

Preface

Thank you for reading the “LiDAR Handle Quick Start Manual”. This manual provides detailed information on the product specifications, features, installation instructions, safety precautions, and troubleshooting guide of the LiDAR Handle.

Technical Support

From the date of purchase, users are entitled to long-term technical support and upgrade services provided by FJDynamics Co., Ltd.
Shenzhen Headquarters
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ZIP: 518063
Telephone: 400-777-6160(CN);1833-330-6660(US);496-931-090-130(EU).
Official website: <https://www.fjdynamics.com>, you can visit the website to learn about the latest updates of all FJDynamics products, download the latest version of related apps, and access technical documentation.

User Feedback

If you have any feedback about this manual or need further technical support, please contact us at service@fjdynamics.com. We are committed to providing you with excellent service.

User Notice

1. Please read the user manual carefully before use to understand its operation and safety precautions.
2. The LiDAR Handle is rated IP65 for outdoor use and installation. However, as time goes by, the protective performance may degrade due to aging. Please ensure proper waterproofing measures are taken. When using the LiDAR Handle to acquire point cloud data, protect the LiDAR sensor window from scratches to avoid affecting accuracy.
3. Avoid dropping the device or subjecting it to strong impacts or collisions.
4. Please take appropriate lightning protection measures to prevent electrical hazards when operating the device outdoors in rainy conditions.
5. Please provide the correct power supply in strict accordance with the product specifications to avoid damage to the device.
6. If the default cable or charging interface is damaged, please immediately stop using the device and replace it with a new one or contact us for after-sales support.
7. Damage caused by force majeure (including but not limited to lightning strikes, drops, impacts, high voltage, short circuits, or burning) is not covered under the company's free warranty policy.
8. Please do not disassemble the device yourself. Unauthorized disassembly will void the limited warranty provided by FJDynamics.

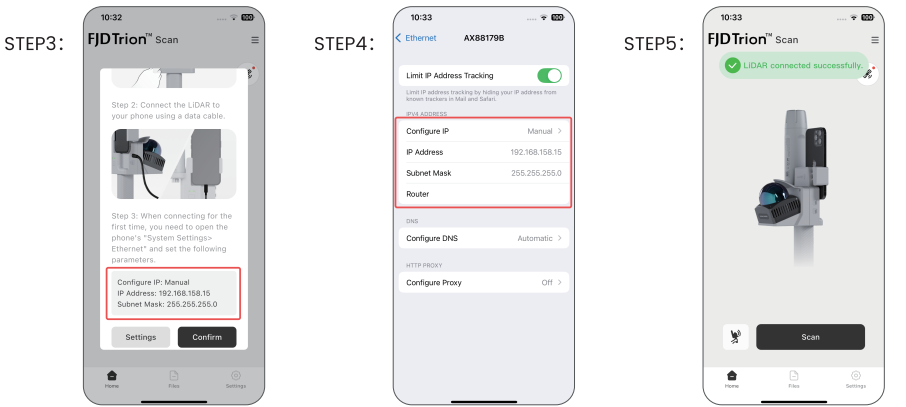
Specification Parameters

Category	Specification	
Radar Specifications	Laser Wavelength	905nm±15n
	Eye Safety Rating (a)	CLASS 1 (IEC 60825-1:2014)
	Detection Range	0.05-50m (90% reflectivity)
		0.1-25m (10% reflectivity)
	Minimum Detection Distance (b)	0.05m
	Field of View(FOV)	H: 360°
		V: -10°~60°
	Horizontal Angular Resolution	0.9°@0.5s
		0.45°@1s
		0.3°@1.5s
		0.225°@2s
		0.18°@2.5s
	Vertical Angular Resolution	0.36°
	Distance Random Error (1σ) (c)	±2cm (@10m) (d)
		±3cm (@0.2m) (e)
	Angular Random Error (1σ)	±0.18°
	Sampling Rate	≥200kHz
	Point Cloud Output	154,600 pts/s @ 70° vertical FOV
	False Alarm Rate (@100 ktx) (f)	< 0.01%
	IMU	IIM-42652
Mobile Compatibility	iOS	iPhone 15 and later models
	Android	More devices to be supported...
Electrical and Interface specificaions	Charging Specs	5V/3A
	Lithium Battery	3.6V/6700mA
	Power Consumption	< 5 W (25 °C)
	Charging Time	3H
	Operating Time	5 H
	Charging Port	Charging / USB 2.0
	Data Port	USB 3.0 (for point cloud data transfer)
Physical Characteristics	Housing Material	PC+ABS
	Dimensions	137mm*155mm*250mm
	Weight	Approx. 890 g

Category	Specification	
Physical Characteristics	Mounting Interface	5/8-inch internal threaded interface
	Button	Power Button
	Indicator Light	Battery Status Indicator
	Operating Temperature (g)	-10°C ~60°C
	Charging Temperature	0°C ~45°C
	Protection Rating	IP65
a: Do not stare directly into the laser emission aperture for extended periods or disassemble the LiDAR unit, as this may cause hazards. b: When the target object distance is between 0.05 m and 0.2 m, the LiDAR can detect and output point cloud data; however, due to uncertain detection accuracy, this data is for reference only. c: To ensure effective detection of objects with varying reflectivity within the measurement range, minor reductions in point cloud accuracy may occur at certain positions. d: Test conditions: ambient temperature approximately 25°C, target object reflectivity 90%, test distance 10 m. e: Test conditions: ambient temperature approximately 25°C, target object reflectivity 90%, test distance 0.2 m. For low-reflectivity and small objects within 0.05~1 m range (including but not limited to black foam, water surfaces, mirrors, glossy or matte-finished objects, and fine wires), detection performance cannot be guaranteed. f: Under 100 klx daylight conditions, ambient temperature approximately 25°C, the false alarm noise points rate caused by environmental stray light. g: Under extreme conditions such as high or low temperature environments, strong vibrations, and heavy fog, LiDAR performance may slightly degrade. In addition, prolonged operation at high temperatures may affect product performance or cause damage. Users are advised to implement effective cooling measures to ensure the inner wall temperature of the housing's heat dissipation fins does not exceed 80°C. If the temperature is too high, the over-temperature protection mechanism will activate, triggering a warning; severe overheating will cause the LiDAR to stop operating.		

Device Connection

1. Please scan the QR code below with your mobile phone to download the latest version of the app.
2. Press and hold the power button for 2 seconds to turn the device on or off. After powering on, the indicator light will turn green to indicate the initialization process. Once initialization is complete, the indicator light displays different colors corresponding to battery levels: solid green for 100%~80%, solid blue for 79%~20%, solid red for 20%~10%, and flashing red for 9%~0%. During charging, the indicator light shows red; when fully charged, it turns green.
3. For measurement, after turning on the device, use the included data cable to connect the device to the mobile app. Please follow the app instructions to configure the settings and begin data collection.



Common troubleshooting solutions

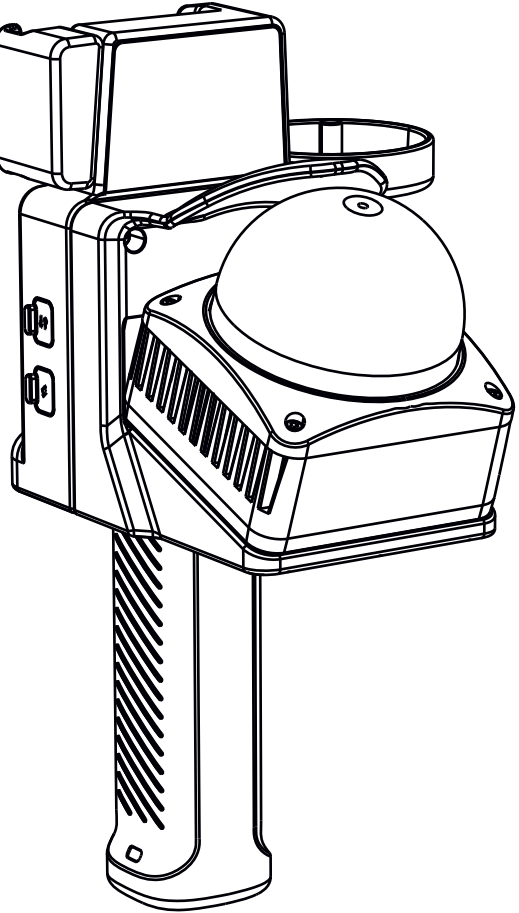
Issue Description	Solution
Device powers on normally but shuts down automatically after 10 seconds	The battery level is too low and the device has entered protection mode. Please connect the charger to recharge the device.
Other abnormal issues with unknown cause	Please refer to the "Technical Support" section to contact us, or go to the app's "Profile" section and submit your issue via "Feedback".

Kind Tips

Please use the supplied charging cable and a charger that meets the specified parameters. Using uncertified or non-compatible cables and chargers may cause fire, explosion, or other hazards. If the device will not be used for an extended period, please charge it to 50%~80% battery level, store it in a dry and cool environment according to the specified requirements, and recharge it once every two months to prevent battery damage caused by excessive discharge during long-term storage.

Disclaimer

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LiDAR Handle