

Leica Viva GS10

Data sheet



Engaging software

The Leica Viva GS10 receiver 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.



Seamlessly share data among all your instruments

Leica Geo Office 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 is 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.

Leica Viva GS10

GNSS PERFORMANCE

GNSS technology	Leica SmartTrack	Advanced four constellation tracking
Number of channels		120 (up to 60 satellites simultaneously on two frequencies) / 500 ¹
Signal tracking		GPS (L1, L2, L2C, L5), Glonass (L1, L2), BeiDou (B1, B2), Galileo (E1, E5a, E5b, Alt-BOC) QZSS (L1, L2, L5) ² , SBAS (WAAS, EGNOS, MSAS, CAGAN)
GNSS antenna	Standard or Choke-ring	Leica AS10 / AS05 or Leica AR10 / AR20 / AR25

MEASUREMENT PERFORMANCE & ACCURACY³

RTK technology	Leica SmartCheck Network RTK Time for initialisation	Continuous check of RTK solution, reliability 99.99% VRS, FKP, iMAX, MAC (RTCM SC 104) Typically 4s
Code differential	DGPS / RTCM	Typically 25cm
Real-time kinematic	Single baseline (< 30km) Network RTK	Hz 8mm + 1ppm / V 15mm + 1ppm Hz 8mm + 0.5ppm / V 15mm + 0.5ppm
Post processing	Static (phase) with long observations Static and rapid static (phase)	Hz 3mm + 0.1ppm / V 3.5mm + 0.4ppm Hz 3mm + 0.5ppm / V 5mm + 0.5ppm

COMMUNICATIONS

Communication ports	Lemo Bluetooth®	1 x USB and 2 x RS232 serial and Power Bluetooth® v2.00 + EDR, class 2
Communication protocols	RTK data protocols NMEA output	Leica, Leica 4G, CMR, CMR+, RTCM 2.2, 2.3, 3.0, 3.1, 3.2 MSM NMEA 0183 V 4.00 and Leica proprietary
External data links	Up to 3 simultaneously	GSM / GPRS / UMTS / CDMA and UHF / VHF modem / Phone / Radio modem in Leica GFU housing (IP67)

GENERAL

User interface	Buttons and LEDs Web server	On/Off and Function button, 8 status LEDs Full status information and configuration options
Data recording	Storage Data type and recording rate	Removable SD card, 1 GB Leica GNSS raw data and RINEX data up to 20 Hz
Power management	Internal power supply External power supply Operation time ⁴	2 exchangeable Li-Ion batteries (6 Ah / 7.4 V) Nominal 12 V DC, range 10.5 - 28 V DC 15 h receiving RTK data with UHF radio 13 h transmitting RTK data with UHF radio (1W) 14 h receiving / transmitting RTK data with phone modem
Weight and Dimensions	Weight Dimensions	1.20kg (GS10) / 5.40kg standard RTK rover setup using pole and backpack 212mm x 166mm x 79mm
Environmental	Temperature Drop Proof against water, sand and dust Vibration Humidity Functional shock	-40 to 65°C operating, -40 to 80°C storage Withstands topple over from a 2m 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) 100% (ISO9022-13-06 / ISO9022-12-04 / MIL STD 810G 507.5 I) 40g / 15 to 23 msec (MIL STD 810G 516.6 I)

LEICA GS10 GNSS RECEIVER	Single Frequency	Performance	Professional	Unlimited ¹
SUPPORTED GNSS SYSTEMS				
GPS L2 / GPS L5 / GLONASS / Galileo / BeiDou	• / • / • / • / •	✓ / • / • / • / •	✓ / ✓ / ✓ / ✓ / •	✓ / ✓ / ✓ / ✓ / ✓
RTK PERFORMANCE				
DGPS/RTCM. RTK Unlimited, Network RTK	•	✓	✓	✓
SmartLink (L-band)	•	•	•	✓
POSITION UPDATE & DATA RECORDING				
5 Hz / 20 Hz positioning	✓ / •	✓ / ✓	✓ / ✓	✓ / ✓
Raw data / RINEX data logging	✓ / •	✓ / •	✓ / ✓	✓ / ✓
NMEA out	•	•	✓	✓
ADDITIONAL FEATURES				
RTK reference station functionality	•	✓	✓	✓
			✓ Standard	• Optional

¹ The Unlimited series includes a future upgrade to 500+ channels.

² Support of QZSS is incorporated and will be provided through future firmware upgrade.

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³ 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.

⁴ Might vary with temperature, age of battery, transmit power of data link device.