



8178D-HR Low-Profile, High Gain Antenna with High Rejection GNSS Technology

The 8178D-HR High Rejection, High Gain, Time Sync Antenna is a full GNSS band antenna covering GPS L1, GLONASS G1, Galileo E1 and Beidou B1 satellite frequency bands. PCTEL's proprietary filtering design allows wideband coverage while achieving superior out-of-band rejection. This antenna comes in an all-plastic, non-corrosive low-profile package for vehicle mounting or fixed installations. This antenna is ideal for any global GNSS tracking or time synchronization application that requires an externally mounted antenna and an extended run of cable.



8178D-HR

Features

- GPS L1, GLONASS G1, Galileo E1 and Beidou B1 frequencies
- Proprietary filtering design allows wideband coverage while achieving superior out-of-band rejection for all GNSS frequencies
- 40dB LNA gain
- Low noise figure < 2.0dB
- IP67, low-profile design**

STANDARD CONFIGURATION

Model	Connector	Mount
8178D-HR	TNC Female	3/4-inch thru-hole or bracket mount*

ELECTRICAL SPECIFICATIONS - GNSS ANTENNA

Frequency Band	LNA Gain	Element Gain	Polarization	Out of Band Rejection
1559-1610 MHz	40 dB +/- 4 dB (typical)	2 dBic @ 90°	Right hand circular	f ₀ = 1586 MHz f ₀ ± 50 MHz: ≥ 60 dBc f ₀ ± 60 MHz: ≥ 70 dBc

ELECTRICAL SPECIFICATIONS - GNSS ANTENNA, continued

Current Draw	DC Voltage	Noise Figure	Nominal Impedance
< 25mA (typical)	2.8-5.5V (operating)	< 2.0 dB (typical)	50 ohms

MECHANICAL & ENVIRONMENTAL SPECIFICATIONS

Dimensions	Weight	Housing Material	Shock	Vibration	Temperature Range	Ingress Protection
2.36 OD x 0.83 H in (60 x 21 mm)	0.1 lbs (50 g)	Black, Lexan EXL9330	Vertical axis 50G, other axes 30G	3 axis, sweep = 15 min 10 – 200 Hz log sweep: 3G	-40°C to +85°C operating	IP67**

* Order MMK1925 for compatible mounting.

** When installed according to the manufacturer's installation instructions.