F-G300

Four-Faith 四信 让万物更加智慧
Bringing Intelligence Across All Beings

Specification

Version	Class
V1.0.2	

F-G300 is a wireless smart light pole gateway for the Internet of Things, which uses the public 4G/5G network to provide users with wireless long-distance big data transmission functions.

The product uses high-performance industrial-grade 32-bit communication processors and industrial-grade wireless modules, with embedded real-time operating system as the software support platform, while providing 1 AC input, 3 AC output, 2 DC output, 2 SFP , 7 Ethernet LAN (4 of which support POE+), 1 Ethernet WAN, 4 RS485 or RS232, 2 ADC acquisition, 4 DI, 4 DO and WIFI interface.

It is widely used on various types of light poles in smart cities, municipal administrations, highways, characteristic towns, scenic spots, and parks.

Topology



Features

Gateway Features

- Connect to the FOURFAITH cloud service, access the cloud platform via Web to achieve remote management; convenient and easy-to-use PC Client software, remote configuration, data monitoring and other intelligent equipment maintenance channels, and direct remote maintenance of field equipment
- Support multiple protocols, support transparent transmission, HTTP, MQTT, TCP/IP, MODBUS RTU to TCP, MQTT and other protocols
- The optical port has the ability of optical fiber Layer 2 networking, which can be flexibly adapted to ring network management, ring type, and chain type networking scenarios.
- Provide safe and reliable access, support the use of DES, 3DES and other encryption methods
- With a Python development environment, you can implement customized functional applications according to your own business. At the same time, a secondary development kit (SDK) is provided to easily call various interfaces and resources of the system
- Equipment running high temperature alarm
- Support IPV4、IPV6

Industrial 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

Reliable

- WDT Watchdog design to ensure system stability
- Adopt a complete anti-drop mechanism to ensure that the data terminal is always online
- Built-in 1.5KV electromagnetic isolation protection for Ethernet interface
- RS232/RS485 Interface power and data isolation, in line 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 the power interface
- Antenna interface lightning protection (optional)

Standard

- Provide standard RS232, RS485, Ethernet and WIFI interfaces
- Provide standard wired WAN port (RJ45, support standard PPPOE protocol), which can be directly connected to ADSL equipment
- Plug and play
- Convenient system configuration and maintenance interface (local and remote WEB mode or CLI

Powerful

- Multiple WAN connection methods (Static IP,DHCP，PPPOE，3G/UMTS/4G/LTE，dhcp-4G)
- Support 4G/Wire fail over（optional）
- Support VPN(PPTP,L2TP,IPSEC,OPENVPN,GRE)
- Support remote management,SYSLOG,SNMP,TELNET,SSHD,HTTPS
- Support firmware upgrade for both local and remote
- Support NTP,build-in RTC
- Support DDNS
- Support VLAN,MAC address clone
- Support multiple installation
- WIFI support 802.11b/g/n/ac, support AP,AP Client,repeater mode
- Support WEP,WPA,WPA2 encryption
- Support private APN sim card
- Support DHCP server,DHCP client,DHCP binding MAC,firewall,NAT,DMZ,QOS
- Support real time data traffic statistics
- Support TCP/IP,UDP,FTP(optional),HTTP
- Support VPN pass through,ACL,URL filter
- Support timing reboot

SPEC

Cellular

Project	Content
Cellular Module	Industrial grade module
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/B71Remarks: Different modules can support different network standards
Bandwidth	5G NR：DL3.4Gbps　UL350Mbps LTE Cat20：DL2.0Gbps　UL150Mbps HSPA+：DL42Mpbs　UL5.76Mbps
Power	<23dBm
Sensitive	<-97dBm

WIFI

Project	Content
Standard	IEEE802.11b/g/n，2.4G, 2*2 MIMO，AP mode，Station mode（optional） IEEE802.11ac，5.8G, 2*2 MIMO，AP mod，Station mode（optional）
Bandwidth	IEEE802.11b/g：108Mbps IEEE802.11n：300Mbps IEEE802.11ac：780Mbps
Security	WEP、WPA、WPA2 encryption
Power	26dBm（11b），21.5dBm（11g），20dBm（11n），16dBm（11ac）
Sensitive	<-72dBm@54Mpbs

Hardware

Project	Content
CPU	Industrial 32 bit processor
FLASH	32MB
DDR3	512MB
TF	8GB/32GB optional

Interface

Project	Content
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
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	4 x RS485，Built-in 15KV ESD protection： Data bit：5、6、7、8 Stop bit：1、2 Check ：NONE、EVEN、ODD Band rate：2400~115200bits/s
Indicators	具有"Power", "System", "Online","Signal "
DI	4 x DI Input high level： 5 to 30 VDC Input low level： 0 to 3 VDC

DO	2 switch output DO, load current: <50mA @ 30VDC
Relay	2 passive relay control outputs, relay load: 5A 250VAC/30VDC
AI	2 x 4~20mA ADC interface
GPS	1 x GPS
Antenna	Cellular:4x Standard SMA female antenna interface, characteristic impedance 50 ohm WIFI：2x Standard SMA female antenna interface, characteristic impedance 50 ohm GPS：1x Standard SMA female antenna interface, characteristic impedance 50 ohm(optional)
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

Power supply

Project	Content
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

Project	Content
Shell	Metal case , IP30 protection
Size	215*134.7*70.2mmmm (Does not include antenna and mounting parts)
Weight	1.8kg(Does not include antenna and mounting parts)

Others

Project	Content
Operating Temperature	-35~+75°C（-31~+167℉）
Storage Temperature	-40~+85°C（-40~+185℉）
Humility	95%(No condensation)

Order info

Mode	Content
F-G300	Cellular (5G-NR), WIFI, SIM*2