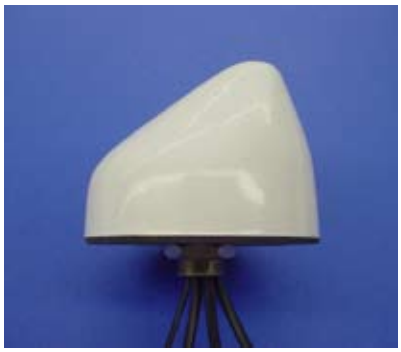
Surface Mount GPS Antenna (Pat.Pnd.)

GSM/CDMA, Diversity, WiFi, WiMAX & GPS



Multi-Band with GPS
4 separate coaxes

- Mounts easily to roof, trunk or bulkhead
- MultiBand covers all popular worldwide frequency systems from 800 MHz - 2.7 GHz
- 3 RF coax feeds for radio comm channels & separate feed for GPS receiver
- High performance GPS with 26 dB amplifier

For maximum capability and ultimate versatility, this is the antenna of choice. This Wide Band model provides high performance operation on two simultaneous GSM or CDMA bands, 2.4 GHz 802.11 bands along with GPS. With three separate RF feeds, diversity configurations can be accommodated for either GSM or WiFi. The surface mount style 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 GPS, the antennas are typically outfitted with 15 feet (4.5 meters) of RG-174 cable. The communications channel cables are 15 feet of low loss RF-195 (4.5 meters). All connectors are male unless requested otherwise. 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.

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

Antenna Model Configurator **SMW-❑❑❑- ❒❒-❑❑-❑❑ -❑❑** example - SMW-401-3A3A3A2C

Combo Configuration

Code	Description
401	Cbl1=800-2.7 GHz Cbl2=2.4 GHz Cbl3=1.7-2.7 GHz Cbl4=GPS

800 -2.7 GHz Interface

Code	Description
3A	RF-195 & TNC
3B	RF-195 & MiniUHF
3C	RF-195 & SMA
3H	RF-195 & Fakra
3K	RF-195/RevPol TNC
3L	RF-195 & SMC

2.4-2.5 GHz Interface

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

1.7 -2.7 GHz Interface

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	2400 - 2485 MHz
Cable #3	1700 - 2700 MHz
Cable #4	GPS, 1575.42 +/- 2 MHz
Band/Channel Gain:	
800-1GHz	2 dBi
1.7 - 2.7 GHz	5 dBi (peak)
2.4 - 2.5 GHz	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:	-40° to +85° C
Nominal Impedance:	50 ohms
Amplifier Bias:	3.3 or 5 VDC +/- 10%

Maximum Power:	
800 - 1900 MHz	20 Watts
1900 - 2500 MHz	10 Watts
Current:	20 mA max, 10 mA typical
Cable:	
GPS	RG-174, 15 ft (4.5 meters)
Cables #1 - #3	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 3/8" long(19 mm x 9mm) for 1/4" thick (6 mm) metal
Hardware:	Nut and gasket included

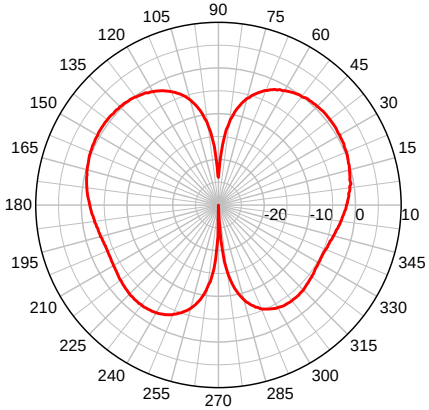
Custom configurations available, please consult factory.

MOBILE MARK®
COMMUNICATIONS ANTENNAS

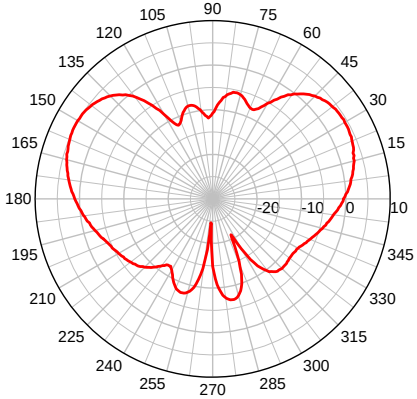
SMW-401 Series Antennas

Surface Mount Multi-Band Antenna 4 cable with GPS (1575 MHz) Cable #4
2 dBi Gain, Frequency (800-2700 MHz) Cable #1
5 dBi Gain, Frequency (2400-2485 MHz) Cable#2
5 dBi Gain, Frequency (1700-2700 MHz) Cable#3

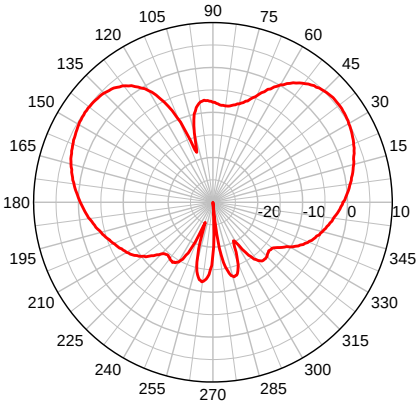
Cable #1
SMW 900 MHz Band – Elevation Plot



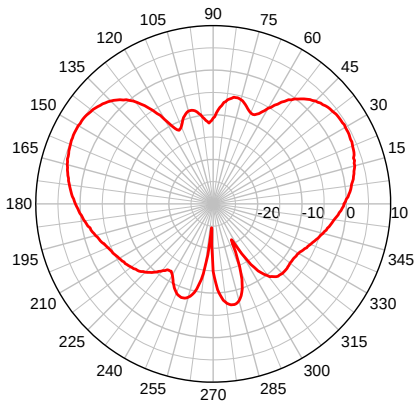
Cable #1
SMW 1900 MHz – Elevation Plot



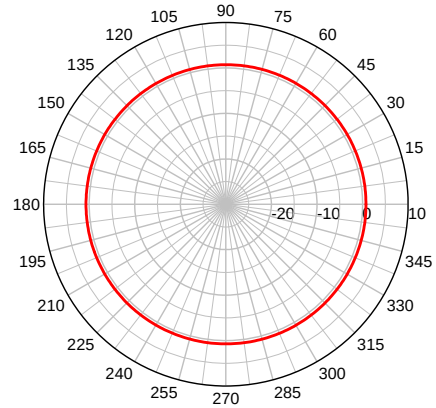
Cable #2
SMW 2400 MHz – Elevation Plot



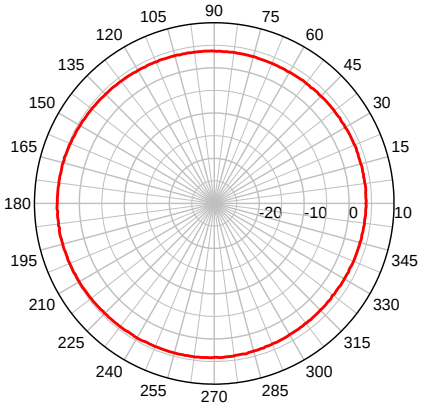
Cable #3
SMW 1900 MHz – Elevation Plot



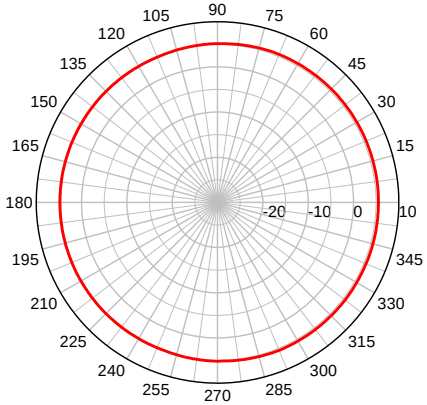
Cable #1
SMW 900 MHz Band – Azimuth Plot



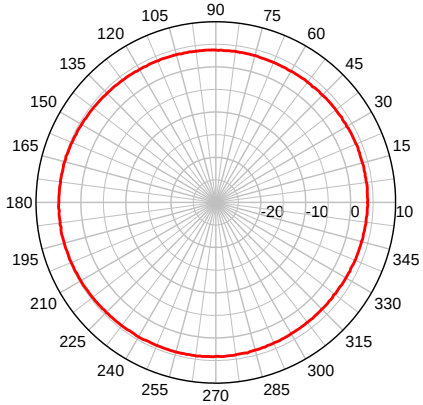
Cable #1
SMW 1900 MHz – Azimuth Plot



Cable #2
SMW 2400 MHz – Azimuth Plot



Cable #3
SMW 1900 MHz – Azimuth Plot



Office & Headquarters: 3900-B River Road, Schiller Park, IL 60176 Tel: 800-648-2800 or 847-671-6690 Fax: 847-671-6715
UK Office: 106 Anglesey Business Park, Hednesford, Staffs. WS12 1NR UK Tel: (+44) 1543-878343 Fax: (+44) 1543-871714
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