



FJD Trion™ V10i



GNSS SYSTEM WITH VISUAL POSITIONING

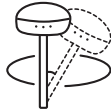
PRECISION REDEFINED: VISION BEYOND COORDINATES

Ditch the struggle and conquer your next surveying project with the new V10i. Boasting a best-in-class Septentrio Mosaic-X5 module, the new V10i muscles through interference and obtains robust and stable signals with the built-in AIM+ technology. On top of that, the V10i keeps the awesome features you know and love: AR Stakeouts and Visual Measurements powered by the high-resolution dual cameras. Enjoy reliable accuracy and enhanced productivity in hard-to-access locations.



Visual Measure & AR Stakeout

Dual cameras: 2 MP Forward, 5 MP Downward



IMU-based Tilt Compensation

Support Visual Measure
Tilt 60° Calibration-free

Hz

100Hz

Ultra high update rate
100Hz



AIM+

Advanced Interference
Monitoring and Mitigation



Rugged Reliability

IP68
2m Drop-proof



RTK Accuracy

H: 0.6 cm + 0.5 ppm
V: 1 cm + 1 ppm



IONO+

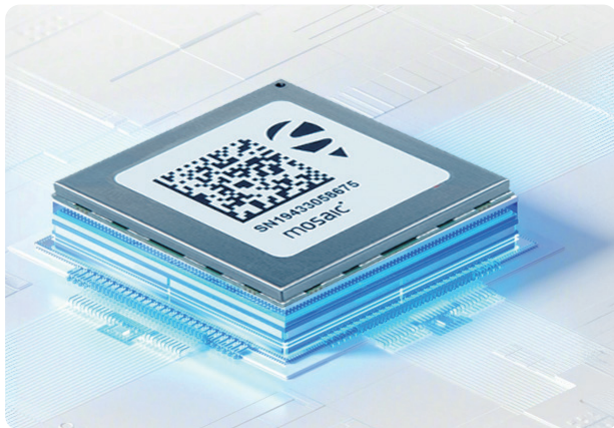
Ionospheric
Scintillation Monitoring



APEM+

Advanced Multipath
Mitigation

CAPTURE MORE, WORRY LESS



Septentrio Inside

The Septentrio Mosaic-X5 module empowers the V10i to conquer challenging conditions and deliver unmatched surveying performance. With built-in AIM+ technology, the powerhouse module suppresses a wide variety of interferers, thus ensuring signal accuracy and stability. It also integrates the IONO+ technology that mitigates signal distortion and delay, providing reliable signals from multiple constellations in a wide range of challenging operations.

Clear Vision, Precise Measurement

View and save coordinate information with clear visual guidance. Featuring a 2 MP forward camera and a 5 MP downward camera, the V10i provides high-resolution AR-based guidance for your stakeout missions powered by a 4-core processor and multi-engine algorithm. The Visual Measurement function allows you to get position information with centimeter-level accuracy without risking your safety in hard-to-access locations.



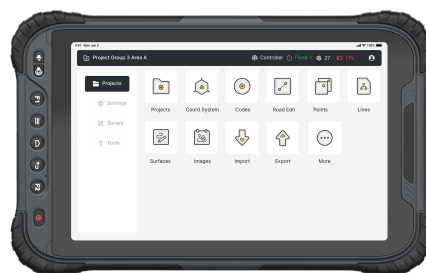


Tilt Surveying for High Efficiency

Forget the struggle of perfectly leveling your pole. The V10i's IMU-based tilt surveying supports tilts of up to 60 degrees. Capture accurate data on uneven ground or around obstacles, maximizing efficiency and eliminating time-consuming redos.

Diverse Controller Options

Work the way you want with the two controller options. Choose the compact and portable 5.5-inch screen controller for on-the-go agility, or opt for the larger 8-inch tablet controller for a more expansive workspace and detailed data visualization. Both controllers boast advanced processors for smooth operation, ensuring a comfortable and efficient workflow.



Diverse Communication

The V10i caters to diverse communication needs. Integrate seamlessly with existing workflows via Wi-Fi, Bluetooth, and one-touch NFC pairing. For extended range or offline operation, the V10i also supports UHF radio and SIM card connectivity options.

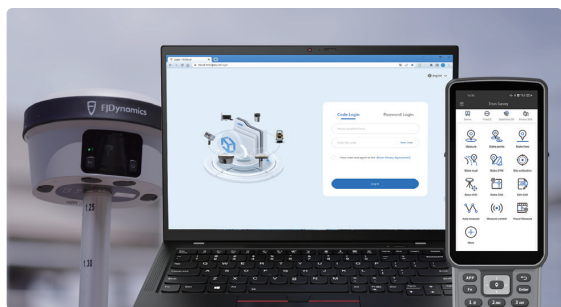
Intuitive Control Panel

The high-resolution OLED screen delivers a clear view of device status, including connections, battery, and satellite signals. Set up static or base mode with physical buttons, even without a controller. The integrated noise-canceling microphone and Hi-Fi speaker enable seamless voice communication for hands-free control.



Field to office - enhance productivity with Fjdynamics Business Center (FBC)

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.



SPECIFICATIONS

GNSS Performance

Channels	448 channels
GPS	L1C/A, L1P(Y), L2C, L2P, L5
GLONASS	L1CA, L2CA, L2P, L3 CDMA
BeiDou	B1I, B1C, B2a, B2I, B3
Galileo	E1, E5a, E5b, E5 AltBOC
QZSS	L1C/A, L2C, L5
NavIC	L5
SBAS	EGNOS, WAAS, GAGAN, MSAS, SDCM (L1, L5)

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 (1.8W Optional) Protocol: TRIMTALK, TRIMMARK III, TT450S, TRANSEOT, Satel 3AS 4FSK Link rate: 9,600 bps to 19,200 bps Max Range: 5-10 km typically ³
Data formats	NMEA 0183, v2.3, v3.03, v4.0 RINEX v2.x, v3.x RTCM v2.x, v3.x (MSM included) CMR v2.0 (out/in), CMR+ (input only)
Data storage	32 GB internal memory

Camera

Sensor resolution	Forward: 2 MP, downward: 5 MP
Field of view	83°

¹ Open sky conditions

² RMS levels

³ Baseline <40 km

⁴ 99.9%

⁵ Incl. software compensation of the sawtooth effect

⁶ No information available (no almanac, no approx. position)

⁷ Ephemeris and approx. position known

⁸ Ideal environment

Positioning Performance

RTK performance ^{1,2,3}	H: 0.6 cm+0.5 ppm V: 1 cm+1 ppm Initialization time 7 s
Other positioning	Standalone: Horizontal 1.2 m, Vertical 1.9 m
modes accuracy ^{1,2}	SBAS: Horizontal 0.6 m, Vertical 0.8 m DGNSS: Horizontal 0.4 m, Vertical 0.7 m
Velocity accuracy	3 cm/s
Maximum update rate	Position: 100 Hz Measurements only: 100 Hz
Latency ⁴	<10 ms
Time precision xPPS out ⁵	5 ns
Event accuracy	< 20 ns
Time to first fix	Cold start ⁶ : < 45 s Warm start ⁷ : < 20 s Re-acquisition: 1 s
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 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

a. Battery life might be influenced by the real working environment.

b. The battery life is related to the working environment, working temperature and working mode. At present, it is the standard working condition.

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