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Raisecom Technology Co., Ltd

Gazelle S1020i-PWH-GL

The Gazelle S1020i-PWH-GL is an industrial PoE switch designed to meet various industrial communication requirements. It can work stably for a long time in harsh environments.

The Gazelle S1020i-PWH-GL provides 2 optical interfaces and 4 electrical interfaces, or 4 optical interfaces and eight 100/1000 Mbit/s auto-negotiation Ethernet interfaces. Complying with IEEE 802.3af/at/bt, it supports outputting up to 90 W power per interface.

The Gazelle S1020i-PWH-GL features good adaptability in industrial environments (including mechanical stability, atmosphere environment adaptability, electromagnetic environment adaptability), and IP40 protection class. It supports dual power supply redundancy, digital input, and low-consumption fanless heat dissipation. It provides a 3-year warranty. Besides the electric power field, it can be widely applied to land transportation, sea transportation, coal, petroleum, metallurgy, and water treatment.

Gazelle S1020i-PWH-GL

Highlights

- Provide 2 optical interfaces and 4 electrical interfaces, or 4 optical interfaces and eight 100/1000 Mbit/s auto-negotiation Ethernet interfaces.
- Guide-rail chassis, fanless heat dissipation, IP40 protection class
- All electrical interfaces comply with IEEE 802.3bt standard (compatible with IEEE 802.3af and IEEE 802.3at) PoE, with up to 90 W per interface.
- Provide 2 digital input interfaces.
- Support restoring default configurations by pressing the RESET button.
- Support dual power supply input with the voltage range of 44–57 VDC.
- Support the operating temperature of -40 to 75°C and storage temperature of -40 to 85°C.
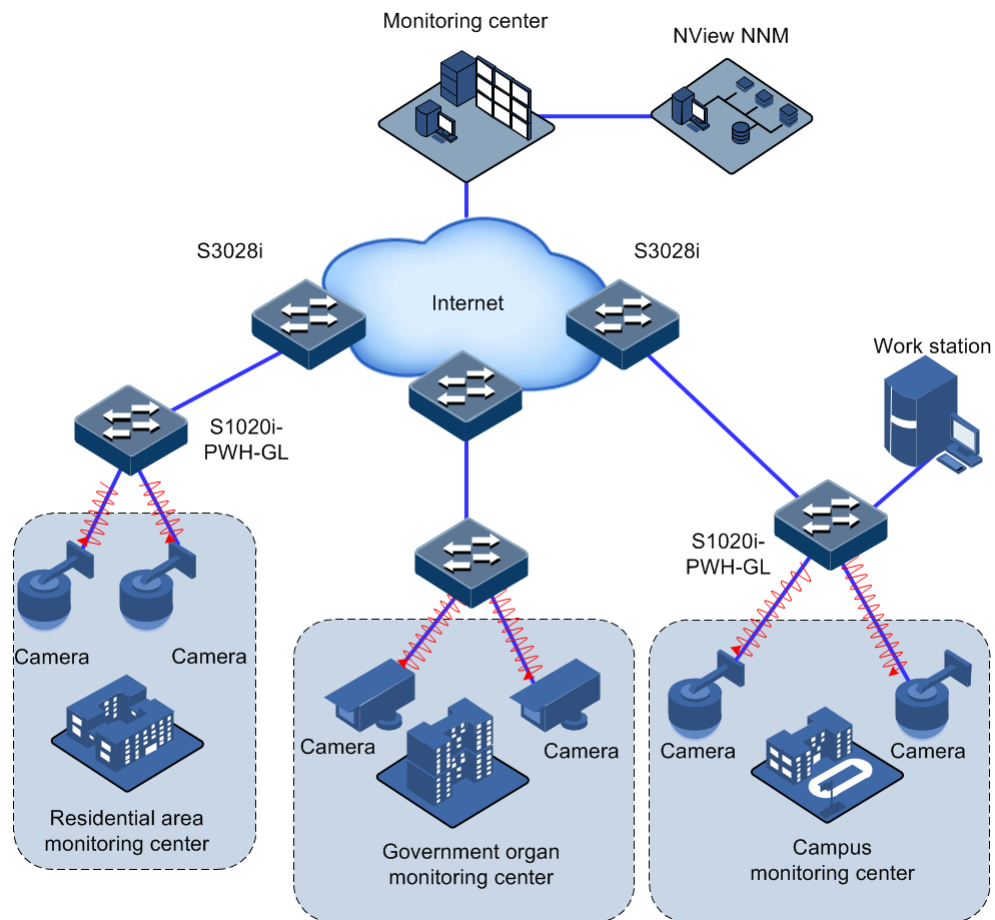
Application>>

Figure 1 Video monitoring for Safe City project

Video monitoring for Safe City project

The Gazelle S1020i-PWH-GL, as the PoE switch, provides power and transmits data through PoE for PDs, such as cameras and wireless APs.

Features>>

Product description	Gazelle S1020i-2GF-4GE-PWH-GL-DC48
	● Two 100/1000 Mbit/s auto-negotiation SFP optical interfaces and four 10/100/1000 Mbit/s Ethernet electrical interfaces
	● All electrical interfaces comply with IEEE 802.3bt standard (compatible with IEEE 802.3af and IEEE 802.3at) PoE, with up to 90 W per interface.
	● The entire device provides up to 180 W PoE power.
	● 2 DI interfaces
	● Dual DC power input (44–57 VDC)
	● Fanless design and IP40 protection class
	Gazelle S1020i-4GF-8GE-PWH-GL-DC48

	• Four 100/1000 Mbit/s auto-negotiation SFP optical interfaces and eight 10/100/1000 Mbit/s Ethernet electrical interfaces • All electrical interfaces comply with IEEE 802.3bt standard (compatible with IEEE 802.3af and IEEE 802.3at) PoE, with up to 90 W per interface. • The entire device provides up to 360 W PoE power. • 2 DI interfaces • Dual DC power input (44–57 VDC) • Fanless design and IP40 protection class
Interface	• GF: 100/1000 Mbit/s auto-negotiation SFP optical interface • GE: 10/100/1000 Mbit/s Ethernet electrical interface
Ring network protection	• ERPS (G.8032) • STP/RSTP/MSTP/MRSTP • BPDU guard and root guard • Loop detection protection
Reliability	• Manual aggregation and static LACP • Interface backup • ELPS (G.8031) • ERPS (G.8032) • Loop detection protection
IPV6	• IPv6 Ping, IPv6 Tracert, IPv6 Telnet, and IPV6 FTP/TFTP/SFTP • IPv6 SNMP and Raisecom IPv6 NView NNM system (network management) • IPV6 RADIUS, IPV6 TACACS+, IPV6 NTP, and SNTP • IPV6 ACL
Multicast	• IGMP v1/v2/v3 Snooping and immediate leave • Immediate leave based on interface or user • Static multicast group • MLD Snooping v1/v2
QoS/ACL	• Rate limiting in the ingress and/or egress direction of interfaces • Each port supports 8 queues. • SP, WRR, DRR, SP+WRR, and SP+DRR scheduling modes • Packet redirection • Remarking 802.1p and DSCP priority of packets • Traffic policing based on interface and dual-rate three-color CAR • L2–L4 packet filtering based on SMAC, DMAC, SIP, DIP, TCP/UDP source/destination port number, protocol, or VLAN
Security	• Hierarchical user management and password protection • 802.1x authentication based on interface or MAC address • CPU protection and anti-ARP protection • Binding with combinations of IP address, MAC address, interface, and VLAN • Blackhole MAC address • MAC address limit

	• AAA accounting, including RADIUS and TACACS+ accounting
	• Interface isolation
	• Port security MAC
	• SSH V2.0
	• SFTP
	• HTTPS
	• DHCP Snooping for preventing spoofing DHCP servers
	• Dynamic ARP inspection, man-in-the-middle attack, ARP DOS
	• BPDU guard and Root guard
Management and maintenance	• Console interface and out-of-band interface management
	• SNMPv1/v2c/v3, CLI, Web, Telnet, and SSH2.0 management modes
	• Raisecom NView NNM system
	• RMON
	• LLDP/LLDP-MED
	• System log and hierarchical alarms
	• Ping and Tracert
	• Dying gasp alarm
	• NTP and SNTP
	• Virtual cable test
	• Interface loopback
	• Zero-configuration, namely, automatically downloading configurations and upgrading software from the DHCP server
	• Loop detection on interfaces
	• Optical module DDM
	• Link-state tracking
	• DLDP
	• Dual systems
POE	• IEEE 802.3af, IEEE 802.3at, and IEEE802.3bt power supply, with up to 90 W power supplied per interface
	• Forcible power supply for non-standard PDs
	• PoE management, including enabling/disabling power supply for interfaces, configuring interface output power, configuring power supply priority, power overload protection, and overtemperature protection
	• Timed PoE power supply, periodically restarting PDs, monitoring PD connection status and restarting PDs upon PD disconnection
MTBF	> 35 years

Specifications>>

Dimensions	• Gazelle S1020i-2GF-4GE-PWH-GL: 80 mm (Width) × 130 mm (Height) × 150 mm (Depth)
	• Gazelle S1020i-4GF-8GE-PWH-GL: 98 mm (Width) × 155 mm (Height) × 177 mm (Depth)

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Weight	● Gazelle S1020i-2GF-4GE-PWH-GL: 0.9 kg ● Gazelle S1020i-4GF-8GE-PWH-GL: 1.5 kg
Power supply	Input voltage: ● 44–57 VDC (IEEE 802.1af) ● 50–57 VDC (IEEE 802.1at) ● 52–57 VDC (IEEE 802.1bt)
Operating environment	● Operating temperature: -40 to 75°C ● Storage temperature: -40 to 85°C ● Humidity: 5%–90% (non-condensing)
Maximum power consumption	● Gazelle S1020i-2GF-4GE-PWH-GL ● System power consumption: ≤ 200 W ● PoE output power: ≤ 180 W ● Gazelle S1020i-4GF-8GE-PWH-GL ● System power consumption: ≤ 380 W ● PoE output power: ≤ 360 W

Standards and protocols>>

Standards and protocols	IEEE 802.3 IEEE 802.3af/at/bt IEEE 802.3u for 100BaseT(X) and 100Base FX IEEE 802.3z for 1000BaseSX/LX/LHX/ZX IEEE 802.3x for Flow Control IEEE 802.1D for Spanning Tree Protocol IEEE 802.1S for Per Vlan Spanning Tree Protocol IEEE 802.1W for Rapid STP IEEE 802.1Q for VLAN Tagging IEEE 802.1p for Quality of Service IEC61000-4-2 (ESD): ±6 kV for contact discharge and ±8 kV for air discharge	IEC61000-4-3 (RS-): 10V/m (80–1000 MHz) IEC61000-4-4 (EFT): ±2 kV for power cables and ±4 kV (5 kHz, 100 kHz) for data cables IEC61000-4-5 (Surge): CM±2 kV/DM±1 kV for power cables and CM±4 kV for data cables IEC61000-4-6 (RF conduction): 10 V (150 kHz to 80 MHz) IEC61000-4-8 (power frequency magnetic field): 100 A/m for lasting; 1000 A/m , 1s–3s IEC61000-4-9 (pulsed magnet field): 300 A/m IEC61000-4-10 (damped oscillation magnetic field): 30 A/m@1MHz IEC61000-4-12/18 (shock wave): CM 2.5 kV; DM 1kV FCC Part 15/CISPR22 (EN55022): Class A IEC61000-6-2 (common industrial standards) IEC60068-2-6 (anti-vibration) IEC60068-2-27 (anti-shock) IEC60068-2-32 (free fall)

Ordering information>>

Gazelle S1020i-2GF-4GE-PWH-GL-DC48	● Two 100/1000 Mbit/s auto-negotiation SFP optical interfaces and four 10/100/1000 Mbit/s Ethernet electrical interfaces ● All electrical interfaces comply with IEEE 802.3bt standard (compatible with IEEE 802.3af and IEEE 802.3at) PoE, with up to 90 W per interface. ● The entire device provides up to 180 W PoE power. ● 2 DI interfaces

	● Dual DC power input (44–57 VDC)
Gazelle S1020i-4GF-8GE-PWH- GL-DC48	● Four 100/1000 Mbit/s auto-negotiation SFP optical interfaces and eight 10/100/1000 Mbit/s Ethernet electrical interfaces ● All electrical interfaces comply with IEEE 802.3bt standard (compatible with IEEE 802.3af and IEEE 802.3at) PoE, with up to 90 W per interface. ● The entire device provides up to 360 W PoE power. ● 2 DI interfaces ● Dual DC power input (44–57 VDC)