

Technical Specification for SG710 5G Edge Computing Gateway



VERSION NUMBER: **V2.1**

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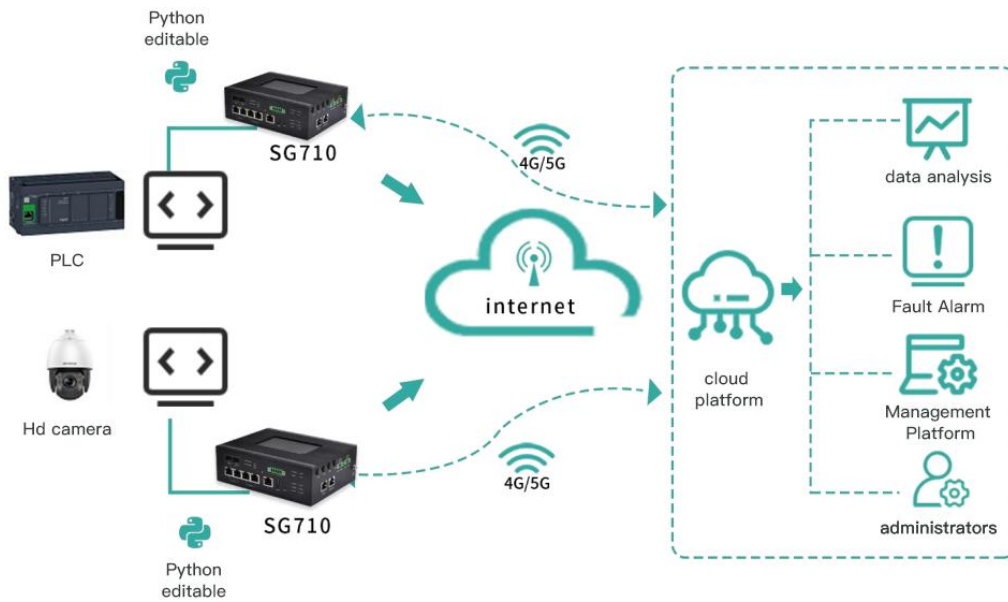
Product Overview

The SG710 series product is a 4G/5G edge computing gateway designed to meet the requirements of unattended site communication. It employs both software and hardware watchdogs along with a multi-level link detection mechanism to ensure communication stability. Additionally, it supports the Star Device Manager "Star Cloud" management platform, enabling convenient remote management for users, thereby ensuring intelligent device management. Various VPN technologies guarantee data transmission security, preventing unauthorized access or tampering. The user-friendly WEB configuration interface design simplifies user configuration, significantly reducing user difficulty

Product Features

- Supports multiple WAN connections
- Supports 4G/5G NR high-speed networks
- Equipped with 6 Ethernet ports
- Supports both DIN-rail and desktop installation
- Supports wired and wireless backup
- Supports multiple hardware interfaces to meet various requirements
- Industrial design to withstand challenging conditions
- Supports Linux OpenWrt 19.07 system and Ubuntu 16.04 system for user customization, providing comprehensive development guidelines

Topology diagram



Technical Parameters

Hardware Performance

CPU	Quad-core A53 1.6GHz
Memory	DDR4 4GB, expandable up to 8GB
FLASH	16GB EMMC (industrial grade), expandable up to 32GB
WIFI (optional)	Supports 2.4G/5.8G dual-band, supports WiFi 6
Network Support	Industrial-grade 4G/5G module
System Time	NTP technology for time synchronization, with built-in RTC

Interfaces

Fixed Business Port	4 GE ports + 2 GE port/optical port multiplexing, LAN/WAN optional
BYPASS	GE0~GE3 Ethernet ports with BYPASS function, switching to bypass mode in case of power failure or hardware/software failure
SIM Card Interface	1 drawer-type card slot, supports 1.8V/3V SIM/UIM cards
USB Interface	1*USB3.0
Reset	1 (reset button).
Antenna Interface	4 (4G/5G antenna, SMA female connector with 50 ohm impedance) 4 (2.4G/5.8G antenna, SMA male connector) 1 x GPS (optional).

Power Supply	1+1 redundant power supply, wide voltage input DC 9~36V, with Phoenix terminal, external power adapter (supports DIN-rail installation), industrial-grade adapter
Console Port	1 (RS232 to RJ45)
Serial Port	1*RS485、 1*RS232
Indicators	<p>Bypass Status Indicator: Each port has a green LED, steady green indicates bypass mode, steady off indicates normal mode</p> <p>Power Indicator: Each power supply has a green LED, steady green indicates normal operation, steady off indicates power failure or no power</p> <p>System Running Status Indicator (2): RUN: Steady green indicates the system is in power-on loading or reset startup state, Green flashing every 2 seconds indicates normal operation, Green flashing 4 times per second indicates the system is starting up ALN: Steady green indicates system failure, such as abnormal self-test during power-on, voltage or temperature detection</p>

Power Characteristics

Power	External power adapter (24V)
Operating Voltage	Wide power input DC 9~36V

Operating Conditions

Operating Temperature	Without 4G/5G module: -40 ~ +85°C With 4G/5G module: -35 ~ +75 °C
Storage Temperature	-40 ~ +85°C
Operating Humidity	5%~95% (non-condensing)
Heat Dissipation	Aluminum bottom shell for natural heat dissipation, noiseless

Physical Characteristics

Chassis	Full metal chassis
Dimensions	Length*Width*Height 166*127.6*55mm (excluding antenna mounting accessories)
Installation Method	DIN-rail installation
Weight	Net weight: 1KG (excluding antennas and installation accessories)
	Gross weight: 1.5KG (with accessories and packaging box)

Device Safety and Reliability

Safety and Reliability	Power reverse protection, overvoltage protection, overcurrent protection; Ethernet interface with built-in 1.5KV electromagnetic isolation protection; RS232/RS485 interface with 15KV ESD protection; SIM/UIM card interface with 15KV ESD protection
Protection Level	IP40
Certification	Complies with CCC, RoHS

MTBF \geq 100,000 hours

Software Features

Network Access	Supports APN VPDN
Access Authentication	Supports CHAP/PAP authentication
Network Modes	GSM/GPRS/EDGE, LIMTS/HSPA+/EVDO/TD-SCDMA/TD-LTE/FDD LTE/5G NR
LAN Protocol	Supports 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

Network Security

Firewall	Full state packet monitoring (SPI), prevention of denial of service (DoS) attacks, filtering of multicast Ping packets, access control lists (ACL), URL filtering, port mapping, virtual IP mapping, IP-MAC binding
Data Security	IPsec VPN/L2TP/PPTP/GRE /OPEN VPN/CA certificate

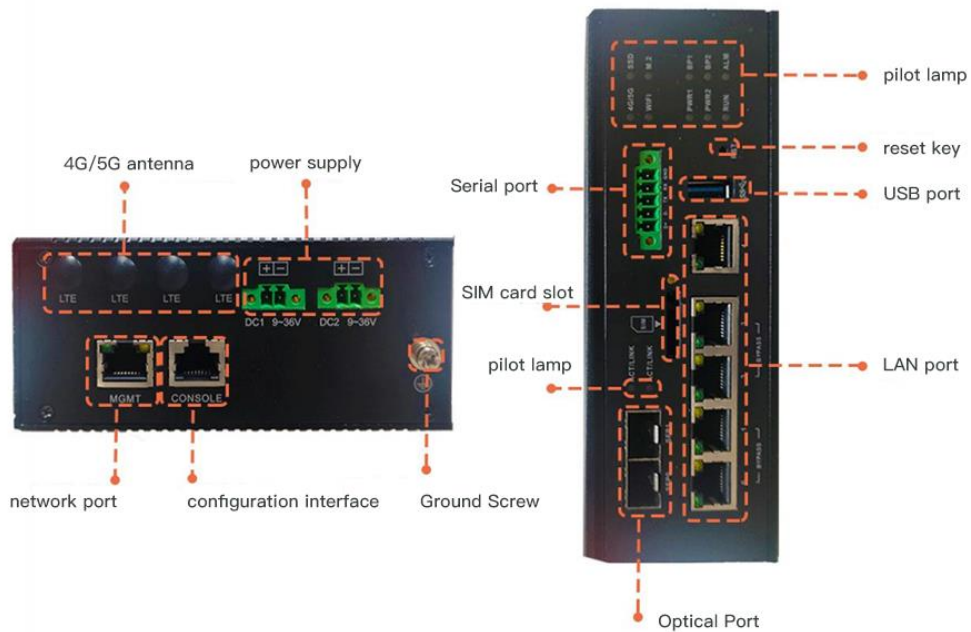
Reliability

Backup Function	Supports wired, 5G, and WiFi triple backup
Online Link Monitoring	Sends heartbeat packets to detect disconnections and automatically reconnects
Built-in Watchdog	Device self-test technology for fault self-repair

WLAN (optional)

Protocol Standard	IEEE 802.11b/g/n/ac/quick6 ax
Rate	Up to 9.6Gbps
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)

Product Interfaces



Product Dimensions

