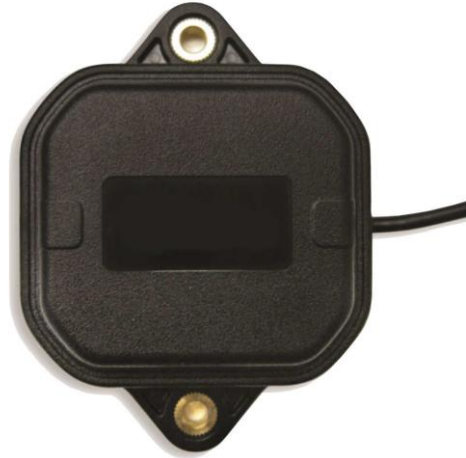


NA107

GNSS Antenna with Low Noise Amplifier



The NA107 is a GNSS antenna designed to operate in the L1 and L2 bands. It incorporates a LNA amplifier providing an overall gain of more than 20 db. The LNA is powered from 3 to 5 Vdc thru the center conductor and draws approximately 15 mA. The unit should be mounted in a location with an unobstructed view of the sky. Buildings and trees that obstruct the view will diminish performance. The unit is a robust design that will operate from -40 to 85°C. The NA107 is designed to be impervious to moisture in the form of rain or snow. The SMA connector is not waterproof and should be inside the building or otherwise protected. A lightning arrestor is advised to protect downstream equipment.

General Notes

The NA107 has been designed to be hard-mounted to a flat surface or to a mast. This guide is intended to aid the installer in properly mounting for optimum performance to a flat surface. When installed properly, as per the following instructions, the installation meets IP67 environmental specifications.

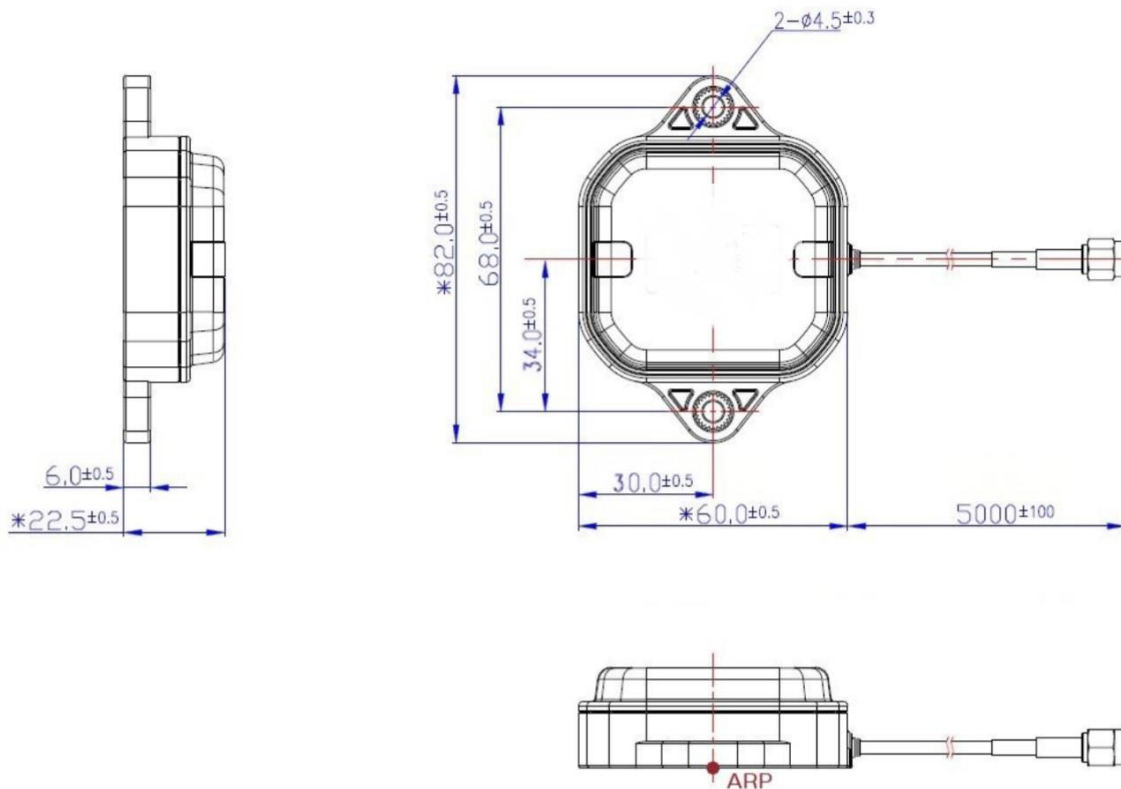
Mounting Surface

The surface must be flat, clean and free of flaking paint or loose metal debris.

Mounting Angle

There will be very little degradation in GPS performance with slopes up to 10 degrees from horizontal. The antenna will function at angles beyond 10 degrees but will continue to degrade with increasing slope.

Mechanical Specifications



Installation Procedure

For optimum GPS performance, the antenna must have a clear view of the sky and preferably have a ground plane. A metallic ground plane of 10cm diameter (4 inches) is sufficient to realize virtually all ground plane benefits. A larger ground plane will provide no additional advantage. The antenna will operate without a ground plane with a slightly wider beam width.

Technical Specifications

NA107 Antenna Specifications		
Antenna	L1 Band	L2/E5b/B2i Band
Frequency	1559-1606 MHz	1197-1249 MHz
Impedance	50	50
Gain	Typ. 3.5 dBic (Zenith)	Typ. 2.0 dBic (Zenith)
Axial Ratio	Max 2.0 dB (Zenith)	Max 2.0 dB (Zenith)
Polarization	RHCP	RHCP
Amplifier		
Frequency	1559-1606 MHz	1197-1249 MHz
Impedance	50	50
LNA Gain	Max 28 +- 3 dB	Max 28 +- 3 dB
LNA Noise Figure	Max 2.8 dB	Max 3.2 dB
Output VSWR	Max 2.0	Max 2.0
Cable Insertaion loss	Typ 6.6 dB	Typ 6.6 dB
Total Gain	Typ 21.4 dB	Typ 21.4 dB
Typ Out of Band Rejection	65dB<1459 MHz	50 dB< 1097 MHz
	70dB> 1706 MHz	75 dB> 1349 MHz
Enviromental		
Operating Temperature	-40 to 85 C	
Storage temperature	-40 to 85 C	
Ingress protection	IP67	
Humidity	95% RH, 60C, 96 Hrs	
Power supply		
	3 to 5 Vdc , 15 ma	
Mechanical		
Weight	173 g	
Size	82x60x22.5 mm	
Cable Length	RG174 5 m	

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