



Surface Mount GPS Antenna (Pat.Pnd.)

Tri-Band 900/1900 MHz & GPS



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Mounts easily to roof, trunk or bulkhead

High performance GPS with 26 dB active amplifier (dual 3.3 & 5 V)

Secure & low profile less than 1" high (25 mm), mounts to 5/8" hole (16 mm)

Tri-Band 900/1900/GPS for AVL applications

This extremely versatile configuration provides a high level of integration for AVL/tracking applications. The Tri-Band antenna provides operation on Cellular and PCS bands along with GPS. The surface mount style antennas can be mounted to any vehicle, cargo container or trailer.

Models are available for Cellular/CDPD & PCS, as well as other popular private networks. Separate cabling is provided for the GPS and 900/1900 MHz interface.

The design uses a 5/8" feed thru (16 mm) for securing to the vehicle. Access to the underside of the body surface is required to complete the installation. For the GPS interface. The antennas are outfitted with 15 feet (4.5 meters) of RG-174 cable & SMB or SMA connectors. All

connectors are male (plugs). The Cellular/PCS cable is 15 feet of RG-58 (4.5 meters). Please consult factory for special lengths or connectors.

GPS performance is 26 dB, with 5 dBi antenna gain. The GPS circuit has a low noise figure (2.0 dB max) with excellent filter characteristics. Power for the GPS amplifier (+3.3/5 VDC) and signal is applied through the same cabling directly to the GPS circuit.

The antennas are enclosed in a 4.5" D x 0.95" H weather-proof polycarbonate radome (114 mm x 24 mm), and supplied with all mounting hardware and sealing gasket. The standard color is white, but can also be supplied in black or grey.

Antenna Model Configurator

SM-

example - SM-U15-1A2C

Freq & GPS Voltage

Code	Description
U15	US AMPS/US PCS - 3.3/5V GPS
C15	Mobitex & ISM/US PCS - 3.3/ 5V GPS
E15	EU GSM/DCS-1800 - 3.3/5V GPS
N15	Nextel trunking/US PCS - 3.3/5 V GPS

Note: All models are dual voltage 3.3/5 VDC

Cellular Cable & Connector

Code	Description
1A	RG-58 & TNC
1B	RG-58 & MiniUHF
1C	RG-58 & SMA
1H	RG-58 & Fakra
1L	RG-58 & SMC

GPS Cable & Connector

Code	Description
2C	RG-174 & SMA
2D	RG-174 & SMB
2E	RG-174 & MCX
2F	RG-174 & MMCX
2H	RG-174 & Fakra
2L	RG-174 & SMC

Specifications

Frequency:

GPS	1575.42 +/- 2 MHz
PCS	1850-1990 MHz
Cellular/CDPD	824-894 MHz
ISM/ EU GSM	870-960 MHz
DCS-1800	1710-1880 MHz
Nextel	806-870 MHz

Cellular / PCS Gain:

Unity

GPS Gain:

26 dB, 5 dBi Antenna

VSWR:

2:1 max over range

Noise Figure:

2.0 dB max, 1.7 dB typical

Operating Temp:

-30° to +80° C

Nominal Impedance:

50 ohms

Maximum Power:

10 Watts (800/900 MHz Band)

Amplifier Bias:

Dual 3.3 & 5 VDC +/- 10%

Current:

20 mA max, 10 mA typical

Cable:

GPS RG-174, 15 ft (4.5 meters)

Cellular/PCS RG-58, 15 ft (4.5 meters)

Case:

4.5"D x .95"H (114mm x 24 mm)

Case Material:

White Polycarbonate, black optional

Stud Mounting:

5/8" dia x 18/32" long (16 mm x 14 mm) thread for 7/32" thick (5.3 mm) metal

Hardware:

Locknut and gasket included

Connector:

See above, other configurations are available, consult factory.