

GL5060X-1604xx

16+4 Port Industrial Managed (PoE) L2 Switch with 10G Uplink

The GL5060X-1604xx Industrial Ethernet Switches from Actelis Networks® are high density hardened, fanless fiber fed switches able to support four 10G interfaces and up to 16 high speed gigabit interfaces per device with optional PoE capabilities.

The GL5060X-1604xx is part of Actelis' DIN Rail family of access switching products designed for industrial, intelligent traffic network, surveillance, pipeline and utility applications. The GL5060X-1604xx family are cost optimized, managed 10G switches supporting multiple ten and 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 GL5060X-1604xx family offer wire-speed switching across 20 ports, featuring an extremely small factor, fanless design, and DIN rail mounting, the GL5060X-1604xx family is ideal for deployment in almost any traffic, utility, or industrial networks.

The GL5060X-1604P supports 8 PoE (Power over Ethernet) ports with a maximum of 30W per port (802.3af and 802.3at), and the GL5060X-1604PB supports 16 PoE+ ports.

Environmentally hardened with redundant power inputs, and featuring a robust, field-proven design, the unit is NEMA 4 extended temperature compliant and protected against over voltage and over current conditions, ensuring high reliability and trouble-free operation.

Interoperable with any standard Ethernet switch, router or hub GL5060X-1604xx devices seamlessly integrate into any Ethernet network. Equipped with four 1/10G Small Form-Factor Pluggable (SFP/SFP+) uplinks and 16x 10/100/1000Base-T copper RJ45 ports, the GL5060X-1604xx allows assignment of a service/device per port.

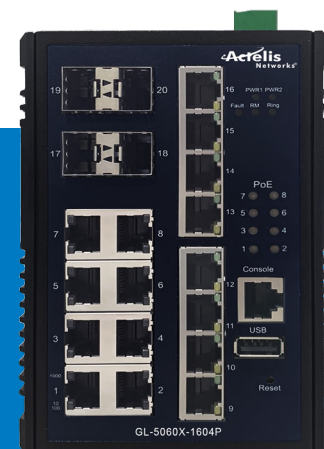
GL5060X-1604xx incorporates comprehensive set of mechanisms that include high level authentication, advanced encryption capabilities, as well as sophisticated filtering and access control using layer 2 processes.

The GL5060X-1604xx 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 GL5060X-1604xx 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** 10G switch – 20 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**



GL5060X-1604xx

Specifications

Interfaces

Ethernet (Network/User) -

- **10/100/1000Base-T:** 16 ports
Connector: RJ45, Auto-MDI/MDI-X
PoE (not on GL5060X-1604 model):
GL5060X-1604P: 8x 30W (802.3af or 802.3at)
GL5060X-1604PB: 16x 30W (802.3af or 802.3at)
- **1/10G Base-X:** 4 ports
Connector: SFP/SFP+, MSA compliant

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 V1/V2 up to 255 multicast groups, IGMP snooping and querying, Throttling and filtering.
- **Discovery Mechanisms:** LLDP IEEE 802.1ab

Redundancy

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

Traffic Management and QoS

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

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
- Ethernet Copper connection diagnostic tool

DHCP

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

NTP

Physical

- **Dimensions :**
Height: 5.7" / 145 mm,
Depth: 4.6" / 118 mm, **Width:** 3.6" / 91 mm
- **Weight:** 2.2-3 lbs / 1-1.4 kg (model dependant)
- **Mounting:** Din Rails, Wall mounting (Optional)

Power

- **Dual DC (integrated):** 12-48VDC, 48-57VDC for PoE

Environmental

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

Regulatory Compliance/Certifications

Safety

- UL 60950, CSA C22.2, EN61010-1, UL 508

EMC

- FCC Part 15, CISPR 22 (EN55032) Class A
- IEC61000-4-2, -3, -4, -5, -6, -8

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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