Engaging software

The Leica Viva GS16 GNSS smart antenna is accompanied with the revolutionary 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 and level instruments for one final and accurate result. Processing has never been made easier when 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 challenge. Eliminate delays with superior technical service, finish jobs faster and avoid costly site revisits with excellent consultancy support. Control your costs with a tailored Customer Care Package (CCP), giving you peace of mind you are covered anywhere, anytime.

- when it has to be right
**GNSS TECHNOLOGY**

- Self-learning GNSS
  - Leica RTKplus
  - SmartLink (worldwide correction service)
  - SmartLink fill (worldwide correction service)
- Adaptive on-the-fly satellite selection
- Remote precise point positioning (3 cm 2D)²
- Initial convergence to full accuracy typically 18 min, Re-convergence < 1 min
- Bridging of RTK outages up to 10 min (3 cm 2D)²
- Leica SmartCheck Continuous check of RTK solution Reliability 99.99%

**MEASUREMENT PERFORMANCE & ACCURACY¹**

- Time for initialisation
  - Typically 4 s
- Real-time kinematic (Compliant to ISO17123-8 standard)
  - Single baseline Network RTK
  - Hz 8 mm + 1 ppm / V 15 mm + 1 ppm
  - Hz 8 mm + 0.5 ppm / V 15 mm + 0.5 ppm
- Post processing
  - Static (phase) with long observations Static and rapid static (phase)
  - Hz 3 mm + 0.1 ppm / V 3.5 mm + 0.4 ppm
  - Hz 3 mm + 0.5 ppm / V 5 mm + 0.5 ppm
- Code differential
  - DGPS / RTCM
  - Typically 25 cm

**COMMUNICATIONS**

- Communication ports
  - Lemo
  - Bluetooth®, USB and RS232 serial
- Communication protocols
  - RTK data protocols
    - NMEA output
    - Network RTK
    - Leica, Leica 4G, CMR, CMR+, RTCM 2.2, 2.3, 3.0, 3.1, 3.2 MSMS
    - NMEA 0183 V 4.00 and Leica proprietary
    - VRS, FKP, WAAS, MAC (RTCM SC 104)
- Built-in data links
  - 3.75G GSM / UMTS / CDMA phone modem
  - Radio modem
    - Fully integrated, internal antenna
    - 403 - 473 MHz, 1 W output power, up to 28000 bps over air or 902-928 MHz (licence free in North America); up to 1.0 W output power
- External data links
  - GSM / GPRS / UMTS / CDMA and UHF / VHF modem

**GENERAL**

- Field controller and software
  - Leica Captivate software
  - Leica CS20 field controller, Leica CS35 tablet
- User interface
  - Buttons and LEDs
  - Web server
    - On / Off and Function button, 7 status LEDs
    - Full status information and configuration options
- Data recording
  - Storage
    - Leica GNSS raw data and RINEX data at up to 20 Hz
  - Data type and recording rate
    - Exchangeable Li-ion battery (2.6 Ah / 7.4 V)
    - Nominal 12 V DC, range 10.5 - 28 V DC
    - 7 h receiving [Hz] data with internal radio, 5 h transmitting [Hz] data with internal radio, 6 h file / 7 data with internal phone modem
- Power management
  - Internal power supply
    - Temperature
    - -40 to 65°C operating, -40 to 80°C storage
  - External power supply
    - Drop
    - Withstands topple over from a 2 m survey pole onto hard surfaces
    - IP68 (IEC60529 / MIL STD 810G 506.5 I / MIL STD 810G 510.5 I / MIL STD 810G 512.5 I)
    - Withstands strong vibration (ISO9022-36-08 / MIL STD 810G 514.6 Cat.24)
  - Operation time
    - 40 g / 15 to 23 msec (MIL STD 810G 516.6 I)
- Weight and dimensions
  - Weight
    - 0.93 kg / 3.20 kg standard RTK rover setup on pole
    - 190 mm x 90 mm
  - Diameter x Height
  - Functional shock
    - 40 g / 15 to 23 msec (MIL STD 810G 516.6 I)

**LEICA VIVA GS16 - GNSS SMART ANTENNA**

- Performance
  - Unlimited

**SUPPORTED GNSS SYSTEMS**

- Multi-frequency
-✔ ✔
- GPS / GLONASS / Galileo / BeiDou / QZSS
-✔ / ✔ / ✔ / ✔ / ✔
- RTK PERFORMANCE
-✔ ✔
- DGPS/RTCM. RTK Unlimited, Network RTK
-✔ ✔
- SmartLink fill / SmartLink
-✔ ✔
- POSITION UPDATE & DATA RECORDING
- 5 Hz / 20 Hz positioning
-✔ ✔
- Raw data / RINEX data logging / NMEA out
-✔ / ✔ / ✔
- ADDITIONAL FEATURES
- RTK reference station functionality
-✔
- 3.75G or CDMA Phone / UHF Radio (receive & transmit) modem
-✔

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 Glonass L3, BeiDou B3, QZSS L6 and Galileo E6 will be provided through future firmware upgrade.

* Support of NavIC L5 is incorporated and will be provided through future firmware upgrade.

* Might vary with temperature, age of battery, transmit power of data link device.