


# M30

## DUAL CAMERAS VISUAL GNSS RTK

**To be the Best**
GNSS Solution Provider

CE FCC IP68

# M30 DUAL CAMERAS VISUAL GNSS RTK

Combines advanced technology with upgraded high-definition Camera, IMU, and 4G integration. M30 can quickly capture the site in images and measure points either in the field or later in the office, it enables you to measure what you see, such as obstruction points, obstacle points, dangerous points, and map hundreds of points with survey-grade accuracy within minutes and capture the scene quickly and decide what should be measured later–even if the scene subsequently changes or disappears.




## VR for Superior Visual Surveying

The M30 achieves real-time& non-contact measurement via camera, enabling precise measurements at points where signals are blocked or where access is difficult or unsafe. Its advanced cameras extract survey-grade 3D coordinates from real-world video, maps hundreds of survey-grade accurate points within minutes, providing higher efficiency and reliability.



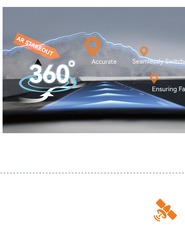
## 3D Modeling

The M30's video photogrammetry algorithms enable 3D modeling of buildings and facades. It effectively fuses drone and GNSS RTK data to efficiently perform 3D modeling over large areas. Additionally, the M30 is compatible with industry-standard 3D modeling software.



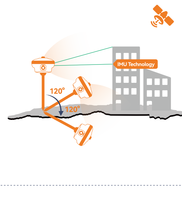
## AR Stakeout

Visual positioning eases point finding by overlaying design files onto real scenes, enhancing stakeout efficiency. A high-performance HD camera achieves high accuracy with precise signal tracking. The 360-degree AR stakeout seamlessly switches between the handheld controller and rover, ensuring fast and accurate stakeout experiences.




## Calibration-Free Solution

Equipped with 120° calibration-free IMU technology in a compact body, it complements the laser's outstanding performance, extending the M30's application range to locations that traditional RTK systems cannot reach, opening up new horizons for product applications, enhancing customer satisfaction and boosting operational efficiency.




## Longer Working Distance

Equipping the MeridianLink protocol internal radio offers 15km working range and increases flexibility. By eliminating the need for an external radio, the M30 becomes more lightweight, less complex, and more portable, which can lead to increased efficiency and convenience in the field.




## Meridian M30 Dual Cameras Specification

| | | |
|---|---|---|
| GNSS Signal | Channel | 1408 |
| | BDS | B1I, B2I, B3I, B1C, B2a, B2b* |
| | GPS | L1C/A, L1C, L2P(Y), L2C, L5 |
| | GLONASS | L1, L2, L3* |
| | GALILEO | E1, E5a, E5b, E6* |
| | QZSS | L1C/A, L1C, L2C, L5, L6* |
| | SBAS | L1, L5* |
| | NavIC(IRNSS)* | L5 |
| | L-band | B2b PPP (Only for the Asian-Pacific Region) & HAS* |
| | Data Format | CMR, CMR+, RTCM2.X, RTCM3.X |
| | Data Output | NMEA-0183, RINEX, TXT |
| | Data Updating Rate | Up to 20Hz |
| | Time to Recapture | <1s |
| | Cold Start | <40s |
| Positioning Performance | Single Point Positioning (RMS) | **Horizontal:** 1.5m ; **Vertical:** 3.0m |
| | DGPS (RMS) | **Horizontal:** 0.4m ; **Vertical:** 0.8m |
| | Real-Time Kinematic (RMS) | **Horizontal:** ±(8mm+1ppm)<br>**Vertical:** ±(15mm+1ppm) |
| | Speed Accuracy (RMS) | 0.03m/s |
| | Static Accuracy (RMS) | **Horizontal:** ± (2.5mm+0.5ppm)<br>**Vertical:** ± (5mm+0.5ppm) |
| | Time Accuracy (RMS) | 20ns |
| | Speed Accuracy | ±0.03m/s |
| | Tilt Compensation Accuracy | ±2cm(Tilt Angle≤60°, Up to 120°) |
| | IMU Update Frequency | 200Hz |
| Communication | Bluetooth | V5.2 Dual Mode, 2.4GHz@+5dBm |
| | WiFi | IEEE 802.11b/g/n |
| | Cellular | **LTE FDD:** B1/3/5/7/8/20<br>**LTE TDD:** B38/40/41<br>**UMTS/HSPA+:** B1/8<br>**GSM/GPRS/EDGE:** 900/1800 MHz |
| | Storage | 32GB, Up to 64GB |
| | Internal Radio | **Transmitting Power:** 1 W (27 dBm ±1.5 dB) or 2 W (32 dBm ±1.5 dB)<br>**Frequency:** 410–470MHz<br>**Protocol:** SOUTH, TRIMTALK 450S, TRIMM-III, TRANSEOT, SATEL, MERIDIANLINK<br>**Air Baud Rate:** 9600, 19200, 11000 |
| Battery | Specifications | 7.2V, 6600mAh lithium-ion Rechargeable Battery |
| | Operating Time | **RTK Rover:** Up to14 hours (Typical Power Consumption)<br>**Static:** Up to 22 hours (Typical Power Consumption) |
| | Charging | Support USB PD 15V/2A (Supports Quick Charging Adapter) |
| Dual-Camera | AR Sensor pixels | Global shutter with 5 MP, large viewing angle, supports live view stakeout |
| | VR Sensor pixels | Global shutter with 2 MP, supports Photogrammetry |
| | VR Field of view | 75°C |
| | Video frame rate | 30fps |
| | Image accuracy | 2–4 cm 95% @10m |
| Environment | Operating Temperature | -40°C~+85°C |
| | Storage Temperature | -55°C~+85°C |
| Physical | Anti-seismic | 2m Pole Drop Onto Concrete |
| | Dust & Waterproof | IP68 |
| | Display | 0.96" OLED Display |
| | I/O Interface | 1x USB type-C port; 1 x TNC antenna port; 1x SIM card slot; 1 × 5 pin LEMO port |
| | Dimensions | 133mm×133mm×84.5mm |
| | Weight | 900g |

*All specifications are subject to change without notice.
(1) Compliant, GLONASS L3, Galileo E6, Galileo E6 High Accuracy Service (HAS), BDS B2b and SBAS L5 will be provided through future firmware upgrade.
(2) Accuracy and reliability are determined under open sky, free of multipaths, optimal GNSS geometry and atmospheric condition. PPP accuracy is subject to the region, environment, and convergence time. High-precision static requires a minimum of 24 hours of long-term observation and precise ephemeris.

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