



FJD Trion™ V10a

GNSS SYSTEM WITH VISUAL GUIDANCE

VISUAL BEYOND COORDINATES WITHIN POCKET

Grab the V10a and start measuring. Equipped with IMU, two high-definition cameras, and physical buttons, the V10a gives you a next-level productivity boost. With pocket-sized design and augmented reality technology, it offers portability convenience and real-time visual guidance for measurements, making it ideal for outdoor surveying projects.



Augmented Reality
Visual Guidance

Dual cameras :
5MP Forward
5MP Downward



Lighter
And smaller

Smaller Size (1.8% ↓)
Lighter Weight (1.5% ↓)



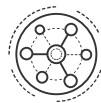
RTK
Accuracy

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



Rugged
Reliability

2m
Drop-proof



Communication Diversity

SIM Card and In/external
radio, NFC, Wi-Fi & Bluetooth

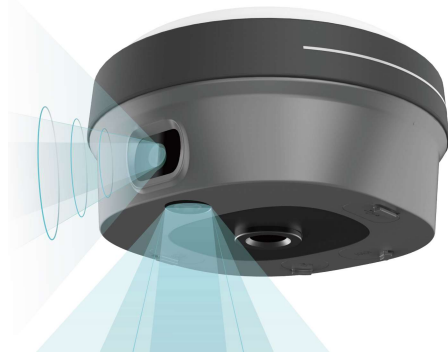


Integrated
4G Modem

LTE-FDD, LTE-TDD, WCDMA,
GSM/EDGE

SEE MORE, WORRY LESS

Clear vision, precise measurements



With two 5MP cameras facing forward and downward, the V10a brings clearer picture texture to surveyors. Running on a powerful 4-core processor and multi-engine algorithm, it offers a smooth view in the AR stakeout, allowing you to follow the visual guidance to complete the staking. With mixed reality technology for superimposing CAD drawings, the V10a enables construction personnel to preview and evaluate the design scheme more comprehensively, ensuring quality and safety on the construction site.

Tilt Survey with high efficiency

Supporting the tilt survey of 60 degrees, the V10a automatically compensates the tilted position to deliver accurate results, eliminating the need to hold the survey pole upright while measuring. This allows you to focus on more mission-critical tasks.

Communication diversity



The V10a supports Wi-Fi, Bluetooth, 4G, and one-touch NFC connection. It also supports UHF radio and SIM card communication to meet different needs. With built-in 4G module, it supports LTE-FDD, LTE-TDD, WCDMA, GSM/EDGE, and meets the requirements of global use.



Built tough, engineered to perform

The V10a has a lightweight alloy body that is resistant to magnetic interference. With the upgraded build, it delivers consistently stable satellite signals even in obstructed environments or challenging weather conditions. You can trust the V10a to keep on working even if it's rained on or dropped.

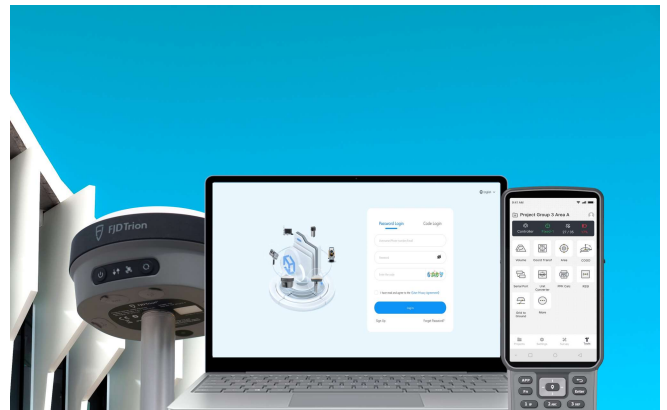


Multiple controllers for selection

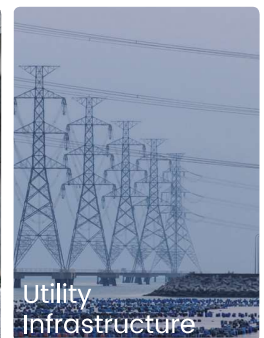
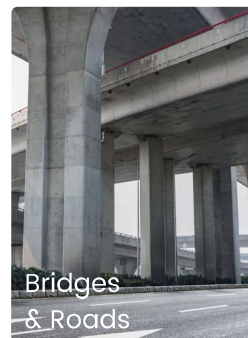
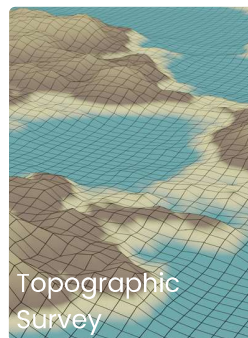
The V10a provides two types of controllers: a 5.5-inch compact-screen keyboard controller and an 8-inch large-screen tablet controller, both powered by advanced processors for smooth screen operation. Featuring sensitive touch and fast response, these controllers help you enhance your work efficiency and allow you to see clearly even in direct sunshine thanks to ambient-aware screen brightness.

Enhance field-to-office productivity with FJDynamics Business Center (FBC)

The V10a simplifies the workflow from field to office through data transfer and project updates to FBC in real time, streamlining project collaboration on both ends. It allows you to share system parameters and set up data, including coordinate systems, geoid models, and datum grid files.



APPLICATION SCENARIOS



SPECIFICATIONS

GNSS

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*
PPP	E6

*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 (Extrenal radio) UHF antenna port USB Type-C port
Built-in UHF radio	Rx/Tx: (410-470)MHz / (902-928)MHz Transmit Power: 1W (1.8W Optional) Protocol: TRIMTALK, TRIMMARK III, TT450S, TRANSEOT, Satel 3AS 4FSK Link rate: 9,600 bps to 19,200 bps MAX Range: 5-8 km typically
Data formats	Input&Output: NMEA-1083, RTCM3.X Input: RTCM2.X, CMR
Data storage	32 GB internal memory

Camera

Sensor resolution	Forward: 5 MP, downward: 5 MP
Field of view	83°

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Positioning

Real time kinematic (RTK)	H: 8 mm + 1 ppm RMS V: 15 mm + 1 ppm RMS Initialization time: < 5s Initialization reliability: >99.9%
PPP accuracy	RMS Horizontal: ±20cm, RMS Vertical: ±40cm
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: < 1s
Tilt angle	0-60°
RTK accuracy with tilt-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 4900 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 x H)	Φ130 x 68 mm
Weight	Approximately 800g

Note: The battery life is subject to the operation environment, working temperature, and working mode. It has a standard lifespan in normal operating conditions.

CREATE FOR A BETTER WORLD

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