

GPS HIGH PERFORMANCE PLATFORM

The GPSHPSM high performance GPS Multi-Band antenna platform is PCTEL's most durable and versatile design for vehicular applications. This platform offers multi-band coverage, superior GPS LNA technology, easy to install design, and "top shelf" materials to provide maximum durability and performance for Mission Critical communications.

Features

- No tune, multi-band coverage: 700/800 MHz Public Safety, 800 MHz Cellular/SMR, 900 MHz GSM/ISM, 1800-2100 MHz GSM/PCS, 3G, 4G, 2.4/5.8 GHz WiFi and 2.3-5.8 GHz Public Safety and WiMAX broadband wireless frequencies
- Metal 3/4-inch stud mount with slotted jam nut provides single cable exit for easier installation and/or antenna replacement
- Attractive low profile design for maximum installation flexibility without antenna orientation restrictions
- IP67 compliant design with custom overmolded gasket provides maximum protection against water or dust ingress under severe environmental conditions
- High performance, low loss cable and high quality connectors for maximum RF system efficiency
- UV resistant black or white housing options complement most vehicular aesthetic requirements



Electrical Specifications - RF Antennas

Model GPSHPSM/SM/SM	Operating Frequencies	Polarization	Nominal Impedance	Gain ¹ (Typical)	Maximum Power	VSWR
Voice/Data RF Element	698-2200 MHz 3300-3800 MHz	Vertical, linear	50 ohms	4-5 dBi	50 watts	<2.0:1
Broadband Wireless RF Element	2.3-2.8 GHz 4.9-5.9 GHz	Vertical, linear	50 ohms	4-5 dBi	50 watts	<2.0:1

Mechanical Specifications

Dimensions	Coax (3)	Connectors
5.2" OD x 2.8" H (132 OD x 71 H mm)	17 feet Pro-Flex Plus 195 (Voice/Data/WiMAX elements); 17 feet Pro-Flex Plus 195 (Broadband Wireless Element); 17 feet RG-174/U (GPS L1)	SMA Plug (Male) standard ²

Mechanical & Environmental Specifications

Radome and Baseplate Construction	Mounting Method	Operating / Storage Temperature	Ingress Protection
Black ² , UV stable CYCOLOY C6200 Radome	3/4-inch hole, 3/4- inch long (.75") zinc stud mount with dual jam nuts (included)	-40°C to +85°C	IP67
Zinc baseplate over- molded with black TPE, SANTOPRENE gasket			

¹ Measured on a 4-foot diameter ground plane. Gain value is measured at the base of the antenna (no cable loss included).

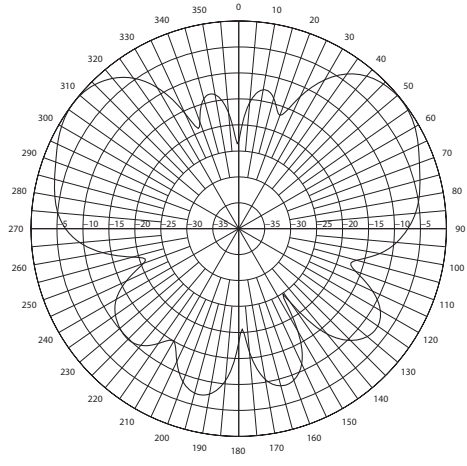
² Other connector options available. White radome option also available (part number WGPSHP).



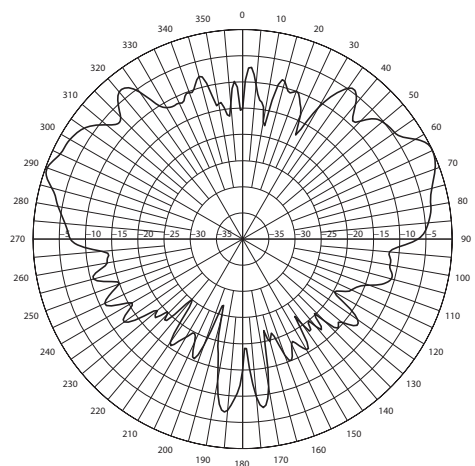
Electrical Specifications - GPS Antenna

Frequency Band: 1575.42 MHz (GPS L1)
Amplifier Gain: 26 dB +/- 3 dBic
Nominal Impedance: 50 ohms
Output VSWR: 1.5:1 typical
DC Current: 20 mA Nominal; < 30 mA @ -40°C to +85°C
DC Voltage: 3-13.5 V
Noise Figure: 1.8dB Typical
Filtering: > 40 dB rejection @ +/- 50 MHz from center frequency

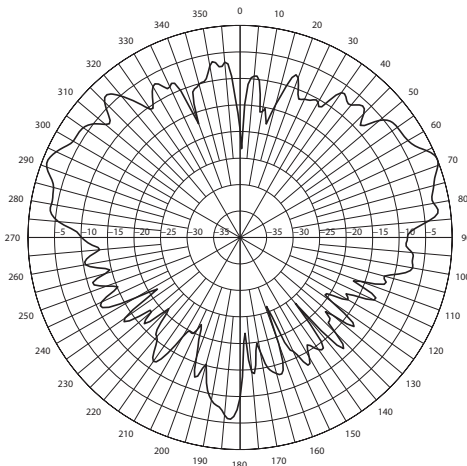
Radiation Patterns



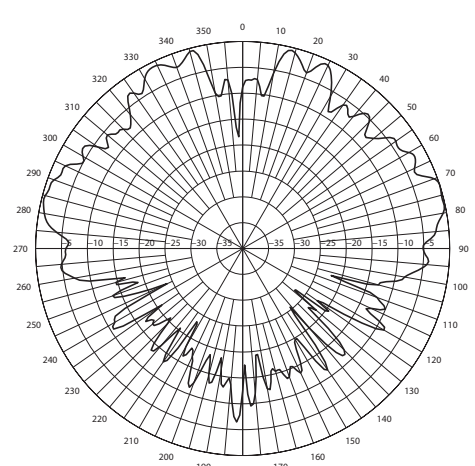
750 MHz Elevation Cut (UWB Element)



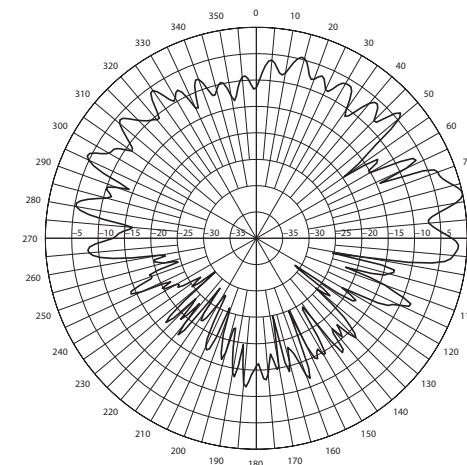
2000 MHz Elevation Cut (UWB Element)



2700 MHz Elevation Cut (Wi-Fi)



3600 MHz Elevation Cut (UWB Element)



5500 MHz Elevation Cut (Wi-Fi)