

FJD Trion V1t

GNSS Receiver with Extended Field Range

Built for Long-Range Field Work

The FJD Trion V1t is designed for projects where standard RTK does not provide sufficient range. With flexible 2 W/5 W internal radio options, it supports stable long-distance operation across large worksites, reaching up to 15 km under open conditions.

A high-precision built-in IMU provides accurate and reliable measurements. Tilt accuracy: 2.5 cm at 30° (maximum angle: 60°)

RTK fix in seconds



1,408 channels: GPS, GLONASS, Galileo, BeiDou, QZSS, SBAS, NavIC

Supports LoRa, TRIMTALK, TRIMMARK III and T450S, with strong resistance to interference

Adjustable internal radio output of up to 5 W

Low-power chipset and large-capacity battery for long battery life of 8 h in base mode and 20 h in rover mode

Accessories

When a standard setup isn't enough, the V1t can be expanded to meet real job needs.

- The E600 controller enables precise field operation through a clear interface.
- An external radio extends communication range across larger sites.
- A cylindrical battery helps keep the system running through longer workdays.

FJD Trion Field Controller E600

- 5.5-inch display
- 7,000 mAh battery, up to 24 hours of runtime
- 2.2 GHz CPU
- 4 GB RAM + 64 GB storage
- USB Type-C with OTG support
- Drop-resistant from heights of up to 1.8 m



Wider Coverage Across the Worksite

The FJ-HPR 400A is an external radio designed for long-range field communication.
With a transmission power of up to 28 W, it supports stable links across large worksites. Its IP67 rating and low power consumption make it suitable for extended outdoor use.



Power for Extended Fieldwork

The cylindrical battery is designed for tripod-based setups and integrates with existing field setups.
It provides additional power for extended workdays, helping keep systems running without frequent battery changes or downtime.

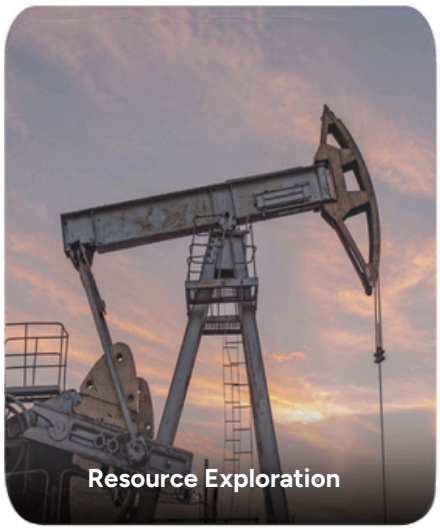


Helps You Get It Right, Anywhere

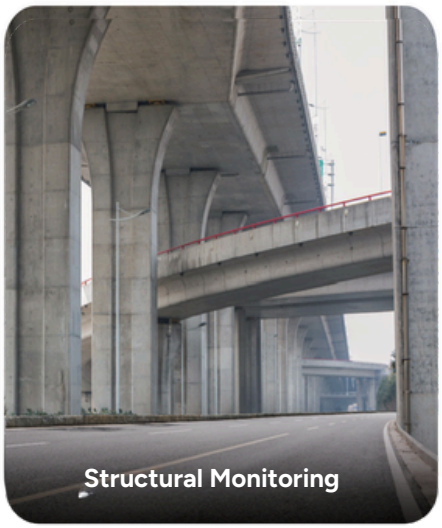












SPECIFICATIONS

GNSS Signals

Channels	1,408
GPS	L1, L1C/A, L2C, L2P, L5
BDS	B1I, B2I, B3I, B1C, B2a, B2b
GLONASS	G1, G2, G3
Galileo	E1, E5a, E5b, E6
QZSS	L1C/A, L1C, L2C, L5, L6
SBAS	L1C/A, L5
NavIC	L5
HAS-PPP	E6

Receiver

Size and weight	162 × 86 mm; 1,070 g
IP rating and memory	IP67; 32 GB

Battery

Battery capacity	6,500 mAh
Battery life	Base: 8 h; rover: 20 h (at 2 W transmit power)

Operating Environment

Operating temperature	-30 °C to +60 °C
Storage temperature	-40 °C to +70 °C
Humidity	100% RH, condensing

Positioning Performance

High-precision static accuracy (RMS)	H: 2.5 mm + 0.1 ppm V: 3.5 mm + 0.4 ppm
Post-processed static accuracy (RMS)	H: 2.5 mm + 0.5 ppm V: 5 mm + 0.5 ppm
Signal reacquisition	< 1 s
Pseudorange accuracy	≤ 10 cm
Carrier phase accuracy	≤ 1 mm
RTK initialisation time	< 5 s (baseline length < 10 km)
Initialisation reliability	> 99.9%

Wi-Fi

Protocol	IEEE 802.11b/g/n

Internal Radio

Power consumption	2 W/5 W (optional)
Modulation type	GMSK or 4FSK
Frequency	410–470 MHz / 902–928 MHz
Protocols	LoRa, TRIMTALK, TRIMMARK III, T450S, TRANSEOT, SATEL 3AS 4FSK

Power Supply

Voltage	USB PD fast charging: 30 W; aviation plug input: 9–32 V DC

Bluetooth

Protocol	BR/EDR

Indicator

Type	Power, data, satellite and Bluetooth

I/O Ports

USB Type-C	Supports 12 V DC fast charging
UHF antenna port	Supports UHF antenna connection
7-pin LEMO	Supports 9–32 V DC power input; external radio port

Single-point positioning accuracy (RMS)	Horizontal: ±1.5 m; vertical: ±2.5 m
RTK accuracy (RMS)	Horizontal: ±(8 mm + 1 ppm) Vertical: ±(15 mm + 1 ppm)
PPP accuracy (RMS)	Horizontal: ±20 cm; vertical: ±40 cm
Timing accuracy	20 ns
Update rate	Raw observation data: 1, 2, 5 Hz Real-time positioning data: 1, 2, 5 Hz
Tilt survey accuracy	2.5 cm (H) at 30°; maximum tilt angle: 60°
Data formats	Output: RTCM 3.x, NMEA 0183 Input: CMR, RTCM 3.x and RTCM 2.x

Build on Precision, From Vision to Reality

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