

- SM202-SF2/SWBSNF(FXXXX)** High performance, 2 MHz B.W. for VHF, 174-216 MHz / 350-2700 MHz
- Covers full 350-2700 MHz and 174-216 MHz with 2 MHz (typ) bandwidth
 - A maximum height of 4 1/4 inches complies with restriction for locomotives and other vehicles
 - Black weather resistant and fire rated radome provides excellent environmental protection

**To perform properly, the antenna needs to be installed on a metal surface with minimum size of 36x48 in.
Complies with IEC 68 standards**



The SM202 series antenna is intended primarily for wireless coverage in transportation applications. This antenna is designed for ease of installation and minimal visual impact. It features a low-profile multiple band radiating element incorporated in a low profile and unobtrusive black housing that is perfect for mounting to a typical metal vehicle rooftop.

The standard SM202 antenna comes with two ports, one for VHF narrow band and one for UHF and above frequency range wide band uses. The wide band port covers full frequency range of 350-2700 MHz, can be used for TETRA400, TETRA800, trunking systems, governmental services, Car telephone network C, NMT 450, TV, DVB, NMT, TACS, AMPS, TDMA, CDMA, PDC, GSM900, GSM1800, GSM1900, EDGE, WCDMA, CDMA2000, UMTS, PHS, DECT and PCS cellular, LTE and WiFi. This port can support multiple systems simultaneously with Sinclair's cross band combining solutions. It can also be expanded for multiple uses quickly without interference with the existing service. Please contact Sinclair customer service for the cross band combining solutions. The narrow band port covers 138-230 MHz in 3 sub-bands with 2 MHz typical bandwidth, which is tuned to customer specified center frequency.

The antenna is fed by two RG303 pigtailed with N female connectors. Other connector options are also available.

Application Notes

- SM202-SF2/SWBSNF(Fxxxx): N female connector, VHF center frequency Fxxxx, no GPS. Fxxxx=F1900 for 190.0 MHz.

Region	United States	Europe, Middle East and Africa	Caribbean and Latin America	Canada and rest of the world
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Electrical Specifications

Frequency Range 1 (F1)	MHz	174 to 216	
Bandwidth (F1)	MHz	2	*1
Frequency Range 2 (F2)	MHz	350 to 2700	
Bandwidth (F2)	MHz	2350	*2
Connector		N-Female	*3
Gain (nominal)	dBd (dBi)	unity (2.1)	
Input VSWR (max)		1.5:1	
Polarization		vertical	
Impedance	Ω	50	
Pattern		Omni- directional	
Average Power Input (max)	W	200	*4
Lightning protection		DC ground	
GPS Center Frequency	MHz	1575.42	
GPS Power Gain (typ)	dB	28	
GPS Supply Voltage Range	VDC	3 to 5	
GPS Current Consumption		12 mA typical	
GPS Output Impedance	Ω	50	
GPS Noise Figure (max)	dB	2	
GPS VSWR		2.0 Maximum	

Notes

- *1 : 1 MHz on low side of band, 2.5 on the high side.
- *2 : VSWR=1.5:1(typ) for 380-2700MHz; VSWR=2:1(typ) for 360-380 MHz; VSWR=2.5:1(typ) for 350-360 MHz.
- *3 : Other options available such as N male, BNC male and female, and TNC male and female.
- *4 : Per port
- *5 : Maximum footprint
- *6 : Maximum footprint
- *7 : RG-174 cable with SMA plug

Ordering Information

Please specify VHF center frequency, and connector type at time of order.

Mechanical Specifications

Width	in (mm)	11.5 (292)	*5
Depth	in (mm)	20.88 (530)	*6
Height	in (mm)	4 (102)	
Radome material		UV stabilized ABS	
Weight	lbs (kg)	7.21 (3.27)	
Actual shipping weight	lbs (kg)	11.2 (5.08)	
Shipping dimensions	in (mm)	26x19x7 (660x483x178)	
GPS Pigtail Type		16.4	*7
Ground Plane (min)	in (mm)	36x48	
Radome Colour		Black	

Environmental Specifications

Horizontal Wind Resistance		5.03 lb @ 100 mph	
Temperature range	°F (°C)	-40 to +140 (-40 to +60)	
Wind Loading Area (Flat Plate Equivalent)	ft² (m²)	0.2 (0.02)	
GPS Operating Temperature	°F (°C)	-22 to 140 (-30 to 60)	

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