

Industrial IP30 LoRa Node Controller (2 DI, 2 DO, EU868/US915 Sub 1G)



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

Build a Smarter, Connected World

PLANET LN1140 is an Industrial LoRa Node Controller used for data acquisition from multiple sensors. It contains two digital input interfaces and two digital output interfaces 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 LN1140 is widely used in indoor applications like smart industries, building automation, etc.



LoRaWAN-based Controller with Rich Industrial Interfaces

The LN1140 LoRaWAN Controller with built-in two DI interfaces and two DO interfaces connects to all types of devices with DO and DI interfaces. The LN1140 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.

- Digital Input
- Digital Output

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 has become the de facto wireless platform of Internet of Things (IoT). LoRaWAN

defines the communication protocol and system architecture. The LN1140, supporting Modbus protocol and serial communication, is ideal for LoRa-enabled devices in the IoT system.

Multiple LoRa Frequency Bands

The LN1140 supports the following license-free sub-gigahertz radio frequency bands:

- **EU868** (863–870 MHz) in Europe
- **AU915/AS923-1** (915–928 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)

Easy Installation in Limited Space

The compact-sized LN1140 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

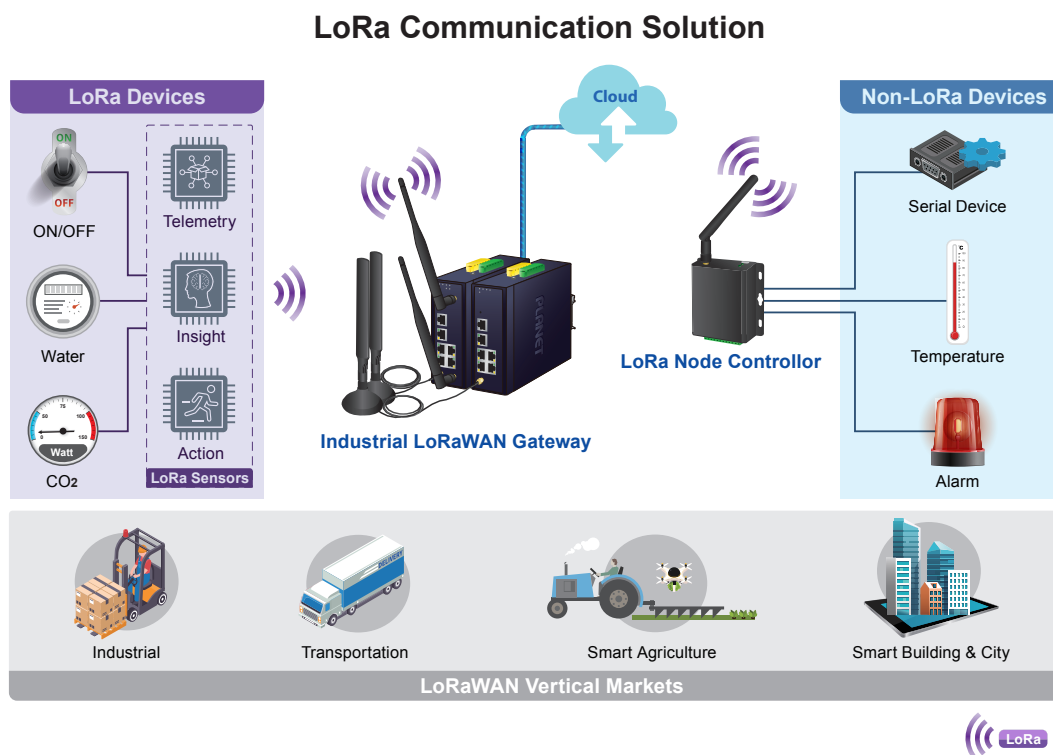
With the IP30 metal industrial case, the LN1140 provides a high level of immunity against electromagnetic interference and heavy electrical surges which are usually found on plant floors or in curb-side traffic control cabinets without air conditioning. It features a ventilated construction in which 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 LN1140 can be placed in almost any difficult environment.

Applications

LoRa Communication Solution

The LN1140 is a versatile device that supports both LoRa and LoRaWAN standards, which is ideal for monitoring and controlling embedded devices such as temperature sensors, access control systems, and security systems. It 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.

Overall, the LN1140 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.

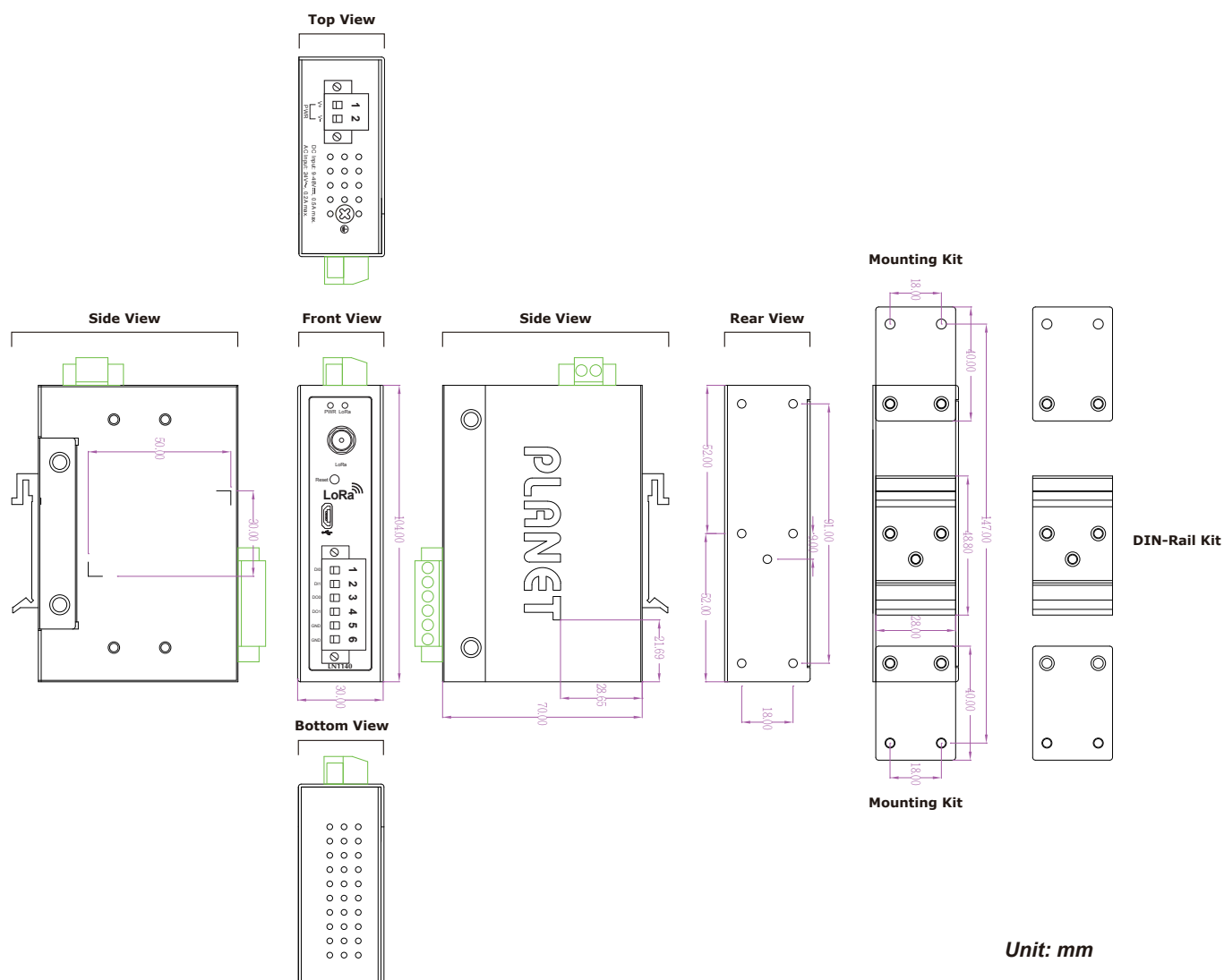


Specifications

Product	LN1140		
Wireless Transmission			
Technology	LoRaWAN Compatibility		
Modulation Type	LoRa and FSK		
Frequency Range	863 MHz to 930 MHz		
Tx Power	16 dBm (EU868) / 20 dBm (US915)		
Sensitivity	-136 dBm		
Work Mode	Class A/ Class B/ Class C		
Antenna	1 × 50 Ω SMA Connector (Center Pin: SMA Female)		
Data Interfaces			
Interface Type	6-pin removable terminal block		
IO Ports	Digital Input	Pin 1 (DI 0)	Level 0: -24V~2.1V (±0.1V)
		Pin 2 (DI 1)	Level 1: 2.1V~24V (±0.1V)
	Digital Output	Pin 3 (DO 0)	Input Load to 24V DC, 10mA max.
		Pin 4 (DO 1)	Open collector to 24V DC , 100mA (max.)
	GND	Pin 5, 6	
Others			
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

LN1140	Industrial IP30 LoRa Node Controller (2 DI, 2 DO, EU868/US915 Sub 1G)
--------	---

Related Products

LN1130	Industrial IP30 LoRa Node Controller (Modbus RS232, RS485, 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)

PLANET Technology Corporation

11F., No.96, Minquan Rd., Xindian Dist., New Taipei City
231, Taiwan (R.O.C.)

Tel: 886-2-2219-9518

Email: sales@planet.com.tw

Fax: 886-2-2219-9528

www.planet.com.tw



PLANET reserves the right to change specifications without prior notice. All brand names and trademarks are property of their respective owners. Copyright © 2023 PLANET Technology Corp. All rights reserved.

LN1140