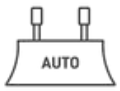


FJDTrion GC100

3D GRADER AUTOMATIC CONTROL SYSTEM

ACHIEVE ACCURATE GRADING IN ONE PASS

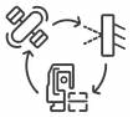
FJD GC100 is an automatic control system for graders. It uses 3D design models and onboard sensors, to adjust blade position in real time, delivering high-precision, repeatable results.



Automatic Blade Control
Higher Accuracy
Less Rework



Wide Compatibility
Electronic & Hydraulic Systems



GNSS | TPS | Laser
Multiple Positioning Solutions



Cold-Resistant Cables
Reliable Perfomance
Down to -40°C



Multi-GNSS Support



IMU
Continuous Tilt Sensing

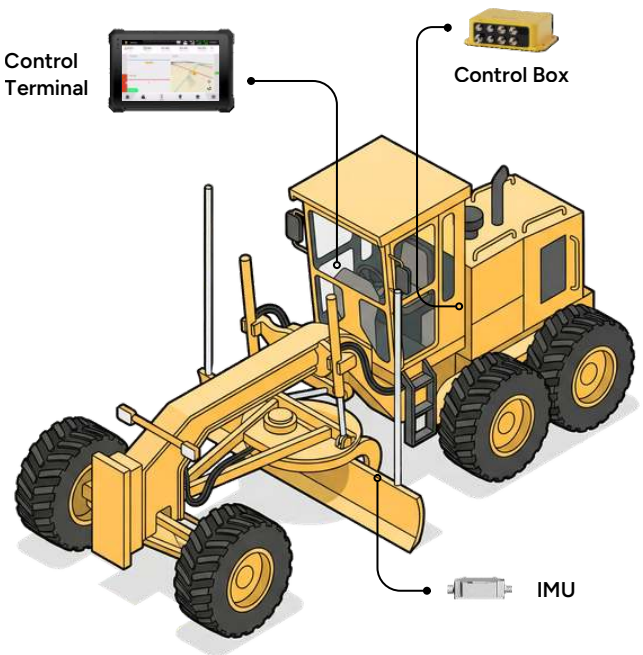


Wireless Connectivity
4G | Built-in Radio
Wi-Fi | BT



Remote Service
Real-Time Diagnostics
Seamless OTA Updates

5 POSITIONING OPTIONS FOR ALL DIGITAL CONSTRUCTION WORKFLOWS



CONTROL MODULE

Hydraulic Grader



Valve Solution

Electro-Hydraulic Grader



Relay Solution



CAN Bus Solution

POSITION SOURCE



Dual GNSS

High-precision grading for large, open job sites.



Single GNSS

Suitable for routine site grading and slope construction



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.

GC100L OPTIONAL GUIDANCE SYSTEM

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.

Broad Grader Compatibility

Fast calibration: 15 mins

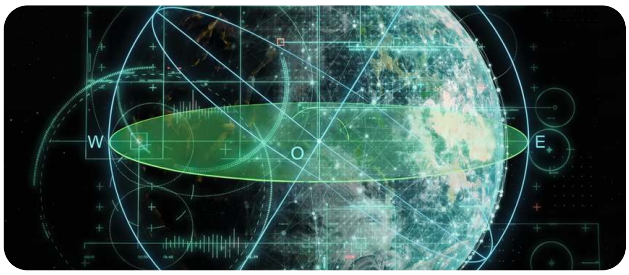
Same Workflow as GC100

Install the Control Module for One-Click Upgrade

DIGITAL CONSTRUCTION IN PRACTICE

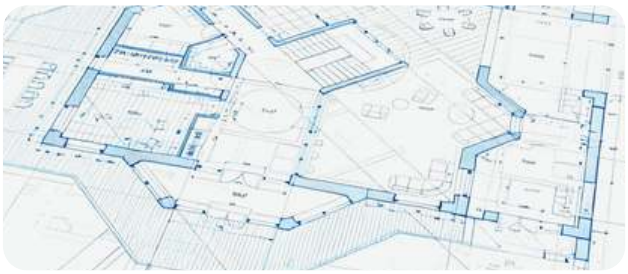
Global Coordinate Systems

Includes over 6,000 predefined coordinate systems worldwide for quick deployment across regions, with no extra configuration required.



Multi-Layer Support

Supports DWG, DXF, SHP, KML, and XML files, with clear layer visualization for advanced project drawings.



FJD Trion TerraMind

Plan and dispatch projects from the FJD Trion TerraMind. Monitor team progress and machine status remotely — all from the office.



Real-Time Precision Control

Provides clear real-time guidance and on-screen results. Automatic blade control achieves reliable centimeter- to millimeter-level precision with TPS/Laser positioning.



HELPS YOU GET IT RIGHT, ANYWHERE









SPECIFICATIONS

Base Module

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

Central Display

Dimensions	284 × 189 × 22.5 mm
Display	10.1″，1920 × 1200，750 cd/m²
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

Optional Sensor Module

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

Laser Receiver

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

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	DC 9–36V
Communication Frequency	2.4 GHz

Optional Control Module

Relay

Ingress Protection	IP68
Operating Voltage	DC 9–33V
Operating Temperature	-40°C to +105°C
Signal Switching	Supports 4-channel PWM signal switching

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

Free Quote: sales@fjdtrion.com

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Build on Precision, From Vision to Reality

FJDTrion