



# Mobile GPS/GIONASS Antenna with LNA

## Model: DS-28

WI-RD-D-027 V1.0

**Compact & Sensitive GPS/GIONASS antenna with ESD  
Circuit Protection for Mobile Applications**



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### Overview:

DS-28 is the most compact GPS/Glonass antenna available on the current market. Its state-of-the-art technology allows for miniature without. With good coverage almost all the way to the horizon, it performs excellently in foliage or urban canyon environment -- even in the presence of electromagnetic interference!

Featuring diminutive and rugged enclosure and unparalleled performance, DS-28 is compatible with almost every GPS/Glonass receiver model on the markets and provides an excellent alternative for a vast range of GPS/Glonass applications including AVL, Vehicle Navigation, Aviation, and Military.

### Features:

- ESD circuit protection
- Diminutive & rugged construction allows for military and other applications demanding high degree of confidentiality.
- Compact Construction/ Low Profile/ Low Noise Figure
- Magnet Mount Base
- Ideal for PDA, HPC, and other computing devices in GPS/Glonass applications.
- Water Resistance

### Applications:

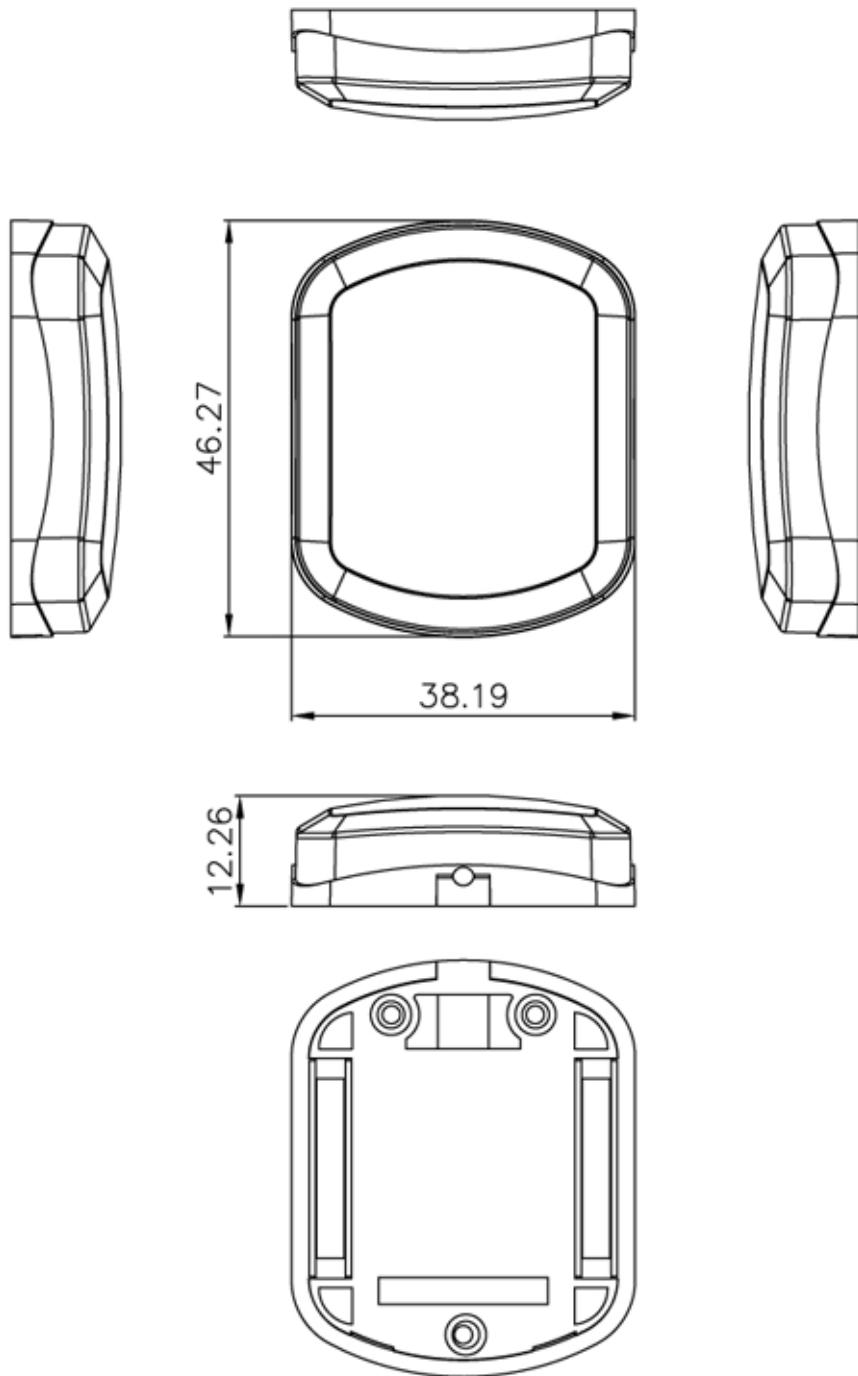
- Automobile GPS/Glonass Receiver/Car Tracking Navigation System
- AVL / Fleet Management Systems
- External Antenna for Handheld GPS/Glonass and Navigator

### Specification:

Physical Condition	
Construction	Polycarbonate- radome at top, die-cast shell at bottom/ rubber gasket for water seal in between
Dimension	46.27mm (L) x 38.19mm (W) x 12.26mm (H)
Weight	50 grams (excluding cable & connector)
Standard Mounting	Magnet mount with two magnets & screw mount
Optional Mounting Plate	Customized metal sheet
Cable & Connector	
RF Cable	5 meter RG174/U (standard) cable, other length available
Pulling Strength	6 Kg @ 5sec with molded plastics on connector end for strain relief
Connector Available	BNC,TNC,FME (to be adapted), GT5, MCX (OSX), SMA, SMB or SMC in straight or right angle
Optional Adapters	Universal Connector Adapter (FME to TNC/BNC/SMA/SMB/MCX)
Antenna Element	
Polarization	R.H.C.P. (Right Handed Circular Polarization)
Gain @ Zenith	1.5 dBic typical Mounted on the 70mm x 70mm square ground plane
Axial Ratio	90° : 3 .0dB max. Mounted on the 70mm x 70mm square ground plane
Low Noise Amplifier	
Gain	27dB @ 3V
Bandwidth	43 MHz min. @S11≤-10 dB
Noise Figure	1.5dB Typical .
Supply Voltages	2.5 ~5V DC
Current Consumption	3V : 10.6mA±1mA, 5V : 21mA ±1mA
Output Impedance	50 ohm
Output VSWR	2.0 max.
Overall Performance ( Antenna Element, LNA & Cable )	
Center Frequency	1575.42 MHz ± 10 MHz & 1602 MHz ± 8 MHz
Gain	At 90° 27 ± 3dB (cable loss) Note: 1 Mounted on the 70mm x 70mm square ground plane
Output Impedance	50 ohm
VSWR	2.0 max.
Environmental Conditions	
Operation temperature	-40°C to +85°C
Storage temperature	-40°C to +85°C
Relative Humidity	95% non-condensing

Note: 1: Cable loss(-1.2dB/m)

Mechanical Diagram:



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