Max Nav

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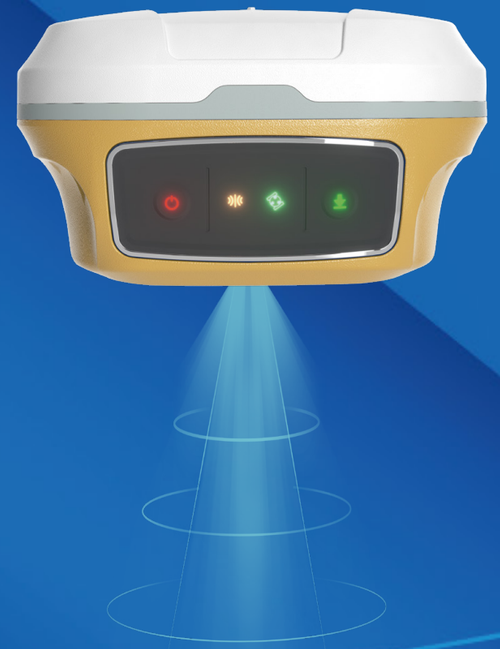
Max Nav

Make surveying easier and faster.



M7 Visual

GNSS Receiver

Visual Stakeout

- GNSS + IMU + Visual Integration
- Real-time refreshing of the handheld stakeout interface
- Low-light camera for clearer images
- Follow the instructions to stakeout

Boosted Performance

- Tracking all running and planned constellations, including GPS, BDS-2, BDS-3, GLONASS, Galileo, QZSS, Navic and SBAS
- Support PPP
- Internal Transceiving UHF Radiomodem the maximum disance is 15KM
- Support Visual Stakeout
- Integrated Bluetooth, V4.0 protocol, compatible with Windows and Android OS
- IP68 Dust- and waterproof for harsh environments

INTEGRATED RECEIVER

System Overview

- Triple-frequency GNSS RTK Receiver with 1688 channels and integrated antenna
- Internal Transceiving 2W UHF Radiomodem, the maximum disance is 15KM
- Baud rates up to 921600 bps UHF modem
- Support Visual Stakeout
- Tx/Rx with full frequency range from 410-470 MHz
- Integrated Bluetooth, V4.0 protocol, compatible with Windows and Android OS
- IP68 Rugged and water-resistant design

HARDWARE

Physical

Dimensions: 123*123*70mm
Weight: ≤900g
Working Temperature: -30 ℃ to +65 ℃
Storage Temperature: -40 ℃ to +85℃
Humidity: 100% no condensing
Waterproof and dustproof: IP68
Shock and vibration tested:
Designed to survive a 2 m drop onto concrete(Shock Non-operating)
Memory: 4GB

STANDARD ROVER SET INCLUDES

- 1 Receiver
- 1 Controller with Holding Bracket
- 2 Rechargeable Batteries (internal)
- 1 Battery Charger
- 1 USB Data, 1 7-Pin Data Cable, 1 DB9 Cable
- 1 Transport Case
- 1 Whip Antenna

STANDARD BASE AND ROVER SET INCLUDES

- 2 Receiver
- 1 Controller with Holding Bracket
- 4 Rechargeable Batteries (internal)
- 2 Battery Charger
- 1 USB Data, 1 7-Pin Data Cable, 1 DB9 Cable
- 2 Transport Case
- 2 Whip Antenna (UHF)
- 1 Tribrach (Optional)
- 1 2m-Range Pole with Bagd (Optional)
- 1 Aluminum Disc ×1 (Optional), 15cm Extension Bar ×1 (Optional)

PERFORMANCE SPECIFICATIONS

Receiver

- 1688 Channels, High fixed rate, Full Constellation tracking, ensures raliable performation
- Anti-interference algorithm technology, for maximum error filtering
- Multiple radio samplers gives the most accurate band tuning available
- Support Visual Navigation and Stakeout
- Available as GNSS L1+L2+L5 Single receiver
- High precision multicorrelating GNSS pseudorange measurements and DP Filter.
- GNSS carrier phase with low noise with <1 mm precision in a 1 Hz bandwidth.
- Signal-to-Noise ratios reported in dB-Hz
- Satellite signals tracked:

GPS: L1C/A, L2P, L1C, L2C, L5
BDS: B1I, B1C, B2I, B2a, B2b, B3I
GLONASS: G1C, G1P, G2C, G2P, G3
Galileo: E1, E5b, E5a, E5AltBoc, E6c
QZSS: L1C/A, L2C, L5, L1C, L1s, L5s, L6
NAVIC: L5
SBAS: L1C/A, L4C
PPP: Support
Sampling Rate: 1Hz, 5Hz, 10Hz on RTK
Code Differential Positioning (DGPS)
< 0.4m RMS
Postprocessed Static (PPS) Fast Static and Kinematic (PPK) Surveying (stop&go)
Horizontal ± 2.5 mm + 0.5 ppm RMS Vertical ± 5 mm + 0.5 ppm RMS
Real Time Kinematic (RTK) Surveying. UHF or Network, Single Baseline <30km(L2)
Horizontal ± 8 mm + 1 ppm RMS Vertical ± 15 mm + 1 ppm RMS
Visual Stakeout
Horizontal ± 8 mm + 1 ppm RMS Vertical ± 15 mm + 1 ppm RMS
Initialization Time: <10 seconds
Initialization Reliability: >99 9%
Signal Re-acquisition: <1s

Communication Protocols and NTRIP compliance

Correction Data: RTCM 2.X, 3.X, CMR (GPS only), CMR+ (GPS only)
ASCII: NMEA-0183 GSV, RMC, HDT, VHD, GGA, GSA, ZDA, VTG, GST; PTNL, etc.

Data Link UHF Radiomodem

Internal Transmitting Power: 0.5-2W adjustable
Tx/Rx with full frequency range: from 410-470 MHz.
Power consumption: ≤3.6W
Antenna: External, SMA
Link Rate/Modulation: up to 921600 bps
Link Protocols: Lora
Unlimited UHF Channels: channel 1 to 9, support customize
Frequency Control: Synthesized 250 kHz Resolution
Work Range: 15 KM
Optional Modes: Transmitting and Receiving

Powerful Android software

User friendly Wizard: Help you get familiar with the software step-by-step
Functions: Radio/PDA CORS modes, all kinds of survey/stake out/CAD sketch and etc.
Import & Export: supporting many kinds of TXT, CSV, SHP, AutoCAD DXF and etc.
Broad Applicability: Featuring 10 more languages and various projections & datums
Cooperation: support mock location function

PDA CORS with Controller Network

Direct connect to CORS with Controller network
Protocols: Transparent / NTRIP/TCP
Network CORS support compatible with VRS, FKP, MAC, iMAX

User Interphase

- 1 Function buttons for Power
- 2 LEDs (indicating Satellites Tracking, RTK Corrections Data)
- Calibration-free IMU integrated for tilt survey up to 60° tilt
- Bluetooth : V 4.0 protocol, compatible with Windows OS and Android OS

Energy

Power Consumption: ≤1.8 W(Rover Mode) ≤3.6 W(Base Mode)
Input Voltage: 5-9 VDC
Integrated internal Battery Charger with charge indicator

Camera

Sensor pixels: 2 MP
Field of view: 75°
Video Frame Rate: 30 fps
Resolution Rate: 1920*1080

Communications

Charger and Download: 1 Type-C
UHF Radio Modem Transmitter / Receiver: switchable power at 0.5W to 2W, 1 SMA
IMU: up to 60°tilt with 2.5 cm accuracy
Integrated internal Battery Charger with charge indicator

- Accuracy, TTFF and reliability specifications may be affected by multipath, satellite geometry and atmospheric conditions.
Specifications assume at least 5 satellites locked and follow up of the recommended practices.
- Working distance of internal UHF varies in different environments, the maximum distance is 15km in ideal situation.
- 8GB is the default internal memory and optional 16GB, 32GB is available to order. Please clarify when placing the order.