

## Precision Performance WAAS Antenna

Specifically designed to meet the demanding standards necessary for worldwide WAAS aviation operations, model 2225NW features both advanced spiral technology and a self-complementary element structure.

The antenna's low multipath error design has the lowest phase error of all antenna element designs. The spiral minimizes manufacturing errors and its self-complementary currents act to center antenna phase. The large cavity design (1/5 lambda) allows for similar, choke slot-like (radiation pattern), roll off at the horizon and a superior front-to-back ratio.



2225NW

### Antenna Element Electrical Specifications

Frequency Band	Antenna Gain	Nominal Impedance	VSWR	Polarization
1575.42 MHz (L1 band)	>-3 dBic @ El=90° (zenith); ≥ -9.0 dBic @ El=5° (L1)	50 ohms	< 2.0:1 @ +/-10 MHz	Right hand circular
1227.60 MHz (L2 band)	>-3 dBic @ El=90° (zenith); ≥ -5.0 dBic @ El=5° (L2)	50 ohms	< 2.0:1 @ +/-10 MHz	Right hand circular
1176.45 MHz (L5 band)	>-3 dBic @ El=90° (zenith); ≥ -9.0 dBic @ El=5° (L5)	50 ohms	< 2.0:1 @ +/-10 MHz	Right hand circular

Elevation Boresight	Elevation HPBW	Azimuth HPBW	Axial Ratio
90° above horizon	66° (L1 band) 90° (L2 band) 103° (L5 band)	Omnidirectional	8 dB (max) elevation from 5° to 45° 4 dB (max) elevation above 45°

### Mechanical Specifications

Antenna Dimensions	Antenna Weight	Radome Color	Connectors
24.5" H x 12.8" OD (61.27 x 32.5 cm)	30 lbs (13.6 kg)	White	RF Side: Type N, Female, Flange-mount DC Side: Type N, Male, Cable-terminated

### Environmental Specifications

Temperature Range	Wind Operational
-58°F to 158°F	0-100 mph

### Mounting

Model	Options
2225NW	Interface to PELCO mount*

\*PELCO mount not included

### Low Noise Amplifier Specifications

Frequency Band (MHz): 1575.42 MHz (L1 band) 1227.60 MHz (L2 band) 1176.45 MHz (L5 band)
Amplifier Gain: 48 +/-3 dB
VSWR: < 1.5:1 +/-10 MHz
Maximum Noise Figure: 2.0 dB
DC Voltage: 24 V
DC Current: ≤ 200 mA @ 24 V
Bandwidth: -1 dB +/-10 MHz (L1, L2, L5) -80 dB +/-50 MHz (L1, L2, L5)
Bandpass Ripple: 1.5 dB +/-10 MHz (L1, L2, L5)
Group Delay Ripple: 3 ns @ L1 +/-10 MHz 4 ns @ L2 +/-10 MHz 4 ns @ L5 +/-10 MHz
1 dB Compression Point: ≥ 10 dBm

