

Leica Zeno GG03

Upgradeable GNSS/GIS SmartAntenna Datasheet



Upgradeable, reliable and accurate GNSS technology

The Leica Zeno GG03 is completely upgradeable; starting as an L1 only DGPS SmartAntenna up to a highly accurate L1/L2 GNSS SmartAntenna. Built on years of knowledge and experience, the GG03 combines a high-performance GNSS SmartAntenna with complete reliability.

- The GLONASS option improves satellites tracking in obstructed locations
- The L2 option delivers cm accuracy in RTK or post-processed
- High-accuracy, jamming resistant measurement engine, to ensure accurate and reliable results in the most demanding environments for all in-view satellite tracking

Built for the field

Designed for extreme environments – rugged, light-weight, and cable-free.

- With IP68 the GG03 is built to withstand the most toughest field whilst maintaining an ergonomic, light-weight and compact design
- Built to operate in extreme temperatures $-40\text{ }^{\circ}\text{C}$ to $+65\text{ }^{\circ}\text{C}$
- Easily exchangeable all-day-battery

Designed for versatile use

Choose the field computer, the field software and the setup (pole or backpack) to suit your workflow and budget.

- Ready-to-use with Leica Zeno Field and Leica MobileMatrix
- Various Leica Geosystems handhelds and tablet computers supported, such as Leica Zeno 5, Zeno 10 & Zeno 15, and the Leica CS25
- Use Leica Zeno Connect to embed custom applications

Technical Specifications

Leica Zeno GG03

GNSS Technology

Channels	120 channels L1 only, Optional: L1/L2 GPS, Optional: Glonass
Satellite signals tracking	GPS: L1, L2, L2C (C/A, P, C Code) GLONASS: L1, L2 (C/A, P narrow Code) BeiDou: B1 Galileo: E1
Real-Time and Post-processed	Support of real-time correction service and post-processing to achieve positioning accuracy
Output data protocols	NMEA-0183 (GGA, VTG, GLL, GSA, ZDA, GSV, RMC, GST, GRS) via Zeno Connect
Update rate	1 Hz (1 sec), Optional: 5Hz (0.2 sec)
Post Processing accuracy static mode	Horizontal: 3 mm + 0.5 ppm (rms) ¹ Vertical: 6 mm + 0.5 ppm (rms) ¹
Horizontal real-time accuracy (SBAS or external source)	SBAS (L1 only): < 0.9 m ¹ DGNS (L1 only): < 40 cm ¹ RTK (L1/L2): 1 cm + 1 ppm ¹
Vertical real-time accuracy	RTK (L1/L2): 2 cm + 1 ppm ¹
Real-time protocols	RTCM 2.x, RTCM 3.0, RTCM 3.1, Leica, CMR, CMR+
Integrated real-time	SBAS (WAAS, EGNOS, MSAS) ³
Time for initialisation	Typically 6 sec ²

GG03 SmartAntenna

User interface	On/Off key Status indicator (LED): satellite tracking, Bluetooth® communication & battery power
Communication port	Bluetooth® 2.0 class 2 & sealed and protected 8-pin Lemo combined USB / power port
Field controller connection	By Bluetooth® or with GEV162 RS232 cable

Power Management

Removable battery	GEB212 (7.4 V / 2600 mAh Li-Ion rechargeable)
Battery charging time	2 hours to full charge with GKL211
Power	Nominal 12 V DC Range 10.5 – 28 V DC
Operating time	10 h (GNSS only) ⁴ , 8 h (RTK) ⁶

Physical Specifications

Weight	0.8 kg with all-day battery 2.6 kg ready-to-use with Leica CS10 3.5G GIS, pole and batteries 2.3 kg ready-to-use with Leica Zeno 5, pole and batteries
Environmental specifications	IP68: dust and water-resistant for all conditions Temporary submersion into water (max. depth: 1 m) Protected against blowing rain and dust
Operating / storage temperature range ⁴	Operation: -40 to 65 °C (-40°F to +149°F) Storage: -40 to 80 °C (-40°F to +176°F)
Humidity	100%, non-condensing ⁵
Drop	Withstands topple over from a 2 m survey pole onto hard surface Withstands 1 m drop onto hard surface
Vibration	Withstands vibration in compliance with ISO9022-26-08

Accessories and Optional Features

Accessories	<ul style="list-style-type: none"> • External battery charger • Backpack kit • Hard carry case • 2 meter range pole
Optional Field and Office software	<ul style="list-style-type: none"> • Leica Zeno Field • Leica MobileMatriX • Leica Zeno Connect • Leica Zeno Office and Leica Zeno Office on ArcGIS
Optional field computers	<ul style="list-style-type: none"> • Leica Zeno 5 • Leica CS25 rugged Tablet Computer • Leica Zeno 10 and Zeno 15 GNSS/GIS handhelds • Leica CS10 GIS and CS15 GIS field controllers

¹ Measurement precision, accuracy and reliability depends upon various factors including number of available satellites, geometry proximity to base station, multipath effects, ionospheric conditions etc.

² May vary due to atmospheric conditions, multipath, obstructions, signal geometry and number of tracked satellites.

³ WAAS available in North America only, EGNOS available in Europe only, and MSAS available in Japan only

⁴ Compliance with ISO9022-10-8, ISO9022-11-special and MIL-STD-810F Method 502.4-II, MIL-STD-810F method 501.4-II

⁵ Compliance with ISO9022-13-6, ISO9022-12-04 and MIL-STD-810F Method 507.4-I

⁶ May vary with temperature, battery age, usage etc.



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- when it has to be **right**

