



FJD Trion™ V10a

GNSS SYSTEM WITH VISUAL GUIDANCE

VISUAL BYEOND 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



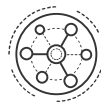
Lighter
And smaller

Smaller Size (1 8% ↓)
Lighter Weight (1 5% ↓)



RTK
Accuracy

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



Communication Diversity

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

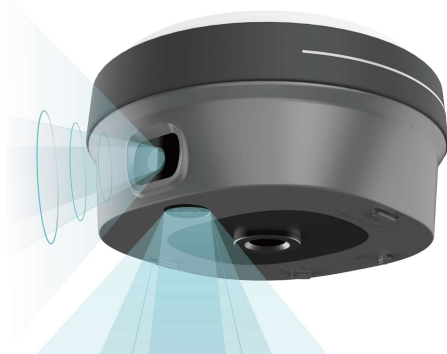


Integrated
4G Modem

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, WCDMA, GSM/EDGE, and 4G. 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.

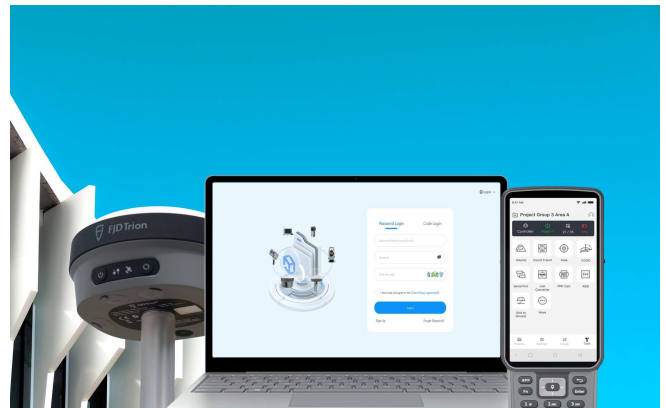


Multiple controllers for selection

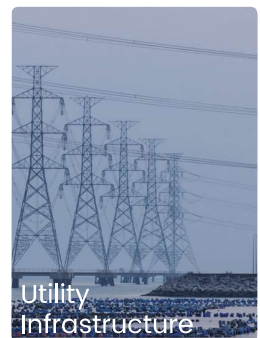
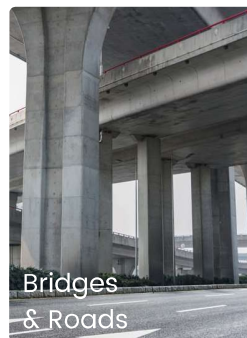
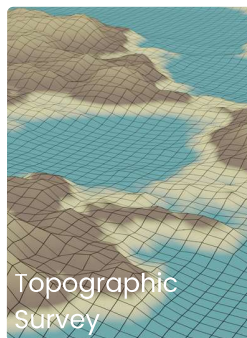
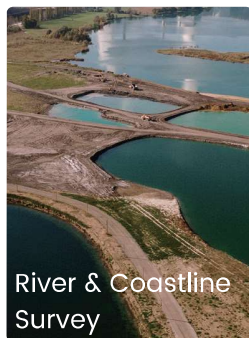
The V10a provides two types of controllers: a 5.5-inch compact-screen keyboard controller and an 8-inch large-screen tablet controller, both powered by advanced processors for smooth screen operation. Featuring sensitive touch and fast response, these controllers help you enhance your work efficiency 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	L1C, L1 C/A, L2C, L5
GLONASS	G1, G2
Galileo	E1, E5a, E5b, E6*
BeiDou	B1I, B1C *
SBAS	L1, L5 *

*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,
Wi-Fi	2.4&5 GHz, 802.11a/b/g/n/ac
Bluetooth®	BT4.2&BLE
Ports	7-pin LEMO port (Extrenal radio) UHF antenna port USB Type-C port
Built-in UHF radio	902.6-927.8 MHz Protocol: TRIMTALK, TRIMMARK III, TT450S, TRANSEOT, Sate1 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 5000 mAh, 7.3V 30 W PD Fast Charge
Operating time on internal battery	Rover 15 h, Base 10 h Static: > 25 h
External power input	9 – 32 V DC
Dimensions (D x H)	Φ130 × 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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FCC statement

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.

This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

