



Gazelle S1020i-LI Series

The Gazelle S1020i-LI is specially designed for data backhaul and the Automatic Control System (ACS) in the industrial field, which can operate stably for a long time in harsh environments. The Gazelle S1020i-LI features industry-leading ring network technologies, supports multiple redundant ring network protocols through which any interface can form a ring with other devices, and supports ring, tangent ring, intersecting ring, and coupling ring networking, with sub-50ms self-healing performance of the ring network. Featuring high reliability, security, and manageability, the Gazelle S1020i-LI ensures secure transmission of key data. It also supports remote management and can work with Raisecom NView NNM system for cluster management, implementing comprehensive network management (without blind spots) during the whole process.

The Gazelle S1020i-LI is highly adaptive (such as mechanical stability, climate adaptability, and electromagnetic environment adaptability) to industrial environments. It is IP40 rated, and supports dual redundant power supplies, adopts low-power fanless cooling technology, and ensures up to 35-year Mean Time Between Failures (MTBF) and a 3-year warranty. The Gazelle S1020i-LI can be widely used in electric power, transportation, maritime transport, coal, petroleum, metallurgy, water treatment and other industries.

Gazelle S1020i-2GF-4GE-LI-DCW24



Gazelle S1020i-2GF-8GE-LI-DCW24



Gazelle S1020i-4GF-8GE-LI-DCW24



Highlights >>

- Industrial standard ERPS solution, 50ms service switching, carrier-grade reliability
- Protection grade: IP40
- Digital Input (DI) and relay alarms
- DHCP-based zero configuration, configuration LED provided
- SNMP v1/v2c/v3, Raisecom Network Management System (NMS), CLI, Web management, and Telnet
- Operating temperature: -40 to 85°C
- MTBF ≥ 35 years

Application >>

Figure 1 Monitoring solution

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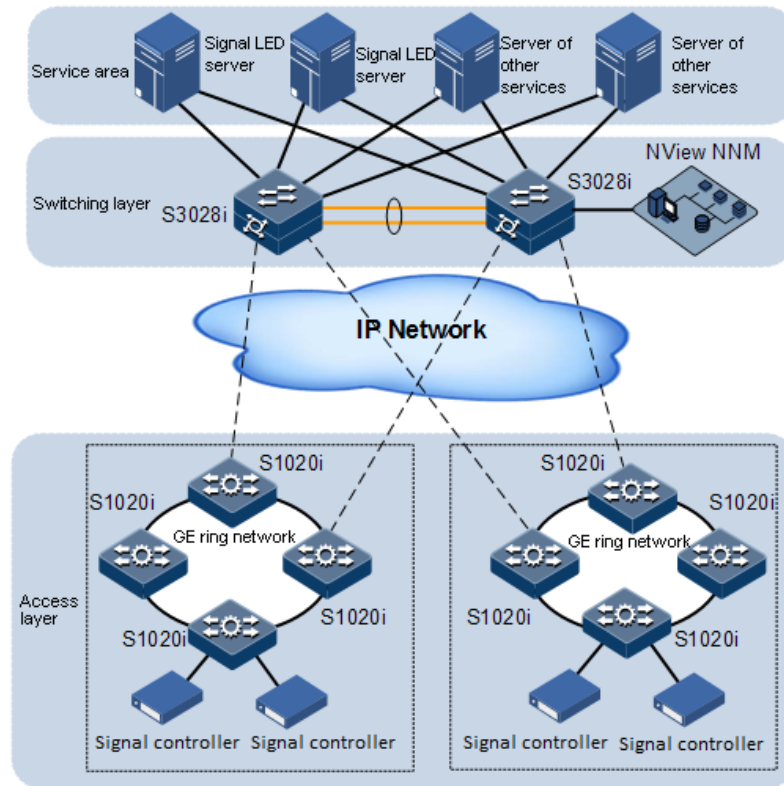
Raisecom Building, East-11, No.10 Xibeiwang East Road,
Haidian District, Beijing, P.R.China, 100193
Tel: +86 10 8288 3305
Fax: +86 10 8288 3056
www.raisecom.com

U.S.A. Headquarters

Address: 6380 N Eldridge Parkway Houston Texas
77401 USA
Tel: 1-888-816-4808
Email: sales@raisecominc.com

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Monitoring solution

The Gazelle S1020i devices generally function as the access switches and form a ring network or star network to access industrial devices or cameras. The Gazelle S3028i series devices can be used at the aggregation layer or you can use L2/L3 aggregation switches from other vendors.

Key features >>

Interface type	<input type="checkbox"/>	GF: 100/1000 Mbit/s auto-negotiation SFP optical interface
	<input type="checkbox"/>	GE: 10/100/1000 Mbit/s auto-negotiation Ethernet electrical interface
Switching capacity/Packet forwarding rate	<input type="checkbox"/>	S1020i-2GF-4GE-LI-DCW24: 12Gbps/8.93Mpps
	<input type="checkbox"/>	S1020i-2GF-8GE-LI-DCW24: 20Gbps/14.89Mpps
	<input type="checkbox"/>	S1020i-4GF-8GE-LI-DCW24: 24Gbps/17.86Mpps
MAC address table	<input type="checkbox"/>	8K MAC addresses
	<input type="checkbox"/>	MAC automatic learning, MAC aging, and static MAC

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	<input type="checkbox"/> Static, dynamic, blackhole MAC entries <input type="checkbox"/> MAC address limits based on VLAN and interface <input type="checkbox"/> Suppression of MAC address flapping
VLAN	<input type="checkbox"/> 4K VLANs <input type="checkbox"/> MAC/Protocol/IP subnet/Interface-based VLAN <input type="checkbox"/> Basic QinQ and selective QinQ <input type="checkbox"/> VLAN mapping
Jumbo Frame	<input type="checkbox"/> 10Kbytes
Ring network protection	<input type="checkbox"/> ERPS (G.8032) <input type="checkbox"/> STP/RSTP/MSTP <input type="checkbox"/> BPDU protection and root protection <input type="checkbox"/> Loop detection
Reliability	<input type="checkbox"/> Manual aggregation and static LACP <input type="checkbox"/> Interface backup <input type="checkbox"/> ERPS (G.8032) <input type="checkbox"/> Loop detection
IPv6	<input type="checkbox"/> IPv6 Ping, IPv6 Tracert, IPv6 Telnet, and IPv6 FTP/TFTP/SFTP <input type="checkbox"/> IPv6 SNMP, Raisecom NView IPv6 network management <input type="checkbox"/> IPv6 Radius, IPv6 TACACS+, IPv6 NTP, and SNTP <input type="checkbox"/> IPv6 ACL
Multicast	<input type="checkbox"/> IGMP v1/v2/v3 Snooping and immediate leave <input type="checkbox"/> Immediate leave based on interface and user <input type="checkbox"/> Static multicast group <input type="checkbox"/> MLD Snooping v1/v2
DHCP	<input type="checkbox"/> DHCP Client <input type="checkbox"/> DHCP Snooping <input type="checkbox"/> DHCP Relay <input type="checkbox"/> DHCP Server, supporting option43 <input type="checkbox"/> DHCP Snooping option61, 82/DHCP Relay option82
Mirroring	<input type="checkbox"/> Flow mirroring <input type="checkbox"/> Local and remote port mirroring
QoS/ACL	<input type="checkbox"/> Simple traffic classification based on interface, IEEE 802.1p priority, and DHCP priority <input type="checkbox"/> Rate limiting in the ingress direction of the interface and traffic shaping in the egress direction of the interface <input type="checkbox"/> SP, WRR, DRR, SP+WRR, and SP+DRR scheduling modes, 8 queues supported by each interface <input type="checkbox"/> ACL (MAC, IP, MAC+IP, IPv6, and user-defined) <input type="checkbox"/> Traffic policy (redirection, mirroring, adding and modifying VLANs, modifying (802.1p/DSCP) priority, and modifying egress queues, gathering statistics, and so on) <input type="checkbox"/> Flow-based single-rate dual-color CAR <input type="checkbox"/> Traffic policy applied based on physical interface in the ingress direction, statistics viewing and clearing
Security	<input type="checkbox"/> User hierarchical management and password protection

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- IEEE 802.1x authentication based on interface and MAC
- CPU protection and ARP attack prevention
- Binding of IP, MAC, interface, and VLAN
- Blackhole MAC address
- MAC address limits
- AAA, Radius, and TACACS+
- Interface isolation
- Secure MAC
- SSH V2.0
- SFTP
- HTTPS
- DHCP Snooping, anti-proofing DHCP server
- Dynamic ARP inspection, MITM prevention and ARP DoS prevention
- BPDU guard and Root guard
- Console interface and out-of-band interface management
- SNMPv1/v2c/v3, CLI, Web management, TELENET, SSH2.0, and so on
- Raisecom Nview NMS
- RMON
- LLDP/LLDP-MED
- Syslog and hierarchical alarms
- Ping and Tracert
- Dying gasp
- NTP and SNTP
- Virtual Cable Test
- Interface loopback
- Zero configuration, configuration downloading, and software upgrade through DHCP Sever
- Interface loop detection
- Optical module DDM
- Link-state tracking
- DLDP unidirectional link detection
- Dual systems

Management and maintenance

Specifications >>	
Power supply	DCW24: 12/24 VDC (9–36 VDC)
Maximum power consumption	Maximum power consumption: 7W
	<input type="checkbox"/> S1020i-2GF-4GE-LI-DCW24
	<input type="checkbox"/> S1020i-2GF-8GE-LI-DCW24
Alarm terminal	Maximum power consumption: 9W
	<input type="checkbox"/> S1020i-4GF-8GE-LI-DCW24
Alarm terminal	3-pin SPDT relay alarm terminal (Dying Gasp)

Standard and protocol >>	
Standard and protocol	<input type="checkbox"/> IEEE 802.3
	<input type="checkbox"/> IEEE 802.3u for 100BaseT(X) and 100Base FX
	<input type="checkbox"/> IEEE 802.3ab for 1000BaseT(X) IEEE 802.3
	<input type="checkbox"/> IEEE 802.3u for 100BaseT(X) and 100Base FX
	<input type="checkbox"/> IEEE 802.3ab for 1000BaseT(X)
	<input type="checkbox"/> IEEE 802.3z for 1000BaseSX/LX/LHX/ZX

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	and device failure alarms)
Digital input	<p>The following model does not support digital input:</p> <ul style="list-style-type: none"> <input type="checkbox"/> S1020i-2GF-4GE-LI-DCW24 <p>The following two models support one digital input:</p> <ul style="list-style-type: none"> <input type="checkbox"/> S1020i-2GF-8GE-LI-DCW24 <input type="checkbox"/> S1020i-4GF-8GE-LI-DCW24 <p>The digital input supports status 1 and status 2. Status 1: 13–30V voltage input Status 2: -30 to 1V voltage input Maximum input current: 6mA</p>
Dimension mm (width × height × depth) and Weight	<ul style="list-style-type: none"> <input type="checkbox"/> S1020i-2GF-4GE-LI-DCW24: 56 × 135 × 105mm, 0.7 Kg <input type="checkbox"/> S1020i-2GF-8GE-LI-DCW24 and S1020i-4GF-8GE-LI-DCW24: 80 × 150 × 130mm, 1.0 Kg
Environment requirement	<ul style="list-style-type: none"> <input type="checkbox"/> Operating temperature: -40 to 85°C, 5%–95% <input type="checkbox"/> Storage temperature: -40 to 85°C, 5%–95% <input type="checkbox"/> Relative humidity: 5%–90% (non-condensing)

	<ul style="list-style-type: none"> <input type="checkbox"/> IEEE 802.3x for Flow Control <input type="checkbox"/> IEEE 802.1d for Spanning Tree Protocol <input type="checkbox"/> IEEE 802.1w for Rapid STP <input type="checkbox"/> IEEE 802.1s for MSTP <input type="checkbox"/> IEEE 802.1q for VLAN Tagging <input type="checkbox"/> IEEE 802.1p for Quality of Service <input type="checkbox"/> IEEE 802.1X for Security <input type="checkbox"/> IEEE 802.3ad for Port Trunk with LACP <input type="checkbox"/> IEC61000-4-2 (ESD): ±6kV contact discharge; ±8kV air discharge <input type="checkbox"/> IEC61000-4-3 (RS-): 10V/m (80–1000MHz) <input type="checkbox"/> IEC61000-4-4 (EFT): power cable: ±4kV; data cable: ±4kV (5kHz, 100kHz) <input type="checkbox"/> IEC61000-4-5 (Surge): power cable: CM±6kV/DM±6kV; data cable: CM±4 kV <input type="checkbox"/> IEC61000-4-6 (RF Conducted Immunity): 10V (150–80 MHz) <input type="checkbox"/> IEC61000-4-8 (Power frequency magnetic field): 10A/m continuous; 300A/m, 1s to 3s <input type="checkbox"/> IEC61000-4-9 (Pulse magnetic field): 100A/m <input type="checkbox"/> IEC61000-4-10 (Damped oscillatory magnetic field): 10A/m@1MHz <input type="checkbox"/> FCC Part 15/CISPR22 (EN55022): Class A <input type="checkbox"/> IEC61000-6-2 (General industrial standard) <input type="checkbox"/> IEC60068-2-6 (Anti-vibration) <input type="checkbox"/> IEC60068-2-27 (Anti-shock) <input type="checkbox"/> IEC60068-2-32 (Free drop) <input type="checkbox"/> CE, FCC, UL, and ROHS-compliant
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Ordering information >>

Gazelle S1020i-2GF-4GE-LI-DCW24	<ul style="list-style-type: none"><input type="checkbox"/> Two 100/1000 Mbit/s auto-negotiation SFP optical interfaces<input type="checkbox"/> Four 10/100/1000Base-T electrical interfaces<input type="checkbox"/> 1 relay alarm output<input type="checkbox"/> 12/24 VDC, dual inputs
Gazelle S1020i-2GF-8GE-LI-DCW24	<ul style="list-style-type: none"><input type="checkbox"/> Two 100/1000 Mbit/s auto-negotiation SFP optical interfaces<input type="checkbox"/> Eight 10/100/1000Base-T electrical interfaces<input type="checkbox"/> 1 DI input<input type="checkbox"/> 1 relay alarm output<input type="checkbox"/> 12/24 VDC, dual inputs
Gazelle S1020i-4GF-8GE-LI-DCW24	<ul style="list-style-type: none"><input type="checkbox"/> Four 100/1000 Mbit/s auto-negotiation SFP optical interfaces<input type="checkbox"/> Eight 10/100/1000Base-T electrical interfaces<input type="checkbox"/> 1 DI input<input type="checkbox"/> 1 relay alarm output<input type="checkbox"/> 12/24 VDC, dual inputs

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