



FJDynamics

FJD XBot

Autonomous Electric
Orchard Platform



Built for Orchards. Ready for More.

Reliable Autonomy Under Dense Canopies.

FJD XBot is an autonomous electric platform built for routine orchard ground-care tasks. RTK and LiDAR fusion supports reliable navigation beneath tree canopies, while intelligent path planning and multi-layer safety protection enable safer, more efficient autonomous operation.

Spraying



Mowing



One Platform. More Ways to Work.

Built to adapt, XBot can be configured for spraying or mowing, or equipped with task-specific implements for different crops, row structures, and workflows. The four configurations shown are only the beginning.



Tall-Canopy Spraying



Low-Canopy Spraying



Mid-Mount Mowing



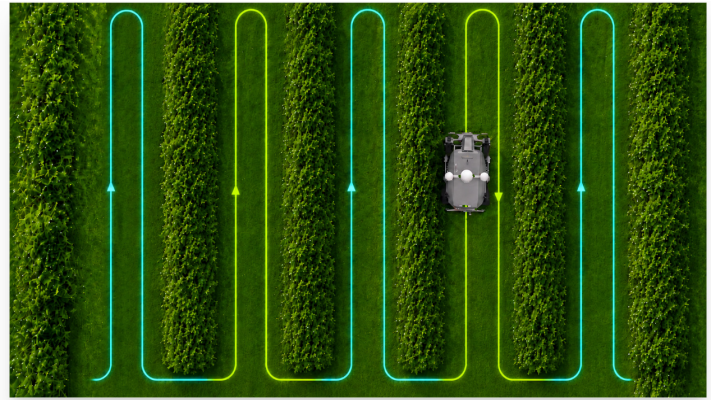
Rear-Offset Mowing



Plan Smarter. Work as a Fleet.

XBot plans efficient routes and coordinates multiple machines across orchard blocks.

It returns to charge automatically and resumes the task when ready, keeping operations moving with minimal manual intervention.



Reliable Navigation Under Dense Canopies.

RTK provides centimeter-level positioning when satellite reception is available. When GNSS receiver weakens beneath dense canopies, LiDAR perception helps maintain stable local navigation.

Multi-Layer Safety Protection.

360° LiDAR detects obstacles in real time, while front and rear bumpers provide a final physical stop layer for safer autonomous operation around people, trees, and equipment.



Built for Uneven Ground.

XBot's front suspension design helps maintain wheel contact and chassis stability across slopes, ruts, and bumps for more stable operation on uneven orchard terrain.



From Orchard Mapping to Autonomous Operations

Create accurate orchard maps through point-cloud scanning and RTK surveying, then manage and deploy them for autonomous XBot operations.

Point-Cloud Scanning



FJD Trion S2 LiDAR Scanner
FJD Trion Scan App
Use LiDAR Scanner to capture point-cloud data across the entire orchard.

RTK Surveying



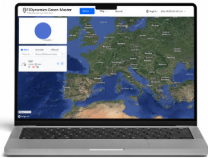
FJD Trion V4e Pro
FJD Trion Survey App
Use the V4E RTK rover to accurately mark boundaries, access points, and other key locations.

Map Creation



FJD Trion Model
Import the collected data into FJD Trion Model to process the point cloud and create an accurate operational map.

Autonomous Operation



FJD Green Master
Import the completed map into Green Master for map management, route planning, and autonomous XBot operations.

Applications

High-Density Orchards



Vineyards



Berry Shrubs



Managed Low-Canopy Crops



Specifications

Dimensions (L × W × H)	1345 × 855 × 970 mm
Weight	170 kg
Battery Capacity	4 kWh
Speed Range	0-6 km/h
Max Climbing Ability	20°
Waterproof Rating	IPX4
Charging Time (220V)	220V: 3 h
Charging Time (110V)	110V: 5 h

*Specifications apply to the base platform. Working time and performance may vary depending on the attachment, terrain, speed, and operating conditions.

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