

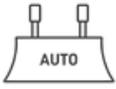


FJD Trion GC100

3D GRADER AUTOMATIC CONTROL SYSTEM

ACHIEVE ACCURATE GRADE IN ONE GO

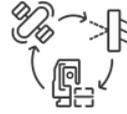
FJD GC100 is an automatic control system for graders. It uses 3D design models and onboard sensors, to adjust blade position in real time, delivering high-precision, repeatable results.



Valve Controller
Adaptive Control Algorithm
Automatic Blade Control



Machine Adaptation
Electronic & Hydraulic
Systems



GNSS | TPS | Laser
Multiple Positioning Solutions



Freeze-proof cables
up to -40°C



GNSS
1408 Channels
Rapid RTK Fix



IMU
Integrated Positioning
Real-time Attitude Sensing

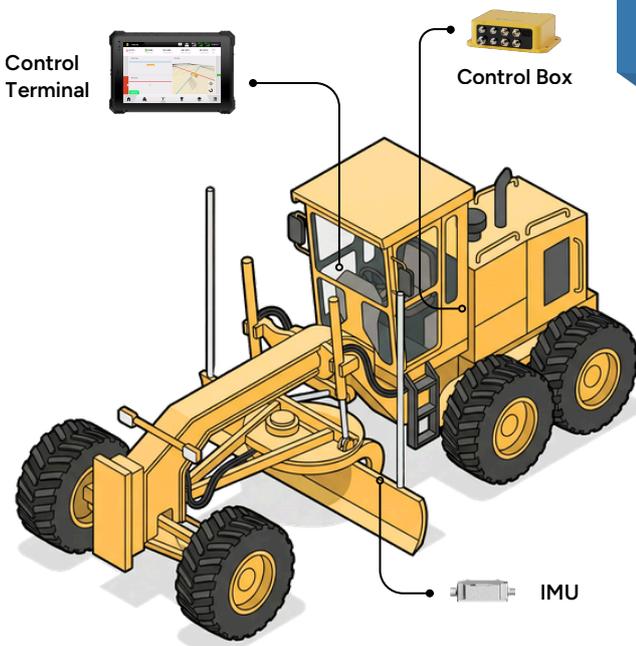


Wireless Communication
4G|Built-in radio | Wi-Fi | BT



Remote Service
Cloud Diagnostics
OTA Updates

5 POSITIONING OPTIONS FOR ALL DIGITAL CONSTRUCTION WORKFLOWS



Position Source

- 

Dual GNSS
High-precision grading for large, open job sites.
- 

Single GNSS
Grading with encoder and body IMU fusion for standard open sites.
- 

TPS
Accurate surface control in areas without GNSS coverage. (Tunnels, urban sites or indoor projects.)
- 

Laser
Surface grading in indoor or semi-enclosed sites. (Factories, sports halls or slabs.)
- 

IMU
Cross-slope control based on a physical height reference.

Control Module

- Hydraulic Grader**



Valve Solution
- Electro-Hydraulic Grader**



Relay Solution
- 

CAN Bus Solution

GC100L

A lite version of GC100, providing 3D visual guidance. Quick to install and calibrate, it is an entry-level solution that can be upgraded to automatic control when needed.



Fits any grader model and size class



Fast calibration: 15 mins



Same Workflow as GC100



One-Click Upgrade Ready
Install valve module to upgrade

DIGITAL CONSTRUCTION IN PRACTICE

Design

Feel free to import CAD files (DXF, LandXML, DWG) or create slopes, depths, and elevations on site. Supports 6000+ EPSG coordinate systems and custom presets to match local project requirements.



Planning

Plan and dispatch projects from the Digital Construction platform. Monitor team progress and machine status remotely — all from the office.

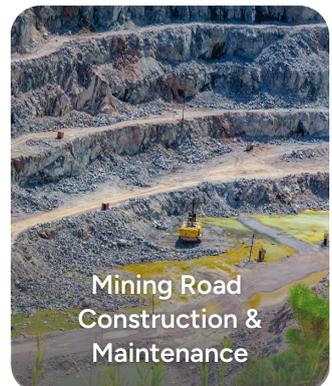
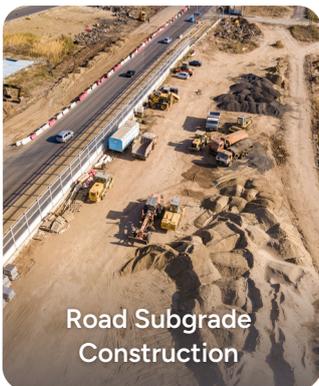


Execution

Provide real-time visual guidance and show construction results on screen. Automatic blade control maintains centimeter-level accuracy — and achieves millimeter-level precision with TPS/Laser positioning.



HELPS YOU GET IT RIGHT, ANYWHERE



SPECIFICATIONS

Terminal

Dimensions	284 × 189 × 22.5 mm
Display	10.1", 1920 × 1200, 750 cd/m ²
Performance	Processor: Octa-core, 2.2 GHz Memory: 8 GB RAM, 128 GB ROM
Power Supply	DC 7–30 V
Wireless Communication	Wi-Fi: 802.11 b/g/n (2.4 GHz) Bluetooth: 5.0 (BLE)
Battery	Built-in lithium battery, 10000 mAh / 3.8 V (non-removable)
Environmental Conditions	Operating temperature: -20 °C to +60 °C Storage temperature: -30 °C to +70 °C
Ingress Protection	IP68 waterproof and dustproof

Control Box

Dimensions	200 × 155 × 63 mm
Communication	Wi-Fi/BT/Ethernet
Power Supply	DC 9–36 V
Environmental Conditions	Operating temperature: -40 °C to +60 °C Storage temperature: -40 °C to +85 °C
Ingress Protection	IP67 waterproof and dustproof

Radio Antenna

Frequency Range	410–470 MHz or 902–928 MHz
Gain	2 ± 0.5 dBi
Cable Length	4.5 m

GNSS Antenna

Passive Antenna Characteristics	Frequency Range: Multi-constellation, full-band GNSS; Gain: ≥ 5.5 dBi Polarization: RHCP (Right-Hand Circular Polarization) Horizontal Coverage: 360°; Output Impedance: 50 Ω; VSWR: ≤ 2.0
Environmental & Mechanical Characteristics	Operating Temperature: -45 °C to +85 °C Storage Temperature: -55 °C to +85 °C Humidity: Up to 95% (non-condensing)

IMU

Resolution	<0.01°
Operating Voltage	DC 9–36V
Output Frequency	Up to 100 Hz
Operating Temperature	-40 °C to +85 °C
Ingress Protection	IP67 waterproof and dustproof

Two-section Electrical Proportional Valve Group

Dimensions	235 × 134 × 91 mm
Rated Voltage	24 V DC
Rated Pressure	300 bar
Rated Flow Rate	64 L/min
Operating Temperature	-40 °C to +105 °C
Storage Temperature	-40 °C to +105 °C
Ingress Protection	IP65 waterproof and dustproof

Optional

Rotation Encoder

Supply Voltage	DC 9–36 V
Ingress Protection	IP67 waterproof and dustproof
Operating Temperature	-40 °C to +105 °C
Storage Temperature	-40 °C to +105 °C

TPS Radio

Ingress Protection	IP65
Power Supply	9–36 V DC
Communication Frequency	2.4 GHz

Laser Receiver

Reception Length	220 mm
Reception Angle	360°
Accuracy	±2 mm
Compatible Lasers	Mainstream rotary lasers
Input Voltage	9–30 V DC
Operating Temp	-20°C to 55°C
Storage Temp	-20°C to 60°C
Protection	IP66
Dimensions (L×W×H)	335 × 141 × 56 mm

Free Quote: sales@fjdtrion.com

Copyright © FJDynamics. All rights reserved.

Build on Presion, From Vision to Reality

FJDTrion

