SEL-9524

GNSS Antenna

Reliable signal acquisition for satellite synchronized clocks

- Robust environmental design ensures long term reliable operation.
- High gain and excellent selectivity provides strong signal to GNSS clocks.
- LEDs convey operational information for improved diagnostic capability.
- Dual satellite constellation allows single antenna to be used for both GPS and GLONASS.

Key Features

Robust Design Provides Reliable Operation in Any Environment

The SEL-9524 GNSS Antenna is a rugged and reliable antenna designed for GNSS devices for critical infrastructure applications. The SEL-9524 operates reliably between −50° to +85°C (−58° to +185°F) and is IP68-rated for weatherproofing and water resistance. The antenna meets or exceeds IEC 60255, 60068, and 61000 standards. Industry-leading surge immunity allows this antenna to perform better in the presence of lightning and other surge events. Designed, manufactured, and tested in a facility that serves critical infrastructure, the SEL-9524 is built to survive in harsh conditions.

Provides High Gain and Rejects Interfering Signals

The SEL-9524 maintains excellent gain (>40 dB) while simultaneously providing strong rejection for signals outside of the nominal frequency band. Pair the SEL-9524 with any satellite-synchronized clock to receive time signals via the Global Navigation Satellite System (GNSS). With high gain and strong out-of-band rejection (>40 dB at frequencies greater than 1,660 MHz or less than 1,520 MHz), the SEL-9524 provides reliable signal acquisition for any satellite-based time synchronization system.

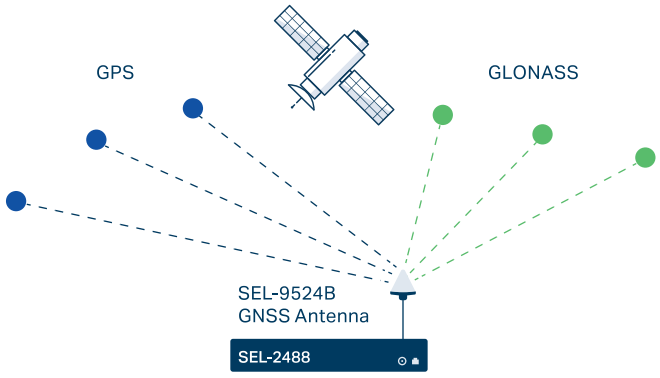
LEDs Provide Diagnostic Information

The antenna is equipped with an LED indicator that tells whether the antenna is receiving the appropriate power. Easily troubleshoot installation and powering issues in the event of cable damage or improper installations.

Color	Description
Green	Antenna voltage is within normal range for operation.
Red	Antenna voltage is within 10 percent of the lower limit for powering the antenna.
Off	Antenna is not receiving enough voltage to power the unit.

GPS/GLONASS Support for Satellite Signal Verification

Use the SEL-9524B to receive satellite signals from both GPS and GLONASS satellite constellations for added reliability. When paired with the SEL-2488 Satellite-Synchronized Network Clock, signals from these constellations can be used in concert to detect GPS spoofing attacks. The SEL-9524A is also available for solutions that require GPS only.



Satellite-Synchronized Network Clock

General Specifications

Operating Temperature	−50° to +85°C (−58° to +185°F)
Humidity	95%
Connector Type	TNC female
Dimensions	Height: 0.13 m (5.074 in) Base Diameter: 0.08 m (3.253 in)
Tightening Torque	Surface Mounting Nuts: 6.77 Nm (60 in-lb)
Weatherproofing	IP68 (with sealed TNC connector)
Constellations	GPS (SEL-9524A) GPS/GLONASS (SEL-9524B)
Frequency Band	1,575.42 ±2 MHz (SEL-9524A) 1,570−1,606 MHz (SEL-9524B)
Low-Noise Amplifier (LNA) Gain	>40 dB
Noise Figure	<2 dB @ 25°C
DC Voltage Range	Operating: 3.5−6 V
Current Draw	40 mA max
Nominal System Impedance	50 Ω
Voltage Standing Wave Ratio (VSWR)	<1.5:1
Out-of-Band Rejection	>40 dB @ f ≤1,520 MHz >40 dB @ f ≥1,660 MHz
Warranty	10 years

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