

## LMP-1600G-M12-67-24 Series

16-Port Industrial M12 IP67 Waterproof Gigabit PoE+ Light Layer 3 Managed Ethernet Switch, with 16\*10/100/1000Tx M12 Connectors (X-Coded) (30W/Port); 24~55VDC Power Input



### Features

- ▶ 16-Port 10/100/1000Base-T(X) Ethernet with IEEE 802.3af/at compliant (30W/Port)
- ▶ Multi-user account for security
- ▶ Bypass design for Daisy Chain Redundancy
- ▶ Configuration: http, https, CLI Command, Telnet, SNMP, SSH
- ▶ Network redundancy support: G.8032 ERPS v2 / STP / RSTP / MSTP
- ▶ Supports Static routes for routing function
- ▶ Supports RADIUS, TACACS+ authentication protocol
- ▶ Supports QoS, LACP bandwidth control
- ▶ Supports VLAN, SNMP v1/v2c/v3, ACL, IP source guard for Ethernet security
- ▶ PoE ping alarm function for PoE ports power recycle
- ▶ Redundant power inputs design
- ▶ Operating Temperature Range
  - STD: -10°C to 65°C, EOT: -40°C to 70°C
- ▶ 5-Year Warranty

### INTRODUCTION

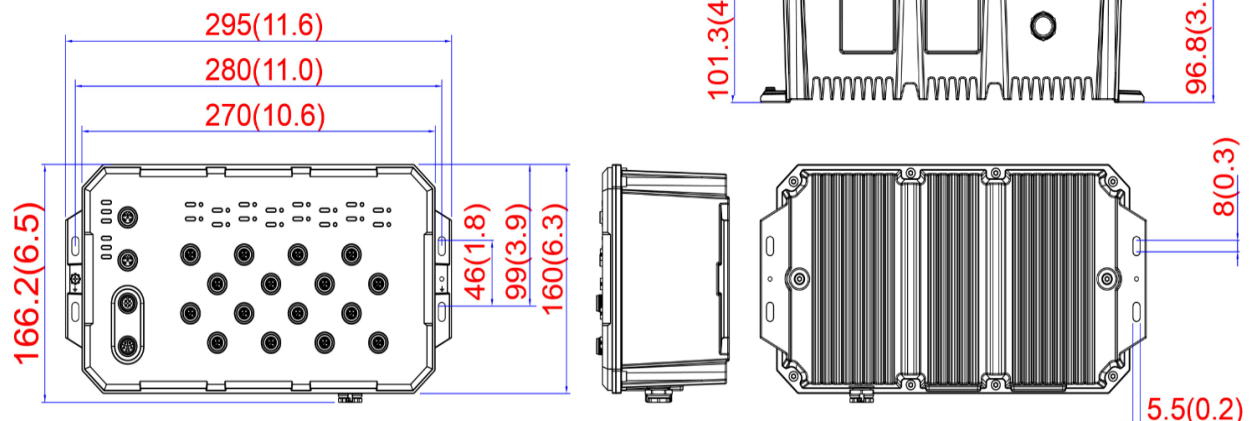
Antaira Technologies' LMP-1600G-M12-67-24 Series is a 16-port managed gigabit Ethernet switch, which provides 16\*10/100/1000 Base-T(X) with IEEE 802.3 af/at PoE compliant. LMP-1600G-M12-67-24 Series is full manageable light layer 3 Ethernet switch series and supports power inputs redundancy. LMP-1600G-M12-67-24 Series offers standardized network redundancy ITU-T G.8032 ERPS v2 (Ethernet Ring Protection Switch) protocol, providing <50ms recovery time to the network.

LMP-1600G-M12-67-24 Series provides comprehensive network security and management capability by supporting Multi-user account, IGMP, GVRP, VLAN, QoS, SNMP, RADIUS, TACACS+, Aggregation (Static, LACP), SSH, SSL, IP source guard to create a highly-secured network environment. For power saving purpose, assuring PD priority and enhancing security level of the network, LMP-1600G-M12-67-24 Series also supports PoE scheduling and PoE output limit function to set up PoE output duration and watt at will.

LMP-1600G-M12-67-24 Series is an M12 IP67 PoE+ industrial gigabit Ethernet switch that meets the high-reliability requirements demanded by industrial applications. Its M12 connectors ensure a tight and robust connection and it guarantees reliable operation on applications that are subject to high vibration and shock in dust, liquid or gas laden environments. Being able to operate under the standard temperature range from -10°C to 65°C or the extended temperature range from -40°C to 70°C, the LMP-1600G-M12-67-24 Series can be installed in almost any harsh environment.

### DIMENSIONS

Unit: mm (inch)



## SPECIFICATIONS

| Technology                  |                                                                                                                                                                                                                                                                |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| L2 Switching                | Port/MAC/Protocol/IP Subnet-based VLAN, GARP/GVRP, Loop Guard, Link Aggregation static/LACP, BPDU guard, Error disable recovery, IGMP snooping v2/v3, MLD snooping v1/v2, IGMP filtering, IPMC throttling / filtering leave proxy, DHCP snooping, G.8032 v1/v2 |
| L3 Switching                | DHCP option82, static routes                                                                                                                                                                                                                                   |
| QoS                         | 802.1p Queueing, Input priority mapping, Storm control for Unicast/Multicast/Broadcast, Port/Queue/ACL policer, Port egress shaper, Queue egress shaper, DiffServ (DSCP), Tag remarking, Scheduler mode                                                        |
| Power Saving                | ActiPHY, PerfectReach, IEEE 802.3az EEE power management                                                                                                                                                                                                       |
| Network Redundancy          | STP/RSTP/MSTP, port trunk with LACP, ERPS v1/v2 (<50ms)                                                                                                                                                                                                        |
| Configuration               | Http, Https, Telnet, SSH, CLI, TFTP, SNMP v3                                                                                                                                                                                                                   |
| System / Diagnostics        | Dual Image Protection, PING, PING6                                                                                                                                                                                                                             |
| Switch Properties           |                                                                                                                                                                                                                                                                |
| Switch Architecture         | Back-Plane (Switching Fabric): 32Gbps                                                                                                                                                                                                                          |
| Priority Queues             | 8                                                                                                                                                                                                                                                              |
| Processing Type             | Store and forward                                                                                                                                                                                                                                              |
| Flow Control                | IEEE 802.3x flow control, back pressure flow control                                                                                                                                                                                                           |
| Transfer Rate               | 14,880pps for Ethernet Port<br>148,800pps for Fast Ethernet Port<br>1,488,000pps for Gigabit Ethernet Port                                                                                                                                                     |
| Memory Buffer               | 4Mbits                                                                                                                                                                                                                                                         |
| Jumbo Frame                 | 9.6Kbytes                                                                                                                                                                                                                                                      |
| MAC Table Size              | 32K                                                                                                                                                                                                                                                            |
| VLAN Group                  | 4095                                                                                                                                                                                                                                                           |
| IGMP Group                  | 1024                                                                                                                                                                                                                                                           |
| Port Interface              |                                                                                                                                                                                                                                                                |
| Ethernet Port               | 16*10/100/1000 Base-T(X), 8-pin M12 X-Coded female connectors, auto negotiation speed, Full/Half duplex mode, and auto MDI/MDI-X connection                                                                                                                    |
| RS232 Serial Console        | 1*RS232 with M12 5-pin A-coded female connector                                                                                                                                                                                                                |
| Configuration Backup        | 1*USB 2.0 with M12 4-pin A-coded female connector for configuration backup/restore                                                                                                                                                                             |
| DI                          | 1* Digital Input (DI) with M12 5-Pin A-coded male connector: State 0: -30~8VDC / State 1: 10~30VDC, Max. input current: 8mA                                                                                                                                    |
| Bypass Protection           | Ethernet Port 8 and Port 16                                                                                                                                                                                                                                    |
| LED Indicators              | System: Power 1, Power 2, Master, Ring, Status, PoE Load<br>PoE: On-connected to PD devices<br>Ethernet ports: Speed/Link/Active                                                                                                                               |
| Protection                  |                                                                                                                                                                                                                                                                |
| Network Cable               | 10Base-T: 2-pair UTP/STP Cat. 3, 4, 5 cable EIA/TIA-568 100-ohm (100m)<br>100Base-TX: 2-pair UTP/STP Cat. 5 cable EIA/TIA-568 100-ohm (100m)<br>1000Base-T: 4-pair UTP/STP Cat.5/5E cable; EIA/TIA-568 100-ohm (100m)                                          |
| Mechanical Characteristics  |                                                                                                                                                                                                                                                                |
| Housing                     | Metal, IP67 protection                                                                                                                                                                                                                                         |
| Dimensions                  | 166.2 x 295 x 101.3 mm (W x H x D)                                                                                                                                                                                                                             |
| Weight                      | Unit: 9.06 lbs.<br>Shipping: 10.66 lbs.                                                                                                                                                                                                                        |
| Mounting                    | Wall mounting                                                                                                                                                                                                                                                  |
| Power Requirement           |                                                                                                                                                                                                                                                                |
| Input Voltage               | 24~55VDC Redundant Input                                                                                                                                                                                                                                       |
| Power Connection            | Dual DC power inputs through M12 5-pin K-coded male connector                                                                                                                                                                                                  |
| Relay Contact               | 24VDC, 1A resistive                                                                                                                                                                                                                                            |
| Overload Current Protection | Present                                                                                                                                                                                                                                                        |
| Reverse Polarity Protection | Present                                                                                                                                                                                                                                                        |
| PoE Pin Assignment          | V+, V+, V-, V-, for pin 1, 2, 3, 6 (End-span, Mode A)                                                                                                                                                                                                          |
| PoE Power Budget            | 240W                                                                                                                                                                                                                                                           |
| System Power Consumption    | 28W                                                                                                                                                                                                                                                            |
| Environmental Limits        |                                                                                                                                                                                                                                                                |
| Operating Temperature       | STD: -10°C to 65°C<br>EOT: -40°C to 70°C                                                                                                                                                                                                                       |
| Storage Temperature         | -40°C to 85°C                                                                                                                                                                                                                                                  |
| Ambient Relative Humidity   | 5% to 95%, (non-condensing)                                                                                                                                                                                                                                    |
| Regulatory Approvals        |                                                                                                                                                                                                                                                                |
| EMI                         | FCC Part 15 Subpart B Class A, CE EN55032/EN61000-6-4 Class A                                                                                                                                                                                                  |
| EMS                         | CE EN55035/EN61000-6-2: IEC61000-4-2,3,4,5,6,8                                                                                                                                                                                                                 |
| Free Fall                   | IEC60068-2-32                                                                                                                                                                                                                                                  |
| Shock                       | IEC60068-2-27                                                                                                                                                                                                                                                  |
| Vibration                   | IEC60068-2-6                                                                                                                                                                                                                                                   |
| Green                       | RoHS Compliant                                                                                                                                                                                                                                                 |
| Certifications              | FCC, CE                                                                                                                                                                                                                                                        |
| Warranty                    | 5 Years                                                                                                                                                                                                                                                        |

## ORDERING INFO

|                       |                                                                                                                                                                                                |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| LMP-1600G-M12-67-24   | 16-Port Industrial M12 IP67 Waterproof Gigabit PoE+ Light Layer 3 Managed Ethernet Switch, with 16*10/100/1000Tx M12 Connectors (X-Coded) (30W/Port), 24-55VDC Power Input, STD: -10°C to 65°C |
| LMP-1600G-M12-67-24-T | 16-Port Industrial M12 IP67 Waterproof Gigabit PoE+ Light Layer 3 Managed Ethernet Switch, with 16*10/100/1000Tx M12 Connectors (X-Coded) (30W/Port), 24-55VDC Power Input, EOT: -40°C to 70°C |



#### Optional Accessories

|                           |                                                                               |
|---------------------------|-------------------------------------------------------------------------------|
| <b>CB-M12A5PF-5M</b>      | M12 A Code 5P Female to open wire, 5 Meter, Wire: 22 AWG, DI/DO Cable         |
| <b>CB-M12A4PM-USB-5M</b>  | M12 A Code 4P Male to USB 2.0 Type-A Female, 5 Meter, Wire: 28 AWG, USB Cable |
| <b>CB-M12X8PM-RJ45-5M</b> | M12 X Code 8P Male to RJ-45 Socket, 5 Meter, Wire: 26 AWG, Ethernet Cable     |
| <b>CB-M12K5PF-5M</b>      | M12 K Code 5P Female to open wire, 5 Meter, Wire: 14 AWG, Power Cable         |
| <b>CB-M12A5PM-DB9-5M</b>  | M12 A Code 5P Male to DB9 Female, 5 Meter, Wire: 24 AWG, Console Cable        |

## Assured Systems

Assured Systems is a leading technology company with over 1,500 regular clients in 80 countries, deploying over 85,000 systems to a diverse customer base in 12 years of business. We offer high-quality and innovative rugged computing, display, networking and data collection solutions to the embedded, industrial, and digital-out-of-home market sectors.

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