

LoRa Node Controller

LN501

Quick Installation Guide

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1. Package Contents

Thank you for purchasing PLANET Industrial LoRa Node Controller, LN series. The description of this model is as follows:

LN501	Outdoor IP67 LoRa Node Controller with Solar Panel
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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:

LN501
<ul style="list-style-type: none">■ LoRa Node Controller x 1■ Data Cables x 2■ Mounting Bracket x 1■ Wall Mounting Kits x 1■ Hose Clamps x 2■ 2550 mAh Battery x 2

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



Caution

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

2. Requirements

- Workstations running Windows 10/11.
- **Type C USB** cable for **LN501**.

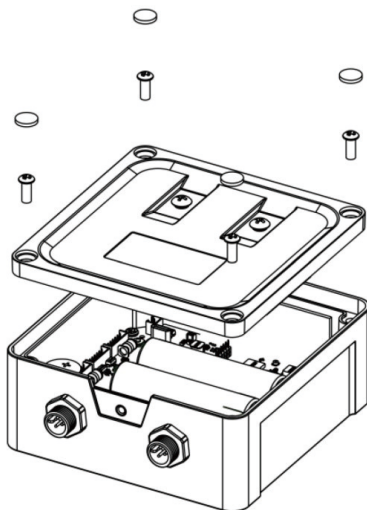
3. Hardware Installation

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

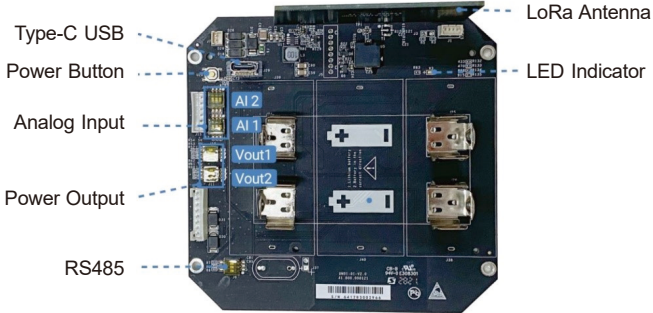
3.1.1 Remove cover for setting analog input or power output

When changing the analog input or power output of LN501 via DIP switch, follow the steps below:

Step 1: Remove the screw caps and take off the bottom cover.



Step 2: Choose or change an analog input and power output via DIP switch.



DIP Switch:

Interface	DIP Switch				
Power Output	12V (default)	3	2	1	OFF
					ON
	9V	3	2	1	OFF
					ON
	5V	3	2	1	OFF
					ON
Analog Input	Disable	3	2	1	OFF
					ON
	4-20mA ADC (default)	3	2	1	OFF
					ON
	0-10V ADC	3	2	1	OFF
					ON

RS485	Disable	3	2	1	
					OFF
					ON
	Add 120 Ω resistor between A and B	3	2	1	
					OFF
					ON
	Add 1k Ω pull-up resistor on A	3	2	1	
					OFF
					ON
	Add 1k Ω pull-down resistor on B	3	2	1	
					OFF
					ON



Please turn off the device before changing an analog input or power output via DIP switch.

Power Button:

Function	Action	LED Indication
Turn On	Press and hold the button for more than 3s.	Off → On
Turn Off	Press and hold the button for more than 3s.	On → Off
Reset	Press and hold the button for more than 10s.	Blinks.
Check On/Off Status	Quickly press the power button.	Light On: Device is on. Light Off: Device is off.

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



Note

1. Analog input is set to 4-20mA by default; power output is set to 12V by default.
2. Power output on interface 1 is used for powering serial port devices and power output on interface 2 is used for powering analog devices and SDI-12 devices.

3.1.2 Data Interface

Data Interface 1

Pin	Description				
1	5V/9V/12V OUT (Switchable)				
	12V (default)	3	2	1	OFF
					ON
	9V	3	2	1	OFF
					ON
	5V	3	2	1	OFF
					ON
	Max.100mA				
	2	3.3V OUT, max. 100mA			
	3	GND			
	4	Analog Input 1			
	5	Analog Input 2			
6	5-24V DC IN				

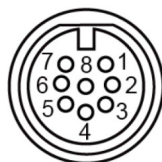


Note

When both DC external power and batteries are connected, external power will be the preferred power supply option.

Data Interface 2

Pin	Description															
1	5V/9V/12V OUT (Switchable)															
	<table border="1"><thead><tr><th>12V (default)</th><th>3</th><th>2</th><th>1</th><th></th></tr></thead><tbody><tr><td></td><td></td><td></td><td></td><td>OFF</td></tr><tr><td></td><td></td><td></td><td></td><td>ON</td></tr></tbody></table>	12V (default)	3	2	1						OFF					ON
	12V (default)	3	2	1												
					OFF											
					ON											
	<table border="1"><thead><tr><th>9V</th><th>3</th><th>2</th><th>1</th><th></th></tr></thead><tbody><tr><td></td><td></td><td></td><td></td><td>OFF</td></tr><tr><td></td><td></td><td></td><td></td><td>ON</td></tr></tbody></table>	9V	3	2	1						OFF					ON
	9V	3	2	1												
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	<table border="1"><thead><tr><th>5V</th><th>3</th><th>2</th><th>1</th><th></th></tr></thead><tbody><tr><td></td><td></td><td></td><td></td><td>OFF</td></tr><tr><td></td><td></td><td></td><td></td><td>ON</td></tr></tbody></table>	5V	3	2	1						OFF					ON
	5V	3	2	1												
					OFF											
				ON												
Max.100mA																
2	3.3V OUT, max. 100mA															
3	GND															
4	GPIO1															
5	GPIO2															
6	RS232(Tx)/RS485(A)															
7	RS232(Rx)/RS485(B)															
8	SDI-12															

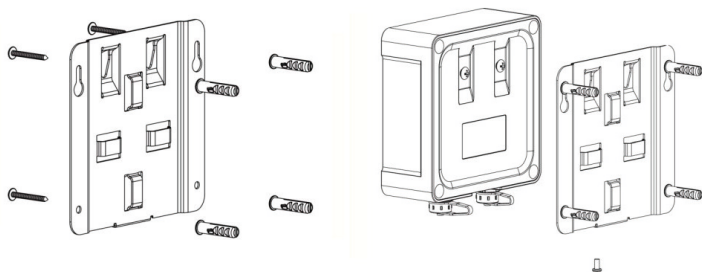


3.1.3 Wall Mounting

Make sure you have a wall mounting bracket, bracket mounting screws, wall plugs, wall mounting screws and other required tools.

Step 1: 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 mounting bracket over the holes with the wall plugs inside, and tighten it with the screws.

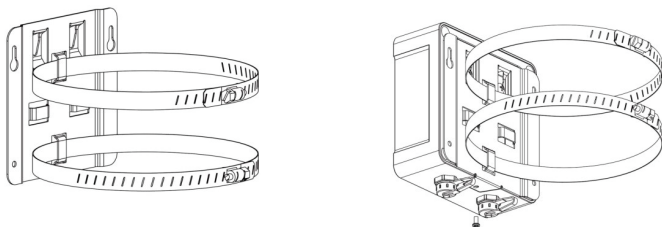
Step 2: Place the device on the mounting bracket and put the small screw into the hole found on the bottom of the device and then tighten the screw to finish the job.



3.1.4 Pole Mounting

Step 1: Straighten out the clamp and slide it through the rectangular rings in the mounting bracket, and wrap the clamp around the pole. Then use a screwdriver to tighten the clamp by turning it clockwise.

Step 2: Place the device on the mounting bracket and put the small screw into the hole found on the bottom of the bracket and then tighten the screw to finish the job.



Note

Please make sure the screws are tightly fixed.

4. 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=LN501&view=3#list>



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

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