

FJD Xbot Frequently Asked Questions (FAQ)

Q1: Is XBot only used for lawn mowing?

A: No. XBot is officially positioned as a **multi-functional electric orchard robot**. Lawn mowing is just one of its basic functions. XBot can also be extended with side mowing, spraying, pesticide application, operation logging, multi-robot collaboration and other functions tailored for orchard scenarios. Our goal is not just to help customers finish a single mowing task, but to help them build an autonomous operation capability for daily orchard management and maintenance.

Q2: Why do orchards need dedicated robots? Can't regular lawn mowers do the job?

A: Orchard operations are completely different from those in ordinary open fields. With tree canopy obstruction, narrow rows, muddy ground, root zones, sloped terrain and high-value crops in orchards, it is difficult for ordinary equipment to stably complete long-term repetitive operations. XBot has been optimized for agricultural scenarios to address these issues, such as agricultural diagonal tires, orchard-grade navigation, LiDAR perception, tree row identification, side mowing modules and spraying expansion capabilities, making it more suitable for long-term use by orchard users.

Q3: What is the difference between XBot and ordinary lawn mowing equipment?

A: Ordinary lawn mowing equipment mainly addresses lawn maintenance issues, while what XBot solves is **orchard comprehensive management and protection** problems. XBot is not just for mowing; it is designed for agricultural production environments, capable of adapting to muddy terrain, sloped land, narrow rows, and canopy-shaded scenarios, and supports subsequent expansions such as spraying, pesticide application, weeding in root zones, multi-machine collaboration, and integration with agricultural management systems.

Q4: What other functions can XBot be extended with in the future?

A: XBot is a platform-based product that can be continuously expanded around high-frequency orchard operations in the future. Key development

directions include side mowing, low-volume spraying, precise pesticide application, inter-row transportation, multi-machine collaboration, orchard map management and operation data recording. What customers purchase is not just the current functions, but a set of orchard autonomous operation platform that can be continuously upgraded.

Q5: Can XBot work under trees or in areas with weak GPS signals?

A: Yes. XBot adopts an integrated positioning scheme combining RTK and LiDAR. When satellite signals are strong, RTK provides centimeter-level precise positioning; when entering areas with weak signals such as under tree canopies, LiDAR can identify tree rows, inter-row boundaries and obstacles to help maintain navigation stability. This is an optimization that XBot has made specifically for orchard scenarios.

Q6: What is the battery life of the XBot?

A: XBot is equipped with a high-capacity 4 kWh battery. Battery life varies depending on factors such as operating scenario, kit type, and terrain slope. Taking standard lawn mowing as an example, it can cover approximately 12,000 square meters (about 3 acres) on a single charge. XBot supports quick battery swapping, which can be completed in 2 to 5 minutes, enabling long-time continuous operation when paired with a spare battery.

Q7: Is XBot safe? Will it bump into trees or people?

A: XBot is equipped with multiple layers of security safeguards:

1. **360° LiDAR** — Perceives the surrounding environment in real time and detects obstacles in advance
2. **Intelligent obstacle avoidance logic** — Optimized specifically for fruit trees to protect trunks and roots
3. **Front and rear physical bumpers** — enable immediate stop for protection even in the event of a collision
4. **Low-speed operation logic** — Low-speed safe operation in orchard scenarios
5. **Emergency Stop and Remote Stop** — Enables immediate emergency shutdown at any time

It can be said that the security design of XBot is specifically tailored for the high-value crops in orchards and the safety of personnel.

Q8: How steep a slope can XBot climb?

A: The maximum climbing capacity of XBot is 20°, and the recommended working slope is within 15°. It can adapt to the sloping land of most orchards. For particularly steep mountain orchards, on-site assessment is recommended first.

Q9: How about the spraying function of XBot? How many liters can it spray?

A: The spraying kit of XBot is currently under testing and optimization. The spraying function supports pump body control, flow rate adjustment, vehicle speed linkage, and operation logging. Regarding the water tank capacity, the product team is optimizing the design based on market feedback, aiming to better adapt to the actual spraying requirements of orchards.

Q10: What is the price of XBot?

A: XBot 的具体价格请参考最新的价格政策文件，不同区域、不同配置价格有所不同。我们提供阶梯价格政策，采购量越大价格越有优势。建议您根据客户的具体需求和采购量，向区域产品经理确认最新报价。

A: Please refer to the latest pricing policy document for the specific price of XBot, as prices vary across regions and configurations. We offer a tiered pricing policy, which means the larger the purchase volume, the more favorable the price will be. We recommend that you confirm the latest quotation with the regional Product Manager based on the client's specific requirements and purchase volume.

Q11: What is the relationship between XBot and RM21/RM21P?

A: RM21/RM21P are mainly designed for scenarios such as lawns, sports fields and golf courses, while XBot is a product line dedicated to orchard agricultural scenarios. XBot has been specially optimized for orchard scenarios in terms of chassis, tires, navigation, and operation kits. Some kits (such as spraying and side mowing) are only compatible with the XBot/RM21P platform.

Q12: Does XBot support multi-machine collaborative operation?

A: XBot's software planning supports multi-robot collaborative operation capabilities, enabling multi-robot formation operation, task allocation and unified management. This function will be gradually rolled out with product iterations, and it is also one of the key advantages of our platform-based products.