

GNSS Reference Server Provides Internet Sharing



The Leica GR25 GNSS Reference Server has now been enhanced with a standard on-board WLAN module to extend its Ethernet and mobile wireless internet connectivity options. This is accompanied by the new RefWorx on-board firmware v3.00, adding internet connection sharing allowing other computers or network devices connected to Ethernet or WLAN to directly access the internet through the GR10 or GR25 server's new routing capability.

The new Site Monitor positioning modes and many other improvements are also included. These new capabilities together with other advanced communication interfaces, the integrated modular devices management, multi-user management and high-end security mean that currently only the GR25 provides a true GNSS Reference Server functionality.

The Leica GR25 WLAN offers internet connectivity along with other interface devices (LAN, mobile phone GPRS/UMTS, serial, USB), and allows smart and secure access to the built-in web interface, FTP server or any configured data stream. With its modular and scalable design, the reference server will grow with users' needs and keep their GNSS applications and networks fully up to date. It is designed for numerous permanent and semi-permanent GNSS network installations and monitoring applications. Including RTK and static networks, single base station, field campaigns, structural monitoring, atmospheric and seismic studies and offshore positioning.

Upgradeable

Through Leica Geosystems' modern 'Future Proof' design, the GR25 is prepared for today and ready for tomorrow, by allowing upgrade of all the key hardware parts, such as tracking, memory, power and communications. This allows customers to always keep up with the latest technology advances when really needed. Just like a data centre server, the GNSS Reference Server has many requirements for reliable operation, such as backup power supplies, redundant data communications, secured access and an easy way to monitor all the server's activities.

WLAN module

With its new integrated WLAN, yet another dimension of flexibility to interface with the Leica GR25 is available. The connection to a WLAN access point offers primary or backup connectivity along with all other interface devices (LAN, Mobile phone GPRS/UMTS, Serial, USB) and allows smart and secure access to the built-in web interface, FTP server or any configured data stream. The GR25 WLAN supports the direct wireless connection with another device, e.g. to open the receiver's web interface from a smartphone without internet access. The installation and system operation becomes more flexible, as no network cables need to be drawn to the physical location of the GR25.

Internet connection sharing

Along with the new GR25 WLAN, the new version 3.00 of RefWorx firmware now offers a flexible internet connection sharing, also referred to as residential gateway sharing. This allows the reference server internet gateway interface to be shared with other devices connected with the LAN interface of the GR-series server. When for example using the GR10 or GR25 in a remote location where only a mobile phone device can be used to access the internet, then the Ethernet or WLAN can be used by connected devices to access the internet as well. In this way other computers or network devices attached to Ethernet or WLAN can access the internet through the GR10 or GR25 servers routing functionality. Additional routing devices are no longer needed when using a Leica GR10 or GR25 reference server.

Site Monitor

The self-positioning capabilities of the new on-board RefWorx Site Monitor offer some interesting benefits. Users have now the flexibility to select their preferred positioning modes out of three options tailored for their application. Supported modes are "Reference Station" for the classical static site monitoring, the "Monitoring" for the more dynamic structural and environmental monitoring, and the "Network RTK" mode to examine the behaviour of a potential rover system working in the proximity of this reference station location. For all operations the positions can be transferred via standard NMEA output to further analysis applications such as Leica SpiderQC.

GNSS Modernisation

GNSS Modernisation is an ongoing process. The modular GNSS tracking engine allows upgrade when new signals structures are finally published. With an exchangeable measurement engine, network providers can keep up-to-date with the latest GNSS signals, without having to exchange the whole server every few years, securing their investment into the long term. All GR-Series GNSS Reference Servers support a variety of GNSS signals including L1, L2, L5 and supports Galileo tracking including AltBOC. And it is already prepared

for the Chinese BeiDou and Japanese QZSS signals.

Leica Spider

The Leica GR-Series is designed to be an integral part of the Leica GNSS Spider software solutions for network RTK, monitoring and scientific studies, working seamlessly with GNSS Spider, SpiderWeb, SpiderQC and the Leica CrossCheck Computation and Monitoring Service.

The Leica GR25-WLAN and RefWorx V3.00 are immediately available.

For detailed information about the new Leica GR25 please visit: <http://www.leica-geosystems.com/GR25>

<https://www.gim-international.com/content/article/gnss-reference-server-provides-internet-sharing>
