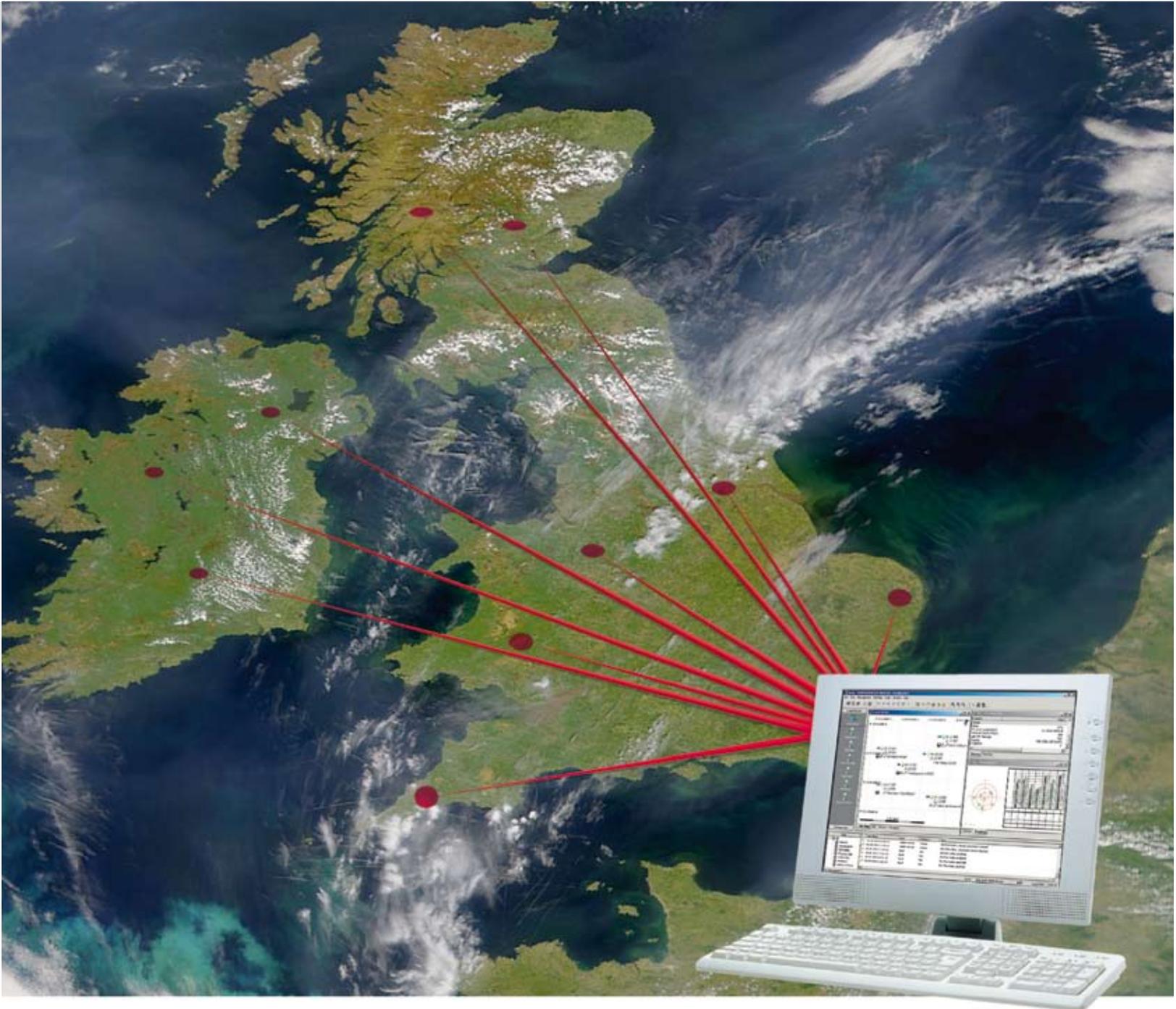


Leica SmartNet Commercial RTK Network Solution



- when it has to be **right**

Leica
Geosystems

One person, one GPS receiver, one precise network solution

Work Smart, choose Leica SmartNet

Leica SmartNet is Britain and Ireland's first commercial RTK Network. Leica SmartNet provides an RTK and DGPS correction service for any professional with a GPS receiver that can accept RTK or DGPS corrections broadcast by GSM or GPRS. So whether you own a Leica Geosystems GPS receiver or other make of GPS receiver you will have equal access to the service.

With Leica SmartNet there is no setting-up time for a local reference station, no security issues in leaving the reference station, no transformations needed and no cost of a reference station and an employee to ensure security. Now, you can perform construction stakeout, topographic surveying, precision GIS data collection and machine control more effectively and quicker than ever before. Arrive on-site, switch on and start working!

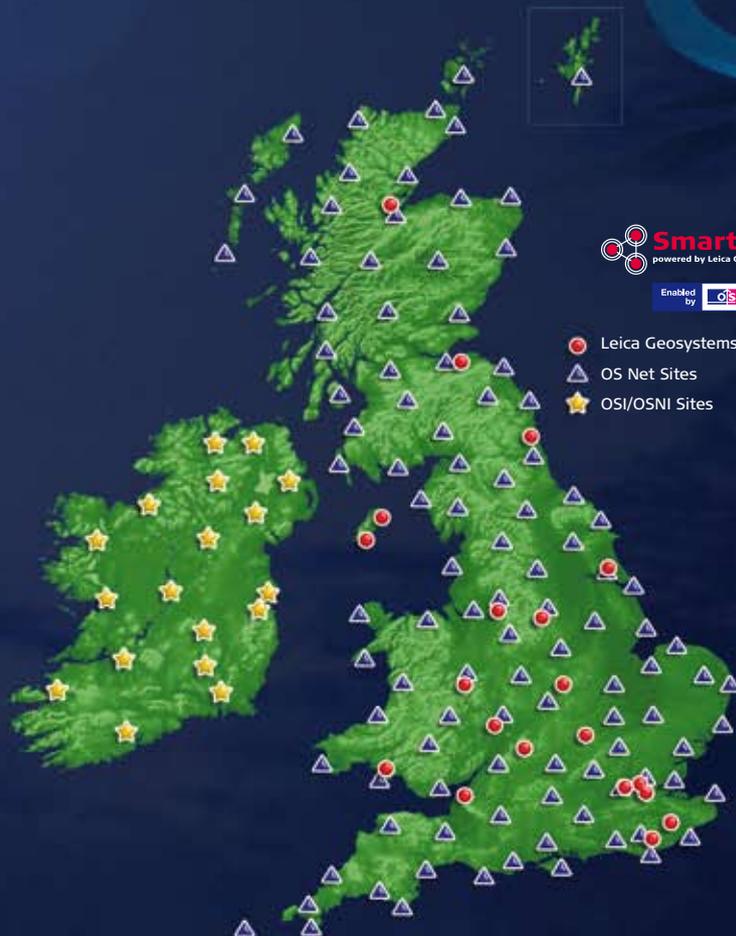
What makes Leica SmartNet so smart?

The most important part of any network is the reference station infrastructure and Ordnance Survey has entrusted Leica Geosystems to provide almost all of the receivers and antennas within its infrastructure. This has created a perfect synergy with the reference station network from Ordnance Survey and the network processing software from Leica Geosystems.

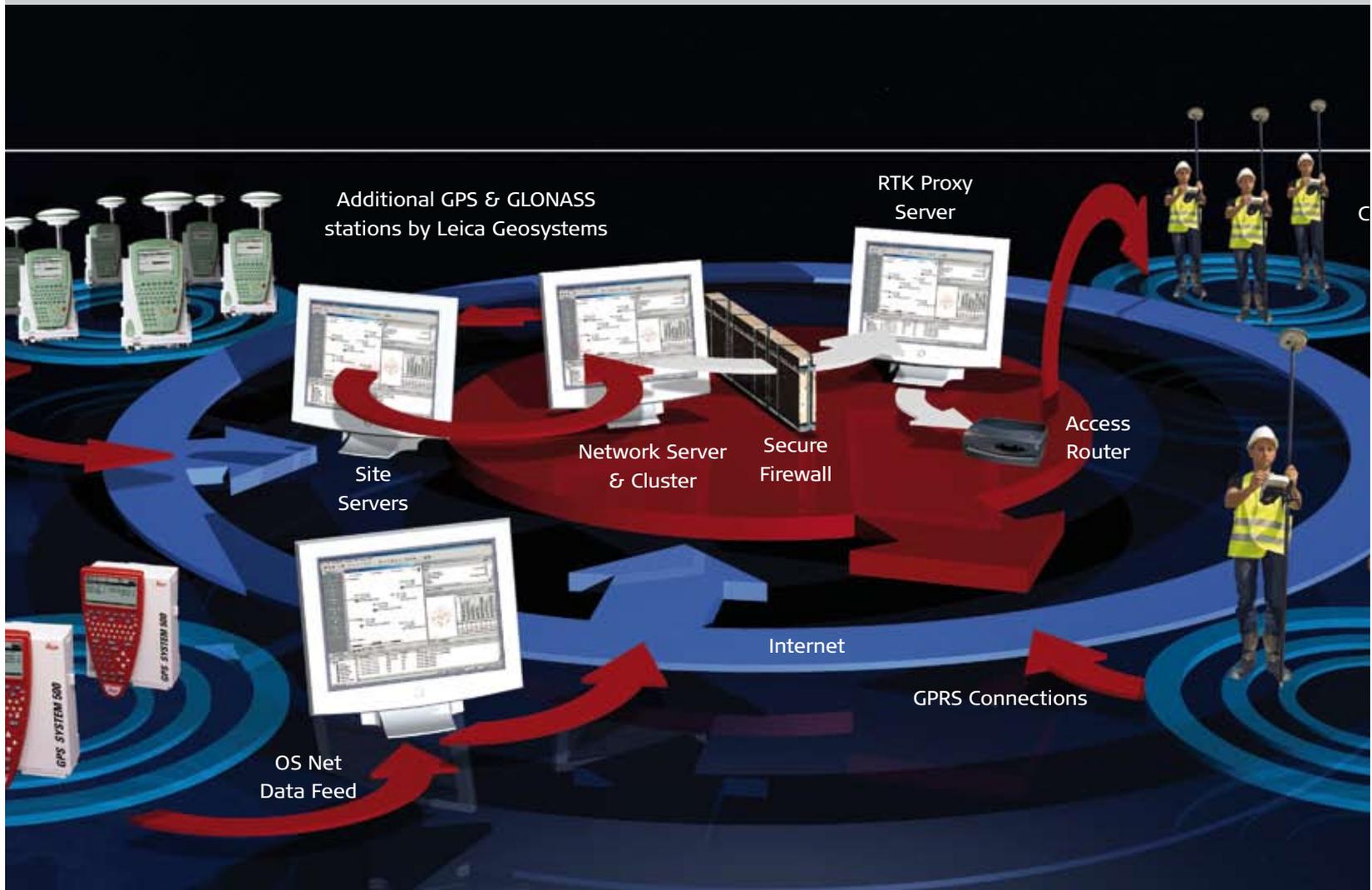
Leica Geosystems has become the first company to acquire the raw data stream from Ordnance Survey's network of reference stations around Great Britain and Ireland. This Ordnance Survey network is only available to its own surveyors as well as third party partners, including Leica Geosystems. Leica SmartNet takes the raw data stream and calculates its own correction services for widespread commercial use for its customers.

The SmartNet service is continually being developed and Leica Geosystems has joined forces with The Survey Association and other professional partners to install additional reference stations at key locations currently around Great Britain, helping to extend the existing network to a target of up to 150 stations. The extra stations will be used to give greater density, enhanced redundancy and the opportunity to use some stations as Quality Assurance monitoring sites.

OS Net
Reference
Stations



- Leica Geosystems Sites
- ▲ OS Net Sites
- ★ OSI/OSNI Sites



Leica GNSS SpiderNet

Leica SmartNet is driven by Leica Geosystems' own network software, SpiderNet. SpiderNet's advanced algorithms have the ability to calculate RTK corrections for all types of (RTK) receiver, old or new.

Traditionally, corrections have been sent out in manufacturer-specific formats, which make a universal correction service impossible. The alternative industry standard 'RTCM' corrections tend to be unwieldy due to the size of each message. Leica Geosystems' developers have been at the forefront of developing a new standard, adopted by the RTCM commission in its version 3 form. RTCM version 3 supports Leica's MAX and i-MAX protocols, which are unique in combining the best correction algorithms in a form that fully satisfies RTCM principles.

SpiderNet also supplies data in RTCM version 2 to support legacy receivers eg. Leica SR530 receivers.

The result? A correction service of high speed and integrity, delivered by GPRS or GSM phone, for use by any RTK receiver capable of picking up its corrections by this transmission media.

Ordnance Survey raw data is supplied as a single Internet data feed to Leica Geosystems' SpiderNet Hub in London Docklands. Additional stations are managed directly over the Internet by Spider's 'Site Server' facility. Users can connect to the correction service either by GPRS via the Internet, or directly by GSM comms. SpiderNet's strategic firewall protection keeps the data safe.

"We have been delighted with the success of SmartNet and the level of uptake that there has been. Networked GPS has transformed surveying over the last year, bringing benefits across the community, as an Ordnance Survey Partner Leica Geosystems has been at the forefront of making this happen."

Mark Salter
Head of Ordnance Survey's
Partner & Alliance Programme

Leica SmartNet Benefits

Quality

- Same accuracy as a local base station
- High-speed initialisation for RTK solutions
- Redundancy – multiple reference stations, not just one
- Reliability – full mirroring of network services
- Quality assurance – Network integrity monitoring

Productivity

- Performs 1-3cm RTK surveys with one rover
- Eliminates daily base station set-up & potential errors
- Reduces dependency on ground control monuments
- Far exceeds range of conventional RTK systems
- Convert your existing base station into a productive rover

Availability

- "Always on" 24/7 monitored service
- Allows subscribers to easily work in various locations

SmartNet Annual Subscription Packages

- RTK Unlimited Access
- RTK Limited Access (40hrs p/m)
- DGPS Unlimited Access
- DGPS Low Access (40hrs p/m)

Extra GPS & GLONASS sites are available, including a specific London Olympic Games RTK correction service.

Upgrade subscriptions, multiple user discounts and prices available on request or via the SmartNet website <http://smartnet.leica-geosystems.co.uk>. Direct debt and standing order schemes are also available.

Flexible subscription plans can be arranged, with users not being restricted to one license per rover. In fact users in Britain can switch their single license between multiple users, as long as there is only one connection at a time.

Just Register A SIM Card And You're Away!

To take out an annual subscription and begin real-time precision RTK GPS survey, simply register your SIM card via:

- Phone: 01908 246242
- Email: smart.net@leica-geosystems.com
- <http://smartnet.leica-geosystems.co.uk>

SmartNet Website

In line with the continued added value services that Leica Geosystems is providing with SmartNet, it has recently launched a new version of SpiderWeb, the software that now powers the SmartNet website. Full network information is available along with FAQ's, a Network RTK Status page, SmartNet News, as well as:

- FREE RINEX download facility with the ability to download all 1-30 sec RINEX data needed from OSNet and Leica Geosystems reference station sites
- Coordinate Generator Service for customers who do not have the facility for post processing
- GNSS QC software displays the results from GNSS QC for the station quality for all configured sites
- Interactive Network map that includes all operating and proposed OSNet and Leica Geosystems sites with full information, data quality, file availability and summary plots

The SmartNet Hub

The SmartNet Docklands hub is housed in a managed infrastructure, permanently manned by support technicians. London Docklands was chosen for its proven reputation as the UK centre for high-speed, high integrity, Internet communications - the first pan-European Internet Peering Point (IPP) is situated here.

The site features:

- Security and surveillance 24/7
- Uninterruptible power supply with on-site diesel generator backup
- Emergency power for three days
- Dedicated, air-conditioned halls for server cabinets
- Redundant Internet connectivity with dedicated dual fibre ring operating at Gigabit Ethernet speeds
- Fire detection system with automated inert gas extinguisher system on each floor

Surveying the Leica SmartNet way is easy. Step out onto site and start collecting data at survey grade accuracy in no time, working in the coordinate system of choice. The corrections are sent already configured for OS grid, yet any local grid can be defined.

Leica SmartNet is the latest addition to the Smart family of high accuracy solutions provided by Leica Geosystems. The range of Smart products work seamlessly with the Leica SmartNet RTK correction service.

SmartStation



SmartStation – Total Station with integrated GPS.

A world first, TPS and GPS perfectly combined. High performance total station with powerful GPS receiver. No need for control points, long traverses or resections. Just set up SmartStation and let GPS determine the position. You survey easier, quicker and with fewer set ups.

SmartStation position coordinates at the touch of a key. With SmartStation you don't need to worry about control points, traverses and resections. Just set up wherever it's convenient, touch the GPS key and let the SmartAntenna do the rest. By dialling-in to Leica SmartNet, a TPS user can have access to OS (and local) control without the knowledge of how to operate GPS, because there is no reference station to set up, and no post processing to complete.

RTK determines the position to centimetre accuracy within a few seconds and at ranges up to 50 km from a reference station, or anywhere within the Leica SpiderNet Network.

SmartRover



Cable free, exceptionally lightweight and fully compatible with Leica SmartStation and Leica SmartNet.

The new RTK GPS Leica SmartRover presents itself as the ideal tool for modern surveying utilising the Leica SmartNet solution.

SmartRover is the lightest cable-free RTK GPS system in the world and is fully compatible with Leica SmartStation, the world's first total station with integrated GPS. Use SmartStation to position your total station and then transfer the SmartAntenna and continue RTK GPS surveying with the SmartRover. Enjoy outstanding performance at a fraction of the weight of current all-on-the-pole systems. Reduce operator fatigue and maximise productivity.

The new Leica RX1250 Controller includes Windows CE and Bluetooth™ wireless technologies. This facilitates direct contact to the office via the Internet to upload/download data to enhance survey productivity. With its integrated CF-card, data can be seamlessly exchanged with Leica System 1200 instruments to provide full X-Function compatibility. Furthermore, Leica SmartRover includes the proven SmartTrack and SmartCheck technologies that deliver the best GPS results with speed and reliability.

System 1200



Leica System 1200 receivers provide all the flexibility, power and performance needed for every type of GPS application.

Built to the toughest MIL specifications, they withstand extreme temperatures, the worst weather and the roughest site conditions. Ideally suited for use with the 'always on' SmartNet RTK solution service. To acquire Leica SmartNet corrections, all variants of System 1200 GPS can use a dedicated, Leica MIL spec telephone modem. Alternatively, the user can dial in from their personal mobile phone, be it GSM or GPRS, via cable or Bluetooth.

Save time by incorporating Leica SmartPole which allows set up on-the-fly and the ability to easily swap between GPS and TPS when needed.

Whether providing corrections from just a single reference station or a nationwide RTK network – the 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 offering industry leading precision, value and service.

When it has to be right.

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