

Embrace LPWAN,

Empower Industrial Digitalization.

LT312 Series LoRaWAN-DTU

LT312 is a versatile LoRaWAN® data terminal for industrial data acquisition and transparent transmission.

It integrates the LoRaWAN® 1.0.3 stack, supports Class A/C, OTAA/ABP, ADR or fixed spreading factors, with adjustable power and channels for balanced coverage and reliability. Via RS485/RS232, it enables scheduled/remote commands and active polling (Modbus-RTU compatible), sending data wirelessly to gateways and platforms for stable end-to-cloud connectivity.

LT312 supports script editing, task orchestration, customizable heartbeat and I/O output, flexible serial settings, and a built-in watchdog for reliability. It is ideal for buildings, campuses, and factories, simplifying integration and maintenance of meters, PLCs, and serial devices.



Features

More Robust Industrial Serial Ports

RS232/RS485 with full isolation and built-in 15 kV ESD protection; supports transparent transmission and scheduled/active data collection (Modbus-RTU compatible).

LoRaWAN protocol

Built-in LoRaWAN 1.0.3, supports Class A/C, OTAA/ABP, supports ADR/fixed SF switching, and adjustable transmit power and channel.

Powerful RF performance

Bandwidth 125 kHz, adjustable SF7–SF12 (typical data rates: 5.5/3.1/1.8/1.0/0.6/0.3 kbps); receiver sensitivity –135 dBm @ SF12/BW125 kHz.

Multi-region frequency coverage

Supports frequency bands such as EU433, CN470, CN779, EU868, AS923, AU915, and KR920, adapting to deployment in different regions.

Flexible task and script definition

Customizable acquisition and LoRaWAN heartbeat tasks, with script editing, task orchestration, and flexible serial configuration for diverse devices and protocols.

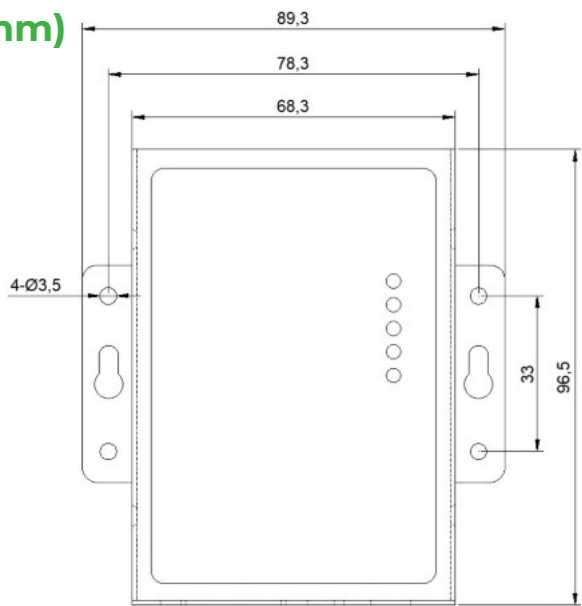
User-friendly power and installation

DC 9–28 V input (terminal block or DC5.5×2.1), with 12 V adapter and wall-mount kit; SMA antenna interface; operating temperature –20 to 70 °C.

Product Specifications

Specifications			
Item	LT312		
Wireless Parameters			
Protocol	LoRaWAN 1.0.3		
Frequency Bands	EU433, CN470, CN779, EU868, AS923, AU915, KR920		
Transmit Power	22dBm		
Receiver Sensitivity	-135dBm@SF12 BW125kHz		
Join/Operation Modes	OTAA/ABP, Class A/C		
Spreading Factor	SF7–SF12, 6 levels adjustable (5.5 / 3.1 / 1.8 / 1.0 / 0.6 / 0.3 kbps)		
RS485			
Quantity & Type	3.81mm, 2Pin terminal * 1		
Baud Rate	2400–115200 bps; default 9600 bps; data bits: 8; stop bit: 1; parity: none		
Protection	Fully isolated circuit, built-in 15 kV ESD protection		
RS232			
Quantity & Type	DB9 * 1		
Baud Rate	2400–115200 bps; default 115200 bps; data bits: 8; stop bit: 1; parity: none		
Protection	Fully isolated circuit, built-in 15 kV ESD protection		
Electrical parameters			
Input	DC12V , 1A		
Connector Type	Port 1: 3.81 mm, 2-pin terminal; Port 2: DC 5.5 × 2.1 mm		
Power Consumption	Average power consumption ≤0.5 W		
Ambient Temperature And Humidity			
Storage Temperature	-40 ~ 85℃	Operation temperature	-20~ 70℃
Ambient humidity	5~ 95% (non-condensing)		
Indicator light			
POWER Indicator	LED is on when power supply is normal; LED is off when undervoltage or fault occurs.		
RUN Indicator	LED blinks when system is running normally; LED is on or off constantly when a fault occurs.		
LoRa Indicator	LED is on when LoRa data is being sent; LED is off when no LoRa data is transmitted.		
RS232 Indicator	LED blinks when RS232 data is received; LED is off when no RS232 data is received.		
RS485 Indicator	LED blinks when RS485 data is received; LED is off when no RS485 data is received.		

Dimensions (mm)



Ordering Guide

Minimum Model	LoRaWAN	Serial Port
LT312-US915	US915 frequency band, North American, transmit power: 22dBm;	1 * RS232 +1 * RS485
LT312-EU868	European EU868 frequency band, transmit power: 22dBm;	1 * RS232 +1 * RS485
LT312-CN470	China CN470 frequency band, transmit power: 22dBm;	1 * RS232 +1 * RS485
LT312-AS923	Asia-Pacific (excluding South Korea and India) AS923 band, transmit power: 22dBm;	1 * RS232 +1 * RS485

About Us

InHand Networks is a leading IoT solutions provider founded in 2001, dedicated to driving digital transformation across industries and empowering customers to unlock their full potential and achieve accelerated growth.

We specialize in delivering industrial-grade connectivity solutions for diverse sectors, such as enterprise networks, industrial and building IoT, digital energy, smart commerce, and mobility. Our comprehensive product portfolio and services cater to various applications worldwide, including smart manufacturing, smart grid, intelligent transportation, smart retail, etc. With a global footprint spanning over 60 countries, we serve customers in China, the United States, France, Germany, the United Kingdom, Italy, and beyond.



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