Four-Faith

LoRa Alliance™

F8L10T

LoRa Terminal

F8L10T LoRa Terminal is a wireless data transmission terminal based on LoRa Spread Spectrum Communication technology. It is using LoRa network to provide wireless data transmission function for users.

The product uses the high-performance industrial-grade LoRa solution with the embedded real-time operating system as the software support platform. It provides RS232 and RS485 (or RS422) interfaces at the same time, can be connected to the serial devices directly to achieve data pass-through function. The terminal has a low-power design, the minimum power consumption is less than 5mA@12VDC. It provides 5 I/O for implement functions as digital input and output, analog input, pulse counting, etc.

The product has been widely used in the M2M industry of the IoT industrial chain, such as smart grid, intelligent transportation, smart home, finance, mobile POS terminals, supply chain automation, industrial automation, intelligent building, fire protection, public safety, environmental protection, meteorology, digital medical, telemetry, agriculture, forestry, water, coal, petrochemical and other related fields.

HIGHLIGHTS

INDUSTRIAL-GRADE DESIGN

- High-performance industrial-grade chip
- Low-power design, support multi-level sleep and wake-up mode
- Metal casing, IP30 protection level, suitable for most industrial control applications.
- Wide range power input (DC 5~36V)

POWERFUL FUNCTIONS

- Support OTA upgrade
- Support WOR to wake up remotely
- Support multiple baud rates, multiple RF rates
- Flexible transmission power settings (5~20dBm, 30dBm with PA module)
- Provides 5 I/O, including 3 analog input, 2 digital input and output, 2 pulse counting.

STABLE & RELIABLE

- WDT watchdog timer to ensure system stability
- RS232/RS485/RS422 interface with built-in 15KV ESD
- Power interface with built-in phase-reversal and over-voltage protection
- Antenna interface with lightning protection (optional)
- Automatically split large data packet in transmission, ensure the packet is integral and not lost
- High-efficiency error detection and correction scheme

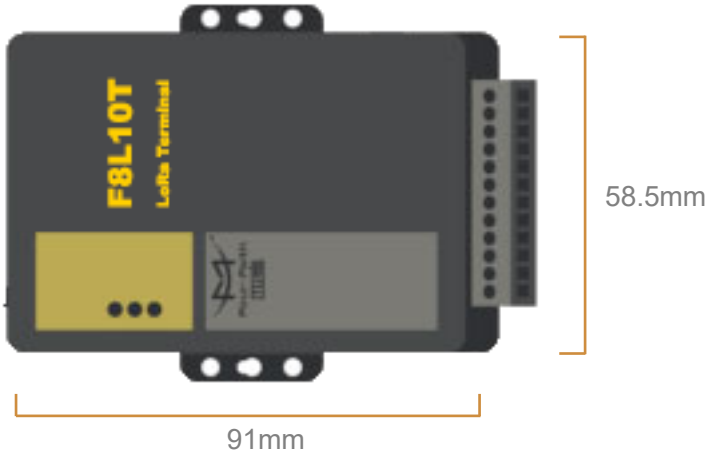
STANDARD INTERFACE & EASY-TO-USE

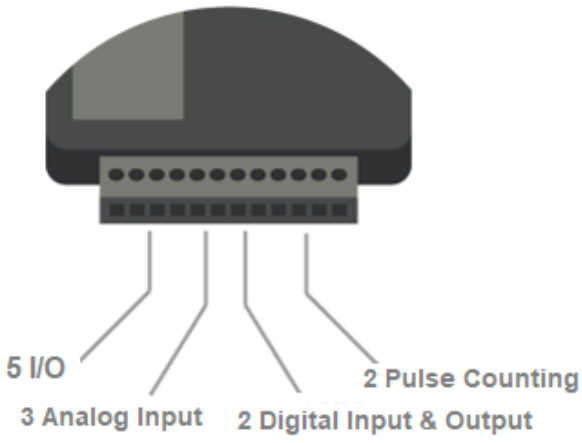
- Industrial terminal block interface, suitable for industrial applications
- Standard RS232/RS485/RS422 interface, can be connected to serial devices directly
- Customizable TTL and ADC serial port
- Intelligent data terminal, automatically enter transmission status after power-on
- Easy to use and flexible, has multiple working modes
- Convenient system configuration and maintenance interface
- Support upgrade software from the serial port and remote maintenance

SPECIFICATIONS

LORA COMMUNICATION	
Frequency Bands	Support various frequency bands in most of the countries (433/470/780/868/915 MHz)
Indoor / urban Communication Distance	F8L10T-N: 1 km, F8L10T-E: 2 km
Outdoor / line-of-sight Communication Distance	F8L10T-N: 3.5 km, F8L10T-E: 11.5 km
Transmit Power	F8L10T-N: 20dBm(100mW), F8L10T-E: 30dBm(1W)
Communication Rate (Theoretically)	6 levels adjustable (0.3, 0.6, 1.0, 1.8, 3.1, 5.5 Kbps)
Sensitivity	-140 dBm
HARDWARE	
CPU	Industrial-grade 32-bit processor
FLASH	128 KB
RAM	16 KB
INTERFACE	
Serial Port	1 RS232 and 1 RS485 (RS422) interface with built-in 15KV ESD Data bits: 8 bits Stop bits: 1 or 2 bits Error detection: none, even parity, odd parity
LED Indicators	Power, communication, LoRa
Antenna Interface	Standard SMA female antenna interface, characteristic impedance: 50 Ω
Power Interface	Terminal block interface with built-in phase-reversal and over-voltage protection

POWER		
Standard Input Voltage	DC 12 V / 0.5 A	
Accepted Voltage Range	DC 5~36 V	
POWER CONSUMPTION		
F8L10T-N	Sleeping	3.1 ~ 3.2mA@12 VDC
	Receiving Data	13.2 ~ 13.4mA@12 VDC
	Sending Data	60.3 ~ 61.2mA@12 VDC
	Sleeping	7.3 ~ 7.4mA@5 VDC
	Receiving Data	26.1 ~ 26.2mA@5 VDC
	Sending Data	107.3 ~ 115.1mA@5 VDC
F8L10T-E	Sleeping	3.1 ~ 3.3mA@12 VDC
	Receiving Data	13.2 ~ 13.4mA@12 VDC
	Sending Data	110-125mA@12 VDC
	Sleeping	7.2 ~ 7.4mA@5 VDC
	Receiving Data	26.3 ~ 26.5mA@5 VDC
	Sending Data	210 ~ 213mA@5 VDC
PHYSICAL PROPERTIES		
Casing	Metal casing, IP30 protection level, suitable for most industrial control applications.	
Dimensions	91 x 58.5 x 22 mm (excluding antennas and mountings)	
Weight	205g	
OTHERS		
Operating Temperature	-40~+85ºC (-40~+185°F)	
Storage Temperature	-40~+125ºC (-40~+257°F)	
Relative Humidity	95% (non-condensing)	





Note: There may be differences between models of accessories and interfaces, actual products shall prevail.

ORDERING INFORMATION	
F8L10T-N	LoRa data transmission terminal
F8L10T-E	LoRa data transmission terminal (With PA*)

*PA = Power Amplifier