



FJD Trion™ V10i

GNSS SYSTEM WITH VISUAL POSITIONING

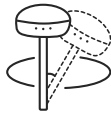
PRECISION REDEFINED: VISION BEYOND COORDINATES

Grab the V10i and get measuring. Integrating an OLED screen, IMU, and two cameras, the V10i gives us a next-level productivity boost. The AR Stakeout gives you real-time visual guidance on stakeouts. The Visual Measure achieves the measurement of hard-to-access locations. An OLED screen will bring a new interactive experience for Surveyors.



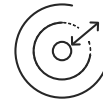
Visual Measure & AR Stakeout

Dual cameras: 2 MP Forward, 5 MP Downward



IMU-based Tilt Compensation

Support Visual Measure
Tilt 60° Calibration-free



RTK Accuracy

H: 8 mm + 1 ppm RMS
V: 15 mm + 1 ppm RMS



Rugged Reliability

IP68
2 m Drop-proof



Communication Diversity

SIM Card and UHF radio,
Supports NFC, WiFi & Bluetooth

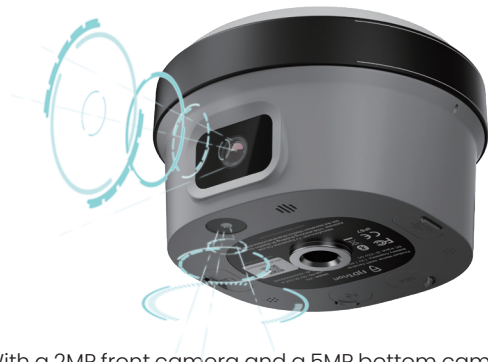


Global Constellations Supported

1408 channels; GPS, GLONASS, Galileo, Beidou, QZSS, SBAS, IRNSS

CAPTURE MORE, WORRY LESS

Clear vision, precise measurements



With a 2MP front camera and a 5MP bottom camera, V10i will bring a clear picture texture to the surveyors. A powerful 4-core processor and a multi-engine algorithm ensure the V10i gets a smooth image in the AR Stakeout function. And in the image measurement function, you only need to click on the photo to obtain centimeter-level precision coordinates.

Multiple controllers for selection

We provide two types of controllers for different required users. We have a 5.5-inch screen keyboard controller and an 8-inch large-screen tablet controller. Both of them are equipped with advanced processors to ensure the smooth operation. The highlighted screen guarantees the controller is readable under the sunlight. Sensitive touch and fast feedback will improve work efficiency.

Tilt Survey with high efficiency



The V10i supports the Tilt Survey of 60 degrees. We don't need to hold the survey pole upright when measured, which improves the efficiency of the measurement. When we meet some positions where we can't hold the pole upright, the Tilt Survey function will help you solve it easily.



Intelligent interaction with ultimate experience



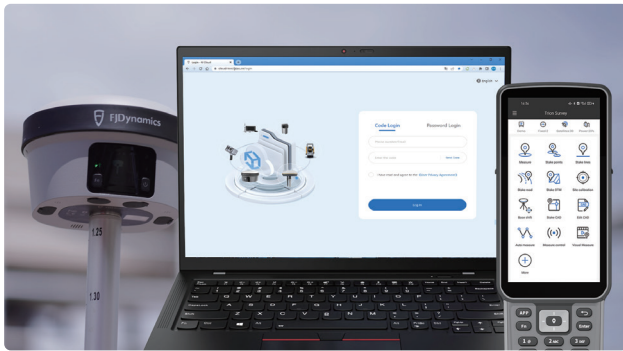
The OLED screen displays the real-time working status of V10i. The highlight screen ensures we can read under the strong sunlight. We can set V10i as a base station and static mode by physical buttons when we don't have controllers. At the same time, the V10i has a noise-canceling microphone, which can accurately and quickly identify sound. The hi-fi speakers can broadcast the working status of the V10i.

Link communication diversification



V10i supports Wi-Fi, Bluetooth, and NFC connection. It is a convenient connection at one touch by NFC. V10i also supports UHF radio and SIM card communication to meet different needs.

Field to office – enhance productivity with Trion Survey Cloud



Seamlessly connect field and office teams. Transmit field data and project updates in real-time, expediting work on both ends. No more waiting, just productivity.

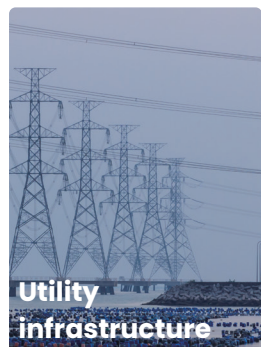
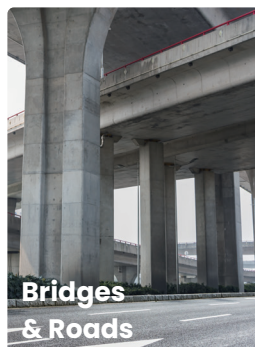
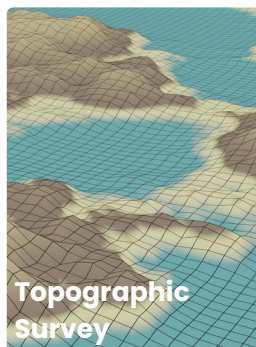
Share system parameters and set up data, including coordinate systems, geoid models, and datum grid files.

Built tough, engineered to perform



The alloy body of the V10i is lightweight and resistant to magnetic interference. The upgraded build enables consistently strong satellite availability even with obstructed sky or less than ideal weather conditions. You can trust the V10i to keep on working even if it's rained on or dropped.

APPLICATION SCENARIOS



SPECIFICATIONS

GNSS Performance

| | |
|----------|-------------------------------|
| Channels | 1408 channels |
| GPS | L1A, L1C, L2C, L2P, L5 |
| GLONASS | L1, L2 |
| Galileo | E1, E5a, E5b, E6* |
| BeiDou | B1I, B2I, B3I, B1C, B2a, B2b* |
| QZSS | L1, L2C, L5, L6* |
| IRNSS | L5* |
| SBAS | L1* |

*Support by a firmware upgrade.

Communications and Data Storage

| | |
|---------------------|---|
| SIM card type | Nano-SIM card |
| Network modem | Integrated 4G modem: TDD-LTE, FDD-LTE, WCDMA, EDGE, GPRS, GSM |
| Wi-Fi | 2.4&5 GHz, 802.11a/b/g/n/actouch pairing |
| Wireless connection | NFC for device |
| Bluetooth® | BT4.2&BLE |
| Ports | 7-pin LEMO port UHF antenna port USB Type-C port |
| Built-in UHF radio | Rx/tx:(410-470)mhz / (902-928)mhz Transmit Power: 1W Protocol: TRIMTALK, TRIMMARK III, TT450S, TRANSEOT, Satel 3AS 4FSK Link rate: 9,600 bps to 19,200 bps Range: 5-8 km typically |
| Data formats | Input&Output: NMEA-1083, RTCM3.X Input: RTCM2.X, CMR |
| Data storage | 32 GB internal memory |

Positioning Performance

| | |
|------------------------------------|---|
| Real time kinematic (RTK) | H: 8 mm + 1 ppm RMS V: 15 mm + 1 ppm RMS Initialization time: < 5 s Initialization reliability: >99.9% |
| Post-processing static | H: 2.5 mm + 0.5 ppm RMS V: 5 mm + 0.5 ppm RMS |
| Code differential | H: 0.4 m RMS V: 0.8 m RMS |
| Autonomous | H: 1.5 m RMS V: 2.5 m RMS |
| Visual survey accuracy | Typically 3 cm, range 2-15 m |
| Positioning rate | 1 Hz, 5 Hz and 10 Hz |
| Time to first fix | Cold start: < 20s, Hot start: < 5s Signal re-acquisition: < 1 s |
| Tilt angle | 0-60° |
| RTK accuracy withtilt-compensation | 30°/2.5 cm |

Hardware

| | |
|------------------------------------|--|
| Temperature | Operating: -35 C-65 C Storage: -40 C-70 C |
| Humidity | 95% non-condensation |
| Ingress protection | IP68, dustproof, protected from continuous immersion to depth of 1 m |
| Drop | Designed to survive a 2-meter pole-drop |
| Li-ion battery capacity | Built-in battery 7000 mAh, 7.4 V 30 W PD Fast Charge |
| Operating time on internal battery | Rover 15 h, Base 10 h Static: > 25 h |
| External power input | 9 - 28 V DC |
| Dimensions (D × H) | ∅ 130 × 83 mm |
| Weight | Approximately 950g |
| True color OLED Screen | 1.41 inches |
| Sensor resolution | Forward: 2 MP, downward: 5 MP, both with global shutter |
| Field of view | 70° |

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