

GL5020

12 Port Industrial Managed PoE++ Gigabit Ethernet Switch

The GL5020 Industrial Ethernet Switches from Actelis Networks® are high density hardened, fanless fiber fed switches able to support four 1G or 10G SFP interfaces and up to 8 RJ45 gigabit interfaces per device with PoE capabilities.

The GL5020 is part of Actelis' DIN Rail family of access switching products designed for industrial, intelligent traffic network, surveillance, pipeline and utility applications. The GL5020 family are cost optimized, managed GE/10GE switches supporting multiple ten or one gigabit Ethernet connections that allow multiple sensors or cameras at various locations to be connected in a linear chain, MSTP/RSTP/STP mesh or Fast healing ERPS ring configurations.

The GL5020 family offers wire-speed switching across 12 ports, featuring an extremely small factor, fanless design, and DIN rail mounting, the GL5020 family is ideal for deployment in almost any traffic, utility, or industrial networks.

The GL5020 supports 4 PoE (Power over Ethernet) ports with a maximum of 30W per port (802.3af and 802.3at) and 2 PoE++ ports with up to 90W (802.3bt).

Environmentally hardened with redundant power inputs, and featuring a robust, field-proven design, the unit is protected against over voltage and over current conditions, ensuring high reliability and trouble-free operation.

Interoperable with any standard Ethernet switch, router or hub GL5020 devices seamlessly integrate into any Ethernet

network. The GL5020-8J4F-P is equipped with four GE Small Form-Factor Pluggable (SFP) uplinks, whilst the GL5020X-8J4F-P has four 10GE uplinks. Both products support 8x 10/100/1000Base-T copper RJ45 ports. The GL5020 allows assignment of a service/device per port.

GL5020 incorporates comprehensive set of mechanisms that include high level authentication, advanced encryption capabilities, as well as sophisticated filtering and access control using layer 2 processes.

The GL5020 provides 802.1q VLAN-aware wire-speed bridging, double tagging (VLAN stacking) for end-user VLAN transparency, L2 (Ethernet priority) classification with eight queues per port, fast healing rings, MSTP/RSTP/STP, Dynamic Link Aggregation, bandwidth monitoring, Multicast/Broadcast limiting, as well as IGMP bandwidth snooping for video distribution applications.

The GL5020 can be managed through Actelis' MetaASSIST EMS multi-platform Element Management System*. Various user interfaces/protocols are supported including a WEB based GUI, Cisco Like CLI as well as SNMP MIBs enabling seamless integration with third-party Network Management Systems (NMS).

Highlights

- **High Density Managed** GE or 10G switch – 12 ports
- **Industrial Design** - Harsh environments, wide temperature range compact IP30
- **Optional PoE** (Power over Ethernet) ports
- **Flexible Network Redundancy** - RSTP, MSTP, ERPS, LACP
- **Advanced Traffic Management** - QoS- CoS, DSCP, WRR/SPQ Queuing, Storm Protection
- **L2 wire speed switching** , 9K Jumbo frames
- **Multicasting** - IGMP Snooping - v1/v2/v3, up to 512 groups
- **Advanced Security:** IEEE 802.1x, RADIUS & TACACS+
- **SNMP** v1/v2c/v3
- **Easy Deployment / Configuration** - USB storage, configuration-free replacement
- **Industrial automation protocols** Ethernet/IP and Modbus TCP
- **Superior Reliability and Availability**



High Performance Broadband Over Fiber

Specifications

Interfaces

Ethernet (Network/User) -

- **10/100/1000Base-T:** 8 ports
Connector: RJ45, Auto-MDI/MDI-X
- **PoE:**
4x 30W (802.3af or 802.3at)
2x 90W (802.3bt)

Uplinks: 4 ports

Connector: SFP/SFP+, MSA compliant

GL5020-8J4F-P:

- **GE SFP:** 4 ports

GL5020X-8J4F-P:

- **10GE SFP+:** 4 ports

Management (out-of-band)

- **Console/Craft:** RS-232
Connector: RJ-45
- **Storage:** Firmware update, configuration backup, restore, boot up and syslog
Connector: USB 2.0

Alarm Contacts

- Terminal Block, 1 input, 1 output

LAN Protocols

- **Ethernet operating mode:** Store & forward, L2 wire-speed/non-blocking
- **MAC addresses:** 16K
- **Jumbo frames:** 9K Bytes
- **Flow control:** IEEE 802.3x (Full Duplex) and Back-Pressure(Half Duplex)
- **Max VLANs:** 4094
- **VLAN Types:** Port-based VLANs
- **VLAN Tagging:** IEEE 802.1Q
- **Double Tagging:** Q-in-Q IEEE 802.1ad
- **Multicast:** IGMP snooping V1/V2/V3 up to 512 multicast groups, IGMP Querier
- **Discovery Mechanisms:** LLDP IEEE 802.1ab

Traffic Management and QoS

- **Priority IEEE 802.1p QoS**
- **Queues per port:** 8
- **Traffic Shaper:** port-based shaping
- **Scheduler:** SPQ, WRR

Redundancy

- **Ring:** ERPSv2
- **Spanning Tree Protocol:**
STP - IEEE 802.1D,
RSTP IEEE 802.1w,
MSTP IEEE 802.1s
- **Link Aggregation with LACP**
Static or Dynamic

Management Applications

- **EMS:** MetaASSIST EMS*

Security Protocols

- **Port security:** IP and MAC-based access control
- **Authentication:** IEEE 802.1X
- **Storm Control:** Multicast/Broadcast/Flooding Storm Control

Management Protocols

User Management interfaces

- Command line interface: Cisco-like CLI
- WEB-GUI
- SNMP: V3, V2C, V1
- Telnet

Secure Access

- HTTPS, SSH, SSL, Radius, TACACS+

Configuration

- TFTP, USB

Diagnostic Syslog

- Per VLAN mirroring

DHCP

- Client, Server, Snooping, Relay Agent with option Option 82

Time Sync

- NTP
- IEEE1588v2 OC (Software Timestamp)
- TC (Hardware Timestamp)

Physical

- **Dimensions :**
Height: 5.7" / 145 mm,
Depth: 4.6" / 118 mm, **Width:** 2.8" / 72 mm
- **Weight:** 2 lbs / 0.9 kg
- **Mounting:** Din Rails, Wall mounting (Optional)

Power

- **Dual DC (integrated):** 48-57VDC
PoE: Max 240W
4x 30W (802.3af or 802.3at)
2x 90W (802.3bt)

Environmental

- **Operating Temp.** -40° to +75°C
- **Storage Temp.** -40° to +85°C
- **Relative humidity:** Up to 95%, non condensing

Regulatory Compliance/Certifications

Safety

- IEC62368, UL62368

EMC

- CE EN 55032 Class A, FCC Part 15
- IEC61000-4-2, -3, -4, -5, -6, -8
- EN 50121-4

CE

- EMC and Safety

Vibration, shock & freefall

- IEC68-2-6, -27, -32

RoHS and WEEE

- RoHS (Pb free) and WEEE compliant



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