



# INDALOS

## AI-Powered GNSS Signal Monitoring

### Premium Static Node

- Continuous All-GNSS Monitoring ✓
- Advanced Interference Detection ✓
- AI-Powered Detection & Classification ✓

### Features:

#### Continuous Monitoring

Real-time detection of interference and anomalies across all major GNSS constellations.

#### Advanced Interference Detection

Multi-level (signal, spectrum, solution), categorized as stream, channel, and receiver-based monitoring, Customizable, Upgradeable.

#### AI-Powered Detection & Classification

On-device AI identifies and characterizes interference, and other anomalies in real time.

# Specifications

Signals		GUI and Interfaces	
<b>GNSS signals</b>	<ul style="list-style-type: none"> <li>- Galileo E1, E5a, E5b, E6</li> <li>- GPS L1 CA &amp; L1C, L2P &amp; L2C, L5</li> <li>- BeiDou B1I &amp; B1C, B2I &amp; B2a, B3I</li> <li>- GLONASS L1, L2</li> <li>- NavIC L1, L5, S</li> <li>- QZSS L1, L2, L5</li> <li>- SBAS L1</li> </ul>	<b>GUI</b>	Intuitive GUI for easy configuration and real-time user feedback.
<b>Signal IF sample rates</b>	Selectable: 5, 10 (standard), 20, 25, 50, 100 MSPS.	<b>Logging</b>	<ul style="list-style-type: none"> <li>- txt files for all monitoring methods independently.</li> <li>- txt file for final detection status including AI decision.</li> <li>- IF sample recording with ION metadata (for event tagging and post-analysis). Standard outputs: NMEA and RINEX 3.</li> <li>- Data logging for intermediate signal processing steps, e.g. acquisition data logs, channel dump logs (including NCO data, discriminator values), decoded navigation data bits, etc.</li> </ul>
<b>Interference classes</b>	<ul style="list-style-type: none"> <li>- Multipath</li> <li>- Jamming</li> <li>- Wide-band noise</li> <li>- Single-tone</li> <li>- Chirp</li> <li>- Modulations</li> <li>- Spoofing</li> </ul>	<b>Remote protocols</b>	TCP/IP, SSH, Customizable
Monitoring Techniques		Hardware and Control Unit	
<b>Actions</b>	<ul style="list-style-type: none"> <li>- Monitoring</li> <li>- Interference Detection</li> <li>- Interference Classification</li> </ul>	<b>RF Front-End</b>	1 or 2 RF input(s) *The second antenna can be placed far from the first antenna using low-resistance cables.
<b>Methods</b>	More than 14 methods in 3 categories: <ul style="list-style-type: none"> <li>- Stream-based</li> <li>- Channel-based</li> <li>- Receiver-based</li> </ul>	<b>Ports</b>	<ul style="list-style-type: none"> <li>- RF</li> <li>- 4 USB</li> <li>- Power</li> <li>- HDMI</li> <li>- LAN</li> </ul>
<b>Sensitivity</b>	Adaptive threshold based. Detects signals >~3db/MHz more than the noise level.	<b>Antenna Compatibility</b>	<ul style="list-style-type: none"> <li>- Active</li> <li>- Passive</li> </ul>
<b>Alerting system</b>	<ul style="list-style-type: none"> <li>- GUI Color-coded lamps</li> <li>- Audio</li> <li>- Remote alerts</li> </ul>	<b>Storage</b>	<ul style="list-style-type: none"> <li>- Internal storage: 1 TB SSD (typical).</li> <li>- Expandable storage: Supports external USB HDD/SSD for additional capacity.</li> </ul>
<b>Classification success rate</b>	>~99,97%	<b>Optional hardware</b>	<ul style="list-style-type: none"> <li>- Omnidirectional antenna</li> <li>- RF cables</li> <li>- GNSS variable-gain amplifier</li> <li>- Tripods for the antennas</li> <li>- Battery</li> <li>- Screen</li> </ul>