

**IP67 Outdoor Solar
LoRa Node Controller**

LN502

Quick Installation Guide

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1. Package Contents

Thank you for purchasing **PLANET IP67 Outdoor Solar LoRa Node Controller, LN502**. The description of this model is as follows:

LN502	IP67 Outdoor Solar LoRa Node Controller (RS232, RS485, DI and DO, EU868/US915 Sub 1G)
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“**LoRa Node**” is used as an alternative name in this Quick Installation Guide.

Open the box of the **LoRa Node** and carefully unpack it. The box should contain the following items:

- LoRa Node Controller x 1
- QR Code Sheet x 1
- Data Cables x 2
- LoRa Antenna x 1
- Wall Mounting Screws x 1 set

If any item is found missing or damaged, please contact your local reseller for replacement.

2. Requirements

- Workstations running Windows 10/11 is equipped with USB interface.
- One end of micro USB cable is attached to the USB port, while the other end to the micro USB connector of the **LN502**.
- PLANET **LoRa Node Controller Tool** software.
- Two 18650 lithium rechargeable batteries.



Caution

This device requires **two 18650 lithium rechargeable batteries**. The batteries are **not included** in the package. Before using the batteries, please carefully **review the following specifications and guidelines**:

1. **Operating Temperature Range:** Ensure the environmental temperature complies with the range suitable for the batteries to avoid performance issues or damage.
2. **Battery Capacity and Voltage:** Use a battery that meets the device's requirements (e.g., 3.7V, 3000mAh).
3. **Safety Precautions:** Prevent short circuits, physical compression, or exposure to high temperatures.
4. **Installation Guidelines:**
 - a. Do not use old and new batteries or batteries of different brands together.
 - b. Ensure proper polarity (+/-) when installing the batteries.



Caution

- Never put batteries in mouth. If swallowed, contact physician or local poison control center.
- Do not short circuit; may cause burns or catch fire.
- Batteries should not be exposed to excessive heat such as sunshine, fire or the like.

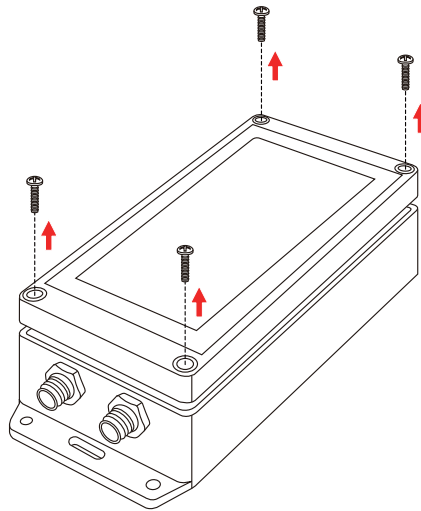
3. Hardware Installation

Refer to the illustration and follow the simple steps below to quickly install your **LoRa Node**.

3.1 Remove cover for setting

When changing the setting of LN502 via micro-USB, follow the steps below:

Step 1: Remove the screw caps to take off the cover.



Step 2: Ensure at least one 18650 lithium rechargeable battery is installed in the device. Follow the polarity markings (+/-) carefully during installation.

Step 3: Put back the cover and tighten the screws.



Note

Please ensure that the screws are tightened securely to prevent external moisture from penetrating the device.

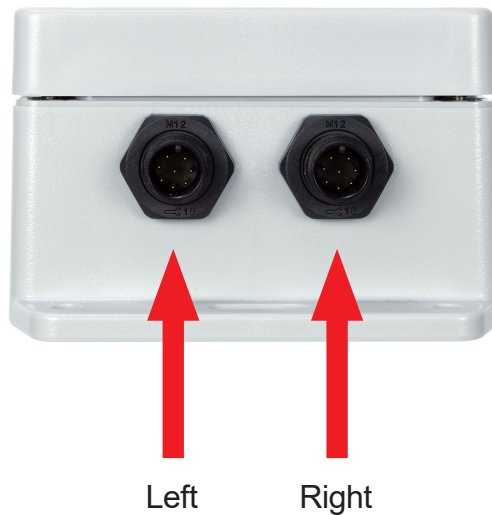
3.2 LoRa Antenna Installation

Step 1: Rotate the antenna clockwise to connect to the LoRa Node Controller.

Step 2: The external LoRa antenna should be positioned vertically for a good signal.



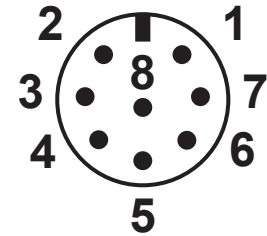
3.3 Data Interface



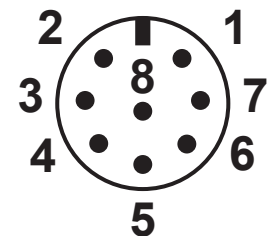
Left: Digital Input, Digital Output and Power IN

Right: RS232, RS485 and Power OUT

Pinout (Left)	Description	Color
1	Digital Output 1	Black
2	Digital Input 1	White
3	Digital Input 0	Red
4	9 – 48V DC in (+)	Orange
5	GND	Yellow
6	9 – 48V DC in (-)	Green
7	Digital Output 0	Blue
8	GND	Purple



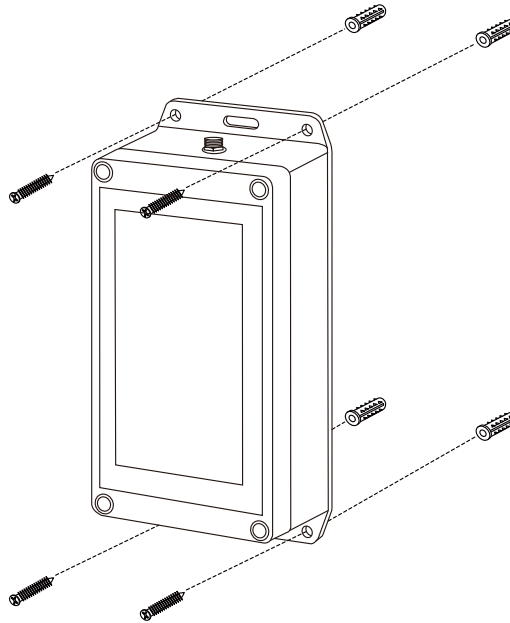
Pinout (Right)	Description	Color
1	5V DC out	Black
2	3.3V DC out	White
3	RS232 Tx	Red
4	RS232 Rx	Orange
5	GND	Yellow
6	RS485 A	Green
7	RS485 B	Blue
8	GND	Purple



3.4 Wall Mounting

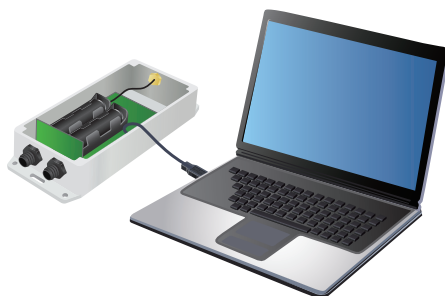
This section describes the functionalities of the Industrial LoRa Node and guides you to installing it on a wall. Please read this section completely before continuing.

Mark the four holes on the wall you prefer to place the device and drill the marked four holes for the wall plugs (anchors). Then place the device over the holes with the wall plugs inside, and tighten it with the screws to finish the job.



4. Managing LoRa Node Controller

1. Download PLANET LoRa Node Controller Tool software from PLANET web site.
<https://www.planet.com.tw/en/support/downloads?&method=keyword&keyword=LN&view=6#list> or visit the support page on PLANET official website and search for 'LoRa tool'
2. Power on the LoRa Node device and then connect it to computer via the micro USB port.



Note

The box of the LN502 does not include a USB cable. Please make sure to use a micro USB cable capable of data transfer.

3. Open the Tool and select **"Serial port"**, and then enter password to log in Utility. (Default password: **admin**)

Planet LoRa Node Controller Tool

Serial port: COM8

Login password: []

Baud rate: 115200

Data bits: 8

Parity bits: No Parity

Stop bits: 1

Login Cancel



For security reason, please change and memorize the new password after this first setup.

Note

4. After entering the password, the main screen appears as shown below.

Planet LoRa Node Controller Tool

System I/O Interface LoRa Maintenance

Model	LN502
DevEUI	A8F7E01525500084
FW Version	v1.120b241107
LoRaWAN Version	v1.0.4
Join Status	Activate
Battery	0.16 V
Uplink Frame-counter	1601
Downlink Frame-counter	15580

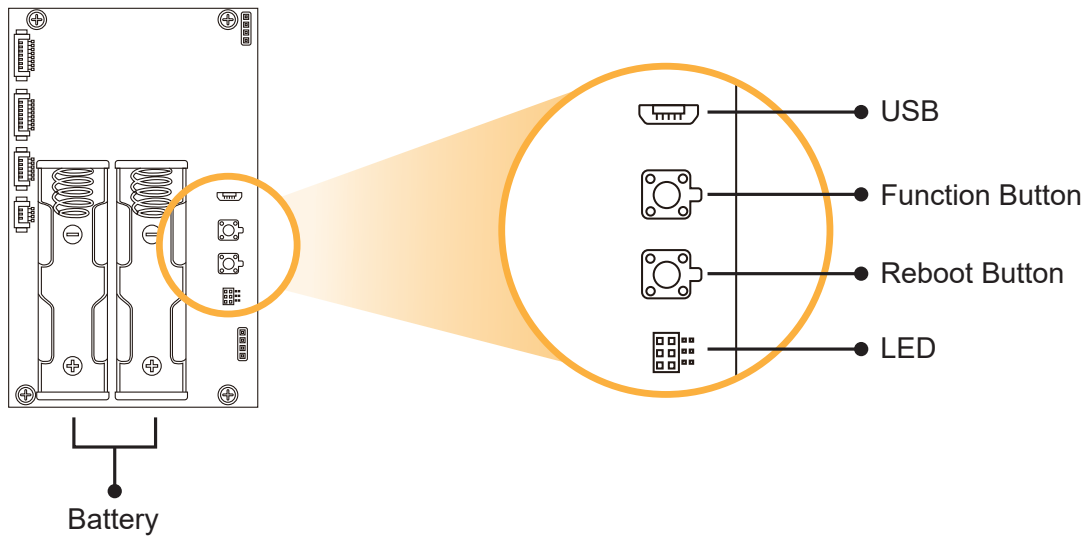
The function menu on the top of the tool lets you access all the commands and configuration the LoRa Node Controller provides.



Now, you can use the LoRa Node Controller Tool software to continue the LoRa Node Controller management.

Please select the correct Frequency for LoRaWAN by country or in a location you stay before doing the LoRaWAN setting.

5. Hardware Button and LED



Button:

Function	Action	LED Indication
Check LoRa Connection Status	Press and release the reboot button.	Fast Blink (connected)
		Slow Blink (not connected)
Reset	Press and hold the reset button for more than 5 seconds.	Fast Blink
Reboot	Press and release the reboot button.	Blink

Please refer to the user's manual for more.

6. Customer Support

You can browse our online FAQ resource and User's Manual on PLANET Web site first to check if it could solve your issue. If you need more support information, please contact PLANET support team.

PLANET online FAQs:

<https://www.planet.com.tw/en/support/faq.php?method=keyword&keyword=LN>

Support team mail address:

support@planet.com.tw

LN Series User's Manual:

<https://www.planet.com.tw/en/support/downloads?&method=keyword&keyword=LN502&view=3#list>



(Please select your model name from the drop-down menu of Product Models.)

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