Product Specifications

Indoor IP30 LoRa Node Controller
LN1152

Version 1.0

Change History:

Revision	Date	Author	Change List
Version 1.0	2022/3/1	Ricebean	Initial release

Author	Ricebean	Editor:	Mark
Reviewed by:	Kent	Approved by:	Kent

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1. PRODUCT DESCRIPTION

Build a Smarter, Connected World

PLANET LN1152 is an indoor LoRa node controller used for data acquisition from multiple sensors. It contains different I/O interfaces including analog inputs, digital inputs, relay outputs and serial ports to simplify the deployment and replacement of LoRaWAN networks. Besides, the LN1152 can trigger multiple conditions and actions without a network. With its industrial design and IP30 metal case, the LN1152 is widely used in indoor applications like smart industries, building automation, etc.

LoRaWAN-based Controller with Rich Industrial Interfaces

The LN501 LoRaWAN Controller with built-in multiple industrial interfaces connects to all types of sensors, meters and other appliances. It also bridges Modbus data between serial and Ethernet network via LoRaWAN. The LN1152 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 application 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
- RS232
- RS485

2. PRODUCT FEATURES

Highlights

- Easy to connect with multiple wired sensors through digital input, digital output, RS232 and RS485 interfaces

- Ultra-wide-distance transmission up to 10km with line of sight

- Triggers multiple conditions and actions

- Embedded watchdog for work stability

- Industrial metal case design with wide operating temperature range

- Compliant with standard LoRaWAN gateways and network servers

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3. PRODUCT SPECIFICATIONS

3.1 Main Components

LoRa Chip	ASR6500 (Semtech SX1262)
MCU	STM32L475

3.2 Functional Specifications

Product	LN1152	
Wireless Transmission		
Technology	LoRaWAN	
Antenna Connector	× 50 Ω SMA Connectors (Center Pin: SMA Female)	
Frequency	LN1152-868: IN865, EU868, RU864 LN1152-915: US915, AU915, KR920, AS923	
Tx Power	16dBm(868)/20dBm(915)	
Sensitivity	-147dBm @300bps	
Work Mode	OTAA/ABP Class C	
Data Interfaces		
Interface Type	3.5mm Terminal Block	
IO	Digital Input	Opto-isolated Digital Inputs, 3-24VDC (pulse counter support)
	Digital Output	SPDT Relay Contact Rating: 3A@DC Max: 30 V or AC Max: 250 V
Serial Port	Ports	RS232/RS485
	Baud Rate	4800~115200bps (RS232)/1200~115200 bps (RS485)
	Protocol	Transparent (RS232), Modbus RTU (RS485)
Others		
Configuration Port	1 × Micro USB	
LED Indicators	1 × System, 1 × ACT	
Built-in	Watchdog, Timer	
Physical Characteristics		
Power Connector	3.5mm Terminal Block	
Power Supply	5-24 VDC	
Ingress Protection	IP30	
Operating Temperature	-40°C to +70°C	
Relative Humidity	5% to 95% (non-condensing)	
Dimensions	79 × 60 × 24 mm	
Installation	Desktop, Wall mounting	

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Standards Conformance	
Regulatory Compliance	CE, FCC

3.3 Physical Specifications

Dimensions (W x D x H)	70 x 60 x 24 mm
Net Weight	0.1 kg

Slide View

Front View

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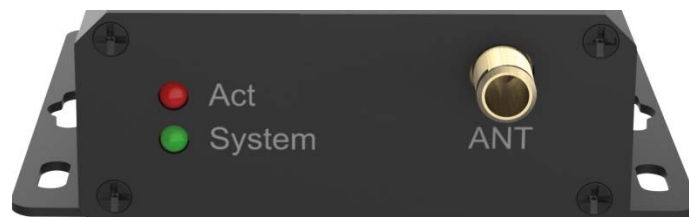
Front View
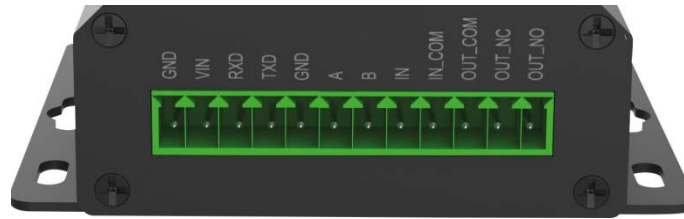
Data Interface and Power Interface

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

Note: OUT_NC=Normally Closed, OUT_No=Normally Open.

LED Definition:

■ **System**

LED	Color		Function
System	**Green**	**Lights**	The system is starting up.
		Blinks	The system is running properly.
Act	**Red**	**Blinks**	Connected to the network successfully.
		Off	Failed to connect to the network.

3.4   ENVIRONMENTAL SPECIFICATIONS

Operating:

Temperature: -40°C ~ 70°C

Relative Humidity: 0% ~ 95% (non-condensing)

Storage:

Temperature: -40°C ~ 80°C

Relative Humidity: 0% ~ 95% (non-condensing)

3.5   ELECTRICAL SPECIFICATIONS

Power Input Range: DC 5~24V

3.6   Regulatory Compliance

FCC, CE

3.7   Reliability

MTBF > 100,000 hrs @ 25 degrees C

3.8   Basic Packaging

- LN1152 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

3.9   Packaging Information

Dimensions (W x D x H)	105 x 85 x 82 mm
Weight	0.4 kg (gross weight)
Carton Dimensions (W x D x H)	455 x 345 x 250 mm
Carton Weight	12 kg
Carton Unit	40pcs in one carton