

Active GPS Antenna, SM-19



Description

The SM-19 is a high-gain, low-power external GPS L1 antenna suitable for many GPS receivers. The SM-19 consists of a high-performance patch antenna connected to a preamplifier and housed in a low-profile, waterproof housing. The current for the preamplifier comes from the receiver over the RF line and should be 2.5V to 3.3V.

Due to its small size and robustness, the SM-19 is suitable for a wide range of applications.

- Compact and sensitive
- Robust construction
- Flat housing
- IP67 weatherproof
- Low power consumption
- Screw and magnetic fastening
- Excellent temperature stability
- Low noise level

Application

- AVL
- Fleet Management Systems
- Vehicle Navigation
- Marine-GPS
- Weather balloon
- Surveillance systems
- External antenna for handheld GPS

Technical Data

Specifications		
Mechanical	Construction	Polycarbonate on top, die-cast at the bottom; rubber gasket in between
	Dimensions	58mm x 48mm x 15mm
	Weight	65g (without cable)
	Assembly	a) Magnetic b) 2 x M3 Threaded holes
Cable/Plug	RF Kabel	RG174/U 3m standard, optionally other lengths
	Strain relief	6Kg / 5sec. molded plastic for strain relief
	Available plugs	Standard MMCX straight. Optional BNC, TNC, FME, MCX, OSX, SMA, SMB, SMC Straight or 90°
Low Noise Amplifier (LNA)	Medium Frequency	1575,42 MHz +/- 1,023 MHz
	Polarisation	RHCP (Right Hand Circular Polarisation)
	Absolute gain at the zenith	(+5) dBi typical
	Gain at 10° height	(-1) dBi typical
	Output Impedance	50 Ohm
	Gain	LNA 14 dB typical
	Bandwidth	2 MHz min
	Noise level	1.3 max
	Belt damping	12 dB min. @F0 +/- 140 MHz
	Supply voltage	2,5 ~ 3,3V DC
	Electricity consumption	5,5 mA +/- 1 mA @3,3V
	Output Impedance	50 Ohm
Total Power (Antenna Element + LNA + Cable)	Medium Frequency	1575,42 MHz +/- 1,023 MHz
	Gain	14 dB typical
	Bandwidth	2 MHz min
	Noise level	2,0 max
	VSWR	2,0 max
	Axial ratio	3 dB max
Environmental conditions	Operating temperature	(-40)°C ~ +85°C
	Storage temperature	(-40)°C ~ +85°C
	Relative humidity	95% non-condensing
	Watertightness	IP67 Waterproof