

Leica GR25

Don't think Receiver,
think Reference Server



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Leica GR25 GNSS Reference Server

Think Reference Server

The GR25 is more than just a reference receiver, it is a GNSS Reference Server. Just like a data centre server, it has many requirements for reliable operation. For example: backup power supply, redundant data communication routes, environmental controls, security devices and an easy way to monitor it all.

Because a server is engineered to manage, store, send and process data 24-hours a day it has to be very reliable and offers a variety of features and hardware to fulfil these requirements and guarantee long term operation. Just like the GR25 offers more reliability, features and hardware than just a standard reference station receiver.

WLAN

The GR25 can be purchased with an integrated WLAN adapter that allows connecting to the internet via a wireless connection, using infrastructure or ad-hoc mode.

Internet Connection Sharing

Internet Connection Sharing (ICS) allows using the GR25 as a gateway to connect other devices to the internet. Data from the connected device can be directly provided to other network users.

SNMP

Simple Network Management Protocol (SNMP) is a protocol for monitoring the health and proper functionality of network equipment, such as the GR25 GNSS Reference Server. SNMP on the GR25 allows monitoring information such as the CPU load, internet connectivity, uptime and power levels.





GNSS Unlimited Series

Safe investment with the GNSS Unlimited series:

- Future proof – lean back and observe GNSS modernisation with an all-round carefree system solution.
- The power of Multi-Constellation – GPS, GLONASS, Galileo, BeiDou, QZSS. Future signals are all supported providing maximum performance.



Ntrip

The GR25 is a full Ntrip Server (Source), Ntrip Caster and Ntrip Client, allowing an unlimited number of mount points, server and client connections via one single port. The GR25 allows receiving correction data in Ntrip client mode, calculating an RTK fixed position and monitoring the antenna position while continuing to work as a GNSS Reference Server.

Security

Built in Firewall, default closed ports, comprehensive user administration and detailed event log (including communications) allow secure system administration of the GR25 Reference Server and Services and protect your GNSS data.

IT Rack Mounting

The GR25 can be installed in a 19" IT rack with a specially design mounting kit for optimal space and stability providing a professional installation, cables in the back and the screen and LEDs in the front to keep an overview.



Leica GR25 GNSS Reference Server

GR25 Modularity – when Flexibility and Adaptability matter

With its modular and scalable design, the GR25 GNSS Reference Server will grow with your needs and keep your GNSS applications and networks fully up-to-date. The GR25 allows picking and choosing the components needed to optimise any setup and adapt them later, should requirements change.

The design and modularity of the GR25 GNSS Reference Server allows fulfilling any application, meeting the highest requirements and working in the toughest of environments, including RTK and static networks, single base station, field campaigns, structural monitoring, atmospheric and seismic studies and offshore positioning.

Modular Casing

Purpose built casing with rubber bumpers allows adding a wall or rack mount kit to complete the installation or easily attach the GR25 to a tripod for Campaign setup. All connectors are rugged and are well spaced for easy handling.

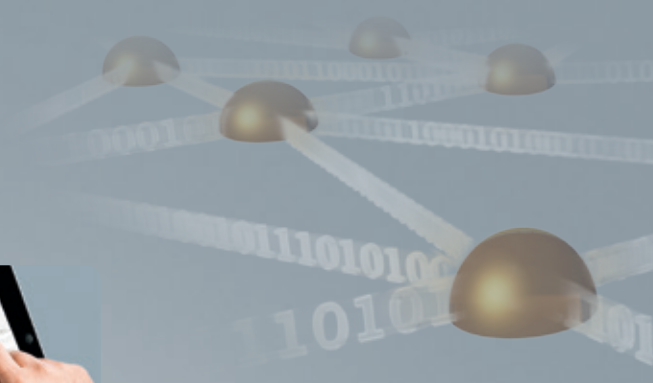
Modular Communication

Decide for a WLAN or Bluetooth® GR25, add a slot-in device such as radio or GSM module to ensure server powered communication that is IP 67 compliant. Or connect the GR25 Server to a network via the Ethernet cable.



Modular Tracking

GNSS Modernisation is an ongoing process. Activate/deactivate satellite systems and frequencies as needed. Be assured that when the GNSS constellation is extended it will not be necessary to purchase new GNSS equipment. The GR25 tracking engine can be exchanged to keep the GNSS Reference Server up-to-date for future GNSS signal developments.



Modular Data Storage

Select an SD card size as needed. If larger storage is required; exchange the SD card at any time or add an external USB hard drive that is powered directly from the GR25 Server. Configure up to 12 independent logging sessions to easily accomplish different applications with the same GR25 Server.

Modular RefWorx Software

The RefWorx software is pre-installed on the GR25. Add licenses for additional functionality as your setup changes. Install language files to make GR25 handling easier for your local setup. The System backup file allows easy distribution of the GR25 Server configuration onto other GR25.



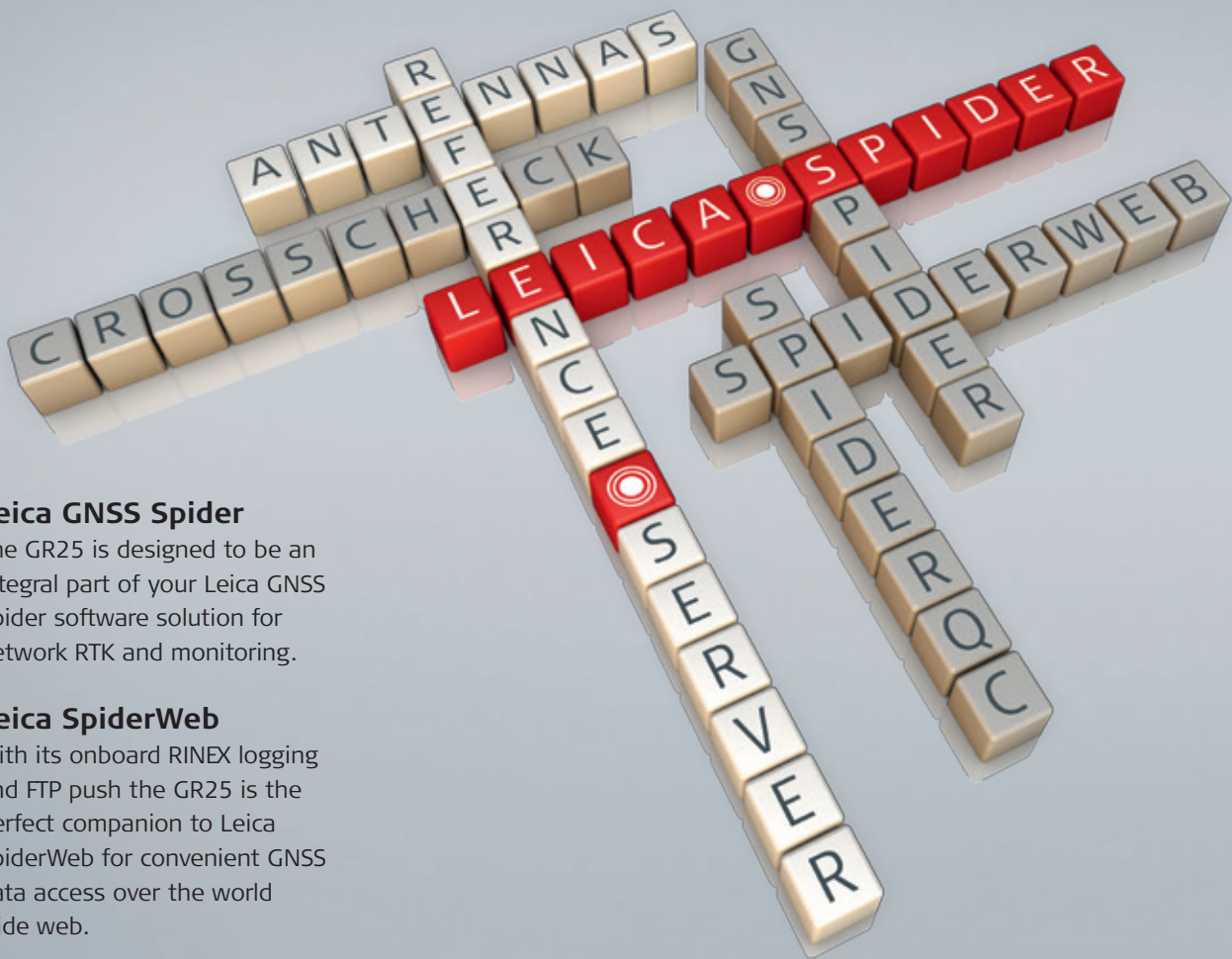
Modular Power

Intelligent Power Management allows choosing from four configurable power sources including two external inputs, Power over Ethernet (PoE) and a removable internal battery. The GR25 Server internal charger ensures the battery provides up to 24 hours of power and data backup.

Leica GR25 GNSS Reference Server

The best Answers combine the smartest Components.

The Leica Spider family of products provide all you need for smart solutions, from single base stations to comprehensive infrastructure RTK networks.



Leica GNSS Spider

The GR25 is designed to be an integral part of your Leica GNSS Spider software solution for network RTK and monitoring.

Leica SpiderWeb

With its onboard RINEX logging and FTP push the GR25 is the perfect companion to Leica SpiderWeb for convenient GNSS data access over the world wide web.

Leica SpiderQC

SpiderQC allows detailed quality checking and live monitoring of GNSS data. Including comprehensive reports and graphical analysis.

Leica CrossCheck

The GR25/GR10/GRX1200+ are all highly suited for use with the Leica CrossCheck Computation and Monitoring Service.

Leica Antenna

The GR25 can be used with all Leica Geosystems antennas and is especially suited for use with the AR range of Reference antennas.



With Active Assist, Leica Geosystems is redefining customer support to guarantee your satisfaction.

Active Assist is an online support service. Through a secure web service you can request a trained support technician to access the receiver and diagnose issues and perform trouble-shooting. Active Assist works even if the receiver is behind a firewall, ensuring quick and comprehensive support.

Technical Specifications

Leica GR25 GNSS Reference Server	
GNSS Technology	<p>Leica patented SmartTrack+ technology:</p> <ul style="list-style-type: none"> ■ Very low noise GNSS carrier phase measurements with <0.2 mm (rms) precision ■ Fixed RTK positioning accuracy 10 mm + 1 ppm (rms) horizontal / 20 mm + 1 ppm (rms) vertical ■ High precision pulse aperture multipath correlator for pseudorange measurements ■ Excellent low elevation tracking, fast acquisition time and jamming resistant
GNSS Signals	<p>Flexible configuration with up to 60 Satellites, 7 Signals per Satellite¹, 120/500+² Channels:</p> <ul style="list-style-type: none"> ■ GPS: L1 C/A, L2P, L2C, L5 ■ GLONASS: L1 C/A, L2P, L2C ■ Galileo: E1, E5a, E5b, AltBOC ■ BeiDou: B1, B2, B3² ■ QZSS: L1, L2C, L5 ■ SBAS: WAAS, EGNOS, GAGAN, MSAS <p>¹ Fully independent carrier phase tracking with full wavelength, and Code ² The Unlimited series provides more than 500 channels that support even more satellites to be tracked, and additional signals (dependent on public available ICDS) such as BeiDou B3 or GLONASS L3 CDMA.</p>
Web & FTP Services	<p>Full control and configuration of the receiver over a web browser through Ethernet, mobile internet, USB, Bluetooth® or WLAN. Internet connection sharing (ICS) connecting external devices attached to the GR25 to the internet, using the GR25 as a gateway. Ntrip server (source), Ntrip client and Ntrip caster functionality with unlimited number of mount points. Secure access using HTTPS, SSL certificates, access management and port blocking. FTP Server and FTP Client (push), Email notification, SNMP support.</p>
Optional Control Software	<p>Leica GNSS Spider. For managing single stations and reference networks.</p>
Data Logging	<p>Removable SD card up to 32 GB. 12 parallel logging sessions. Data rates up to 50 Hz. RINEX 2.11/3.01/3.02, Hatanaka and Leica MDB formats including Zip compression.</p>
Data Streaming	<p>Up to 20 parallel data streams with multiple connections. Data rates up to 50 Hz. Supports Leica, Leica 4G, CMR, CMR+, RTCM v2.1/2.2/2.3/3.2, BINEX, NMEA 0183 V2.20 and proprietary formats via TCP/IP, serial, USB and Bluetooth®. Supports Ntrip.</p>
Communication Slot	<p>Exchangeable Radio/GSM/GPRS/UMTS devices supported. Automatic gateway routing provides backup of internet access for continuity of communications.</p>
Ports and Connectors	<p>1 × ruggedised RJ45 Ethernet 2 × serial RS232 Lemo (P2 includes an Event Port) 1 × USB client (for connection to a PC or tablet) 1 × USB host (for connection to USB hard disk or flash disk) 1 × external oscillator 1 × power Lemo (with dual line input for two power supplies) 1 × UART serial & USB (for removable internal communication devices) WLAN or Bluetooth® support for data streaming and web interface configuration</p>
User Interface	<p>ON/OFF button, 6 button keypad, OLED display, Web Interface</p>
Status Indicators	<p>7 LED indicators for power, memory, logging, RT out, RT in, position, Bluetooth®</p>
Power Input and Management	<p>Nominal 12V DC, range 10.5 – 28V DC. Two external power inputs. Internal removable Li-Ion battery (GEB242) and built-in charger Power over Ethernet</p>
Power Consumption	<p>3.1 W typically, 24 V@150 mA, up to 24 h backup using the GEB242 internal battery</p>
Temperature Range	<p>Compliance with ISO9022-10-08, ISO9022-11-special, MIL STD 810F – 502.4-II, MIL STD 810F – 501.4-II</p>
Operating / Storage	<p>–40° C to +65° C / –40° C to +80° C</p>
Humidity	<p>100%, compliance with ISO9022-13-06, ISO9022-12-04 and MIL STD 810F – 507.4-I</p>
Weight	<p>1.84 kg (without battery), 2.29 kg (with battery)</p>
Dimensions	<p>220 mm x 200 mm x 94 mm (including removable rubber bumpers)</p>
Proof against: Water, Sand and Dust	<p>IP67 according IEC60529 and MIL STD 810F – 506.4-I, MIL STD 810F – 510.4-I and MIL STD 810F – 512.4-I Protected against blowing rain, sand and dust. Temporary submersion into water (max 1 m)</p>
Vibration	<p>Withstands strong vibration during operating, compliance with ISO9022-36-08 and MIL STD 810F – 514.5-Cat.24</p>



Instant access to product information, updates and knowledge

Active Customer Care provides a range of support and maintenance services. With myWorld you can update firmware & software, purchase software options, access service and support status & history and conduct online training at your convenience.

myWorld.leica-geosystems.com

Whether providing corrections from just a single reference station, or an extensive range of services from a nationwide RTK network – innovative reference station solutions from Leica Geosystems offer tailor-made yet scalable systems, designed for minimum operator interaction whilst providing maximum user benefit. In full compliance with international standards, Leica Geosystems' proven and reliable solutions are based on the latest technology.

Precision, value, and service from Leica Geosystems.

When it has to be right.



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ACTIVE customer care

Leica Geosystems' customers benefit from service and support that spans time zones and geography. Our Active Customer Care program has packages to suit your needs, whether you use our simplest distance measuring device or the most sophisticated integrated solution.

Receivers:
Leica GR10
Leica GMX902 Series
Leica GMX901Plus

Antennas:
Leica AR25
Leica AR10
Leica AR20

Software:
Leica GNSS Spider
Leica SpiderWeb
Leica SpiderQC

Services:
Leica CrossCheck

For more information on GNSS Reference Networks products and services, please visit: www.leica-geosystems.com/nrs