

Smart Light Pole Gateway

F-G310

Introduction

F-G310 is a wireless smart street light pole gateway for the Internet of Things, providing users with wireless long-distance big data transmission functions using fiber/wired /4G/5G networks. It is widely used in various types of light poles in smart cities, municipalities, expressways, characteristic towns, scenic spots, parks, and other occasions.

High Performance

- Connect to the Four-Faith cloud platform for remote management
- Support common industrial protocol
- Customize private communication protocols like MQTT, MODBUS TCP, etc.
- Integrates multiple communication modes, like ZigBee, LoRa, 4G, 5G, etc.
- Support Ali Could and Baidu Cloud and other third-party platforms
- Encryption modes such as DES and 3DES are supported
- Support software watchdog and hardware watchdog technology
- Support Python and C secondary development environment
- Support Multiple wireless protocol extensions such as standard LoRaWAN protocol
- Support off-network data storage and transmission
- Support IPV4, IPV6

Stability & Reliability

- WDT Watchdog design to ensure system stability
- Adopt a complete anti-drop mechanism to ensure that data terminal is always online
- Built-in 1.5KV electromagnetic isolation protection for Ethernet interface
- RS485 interface power and data isolation with CSA, UL and IEC standards
- SIM/UIM card interface built-in 15KV ESD protection
- Built-in reverse phase protection and over voltage protection for power interface
- Antenna interface lightning protection (Optional)

Four-Faith 四信®
Tel：400-8838-199
Web：www.fourfaith.com
V2.0.0 Copyright @ Four-Faith 2021

Smart Light Pole Gateway F-G310



Industrial-grade Design

- High-performance industrial-grade wireless module.
- High-performance industrial-grade 32-bit communication processor.
- Use metal shell, protection grade IP30, metal shell and system safety isolation.

Standard & Convenience

- Provide standard RS485, Ethernet and WIFI interfaces
- Provide standard wired WAN port (RJ45 support standard PPPOE protocol)
- Intelligent data terminal, data transmission immediately when device power on
- Convenient system configuration and maintenance interface
- Support wall-mounted installation

Product Specification

Cellular Specification	
Items	**Contents**
Module	Industrial wireless module
Standard and Frequency	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/B25/B26/B28/B29/B30/B38/B39/B40/B41/B42/B43/B46/B48/B71 Remarks: Different modules can 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
Transmit power	<23dBm
Receiving sensitivity	<-97dBm

V2.0.0 Copyright @ Four-Faith 2021

Smart Light Pole Gateway F-G310



WIFI Specification	
Items	**Contents**
Frequency	IEEE802.11b/g/n，2.4G, 2x2 MIMO，AP mode，Station mode (Optional)
Bandwidth	IEEE802.11b/g：108Mbps IEEE802.11n：300Mbps
Security	WEP, WPA, WPA2 encryption mode, WPS (Optional)
Power	26dBm (11b), 21.5dBm (11g), 20dBm (11n)
Sensitive	<-72dBm@54Mbps
Hardware System	
Items	**Contents**
CPU	Industrial 32 bit processor
FLASH	32MB
DDR3	512MB
TF	8GB, 32GB (Optional)
eMMC	Reserved 8GB
Interfaces	
Items	**Contents**
AC Input	1 x 85~264V/35A
AC Output	3 x 85~264V/10A, provide 220V output power supply to the corresponding equipment, remote control switch, voltage and current detection, a single channel allows a maximum current of 10A
DC Output	1 x 12V/2A, can realize remote switch and current detection 1 x 24V/2A, can realize remote switch and current detection
SFP	2 x SFP interface, 10/100/1000M SFP slot, Support single-mode, multi-mode fiber, support ring network management, ring, chain and other network topology
WAN	1 x 10/100/1000M Ethernet (RJ45), auto MDI/MDIX, Built-in 1.5KV electromagnetic isolation protection, WAN/LAN reusable
LAN	7 x 10/100/1000M Ethernet (RJ45), auto MDI/MDIX，Built-in 1.5KV electromagnetic isolation protection, Among them, 4 channels of POE, support POE+ single channel power up to 30W
Serial	2 x RS485，Built-in 15KV ESD protection： Data bit：5, 6, 7, 8 Stop bit：1, 1.5 (Optional), 2 Check ：NONE, EVEN, ODD, SPACE and MARK (Optional) Band rate：2400~115200bits/s
Indicators	"Power", "System", "Online", "Signal "
LoRA/Zigbee	Optional

V2.0.0 Copyright @ Four-Faith 2021

Smart Light Pole Gateway F-G310



Antenna	Cellular:4x Standard SMA female antenna interface, characteristic impedance 50 ohm WIFI 2.4GHz: 1x Standard SMA female antenna interface, characteristic impedance 50 ohm LoRa/Zigbee: 1x Standard SMA female antenna interface, characteristic impedance 50 ohm (Choose one of the two)
SIM/UIM	2 standard drawer type user card interfaces, support 1.8V/3V SIM/UIM card, built-in 15KV ESD protection (Remarks: Compatible with e-SIM)
TF	1 x TF card interface
Reset	Through this button, the parameter configuration can be restored to the factory value
Remark	1. The mainboard reserved DI/DO/ relay interface 2. For the non-full function of the rod, the hardware can be modular (Reduce the cost)

Power Supply	
Items	**Contents**
AC	AC 85~264/35A (Max)
Operating	0.15~0.25A (All output ports are empty)
Standby	0.1A (All output ports are empty)

Physical	
Items	**Contents**
Shell	Metal casing, IP30
EMC	Level 3
Size	330 x 108 x 71mm (Wall-mounted part dimensions) 260 x 108 x 70mm (Without Wall-mounted part dimensions)
Weight	1.8Kg

Others	
Items	**Contents**
Operating Temperature	-35~+75ºC (-31~+167℉)
Storage Temperature	-40~+85ºC (-40~+185℉)
Humility	95% (No condensation)

V2.0.0 Copyright @ Four-Faith 2021

Smart Light Pole Gateway F-G310



Topology



Dimension (mm)



V2.0.0 Copyright @ Four-Faith 2021

Smart Light Pole Gateway F-G310



Order Information

Models	Description
F-G310	Cellular (5G-NR), WIFI, SIM*1
F-G310-4G	Cellular (4G), WIFI, SIM*1
F-G310-N	WIFI

V2.0.0 Copyright @ Four-Faith 2021