

FJD Trion V10L

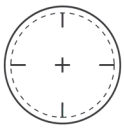
GNSS Receiver with Laser Measurement

Fast and Precise Laser Measurement

Measure from a distance without stepping onto the site. Aim, measure, and stake out with intuitive on-screen guidance while EasyFix automatically locks onto the target, reducing manual corrections for faster, more accurate fieldwork.



Non-contact measurement and stakeout



EasyFix targeting



Visible laser



Automatic Gain Control for ranges up to 80 m



Second-generation IMU

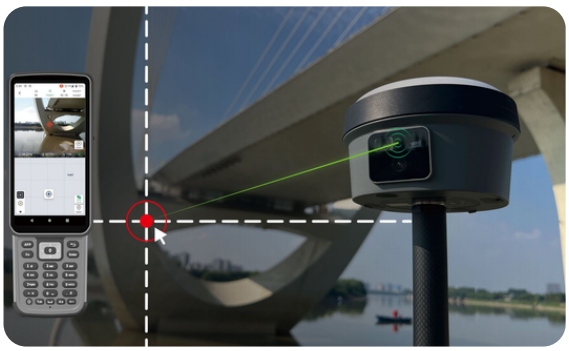


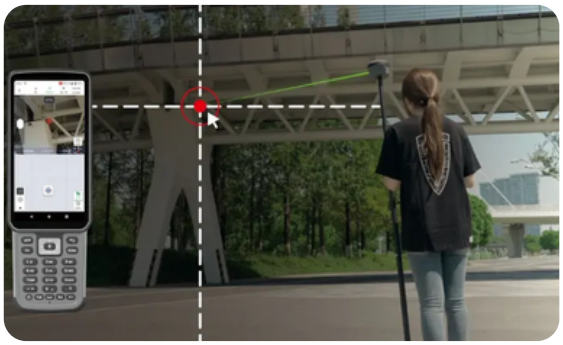
15 m range
± 5 cm accuracy

Why Surveyors Choose V10L

Non-contact Measurement in Changing Conditions

Measure points without making contact with the target. Use clear on-screen guidance to aim and capture from up to 5 m away, maintaining consistent ±3 cm precision across changing lighting conditions and surface types.





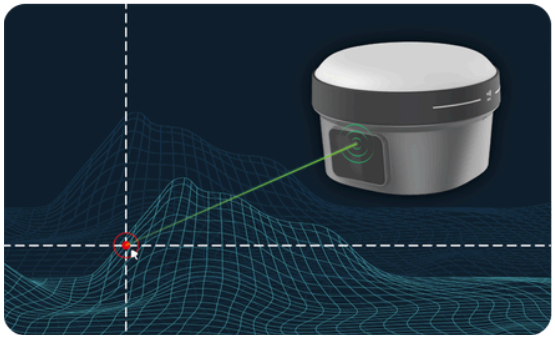
EasyFix, Easy Targeting

Use the live camera view to lock onto targets. Automatic alignment and zoom make it easier to identify and select precise points, even when working at longer distances.

Clear Visibility in Any Light

The laser remains visible in bright sunlight and low-light conditions. An integrated night-vision camera supports measurement and stakeout in dark environments.





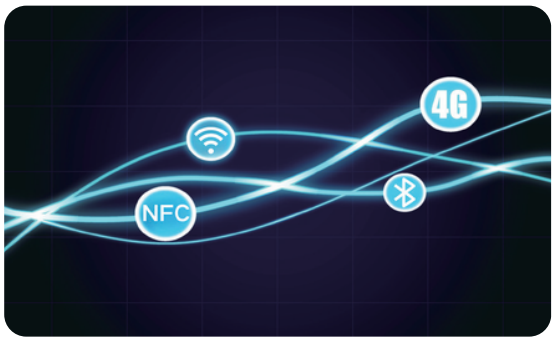
Visual Stakeout

See where to stake out before you walk there.
AR guidance shows direction and distance on screen, helping you place points and reduce back-and-forth on site.

Auto IMU

No calibration required. Start surveying 60% faster with our second-generation IMU, delivering quicker initialisation, enhanced accuracy, and reliable performance across a wide range of surveying tasks.





Multiple Communication Channels

Built-in 4G, Wi-Fi, Bluetooth and NFC support stable data flow across different site conditions. Internal and external radio options let you choose the setup that fits your site layout and working range.

Choose the Right Fit for Your Workflow

V10La supports non-contact measurement and laser stakeout for standard point-by-point work.

V10Li adds visual measurement, allowing multiple points to be selected from a single image, making it better suited to jobs with many targets or complex scenes.

V10Li



V10La



Helps You Get It Right, Anywhere











SPECIFICATIONS

GNSS

Channels	1408 channels
GPS	L1 C/A, L1C, L2C, L2P, L5
GLONASS	L1, L2, L3
BeiDou	B1I, B2I, B3I, B1C, B2a, B2b
Galileo	E1, E5a, E5b, E6
QZSS	L1, L2C, L5, L6
NavIC	L5
SBAS	L1C/A

Positioning

RTK performance [1]	H: 8 mm + 1 ppm RMS; V: 15 mm + 1 ppm RMS
	initialisation time: <5 s; initialisation reliability: >99.9%
Post-processing static	H: 2.5 mm + 0.5 ppm RMS
	V: 5 mm + 0.5 ppm RMS
High-precision static	H: 2.5 mm + 0.1 ppm RMS
	V: 3.5 mm + 0.4 ppm RMS
PPK accuracy	H: 3 mm + 1 ppm RMS; V: 5 mm + 1 ppm RMS
HAS-PPP accuracy	Horizontal RMS: ±20 cm; vertical RMS: ±40 cm
Code differential	H: 0.4 m RMS | V: 0.8 m RMS
Autonomous	H: 1.5 m RMS | V: 2.5 m RMS
SBAS	60 cm
Positioning rate	1 Hz, 2 Hz, 5 Hz, 10 Hz and 20 Hz
Visual survey accuracy[5]	Typically 3 cm, range 2–15 m
Tilt angle	0° to 60°
RTK accuracy with tilt compensation	RMS: 8 mm + 0.6 mm/° tilt
Time to first fix	Cold start[2]: <20 s; Warm start[3]: <5 s
	Signal re-acquisition: <1 s
Laser measurement accuracy	≤3 cm within 5 m
	≤4 cm within 10 m; ≤5 cm within 15 m

Camera

Sensor resolution	Dual 2 MP
Field of view	88°
Image group capture[5]	Method: video photogrammetry
	Max. capture time: 30 s with an image group size of approx. 30 MB
Illumination[5]	Starlight-grade camera with global shutter
	Large Format Sensor (3μm*3μm); Maintain full colour at illumination levels
Visual Layout	Vertical Field of View (VFOV): 63°
	Horizontal Field of View (HFOV): 76°

[1] Open sky conditions
[2] No information available (no almanac or approximate position)
[3] Ephemeris and approximate position known
[4] Ideal environment
[5] Supported by V10Li only

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 and 5 GHz, 802.11a/b/g/n/ac
Wireless connection	NFC device pairing
Bluetooth	2.1 EDR/3.0 HS/4.2 LE/5.0 LE
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: 2 W
	Protocol: TRIMTALK, TRIMMARK III, TT450S,
	TRANSEOT, Satel 3AS 4FSK, LoRa; Link rate: 9,600 bps to 19,200 bps
	Typical range: 6-12 km; up to 16 km under optimal conditions[4]
Data formats	Output: NMEA 0183, RTCM 3.x, RINEX
	Input: RTCM 2.x, RTCM 3.x, CMR
Data storage	32 GB internal memory

Hardware

Temperature	Operating: -35 °C to 65 °C; storage: -40 °C to 70 °C
Humidity	95% non-condensing
Ingress protection	IP68, dustproof, protected from continuous
	immersion to a depth of 1 m
Drop	Designed to survive a 2-metre pole drop
Li-ion battery capacity	7,000 mAh, 7.4 V; 30 W PD fast charging
Laser	Laser type: Class 2M green; laser wavelength: 520 nm ± 20 nm
	Measuring range: 0–80 m; ranging accuracy: ±(5 + 100 × 10^{-6} × D) mm
	D = Measuring distance (unit: mm)
Operating time on internal battery	Rover: 15 h; base: 10 h
	Static: >25 h
External power input	9–28 V DC
Dimensions (D × H)	Ø130 × 83 mm
Weight	Approximately 980 g
True colour OLED screen	1.41 in (320 × 360, 274 ppi)
Front panel	4 LEDs, 2 physical buttons
Power consumption	UHF/4G RTK Rover w/o camera: Typical 3 W
	Visual Stakeout / Visual Survey: typical 4.5 W
Waterproof and breathable membrane	
	Prevents water vapour from entering in harsh environments
Tilt sensor	Immune to magnetic disturbances; e-bubble levelling

Battery life varies with the operating environment, temperature and working mode.

Build on Precision, From Vision to Reality

Request a free quote: sales@fjdtrion.com

FJDTrion

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