12100 Series, Airborne Puck Antennas

The 12100 series antennas are robust, rigorously tested and environmentally sealed units suitable for a wide variety of GPS applications. They are ideal for vehicle tracking, marine or airborne navigation installations requiring maximum security and durability.

These antennas have been tested to DO-160 environmental test requirements and are designed to meet Arinc 743 specifications. They feature dual o-ring seals that protect them against severe environmental conditions for reliable, long-lasting performance. Their radome is constructed of high grade polymer resin for UV and abrasion resistance. They will resist all de-icing fluids, jet fuels, and standard cleaning solvents.

The antennas in this series are hard mounted through a unique single hole feed structure and include gaskets to prevent air and water leaks. They are available in passive form (no amplifier) or in a variety of active amplified gain configurations.

12100 Series

Antenna Element Electrical Specifications

Frequency Band	Antenna Gain	Nominal Impedance	VSWR	Polarization	Grounding Protection	RF Input
1575.42 ± 10 MHz (GPS L1)	+4.5 dBiC nominal at zenith	50 ohms	< 1.9:1	Right hand circular	DC grounded	TNC Female

Mechanical Specifications

Antenna Dimensions	Antenna Weight	Radome Color	NATO Stock Number	Torque Setting
2.7” OD x 0.75” D	3 oz nominal	White	5820 99 147 2772 (for 1213FW only)	10 ft-lbs

Environmental Specifications

Temperature Range	Humidity
-40°C to +85°C	95%

Mounting

Model	Options
1210FW	Through hole 5/8-18UNC-2A thread
1213FW	Through hole 5/8-18UNC-2A thread

Low Noise Amplifier Specifications

Frequency Band (MHz): 1575.42 ± 10 MHz (GPS L1)
Amplifier Gain: 26 dB (Part # 1210FW) 40 dB (Part # 1213FW)
Nominal Impedance: 50 ohms
Output VSWR: 2.0:1 maximum
Maximum Noise Figure: 2.5 dB maximum
DC Voltage: 5 to 9 VDC through connector
DC Current: 25 mA typical ≤ 40 mA
Filtering: Dual ceramic filters