


  
**SmartNet**
  
 powered by Leica Geosystems



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**Leica SmartNet GB - Reference Stations**

- Leica intend to add value with the deployment of a further 30+ active stations.
- Leica intend to add value by increasing the opportunities for a full GNSS (Global Navigation Satellite System) network.
- Tracking all available signals from **GPS**, **GLONASS** and the future Galileo.
- Strengthening the network increases the survey quality while providing redundancy, accuracy, density and reliability.



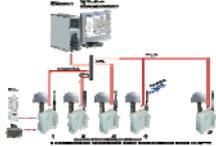

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**Leica SmartNet GB Reference Station – Network Software Synergy**

**Reference Station Antennas (absolute IGS antenna calibrations)**

- 91 x sites are Leica IGS Type LEIAT504 LEIS choke ring antennas
- 7 x sites are Ashtech IGS type ASH700936E SNOW antennas
- 1 x Sites are Ashtech IGS type ASH700936D\_M SNOW
- 1 x Site is Trimble IGS type TRM29659.00 NONE
- 1 x IGS Morpeth site currently with a temp AX1202GG (replacing with LEIAT504 GG)

All reference sites are geospatially coordinated to EUREF GB 2001.  
ETRS89 is used as the reference datum.





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**Leica SmartNet GB – Network Services**

**Network RTK Corrections - MAX & i-MAX**

- Network RTK Standard RTCM 3.1 Format with Leica Master-Auxiliary Concept
- *i* - Individualised Network RTK
- Optimised for each rover location
- *i*-Max Provided in standard baseline RTK formats (RTCM v3.1, 2.3, Leica)

**Network DGPS Corrections**

- Provided in standard RTCM v2.3 (9, 2) formats

**Web Site – Rinex Downloads**

- 1 - 30 sec Rinex data available
- Coordinate converter facility to nearest stations
- QA Plots, active map etc...

**Communication:**

- NTRIP
- TCP/IP
- Mobile Internet GPRS
- GSM Access Router
- Landline




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**Leica SmartNet GB – Business Model**

Commercial Interconnect agreement with OS for data feed from all OSNet stations.  
SLA agreement with OS for maintenance of stations, availability of data stream etc..

No cost for OSNet data stream via NTRIP in LB2 format, however, we pay OS a royalty for each end user license and reflect the price bandings to our end users as follows:

**Annual Subscription Cost:**

|      |                           |        |
|------|---------------------------|--------|
| RTK  | Low rate user (40hrs p/m) | £1,200 |
| RTK  | Unlimited access          | £2,000 |
| DGPS | Low rate user (40hrs p/m) | £350   |
| DGPS | Unlimited Access          | £750   |

*Multiple user discounts available*

Leica Geosystems has made huge investment in server hardware, software, staff and extra reference station sites as a stand-alone business.


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**Leica SmartNet GB – Suggestions for Regional or International Consideration**

- Sub group or Sub commission specifically for the field surveyors community.
- Collecting information, data and experiences from all existing network.
- Pushing/promoting GNSS Network industry standards.
- A gateway to educating field surveyors on best practice methods with Networks, etc...
- Investigate a Global FIG Network standard?
  - Maybe FIG cooperative Networks on a global basis.
  - Ensuring coordinate compatibility accross borders. i.e Cross European work, traceability of coordinate origins is very important.


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**THANK YOU!**