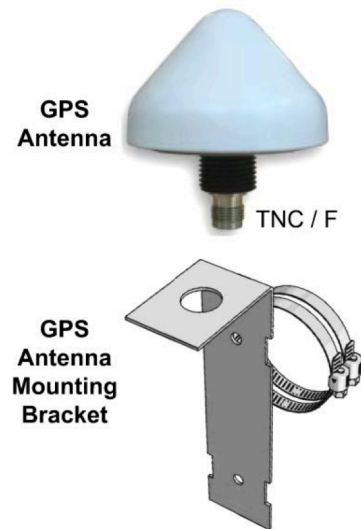


# Timing Reference Antenna **ANT GNSS 1**

The **ANT GNSS 1** High Rejection, High Gain Time Sync Antenna is a full GNSS band antenna covering GPS L1, GLONASS L1, Galileo E1 and Beidou B1 satellite frequency bands.

It is ideal for the Brainstorm DXD/GPS receiver.

Its filtering design allows wideband coverage while achieving superior out-of-band rejection and high gain 40 dB performance. It comes in a small, conical form factor to minimize perching and provide runoff. It is equipped with a TNC female connector.



## FEATURES

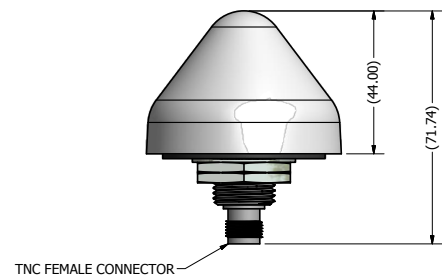
- GPS L1, GLONASS L1, Galileo E1 and Beidou B1 frequencies
- Industry leading out-of-band rejection
- 40 dB LNA gain
- Low noise figure < 2.0 dB
- Conical radome sheds water, ice, and minimizes bird perching
- Supplied with a mounting L-Bracket

## ELECTRICAL SPECIFICATIONS

<b>Frequency Range</b>	1559-1610 MHz
<b>LNA Gain</b>	40 dB $\pm$ 4 dB
<b>Element Gain</b>	2 dBic @ 90°
<b>Polarization</b>	Right hand circular
<b>Out of Band Rejection</b>	f0 = 1586 MHz
	f0 $\pm$ 50 MHz: $\geq$ 60 dBc
	f0 $\pm$ 60 MHz: $\geq$ 70 dBc
<b>Current Draw</b>	< 25 mA (typical)
<b>DC Voltage</b>	2.5- 6.0 V (operating) <sup>1</sup>
	$\leq$ 12.0 V (survivability)
<b>Noise Figure</b>	< 2.0 dB (typical)
<b>VSWR</b>	2.0:1 (typical)
<b>Nominal Impedance</b>	50 ohms

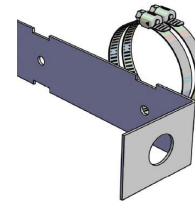
## MECHANICAL SPECIFICATIONS

<b>Dimensions</b>	2.36" x 1.73" (60 x 44 mm)
<b>Weight</b>	0.1 lbs (50 g)
<b>Housing Material</b>	GE Lexan EXL9330
<b>Connector</b>	TNC Female



<b>Mount</b>	3/4" thru-hole or bracket mount
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The Stainless steel "L" bracket mount was designed for wall or pipe mount installations. It comes with two hose clamps and can be used on a 2" maximum diameter mast. It is 6" long with a 3/4" diameter hole for mounting the antenna.

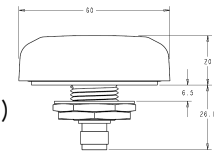


## ENVIRONMENTAL SPECIFICATIONS

<b>Temperature Range</b>	-40°C to +85°C operating
<b>Vibration</b>	3 axis, sweep = 15 min 10-200 Hz log sweep: 3G
<b>Ingress Protection</b>	IP673 2

## INSTALLATION INSTRUCTIONS

The **ANT GNSS 1** has been designed to be hard mounted to a flat surface or to a mast using the supplied Mast L-Bracket. The mounting surface must not exceed 6.5mm in thickness. The surface must be flat, clean and free of flaking paint or loose metal debris in order to have a watertight (IP67) installation.



There will be very little degradation in GPS performance with slopes up to 30 degrees from horizontal. The antenna will function at angles beyond this point but the performance will continue to degrade with increasing slope. It is recommended that the maximum slope not exceed 45 degrees.

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 advantages. The antenna will operate without a ground plane with a slightly wider beam-width.

The antenna kit comes equipped with all necessary mounting accessories, 1 silicone rubber gasket (attached to the base), 1 metal washer and 2 nickel-plated brass panel nuts 3/4 inch size. Remove from the antenna the 2 panel nuts and the metal washer.

After inserting the antenna in the 3/4 inch diameter mounting surface opening, place the metal washer and 1 panel nut on the thread of the antenna, on the inside of the mounting surface and tighten the first panel nut. The recommended torque for the 1st panel nut is 15-20 in-pounds. Screw on and tighten the 2nd panel nut while holding the 1st panel nut in stationary position. The recommended maximum torque for the 2nd panel nut is 35-45 in-pounds. Do not exceed recommended maximum torque.

<sup>1</sup>Gain may decrease at lower voltages.

<sup>2</sup>When installed according to the manufacturer's installation instructions.