FJD Trion™ V1t

GNSS SYSTEM WITH IMU SURVEY

A NEW WAY TO MEASURE THE WORLD

The FJD Trion V1t receiver uses a next-generation GNSS positioning module to support higher satellite tracking channels and RTK measurement accuracy and reliability in complex environments. The PPP function is added on the basis of the original function unchanged. The V1t receiver supports the PPP differential function derived from Galileo E6b, enabling continuous and stable PPP operation in areas covered by Galileo signals.

Hi-precision built-in IMU for accurate and reliable measurement. Precision: 2.5cm. Angle: 30°. (Max: 60°)

Fixed in seconds

1408 channels: GPS, GLONASS, Galileo, Beidou, QZSS, SBAS, IRNSS

Supports TRIMTALK, TRIMMARK III,TT450S, TRANSEOT and SATEL 3AS 4FSK

HAS-PPP

15H

Low-power chipset and large-capacity battery for long battery life: Base 10hrs and Rover 15hrs typically

FJD TRION FIELD CONTROLLER E600

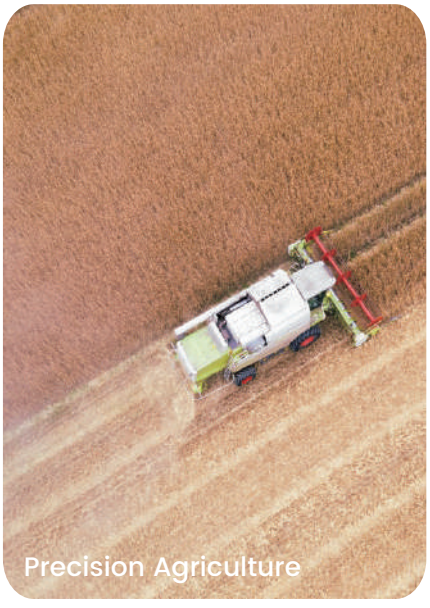
- 5.5-inch screen
- 7700 mAh, 24h battery life
- CPU 2.2GHz
- Memory 4+64 GB
- USB- Type C, OTG Support
- 1.8-meter drop test survivor

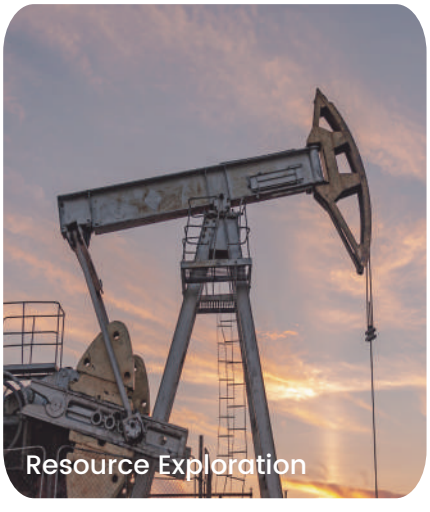
FJD TRION SURVEY

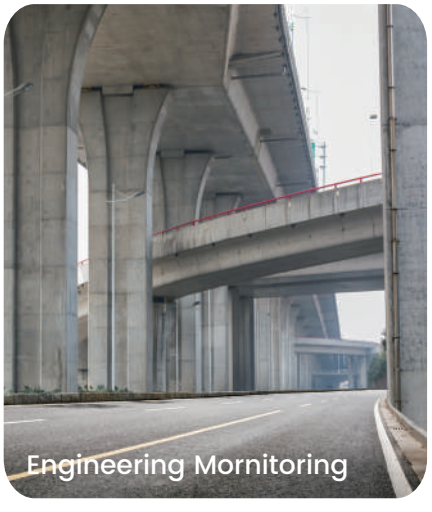
Trion Survey is an app that aids engineers in accurate measurement. It works with FJD Field Controller and FJD tablet for effort-less survey experiences. It supports Measure , Stake points, Stake lines and powerful Stake CAD function. In addition, we support Edit CAD function. The abundant functions can match with different customers requests. The concise interface and easy-to-understand icons make the measurement intuitive more than ever.

Measure&Draw Stake Road Stake DTM Stake CAD

APPLICATION SCENARIOS







QUICK SPECS

GNSS Singal

GPS	L1, L1C/A, L2C, L2P, L5
BDS	B1I, B2I, B3I, B1I, B3I, B1C, B2a, B2b
GLONASS	G1, G2, G3*
Galileo	E1, E5a, E5b, E6C*, AltBOC*
QZSS	L1, L2C, L5, L1C*, L1-SALF
SBAS	L1C/A, L5*
IRNSS	L5*
HAS-PPP	E6

Receiver

Size & Weight	∅162*86 mm; 1070g
IP rating & Memory	IP67; 32GB

Battery

Battery capacity	6500 mAh
Battery life	Base 10 h, Rover 15 h typically

Ambient Environment

Operating temperature	-30 ℃ ~ + 60 ℃
Storage temperature	-40 ℃ ~ + 70 ℃
Humidity	100%, condensing

Wi-Fi

Protocol	IEEE 802.11b/g/n protocol standard

Internal Radio

Power consumption	1 W (1.8W Optional)
Modulation type	GMSK or 4FSK
Frequency	(410-470) MHz / (902-928) MHz
Protocol	TRIMATLK, TRIMMARK III, TT450S, TRANSEOT, Satel 3AS 4FSK

Power Supply

Voltage	USB PD fast charging 30 W Aviation plug support (9-32) V DC

Bluetooth

Protocol	BR / EDR

Indicator

Type	Power, data, satellite and Bluetooth

I/O Ports

Type-C	Support 12 V DC Fast charge
UHF Antenna port	Support UHF antenna connection
7pin-Lemo	Support 9 - 32 V DC power input External Radio Port

Positioning Performance

Time to first fix	< 20 s (cold start) < 10 s (hot start)
Signal reacquisition	< 1 s
Pseudo-range accuracy	≤ 10 cm
Carrier phase accuracy	≤ 1 mm
RTK initialization time	< 5 s (baseline length < 10 km)
Initialization reliability	> 99.9%
Channels	1408
Single positioning (RMS)	Horizontal: ±1.5 m, vertical: ±2.5 m
Static accuracy	Horizontal: ±(2.5 mm+0.5 ppm), RMS Vertical: ±(5 mm+0.5 ppm),
RTK accuracy	RMS Horizontal: ±(8 mm+1 ppm), RMS Vertical: ±(15 mm+1 ppm),
PPP accuracy	RMS Horizontal: ±20cm, RMS Vertical: ±40cm, RMS
Timing accuracy	20 ns
Update rate	Raw observation data: 1, 2, 5, 10, 20 Hz Real-time positioning data: 1, 2, 5, 10, 20 Hz
Tilt Survey accuracy	30°/2.5cm（H）,Max angle 60°
Data format	Input &output：RTCM3.X, NMEA-0183 Input：CMR, RTCM2.X

Free Quote:sales.global@fjdynamics.com

FJDynamics.com

CREATE FOR A BETTER WORLD