

C-Nav977XF+ Low Elevation Angle Nulling Antenna (LEANA)

Quad Band GNSS Antenna complete with Mounting Bracket

The C-Nav977XF+ Low Elevation Angle Nulling Antenna (LEANA) supports multiple GNSS constellations and frequencies and is designed to mitigate interference and jamming signals broadcast from near ground-based transmitters.

The radiation pattern of the LEANA provides 20 dB (typical) wideband suppression for all GNSS band signals received at an elevation angle of -5° through to approximately 15° .

This level of attenuation has demonstrated its capability to mitigate jamming signal broadcasts at an elevation angle of 10° such that the antenna can be up to 10 times closer, compared to a standard antenna, to the source of interference without being jammed. The combination of low elevation angle nulling radiation pattern and extended filtering (deep filtering and high linearity) technologies provides a one-two punch to jamming and RF noise. This antenna can mitigate some ground-based jamming signals compared with a standard GNSS antenna (E.g. C-Nav289). For more sophisticated jamming mitigation, end users should consider deployment of a Controlled Radiation Pattern Antenna (CRPA).

The C-Nav977XF+ LEANA is ideal for mission critical positioning, navigation, and timing applications. It is not export controlled.



FEATURES

Multi-constellation decimeter performance

Suppression of all in band signals below 15-degree elevation

Not export controlled

Works with existing TNC RF cable

GNSS	Frequency	Gain (dBic typical at Zenith)	Axial Ratio (dB at Zenith)
GPS / QZSS	L1	2.5	≤1.0
	L2	3.7	≤1.0
	L5	1.9	≤1.0
GLONASS	G1	1.8	≤1.0
	G2	3.0	≤1.0
	G3	3.0	≤1.0
Galileo	E1	2.5	≤1.0
	E5A	1.9	≤1.0
	E5B	3.0	≤1.0
	E6	Not supported	
BeiDou	B1	2.5	≤1.0
	B2b	3.3	≤1.0
	B2a	1.9	≤1.0
	B3	Not supported	
IRNSS / NavIC	L5	1.9	≤1.0
QZSS	L6	Not supported	
L-Band Services (1525 MHz - 1559 MHz)	Not supported above latitudes 40°N or 40°S- We recommend using this antenna with C-NavX1 or X3 receivers which use Iridium for correction services.		
SBAS Services	Supported - SBAS (WAAS, EGNOS, MSAS, and GAGAN)		

The antenna's radiation pattern above 20° elevation angle provides excellent gain and a phase center that supports accurate and precise positioning. This antenna technology has been designed to mitigate out-of-band signals (e.g. new Ligado and LTE signals, Inmarsat) and prevent GNSS antenna saturation.

C-Nav977XF+ LEANA Specifications

Size (D x H)	3.54 x 7.09 in / 90 x 180 mm
Weight	0.55 lb / 245 g
Material	Radome: EXL9330, Base: Aluminum
Mount	Through-hole
Connector	TNC
Operating Temperature	-40 to 185°F / -40 to 85°C
Storage Temperature	-58 to 203°F / -50 to 95°C
Vibration	MIL-STD-810D Method 514.3-1
Shock	Vertical Axis: 50 G, other axes: 30 G
IP Rating	IP67
Compliance	IPC-A-610, FCC, RED / CE Mark, RoHS, REACH

