



NAVAIS NS-50

Full-Band GNSS Survey Antenna



Professional-grade signal integrity. Survey-grade multi-frequency reception for RTK, PPK, PPP, CORS and demanding field positioning.

Key Features

- Full-band reception across all major GNSS constellations
- Survey-grade phase-center stability
- Excellent multipath suppression
- L1, L2, L5, L6 and L-Band correction support
- 38 dB integrated low-noise amplifier
- Rugged housing for RTK, PPK, PPP and CORS deployment

Supported GNSS Signals

Constellation	Supported signals
GPS	L1, L2, L5
GLONASS	L1, L2, L3
Galileo	E1, E5a, E5b, E6
BeiDou	B1I, B2I, B2a, B2b, B3I
QZSS	L1, L2, L5, L6
IRNSS / NavIC	L5
L-Band	PPP correction services

Technical Specifications

Specification	Description
Model	NS-50
Antenna type	Full-band survey GNSS antenna
Frequency coverage	L1, L2, L5, L6 and L-Band
Polarization	RHCP
Gain	5.5 dBi
Axial ratio	≤ 3 dB
Phase-center accuracy	± 2 mm
VSWR	≤ 2.0
Impedance	50 ohms
LNA gain	38 $\pm$ 2 dB
Noise figure	≤ 1.8 dB
Operating voltage	3.3 V to 12 V
Current consumption	≤ 45 mA
Differential delay	≤ 5 ns
Connector type	TNC Female
Mounting thread	5/8-in - 11 UNC
Dimensions	Diameter 156 x 61 mm
Weight	≤ 380 g
Operating temperature	-40 C to +85 C
Storage temperature	-55 C to +85 C
Humidity	95% non-condensing

Positioning Benefits

Superior multi-frequency tracking: Simultaneous reception enables faster ambiguity resolution and stronger RTK performance.

Higher positioning accuracy: Stable phase-center characteristics support surveying, mapping and geodetic applications.

Improved multipath rejection: Optimized antenna design reduces reflected signals in urban and obstructed environments.

Reliable PPP and RTK performance: L-Band services and multi-constellation tracking support consistent positioning worldwide.

Enhanced satellite availability: GPS, GLONASS, Galileo, BeiDou, QZSS and NavIC improve visibility and solution reliability.

Rugged field operation: Designed for continuous outdoor use at survey, marine and permanent reference-station sites.

Typical Applications

RTK surveying | CORS stations | Marine positioning | Machine control | Infrastructure monitoring

Discuss your survey, reference-station or integration requirements at info@navaisgnss.com