

Gigabit PoE+ Managed Switch -4*10/100/1000Tx PoE (120W) + 2*100/1000 SFP Slots



OVERVIEW

Environmentally Hardened Design

AADONA Industrial 6-Port Gigabit 802.3at PoE+ Switch, SML-4GP-1G1S, is equipped with a rugged IP40 metal case for stable operation in heavy Industrial demanding environments. With IP40 industrial case protection, the SML-4GP-1G1S provides a high level of immunity against electromagnetic interference and heavy electrical surges which are usually found on plant floors or in curbside traffic control cabinets. Being able to operate under a wide temperature range from -40 to 85 degrees C, the SML-4GP-1G1S can be placed in almost any difficult environment. The SML-4GP-1G1S also allows either DIN rail or wall mounting for efficient use of cabinet space.

Redundant Ring, Fast Recovery for Surveillance System

The SML-4GP-1G1S supports redundant ring technology and features a strong rapid self-recovery capability to prevent interruptions and external intrusions. It incorporates advanced Redundant Ring technology, Spanning Tree Protocol (802.1w RSTP), and redundant power supply systems into customers' industrial automation networks to enhance system reliability and uptime in harsh factory environments. The SML-4GP-1G1S also protects customers' industrial network connectivity with a switching recovery capability that is used for implementing fault-tolerant ring and mesh network architectures. If the Industrial network was interrupted accidentally, the fault recovery times could be less than 50ms to quickly bring the network back to normal operation.

High Power PoE for Security and Public Service Applications

To fulfill the demand of High Power PoE for network applications with Gigabit speed transmission under wide temperature, the SML-4GP-1G1S provides 4 10/100/1000Mbps ports featuring IEEE 802.3at Power over Ethernet Plus (PoE+) that combines up to 120-watt power output and data per port over one Cat.5E/6 Ethernet cable. With a total 120-watt PoE budget on the whole system, the SML-4GP-1G1S is designed specifically to

satisfy the growing demand for higher power-consuming network PDs (powered devices) such as PTZ (Pan, Tilt & Zoom)/Speed Dome network cameras, multi-channel (802.11a/b/g/n) wireless LAN access points and other PoE network devices by providing PoE power, doubling that of the current conventional 802.3af PoE.

Intelligent Alive Check for Powered Device

The SML-4GP-1G1S PoE Switch can be configured to monitor the connected PD's status in real time via ping action. Once the PD stops working and responding, the SML-4GP-1G1S will recycle the PoE port power and bring the PD back to work. It also greatly enhances the reliability owing that the PoE port will reset the PD power, thus reducing the administrator's management burden.

PoE Schedule for Energy Saving

Under the trend of energy saving worldwide and contributing to environmental protection on the Earth, the SML-4GP-1G1S can effectively control the power supply besides its capability of giving high watts of power. The built-in 'PoE schedule' function helps you to enable or disable PoE power feeding for each PoE port during specified time intervals and it is a powerful function to help SMBs or enterprises save power and money.

Robust Layer 2 Features

The SML-4GP-1G1S can be programmed for advanced switch management functions such as dynamic port link aggregation, Q-in-Q VLAN, private VLAN, Rapid Spanning Tree Protocol, Layer 2 to Layer 4 QoS, bandwidth control, and IGMP snooping. The SML-4GP-1G1S provides 802.1Q tagged VLAN. Via aggregation of supporting ports, the SML-4GP-1G1S allows the operation of a high-speed trunk combining multiple ports and supports fail-over as well.

Efficient Management

For efficient management, the SML-4GP-1G1S Managed Ethernet Switch is equipped with console, Web, and SNMP management interfaces. With the built-in Web-based management interface, the SML-4GP-1G1S offers an easy-to-use, platform-independent management and configuration facility. For text-based management, the

SML-4GP-1G1S can be accessed via Telnet and the console port. Moreover, it also offers secure remote management via any standard-based management software by supporting an SNMPv3 connection which encrypts the packet content at each session.

Powerful Security

The SML-4GP-1G1S offers a comprehensive Layer 2 to Layer 4 Access Control List (ACL) for enforcing security to the edge. It can be used to restrict network access by denying packets based on source and destination IP address, TCP/UDP ports, or defined typical network applications. Its protection mechanism also comprises 802.1x Port-based and MAC-based user and device authentication. With the private VLAN function, communication between edge ports can be prevented to ensure user privacy. Network administrators can now construct highly-secured corporate networks with considerably less time and effort than before.

Flexibility and Extension Solution

The two mini-GBIC slots built in the SML-4GP-1G1S support dual speed, 100BASE-FX and 1000BASE-SX/LX SFP (Small Form-factor Pluggable) fiber-optic modules, meaning the administrator now can flexibly choose the suitable SFP transceiver according to not only the transmission distance but also the transmission speed required. The distance can be extended from 550 meters (multi-mode fiber) to 10/50/70/120 kilometers (single-mode fiber or WDM fiber). They are well-suited for applications within enterprise data centers and distributions.

Perfect Integration Solution for Outdoor IP PoE Camera and NVR System

The SML-4GP-1G1S provides 4 10/100/1000Mbps 802.3at PoE+ ports and can offer sufficient PoE power to 4 PoE IP cameras at the same time. In addition, with the 1 100/1000BASE-X SFP and 100/1000BASE-X ethernet interfaces for flexible uplinking, the SML-4GP-1G1S can connect to the core fiber switch and send the video stream to NVR and the monitoring center. Through the high-performance switch architecture, the SML-4GP-1G1S facilitates the recorded video files from the 4 PoE IP cameras to be saved in the NVR systems. Furthermore, the NVR systems can be controlled and monitored both in the local LAN and the remote site via the Internet. The SML-4GP-1G1S undoubtedly brings an ideal secure surveillance system at a lower total cost.

FEATURES

4-port 10/100/1000Tx Ethernet with IEEE 802.3at Compliant PoE+

1-port 100/1000 SFP Slot

1-port 100/000 Ethernet Port

Configuration: Web GUI, Serial Console, CLI Command

Network Redundancy support: G.8032 ERPS, RSTP, MSTP

Supports IGMP v1/v2, up to 256 groups

Supports Storm Protection for Broadcast, Multicast, and Unicast frames

Supports IEEE802.1p QoS and CoS/ToS

Supports IEEE802.1Q VLAN, SNMP v1/v2c/v3

PoE Ping Alarm function for PoE ports power recycle

System Warning setting for automatic warning through e-mail

2*Independent Power Input, 12-57VDC

IP40 Rugged Metal Case Design

DIN-Rail Mounting, Wall Mounting

Operating Temperature Range – STD: -10°C ~ 65°C, EOT: -40°C ~ 85°C

Applications

Industrial Area Department/Workgroup PoE Switch

Providing up to 4 PoE+, in-line power interfaces, the SML-4GP-1G1S can easily build a power centrally controlled by an IP phone system, IP camera system, or wireless AP group for an Industrial network. For instance, 4 PoE IP cameras or wireless access points can be easily installed around the corner in the industrial environment for surveillance demands or for a wireless roaming network. Without the power-socket limitation, the SML-4GP-1G1S makes the installation of IP cameras or wireless AP easier and more efficient.

With IEEE 802.3at Power over Ethernet Plus standard, the SML-4GP-1G1S can directly connect with any IEEE 802.3at end-nodes like PTZ (Pan, Tilt & Zoom) network cameras, PTZ speed dome cameras, color touch-

screen Voice over IP (VoIP) telephones, and multi-channel wireless LAN access points. Wireless LAN would be more efficient for the transportation station to provide high-speed and wide area Internet services for travelers. With the PoE wireless LAN structure, the transportation authority gains benefits from less cost while providing better Internet services in wider areas for travelers.

SPECIFICATIONS

Basic	
Product Description	4-Port Industrial Gigabit PoE+ Managed Ethernet Switch -4*10/100/1000Tx with PoE Injector (30W/Port) + 1*100/1000 SFP Slot + 1*100/1000 Ethernet Port
Model Name	SML-4GP-1G1S
Product Family	Sapphire
Total No Of Ports	4+1+1 = 6
Warranty	3 Year Warranty Pack
Technology	
Standards	IEEE 802.3 10BaseT Ethernet IEEE 802.3u 100BaseTX Fast Ethernet IEEE 802.3ab 1000BaseT IEEE 802.3z 1000Base-X Gigabit Fiber IEEE 802.3af/at Power over Ethernet IEEE 802.1d STP (Spanning Tree Protocol) IEEE 802.1w RSTP (Rapid Spanning Tree Protocol) IEEE 802.1s MSTP (Multiple Spanning Tree Protocol) ITU-T G.8032 / Y.1344 ERPS (Ethernet Ring Protection Switch) IEEE 802.1Q Virtual Local Area Network (VLAN) IEEE 802.1p QoS/CoS Protocol for Traffic Prioritization IEEE 802.1X Network Authentication IEEE 802.1AB Link Layer Discovery Protocol (LLDP) IEEE 803.3ad Link Aggregation (LACP)
Processing Type	Store and Forward
Protocol	CSMA/CD, IGMP v1/v2, SNMP v1/v2c/v3, TFTP, SNTP, SMTP, RARP, RMON, Syslog
Flow Control	IEEE 802.3x flow control, back pressure flow control

Switch Properties	
Switching Fabric	12Gbps
Priority Queues	8
Max VLANs	4095
Memory Buffer	4Mbits
Jumbo Frame	9.6Kbytes
MAC Table size	8K Mac Addresses
IGMP Group	Up to 1024 groups
Network Management	
Network Redundancy	STP/RSTP/MSTP, Port Trunk with LACP, ERPS(50ms)
Configuration	Web-based, Telnet, Console, Cisco-like CLI, TFTP, SSH, SSL, SNMP v1/v2c/v3, RMON, USB
Software Features	Storm Protection for Broadcast, Multicast, and Unicast frames QoS – CoS, ToS/Diffserv mapping, SPQ/WRR queuing 802.1Q Virtual Local Area Network(VLAN) IGMP Snooping, IGMP query DHCP Client/Server/Relay with Option 82 Internet Protocol Version 6 (IPv6) Link Layer Discovery Protocol (LLDP) Port Status, Statistics, Monitoring, Security PoE Status, Monitoring, Ping Alarm, Scheduling Port Mirror, LLDP, uPnP, Modbus/TCP, L3 Static Routing
Security Features	Static MAC address 802.1X authentication, RADIUS SNMP v3 encrypted authentication, and access
Interface	
RJ45 Ports	5*10/100/1000BaseT(X) with 8* PoE+, auto-negotiation speed, Full/Half duplex mode, and auto MDI/MDI-X connection
PoE Pin Out	V+, V+, V-, V-, for pin 1, 2, 3, 6 (Endspan, MDI Alternative A)
Fiber Port	1*100/1000 SFP Slot
LED Indicators	Power 1, Power 2, Fault Ethernet Ports: On-Link/Flash-data transmitting PoE: On-connected to PD devices SFP: Link/Active
Wavelength	Depends on SFP modules

RS232 Serial Console	1*RS232 in RJ45 connector with console cable, 115.2bps, 8,N,1
Configuration Backup	Configuration backup/restore/boot up and Syslog
Network Cable	10BaseT: 2-pair UTP/STP Cat. 3, 4, 5 cable EIA/TIA-568 100-ohm (100m) 100BaseTX: 2-pair UTP/STP Cat. 5 cable EIA/TIA-568 100-ohm (100m) 1000BaseTX: UTP/STP Cat.5/5E cable; EIA/TIA-568 100-ohm (100m)
Power Requirements	
Power Supply	External Din-Rail Industrial Power Supply Unit (Not included & to be purchased separately)
Input Voltage	12-57VDC, 2*independent power input
Overload Current Protection	Present(Slow-Blown Fuse)
Power Connection	1 removable 6-contact terminal block
Reverse Polarity Protection	Present
PoE Power Output	30W max. per PoE port
Power Consumption	<15 Watts for System
Max. PoE Power Budget	120W
Relay Contact	24 VDC, 1A resistive
Protection	
CPU Watch Dog	Present
Mechanical Characteristics	
Housing	Metal, IP40 protection

Dimensions	160 x 115 x 40 mm
Weight	Unit Weight: 0.95kg, Shipping Weight: 1.25kg
Mounting	DIN-Rail Mounting, Wall Mounting
Environmental Limits	
Operating Temperature	STD: -10°C ~ 65°C; EOT: -40°C ~ 85°C
Storage Temperature	-40°C ~ 95°C
Ambient Relative Humidity	5 to 95%, (non-condensing)
Regulatory Approvals	
EMI	CE Commercial/EN60950
ISO	ISO-9001 ISO-10002 ISO-14001 ISO-27001
Free Fall	IEC60068-2-32
Shock	IEC60068-2-27
Vibration	IEC60068-2-6
Green	RoHS Compliant
*All specifications are subject to change without notice.	



SAPPHIRE : SML-4GP-1G1S
CATEGORY: MANAGED POE, RUGGED SWITCH, SMB

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