## Meridian M25 Specification

| | | |
|---|---|---|
| GNSS Signal | Channel | 1408 |
| | BDS | B1I，B2I，B3I，B1C，B2a，B2b* |
| | GPS | L1 C/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, DAT |
| | 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+1×10⁻⁶·D)<br>**Vertical:** ±(15mm+1×10⁻⁶·D) |
| | Speed Accuracy (RMS) | 0.03m/s |
| | Static Accuracy (RMS) | **Horizontal:** ±(2.5mm+0.5⁻⁶·D)<br>**Vertical:** ±(5mm+0.5⁻⁶·D) |
| | Time Accuracy (RMS) | 20ns |
| | Speed Accuracy | **≥0.03m/s** |
| | Tilt Compensation Accuracy | **≤2cm(Tilt Angle≤60°, Up to 120°)** |
| | IMU Update Frequency | **200Hz** |
| | Laser Accuracy (RMS) | **Horizontal**: ±(8mm+3mm/m)<br>**Vertical:** ±(15mm+3mm/m)<br>Supports **120-meter** laser range with high-brightness laser technology |
| Communication | Bluetooth | SPP3.0+BLE5.0 Dual Mode |
| | WiFi | 802.11 a/b/g/n/ac |
| | Cellular | **LTE FDD:** B1/2/3/4/5/7/8/12/13/18/19/20/25/26/28<br>**LTE TDD:** B38/39/40/41<br>**WCDMA:** B1/2/4/5/6/8/19<br>**GSM:** B2/3/5/8 |
| | Storage | 32GB |
| | Internal Radio | **Transmitting Power:**2W(37±1dBm) 1W(30±1dBm)<br>**Frequency:** 410~470MHz<br>**Protocol:** SOUTH19200, SOUTH9600,Trimtalk9600, TRANSEOT9600, SATEL，MeridianLink<br>**Air Baud Rate:** 9600, 19200 |
| Battery | Specifications | 7.4V，7000mAh lithium-ion Rechargeable Battery |
| | Operating Time | **Laser RTK Rover:** Up to 22 hours (Typical Power Consumption)<br>**Static:** Up to 35 hours (Typical Power Consumption) |
| | Charging | Support USB PD 15V/2A (Supports Quick Charging Adapter) |
| Environment | Operating Temperature | -40°C~+85°C |
| | Storage Temperature | -55°C~+85°C |
| | Anti-seismic | 2m Pole Drop Onto Concrete |
| | Dust & Waterproof | IP67 |
| Physical | AR Camera | 5 MegaPixel, large viewing angle, supports live view stakeout |
| | Laser Assisted Camera | 5 MegaPixel, large viewing angle, supports live view stakeout |
| | I/O Interface | 1× USB type-C port; 1 × TNC antenna port; 1× SIM cardslot; 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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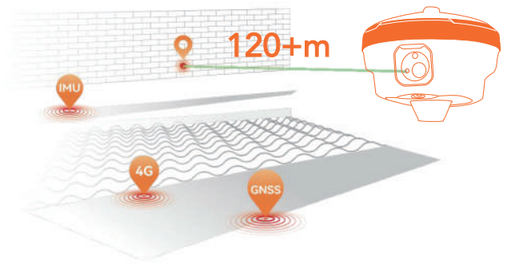
# M25 High Precision Laser GNSS RTK

Meridian M25 GNSS RTK is an innovative solution that combines advanced laser technology with Camera, IMU, and 4G integration. It is calibration-free, significantly boosting operational efficiency and laser measuring makes the rodless survey improve efficiency and reduce risk factors. The M25 receiver provides a new way to work in challenging & impossible scenarios with high accuracy, including river-ine stake-out, bridge pile surveying, elevation surveying, municipal surveying, and outdoor & indoor combination surveying.

LASER CAMERA IMU 4G


## Latest Laser Technology

Laser technology offers unparalleled advantages in precision positioning and makes surveying work rodless and easier. Combining cutting-edge 120m ultra-bright laser technology with full constellation GNSS, IMU, and 4G integration delivers calibration-free accuracy, significantly enhancing work efficiency and reducing potential risks.

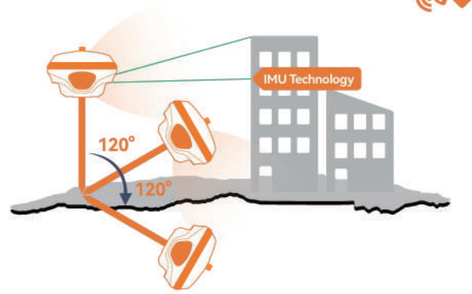



## AR Stakeout

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 laser & 120° calibration-free IMU technology in a small body, it complements the laser's outstanding performance, extending the M25 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

Equipped the MeridianLink protocol internal radio offers 15km working range and increases flexibility. By eliminating the need for an external radio, the M25 becomes more lightweight, less complex, and more portable, which can lead to increased efficiency and convenience in the field.


## Full Constellations

Supports BDS, GPS, GLONASS, Galileo, QZSS, and SBAS. Its 1408 channels offer comprehensive GNSS signal tracking capabilities.