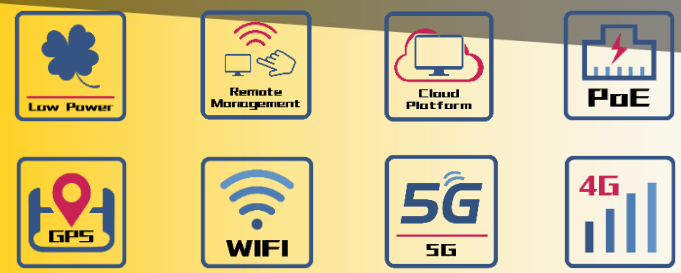


Four-Faith

5G LoRaWAN® Base Station

FBL800-00



Introduction

FBL800-00 series outdoor base station is a wireless communication base station based on the LoRaWAN standard protocol. It accesses various application nodes that meet the LoRaWAN standard protocol, and the collected information is transmitted to the cloud server through wired Ethernet/4G/5G/5G Redcap/WIFI. This product has been widely used in the M2M industry of the Internet of Things industry chain, such as smart meters, smart disaster relief, smart sensors, and other fields.

Industrial-grade Design

- High-performance industrial-grade CPU and wireless module
- High-performance industrial-grade multi-channel LoRaWAN® gateway RF chip
- Using ABS shell, metal heat dissipation base, IP67 protection
- Support POE+ (802.3af/at) input
- Wide power input (VAC100-277V ~ 0.5A), DC input can be customized.

Stability & Reliability

- WDT watchdog design to ensure system stability
- Anti-drop mechanism to ensure device always online
- Ethernet interface with built-in 15KV ESD
- Power interface with built-in phase-reversal, overvoltage, and lightning protection
- Antenna interface with lightning protection

Standard & Convenience

- Provide standard Ethernet, 4G, 5G, 5G Redcap and WIFI interface
- Provide standard wired WAN interface (support standard PPPOE protocol)
- Provide powerful central management software to facilitate equipment
- Convenient system configuration and maintenance interface
- Intelligent data terminal, automatically enter transmission status after power on.

5G LoRaWAN® Base Station FBL800-00



High Performance

- Support LoRaWAN® protocol: Class A, Class C
- Support 802.11 b/g/n WIFI network
- WIFI support variety types of encryption such as WEP, WPA and WPA2. Support MAC address filtering
- Support LoRaWAN® wireless data transmission protocol

Product Specification

Characteristics			
Model	**LORA+5G**	**LORA+5G Redcap**	**LORA+4G**
Items	**Contents**		
Bandwidth Standard	**5G NR:** n1/n2/n3/n5/n7/n8/n20/n28/n41/ n66/n71/n77/n78/n79 **LTE:** B1/B2/B3/B4(66)/B5(18/19/26)/ B7/B8/B12(17)/B13/B14/B20/B2 5/B26/B28/B29/B30/B38/B39/B 40/B41/B42/B43/ B46/ B48/B71	**5G NR:** N1/2/3/5/7/8/12/13/14/18/20/25/ 26/28/30/38/40/41/48/66/70/71/ 77/78 **LTE:** B1/2/3/4/5/7/8/12/13/14/17/18/1 9/20/25/26/28/30/34/38/39/40/4 1/42/43/48/66/71	Support LTE FDD, LTE TDD, EVDO, WCDMA、TD-SCDMA, CDMA1X, GPRS/EDGE
	Note: Different modules can be selected according to user needs to support different network standards.		
Theoretical Bandwidth	**5G NR:** DL: 3.4 Gbps, UL: 350 Mbps **LTE Cat20:** DL: 2.0 Gbps, UL: 150 Mbps **HSPA+:** DL: 42 Mbps, UL: 5.76 Mbps	**5G SA Sub-6 (256QAM):** DL: 223 Mbps, UL: 123 Mbps **LTE (256QAM):** DL:195 Mbps, UL: 105 Mbps	**LTE FDD：** DL:100 Mbps， UL: 50 Mbps **LTE TDD：** DL:61 Mbps， UL: 18 Mbps **DC-HSPA+：** DL:42 Mbps， UL: 5.76 Mbps **TD-HSPA+：** DL:4.2 Mbps， UL: 2.2 Mbps **EVDO Rev. A：** DL: 3.1 Mbps， UL: 1.8 Mbps
	Note: The rate is mainly based on actual testing.		
Transmit Power	<23dBm		
Receive Sensitivity	<-97dBm		

5G LoRaWAN® Base Station FBL800-00



LoRa Characteristics			
Model	LORA+5G	LORA+5G Redcap	LORA+4G
Items	Contents		
Network Structure	Simple Star Network Topology		
LoRaWAN® Protocol	Class A, Class C		
Urban Communication Distance	9km@SF12		
Floor Penetration Reference Distance	18 floors@SF12		
Output Power	26±1dBm		
Operating Frequency	EU433, CN470-510, CN779-787, EU863-870, US902-928, AU915-928, AS923, KR920-923		
Antenna Max Sensitivity	-140dBm@LoRa		
Bandwidth	125kHz / 250kHz / 500kHz		
Communication Channel	Uplink： 8, Downlink:1		
Communication Rate	Adaptive link rate		
Communication Mode	Half-duplex		
Working Mode	Supports sending and receiving different frequencies and the same frequency		
Reporting Server Mode	Ethernet, 4G, 5G		
Wireless Management	WiFi wireless management and upgrade		

WIFI	
Items	Contents
Standard & Frequency Band	IEEE802.11b/g/n standard
Theoretical Bandwidth	IEEE802.11b/g： Max speed rate 54Mbps IEEE802.11n： Max speed rate 150Mbps
Security Encryption	Supports multiple encryption modes, such as WEP, WPA, and WPA2. WPS is optional
Transmitting Power	20dBm(11n), 24dBm(11g), 26dBm (11b)
Receive Sensitivity	< -72dBm@54Mbps

Hardware	
Items	Contents
CPU	Industrial 32-bit Communication Processor
Flash	32MB
DRR2	128MB

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Interfaces			
Model	LORA+5G	LORA+5G Redcap	LORA+4G
Items	Contents		
Power (AC)	Standard AC power cable with built-in power reverse protection		
RJ45	WAN/LAN configurable, one 10/100M Ethernet port (RJ45 socket), adaptive MDI/MDIX, built-in 1.5KV electromagnetic isolation protection, support POE+ powered		
Type-C	Serial Port		
Reset	Use this button to restore the parameters of a Gateway to factory defaults		
TF Card	8GB/32GB (Optional)		
SIM Card	1		
Indicator	"PWR", "Online","LoRa ","4G/5G", "WiFi"		

Note: Different models of accessories and interfaces may be different, the specific object prevail.

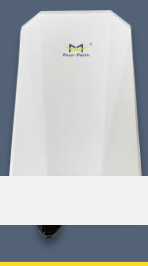
Power Supply	
Items	Contents
Standard	VAC:100-277V~0.5A
POE	POE+（802.3af/at）, 25W Max

Power Consumption	
Items	Contents
Stand By	Average Current ≤ 130mA @12V
Communication	Transmitting current ≤450mA @12V (with 4G) Transmitting current ≤220mA @12V (without cellular module) Receiving current ≤120mA @12V

Physical Properties	
Items	Contents
Installation	Wall mounting or pole mounting
Dimensions	240x150x100mm
Shell	ABS + Metal base, IP67
Electrostatic Discharge Immunity Test	IEC61000-4-2
Surge (Impact) Immunity Test	IEC61000-4-5
Electrical fast transient pulse group immunity test	IEC61000-4-4

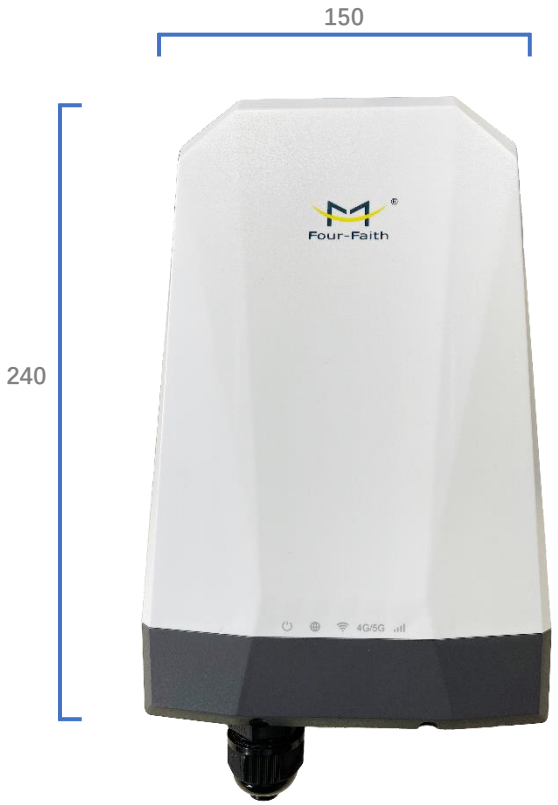
Others	
Items	Contents
Operating Temperature	-35~+75ºC (-40~+167ºF)
Storage Temperature	-40~+85ºC (-40~+185ºF)

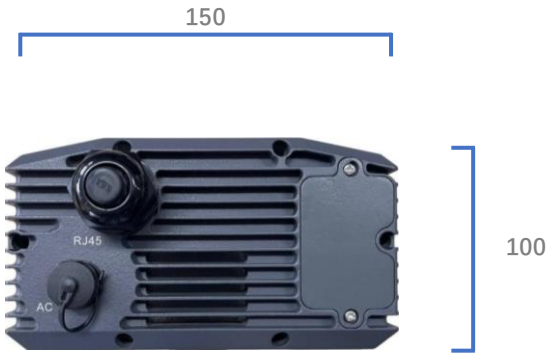
5G LoRaWAN® Base Station FBL800-00



Relative Humidity	95% (non-condensing)

Dimensions (mm)





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

5G LoRaWAN® Base Station FBL800-00



Order Information

Products	Description	Cellular Antenna	WIFI Antenna	LoRa Antenna	GPS Antenna
FBL800-02433-XXX	LoRa+4G WIFI	2	1	1	1
FBL800-02470-XXX	LoRa+4G WIFI	2	1	1	1
FBL800-02868-XXX	LoRa+4G WIFI	2	1	1	1
FBL800-02915-XXX	LoRa+4G WIFI	2	1	1	1
FBL800-004335G-XXX	LoRa+5G WIFI	2	1	1	1
FBL800-004705G-XXX	LoRa+5G WIFI	2	1	1	1
FBL800-008685G-XXX	LoRa+5G WIFI	2	1	1	1
FBL800-009155G-XXX	LoRa+5G WIFI	2	1	1	1
FBL800-004335R-XXX	LoRa+5G Redcap WIFI	2	1	1	1
FBL800-004705R-XXX	LoRa+5G Redcap WIFI	2	1	1	1
FBL800-008685R-XXX	LoRa+5G Redcap WIFI	2	1	1	1
FBL800-009155R-XXX	LoRa+5G Redcap WIFI	2	1	1	1
FBL800-02433-MZZ	LoRa+ WIFI	0	1	1	1
FBL800-02470-MZZ	LoRa+ WIFI	0	1	1	1
FBL800-02868-MZZ	LoRa+ WIFI	0	1	1	1
FBL800-02915-MZZ	LoRa+ WIFI	0	1	1	1

Note: XXX indicates the 4G/5G/5G Redcap version, and MZZ indicates that the 4G module version is not included