

# M5+

## Survey & Engineering

- 384 channels multi-constellation receiver
- Multiple frequencies for GPS, GLONASS and BDS
- Integrated network, UHF modem and Bluetooth
- Compact and rugged design
- Cost-effective GNSS RTK



M5+ GNSS receiver is one of the most cost-effective solutions selected by a large number of surveyors for its outstanding performances and reliability.

Outstanding 384 channels multi-constellation tracking supports GPS, GLONASS and BDS for obstructed sky conditions to guarantee RTK accuracy and reliability in the field.

Perfect compatibility with Android-based field surveying software LandStar 7 provides an epoch-making experience for various and flexible working industries.

M5+ innovative design integrates a built-in GNSS core, multi-constellation antenna, Bluetooth communication, Rx/Tx UHF datalink and network modules in one single receiver.

M5+ GNSS receiver brings extremely affordable GNSS RTK solution to surveyors without a high cost.



# ■ Technical Specifications

## GNSS Characteristics

- 384 channels with all in view simultaneously tracked satellite signals
  - GPS: L1, L2, L5
  - GLONASS: L1, L2
  - BDS: B1, B2, B3
- Advanced multipath mitigation technology
- Low noise carrier phase measurement

## GNSS Accuracies <sup>(1)</sup>

- Real Time Kinematics (RTK):
  - Horizontal: 10 mm + 1 ppm RMS
  - Vertical: 15 mm + 1 ppm RMS
  - Initialization Time: < 10 s
  - Initialization Reliability: > 99.9%
- Post-processing Static:
  - Horizontal: 8 mm + 1 ppm RMS
  - Vertical: 10 mm + 2 ppm RMS

## Communications

- Integrated 3G network modem
- UHF Radio: Protected TNC Female
  - Standard Internal Rx/Tx: 455 MHz to 465 MHz
  - Transmit Power: Up to 2 W
  - Protocol: CHC
  - Range: 5 km under optimal conditions
  - External Tx DL6: 5 W to 28 W adjustable
- Protocols:
  - RTCM2.x, RTCM3.x, CMR
  - NMEA 0183 output
  - HCN outputs for GNSS raw data (convertible to RINEX static format)
- Bluetooth®: V2.0
- Serial: 1 x 10-pin LEMO port (external power, USB data download, USB update, RS-232)
- Data Storage:
  - 4 GB internal memory
  - GPS device mounts as a USB external hard drive

## Physical

- Size (H x D): 80 mm x 180 mm (3.1 in x 7.1 in)
- Weight: 1.4 kg (49.4 oz) with battery
- Environment
  - Operating: -40°C to +65°C (-40°F to +149°F)
  - Storage: -40°C to +75°C (-40°F to +167°F)
- Humidity: 100% condensation
- Dust and Water Proof: IP67
- Shock and Vibration: 2 m (6.56 ft) fall onto concrete

## Electrical

- Power Consumption: 3.5 W (depending on user settings)
- Li-ion Battery Capacity: 3400 mAh
- Operating Time<sup>(2)</sup>: Up to 4 h in RTK mode
- External Power: 9 V DC to 18 V DC

## Software (optional)

- LandStar 7 Android field data collection software

(1) Accuracy and reliability specifications may be affected by multipath, satellite geometry and atmospheric conditions. Performances assume the minimum of 5 satellites, follow up of recommended general GPS practices. (2) Operating time varies based on temperature.

Specifications are subject to change without notice.



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