

Leica Viva GS14

Data sheet



Viva



Engaging software

The Leica Viva GS14 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 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 GS14

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), Glonass (L1, L2), BeiDou (B1, B2), Galileo QZSS ² , SBAS (WAAS, EGNOS, MSAS, CAGAN)

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®	USB and RS232 serial 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
Built-in data links	3.75G GSM / UMTS / CDMA phone modem Radio modem	Fully integrated, internal antenna Fully integrated, receive and transmit, external antenna 403 - 470 MHz, 1 W output power
External data links		GSM / GPRS / UMTS / CDMA and UHF / VHF modem

GENERAL

User interface	Buttons and LEDs Web server	On/Off and Function button, 7 status LEDs Full status information and configuration options
Data recording	Storage Data type and recording rate	Removable microSD card, 1 GB Leica GNSS raw data and RINEX data at up to 20 Hz
Power management	Internal power supply External power supply Operation time ⁴	Exchangeable Li-Ion battery (2.6 Ah / 7.4 V) Nominal 12 V DC, range 10.5 - 28 V DC 7 h receiving RTK data with internal UHF radio 5 h transmitting RTK data with internal UHF radio (1W) 6 h receiving / transmitting RTK data with internal modem
Weight and Dimensions	Weight Diameter x Height	0.93kg (GS14) / 2.90kg standard RTK rover setup on pole 190mm x 90mm
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 GS14 GNSS SMARTANTENNA	Single Frequency	Performance	Professional	Professional with BeiDou	Unlimited ¹
SUPPORTED GNSS SYSTEMS					
GPS L2 / GLONASS / Galileo / BeiDou	• / • / • / x	✓ / • / • / x	✓ / ✓ / ✓ / x	✓ / ✓ / ✓ / ✓	✓ / ✓ / ✓ / ✓
RTK PERFORMANCE					
DGPS/RTCM. RTK Unlimited, Network RTK	•	✓	✓	✓	✓
POSITION UPDATE & DATA RECORDING					
5 Hz / 20 Hz positioning	✓ / •	✓ / ✓	✓ / ✓	✓ / ✓	✓ / ✓
Raw data / RINEX data logging	✓ / •	✓ / •	✓ / ✓	✓ / ✓	✓ / ✓
NMEA out	•	•	✓	✓	✓
ADDITIONAL FEATURES					
RTK reference station functionality	•	✓	✓	✓	✓
3.75G Phone / UHF Radio (receive & transmit) modem	✓ / •	✓ / •	✓ / •	✓ / ✓	✓ / ✓
			✓ Standard	• Optional	x Not available

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.