# Leica Viva GS25
## Data sheet

### Engaging software

The Leica Viva GS25 GNSS receiver is accompanied by the revolutionary Leica Captivate software, turning complex data into the most realistic and workable 3D models. With easy-to-use apps and familiar touch technology, all forms of measured and design data can be viewed in all dimensions. Leica Captivate spans industries and applications with little more than a simple swipe, regardless of whether you work with GNSS, total stations or both.

### Infinitely bridging the field to the office

Leica Infinity imports and combines data from your GNSS, total station, level instruments and laser scanners for one final and accurate result. Processing has never been easier because all your instruments work in tandem to produce precise and actionable information.

### ACC»

### Customer care only a click away

Through Active Customer Care (ACC), a global network of experienced professionals is only a click away to expertly guide you through any problem. Eliminate delays with superior technical service, finish jobs faster with excellent consultancy support and avoid costly site revisits with online service to send and receive data directly from the field. Control your costs with a tailored Customer Care Package, giving you peace of mind you're covered anywhere, anytime.

- when it has to be **right**

Leica Geosystems

# Leica Viva GS25

| | | |
|---|---|---|
| **GNSS TECHNOLOGY & SERVICES** | | |
| Self-learning GNSS | Leica RTKplus | Adaptive on-the-fly satellite selection |
| HxGN SmartNet Global | HxGN SmartNet Pro | Network RTK and unlimited worldwide RTK bridging and PPP service |
| | HxGN SmartNet+ | Network RTK and RTK bridging service |
| | HxGN SmartNet PPP | Unlimited worldwide RTK bridging and PPP service |
| Leica SmartCheck | Continuous check of RTK solution | Reliability 99.99% |
| Signal tracking | GPS \| GLONASS<br>Galileo \| BeiDou<br>QZSS \| NavIC<br>SBAS \| TerraStar | L1, L2, L2C, L5 \| L1, L2, L2C, L3<br>E1, E5a, E5b, AltBOC, E6 \| B1I, B1C, B2I, B2a, B2b[2], B3I<br>L1, L2C, L5, L6[2] \| L1[2], L5<br>WAAS, EGNOS, MSAS, GAGAN \| L-Band, IP |
| Number of channels | | 555 (more signals, fast acquisition, high sensitivity) |
| **MEASUREMENT PERFORMANCE & ACCURACY**[1] | | |
| Time for RTK initialisation | | Typically 4 s |
| Real-time kinematic<br>(Compliant to ISO17123-11 standard) | Single baseline<br>Network RTK | Hz 8 mm + 1 ppm / V 15 mm + 1 ppm<br>Hz 8 mm + 0.5 ppm / V 15 mm + 0.5 ppm |
| RTK bridging | Up to 10 min bridging of RTK outages | Hz 2.5 cm \| V 5 cm |
| PPP | Initial convergence to full accuracy typically 6 min, Re-convergence < 1 min | Hz 2.5 cm \| V 5 cm |
| Post processing | Static (phase) with long observations<br>Static and rapid static (phase) | Hz 3 mm + 0.1 ppm / V 3.5 mm + 0.4 ppm<br>Hz 3 mm + 0.5 ppm / V 5 mm + 0.5 ppm |
| Code differential | DGPS / RTCM | Typically 25 cm |
| **COMMUNICATIONS** | | |
| Communication ports | Lemo<br>Additional<br>Bluetooth® | 1 x USB and 2 x RS232 serial and Power<br>USB Mini AB, USB A, Event input, PPS output (20 ns time accuracy)<br>Bluetooth® v2.00 + EDR, class 2 |
| Communication protocols | RTK data protocols<br>NMEA output<br>Network RTK<br>Security protocol | Leica, Leica 4G, CMR, CMR+, RTCM 2.2, 2.3, 3.0, 3.1, 3.2 MSM<br>NMEA 0183 V 4.00 and Leica proprietary<br>VRS, FKP, iMAX, MAC (RTCM SC 104)<br>TLS 1.2 |
| Built-in data links | 4G phone modem<br>Radio modem | Fully integrated, external antenna<br>Fully integrated, receive and transmit, external antenna<br>403 - 473 MHz, 1 W output power, up to 28800 bps over air |
| External data links | Up to 3 simultaneously | GSM / GPRS / UMTS / LTE / CDMA and UHF / VHF modem |
| **GENERAL** | | |
| Field controller and software | Leica Captivate software<br>Leica SmartWorx Viva software | Leica CS20 field controller, Leica CS35 tablet<br>Leica CS10 and CS15 field controller |
| User interface | Buttons, LEDs and display<br>Web server | On / Off and 6 function buttons, 7 status LEDs, display<br>Full status information and configuration options |
| Data recording | Storage<br>Data type and recording rate | Removable SD card, 8 GB<br>Leica GNSS raw data and RINEX data at up to 20 Hz |
| Power management | Internal power supply<br>External power supply<br>Operation time[3] | Exchangeable Li-Ion batteries (5.8 Ah / 14.8 V)<br>Nominal 12 V DC, range 10.5 - 28 V DC<br>14 h receiving (Rx) data with UHF radio, 12 h transmitting (Tx) data with UHF radio,<br>13 h Rx / Tx with phone modem |
| Weight and Dimensions | Weight \| Dimensions | 1.84 kg \| 220 mm x 200 mm x 94 mm |
| Environmental | Temperature<br>Drop<br>Proof against water, sand and dust<br>Vibration<br>Humidity<br>Functional shock | -40 to 65°C operating, -40 to 80°C storage<br>Withstands topple over from a 2m survey pole onto hard surfaces<br>IP68 (IEC60529 / MIL STD 810G 506.5 I / MIL STD 810G 510.5 I / MIL STD 810G 512.5 I)<br>Withstands strong vibration (ISO9022-36-08 / MIL STD 810G 514.6 Cat.24)<br>100% (ISO9022-13-06 / ISO9022-12-04 / MIL STD 810G 507.5 I)<br>40 g / 15 to 23 msec (MIL STD 810G 516.6 I) |

| LEICA VIVA GS25 - GNSS RECEIVER | PERFORMANCE | UNLIMITED |
|---|---|---|
| **SUPPORTED GNSS SYSTEMS** | | |
| Multi-frequency | ✔ | ✔ |
| GPS / GLONASS / Galileo / BeiDou / QZSS | ✔ / • / • / • / • | ✔ / ✔ / ✔ / ✔ / ✔ |
| **RTK PERFORMANCE** | | |
| DGPS/RTCM. RTK Unlimited, Network RTK | ✔ | ✔ |
| HxGN SmartNet Global | • | • |
| **POSITION UPDATE & DATA RECORDING** | | |
| 5 Hz / 20 Hz positioning | ✔ / ✔ | ✔ / ✔ |
| Raw data / RINEX data logging / NMEA out | ✔ / • / • | ✔ / ✔ / ✔ |
| **ADDITIONAL FEATURES** | | |
| RTK reference station functionality | ✔ | ✔ |
| Event & PPS Output ports | ✔ | ✔ |

✔ Standard • Optional

[1] Measurement precision, accuracy, reliability and time for initialisation are dependent upon various factors including number of satellites, observation time, atmospheric conditions, multipath etc. Figures quoted assume normal to favourable conditions. A full BeiDou and Galileo constellation will further increase measurement performance and accuracy.

[2] BeiDou B2b, QZSS L6 and NavIC L1 will be provided through future firmware upgrade.

[3] Might vary with temperature, age of battery, transmit power of data link device.

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