

## GNSS High Rejection Time Sync Antenna



8171D-HR-DH-W



8171D-HR-NDH-W

PCTEL's GNSS High Rejection Time Sync Antenna is a multiband antenna covering GPS L1, Glonass G1, Galileo E1, and Beidou B1I. PCTEL's proprietary filtering design allows wideband coverage while achieving superior out-of-band rejection. This antenna comes in a small, conical form factor to minimize perching and provide runoff. The temporary mount model (8171D-HR-DH-W) is equipped with a TNC female connector, while the permanent mount models (8171D-HR-NDH-W) has an N-Male bottom-fed connector. This antenna is ideal for any global GNSS time synchronization application that requires an externally mounted antenna.

### Features

- GPS L1, Glonass G1, Galileo E1, Beidou B1I Frequencies
- Industry Leading Out-of-Band Rejection
- 26 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
- Seismic Detection

### Low Noise Amplifier Specifications

<b>Frequency Band:</b> 1559-1610 MHz
<b>Amplifier Gain:</b> @ 3.0VDC: 26 dB (typical)
<b>Noise Figure:</b> < 2.0 dB (typical)
<b>Out-of-band Rejection:</b> f0 = 1586 MHz f0 ± 50 MHz ≥ 60dBc f0 ± 60 MHz ≥ 70dBc
<b>DC Voltage:</b> 2.8-6.0 V (operating) ≤ 12.0 V (survivability)
<b>DC Current:</b> < 25 mA (typical)

### RF/Electrical Specifications

Part Number	Frequency Band	Nominal Gain	Polarization	Nominal Impedance
8171D-HR-DH-W 8171D-HR-NDH-W	1559-1610 MHz	2 dBic @ 90°	Right Hand Circular	50 ohms

### Mechanical Specifications

Part Number	Dimensions	Weight	Shock	Vibration
8171D-HR-DH-W	2.36" x 1.73" (60 x 44 mm)	0.1 lbs (50 g)	Vertical axis 50G, other axes 30G	3 axis, sweep = 15 min 10-200 Hz log sweep: 3G
8171D-HR-NDH-W	2.36" x 2.80" (60 x 71 mm)	0.15 lbs (68 g)		

  

Part Number	Radome Material	Connector	Mounting Method
8171D-HR-DH-W	GE Lexan EXL9330	TNC Female	¾" thru-hole or bracket mount*
8171D-HR-NDH-W	GE Lexan EXL9330	N Male	N Female Panel Mount or Bracket Mount

### Environmental Specifications

Temperature Range	Ingress Protection
-40° C to +85° C operating	IP67**



\* Order MMK1925 for compatible mounting.  
\*\* When installed according to the manufacturer's Installation instructions.