FJDynamics

FJD TRION N10

CORS SYSTEM

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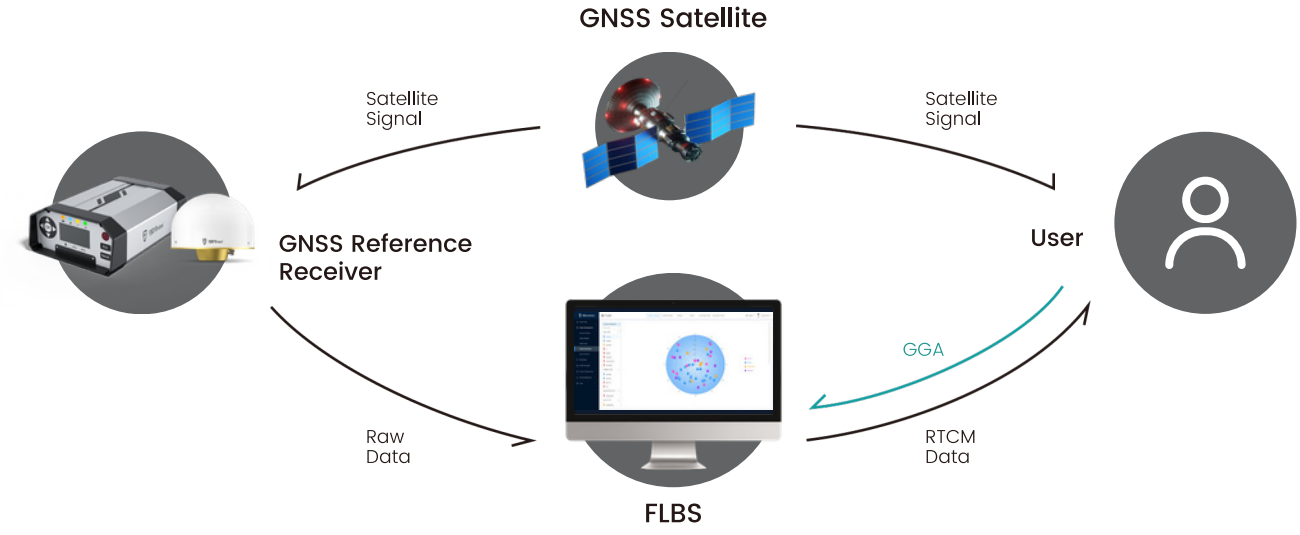
FJD Trion N10 CORS System provides 24/7 high-precision correction data services. Its core N10 GNSS reference receiver features strong anti-interference capability and supports five major satellite systems including GPS, GLONASS, Galileo, BeiDou, and QZSS, ensuring high-precision positioning and stable operation. The built-in battery ensures continuous operation during power loss, and the management platform enables efficient administration of base stations and NTRIP accounts. The N10 makes it easier to access and utilize RTCM data in real-time via the internet, delivering reliable centimeter-level positioning solutions for applications such as surveying and mapping, precision agriculture, and robotic lawn mowing.

- Centimeter-level Positioning Accuracy
- Multi-Satellite Multi-Frequency
- 24/7 All-Weather Operation
- 10000 Concurrent Users per Server
- Timely Warning
- High Availability and Fast Convergence



RELIABLE SIGNAL RECEPTION STARTS AT THE ANTENNA

CGX611A 3D CHOKE RING ANTENNA

Global Frequency & Constellation Coverage

Receive all major GNSS frequencies for maximum precision.

Built-In Precision

Offer ±1 mm phase-center offset, an MTBF over 30,000 hours, and rugged IP67 protection for consistent field deployment.

Designed to Reject Interference

Minimize multipath interference and signal reflections.

HIGH-PRECISION GNSS RECEIVER BUILT TO LAST

N10 GNSS REFERENCE RECEIVER

Multi-System High-Precision Positioning

Cover all major global satellite navigation systems and offer wide compatibility with 16 frequency bands. It supports the configuration of multiple coordinate systems, ensuring rapid and precise positioning in any terrain around the world.

Durable Design, Stable Performance

Feature an IP67-rated enclosure, built-in firewall, and a 22,000mAh battery. With advanced network backup mechanism and an MTBF of over 25,000 hours, it ensures 24/7 uninterrupted performance.

Smart Operation & Data Sharing

Support 30-day data storage, automatic FTP transmission of raw observation data, remote N2N configuration, and OTA firmware updates. It enables non-touch maintenance and seamless data sharing, significantly improving efficiency in data access, analysis, and collaboration while ensuring highly stable and reliable system operation.

Simultaneous Broadcasting via Internet & Radio

Broadcast simultaneously RTK data via internet and radio, ensuring uninterrupted high-precision positioning in any environment. With broader coverage and higher reliability, it eliminates signal loss for efficient and consistent operations.

INTELLIGENT SIGNAL MANAGEMENT FROM ANY-WHERE

FLBS PLATFORM

Streamlined CORS Station Oversight

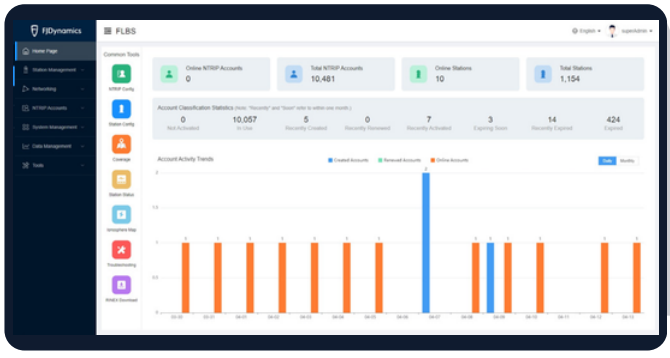
View, monitor, and manage all your stations remotely with real-time status feedback and alerts.

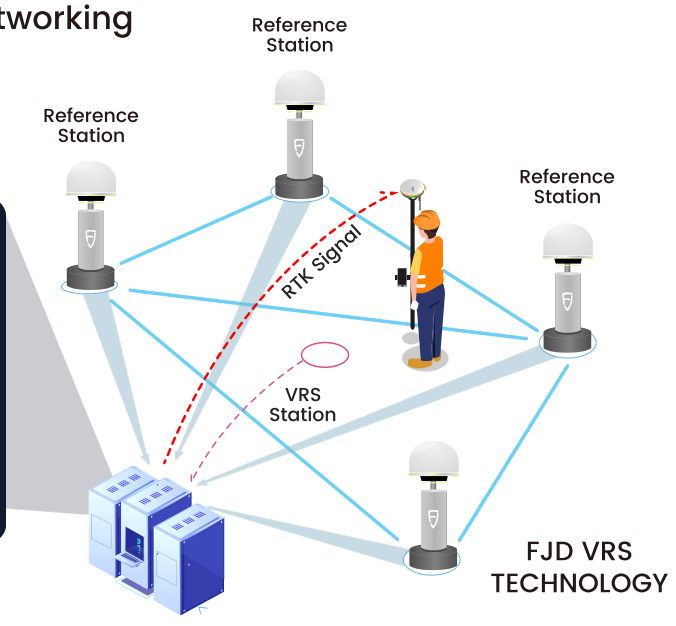
User and Account Management Made Simple

Create and administer Ntrip accounts and view live connection status.

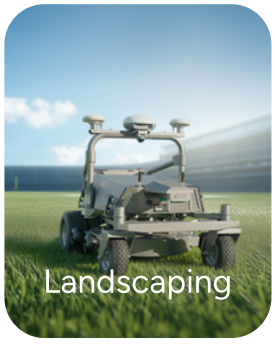
Multi-Platform Compatibility and VRS Networking

Compatible with multi-brand GNSS receiver and terminal, VRS techology supported as well.





APPLICATION



SPECS

N10 GNSS Reference Receiver

Positioning

Channels	1408
Frequencies	BDS: B1I, B3I, B1C, B2a, B2b GPS: L1C/A, L2C/L2P, L5 GLO: G1, G2 GAL: E1, E5a, E5b QZSS: L1C/A, L2C, L5, L1S, L1C/B
Single point (RMS)	Horizontal: 1.5 m Vertical: 2.5 m
RTK (RMS)	Horizontal: 0.8 cm + 1 ppm Vertical: 1.5 cm + 1 ppm
Static differential (RMS)	Horizontal: 2.5 mm + 1 ppm Vertical: 5.0 mm + 1 ppm
Protocols	NMEA-0183, RTCM 2.x/3.x
Update rate	Up to 5 Hz
GNSS antenna	Choke ring antenna

4G network

4G module	Universal
Coverage	Global (except the Antarctic and Arctic regions)
SIM card slot	Micro SIM

Ethernet

Ethernet transceiver	Transmission speed: 10/100 Mbps Initial IP address: 192.168.1.6

Wi-Fi network

Wi-Fi hotspot	For configuring the receiver
Wi-Fi hotspot properties	Name: FJN10SN Initial password: 123456789 Initial IP address: 192.168.200.1
Wi-Fi client	For receiver networking (connect to a 2.4 GHz Wi-Fi network using DHCP)

I/O

USB port (USB)	Max. transmission speed: 480 Mb/s Connector type: Type-C (USB2.0) Usage: for connecting to an external storage or updating firmware
LEMO connector (LEMO)	2-pin, applicable power supply: DC 9 V–36 V Recommended power supply: DC 12 V
Aviation connector (RJ45)	Ethernet port
RS232 connector (COM1)	DB9 connector
RS232 connector (COM2)	7-pin LEMO
GNSS antenna (GNSS)	TNC connector
4G antenna (4G)	SMA connector
PPS output (PPS)	SMA connector
External event input (EVENT)	SMA connector
External frequency standard input (CLK)	SMA connector, reserved

Power supply

Input voltage	DC 9 V–36 V AC 90 V–260 V
Over-voltage protection	Threshold: DC 38 V
Protection against reverse connection	Supported
Powering method	Lithium battery of 22,000 mAh (under standard conditions) External DC power supply via LEMO connector
Battery life	>24 h
Restart	Remote restart supported

Physical and environmental

Power consumption	5 W (standard)
Dimensions	L×W×H: 220.7×152.1×81.7 mm
Weight	2.08 kg
IP rating	IP67
Operating temperature	-40°C to 65°C
Storage temperature	-40°C to 80°C

CGX611A 3D Choke Ring Antenna

Antenna

Frequencies	BDS: B1I, B3I, B1C, B2a, B2b GPS: L1C/A, L2C/L2P, L5 GLO: G1, G2 GAL: E1, E5a, E5b QZSS: L1C/A, L2C, L5, L1S, L1C/B
Impedance	50 Ω
Polarization	Right-handed circular polarization
Antenna axial ratio	≤ 3 dB
Horizontal coverage	360°
Output VSWR	≤ 2.0
Peak gain	6.5 dBi
Phase center error	±1 mm

Low noise amplifier

Gain	50±2 dB
Noise figure	≤ 2 dB
Output VSWR	≤ 2.0
In-band flatness	±2 dB
Operating voltage	DC 3.3 V–12 V
Operating current	≤ 60 mA
Differential transmission delay	≤ 5 ns

Environment

Operating temperature	-40℃ to 85℃
Storage temperature	-55℃ to 85℃
Humidity	95% non-condensing

Structure

Size	Φ185*148 mm
Weight	≤1.8 kg
Connector	TNC female
Installation	5/8"×11 threaded

FLBS Platform

Coverage

Within network	Full coverage
Outside network	Up to 30 km
Reference station spacing	30~120 km

Positioning accuracy (RMS)

Network RTK	Horizontal: ≤ 2 cm Vertical: ≤ 5 cm

Compatibility

Satellite signals	BDS: B1I, B3I, B1C, B2a, B2b GPS: L1C/A, L2C/L2P, L5 GLO: G1, G2 GAL: E1, E5a, E5b QZSS: L1C/A, L2C, L5, L1S, L1C/B
Correction data formats	RTCM 2.3, RTCM 3.0, RTCM 3.2 MSM4, RTCM 3.2 MSM5, CMR, CMR+
Broadcast rate	1 s
Reference station	Supports all GNSS reference station receivers (Compliant with NTRIP 1.0 protocol)
Rover	Supports all GNSS rover receivers (Compliant with NTRIP 1.0 protocol)
Data storage format	RTCM 2.x/3.x, RINEX 3.04

Service modes

Operation modes	Physical reference station Virtual reference station (Gird VRS)
Station types	Assigned station Nearest station

Stability

Availability	99.9% (365 days/year) 24/7 continuous operation
Email alerts	Reference station offline NTRIP account status changes Ionospheric activity
Phone alerts	Service operation anomalies

Capacity

End Devices	Based on a distributed cloud architecture, supporting hundreds of thousands of concurrent device connections

Internationalization

Languages supported	Simplified Chinese, English, French, Spanish, German, Hungarian, Turkish, Italian, Ukrainian, Japanese, Korean

Free Quote:sales.global@fjdynamics.com
Address:15 SCOTTS ROAD #03-12, SINGAPORE

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