

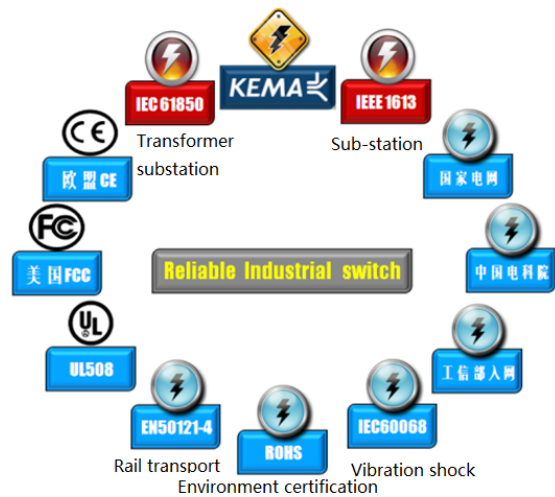


Gazelle S1503i GE Industrial Ethernet Switch

» Brief introduction

The **Gazelle S1503i GE industrial Ethernet switch**, which provides few interfaces, is specially designed for the Automatic Control System (ACS) in the industrial field and can operate stably for a long time in harsh environments. Featuring high reliability, security, and manageability, the Gazelle S1503i ensures secure transmission of key data. It also supports remote management and can work with Raisecom NView NNM system for cluster management, implementing seamless network management during the whole process.

The Gazelle S1503i is highly adaptive to industrial environments in terms of mechanical stability, climate adaptability, electromagnetic environment adaptability, and so on. 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 S1503i can be widely used not only in electric power industry but also in transportation, maritime transport, coal, petroleum, metallurgy, water treatment and other industries.



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Device figure



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Device features

Wire-speed switching

The Gazelle S1503i supports the bus bandwidth of 6 Gbit/s, enabling all interfaces with Layer 2 wire-speed switching capabilities. With wire-speed switching, it can meet the high bandwidth requirements of the current multi-service big data.

Serial interface protocol conversion (optional)

The Gazelle S1503i provides one serial interface which supports RS-232/485, implementing the encapsulation and decapsulation of serial interface IP packets. When the Gazelle S1503i is accessed to the Ethernet through the serial interface, the data from the serial interface will be transmitted over the Ethernet through protocol conversion.

Complete security control policy

The Gazelle S1503i supports storm control and interface isolation, which ensures the security of the network with accessed users.

The Gazelle S1503i supports port mirroring to monitor the services and traffic of the monitoring port, which helps optimize deployment and monitor malicious attacks.

Carrier-grade QoS

The Gazelle S1503i supports 4 output queues for each interface, and 3 queue scheduling algorithms: Strict Priority (SP), Weighted Round Robin (WRR), and SP+WRR, through which packets can be distributed to interface output queues based on different priorities. It also supports bidirectional rate limiting on the interface with a minimum rate-limiting granularity of 64 Kbit/s. With Carrier-grade QoS, the Gazelle S1503i meets users' requirements for multi-service identification, classification, and resource scheduling.

Easy management and maintenance

The Gazelle S1503i supports SNMP and Raisecom NView NNM system. It supports network topology discovery and implements centralized management (uniformly manages multiple devices) and maintenance of devices by working with Raisecom NView NNM system, thus reducing the management costs. The Gazelle S1503i also

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supports multiple management methods, such as CLI, SSH, Web network management, and Telnet, facilitating device management.

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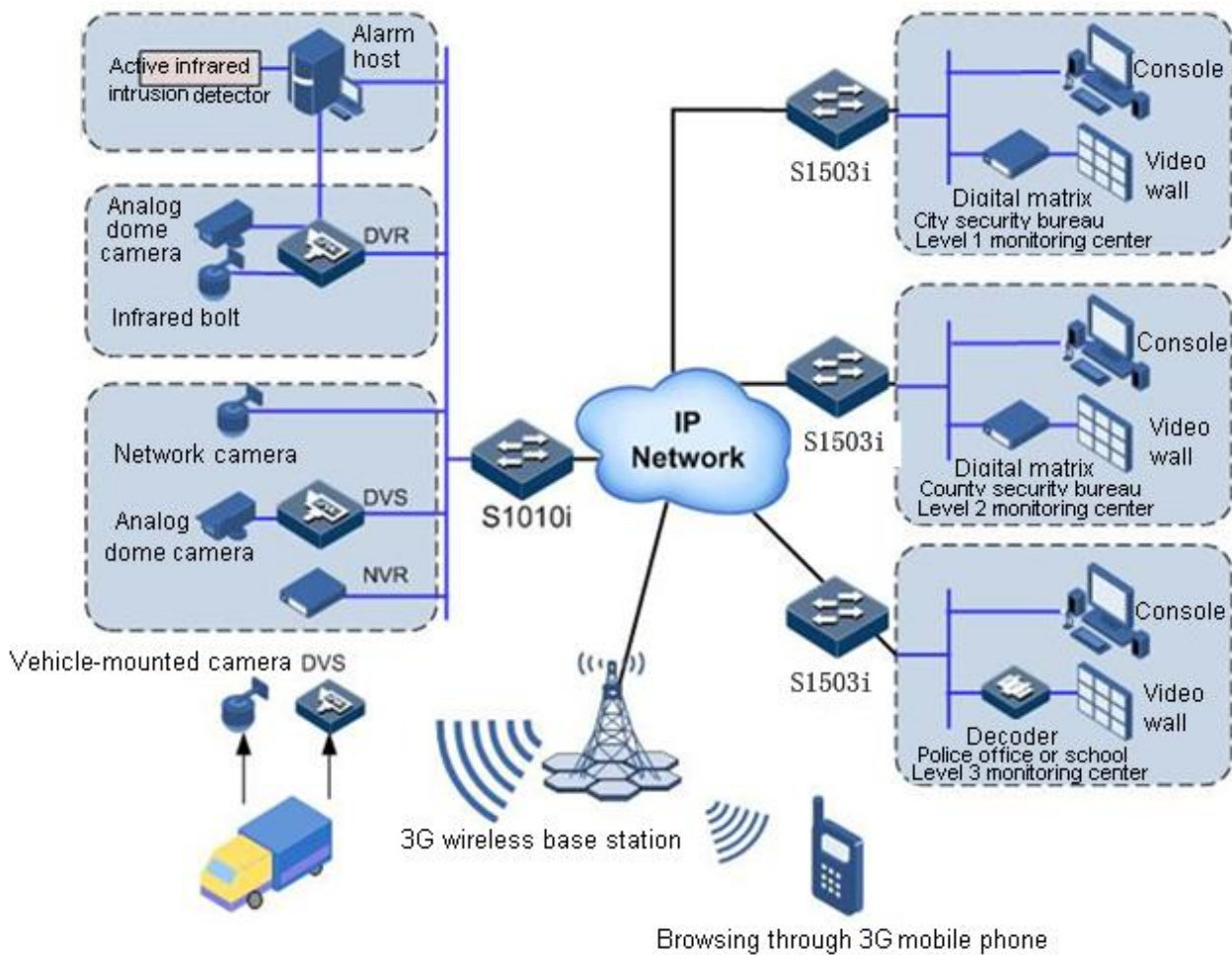
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Typical application

Monitoring system of safe cities



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Technical specifications

Model	Gazelle S1503i
Description	<ul style="list-style-type: none"> • One or two 10/100/1000BASE-T auto-negotiation Ethernet electrical interfaces • One 100BASE-FX/1000BASE-T auto-negotiation Ethernet optical interfaces • One RS-232/485 serial interface, Phoenix connector (Optional) • All-metal enclosure • Fanless design • Compact structure • IP40-compliant
Basic information	
Service interfaces	<ul style="list-style-type: none"> • Two 10/100/1000BASE-T auto-negotiation RJ45 electrical interfaces (or one 10/100/1000BASE-T auto-negotiation RJ45 electrical interface) • One 100BASE-FX/1000BASE-T auto-negotiation SFP optical interface • One RS-232/485 serial interface (Optional)
Dimensions (Width × Height × Depth)	56 mm × 135 mm × 105 mm
Weight	0.7 kg
Installation mode	Wall-mount and DIN guide-rail
Protection grade	IP40
MTBF	35 years
Operating voltage	DCW24 <ul style="list-style-type: none"> • Rated voltage: 12/24 VDC

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Model	Gazelle S1503i
	<ul style="list-style-type: none"> • Voltage range: 10–36 VDC DCW48 <ul style="list-style-type: none"> • Rated voltage: 24/48 VDC • Voltage range: 20–72 VDC AC <ul style="list-style-type: none"> • Rated voltage: 110/220 VAC, 220 VDC • Voltage range: 100-240 VAC, 170–300 VDC
Power consumption	< 4 W
Operating temperature	-40 °C to +85 °C
Storage temperature	-40 °C to +85 °C
Relative humidity	5%–95%, non-condensing
Backplane bandwidth	6 Gbit/s
MAC address table	8K, automatic learning
Features of serial interface	
Mode	RS-232 or RS-485
Protocol conversion module	Encapsulating and decapsulating IP packets of the serial interface, and transmitting serial interface data over Ethernet
2-wire RS-485 flow control	Automatic
Protocol	Real port mode, TCP server mode, TCP client mode, UDP mode, Reverse Telnet, and

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Model	Gazelle S1503i
	RFC2217
Features	
Switching mode	Store and Forward, 1 Mbit switching cache
Frame length	Support a maximum frame length of 10K bytes.
Storm control	Support storm control over broadcast and unknown multicast packets based on the number of bytes (bps).
Interface loop detection	<ul style="list-style-type: none">• When a loop is detected, the interface can be automatically shut down.• When the loop is eliminated, the interface can be automatically unblocked again.• You can configure the detection interval.
Multicast	<ul style="list-style-type: none">• Support IGMP Snooping v1, v2, and v3.• Support filtering multicast packets and discarding unknown multicast packets.• Support static multicast groups.• Support 1024 multicast groups.
Spanning tree	Support STP, MSTP, and RSTP.
Industrial ring network protocols	<ul style="list-style-type: none">• Support G.8032 (ERPS).• Support up to 63 rings. Each ring supports up to 1024 devices.
Mirroring	<ul style="list-style-type: none">• Support multiple-to-one port mirroring, namely, multiple source ports and one mirroring port.• Support respective mirroring in the ingress and egress direction of the interface.
MAC address	<ul style="list-style-type: none">• Support 8K MAC addresses.• Support 1024 static MAC address bindings based on interface.

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Model	Gazelle S1503i
	<ul style="list-style-type: none"> Support adding/deleting MAC addresses and showing statistics.
Flow control	<ul style="list-style-type: none"> Support IEEE 802.3x flow control in full duplex mode. Support back pressure flow control in half duplex mode.
VLAN	<ul style="list-style-type: none"> Support 4094 concurrent VLANs (VLAN 1–VLAN 4094). Support multiple VLAN partitions on a single interface.
Advanced features	
QoS	<ul style="list-style-type: none"> Support 802.1p CoS, DSCP, and interface priority. Support trusting local priority. Support trusting CoS and DSCP priority. Support global queue scheduling. Each interface supports 4 queues. Support 3 priority queues. Support SP, WRR, and SP+WRR.
Bandwidth control	<ul style="list-style-type: none"> Range: 1–1000 Mbit/s (1000 Mbit/s interface) Granularity: 64 Kbit/s Support ingress and egress rate limiting based on interface and flow rate limiting based on packet type and queue priority.
Security	<ul style="list-style-type: none"> Support hierarchical management on users and password protection. Support RADIUS authentication. Support TACACS+ authentication. Support interface protection.
Management features	
System management	<ul style="list-style-type: none"> Support CLI configurations.

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Model	Gazelle S1503i
	<ul style="list-style-type: none"> • Support CLI help in both Chinese and English. • Support remote configurations of multiple SSH v2 clients. • Support RMON group 1, 2, 3, and 9 MIB. • Support SNMP v1/v2c/v3. • Support Raisecom NMS. • Support system log. • Support alarm outputs through Trap, and Syslog. • Support Keepalive reports.
Time management	<ul style="list-style-type: none"> • Support timezone management. • Support time modification. • Support DST. • Support the SNTP client to be synchronized with the system time. • Support NTP.
DHCP	Support DHCP Client.
Task scheduling	Support running the task periodically or during a specified time.
Tolerance and redundancy	<ul style="list-style-type: none"> • Support system error report. • Support fast recovery from critical errors.
Authentication	
Compliance standard	<ul style="list-style-type: none"> • IEEE 802.3 • IEEE 802.3u for 100BaseT(X) and 100Base FX • IEEE 802.3z for 1000BaseSX/LX/LHX/ZX • IEEE 802.3x for Flow Control

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Model	Gazelle S1503i
	<ul style="list-style-type: none"> • 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 contact discharge, ± 8 kV air discharge • IEC61000-4-3 (RS-): 10 V/m (80–1000 MHz) • IEC61000-4-4 (EFT): power cable: ± 2 kV; data cable: ± 1 kV (5 kHz, 100 kHz) • IEC61000-4-5 (Surge): power cable: CM ± 4 kV/DM ± 2 kV; data cable: CM ± 4 kV • IEC61000-4-6 (RF Conducted Immunity): 10 V (150 kHz–80 MHz) • IEC61000-4-8 (Power Frequency Magnetic Field Immunity): 100A/m continuous; 1000A/m, 1s to 3s • IEC61000-4-9 (Pulse magnetic field): 300A/m • IEC61000-4-10 (Damped oscillation magnetic field): 30A/m@1MHz • IEC61000-4-12/18 (oscillation wave): CM 2.5kV, DM 1kV • FCC Part 15/CISPR22 (EN55022): Class A • IEC61000-6-2 (general industrial standards) • IEC60068-2-6 (anti-vibration) • IEC60068-2-27 (anti-shock) • IEC60068-2-32 (free falling) • IEC61850-3 (electrical substation) • IEEE1613 (electrical substation) • CE, FCC, ROHS, certification by State Grid Corporation of China, certification by China Electric Power Research Institute, and Network Access License for Telecommunications Equipment (Ministry of Industry and Information

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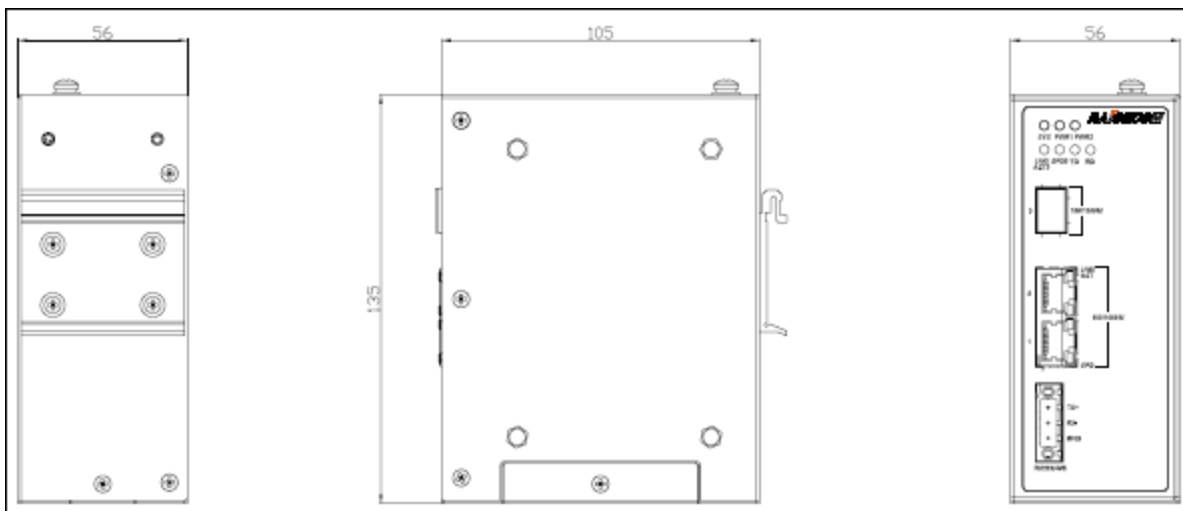
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Model	Gazelle S1503i
	Technology, P.R.C)



Device dimensions



Ordering information

Gazelle S1503i GE NMS-manageable industrial Ethernet switch	
Model	Description
<ul style="list-style-type: none"> Gazelle S1503i-GF-2GE-DCW48 Gazelle S1503i-GF-2GE-DCW24 Gazelle S1503i-GF-2GE-AC 	<ul style="list-style-type: none"> One 100/1000 Mbit/s uplink SFP optical interface Two 10/100/1000 Mbit/s Ethernet electrical interfaces DCW48: dual redundant inputs, 24/48 VDC DCW24: dual redundant inputs, 12/24 VDC AC: single input, 110/220 VAC, 220 VDC
Compatible wall-mount plate	Wall-mount plate, for securing the switch to the wall Specification: RC8.044.033(A0)

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Datasheet

Gazelle S1503i GE NMS-manageable industrial Ethernet switch

Compatible tray	Cabinet-mount tray, for installing the switch to a standard 19-inch cabinet Specification: RC8.038.194(A0)
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