GL7000 series

L2 DALI enabled smart switch for pole installation

The GL7000 series is a family of switches which can be installed in a smart pole providing connectivity for smart lights, CCTV cameras, sensors, Wi-Fi and many other IoT devices. The GL7000 is a complimentary product line to Actelis' GL5000 DIN-rail and GL6000 rack-mounted fiber switches to provide easy connectivity in any form factor.

The GL7000 series is a fully managed PoE switch providing Gigabit connectivity for multiple pole-mounted devices and offers the highest link resilience by providing support for multiple rings. GL7000 devices can fit inside or on a smart pole, thereby requiring no additional footprint. The products are temperature hardened and conform to either IP65 or IP68 specs, allowing them to be deployed in any environment.

Cyber security is a gowing concern and therefore the GL7000 devices can detect any attempt to physically tamper with the unit and prevent cyber attacks. In addition, the characteristics of the copper cables, PoE consumption, and fiber optic attenuation are monitored to detect any unauthorized change in the network. Furthermore, the GL7000 monitors the communication between network elements and prevents any unauthorized device from accessing the network.

With six Gigabit Ethernet RJ45 ports supporting PoE+ with 2x 60W and 4x 30W, the GL7000 can provide connectivity to multiple remotely powered devices.

The GL7000 also has three Gbps SFP ports for mesh connectivity providing one virtual large switch. , and an additional GE SFP combo port which can be used instead of one of the RJ45 ports.

The GL7000 supports two DALI ports for control and mangement of up to 64 street lights. Two digital outputs, two input dry contacts and two output dry contacts are also available for connecting to external devices.

The GL7000 comes in 4 models:

- GL7006-4J2F-P: IP65 model with 4 x GE RJ45 PoE (4x30W) ports and 2 x SFP 1Gbps ports
- GL7010-6J4F-P: IP65 model with 6 x GE RJ45 PoE ports (2x60W, 4x30W) and 4 x SFP 1Gbps ports
- GL7020-6J4F-P: GL7010-6J4F-P model with the addition of an I/O controller, Built-In Dali-2 interface and PWM (Power Management)
- GL7030-6J4F-P: IP68 version of GL7020-6J4F-P model

The GL7000 is interoperable with any standard Ethernet switch, router or hub and thus seamlessly integrates into carrier Ethernet networks.

The GL7000 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 GL7000 series can be managed using a standard command line interface or via a web interface The management protocols include MQTT and SNMP using standard MIBs for seamless integration with third-party Network Management Systems.

Highlights

- Outdoor IP68 weatherproof L2 switch
- Integrated Smart light and Virtual I/O
- Support for multi-rings for reliable connectivity
- 6 PoE GE ports
- Multi-layered Cyber-security
- In-pole or out-of-pole installation with no cabinets
- Dual power inputs
- FCC, CE
- Environmentally Hardened

Applications

- IP cameras
- Thermal cameras
- Radars
- EV charging stations
- Wifi hotspot
- Streaming signs
- Audio
- Wireless Access Point
- Smart Lights

GL7000 series

Specifications

Interfaces

Ethernet (Network/User)

- **10/100/1000 Base-T:** 4-6 ports
  Connector: RJ45, Auto-MDIX
  PoE: 2x 60W (802.3af, 802.3at or 802.3bt) - except GL7006-4J2F-P
  4x 30W (802.3af, 802.3at)
- **100/1000Base-FX:** 2-4 ports
  Connector: SFP based, MSA compliant

Smart Light (On GL7020-6J4F-P/GL7030-6J4F-P models)

- **Dry contact relays: 2**
- **Digital input/output ports: 3**
- **DALI – up to 64 lamps and 16 groups**

Ethernet Bridge Features

- **Bridging:** IEEE 802.1q
- **Forwarding Database size:** 4K MAC addresses
- **TPID:** up to 4 settable per inner/outer tag
- **Aging:** Configurable
- **MAC Limiting and Filtering**
- **Multicast/Broadcast Control**
- **Port based VLAN Stacking** (Q-in-Q)
- **VLANs: 4K**
- **RSTP, STP, MSTP:** IEEE 802.1d/w/s
- **Link Aggregation:** IEEE 802.3, L2/L3 balancing
- **Provider Bridges:** IEEE 802.1ad
- **LLDP**: IEEE 802.1ab
- **IGMP Snooping:** RFC 4541, V1/V2
  RFC 1112/2236
- **ERPS:** ITU-T G.8032

Quality of Service Features

- **Classes of Service** (queues per port): 8
- **Classification:** Port/VLAN/L2 L3/L4)
- **Shaping:** per queue/port
- **Color Mode Awareness** by COS or DEI
- **CoS Marking**: by COS or DEI, per Service
- **L1 Synchronous Ethernet**
- **IEEE 1588v2**

Management

Protocols

- IPV4 and IPV6
- **DHCP Client:** RFC 2132
- **Command Line Interface:** CLI
- **Remote Access:** Telnet/SSHv2
- **SNMP:** V3
- **Radius Authentication:** RFC 2865
- **Time Synchronization:** SNTP v3
- **Web Access**: HTTP
- **File transfer:** TFTP
- **Syslog:** RFC 3164
- **Port-based and MAC-based access control:** 802.1x

Alarm Contacts

- **Terminal Block:** 2 dry contact relays, 3 digital input/output ports, PWM (Pulse Width Modulation), DALI - up to 64 lamps and 16 groups

Physical

- **Dimensions**
  Length: 13-14”/ 328.8-357.3 mm
  Height: 1.57” / 40mm
  Width: 3.6” / 91 mm
- **Weight**: 2.87 lbs / 1.3 Kg
- **Power**
  DC: 42-57 Vdc, Dual powering for GL7030 model
  PoE: 240W: 2x 60W (802.3af, 802.3at or 802.3bt)
  4x 30W (802.3af, 802.3at)

Environmental

- **Operating Temp:** -40° to +65°C
- IP65 or IP68 enclosures
- **Storage Temp:** -40° to +74°C
- **Relative humidity:** Up to 95%, non-cond.

Regulatory and Compliance

Safety

- EN 60950-1, IEC 60950-1

EMC

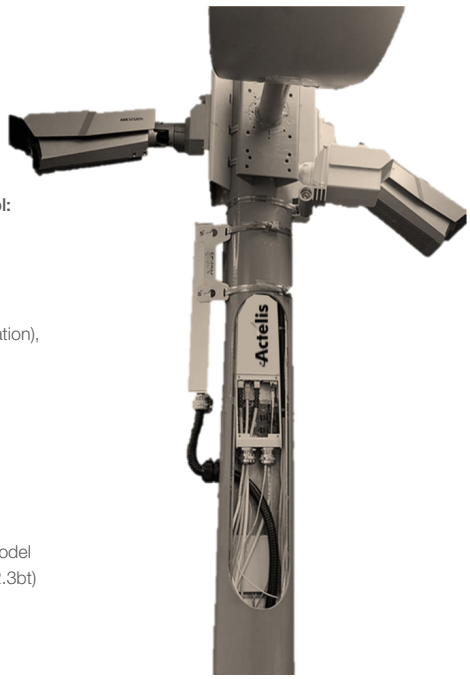
- ETSI EN 300 386 Class B

CE

- EMC and Safety

Environmental

- IP65 or IP68



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