

Technical Specification SG610 4G Street Light Pole Gateway



VERSION NUMBER: **V2.1**

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Product Overview

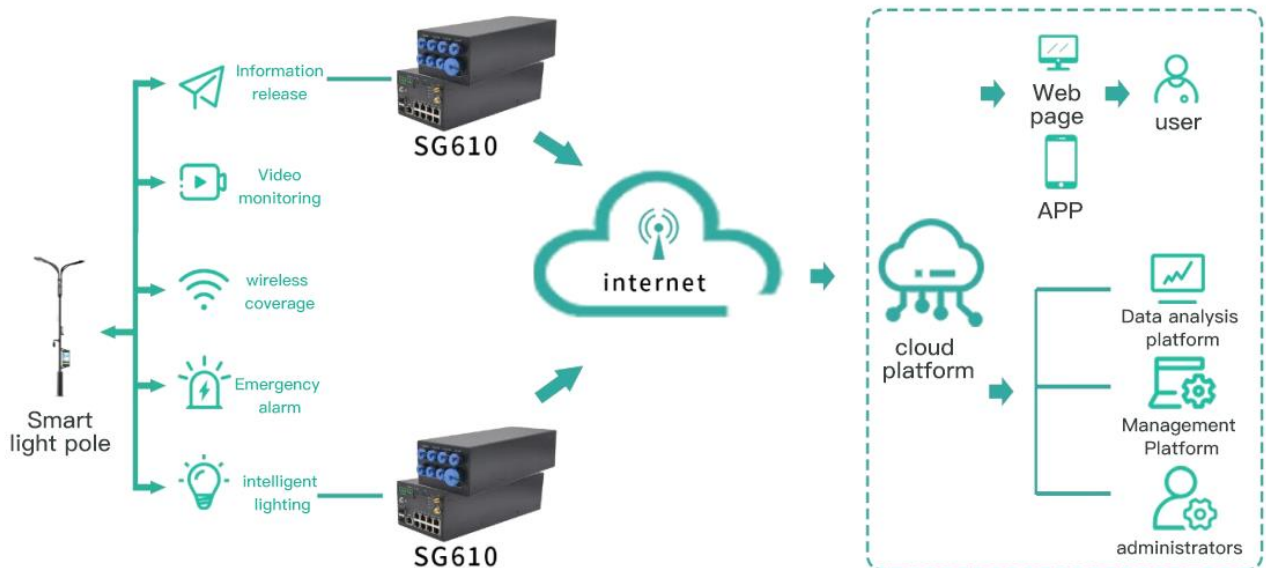
The SG610 Smart Lamp Pole Gateway is a gateway designed specifically for smart Street Light poles, replacing traditional combinations of gateways, power modules, and optical modules. It integrates functions including surge protection systems, power conversion systems, AC/DC power control systems, data acquisition systems, network routing and switching systems, as well as lighting control systems, to work with smart terminal equipment management platform systems. Its design fully considers multifunctionality and stability, based on IoT technology architecture design, capable of meeting data collection and intelligent control needs of smart terminal equipment, while also being scalable, facilitating the integration of new devices under existing hardware. It supports centralized and individual control management of front-end multimedia equipment and lighting devices. It can connect to sensors and sensor devices for power remote monitoring and energy consumption monitoring of lighting, security monitoring, wireless coverage, broadcasting, information dissemination, environmental meteorological monitoring, emergency alarms, municipal facilities monitoring, charging piles, etc. It features fast speed, powerful functions, and supports edge computing.

Product Features

- Supports WLAN
- Supports 8 Ethernet ports
- Supports hand-in-hand ring network and STP
- Supports 4G LTE CAT4 high-speed network
- Supports efficient completion of large-scale device network deployment
- Supports various hardware interfaces to meet various lamp pole requirements
- Industrial design, capable of withstanding harsh conditions
- Supports Linux OpenWrt system, facilitating user secondary development, and providing comprehensive secondary development guidelines

- Supports various VPN functions: PPTP, L2TP, IPSEC, OPENVPN, GRE, GRE-TAP, Vxlan
- Supports SNMP and Star Device Manager (Star Cloud Platform) for efficient remote centralized network management

Topology Diagram



Technical Parameters

Hardware Performance

Memory	512MB
FLASH	4GB EMMC
WIFI (optional)	802.11b/g/n

Network Support	Supports seven-mode full network (4G).
System Time	Time synchronization using NTP technology, with built-in RTC
Interfaces	
WAN Port	1 WAN port (can be configured as LAN)
LAN Port	8 (10M/100M/1000M adaptive MDI/MDIX ports)
Gigabit Fiber Port	2 routes 10/100/1000M SFP slots
SIM card Interface	1(drawer-type card slot, supports 1.8V/3V SIM/UIM cards)
USB Interface	1*USB2.0
Reset	1 (reset button).
Antenna Interface	1 (4G antenna, impedance 50 ohms, SMA male inner hole interface). 1 (2.4G antenna, impedance 50 ohms, SMA inner pin interface).
Power Terminal	1 (3-pin aviation plug).
Serial Port	2*RS485, independent isolation, aviation plug
Power Output	2 relay output interfaces 3 routes AC220V output, independent control, supports metering, aviation plug 4 routes DC12V output, independent control, maximum support output power 70W, aviation plug 1 route DC24V output, independent control, maximum support output function 40W, aviation plug
Indicators	9 indicators (1 PWR light, 1 SYS light, 1 GPS light, 3 signal strength lights, sim1, sim2, and TF indicators)

Power Supply Characteristics

power supply	Power input (220V AC).
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Operating Conditions

Operating Temperature	-35~+75°C (-31~+167°F)
Storage Temperature	-40~+85°C (-40~+185°F)
Operating Humidity	5%~95% (non-condensing)
Device Ventilation	Natural cooling, no noise

Physical Features

Chassis	Full metal chassis
Dimensions	Length * width * height 295 * 120 * 70mm (excluding antenna and mounting components)
Installation Method	Desktop placement, rail mounting, wall mounting
weight	Net weight: 0.82KG (excluding antenna and mounting components) Gross weight: 1.02KG (with accessories and packaging box)

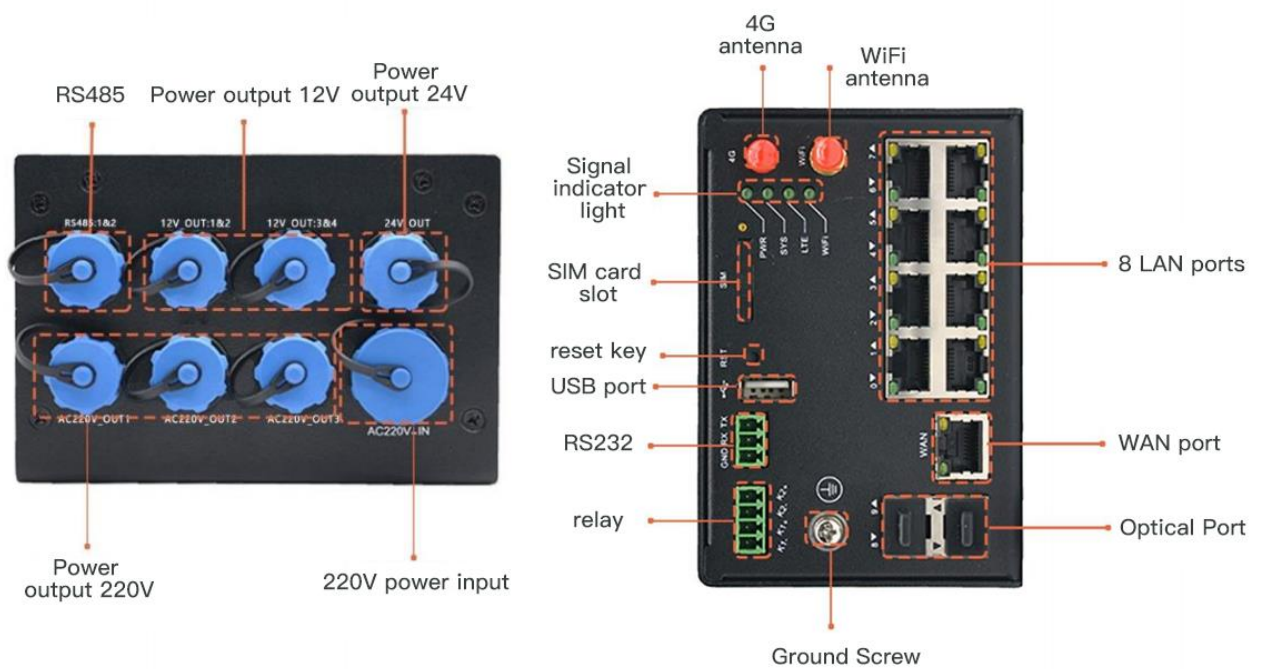
Device Safety and Reliability

Safety and Reliability	Reverse polarity protection, overvoltage protection, overcurrent protection; Ethernet interface built-in 1.5KV electromagnetic isolation protection; RS232/RS485 interface built-in 15KV ESD protection; SIM/UIM card interface built-in 15KV ESD protection
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Protection Level	IP30
Certification	Compliant with CCC
RoHS MTBF	≥ 100,000 hours
Software Function	
Network Access	Supports APN VPDN Access
Authentication	Supports CHAP/PAP authentication
Network Mode	GSM/GPRS/EDGE, LIMTS/HSPA+/EVDO/TD-SCDMA/TD-LTE/FDD LTE/5G NR
LAN Protocol	Support ARP, Ethernet
WAN Protocol	Supports static IP, DHCP, PPPoE, PPP
IP Applications	Supports Ping, Trace, DHCP Server, DHCP Relay, DHCP Client, DNS relay, DDNS, Telnet
IP Routing	Supports routing
NAT Function	Supports network address translation
Industrial Protocol	Supports environmental protection 212 protocol, supports MQTT, MUDBUS, and other industrial protocols
Network Security	
Firewall	Full-state packet monitoring (SPI), defense against denial of service (Dos) attacks, filtering of multicast Ping packets, access control lists (ACL), content URL filtering, port mapping, virtual IP mapping, IP-MAC binding
Data Security	IPsec VPN/L2TP/PPTP/GRE /OPEN VPN/CA certificate
Reliability	
Backup Function	Supports wired and 4G backup
Link Online Monitoring	Sends heartbeat packets to detect disconnections and automatically reconnects
Embedded Watchdog	Device self-checking technology, device fault self-repair
WLAN (optional).	
Protocol Standard	IEEE 802.11b/g/n
Safety Features	Open system, shared key, WPA/WPA2 authentication, WEP/TKIP/AES encryption
Operating Mode	AP, Client mode
Transmission Distance	100m (actual transmission distance depends on the environment).
Intelligent	
Intelligence Integrated DTU Function	Supports TCP, UDP transparent transmission mode, TCP Server mode, supports Modbus RTU to Modbus TCP bridge, supports DCUDP, DCTCP mode
Network Management	
QOS Management	Supports bandwidth limitation, IP speed limit
Configuration Method	Supports telnet, web, ssh, and console configuration methods
Upgrade Method	Supports web upgrade, supports FOTA Log
Function	Supports local system logs, remote logs, serial port output logs.

SMS Function	Status query, configuration, reboot
Network Management Function	Supports Star Device Manager (Star Cloud Platform) for batch management
Simple Network Management Function	Supports SNMP v1/v2/v3, supports SNMP TRAP function
Traffic Management	Supports traffic threshold setting, supports traffic statistics and traffic alarm function
Maintenance tools	Ping, route tracking
Status Query	System status, modem status, network connection status, routing status

Product Interfaces



Product Dimensions

单位:mm
unit:mm

