

Surface Mount GPS Antenna (Pat.Pnd.)

GSM/CDMA, WiFi, WiMAX & GPS

- Mounts easily to roof, trunk or bulkhead
- MultiBand covers all popular worldwide frequency systems from 800 MHz - 6 GHz
- 3 Separate RF coax feeds; for radio comm channel (800-2.7 GHz), 2.4/5 GHz & GPS
- High performance GPS with 26 dB active amplifier



MultiBand with GPS
3 separate coaxes



New!
Magnet Mount
Version
(series MGW)

For maximum communications capability and ultimate versatility, this is the antenna of choice. This Wide Band antenna provides high performance operation on all cellular bands, all PCS bands and 2.4 GHz 802.11 bands along with GPS. An optional version can operate dual band on 2.4 & 5 GHz for 802.11 a/b/g. Three separate RF feeds allow communication with the voice/data channel, the WiFi radio, as well as GPS. The antennas can be mounted to any vehicle, cargo container or trailer.

The 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 ASA radome (107 mm x 81 mm), and supplied with all mounting hardware and sealing gasket. The SMW radome color is white standard, black optional. The MGW mag mount is available in white (standard) or optional black.

Antenna Model Configurator

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

Combo Configuration

| Code | Description | Cable #1 | | Cable #2 | | GPS Interface | |
|--------------|---|----------|-------------------|----------|-------------------|---------------|--------------|
| | | Code | Description | Code | Description | Code | Description |
| SMW-UMB | Cable 1 = 800 - 2.7 GHz | 3A | RF-195/TNC | 3A | RF-195/TNC | 2C | RG-174/SMA |
| | Cable 2 = 2.4 GHz (WiFi) | 3B | RF-195/MiniUHF | 3B | RF-195/MiniUHF | 2D | RG-174/SMB |
| | Cable 3 = GPS | 3C | RF-195/SMA | 3C | RF-195/SMA | 2E | RG-174/MCX |
| SMW-301 | Cable 1 = 800 - 2.7 GHz | 3J | RF-195/RevPol SMA | 3J | RF-195/RevPol SMA | 2F | RG-174/MMCX |
| | Cable 2 = 2.4 & 5+ GHz (WiFi) | 3K | RF-195/RevPol TNC | 3K | RF-195/RevPol TNC | 2H | RG-174/Fakra |
| | Cable 3 = GPS | 00 | No Cellular/cable | 00 | No WiFi/cable | 2L | RG-174/SMC |
| Note: | For Mag mount, substitute MGW for SMW in model | | | | | 00 | No GPS/cable |

Specifications

| | | | |
|---------------------------|------------------------------|------------------------|--|
| Frequency: | | Amplifier Bias: | 3.3 or 5 VDC +/- 10% |
| Cable #1 | 800 - 2700 MHz | Maximum Power: | |
| Cable #2 | 2400 - 2485 MHz or dual band | 800 - 1900 MHz | 20 Watts |
| | 2.4-2.5/4.9 - 6.0 GHz | 1900 - 5800 MHz | 10 Watts |
| GPS | 1575.42 +/- 2 MHz | Current: | 20 mA max, 10 mA typical |
| Comm Channel Gain: | | Cable: | |
| 800 - 1GHz | 2 dBi | GPS | RG-174, 15 ft (4.5 meters) |
| 1700 - 2700 | 5 dBi (peak) | CABLE #1 & #2 | Separate RF-195 Cables, 15 ft (4.5 meters) |
| 2.4 - 2.5 GHz | 5 dBi (peak) | Case: | 4.2"D x 3.2"H (107 mm x 81 mm) |
| 4.9 - 6.0 GHz | 5 dBi (peak) | Case Material: | White ASA, black optional |
| GPS Gain: | 26 dB, 5 dBi Antenna | Mounting: | 3/4" dia. x 1/2" long (19 mm x 13 mm) for 3/16" thick (4.7 mm) metal |
| VSWR: | 2:1 max over range | Hardware: | Nut and gasket included |
| Noise Figure: | 2.0 dB max, 1.7 dB typical | Option: | Mag Mount MGW, 15 ft cables |
| Operating Temp: | -40° to +85° C | | |
| Nominal Impedance: | 50 ohms | | |

SMW-UMB Series Antennas

Surface Mount Multi-Band Antenna with

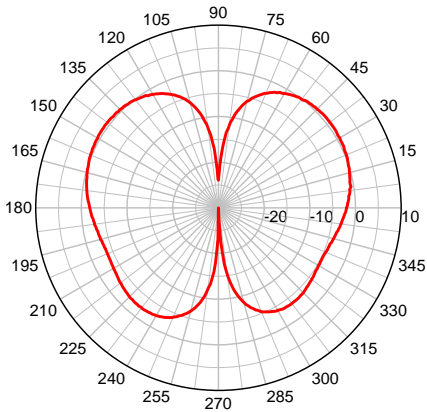
2 dBi Gain, Frequency (800-2700 MHz) Cable #1

5 dBi Gain, Frequency (2400-2485 MHz) Cable #2

GPS (1575 MHz) Cable #3

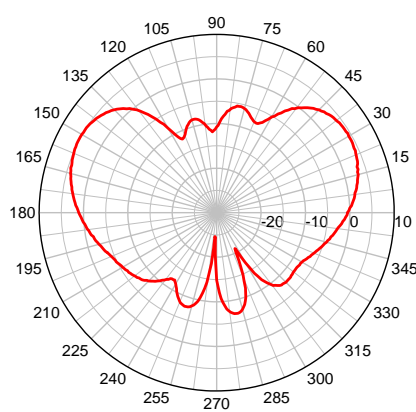
Cable #1

SMW 900 MHz Band – Elevation Plot



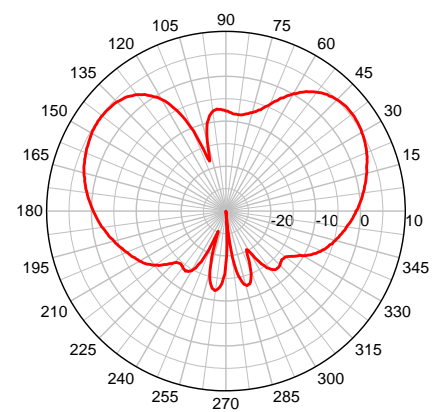
Cable #1

SMW@1900 MHz – Elevation Plot



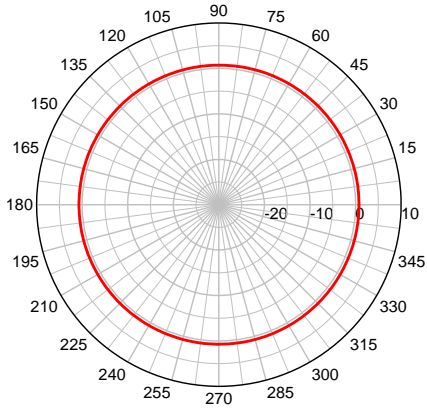
Cable #2

SMW 2400 MHz – Elevation Plot



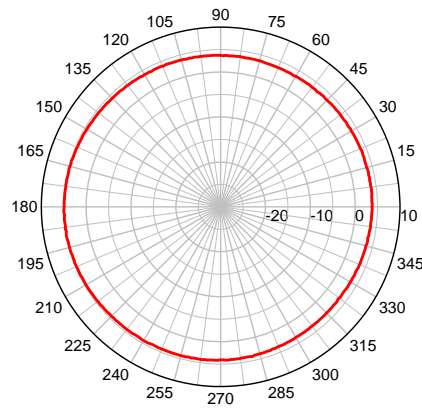
Cable #1

SMW 900 MHz Band – Azimuth Plot



Cable #1

SMW 1900 MHz – Azimuth Plot



Cable #2

SMW 2400 MHz – Azimuth Plot

