



## Gazelle S5028i | Full-Gigabit L2 Modular Manageable Industrial Switch

### Product Overview

The Gazelle S5028i is a full-gigabit Layer 2 19" rack-mount manageable industrial switch designed to satisfy broadband backbone transportation in areas of smart grid (IEC 61850-3, IEEE 1613), transportation (EN50121-4), energy and industrial automation. The full modular design enables maximum flexibility among electrical, and SFP optical interfaces. It supports up to 4 GE uplinks and 24 GE downlinks. Network redundancy and reliability are guaranteed with LACP, G.8032 ERPS (<50ms switch-over time), and 24/48 VDC or 110/220 VDC/VAC dual power supplies.

### Highlights

- Compliant with IEC 61850-3 and IEEE 1613 (power substations) as well as EN50121-4 (railway applications)
- Support standardized G.8032 Ethernet ring protection switching with a recovery time less than 50ms
- LACP for optimizing bandwidth utilization
- VLAN and flexible QinQ
- Wide operating temperature range
- IP40 protection level
- Redundant AC/DC power supplies
- Rugged rack-mount design
- MTBF: 306,600 hours

### Specifications

Interface/Modules:

2xGE uplink slots: 2x10/100/1000Base-TX, or 2xGE SFP ports  
6xGE downlink slots: 4x10/100/1000Base-TX, or 4xGE SFP ports

SNMP/Console: 1 x RJ45

Relay alarm output: 1x1 S.P.D.T.

Dimensions: 440(L)× 360(W) ×44(H) mm

Weight: 7Kg

Installation: rack-mount

Operating temperature: - 40 to 85°C

Storage temperature: -40 to 85°C

Humidity: 5% to 95%, non-condensing

Power supply (input Voltage):

- DC 24/48V (18-72V)

- AC/DC 110/220V (AC: 85-264V; DC: 77-370V)

Power consumption: <30W (full electrical ports), <40W (full optical ports)

### Access Capacity

- MTU: 16K byte
- Switching buffer size: 16Mbit

### Ethernet

- Up to 32k MAC
- Support 4,094 VLANs, flexible QinQ and GVRP
- IEEE 802.3x and back pressure flow controls
- N:1 port-based mirror and flow-based mirror

### IP Services

- DHCP server/client/relay/snooping/option82
- IGMP snooping v1/v2/v3, MVR, GMRP, PIM-SM, PIM-DM, multicast filtering, unknown multicast discard, static multicast group and 1K multicast groups

### Traffic Management

- Service classification per port/VLAN/CoS (DSCP)
- Support SP, WRR and SP+WRR scheduling modes,

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and up to 8 queues per port

- Flow statistics and flow-based mirroring
- Rate limit per port/VLAN/CoS (DSCP)
- Traffic shaping in egress direction

#### Security

- Secure MAC address
- RADIUS, TACACS+
- IEEE 802.1X based on port/MAC/user
- User management and password protection
- PPPoE Agent, PPPoE+
- dot1x, IP Source Guard, DAI (dynamic ARP inspection)
- Storm control (broadcast, multicast, DLF)

#### Reliability

- Link aggregation group (LAG) – up to 32 groups with maximum 8 ports in each group, and six load balancing mode based on source/destination IP and/or MAC
- STP/RSTP/MSTP, G.8032 ERPS (recovery time less than 50ms), and IEC62439-6 redundant ring protections
- Port-based Ethernet local loop detection: auto shutdown and recover individual port upon fault signals

#### Ethernet OAM

- IEEE 802.3ah EFM-OAM link management
- Dying gasp message in case of power failure

#### System Management

- Remote management via SNMP v1/v2c/v3, Telnet, CLI and SSH v1/v2
- Local management via console interface
- Raisecom Nview NMS/EMS
- KeepAlive, RMON, LLDP, Syslog
- Relay output alarm, Dry contact alarm, and trap alarm management

#### Standard Compliance

- IEEE 802.1Q (VLAN), 802.1ad (QinQ), 802.1D (STP), 802.1w (RSTP), 802.1s (MSTP), 802.1p (QoS/CoS Priority), 802.1x (Security), 802.3ad (LAG), 802.3ah (EFM), 802.3x (Flow control), 1613(sub-station)
- ITU-T G.8032 (ERPS)
- IEC61000-4-2 (ESD), 61000-4-3 (RS), 61000-4-4 (EFT), 61000-4-5 (Surge), 61000-4-6(RF transmission), 61000-4-8 (Power frequency magnetic fields), 61000-4-9 (Pulsed magnet field), 61000-4-10 (Damped oscillation), 61000-4-12/18 (Shockwave), 61000-4-16 (Common-mode conduction), 61000-6-2 (General industrial standard), 60068-2-6 (Anti-vibration), 60068-2-27 (Shock resistance), 60068-2-32 (Free falling), 61850-3 (transformer substation)
- FCC Part 15/CISPR22 (EN55022): Class A
- In compliance with KEMA, CE and ROHS

#### Ordering Information

Model	Description
Gazelle S5028i-4GF-24GF-HIP/D	full- gigabit L2 modular rack-mount manageable industrial switch with 28x1000Base-X SFP ports, and dual AC-DC compatible power supply
Gazelle S5028i-SUB-2GE	Subcard with 2x10/100/1000Base-TX electrical ports for uplink slot
Gazelle S5028i-SUB-2GF	Subcard with 2x1000Base-X SFP ports for uplink slot
Gazelle S5028i-SUB-4GE	Subcard with 4x 10/100/1000MBase-TX electrical ports for downlink slot
Gazelle S5028i-SUB-4GF	Subcard with 4x1000Base-X SFP ports for downlink slot

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