

Surface Mount GPS Antenna (Pat. Pnd.)

GPS Only & Dual Band 900 MHz/GPS



Dual Band 900 & GPS

Also available in
black or grey!



Single Band GPS

- Mounts easily to roof, trunk or bulkhead
- High performance GPS with 26 dB active amplifier
- Secure & low profile under 1" high (25 mm), mounts to 5/8" hole (16 mm)
- Single band GPS & Dual Band 900/GPS models for AVL applications

These antenna are tough all around performers. The surface mount dual and single band antennas are very low profile, perfect for any vehicle, cargo trailers and more.

Models include a single band GPS only version, as well as several dual band 900 MHz & GPS antennas. The dual band versions allow multiband operation for a variety of AVL applications. Models are available for Cellular, CDPD, and other private networks. Separate cabling is provided for the GPS and 900 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. The antennas are outfitted with 15 feet (4.5 meters) of RG-174 cable with SMB or SMA connectors for the GPS interface. The 800 band or 900 band cable is 15 feet (4.5 meters) of RG-58 with a TNC connector. Other cable lengths and connectors may be available.

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 input for the GPS

amplifier (+3.3/5 VDC) and RF output is achieved through the same coax cable.

For the dual band model, cellular performance is provided by a low profile, yet high efficiency airdielectric radiating element. This maintains effective radiation across the desired frequency range, with omnidirectional coverage. Unity gain performance is maintained.

The antennas are enclosed in a weatherproof polycarbonate radome, and supplied with all hardware and sealing gasket. The single band radome is 2.5" in diameter (64 mm), the dual band is 4.5" diameter (114 mm).

Model Numbers

Model	Description
SM-1575	Surface mount GPS with amplifier
SM-900/1575	Surface mount Cellular/CDPD & GPS
SM-837/1575	Surface mount Low SMR & GPS
SM-925/1575	Surface mount High SMR/GSM & GPS

Specify GPS connectors & 800/900 band connectors at time of order. Note: All models are dual voltage 3.3/5 VDC.

Specifications

Frequency:

GPS	1575.42 +/- 2 MHz
Cellular/CDPD	824-894 MHz
Low SMR	804-870 MHz
High SMR/GSM	870-960 MHz

Cellular 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:

3.3/5 VDC +/- 10% (GPS)

Current:

20 mA max, 10 mA typical

Case Material:

White Polycarbonate (standard)
grey or black are special order

Cable:

GPS	RG-174, 15 feet (4.5 meters)
Cellular/SMR	RG-58, 15 feet (4.5 meters)

Case:

SM-1575	2.5" dia. x .75" H (64 mm x 19 mm)
SM Dual Band	4.5" dia. x .95" H (114mm x24mm)

Stud Mounting:

SM-Dual Band	5/8" diameter, 18/32" long shaft (16mm dia, 14.3 mm long)
SM -1575	5/8" diameter, 3/4" long shaft (16 mm dia, 19 mm long)

Hardware:

Nut, lockwasher and gasket included

Connector:

SMB plug or SMA for GPS, TNC for 900 MHz bands. Consult factory for other configurations and connectors.