FJDTrion

FJDTrion S2 LiDAR SCANNER

Scan the toughest without compromise

Meet FJD Trion S2 Series

FJD Trion S2 Series is built for fast, flexible capture across large and complex environments. From open construction sites to dense forests and hard-to-reach terrain, it delivers complete, georeferenced point clouds with flexible deployment from ground to air.

Up to 1 cm
Relative Accuracy

Real-time
Colourisation

Georeferenced
Point Clouds

3-Hour
Runtime

Integrated
Ecosystem

Air-to-Ground
Coverage

Performance Options for Every Project

S2

320,000
Points per second

120m
Range

Balanced performance for everyday large-site capture

S2 PRO

640,000
Points per second

120m
Range

Higher point output for faster capture and richer detail

S2 MAX

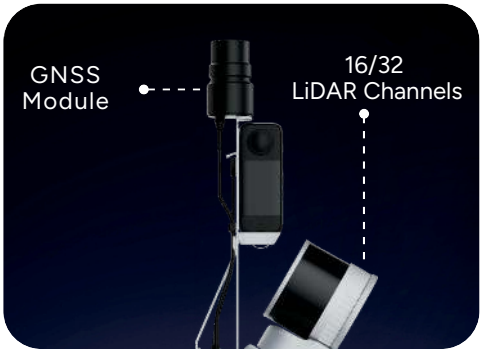
640,000
Points per second

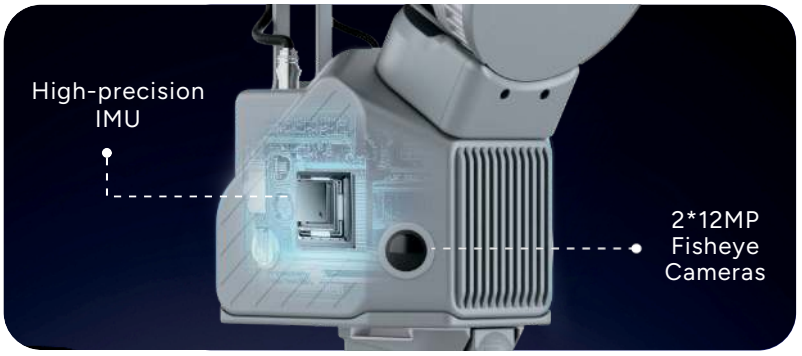
300m
Range

Extended range for open and expansive environments

Integrated Modules, Ready in Seconds

Start scanning in seconds and move smoothly between field tasks with a compact, integrated design that brings the camera, IMU, and GNSS together in one system.





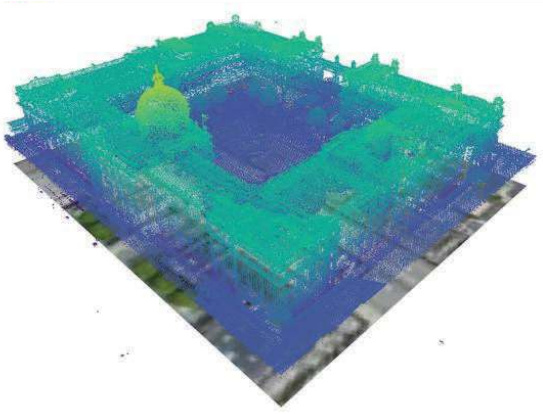
Data Quality You Can Build On

Reliable Accuracy, Realistic Colour

Capture dependable, colourised point clouds with up to 1 cm relative accuracy, even in complex environments. Dual 12 MP cameras enable real-time colourisation, while advanced VIO and LiDAR SLAM help maintain stable, reliable performance throughout the scan.

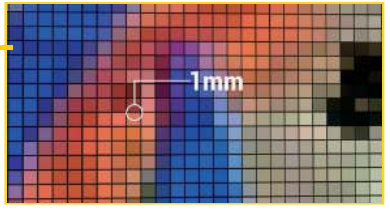
Seamless GIS and Mapping Integration

Work in the right coordinate system from the start with support for over 8,000 coordinate systems. With integrated GNSS, the S2 fits smoothly into local GIS and mapping workflows, helping reduce time-consuming manual conversions and rework.



HyperDense+ Enhanced Detail

Enhance detail with HyperDense+ in the FJD Trion Model, generating 5–7× denser point clouds with up to 1 mm spacing for finer surfaces and better colourisation.



Adapt to More Field Conditions

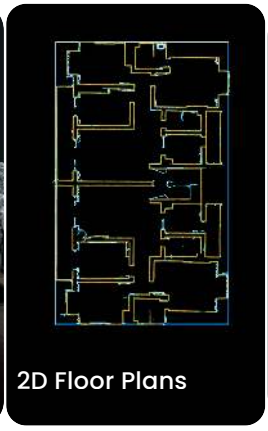
From high-speed ground surveys to sky-level coverage, the S2 supports both vehicle and drone deployment, enabling fast, full-scene capture in a single scan.

Reach tight, elevated, and hard-to-access areas with accessories such as the extension pole and robot dog mount. The backpack, stabilising vest, and rolling suitcase help reduce fatigue, simplify transport, and keep teams working efficiently across large, complex sites.

One Scan, Multiple Deliverables

Turn raw scan data into integrated deliverables through the Trion ecosystem. From engineering-ready outputs to immersive visualisations, every scan supports more workflows and more downstream use.

Dense reality data for CAD, BIM, and analysis



Automatically vectorised sections for engineering design.

Photorealistic textures for AR/VR applications.

Real-time immersive visualisation for better scene reconstruction.

Context-rich site records for facility management and real estate

A Workflow That Finally Fits

Seamlessly integrate with both FJD Trion Scan and Model software, offering a streamlined workflow from data capture to final deliverables.

Capture Reality Without Gaps

Maintain continuous site capture with the Scan app. Real-time colourised point clouds provide instant coverage checks, while support for scans of up to 1 hour and resume-from-breakpoint functionality help teams continue where they left off.

FJD Trion Scan

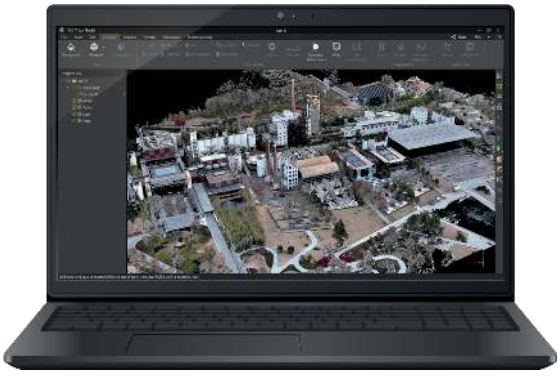
FJD Trion Model for Pad

On-site Process, Real Confidence

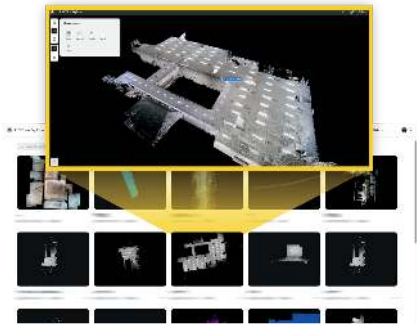
Process and review data directly on your pad while still on site. FJD Trion brings real-time feedback into the field, helping teams confirm results before leaving the job.

Process with Full Profession

Process complex point clouds into multiple deliverables with comprehensive tools built for engineering, surveying, forestry, and more, delivering lasting value for long-term workflows.



FJD Trion Model



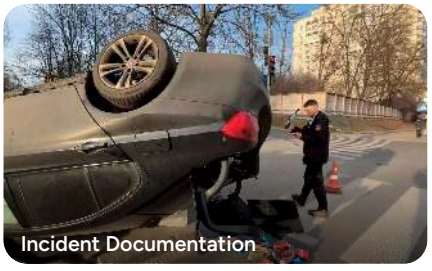
FJD Trion Model Web

Cloud Collaboration Made Easy

Sync scans to FJD Trion Cloud for fast sharing, review, and collaboration. Teams stay aligned without being limited by device performance or local storage.

Applications Across Industries

Apply point cloud data across a wide range of applications, from construction and surveying to forestry, mining, property management, incident documentation, and more.



Quick Specs

LiDAR

	S2	S2 PRO	S2 MAX
Range	120m @ 80% reflectivity 80m @ 10% reflectivity	120m @ 80% reflectivity 80m @ 10% reflectivity	300m @ 80% reflectivity 80m @ 10% reflectivity
Channels	16	32	32
Speed	320,000 pts/s	640,000 pts/s	640,000 pts/s
FOV	360° × 270°	360° × 270°	360° × 270°
Safety Level	Class 1 / 905 nm, eye safety	Class 1 / 905 nm, eye safety	Class 1 / 905 nm, eye safety

System Parameters

Relative Accuracy*	≤ 1 cm
Absolute Accuracy	3 cm
Weight	1.8 kg (excludes battery, external camera and RTK module)
Battery Life	3 h (with 1 set of 2 batteries)
Storage	512 GB (1TB expandable)
Operating Temperature	-10 °C ~ 50 °C
Power Consumption	25 W
Size	107 × 118 × 398 mm (including base and battery)
Data Export	WIFI, USB Type-C, USB Type-A
Point Cloud Format	.las / .ply / .pts / .e57
Power Supply	10.8 V, 3 A
IP Rating	IP54

*Accuracy measured in experimental environment

Camera

Resolution	2 × 12MP
FOV	200°
Visual SLAM	Support
Image Export	Support
Image Format	.jpg

GNSS

Satellite Constellation	BDS: B1I / B2I / B3I / B1C / B2a / B2b GPS: L1 C/A / L1C / L2P (Y) / L2C / L5 GLONASS: G1 / G2 / G3 Galileo: E1 / E5a / E5b / E6 QZSS: L1C/A / L1C / L2C / L5
RTK Accuracy	H: 8 mm + 1 ppm RMS V: 15 mm + 1 ppm RMS
PPS	Support