Leica Zeno GG04 plus
Data sheet

Smart device independence

Using the Zeno GG04 plus smart antenna with your controller from Leica or own device is simple, regardless if it runs on Android™, iOS or Windows® platforms. Now you can feel right at home while carrying out your data collection tasks. Bluetooth® connectivity ensures cable free operation and high accuracy configuration is easy with just a few clicks in the Zeno Connect application.

Precise Point Positioning (PPP)

PPP enables the GG04 plus to achieve high accuracy data collection without the need for a mobile data connection. PPP works by using a satellite based correction service to broadcast data directly to the GG04 plus. Corrected data is processed onboard the antenna and delivered seamlessly to your device. PPP is available anywhere in the world at any time.

Extensive software support

Not only will the Zeno GG04 plus smart antenna work with Zeno Mobile and Zeno Field software, but, with the help of Zeno Connect it will also work with other data collection apps and software. No development efforts are required to achieve centimetre accurate positioning. If required GNSS metadata can be queried additionally.

Technical Specifications

LEICA ZENO GG04 PLUS I GNSS TECHNOLOGY		
Number of channels	555 channels (more signals, fast acquisition, high sensitivity)	
Satellite signal tracking	GPS (L1, L2, L2C/L2P, L5), Glonass (L1, L2, L3), BeiDou (B1, B2, B3[1]), Galileo (E1, E5a, E5b, Alt-BOC, E6[1]), QZSS, NavIC (IRNSS, L5), SBAS (WAAS, EGNOS, MSAS, GAGAN), L-band	
Real-time and post-processing	Support of real-time correction service and post-processing to achieve positioning accuracy	
Output data protocols	• Windows®: NMEA[2] via Zeno Connect • Android: position provided by Location Service and NMEA[2] output possible, both via Zeno Connect • iOS: position provided by iOS Location Feature and NMEA[2] output possible (via EA protocol) via Zeno Connect	
Update rate	20 Hz (0.05 sec)[3]	
Post-processing accuracy static mode	Horizontal: 3 mm + 0.5 ppm (rms)[4] Vertical: 6 mm + 0.5 ppm (rms)[4]	
Horizontal real-time accuracy (SBAS or external source)	SBAS, L1 only Spot Lite, PPP (Multi-frequency option needed) DGNSS, L1 only Spot Prime, PPP (Multi-frequency option needed) RTK, Multi-frequency	‹ 0.9 m[4] ‹ 60 cm[4] after approximately 8 minutes of converging ‹ 40 cm[4] ‹ 10 cm[4] after approximately 15 minutes of converging ‹ 1 cm + 1 ppm[4]
Vertical real-time accuracy	RTK (Multi-frequency): 2 cm + 1 ppm[4]	
Real-time protocols	RTCM 2.x, RTCM 3.0, RTCM 3.1, RTCM 3.2, RTCM MSM, CMR, CMR+	
Integrated real-time	SBAS[5] (EGNOS, WAAS, MSAS, GAGAN), or PPP via L-band (requires a valid Spot option)	
Time for initialisation	Typically 6 sec[6]	
INTERFACE & COMMUNICATION		
User interface	On/Off key Status indicator (LED): satellite tracking, Bluetooth® communication and battery power	
Communication port	Bluetooth® 4.1 class 1 & sealed and protected 8-pin Lemo combined USB / Serial232 port	
Field controller connection	By Bluetooth® (3 ports available), RS232 or USB cable	
POWER MANAGEMENT		
Removable battery	GEB212 (7.4 V / 2600 mAh Li-Ion rechargeable)	
Battery charging time	2 hours to full charge with GKL341	
Power	Nominal 12 V DC Range 10.5 – 28 V DC	
Operating time	7.5 h (RTK)[7], 10 h (GNSS only)[7]	
PHYSICAL SPECIFICATIONS		
Weight and dimensions	0.8 kg with all-day battery Height: 0.071 m x Diameter: 0.186 m	
Proof against water, sand and dust	IP66 & IP68 (IEC60529): dust and water-resistant for all conditions: Temporary submersion into water (2 hours in 1.40 m depth) and protected against blowing rain and dust	
Operating / Storage temperature range	Operation: –40 to 65 °C (–40°F to +149°F) (ISO 9022-10-08, MIL-STD-810G CHG1 Method 502.6-II & ISO 9022-11-04, MIL-STD-810G CHG1 Method 501.6-II) Storage: –40 to 80 °C (–40°F to +176°F) (ISO 9022-10-08, MIL-STD-810G CHG1 Method 502.6-I & ISO 9022-11-06, MIL-STD-810G CHG1 Method 501.6-I)	
Humidity	100% (ISO9022-12-04, ISO9022-13-06, ISO9022-16-02, MIL-STD-810G CHG1 Method 507.6-I)	
Drop	Withstands topple over from a 2 m survey pole onto hard surface Withstands 1 m drop onto hard surface	
Vibration	Withstands strong vibration (ISO9022-36-05)	
ACCESSORIES & OPTIONAL FEATURES		
Accessories	• External battery charger • Backpack kit • Hard carry case • 2 meter range pole • Universal pole mounts for different sized 3rd party mobile devices	
Optional field and office software	• Leica Zeno Field • Leica Zeno Mobile • Leica Zeno Connect • Leica Zeno Office and Leica Zeno Office on ArcGIS	
Optional field computers	• Leica Zeno 5 • Leica Zeno Tab Android tablet or with the following 3rd party HW in combination with Leica Zeno Connect and Zeno Mobile (Android only): • Android: most phones and tablets with Android version › 4.1 • Windows®: tablets/pcs/handhelds with Windows® 10/8/7 or WEH • Apple phones and tablets	

[1] Believe to comply, but subject to availability of BeiDou ICD and Galileo commercial service definition. BeiDou B3 and Galileo E6 will be provided through future firmware upgrade.
[2] Supported NMEA-0183 messages: GGA, VTG, GLL, GSA, GGQ, GSV, RMC, LLQ (Windows® only), GST
[3] 20 Hz supported for selected NMEA messages on Windows® only.
[4] Measurement precision, accuracy and reliability depends upon various factors including number of available satellites, geometry proximity to base station, multipath effects, ionospheric conditions, etc.
[5] WAAS available in North America only, EGNOS available in Europe only, MSAS available in Japan only, GAGAN available in India only.
[6] May vary due to atmospheric conditions, multipath, obstructions, signal geometry and number of tracked satellites.
[7] May vary with temperature, battery age, usage etc.

Support of different iOS and Android versions cannot be guaranteed at all times as operating system updates are out of Leica Geosystems control. Leica Geosystems publishes a list of fully tested and verified operating system versions on the customer information portal myWorld.

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