

DEEP Robotics



# LYNX M20

*Autonomous Charging Manual*  
V1.0.1-0

## Statement

- This manual is the information asset owned by Hangzhou Yunshenchu Technology Co.,Ltd. (hereafter referred to as DEEP Robotics) and any reproduction of part or all of this manual is strictly prohibited without the permission of DEEP Robotics.
- This manual explains the autonomous charging function of "Lynx M20". Be sure to read and understand this manual carefully before operating the robot.
- Basic information on safe use is described in detail in the "Reading Tips", so be sure to read this part thoroughly to ensure proper use.
- The diagrams and photographs in this manual are representative examples and may differ in details from the product purchased.
- This manual may be modified as appropriate for product improvements, specification changes, etc.
- The contents of this manual do not exclude the possibility of misremembering or omission.If this manual is damaged or lost or if you have questions about the contents of this manual, please contact us promptly.
- Failure caused by unauthorized disassembly or modification of the product by the customer is not covered by our warranty, see "Service & Warranty" for details.

## Reading Tips

### Description of Symbol

Before using the charging dock and the autonomous charging function, please be sure to read and master this manual, and familiarize yourself with the equipment and safety matters before you start using it. The safety matters in this manual are divided into three kinds: "Caution", "Mandatory" and "Prohibition". Even the contents of "Caution" may have serious consequences depending on the situation, so any of these safety matters are extremely important and should be strictly observed.



#### Caution

Usage tips or operational recommendations. Improper using or operating the robot may cause damage to it.



#### Mandatory

Matters that must be observed.



#### Prohibition

Matters prohibited. Misoperation is dangerous and may cause injury to operators or damage to the robot.

### Get Help

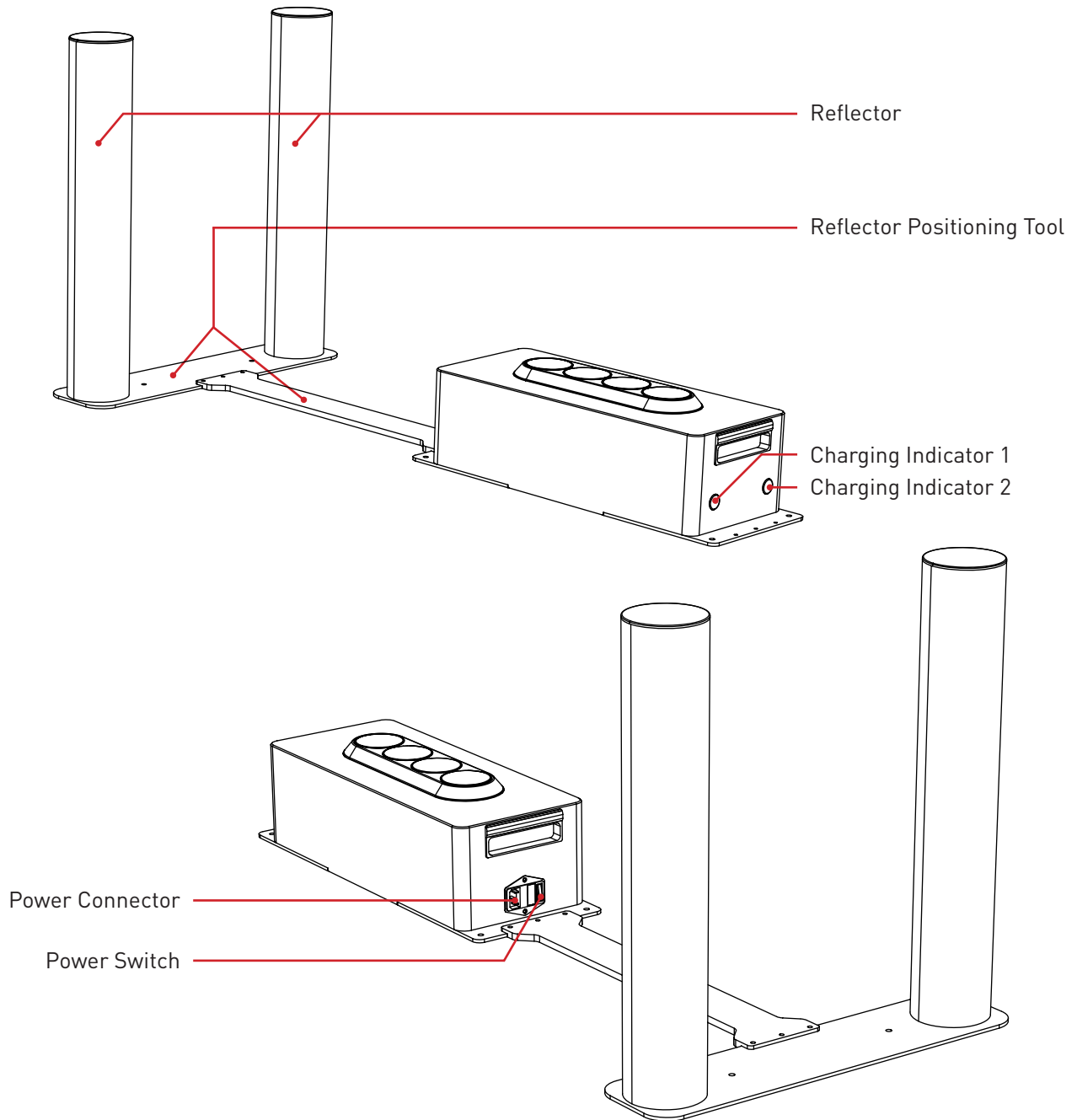
For more resources to assist you in using Lynx M20 proficiently, you can also visit DEEP Robotics' corporate website: <http://www.deeprobotics.cn>.

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# 1 Introduction


## 1.1 Technical Parameters




Charging Dock Parameters	
Dock Size (Length × Width × Height)	480mm×185mm×150mm
Reflector Size (Diameter × Height)	90mm×527mm
Dock Input Voltage	100V~240V
Dock Output	84/3A

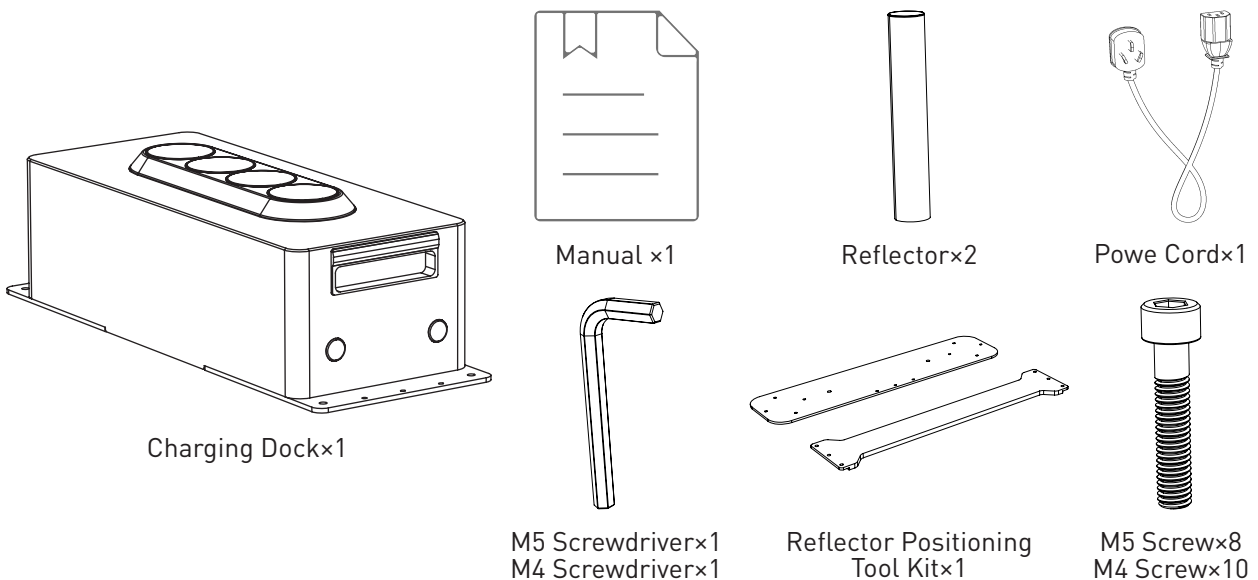
Charging Dock Parameters	
Weight	14.2kg

Indicator Light	Meaning
No light	The charging dock is not powered on
Indicator 1 flashes green	The charging dock is powered on, and the battery (near the reflectors side) of robot is not charging or installed
Indicator 1 lights red	The battery (near the reflectors side) of robot is charging by the charging dock
Indicator 2 flashes green	The charging dock is powered on, and the battery (away from the reflectors side) of robot is not charging or installed
Indicator 2 lights red	The battery(away from the reflectors side) of robot is charging by the charging dock
Indicator flashes red	Charging dock abnormal protection

	<p>If the abnormal protection status of the charging dock appears and does not disappear after restarting, please contact after-sales support for assistance.</p>
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## 1.2 Product List

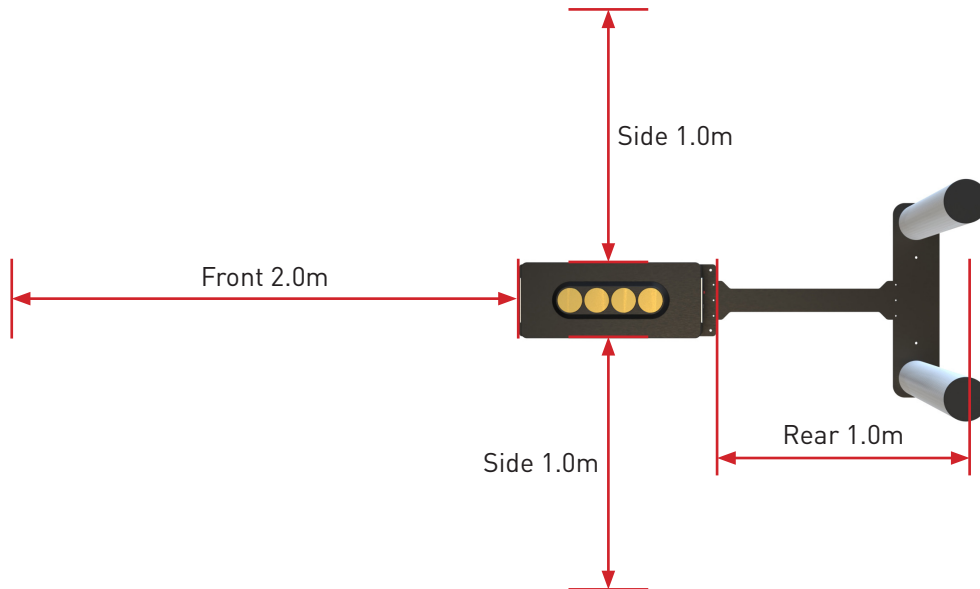
	<p>Before using the autonomous charging function, please check that the product list is complete.</p>
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## 2 Installation Instructions

### 2.1 Working environment

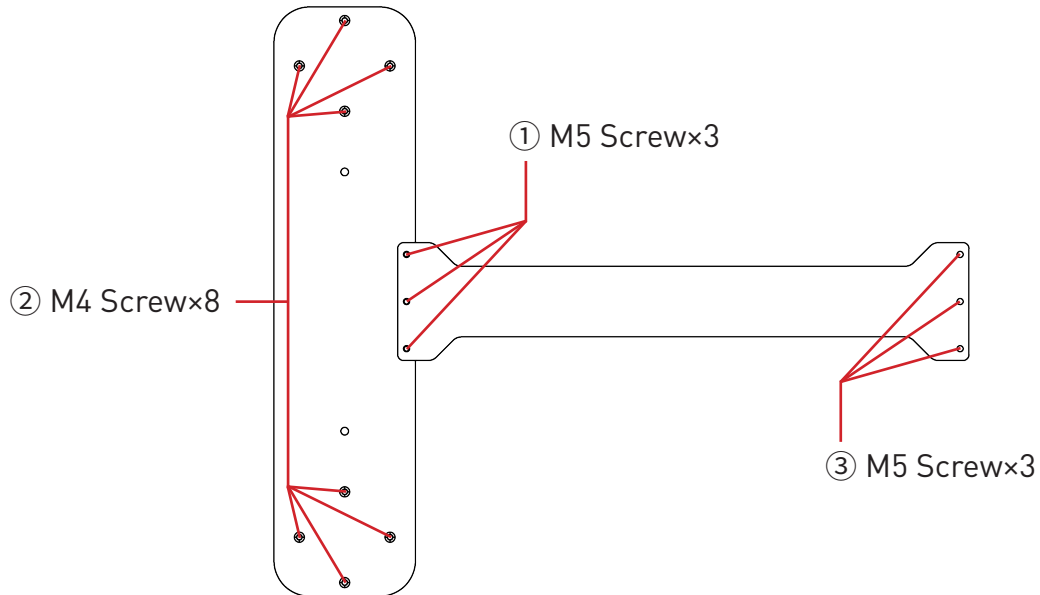
Select a horizontal and flat ground to install the charging dock, and ensure that there are no obstacles within 1.0m behind the charging dock, and no obstacles within 1m on the left and right sides and 2m in front of it.



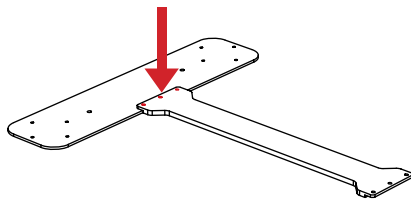
- Please make sure that there are no other reflective strips or reflectors near charging dock.
- Do not obstruct the two reflectors of the charging dock.

## 2.2 Assemble Charging Dock

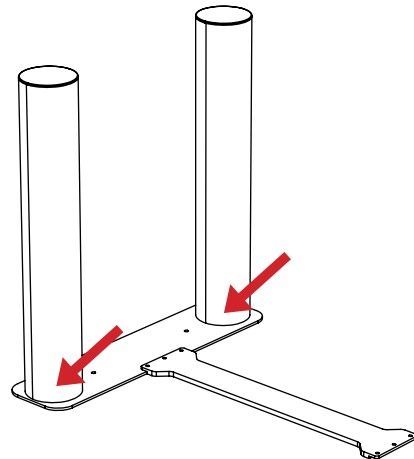
The reflector positioning tool can connect the charging dock and the reflectors, and fix the relative position between the two. The screw holes on the reflector positioning tool for connecting the two are shown in the following diagram.



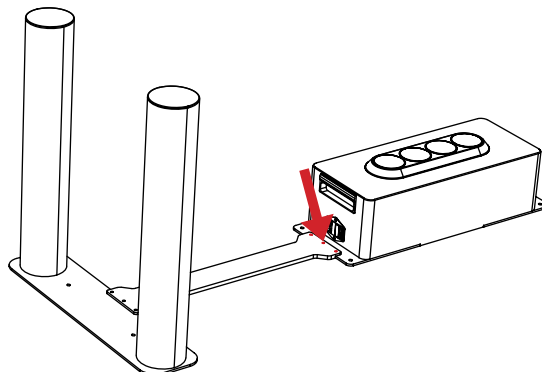
① Connect the two positioning tools with three M5 screws.



② Connect the reflectors to the positioning tool with eight M5 screws.



③ Connect the charging dock to the reflector positioning tool with three M5 screws.

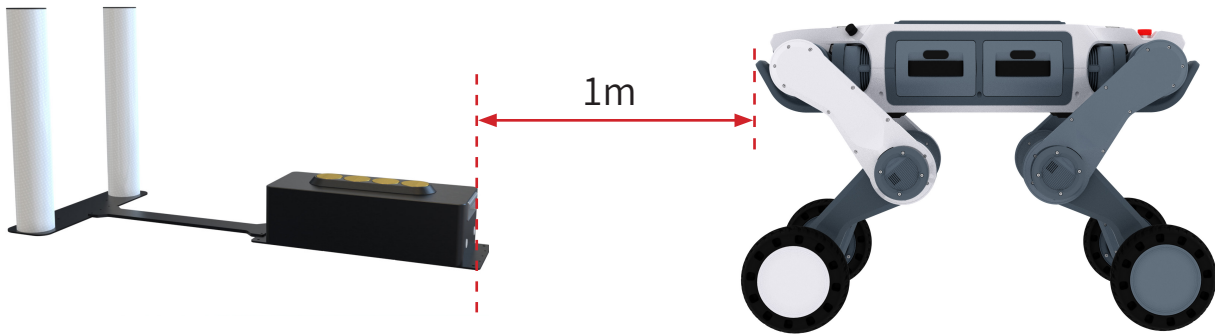




### 3 Usage

Lynx M20 allows users to use autonomous charging on the controller.

First, control the robot to move to a suitable location: Face the charging dock and stand about 1 meter away from it (as shown in the picture below), and make the robot stand still.



Then, press the [CHARGE] button, the robot will automatically enter the dock to charge; after the robot has entered the charging dock and started charging, click the [FINISH] button. The robot will stop charging and exit the dock.

During the charging process, the following charging abnormality prompts may appear as shown in the figure. After a charging error occurs, the robot stands in place and ends the autonomous charging task. Users can continue to use the autonomous charging function after troubleshooting according to the prompts. Common charging errors are shown in the following table:

Error Code	Charging Error
0x8501	Location Information Timeout
0x8502	Localization Startup Failure
0x8503	No Location Information
0x8506	No Current
0x8509	Charging Dock Entry Timeout
0x8510	Charging Dock Exit Timeout

※ For the charging error "No Current (0x8506)", if it is triggered right after the robot reaches the charging dock during the "enter charging dock" task, the robot will automatically stop charging, exit the dock, and terminate the autonomous charging process. If it is triggered while the robot is already charging on the dock, the robot will remain stationary on the dock.

## 4 Service & Warranty

### 4.1 Warranty Policy

The warranty period for the charging dock of Lynx M20 is one year. The warranty period starts from the date of receipt. Products or parts that meet the warranty period and the contents of the warranty will receive free after-sales service. If the product you purchased is beyond the warranty period, you can also get help from us by purchasing a separate service.

**Tip: Shell, Reflector, Reflector Positioning Tool and other fragile parts, and other accessories are not covered by warranty. If necessary, please consult after-sales support.**

### 4.2 Warranty Coverage

Depending on the specific situation, we will repair or replace parts accordingly for the product you purchased. However, the following cases will not be covered by the free warranty, but you can still choose to have paid after-sales service, for which please consult the after-sales support for details.

- Damage caused by man-made non-product quality problems.
- Unauthorized modification, disassembly, shell opening, etc.
- Out of warranty.
- Damage caused by improper installation, use and operation (such as dropping, crushing, immersion, violent use, etc.) as required by the manual.
- Damage caused by self-repair or replacement of parts without official instructions.
- Damage caused by installing third-party products by yourself.
- Damage caused by the use of a non-original power cord for power supply.
- Failure or damage due to force majeure factors such as typhoon, earthquake, fire, lightning strike, abnormal voltage.
- Damage caused by forced operation of parts in the event of aging or damage.
- There are obvious traces of dust, grit, water, and metal powder intrusion inside the robot.
- Damage caused by improper handling operations.
- Corrosion of components and circuit boards caused by using the robot in a humid environment.
- Due to operation errors, there are obvious marks of collision and scratches on the surface of the charging dock.

### 4.3 Repair Instructions

- When you obtain after-sales service from DEEP Robotics, you authorize DEEP Robotics to make any modification, delete data or restore factory settings for the purpose of after-sales service.
- Before sending it for repair, please contact after-sales support, DEEP Robotics will try to diagnose and solve your problem remotely.
- If the above methods cannot solve your problem, you can send it back to the robot for repair after verifying with after-sales support. You need to pay for the postage first when you send the product to DEEP Robotics. After DEEP Robotics receives the product in need of maintenance, the product will be tested to determine the problem and responsibility.
- If the problem is caused by defects in quality of the product itself, DEEP Robotics will be responsible for the testing fee, material fee, labor fee and the postage for sending back.
- If the product does not meet the conditions of free repair, you can choose to pay for repair, and the corresponding testing fee, material fee, labor fee and the postage for sending back will be paid by you. You can also choose not to repair and to send back the product, the corresponding postage and insurance fee will be paid by you.
- Considering environmental protection and safety, please do not send back seriously damaged batteries. If you have sent back, DEEP Robotics will scrap such batteries and will not return them back.
- If you provide an incorrect delivery address which results in non-delivery or rejection by the recipient, the adverse consequences and losses shall be afforded by you.
- To ensure your rights and interests, when you sign for the after-sale products sent by DEEP Robotics, please check carefully whether the products are intact. If there is any abnormality, please immediately take video or photos on the spot and contact DEEP Robotics to get the solution. If there are unresolved after-sale problems, please also contact DEEP Robotics immediately, otherwise it is regarded as the end of this after-sale service without dispute.

※The final interpretation of these after-sales terms and conditions belongs to DEEP Robotics.

※Please contact us if you have any questions before obtaining after-sales service.

※These after-sales terms and conditions are only used in Chinese mainland, and the after-sales policies of other countries or regions are subject to local laws.

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