1. Package Contents

Thank you for purchasing PLANET Industrial LoRa Node Controller, LN series. The descriptions of these models are as follows:

LN501	Outdoor IP67 LoRa Node Controller with Solar Panel
LN1152	Indoor IP30 LoRa Node Controller

"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	LN1152
■ LoRa Node Controller x 1 ■ Quick Installation Guide x 1 ■ Data Cables x 2 ■ Mounting Bracket x 1 ■ Wall Mounting Kits x 1 ■ Hose Clamps x 2 ■ 2550 mAh Battery x 2	■ LoRa Node Controller x 1 ■ Quick Installation Guide x 1 ■ LoRa Antenna x 1 ■ 12-Pin Terminal Block x 1 ■ Wall Mounting Screws x 2 ■ Power Adapter x 1

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/XP/2003/Vista/7/8/2008.
- **Type C USB** cable for **LN501**.
- **Micro USB** cable for **LN1152**.

3. Hardware Installation

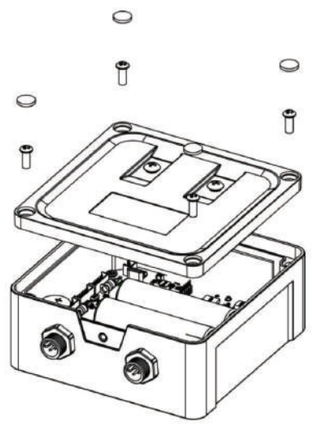
Refer to the illustration and follow the simple steps below to quickly install your **LoRa Node**.

3.1 LN501

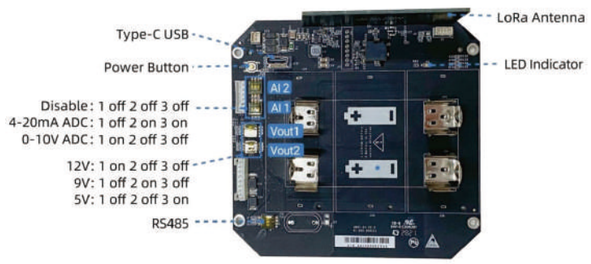
3.1.1 Remove cover for setting analog input or power output

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 roof cover.



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



DIP Switch:

Interface	DIP Switch
Power Output	12V: 1 on 2 off 3 off (default) 9V: 1 off 2 on 3 off 5V: 1 off 2 off 3 on
Analog Input	Disable: 1 off 2 off 3 off 4-20mA ADC: 1 off 2 on 3 on (default) 0-10V ADC: 1 on 2 off 3 off
RS485	Disable: 1 off 2 off 3 off (default) Add 120 Ω resistor between A and B: 1 on 2 off 3 off Add 1k Ω pull-up resistor on A: 1 off 2 on 3 off Add 1k Ω pull-down resistor on B: 1 off 2 off 3 on

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.

Note

Please turn off the device before changing DIP switches.

Step 3: Put back the roof cover and screw 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.

3.1.2 Data Interface

Data Interface 1

Pin	Description
1	5V/9V/12V OUT (Switchable)
2	3.3V OUT
3	GND
4	Analog Input 1
5	Analog Input 2
6	5-24V DC IN

Data Interface 2

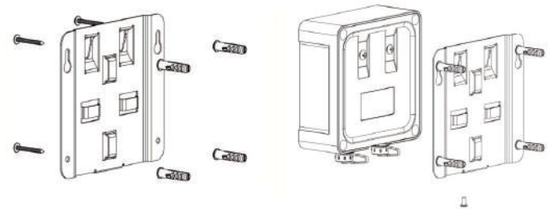
Pin	Description	
1	5V/9V/12V OUT (Switchable)	
2	3.3V OUT	
3	GND	
4	GPIO1	
5	GPIO2	
6	RS232/RS485 (Switchable)	
7		
8	Reserved	
PIN	RS232	RS485
6	Tx	A
7	Rx	B

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.

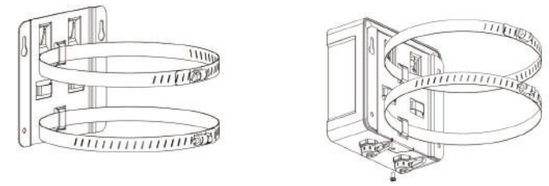
Step 2: Place the device on the mounting bracket and put the small screw into the hole found on the bottom of the device and then tighten the screw to finish the job.



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 device and then tighten the screw to finish the job.



Note

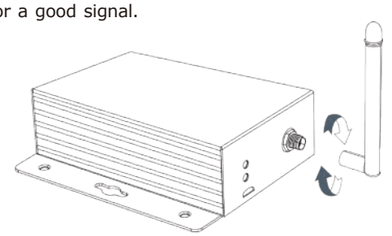
Please make sure the screws are tightly fixed.

3.2 LN1152

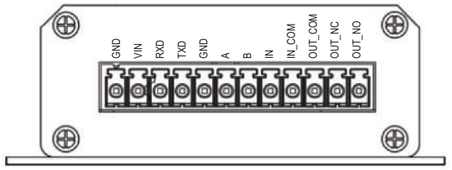
3.2.1 Antenna Installation

Step 1: Rotate the antenna into the antenna connector accordingly.

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



3.2.2 Data Interface and Power Interface



PIN	Definition	Description
1	GND	Ground
2	VIN	5-24V DC
3	RXD	RS232
4	TXD	
5	GND	
6	A	RS485
7	B	
8	IN	DI
9	IN_COM	
10	OUT_COM	DO
11	OUT_NC	
12	OUT_NO	

Note

OUT_NC = Normally Closed, OUT_No = Normally Open.

3.2.3 LED Indicators

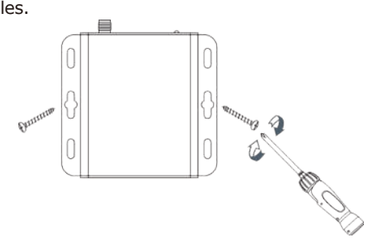
LED	Indication	Status	Description
System	System Status	Static	System Start-up
		On for 500 ms, off for 500 ms	The system is running properly.
		On for 200 ms, off for 200 ms	The system is not connected to server.
ACT	Network Status	Off	Failed to access the network
		On for 500 ms, off for 500 ms	Accessed the network successfully

3.2.4 Wall Mounting

Step 1: Align the LN1152 device horizontally to the desired position on the wall and use a marker pen to mark two mounting holes on the wall.

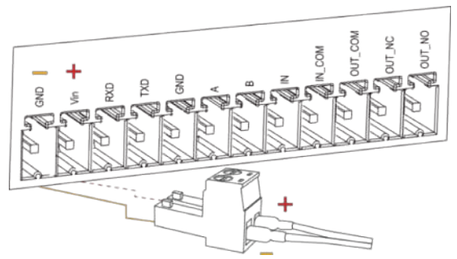
Step 2: Drill the two holes marked previously on the wall by using your drill with a 6 mm drill bit.

Step 3: Mount the device to the wall by tightly screwing the wall mounting screws (M3 * 20) into the device mounting holes.



3.2.5 Wiring Power Input

LN1152 series supports 5-24V DC power supply. You can use other supplies or power adapter to power on the device.

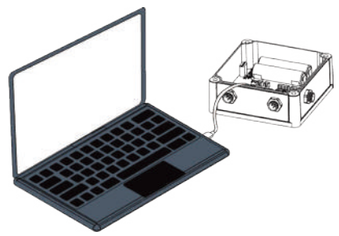


Note

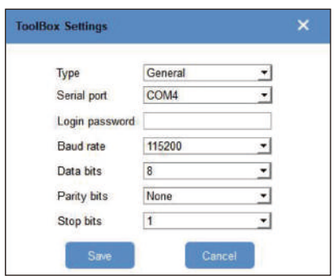
For industrial applications, it's suggested not to release the metal case and use an independent power supply.

4. Managing LoRa Node

1. Download ToolBox software from Planet web site. https://www.planet.com.tw/en/support/downloads?&method=keyword&keyword=LN501&view=6#list
2. Power on the LoRa Node device and then connect it to computer via micro USB port.



3. Open the ToolBox and select "Type" and then "General", and then click password to log in ToolBox. (Default password: 123456)



4. After logging in the ToolBox, you can click "Power On" or "Power Off" to turn on/off device and change other settings.

PLANET Networking & Communication

User's Manual

www.PLANET.com.tw

LoRa Node Controller

LN501/LN1152

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2011-AJ0050-000

5. 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
https://www.planet.com.tw/en/support/downloads?&method=keyword&keyword=LN1152&view=3#list

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