

GL6040X

36 Port Industrial Managed Ethernet Switch with 10G Uplink

The GL6040X Ethernet switch from Actelis Networks® is a hardened, fiber fed switch able to support up to 36 high speed gigabit interfaces.

The GL6040X product line is part of Actelis' family of switching products designed for industrial, intelligent traffic network, surveillance, pipeline and utility applications. Complementing the ML684Dx, which supports both bonded copper and fiber, and switches in the ML510D family, the GL6040X is a cost optimized, fiber-fed only unit supporting multiple Gigabit Ethernet connections that allow multiple sensors or cameras at various locations to be connected in MSTP/RSTP/STP mesh or Fast healing ring configurations.

The GL6040X offers full Ethernet switching capabilities, supporting 4 10GE SFP ports for connection to the core network, and a total of 32 client ports on each device. The GL6040X is ideal for deployment in any environment including non-air-conditioned locations.

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 the GL6040X seamlessly integrates into any Ethernet network. Equipped with 8 10/100/1000Base-T Ethernet interfaces, 24 GE SFP ports, and four 10GE Small Form Factor (SFP+) ports, the GL6040X allows assignment of a service or a customer per port.

Actelis has comprehensive mechanisms that include high level authentication, advanced encryption capabilities, as well as sophisticated filtering and access control using layer 2 processes.

Actelis GL6040X offers an all-embracing level of security initiating

from the physical layer through switching and up to the management and access layers. This provides a significantly strong and resilient solution and enables transmissions which have the highest level of immunity with notably lower vulnerability to hacking attempts.

The GL6040X 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, MSTP/RSTP/STP, G.8032 ERPSv2, Dynamic Link Aggregation, bandwidth monitoring, Multicast/Broadcast limiting, as well as IGMP bandwidth snooping for video distribution applications.

The GL6040X 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

- 1U 19" Rack mounted
- Drop and Continue, RSTP/STP mesh or ERPS
- Compact Design
- Enhanced Security - Low vulnerability to hacking
- Rapid Service Deployment
- Low Delay and Jitter for Voice and Video Transmission

Applications

- Telemetry
- IP-based Traffic Controllers
- Smart Grid Sensors
- Dynamic Message Signs
- HD Video Cameras & Streaming
- Vehicle Detection
- Smart Parking
- Emergency Response
- Supports & Complements City Wi-Fi Access

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Specifications

Interfaces

Ethernet (Network/User) -

- **10/100/1000Base-T:** 8 ports
Connector: RJ45, Auto-MDIX
- **GE SFP:** 24 ports
Connector: SFP Based
- **GE/10GE SFP+:** 4ports
Connector: SFP Based, MSA compliant multimode (mm) and single mode (sm)

Management (out-of-band)

- **Console/Craft:** RS-232, Terminal emulator, RJ45 Baud rate: 115200bps
- **Storage:** USB 2.0 for firmware update, configuration backup, restore, boot up and syslog

Alarm Contacts

- Terminal Block, 1 input, 1 output

LAN Protocols

- Ethernet operating mode: Store & forward, L2 wire-speed/non-blocking
- MAC addresses: 32K
- Jumbo frames: 12K 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 1024 multicast groups, IGMP snooping and querying, Throttling and filtering.
- 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)

Port Trunk with LACP:

- Static or Dynamic

Physical

- **Dimensions:**
Height: 1.7" / 44 mm,
Depth: 13.0" / 331 mm, Width: 17.3" / 440 mm
- **Weight:** 10.6 lbs / 4.8 kg
- **Mounting:** Rack Mounting

Power Options

- Dual DC (integrated): 12-48VDC
- Dual AC (integrated): 90-264VAC
- DC+AC

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

CE

- EMC and Safety

Vibration, shock & freefall

- IEC61373, IEC60068-2-32

RoHS and WEEE

- RoHS (Pb free) and WEEE compliant



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