

# 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 Cloud 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)

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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

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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

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<b>Antenna</b>	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)
<b>SIM/UIM</b>	2 standard drawer type user card interfaces, support 1.8V/3V SIM/UIM card, built-in 15KV ESD protection (Remarks: Compatible with e-SIM)
<b>TF</b>	1 x TF card interface
<b>Reset</b>	Through this button, the parameter configuration can be restored to the factory value
<b>Remark</b>	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)
<b>Power Supply</b>	
<b>Items</b>	<b>Contents</b>
<b>AC</b>	AC 85~264/35A (Max)
<b>Operating</b>	0.15~0.25A (All output ports are empty)
<b>Standby</b>	0.1A (All output ports are empty)
<b>Physical</b>	
<b>Items</b>	<b>Contents</b>
<b>Shell</b>	Metal casing, IP30
<b>EMC</b>	Level 3
<b>Size</b>	330 x 108 x 71mm
<b>Weight</b>	1.8Kg
<b>Others</b>	
<b>Items</b>	<b>Contents</b>
<b>Operating Temperature</b>	-35~+75°C (-31~+167°F)
<b>Storage Temperature</b>	-40~+85°C (-40~+185°F)
<b>Humidity</b>	95% (No condensation)

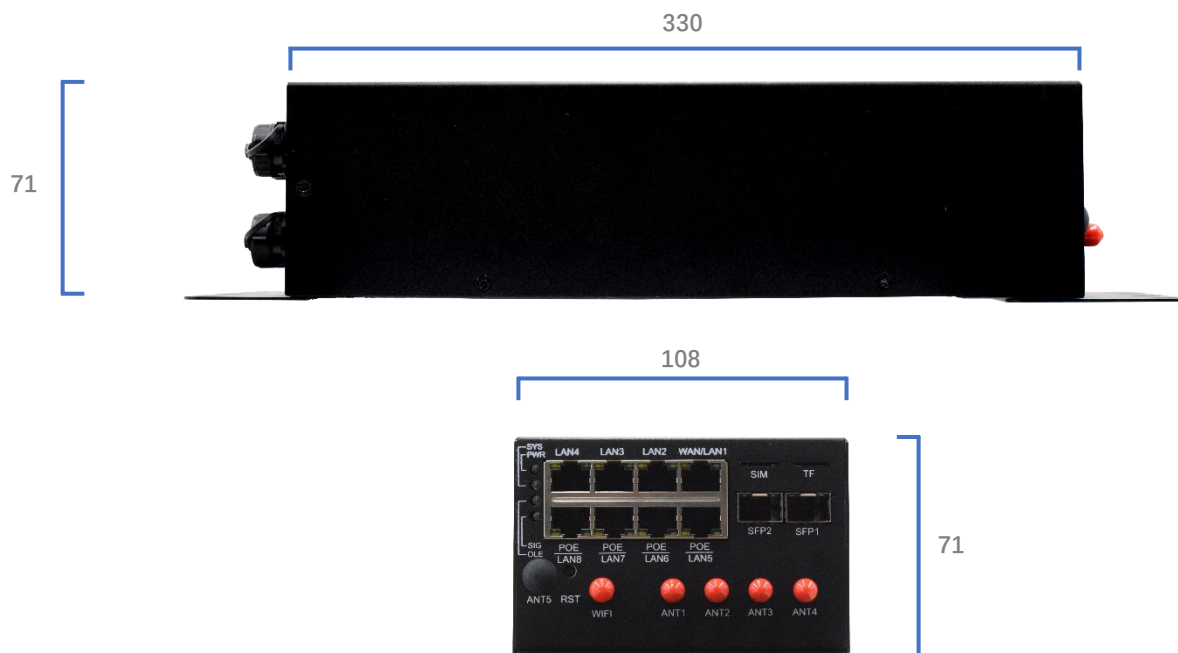
# Smart Light Pole Gateway F-G310



## Topology



## Dimension (mm)



# 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