

# Leica GS07

## Data sheet



### Engaging software

The Leica GS07 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 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.

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- when it has to be **right**

**Leica**  
Geosystems

# Leica GS07

## GNSS PERFORMANCE

|                    |                                  |                                                                                                                                                                                                                                                |
|--------------------|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| GNSS Technology    | Leica RTKplus                    | Adaptive on-the-fly satellite selection                                                                                                                                                                                                        |
| Leica SmartCheck   | Continuous check of RTK solution | Reliability 99.95%                                                                                                                                                                                                                             |
| Signal tracking    | SmartTrack                       | GPS (L1, L2, L2C, L5), Glonass (L1, L2, L3 <sup>2</sup> ), BeiDou (B1, B2, B3 <sup>2</sup> ), Galileo (E1, E5a, E5b, Alt-BOC, E6 <sup>2</sup> ), QZSS (L1, L2, L5, LEX <sup>2</sup> ), NavIC L5 <sup>3</sup> , SBAS (WAAS, EGNOS, MSAS, GAGAN) |
| Number of channels |                                  | 320 hardware channels                                                                                                                                                                                                                          |

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

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

## COMMUNICATIONS

|                                  |                                                    |                                                                                                                              |
|----------------------------------|----------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| Communication ports              | Lemo<br>Bluetooth®                                 | USB and RS232 serial<br>Bluetooth v2.00 + EDR, class 2                                                                       |
| Communication protocols          | RTK data protocols<br>Network RTK                  | Leica, Leica 4G, CMR, CMR+, RTCM 2.2, 2.3, 3.0, 3.1, 3.2 MSM<br>VRS, FKP, iMAX, MAC (RTCM SC 104)                            |
| Built-in data links <sup>4</sup> | 3.75G GSM / UMTS / CDMA phone modem<br>Radio modem | Fully integrated, internal antenna<br>Fully integrated, receive, external antenna<br>403 - 470 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>5</sup><br>Data type and recording rate                                                       | Removable SD card, 8 GB<br>Leica GNSS raw data and RINEX data at up to 5 Hz                                                                                                                                                                                                                                                                                                                                                     |
| Power management              | Internal power supply<br>External power supply<br>Operation time <sup>6</sup>                              | Exchangeable Li-Ion battery (2.6 Ah / 7.4 V)<br>Nominal 12 V DC, range 10.5 - 28 V DC<br>8 h GNSS<br>7 h receiving RTK data with CS modem                                                                                                                                                                                                                                                                                       |
| Weight and dimensions         | Weight<br>Diameter x Height                                                                                | 0.7 kg / 2.7 kg standard RTK rover setup on pole<br>186 mm x 71 mm                                                                                                                                                                                                                                                                                                                                                              |
| Environmental                 | Temperature<br>Drop<br>Proof against water, sand and dust<br><br>Vibration<br>Humidity<br>Functional shock | -40 to 65°C operating, -40 to 80°C storage<br>Withstands topple over from a 2 m survey pole onto hard surfaces<br>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)<br>Withstands strong vibration (ISO9022-36-05 / MIL STD 810G 514.6 Cat.24)<br>95% (ISO9022-13-06 / ISO9022-12-04 / MIL STD 810G CHG-1 507.6 II)<br>40 g / 15 to 23 msec (MIL STD 810G 516.6 I) |

## LEICA GS07 - GNSS SMART ANTENNA

### SUPPORTED GNSS SYSTEMS

Dual-frequency / Multi-frequency

GPS / GLONASS / Galileo / BeiDou / QZSS

✓ / •  
✓ / • / • / • / ✓

### RTK PERFORMANCE

DGPS/RTCM, RTK Unlimited, Network RTK

✓

### 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> Believe to comply, but subject to availability of BeiDou ICD and Galileo commercial service definition. Glonass L3, BeiDou B3, QZSS LEX and Galileo E6 will be provided through future firmware upgrade.

<sup>3</sup> Support of NavIC L5 is incorporated and will be provided through future firmware upgrade.

<sup>4</sup> Depending on the used CS field controller and radio modem.

<sup>5</sup> Data is recorded to the CS field controller.

<sup>6</sup> Might vary with temperature, age of battery, transmit power of data link device.



**SDM Co., Ltd.**

1/285 moo 9 Bangphud, Pakkred, Nonthaburi THAILAND 11120 | Tel : 02 582 3509 HOTLINE : 081 514 8151

E-mail : sdmthai@sdm.co.th website : www.sdm.co.th

www.sdm.co.th