

# Leica GS07

## Data sheet



### Engaging software

The Leica Captivate field software is the perfect companion for the GS07. Everything from measuring, viewing, and sharing data is done within one software. Easy-to-use apps and precise 2D views/3D models enable you to understand, create, and utilise data effectively. Captivate spans industries and project use cases with little more than a simple tap, regardless of whether you work with GNSS, total stations, or both.



### Seamlessly share data among all your instruments

Leica Infinity imports and combines data from your GNSS RTK rover, 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

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- when it has to be **right**

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# Leica GS07

## 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 99.95%
Signal tracking	GPS   GLONASS	L1, L2, L2C, L5   L1, L2, L2C, L3
	Galileo   BeiDou	E1, E5a, E5b, AltBOC, E6   B1I, B1C, B2I, B2a, B3I
	QZSS   NavIC	L1, L2C, L5, L6 <sup>2</sup>   L5
	SBAS   TerraStar	WAAS, EGNOS, MSAS, GAGAN   L-Band, IP
Number of channels		320 hardware channels

## MEASUREMENT PERFORMANCE & ACCURACY<sup>1</sup>

Time for RTK initialisation		Typically 6 s
Real-time kinematic (Compliant to ISO17123-8 standard)	Single baseline	Hz 10 mm + 1 ppm / V 20 mm + 1 ppm
	Network RTK	Hz 10 mm + 0.5 ppm / V 20 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 10 min, Re-convergence < 1 min	Hz 2.5 cm   V 5 cm
Post processing	Static (phase) with long observations	Hz 3 mm + 0.5 ppm / V 6 mm + 0.5 ppm
	Static and rapid static (phase)	Hz 5 mm + 0.5 ppm / V 10 mm + 0.5 ppm
Code differential	DGPS / RTCM	Hz 25 cm   V 50 cm

## COMMUNICATIONS

Communication ports	Lemo Bluetooth®	USB and RS232 serial Bluetooth v4.1 + EDR, class 1
Communication protocols	RTK data protocols Network RTK	Leica, Leica 4G, CMR, CMR+, RTCM 2.2, 2.3, 3.0, 3.1, 3.2 MSM VRS, FKP, iMAX, MAC (RTCM SC 104)
Built-in data links <sup>3</sup>	LTE / UMTS / CDMA phone modem Radio modem	Fully integrated, internal antenna Fully integrated, receive, external antenna 403 - 473 MHz, up to 28800 bps over air
External data links		Bluetooth GSM / GPRS / UMTS / LTE / CDMA phone modem

## GENERAL

Field controller and software	Leica Captivate software	Leica CS20 field controller
User interface	Buttons and LEDs	On / Off button, 3 status LEDs
Data recording	Storage <sup>4</sup> Data type and recording rate	Removable SD card Leica GNSS raw data and RINEX data at up to 5 Hz
Power management	Internal power supply External power supply Operation time <sup>5</sup>	Exchangeable Li-Ion battery (2.6 Ah / 7.4 V) Nominal 12 V DC, range 10.5 - 28 V DC 8 h GNSS, 7 h receiving RTK data with CS modem
Weight and dimensions	Weight Diameter x Height	0.7 kg / 2.7 kg standard RTK rover setup on pole 186 mm x 71 mm
Environmental	Temperature	-40 to 65°C operating, -40 to 80°C storage
	Drop	Withstands topple over from a 2 m survey pole onto hard surfaces
	Proof against water, sand and dust	IP66 / IP68 (IEC60529 / MIL STD 810G CHG-1 510.6 I / MIL STD 810G CHG-1 506.6 II / MIL STD 810G CHG-1 512.6 I)
	Vibration	Withstands strong vibration (ISO9022-36-05 / MIL STD 810G 514.6 Cat.24)
	Humidity	95% (ISO9022-13-06 / ISO9022-12-04 / MIL STD 810G CHG-1 507.6 II)
	Functional shock	40 g / 15 to 23 msec (MIL STD 810G 516.6 I)

## LEICA GS07 - GNSS SMART ANTENNA

### 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 positioning

Raw data / RINEX data logging



### ADDITIONAL FEATURES<sup>4</sup>

3.75G GSM / GPRS / UMTS / CDMA phone modem



UHF radio modem (receive only)



✓ Standard • Optional

<sup>1</sup> 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.

<sup>2</sup> QZSS L6 will be provided through future firmware upgrade.

<sup>3</sup> Depending on the used CS field controller and radio modem.

<sup>4</sup> Data is recorded to the CS field controller.

<sup>5</sup> Might vary with temperature, age of battery, transmit power of data link device.