



## GPS Antennas for Commercial, Military & Space Applications



### FEATURES/BENEFITS:

- Commercial, Military, and Space-qualified Versions
- -2.0 dBic to -3.0 dBic @ 5 Degrees Above the Horizon
- Operational at L1, L2, and GLONASS Frequencies
- Excellent Performance at Lower Angles without an External Ground Plane
- Designed for High Accuracy, Omni-Directional Applications

The TECOM 401163-2 Extended Band L1 GPS antenna is a low-cost, high-performance, wide-band unit designed to operate from 1565 to 1585 MHz in commercial and industrial applications, including marine, railroad, oil exploration, timing systems, and mobile transportation. This unit is also available in a space-qualified version, and in frequencies outside of the GPS range. One version of the 401163 has been optimized to operate at both L1 and L2 frequencies, and another version at L1 and GLONASS frequencies.

The 401170 Dual-Frequency L1/L2 dual-band unit was designed by TECOM to provide a competitively priced, lightweight GPS antenna with excellent hemispherical pattern coverage. The unique antenna, which provides excellent on-horizon gain, has a broadband frequency range of 1227.5 ( $\pm 10.23$ ) MHz and 1575.5 ( $\pm 10.23$ ) MHz. The ruggedized unit is designed to MIL-E-16400 to survive harsh environments on naval ships, military aircraft, and mobile vehicles. It is also available in a space-qualified version.

Electrical Performance Specifications						
Type Number	Frequency Range	VSWR	Polarization	Gain	Pattern Coverage	Power Handling
401163-2	1565 - 1585 MHz	1.5:1 (Max)	RHCP for all angles above 5 degrees EL	-2 dBic (Min)	Hemispherical	20 W (Avg) 2 KW (Peak)
401170	L2: 1227.60 $\pm$ 10.23 MHz L1: 1575.42 $\pm$ 10.23 MHz	2:1 (Max) 1.6:1 (Avg)	RHCP from 5 degrees above Horizon ( $\pm 85$ degrees)	-3 dBic (Min)	Hemispherical	+30 dBm (Max)

### Common Performance Data

- 1) Impedance: 50 Ohms
- 2) Connector: TNC Female
- 3) DC Block: Yes. (Greater than 15,000 Ohms)