

8178D-HR-DH-W Time Sync, High Gain, High Rejection Antenna



PCTEL's GNSS 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. PCTEL's proprietary filtering design allows wideband coverage while achieving superior out-of-band rejection and high gain 40 dB performance. This antenna comes in a small, conical form factor to minimize perching and provide runoff. The 8178D-HR-DH-W is equipped with a TNC female connector and is ideal for any global GNSS time synchronization application that requires an externally mounted antenna.

Features

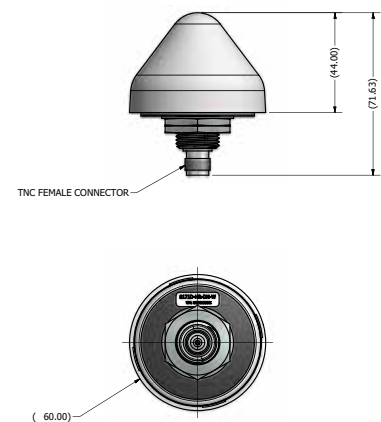
- GPS L1, GLONASS L1, Galileo E1 and Beidou B1 frequencies
- Industry leading out-of-band rejection
- 40 dB LNA gain
- Low noise figure < 2.0 dB
- Conical radome sheds water, ice, and minimizes bird perching

Applications

- Carrier network timing / small cell
- Utility electric grid synchronization
- Positive train control (PTC) networks
- Broadcast digital TV networks
- Public safety communications
- Banking / financial time stamping



8178D-HR-DH-W



ELECTRICAL SPECIFICATIONS - GNSS ANTENNA

Frequency Range	LNA Gain	Element Gain	Polarization	Out of Band Rejection
1559-1610 MHz	40 dB $\pm$ 4 dB	2 dBic @ 90°	Right hand circular	$f_0 = 1586$ MHz $f_0 \pm 50$ MHz: ≥ 60 dBc $f_0 \pm 60$ MHz: ≥ 70 dBc

ELECTRICAL SPECIFICATIONS - GNSS ANTENNA, continued

Current Draw	DC Voltage	Noise Figure	VSWR	Nominal Impedance
< 25 mA (typical)	2.5- 6.0 V (operating) ¹ ≤ 12.0 V (survivability)	< 2.0 dB (typical)	2.0:1 (typical)	50 ohms

MECHANICAL SPECIFICATIONS

Dimensions	Weight	Housing Material	Mount	Connector
2.36" x 1.73" (60 x 44 mm)	0.1 lbs (50 g)	GE Lexan EXL9330	3/4" thru-hole or bracket mount ²	TNC Female

ENVIRONMENTAL SPECIFICATIONS

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

¹Gain may decrease at lower voltages. ²Order MMK1925 for compatible mounting. ³When installed according to the manufacturer's installation instructions.