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F8L10T LoRa Terminal Technical Specification

General

F8L10T LoRa data transmission terminal is a wireless data transmission terminal based on LoRa spread spectrum technology. At the same time using Lora wireless transmission technology for short distance data transmission.
 	
    This product adopts industrial grade Lora scheme with high performance, based on embedded real-time operating system as the software platform, while providing RS232 and RS485 (or RS422) interface, can be directly connected to the serial device, realize the transparent data transmission function; low power design, lowest power consumption is less than 5ma@ 12VDC; 5 i/o, can achieve the digital input output, analog input, pulse counting function.
 	
    It has been widely used on M2M fields, such as electric power, intelligent trafic, wireless metering, industrial automation, telemetry, water supply, environment protection, weather, and so on.

Product Feature --

Design for Industrial Application

◆ High-powered industrial LoRa chip and MCU

◆ High-powered industrial 32 bits CPU

◆ Support low power consumption mode, including multi-sleep and trigger modes to reduce the power dissipation farthest

◆ Housing: iron, providing IP30 protection

◆ Power range: DC 5~36V

Stability and Reliability

◆ Support hardware and software WDT

◆ RS232/RS485/RS422 port: 15KV ESD protection

◆ Power port: reverse-voltage and overvoltage protection

◆ Antenna port: lightning protection(optional)

Standard and Convenience

◆ Adopt terminal block interface, convenient for industrial application

◆ Support standard RS232 and RS485(or RS422) port that can connect to serial devices directly

◆ TTL logic level RS232 interface can be customized, ADC interface can be customized

◆ Support intellectual mode, enter into communication state automatically when powered

◆ Provide management software for remote management

◆ Support several work modes

◆ Convenient configuration and maintenance interface

High-performance

◆ Support Lora wireless short-range data transmission capabilities, with self-organizing network capabilities

◆ Relay routing and terminal device functionality

◆ Network capacity: 65000 nodes (typical number of 300)

◆ Send mode flexible: Broadcast send or destination address send mode optional

◆ Supply 5 I/O channels, can achieve the analog input of the 3 channels, the digital input and output of the 2 channels; compatible with the pulse count function of the 2 channels
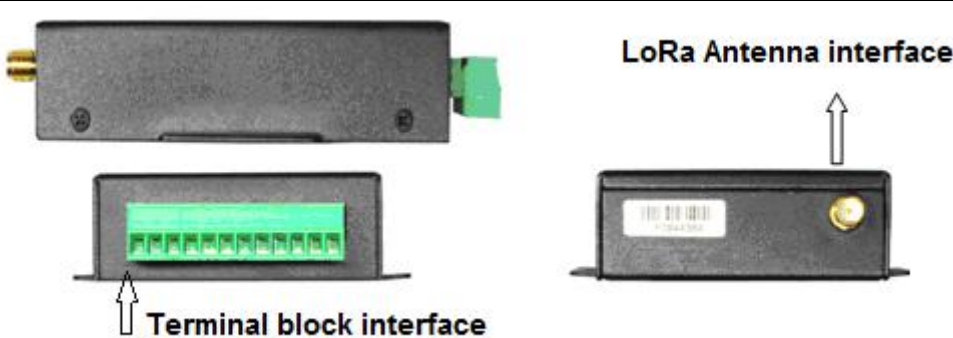
Product Pecification --

LoRa Specification

Item	Content
Communication Frequency Band	Support a variety of frequency bands around the world（433/470/780/868/915 MHz）
Indoor/Urban Communication Distance	F8L10T-N:1km　　　　　　F8L10T-E:2km
Outdoor/Visual Communication Distance	F8L10T-N:3.5km　　　　　F8L10T-E:11.5km
Bandwidth	6 level adjustable（0.3、0.6、1.0、1.8、3.1、5.5Kbps）
TX Power	F8L10T-N:20dBm(100mW)　F8L10T-E:30dBm(1W)
RX Sensitivity	-140dBm

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Interface type

Item	Content
Serial	1 RS232 port and 1 RS485(orRS422) port, 15KV ESD protection Data bits: 8 Stop bits: 1, 2 Parity: none, even, odd, space, mark Baud rate: 300、600、1200、2400、4800、9600、19200、38400、57600、115200bps
Indicator	"Power", "ACT", "Online"
Antenna	LoRa : Standard SMA female interface, 50 ohm, lighting protection(optional)
Power	Terminal block interface, reverse-voltage and overvoltage protection

LoRa Antenna interface

Terminal block interface

Power supply

Item	Content
Standard Power	DC 12V/0.5A
Power range	DC 5~36V

Consumption

Item	Working condition	Consumption
F8L10T-N	Sleep	3.1～3.2mA@12 VDC
	Receive data	13.2～13.4mA@12 VDC
	Transmit data	60.3～61.2mA@12 VDC
	Sleep	7.3～7.4mA@5 VDC
	Receive data	26.1～26.2mA@5 VDC
	Transmit data	107.3～115.1mA@5 VDC
F8L10T-E	Sleep	3.1～3.3mA@12 VDC
	Receive data	13.2～13.4mA@12 VDC
	Transmit data	110-125mA@12 VDC
	Sleep	7.2～7.4mA@5 VDC
	Receive data	26.3～26.5mA@5 VDC
	Transmit data	210～213mA@5 VDC

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Physical Characteristics

Item	Content
Housing	Iron, providing IP30 protection
Dimensions	91x58.5x22 mm
Weight	205g

Environmental Limits

Item	Content
Operating Temperature	-40~+85ºC（-40~+185℉）
Storage Temperature	-40~+125ºC（-40~+257℉）
Operating Humidity	95% (unfreezing)

Ordering Information

Product number	Description
F8L10T-N	LoRa data transmission terminal（Without PA）
F8L10T-E	LoRa data transmission terminal（With PA）

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