

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.

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Technical Specifications

LEICA ZENO GG04 PLUS | GNSS TECHNOLOGY

| | | |
|---|--|---|
| Number of channels | 555 channels (more signals, fast acquisition, high sensitivity) | |
| Satellite signal tracking | GPS (L1, L2, L2C, L5), Glonass (L1, L2), BeiDou (B1, B2, B3 ¹), Galileo (E1, E5a, E5b, Alt-BOC, E6 ¹), QZSS, 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 | <ul style="list-style-type: none"> Windows[®]: NMEA² via Zeno Connect Android: position provided by Location Service and NMEA² output possible, both via Zeno Connect iOS: position provided by iOS Location Feature and NMEA² 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 | < 0.9 m ⁴ |
| | Spot Lite, PPP (Multi-frequency option needed) | < 60 cm ⁴ after approximately 7 minutes of converging |
| | DGNSS, L1 only | < 40 cm ⁴ |
| | Spot Prime, PPP (Multi-frequency option needed) | < 10 cm ⁴ after approximately 30 minutes of converging |
| | RTK, Multi-frequency | < 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

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| 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

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| 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

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|---------------------------------------|--|
| 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 | 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

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|------------------------------------|--|
| Accessories | <ul style="list-style-type: none"> 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 | <ul style="list-style-type: none"> Leica Zeno Field Leica Zeno Mobile 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 plus rugged tablet computer or with the following 3rd party HW in combination with Leica Zeno Connect: <ul style="list-style-type: none"> Android: most phones and tablets with Android version > 4.1 Windows[®]: tablets/pcs/handhelds with Windows[®] 10/8/7 or WEH Apple phones and tablets⁸ |

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, GGG, GSV, RMC, LLQ (Windows[®] only), GSD
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.

⁸ Check compatibility list.



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