Surface Mount GPS Antenna (Pat.Pnd.)

MultiBand for Cell/PCS, WiMAX & GPS

MultiBand with GPS
3 separate coaxes

New!
Magnet Mount
Version
(model MGW)

- Mounts easily to roof, trunk or bulkhead
- Multiband covers all GSM/CDMA systems & new WiMAX, or Diversity GSM
- 3 separate RF coax feeds: two radio communication channels & separate GPS
- High performance GPS with 26 dB active amplifier

This new configuration of the SMW Series provides Wide Band performance on all cellular bands, all PCS bands and WiMAX bands along with GPS. It can also be used in a GSM/CDMA system with diversity receive on a secondary 1.9 GHz data link.

Three separate RF feeds allow communication with two voice/data channel, as well as GPS. The antennas can be mounted to any vehicle, cargo container or trailer.

The stud mount design uses a 3/4" feed thru (19 mm) for securing to the vehicle. Access to the underside of the body surface is required to complete the installation. Note, for best performance, the antenna should be mounted on a metal surface/groundplane.

For the GPS interface, the antennas are typically outfitted with 15 feet of RG-174 cable (4.5 meters). The communications channel cables are 15 feet of low loss RF-195. All connectors are male unless requested otherwise.

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.

The antennas are enclosed in a 4.2"D x 3.2"H weatherproof radome (107 mm x 81 mm), and supplied with all mounting hardware and sealing gasket. The radome color is white with optional black.

Mag Mount series - MGW is available, with all the same performance characteristics.

Antenna Model Configurator

SMW-❑❑❑-❑❑-❑❑ -❑❑

example - SMW-302-3A3A2C
Mag Mount - MGW-302-3A3A2C

Combo Configuration

Code	Description
SMW-302	Cable 1 = 800 - 2.7 GHz Cable 2 = 1.7 - 2.7 GHz (WiMAX or Diversity) Cable 3 = GPS

Note: For Mag mount, substitute MGW for SMW in model

Cable #1

Code	Description
3A	RF-195/TNC
3B	RF-195/MiniUHF
3C	RF-195/SMA
3J	RF-195/RevPol SMA
3K	RF-195/RevPol TNC

Cable #2

Code	Description
3A	RF-195/TNC
3B	RF-195/MiniUHF
3C	RF-195/SMA
3J	RF-195/RevPol SMA
3K	RF-195/RevPol TNC

GPS Interface

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

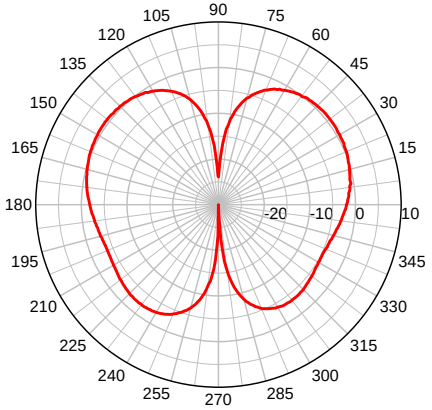
Frequency:	
Cable #1	800 - 2700 MHz
Cable #2	1.7 - 2.7 GHz
GPS	1575.42 +/- 2 MHz
Comm Channel Gain:	
800 - 1GHz	2 dBi
1700 - 2700	5 dBi (peak)
GPS Gain:	26 dB, 5 dBi Antenna
VSWR:	2:1 max over range
Noise Figure:	2.0 dB max, 1.7 dB typical
Operating Temp:	-30° to +80° C
Nominal Impedance:	50 ohms
Amplifier Bias:	3.3 or 5 VDC +/- 10%
Maximum Power:	
800 - 1900 MHz	20 Watts
1900 - 5800 MHz	10 Watts
Current:	20 mA max, 10 mA typical
Cable:	
GPS	RG-174, 15 ft (4.5 meters)
CABLE #1 & #2	Separate RF-195 cables, 15 ft (4.5 meters)
Case:	4.2"D x 3.2"H (107 mm x 81 mm)
Case Material:	White ASA, black optional (ABS)
Mounting:	3/4" dia.x 1/2" long(19 mm x13 mm) for 3/16" thick (4.7 mm) metal
Hardware:	Nut and gasket included

MOBILE MARK®
COMMUNICATIONS ANTENNAS

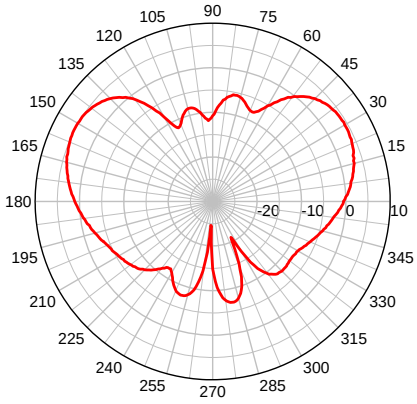
SMW-302 Series Antennas

Surface Mount Multi-Band Antenna with GPS (1575 MHz) Cable#3
2 dBi Gain, Frequency (800-2700 MHz) Cable #1
5 dBi Gain, Frequency (1700-2700) Cable#2

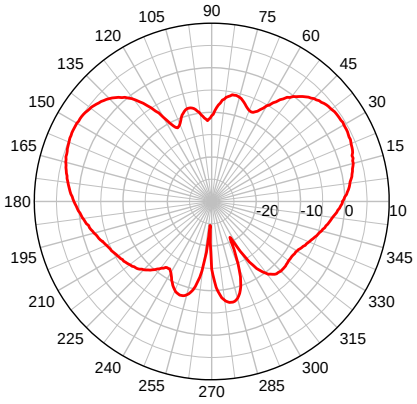
Cable #1
SMW 900 MHz Band – Elevation Plot



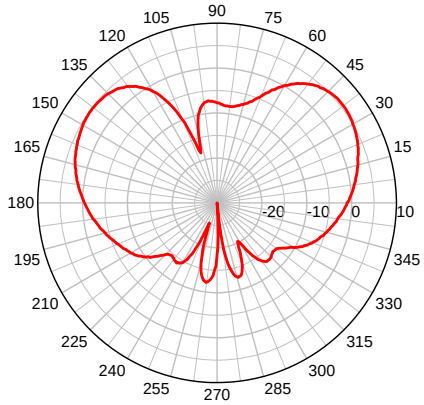
Cable #1
SMW 1900 MHz – Elevation Plot



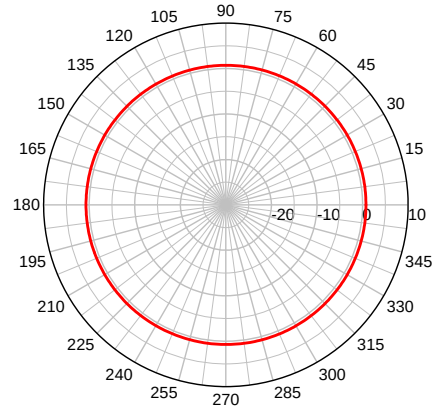
Cable #2
SMW 1900 MHz – Elevation Plot



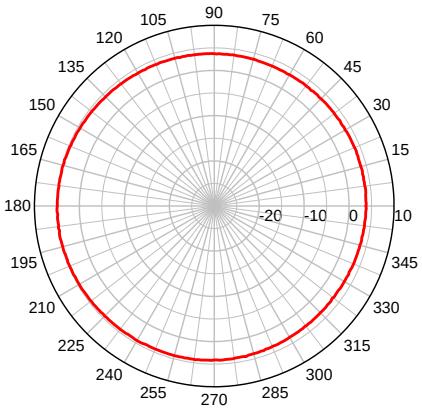
Cable #2
SMW 2400 MHz – Elevation Plot



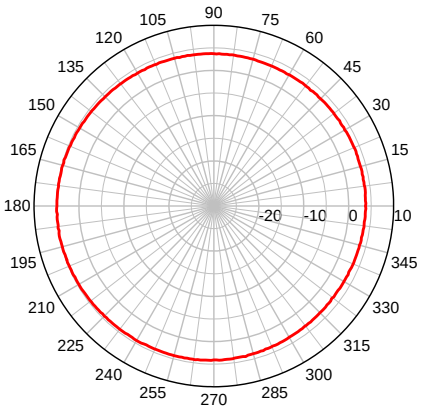
Cable #1
SMW 900 MHz Band – Azimuth Plot



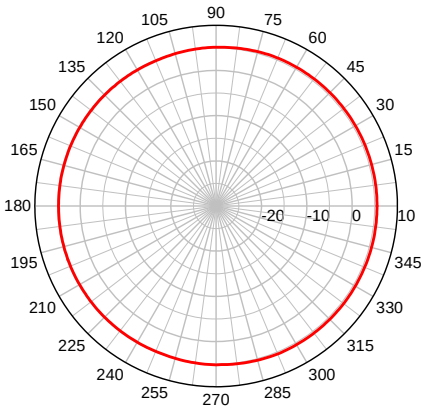
Cable #1
SMW 1900 MHz – Azimuth Plot



Cable #2
SMW 1900 MHz – Azimuth Plot



Cable #2
SMW 2400 MHz – Azimuth Plot



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