

# Puck Low-Profile Tracking Antenna

GNSS/GPS Antennas - High Rejection

8171D-HR



## Description

Dual band, low-profile antenna with high rejection technology.

## Technologies

- GPS L1
- GLONASS G1
- Galileo E1
- Beidou B1

## Features

- High performance – 26dB LNA gain; Low noise figure < 2.0db
- Optimal coverage – GPS L1, Galileo E1, Beidou B1, and GLONASS G1 frequencies
- Industry-leading out-of-band rejection – Via proprietary filtering design
- Withstands severe environmental conditions – IP67 compliant design protects against water or dust ingress



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### GNSS/GPS Antennas - High Rejection

PCTEL's 8171D-HR High Rejection GPS/GLONASS Antenna is a multiband antenna covering GPS L1, Galileo E1, Beidou B1, and GLONASS G1 frequencies. 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 GNSS global tracking or time synchronization application that requires an externally mounted antenna.

#### Features

- GPS L1, Beidou B1, Galileo E1, GLONASS G1
- Industry Leading Out-of-Band Rejection
- 26dB LNA Gain
- Low Noise Figure < 2.0dB
- IP67, Low Profile Design

#### Applications

- Fleet Management / Asset Tracking
- Public Safety Emergency Responders
- Positive Train Control (PTC) Rolling Stock
- Network Synchronization
- Agriculture
- Differential Correction

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## GNSS/GPS Antennas - High Rejection

### Standard Configurations

Model	Connector	Mount	Housing Color
8171D-HR	TNC Female	¾" thru-hole or bracket mount <sup>1</sup>	Black

### Electrical Specifications – GNSS Antenna

Frequency Range	1559 MHz - 1610 MHz
Nominal Gain	2 dBic @ 90°
Polarization	Right hand circular
Nominal Impedance	50 Ohms

### Low Noise Amplifier Specifications

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

### Mechanical and Environmental Specifications

#### Physical

Dimensions (Diameter x Mount Height)	2.36" x 0.83" (60 x 21 mm)
Weight	0.1 lbs (50 g)
Shock	Vertical axis 50G, other axes 30G
Vibration	3 axis, sweep = 15 min 10 – 200 Hz log sweep: 3G
Radome Material	GE Lexan EXL9330
Vibration	3 axis, sweep = 15 min 10 – 200 Hz log sweep: 3G
Temperature Range	-40°C to +85°C operating
Ingress Protection	IP67 <sup>2</sup>

<sup>1</sup> Order MMK1925 for compatible mounting.

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

**CONTACT US**

**For more information about  
this product contact your  
sales representative or visit  
> [pctel.com/antenna-products](https://pctel.com/antenna-products)**

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PCTEL is a leading global provider of wireless technology, including purpose-built Industrial IoT devices, antenna systems, and test and measurement solutions. Trusted by our customers for over 25 years, we solve complex wireless challenges to help organizations stay connected, transform, and grow.



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