



3-Cable Multiband  
Antenna

The SMW-PTC Series Antenna was designed for PTC (Positive Train Control) applications. Designed & built with heavy duty construction to survive the rigors of railroad use.

This antenna uses our popular SMW Series platform to combine PTC with WiFi and GPS. As with our other SMW antennas, this antenna contains 3-elements all within the same radome. The first element covers 220-222 MHz, the second element covers 2.4-2.5 GHz and the third covers GPS at 1575 MHz.

The SMW-PTC antennas provide 2 dBi gain on the PTC element, 5 dBi gain on the WiFi element, and 5 dBi gain with a 26 dB amplifier on the GPS element. The antennas will handle 10 watts of power.

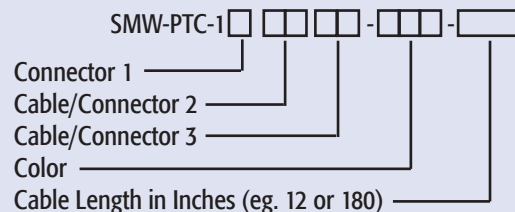
The surface mount models use a 3/4-inch feed thru (19 mm) for securing to the vehicle. Access to the underside of the body surface is required to complete the installation of the SMW Series. For best performance the antenna should be mounted on a metal surface or ground plane. A mag-mount option is not available.

The antenna is enclosed in a 4.2"D x 3.2"H (107 mm x 81 mm) weatherproof radome, and supplied with all mounting hardware and a sealing gasket. The radome is available in either black or white.

## Surface Mount Multiband PTC 220 MHz, WiFi & GPS

- Designed for Positive Train Control (PTC) at 220 MHz along with WiFi and GPS
- Rugged, heavy duty construction
- Available with different length mounting studs

### Model Configurator



Example: SMW-PTC-1C3C2C-WHT-180

Specify "SMWG" instead of "SMW" for GPS/Glonass combination antenna.

Cable Options:		Connector Options:		Color Options:	
Code	Cable	Code	Connector	Code	Color
1	RG-58	A	TNC	WHT	White
2	RG-174	B	Mini UHF	BLK	Black
3	RF-195	C	SMA		
		D	SMB		
		E	MCX		

(Other Configurations available.)

### Specifications

#### Frequency & Gain:

Cable 1	220-222 MHz, 2 dBi
Cable 2	2400-2485 MHz, 5 dBi
Cable 3 (GPS)	1575.42 +/- 2 MHz, LNA 26dB 5 dBi nominal RHCP, Antenna

#### VSWR:

2:1 max over range

#### Nominal Impedance:

50 ohms

#### Power:

10 Watts

#### GPS:

Noise Figure	2.0 dB max, 1.7 dB typical
Amplifier Bias	2.7 to 5 VDC
Amplifier Current	20 mA, 10 mA typical
GPS & Glonass Option:	1575 MHz & 1612 MHz

#### Case:

4.2"D x 3.2"H (107 mm x 81 mm)

#### Case Material:

White or Black UV resistant ASA

#### Cable:

Cable 1 (220)	RG-58 cable, 15 ft (4.5 meters)
Cable 2 (WiFi)	RF-195 cable, 15 ft (4.5 meters)
Cable 3 (GPS)	RG-174, 15 ft (4.5 meters)

#### Connectors:

SMA Plug (Male)

#### Mounting:

Threaded metal stud  
3/4" dia. x 1/2" long  
(19 mm x 13 mm) for  
1/4" (6 mm) thick metal;  
supplied with gasket and nut

#### Operating Temp:

-40 to +85 °C

#### Shock & Vibration:

IEEE1478, EN 61373,  
MIL-810G, TIA 329.2-C

#### Dust/Water Ingress:

IP67