

Low-Voltage GPS Antenna **MODEL: SM-19**

*Compact & Sensitive GPS Antenna with
Excellent Signal Amplification for Mobile Applications*



SM-19 is an externally mounted GPS antenna that provides continuous L1 band with high gain and low power consumption to a wide selection of GPS receivers in today's market. It is the integration of a high-performance GPS patch antenna and a low noise amplifier into a low profile, extremely compact and fully waterproof enclosure. **SM-19**

provides excellent signal amplification to any GPS receiver with **2.5~3.3V DC** antenna power at the center pin.

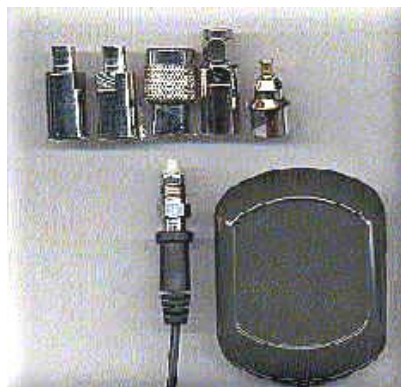
Coming with small size and ruggedness, **SM-19** is designed mainly to meet the robust demand for a GPS antenna that can maintain GPS signal stability for automatic vehicle locating and navigation even in a harsh environment.

FEATURES:

- Compact Construction/ Low Profile/ Fully Weatherproof
- Low Power Consumption
- New Universal Connectors/Magnet or Screw Mount
- Excellent Temperature Stability
- Low Noise Figure
- Ultra-High Sensitivity

APPLICATIONS:

- AVL
- Fleet Management Systems
- Car Navigation
- Marine GPS
- Weather Balloon
- Security Surveillance
- External Antenna for Handheld GPS





SPECIFICATIONS

PHYSICAL CONSTRUCTION	LOW NOISE AMPLIFIER
Construction: Polycarbonate radome at the top, die-cast-shell at the bottom/ rubber gasket for water seal in between	Center Frequency: 1575.42 MHz +/- 1.023 MHz.
Dimension: 58mm(L) x 48mm(W) x 15mm(H).	LNA Gain: 27 dB typically
Weight: 65grams (excluding cable & connector)	Bandwidth: 2 MHz min.
Standard Mounting: magnet mount and/or screw mount with 2 pieces of M3 tapped holes on the plastic flanges	Noise Figure: 1.3 max
Optional Mounting Plate: customized metal sheet	Outer Band Attenuation: 12dB min. @Fo+/-140 MHz
	Supply Voltages: +2.5 ~3.3V DC
CABLE & CONNECTOR	Current Consumption: 5.5mA +/-1 mA@3.3V
Cable: 5 meter RG174/U (standard) cable, other length available	Output Impedance: 50 ohm
Pulling Strength: 6 Kg @ 5sec with molded plastics on connector end for strain relief	OVERALL PERFORMANCE (Antenna Element, LNA & Cable)
Connector Available: BNC,TNC,FME (to be adapted), GT5, MCX (OSX), SMA, SMB or SMC in straight or right angle	Center Frequency: 1575.42 MHz.
Optional Adapters: Universal Connector Adapter (FME to TNC/BNC/SMA/SMB/MCX)	Gain: 20 dB min.
ANTENNA ELEMENT	Noise Figure: 1.3 max.
Center Frequency: 1575.42 MHz +/-1.023MHz	Axial Ratio: 3 dB max.
Polarization: R.H.C.P. (Right Handed Circular Polarization)	Bandwidth: 2 MHz min. VSWR: 1.5 max.
Absolute Gain @ Zenith: +5 dBi typical	Output Impedance: 50 ohm
Gain @ 10° Elevation: -1 dBi typical	ENVIRONMENTAL CONDITIONS
Axial Ratio: 3 dB max.	Operating Temperature: -40° C~ +85° C
Output VSWR: 1.5 max.	Storage Temperature: -50° C~ +90° C
Output Impedance: 50 ohm	Relative Humidity: 95% non-condensing
	Water Resistance: 100% waterproof