

# Industrial IP30 LoRa Node Controller (Modbus RS232, RS485, EU868/US915 Sub 1G)



## Build a Smart IoT Environment

PLANET LN1130 is an Industrial LoRa Node Controller used for data acquisition from multiple sensors. It contains one RS232 interface and one RS485 interface to simplify the deployment and replacement of LoRaWAN networks. It can be used to monitor and control embedded devices such as temperature sensors, access control systems, security systems, and more. With its industrial design and IP30 metal case, the LN1130 is widely used in indoor applications like smart industries, building automation, etc.



## LoRaWAN-based Controller with Rich Industrial Interfaces

The LN1130 LoRa Node Controller with one RS232 interface and one RS485 interface connects to all types of sensors, meters and other appliances. It also bridges Modbus data between serial and Ethernet network via LoRaWAN. The LN1130 supports LoRaWAN class C protocol to be in full compatibility with standard LoRaWAN gateways including PLANET LCG-300 series. It is ideal for large-scale IoT deployments, such as projects for building automation, smart metering, HVAC system, etc. With multiple interfaces, LoRaWAN Controller can perfectly help retrofit legacy assets into IoT enablement.

- RS232
- RS485

## LoRa and LoRaWAN Wireless Technology

LoRa or long range is a physical proprietary radio communication technique. It is based on spread spectrum modulation techniques derived from chirp spread spectrum (CSS) technology. LoRa is a long range, low power wireless platform that

- 1 x micro USB port console
- 1 x RS232 serial interface
- 1 x RS485 serial interface
- LED indicators for the LoRa and Power status
- 9 ~ 48V DC and 24V AC input voltage range
- Supports LoRaWAN protocol

has become the de facto wireless platform of Internet of Things (IoT). LoRaWAN defines the communication protocol and system architecture. The LN1130, supporting Modbus protocol and serial communication, is ideal for LoRa-enabled devices in the IoT system.

### Multiple LoRa Frequency Bands

The LN1130 supports the following license-free sub-gigahertz radio frequency bands,

- **EU868** (863 to 870 MHz) in Europe
- **AU915/AS923-1** (915 to 928 MHz) in South America
- **US915** (902 to 928 MHz) in North America
- **IN865** (865 to 867 MHz) in India
- **AS923** (915 to 928 MHz) in Asia
- **KR920** (920 to 923 MHz) in South Korea
- **RU864** (864 to 870 MHz) in Russia.

### Easy Installation in Limited Space

The compact-sized LN1130 is specially designed to be installed in a narrow environment, such as wall enclosure. It can be installed by fixed wall mounting or DIN rail, thereby making its usability more flexible and easier in any space-limited location.

## Optional installation method



\* The above pictures are for illustration only.

### Environmentally Hardened Design

With the IP30 metal industrial case, the LN1130 provides a high level of immunity against electromagnetic interference and heavy electrical surges which are usually found on plant floors or in curb-side traffic control cabinets without air conditioning. It features a ventilated construction in which a cooling fan is not necessary, thereby making its operation noiseless. Being able to operate under the temperature range from -40 to 75 degrees C, the LN1130 can be placed in almost any difficult environment.

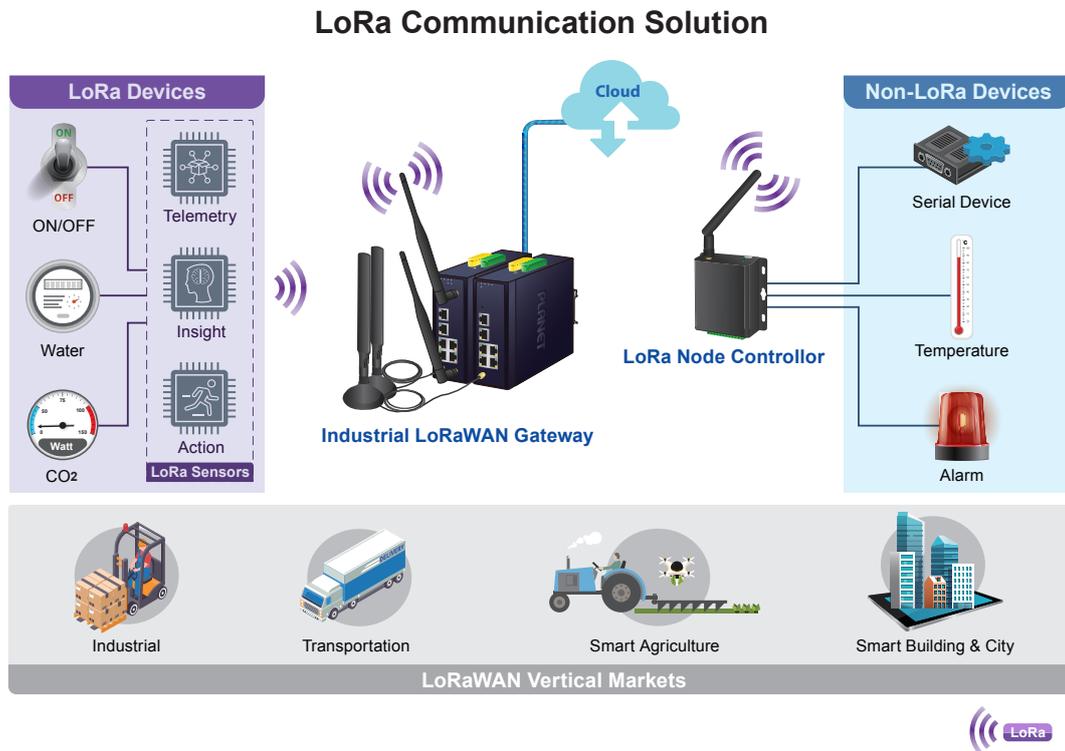
## Applications

### LoRa Communication Solution

The LN1130 is a versatile device that supports both LoRa and LoRaWAN standards. It comes equipped with one RS232 (serial communication) interface and one RS485 (Modbus protocol) serial interface. It is ideal for monitoring and controlling embedded devices such as temperature sensors, access control systems, and security systems.

The LN1130 offers various functions, including controlling node settings and configurations, data transmission, data collection and analysis, and managing the LoRa network, node management and other related functions. When used in conjunction with the LCG-300-series gateway, the LN1130 can send information via Ethernet to the Network Server, which is responsible for network management functions that distribute information to each application accordingly.

Overall, the LN1130 is a reliable and efficient solution for managing LoRa networks and controlling embedded devices, making it an essential tool for businesses and organizations looking to streamline their IoT operations.



## Specifications

Product	LN1130		
<b>Wireless Transmission</b>			
Technology	LoRaWAN		
Antenna Connector	1 × 50 Ω SMA Connectors (Center Pin: SMA Female)		
Frequency	IN865, EU868, RU864, US915, AU915, KR920, AS923		
Work Mode	OTAA/ABP Class A/B/C		
<b>Data Interfaces</b>			
Interface Type	6-pin removable terminal block		
Serial Port	RS232	Pin 1	TxD
		Pin 2	RxD
		Pin 3	GND
	RS485	Pin 4	D-(A)
		Pin 5	D+(B)
Pin 6		GND	
Baud Rate	600~256000 bps (RS232)/600~256000 bps (RS485)		
Protocol	Transparent (RS232), Modbus RTU (RS485)		
<b>Others</b>			
Configuration Port	1 × Micro USB		
LED Indicators	1 × PWR, 1 × LoRa		
Built-in Sensor	Temperature sensor		

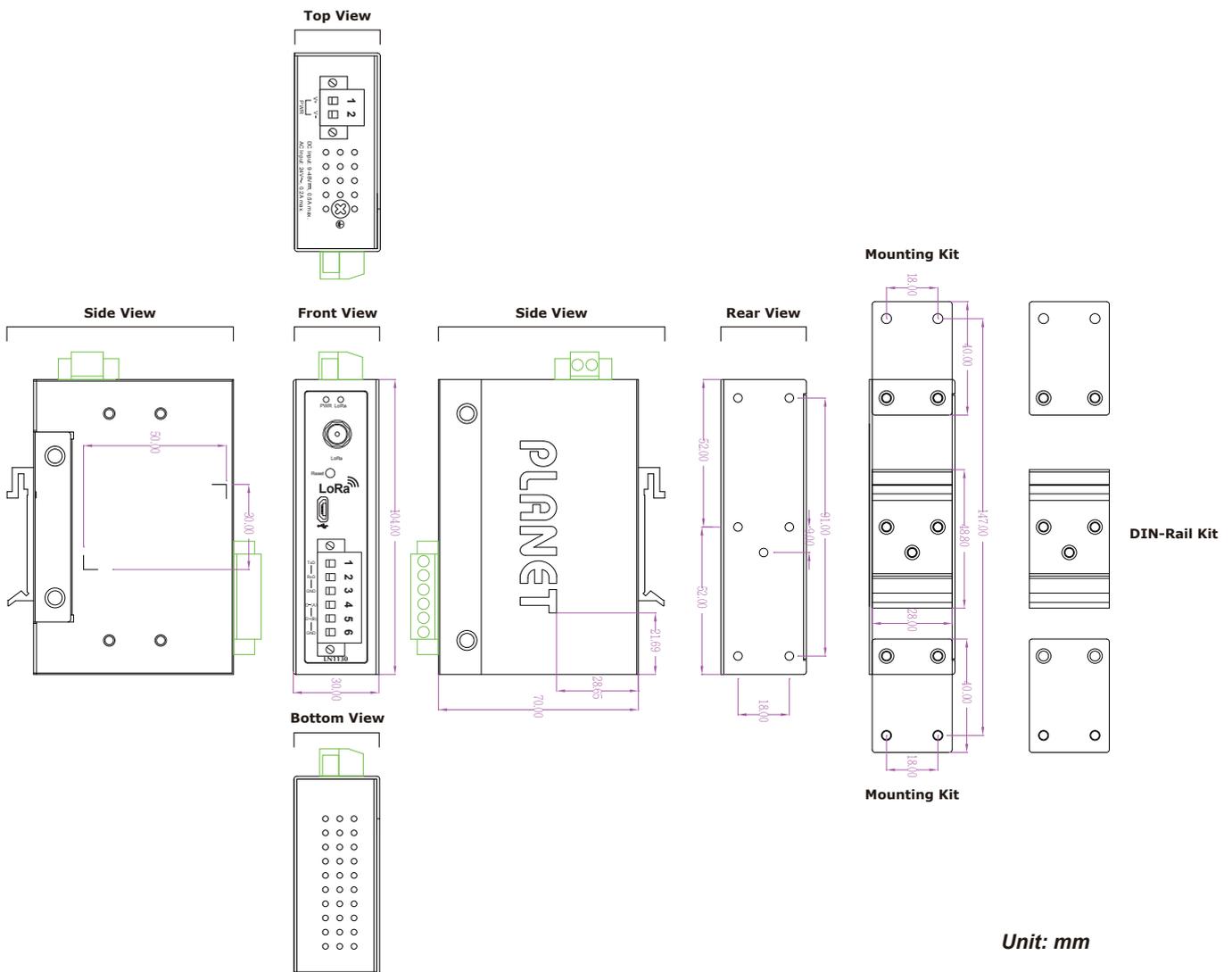
**Physical Characteristics**

Power Connector	2-pin removable terminal block
Power Supply	9 ~ 48V DC/ 24V AC
Ingress Protection	IP30
Operating Temperature	-40°C to +75°C
Relative Humidity	5% to 95% (non-condensing)
Dimensions	33 x 70 x 104 mm
Weight	218 g
Installation	DIN-rail or wall mounting

**Standards Conformance**

Regulatory Compliance	CE, FCC
-----------------------	---------

## Dimensions



## Ordering Information

LN1130	Industrial IP30 LoRa Node Controller (Modbus RS232, RS485, EU868/US915 Sub 1G)
--------	--

## Related Products

LN1140	Industrial IP30 LoRa Node Controller (2 DI, 2 DO, EU868/US915 Sub 1G)
LCG-300-NR	Industrial LoRaWAN + 5G NR Cellular Gateway with 5-Port 10/100/1000T
LCG-300W	Industrial LoRaWAN Wireless Gateway with 5-Port 10/100/1000T

## Accessories

PWR-240-48	240W 48V DC Single Output Industrial DIN-rail Power Supply (-20 ~ 70 degrees C)
PWR-480-48	480W 48V DC Single Output Industrial DIN-rail Power Supply (-20 ~ 70 degrees C)