antenna



The 3910D GPS antenna has one of the industry’s lowest noise figures. It features ESD circuit protection, an innovative very low noise LNA and a high rejection SAW filter. It also features a precisely tuned custom ceramic patch element that minimizes detuning effects caused by adjacent objects. The 3910D is ideal for Fleet Management, Asset Tracking and Precision Agriculture as well any application with poor signal reception area.

The 3910D 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 3910D GPS antenna is ideal for demanding vehicle mounted GPS applications.

### Features

- Low noise: 0.5 dB
- Low current: 8mA
- Superior out-of-band rejection
- Wide voltage input range (2.7 - 5 VDC)
- Robust IP67 housing built for various weather conditions

### Low Noise Amplifier Specifications

<b>Nominal Gain:</b> 28 dB @ 3.3VDC
<b>Noise Figure:</b> 0.5 dB (typical)
<b>Out-of-Band Signal Rejection:</b> > 30dB @ +/- 30 MHz
<b>Voltage:</b> 2.7-5 VDC

### RF/Electrical Specifications

Center Frequency	Nominal Gain	Polarization	Current Draw
1575.42 MHz ± 10 MHz	3 dBic @ 90° -2 dBic @ 20°	Right Hand Circular	8 mA @ 3.3V

### Mechanical Specifications

Antenna Dimensions	Weight	Shock	Vibration
1.77" x 2.01" x .47" (45 x 51 x 12 mm)	.29 lbs (130 g)	Vertical axis 50G, other axes 30G	3 axis, sweep = 15 min 10 - 200 Hz log sweep: 3G

Cable	Connector	Mounting Method
9.8' (3 meters) highly-flexible 174 sized cable	Male SMA standard	Magnetic (5 lb lift-off force) or permanent (pre-threaded for 3 x M2.5 screws)

### Environmental Specifications

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

For other connector options, please refer to GPS Mobile Antenna Configurator Part Number Guide



## 3914D Very Low Current Mobile GPS Antenna

The 3914D GPS antenna is an industry leader in low power consumption. It features ESD circuit protection, an innovative very low noise LNA and a high rejection SAW filter. It also features a precision tuned ceramic patch element that minimizes detuning effects caused by adjacent objects. The 3914D is ideal for portable applications where low power operation is a necessity.

The 3914D 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 3914D is ideal for most demanding, power critical GPS applications.

### Features

- Extremely low current: 2 mA @ 2.7 VDC
- Low noise figure: 1 dB
- 18 dB gain
- NATO approved: NSN 5985-12-364-3842
- Robust IP67 housing built for various weather conditions
- ESD circuit protection: 15 KV



### RF/Electrical Specifications

Frequency Range	Nominal Gain	Polarization	Current Draw
1572.5 - 1578 MHz	3 dBic @ 90° -2 dBic @ 20°	Right Hand Circular	2 mA @ 2.7V

### Mechanical Specifications

Antenna Dimensions	Weight	Shock	Vibration
2.1" x 2.3" x .54" (52.1 x 58.9 x 13.6mm)	.26 lbs (120 g)	Vertical axis 50G, other axes 30G	3 axis, sweep = 15 min 10 - 200 Hz log sweep: 3G

Cable	Connector	Mounting Method
16.4' (5 meters) highly-flexible 174 sized cable	SMA standard	Magnetic (5 lb lift-off force) or permanent (pre-threaded for 3 x M2.5 screws)

### Environmental Specifications

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

### Low Noise Amplifier Specifications

<b>Nominal Gain:</b> 18 dB @ 3.3VDC
<b>Noise Figure:</b> 1 dB (typical)
<b>Out-of-Band Signal Rejection:</b> > 30dB @ +/- 30 MHz
<b>Voltage:</b> 2.5-3.3 VDC

For other connector options, please refer to GPS Mobile Antenna Configurator Part Number Guide



## 3917D Value Mobile GPS Antenna



The 3917D GPS antenna is a high performance value antenna with a wide voltage range, ideally suited to telematics platforms for use in vehicle-mounted applications. Using internal magnets or screw mount holes, the antenna can be installed almost anywhere on a vehicle allowing for greater flexibility. The 3917D antenna features 28 dB gain low noise amplifier and a SAW filter. With 2.7 to 5 volt operation, the antenna can be used with the vast majority of GPS systems available.

### Features

- Voltage range 2.7 - 5 V
- LNA 28 dB gain typical
- Low noise figure 1.5dB



### Low Noise Amplifier Specifications

<b>Nominal Gain:</b> @ 3.3VDC: 28 dB @ 5VDC: 30 dB
<b>Noise Figure:</b> 1.5 dB (typical)
<b>Out-of-band Signal Rejection:</b> > 30dB @ +/- 40 MHz
<b>Voltage:</b> 2.7-5 VDC

### RF/Electrical Specifications

Center Frequency	Nominal Gain	Polarization	Current Draw
1575.42 MHz ± 10 MHz	3 dBic @ 90° -2 dBic @ 20°	Right Hand Circular	9 mA @ 3.3V 15 mA @ 5V

### Mechanical Specifications

Antenna Dimensions	Weight	Shock	Vibration
1.77" x 2.01" x .47" (45 x 51 x 12 mm)	.26 lbs (120 g)	Vertical axis 50G, other axes 30G	3 axis, sweep = 15 min 10 - 200 Hz log sweep: 3G
Cable	Connector	Mounting Method	
9.8' (3 meters) highly flexible 174 sized cable	Male SMA standard	Magnetic (5 lb lift-off force) or permanent (pre-threaded for 3 x M2.5 screws)	

### Environmental Specifications

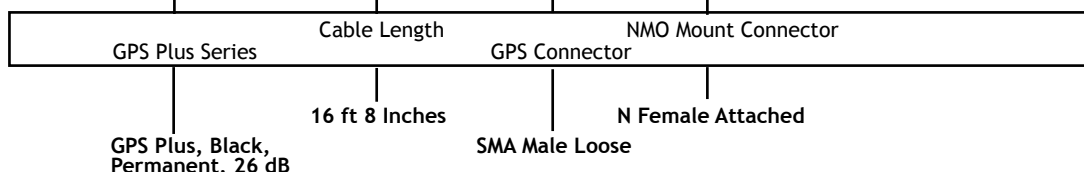
Temperature Range	Ingress Protection
-40°C to +85°C operating	IP67

For other connector options, please refer to GPS Mobile Antenna Configurator Part Number Guide

# GPS Multi-Band Mobile Antenna Configurator Part Number Guide - Tri-band Models

PCTEL's GPS multi-band mobile antennas can be configured with several cable and connector options. Please refer to the template below to determine your configurator part number.

## GPMB - 200 - S1N - N4



GPS PLUS SERIES
GPPB = 26 dB, Permanent, Black
GPPW = 26 dB, Permanent, White
GPMB = 26 dB, Magnetic, Black
GPTB = 26 dB, Trunk, Black
GPRB = 26 dB, Mirror, Black
GPPL = 16 dB, Permanent, Black
GPML = 16 dB, Magnetic, Black
GPRL = 16 dB, Mirror, Black

GPS TRIBAND SERIES
GTMU = Low Profile, Magnetic, Black
GTPU = Low Profile, Permanent, Black
GTSU = Sharkfin, Permanent, Black

CABLE LENGTH
Cable is available in length by inch. Longer cable will lead to higher potential loss. ** Cable length may not exceed 17 Feet (204 Inches).
ex. 010 = 10 Inches
ex. 150 = 14 ft 6 in. (150 in.)
ex. 200 = 16 ft 8 in. (200 in.)

CONNECTOR COMPATIBILITY
Connectors are not necessarily compatible with every cable type. Please inquire to customer service as to what configurations and inventory are available.

CONNECTOR TYPE
B = BNC
N = N
F = FME
S = SMA
P = PL259
M = Mini-UHF
T = TNC
U = SMB
X = MCX
Z = MMCX

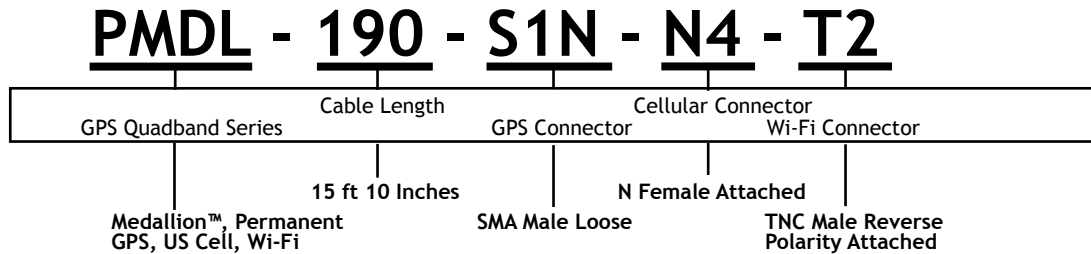
CONNECTOR TYPE
1 = Male
2 = Male reverse polarity
3 = Male right angle
4 = Female
5 = Female reverse polarity
6 = Female right angle
7 = Male soldered
8 = Female soldered

OPTIONAL CONNECTOR ATTACHMENT
[Does not appear in every part number]
Connector comes attached unless denoted with an 'N' following the connector type
N = Connector Included (not attached)

\*\*Product cable length will be within +/- 2 inches of the requested length. The requested length must be equal for both cables.

# GPS Multi-Band Mobile Antenna Configurator Part Number Guide - Quad-band Models

PCTEL's GPS multi-band mobile Antennas use the following model to generate configured product codes. This structure outlines the electrical and mechanical specifications for each configured antenna.



GPS QUADBAND ANTENNAS	
GPHP =	GPS High Performance, GPS, US Cell, Wi-Fi
GQSU =	Sharkfin, Permanent, GPS, US Cell, Wi-Fi
GQSE =	Sharkfin, Permanent, GPS, European Cell, Wi-Fi
PMDL =	Medallion™, Permanent, GPS, US Cell, Wi-Fi

CABLE LENGTH
Cable is available in length by inch. Longer cable will lead to higher potential loss.
** Cable length may not exceed 17 Feet (204 Inches). Cable length determined will be applied to all three cable leads. Cable type per lead may vary depending on frequency.
ex. 010 = 10 Inches
ex. 150 = 12 ft 6 in. (150 in.)
ex. 200 = 16 ft 8 in. (200 in.)

CONNECTOR COMPATIBILITY
Connectors are not necessarily compatible with every cable type. Please inquire to customer service as to what configurations and inventory are available.

CONNECTOR TYPE
B = BNC
N = N
F = FME
S = SMA
P = PL259
M = Mini-UHF
T = TNC
U = SMB
X = MCX
Z = MMCX

CONNECTOR TYPE
1 = Male
2 = Male reverse polarity
3 = Male right angle
4 = Female
5 = Female reverse polarity
6 = Female right angle
7 = Male soldered
8 = Female soldered

OPTIONAL CONNECTOR ATTACHMENT <small>[Does not appear in every part number]</small>
Connector comes attached unless denoted with an 'N' following the connector type
N = Connector Included (not attached)

\*\*Product cable length will be within +/- 2 inches of the requested length. The requested length must be equal for all three cables.

## 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 - RF Antennas

Available Models: GPSHPSM/SM/SM (Black Radome) WGPSHP (White Radome)	Operating Frequencies	Polarization	Nominal Impedance	Gain <sup>1</sup> (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

### Electrical Specifications - GPS Antenna

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

### 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 <sup>2</sup> 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			

<sup>1</sup> 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

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

<sup>1</sup> 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>
<b>Black</b>	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

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

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

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

## GPS/GSM Multi-band Through Hole Low Profile Antenna

The GPSGSMMSMA multi-band GPS 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 is designed for permanent roof top vehicular installations. It is ideal for mass transit applications requiring voice coverage and GPS tracking to improve operational dispatch and schedule maintenance efficiencies. 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 GPS 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
- White radome option available

### GPS Antenna Electrical Specifications

Center Frequency	Current Draw	LNA Gain
L1: 1575.42 +/- 3 MHz	< 15 mA @ 3-5V	25 +/- 3 dB

### GSM Antenna Specifications

Operating Frequencies	Typical Gain (without cable)
824-896 MHz 1710-1990 MHz	2dB +/- 1dB @ 900 MHz 1dB +/- 1dB @ 1800 MHz

### Mechanical Specifications

Weight	Dimensions	Temperature Range
0.45 lbs (204 grams)	3.1 x 0.59 inches (8 x 1.5 cm)	-40° C to +85° C



GPSGSMMSMA



### Technical Data

<b>Maximum Power (GSM):</b> 8 watts
<b>Polarization:</b> Right hand circular (GPS) Linear (GSM frequencies)
<b>Input Impedance:</b> 50 ohms
<b>VSWR:</b> < 1.5:1 (GPS) < 2.5:1 (GSM)
<b>Radome:</b> UV stable plastic Black (part number GPSGSMMSMA) White (part number WGPSGSMMSMA)
<b>Cable:</b> 17 feet (5 meter) RG-174/U (GPS) 17 feet (5 meter) RG-174/U (GSM)
<b>Connector*:</b> Male SMA (GPS) Male SMA (GSM)
<b>Mount Method:</b> 1/2 inch through hole mount Mount assembly includes flat adapter shim for installations on existing larger hole diameters. Adhesive VHB tape layer included.

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



GPSGSMMSMA

## 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.

### 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



### Technical Data

<b>Maximum Power (GSM):</b> 8 watts
<b>Polarization:</b> Right hand circular (GPS) Linear (GSM frequencies)
<b>Input Impedance:</b> 50 ohms
<b>VSWR:</b> < 1.5:1 (GPS) < 2.5:1 (GSM)
<b>Radome:</b> Black UV resistant plastic
<b>Cable:</b> 17 feet (5 meter) RG-174/U (GPS) 17 feet (5 meter) RG-174/U (GSM)
<b>Connector*:</b> Male SMA (GPS) Male SMA (GSM)
<b>Mount Method**:</b> Magnetic mounting Adhesive VHB tape layer included.
<b>Magnet Pull Force:</b> 2.8 lbf, minimum

### GPS Antenna Electrical Specifications

Center Frequency	Current Draw	LNA Gain
L1: 1575.42 +/- 3 MHz	< 15 mA @ 3-5V	25 +/- 3 dB

### GSM Antenna Specifications

Operating Frequencies	Typical Gain (without cable)
824-896 MHz 1710-1990 MHz	2dB +/- 1dB @ 800 MHz 1dB +/- 1dB @ 1800 MHz

### Mechanical Specifications

Weight	Dimensions	Temperature Range
0.4 lbs (181.4 grams)	2.8 x 2.4 x 0.5 inches (7.2 x 6.2 x 1.4 cm)	-40°C to +85°C

\*\*The top of the antenna housing must be directed toward the sky, as indicated by the "AIRWARD" on the antenna radome. For other connector options, please refer to GPS Multi-Band Mobile Antenna Configurator Part Number Guide.

## 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.

### 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

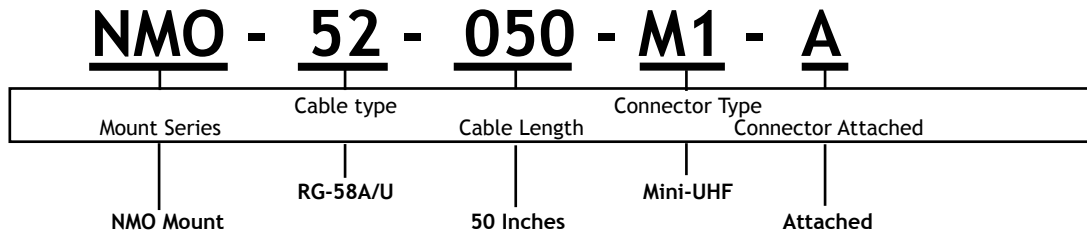
Temperature Range
-40°C to +85°C operating

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

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

# Mobile Antenna Mounts Configurator Part Numbering Guide

PCTEL's mobile antenna mounts can be configured with several cable and connector options. Please refer to the template below to determine your configurator part number.



MOUNT SERIES
NMO = NMO Mount
SMM = SM Mount
K16 = K166 Mount
KD6 = KD66 Mount
BMA = BMA Mount
BMM = BMATM Mount
BM3 = BMATM338 Mount
GCC = G Mount (chrome)
GCR = G Mount (chrome, w/rubber boot)
GBB = G Mount (black)
GBR = G Mount (black, w/rubber boot)
GMC = GM Mount (chrome)
GMB = GM Mount (black)
MBM = MBM Mount (chrome)
MBB = MBM Mount (black)
TGB = TGBWP45 Mount
TTT = T Mount
BMT = BMT Mount

CABLE TYPE
12 = Pro-Flex Plus 195
13 = Pro-Flex Plus 195, A/U
*20 = LMR240
52 = RG-58A/U
60 = RG-58/U
61 = RG-58 Teflon (white)

CABLE LENGTH
Cable is available in length by inch. Longer cable will lead to higher potential loss.
** ex. 010 = 10 Inches
ex. 150 = 14 ft 6 in (150 in.)
ex. 300 = 25 ft. (300 in.)

CONNECTOR TYPE
B = BNC
N = N
F = FME
S = SMA
P = PL259
M = Mini-UHF
T = TNC
U = SMB
X = MCX
Z = MMCX

CONNECTOR TYPE
1 = Male
2 = Male reverse polarity
3 = Male right angle
4 = Female
5 = Female reverse polarity
6 = Female right angle
7 = Male soldered
8 = Female soldered

OPTIONAL CONNECTOR ATTACHMENT
<small>[Does not appear in every part number]</small>
A = Attached Connector
N = Connector Included (not attached)

HIGH EFFICIENCY MOUNT SERIES
MHF = MHFML195C Mount
MHP = MHFPFP240C Mount
MLF = MLFML195C Mount
MLP = MLFPFP240C Mount
GHF = GMHFML195C Mount (chrome)
GHB = GMHFML195C Mount (black)
GHP = GMHFPP240C Mount (chrome)
GHZ = GMHFPP240C Mount (black)
GLF = GMLFML195C Mount (chrome)
GLB = GMLFML195C Mount (black)
GLP = GMLFPFP240C Mount (chrome)
GLZ = GMLFPFP240C Mount (black)

CONNECTOR COMPATIBILITY
Connectors are not necessarily compatible with every cable type. Please inquire to customer service as to what configurations and inventory are available.

\*Available with limited options

\*\*Product cable length will be within +/- 2 inches of requested length.

## G Magnetic Mount Series

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



**G**

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)(B)GBN	12'	RG-58/U	BNC	Crimp
(R)(B)GC	12'	RG-58/U	TNC	Crimp
(R)GML195C	12'	Pro-Flex™ Plus 195	TNC	Crimp
(R)GP	12'	RG-58/U	Teflon PL259	Solder
(R)(B)GPL	12'	RG-58/U	Mini-UHF	Crimp
RBGFPL	12'	White Teflon	Mini-UHF	Crimp
(R)GML195NCP	12'	Pro-Flex™ Plus 195	N	Crimp
(R)(B)GNCP	12'	RG-58/U	N	Crimp
(R)GML195MSMA	12'	Pro-Flex™ Plus 195	Male SMA	Crimp
(R)GMSMA	12'	RG-58/U	Male SMA	Crimp
(R)(B)GFFME	12'	RG-58/U	Female FME**	Crimp
RGRF240-NC	12'	Pro-Flex™ Plus 240	None	N/A

\* 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 option

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

## Magnetic Mounts

## GM Series

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



BGM



GM

Model	Length of Coax	Coax	Connector	Type
(B)GM-NC	12'	RG-58A/U	None	N/A
(B)GMC-NC	12'	RG-58/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)GMML195MSMA	12'	Pro-Flex™ Plus 195	Male SMA	Crimp
(B)GMMSMA	12'	RG-58/U	Male SMA	Crimp
(B)GMML195NCP	12'	Pro-Flex™ Plus 195	N	Crimp
(B)GMNCP	12'	RG-58/U	N	Crimp
GMSUNCP	12'	RG-58A/U	N	Crimp
GMNF	12'	RG-58/U	Female N	Crimp
(B)GMPL	12'	RG-58/U	Mini-UHF	Crimp

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

\*\* Connectors are attached on these models only.

(B) prefix indicates black option

For 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”

Model	Length of Coax	Coax	Connector*	Type
BMA38**	None	N/A	None	N/A
BMA-NC**	17'	RG-58/U	None	N/A
BMAFLC-NC	17'	RG-58 Teflon	None	N/A
BMA	17'	RG-58/U	PL259	Solder
BMACP	17'	RG-58/U	PL259	Crimp
BMANCP	17'	RG-58/U	N	Crimp
BMABN	17'	RG-58/U	BNC	Crimp
BMAC	17'	RG-58/U	TNC	Crimp
BMAPL	17'	RG-58/U	Mini-UHF	Crimp
BMAML195MSMA	17'	Pro-Flex™ Plus 195	Male SMA	Crimp
BMAMSMA	17'	RG-58/U	Male SMA	Crimp



BMA

## 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”

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
BMATMMSMA	17'	RG-58/U	Male SMA	Crimp
BMATMPL	17'	RG-58/U	Mini-UHF	Crimp
BMATMFFME	17'	RG-58/U	Female FME**	Crimp
BMATM38	N/A	None	None	N/A



BMATM

## K/KE794 Surface Mounts

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

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



K794 Series

\* 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"



BMATM338

Model	Length of Coax	Coax	Connector	Type
BMATM338	N/A	None*	None	N/A
BMATM3-NC	17'	RG-58/U	None	N/A
BMATM3CP	17'	RG-58/U	PL259	Crimp
BMATM3	17'	RG-58/U	PL259	Solder
BMATM3MSMA	17'	RG-58/U	Male SMA	Crimp
BMATM3PL	17'	RG-58/U	Mini-UHF	Crimp



MTPM

## 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.



MTPM800

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

\* Cable assembly with mating connector sold separately.

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

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

## Stainless Steel “SM” Series

3/4” hole; 1-1/8”-18 thread; installs from above

Model	Length of Coax	Coax	Connector*	Type
SM34	None	N/A	None	N/A
SM-NC	17'	RG-58A/U	None	N/A
SMC-NC	17'	RG-58/U	None	N/A
SMML195-NC	17'	Pro-Flex™ Plus 195	None	N/A
SMFLC-NC	17'	RG-58 Teflon	None	N/A
SM	17'	RG-58A/U	PL259	Solder
SMCP	17'	RG-58A/U	PL259	Crimp
SMSP	14'	RG-58A/U	PL259	Solder
SMPCP	17'	RG-58/U	PL259	Crimp
SMP	17'	RG-58/U	Teflon PL259	Solder
SMML195P	17'	Pro-Flex™ Plus 195	Teflon PL259	Solder
SMPL	17'	RG-58/U	Mini-UHF	Crimp
SMML195PL	17'	Pro-Flex™ Plus 195	Mini-UHF	Crimp
SMML195RPC	17'	Pro-Flex™ Plus 195	Reverse Polarity TNC	Crimp
SMML195C	17'	Pro-Flex™ Plus 195	TNC	Crimp
SMC	17'	RG-58/U	TNC	Crimp
SMBN	17'	RG-58/U	BNC	Crimp
SMML195BN	17'	Pro-Flex™ Plus 195	BNC	Crimp
SMML195NCP	17'	Pro-Flex™ Plus 195	N	Crimp
SMML195MSMA	17'	Pro-Flex™ Plus 195	Male SMA	Crimp



SM

\*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.

## Brass NMO Style Series with Gold Contact Pin and Brass Nut Ring Mount

3/4" hole; 1-1/8"-18 thread; installs from above



NMO

Model	Length of Coax	Coax	Connector	Type
NMO58AU-NC	17'	RG-58A/U	None	N/A
NMO34	17'	N/A	None	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
NMO58UMSMA	17'	RG-58/U	Male SMA	Crimp
NMOPFP195MSMA	17'	Pro-Flex™ Plus 195	Male SMA	Crimp
NMO58UNCP	17'	RG-58/U	N	Crimp
NMO58UNSO	17'	RG-58/U	N	Solder
NMOPFP195RPC	17'	Pro-Flex™ Plus 195	Reverse Polarity TNC	Crimp
NMO58UTSP	17'	RG-58/U	Teflon PL259	Solder
NMO58AUSP	17'	RG-58A/U	PL259	Solder
NMO58AUCP	17'	RG-58A/U	PL259	Crimp
NMO58UCP	17'	RG-58/U	PL259	Crimp
NMOPFP195CP	17'	Pro-Flex™ Plus 195	PL259	Crimp
NMO58UCP	17'	RG-58/U	PL259	Crimp
NMOPFP195C	17'	Pro-Flex™ Plus 195	TNC	Crimp
NMO58UC	17'	RG-58/U	TNC	Crimp
NMOPFP195PL	17'	Pro-Flex™ Plus 195	Mini-UHF	Crimp
NMO58UPL	17'	RG-58/U	Mini-UHF	Crimp
NMO58AUPL	17'	RG-58A/U	Mini-UHF	Crimp

\* 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.

## 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



MTPMHF



MVPHF

\* Cable assembly with mating connector sold separately.

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

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

## Vandal Proof Mounts - MVP

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



MVP



MVPHF

Model	Mount Type	Coax	Connector
MVP	Vandal-proof permanent mount for frequencies under 3 GHz. Accommodates surfaces up to 1/2-inch thick.	None*	M to N Female
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

## K Mounts

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



K166



K44/5PCK



K45/5PCK

Model	Length of Coax	Coax	Connector
K166M	17'	RG-58/U	Mini-UHF crimped
K166MTT	25'	RG58/U	Mini-UHF crimped
K166T	17'	RG-58/U	TNC male crimped
KD166N	17'	Pro-Flex™ Plus 195	N male crimped
KD166T	17'	Pro-Flex™ Plus 195	TNC male crimped
KD166M	17'	Pro-Flex™ Plus 195	Mini-UHF male
KE166U	17'	Pro-Flex™ Plus 195	FME Female
KE166UMT	17'	Pro-Flex™ Plus 195	FME Female***

3/8" Snap-In Rooftop Mount for Quarter Wave Antennas

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

Model	Description	Length of Coax	Coax	Connector
K45//5PCK	3/8" Hole Snap-In Rooftop Mount Pack of 5 adapters for Rooftop Mounts	N/A	N/A	N/A

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

\*\* High frequency mount to be used with (B)MEFC49005HF, (B)MEFC58005HF, MEF-C2327HF and MLPV4900NGP

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

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

## TGBWP Series

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

Model	Length of Coax	Coax	Connector*	Cable Exit Angle	Type
TGBWP45-NC	17'	RG-58A/U	None	45°	N/A
TGBWP45C-NC	17'	RG-58/U	None	45°	N/A
TGBWP45	17'	RG-58A/U	PL259	45°	Crimp
TGBWP45C	17'	RG-58/U	TNC Plug	45°	Crimp
TGBWP45PL	17'	RG-58/U	Mini-UHF	45°	Crimp
TGBWP45FFME	17'	RG-58/U	Female FME*	45°	Crimp
TGBWP45NCP	17'	RG-58/U	N	45°	Crimp



TGBWP45

## T Series

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

Model	Length of Coax	Coax	Connector*	Type
TTT	N/A	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
TP	17'	RG-58/U	Teflon PL259	Solder
TBN	17'	RG-58/U	BNC	Crimp
TC	17'	RG-58/U	TNC	Crimp
TNCP	17'	RG-58/U	N	Crimp
TPL	17'	RG-58/U	Mini-UHF	Crimp



T



BMT

## BMT Series

Black 1-1/8"-18 thread; all metal trunk lid mount

Model	Length of Coax	Coax	Connector*	Type
BMT-NC	17'	RG-58A/U	None	N/A
BMTC-NC	17'	RG-58/U	None	N/A
BMTML195-NC	17'	Pro-Flex™ Plus 195	None	N/A
BMT	17'	RG-58A/U	PL259	Solder
BMTBN	17'	RG-58/U	BNC	Crimp
BMTC	17'	RG-58/U	TNC	Crimp
BMTPL	17'	RG-58/U	Mini-UHF	Crimp
BMTML195-NC	17'	Pro-Flex™ Plus 195	Reverse Polarity TNC	Crimp

\* 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.

## (B)MBM Series

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

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



(B)MBM

Prefix “B” indicates black.

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

## Reinstallation Kits and Coupling Box Packs

Part Number	Description	Antenna Series
KAV353//5PCK	Reinstallation kit for all VHF glass mount antennas, pack of 5	APR152.3 SERIES
KAV377//5PCK	Reinstallation kit for "On-Glass"® antennas, pack of 5	APR874.3, APD873.3, APD876.3, APDM927, APR-852, APRG-852
KAV398//5PCK	Reinstallation base and swivel, pack of 5	APDM928
K93001//10PCK	Reinstallation tape, pack of 10	APR852.3, APRG852.3, APD876.3, APDM927, AP354, APR143, APR152.3, APR153
KCB454//5PCK	Replacement Coupling Box, 410-512 MHz, pack of 5	AP454
KCB852//5PCK	Replacement Coupling Box, 806-869 MHz, pack of 5	APR852
KCB876//5PCK	Replacement Coupling Box, 824-894 MHz, pack of 5	APD876
KCB928//5PCK	Replacement Coupling Box, 806-960 MHz and 1850-1990 MHz, pack of 5	APDM928



KAV353//5PCK



KAV377//5PCK



KAV398//5PCK



K93001 Tape//10PCK



KCB454



KCB852//5PCK



KCB876



KCB928



# “On-Glass”<sup>®</sup> Whips and Adapters, Packs of 5 units

## “On-Glass”<sup>®</sup> Replacement Whips

Model Series	Part Number	Whip Style	Frequency
APR852	KR852Z//5PCK	A	806-869 MHz
APDM928	KDM928Z//5PCK	B	iDEN/PCS
APD876.3	KD876Z//5PCK	C	Cellular
APR153	KAVR153Z (sold as a unit)	D	150-174 MHz
APDM928.1	KDM928.1Z//5PCK	E	iDEN/PCS
AP454.3	K454.3Z//5PCK	F	410-512 MHz



**A**  
3 dB Gain  
Open Coil



**B**  
3 dB Gain  
Straked  
Dual Band



**C**  
3 dB Gain  
Enclosed  
Coil Straked



**D**  
Unity Gain  
Open Coil



**E**  
KDM928.1Z



**F**  
K454.3ZV

# Mobile Shock Springs, Antenna Springs and Coils

## Mobile Shock Springs

Model	Description
MAXS//5PCK	5/16-24, Max base spring, chrome, pack of five
MQS	Shock spring for MLB3001
MS//5PCK	Chrome coil spring, pack of five



MS

MAXS

MQS

## Mobile Antenna Springs and Coils for Antenna Specialists®

Part Number	Description	Antenna Series
K223//5PCK	Replacement spring with 1/4"-20 female bottom thread. Accepts 0.125" diameter whips, pack of five	ASPR7495
KR723//5PCK	DURA-FLEX® noiseless elastomer spring for UHF low profile gain antennas with 1/4"-20 female bottom thread. Accepts 0.125" diameter whips, pack of five	UHF low profile gain antennas
KR726//5PCK	DURA-FLEX® noiseless elastomer replacement spring for VHF, low profile antennas with 1/4"-20 female bottom thread. Accepts 0.100" diameter whips, pack of five	ASP7455, ASPH7455, ASP7795



K223



KR723



KR726

## Replacement Rods

Antenna Model	Replacement Rod #
ASP7455	KR731//5PCK
ASPB76552	KRB7242//5PCK
ASPC201	K42//5PCK
MHB5800	MATH//5PCK
MHB5800132	MATH132//5PCK
MHB5802	MATH//5PCK
MHBDC5800	MATH//5PCK
MLB2700	MATH//5PCK
MLB3000	MATH//5PCK
MLB3001	MAR96
MLB3400	MATH//5PCK
MLB4000	MATH//5PCK
MLB4700	MATH//5PCK
MLB6600	MATH//5PCK
MLBDC2700	MATH//5PCK
MLBDC3000	MATH//5PCK
MLBDC3400	MATH//5PCK
MLBDC3700	MATH//5PCK
MLBDC4000	MATH//5PCK
MLBDC4500	MATH//5PCK
MLBDC4700	MATH//5PCK
MMC150	MATH//5PCK
MUF4505	MUB450//5PCK
MUF4505NGP	MUB450NGP//5PCK
ASP76551	KR724//5PCK
ASPRDM1994	KRDM1994Z//5PCK

## Replacement Coils

Antenna Model	Replacement Coil #
ASP7455	K725//5PCK
ASP76551	K722//5PCK
MHB1520	MAT1520//5PCK
MHB5800	MAT58//5PCK
MHB5802	MAT582//5PCK
MLB2700	MAT27//5PCK
MLB3000	MAT30//5PCK
MLB3001	MAT3001
MLB3400	MAT34//5PCK
MLB4000	MAT40//5PCK
MLB4700	MAT47//5PCK
MLB6600	MAT66//5PCK
MUF4065	MAT406
MUF4505	MAT450//5PCK
MUF4505NGP	MAT450NGP//5PCK
MWB1320	MATMWB//5PCK
MWV1322	MATMWV//5PCK
MWV1322HD	MATMWVHD//5PCK

## Miscellaneous Mobile Accessories

Part Number	Description
BMMB34	3/4" mirror mount, black
BNUT//20PCK	3/4" brass nut, 20 pack set
CNUT//20PCK	Bright chrome mount nut for 1/4 wave, 20 pack set
MANUT//100PCK	Nut and O-ring for 3/8" mounts, 100 pack set
ORNG//100PCK	O-ring for 3/4 mounts, 100 pack set
BTGB34	3/4" "L" bracket, black
MAX//5PCK	Max Base, contact washer, 5 pack set
MMB34	3/4" mirror mount, chrome
MMGSK	Seal gaskets, fit around 3/4" mount nut, 6 pack set
MRC//25PCK	Chrome rain cap, 25 pack set
TGB34	3/4" hole "L" bracket, chrome
MAB//100PCK	Antenna ball/set screw for MFT120, package of 100
MNFA//5PCK	M mount to N female adapter, package of 5
K35/25*	1.5" (38.1 mm) diameter rubber plug for covering 3/4" (19.1 mm) hole after antenna removal.
K37/25*	1.25" (31.8 mm) diameter rubber plug for covering 3/8" (9.5 mm) hole after antenna removal.
K39/25*	1.5" (38.1 mm) diameter rubber plug for covering 7/8" (22.2 mm) hole after antenna removal.
K332	Ground plane disk provides ground plane for fiberglass-bodied vehicles.



BMMB34



BTGB34



TGB34



K35



K37



K39



K332 Ground Plane Disk

\* Package of 25.