α-GEO

LEGEND L6U

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LEGEND

OLED display

Full constellation

Ultra long range radio

Internal GSM antenna

Radio/CORS repeater

Large capacity battery

Magnesium alloy housing

Patented physical offset technology

PERFORMANCE SPECIFICATIONS

MEASUREMENTS

- ◆ 432 Tracking Channels
- ◆ Satellite signals tracked simultaneously
    - GPS: L1C/A, L1C, L2C, L2E, L5
    - GLONASS: L1C/A, L1P, L2C/A, L2P, L3
    - SBAS: L1C/A, L5 (Just for the satellites supporting L5)
    - Galileo: E1, E5A, E5B, E5 AltBOC, E6
    - BDS: B1, B2, B3
    - RTX, QZSS, WAAS, MSAS, EGNOS, GAGAN, SBAS
- ◆ Positioning rates
    - 1Hz, 2Hz, 5Hz, 10Hz, 20Hz ,and 50Hz
- ◆ Initialization time < 10s
- ◆ Initialization reliability >99.99%

POSITIONING

- ◆ Code differential GNSS positioning
    - Horizontal: 0.25 m + 1 ppm RMS
    - Vertical: 0.50 m + 1 ppm RMS
    - SBAS differential positioning accuracy: typically <5m 3DRMS
- ◆ Static GNSS surveying
    - Horizontal: 3 mm + 0.1 ppm RMS
    - Vertical: 3.5m m + 0.4 ppm RMS
- ◆ Real time kinematic surveying
    Single baseline < 30km
    - Horizontal: 8 mm + 1 ppm RMS
    - Vertical: 15m m + 1 ppm RMS
    Network RTK
    - Horizontal: 8 mm + 0.5 ppm RMS
    - Vertical: 15m m + 0.5 ppm RMS
    RTK start-up time: 2 to 8 seconds
- ◆ RTX service
    - Horizontal: 2-4cm RMS
    - Vertical: 5cm RMS
    - Convergence time: < 15min

HARDWARE

PHYSICAL

- ◆ Material: Magnesium alloy
- ◆ Dimensions (W✕H): 130mm✕110mm
- ◆ Weight: 1.0kg with internal battery
- ◆ Operating temperature: -40 ℃ to +60 ℃
- ◆ Storage temperature: -55 ℃ to +85 ℃
- ◆ Ingress protection: IP67 dustproof, protected from 30min immersion to depth of 1m
- ◆ Shock: Survive a 2m pole drop onto concrete
- ◆ Vibration: MIL-STD-810G

COMMUNICATIONS & DATA STORAGE

- I/O Interface
  - 1 LEMO port (5pin): Supports power input, serial port control, and external radio communication
  - 1 micro USB port: Data download, OTG
  - 1 sim card slot: Supports micro sim card
  - 1 antenna port: UHF antenna interface
- Radio modem
  - Transmit power: 1w/2w/5w switchable, the work range is greater than 6km
  - Frequency band: 410MHz-470MHz; supports to freely set the frequency
  - Supports to retransmit correction from CORS; Compatible with other brands
- Cellular
  - Integrated full frequency band 4G modem, supports WCDMA/CDMA2000/TDD-LTE /FDD-LTE
- WiFi
  - 802.11 b/g standard, access point and client mode, supports to access to hotspot to transfer corrections
- Bluetooth
  - Fully integrated Bluetooth V4.0, range = 50m
- Data format
  - sCMRx, RTCM3.2, CMR, RTCM 3.x input and output
  - Dat, Rinex, NMEA outputs
- Storage
  - 8GB, 16GB, 32GB internal memory optional, supports cyclic storage; over one-year raw observations based on 5 seconds interval

OTHERS

PRACTICAL

- OS system: Intelligent LINUX operating system
- Tilt survey: Calibration free; accuracy, <2.5cm in 30 degree
- Relay station: CORS relay, radio relay
- Supported controllers: All Android devices with supported software

DESIGN

- Display: 1.54'' high brightness LCD screen
- Button: 1 power key, 2 function keys
- Indicator: 1 power indicator, 1 data link indicator, 1 satellite indicator
- Voice: Intelligent voice prompts

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