FJDynamics

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.

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.

Mutiple 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.

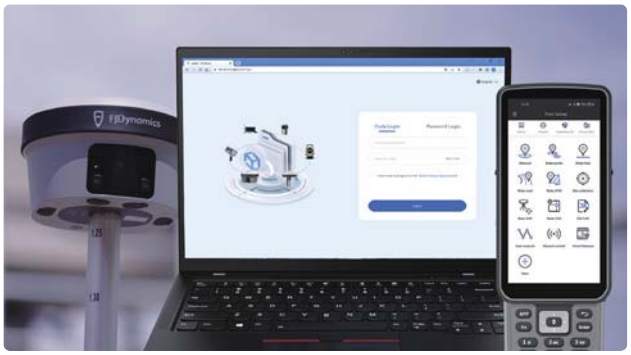
Intelligent interaction with ultimate experience

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 micro-phone, 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



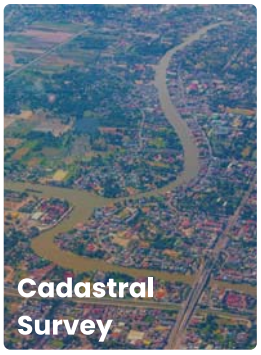
Seamlessly connect field and office teams. Transmit field data and project updates in real-time, expediting work on both ends. No more waiting, just productivity.

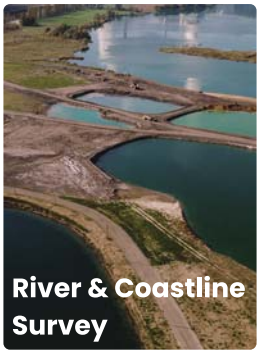
Share system parameters and set up data, including coordinate systems, geoid models, and datum grid files.

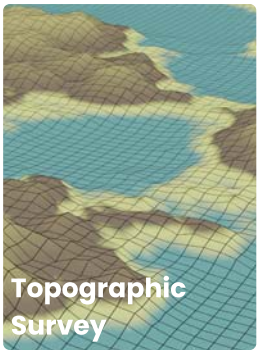
Built tough, engineered to perform

The alloy body of the V10i is lightweight and resistant to magnetic interference. The upgraded build enables consistently strong satellite availbility even with obstruct-ed 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℃~65℃
	Storage: -40℃~70℃
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)	Φ 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°

CREATE FOR A BETTER WORLD