



## Gazelle S6028i | Full-Gigabit L3 Modular Manageable Industrial Switch

### Product Overview

The Gazelle S6028i is a full-gigabit Layer 3 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. It supports additional L3 functions including static routing, RIP, OSPF and VRRP and better aggregation capabilities. The full modular design enables maximum flexibility among electrical, SFP interfaces. It supports up to 4x10GE or 4 GE uplinks, 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)
- Layer 3 static routing, dynamic routing, policy routing, multicast routing, RIP, OSPF and VRRP
- 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:  
2\*10GE uplink slots: 2\*10000 Base-X SFP+ optical ports (or 2\*GE uplink slots: 2\*10/100/1000Base-TX, or 2\*1000Base-X SFP ports )  
6\*GE downlink slots: 4\*10/100/1000Base-TX or 4\*100Base-FX/1000Base-X SFP optical ports  
SNMP/Console: 1 \* RJ45  
Relay alarm output: 1\*1 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

- Static routing, dynamic routing, policy routing, multicast routing
- RIPv1/v2, OSPFv2, VRRP

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- 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, 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
- Support VRRP, IEC62439-2(MRP)
- 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
- Web GUI
- 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 S6028i-4GF-24GF-HIP/D	full- gigabit L3 modular rack-mount manageable industrial switch with 28*100/1000Base-X SFP ports, and dual AC-DC compatible power supply
Gazelle S6028i-DC/S, -DC/D	full- gigabit L3 modular rack-mount manageable industrial switch with single/dual DC power supply

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Gazelle S6028i-HIP/S, -HIP/D	full- gigabit L3 modular rack-mount manageable industrial switch with single/dual AC-DC compatible power supply
Gazelle S6028i-HIP/DC	full- gigabit L3 modular rack-mount manageable industrial switch with one AC-DC compatible power supply and one DC power supply
Gazelle S6028i-SUB-2HF	Subcard with 2*1000Base-X SFP+ optical ports
Gazelle S6028i-SUB-2GE	Subcard with 2*10/100/1000Base-TX electrical ports
Gazelle S6028i-SUB-2GF	Subcard with 2*1000Base-X SFP optical ports
Gazelle S6028i-SUB-4GE	Subcard with 4* 10/100/1000MBase-TX electrical ports
Gazelle S6028i-SUB-4GF	Subcard with 4*100Base-FX/1000Base-X SFP optical ports

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