

Vendor Part No.: ALL-SGI8120PM

# ALLNET Switch industrial full managed Layer2+ 20 Port 20x GbE • PoE Budget 240W • 8x PoE at • 8x GbE • 4x SFP • DIN • Fanless • ALL-SGI8120PM

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#### **EAN CODE**



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#### **Highlights:**

- 8x Gigabit ports with PoE AF-AT support up to 30Watt per port
- 8x Gigabit ports
- 4x SFP ports for fibre optic GBIC e.g. ALL4750/4751-INDU etc.
- PoE ports 1-8 max. PoE IEEE802.3at 30W
- Layer2+ features like 802.1Q VLAN, Port Isolation IGMP, LLDP, PoE+ Management, IP source Guard, ACLs etc.
- Supports Spanning Tree STP (802.1D) and RSTP (802.1W) and MSTP (802.1s)
- Supports PoE management such as PoE scheduling, PoE PD-alive, Port PoE Priority, Soft-Reboot PoE Non-Stop
- Supports G.8032 quick ring protocol. Self-healing <20ms
- Max. PoE budget = 240 watts
- Fanless metal housing with optimised heat dissipation
- Easy to use as desktop, wall-mounted or top-hat rail unit
- Extended temperature range from -40°C ~ +75°C

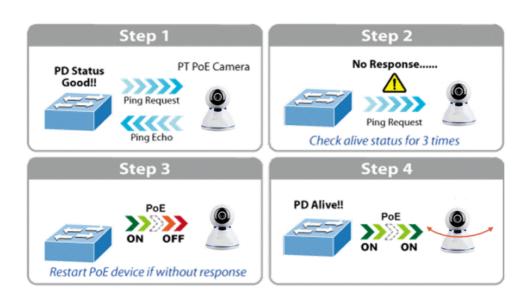
ALLNET ALL-SGI8120PM Industrial Switch is a Layer 2+ managed Gigabit PoE Switch that features 8-Port Gigabit 802.3af/at PoE + 8-Port Gigabit RJ45 + 4-Port Gigabit SFP optical port,is specially designed to build a full Gigabit backbone to transmit reliable and high-speed data in heavy industrial demanding environments and



forward data to remote network through fiber optic cabling. It comes with an IP40 rugged case and redundant power system. The industrial managed switch provides user friendly but advanced IPv6/IPv4 management interfaces and Soft-reboot PoE Non-stop function. It is the best investment for expanding industrial business or upgrading its network infrastructure.

#### Intelligent PD-Alive Check for Frozen PDs

The ALL-SGI8112P Mindustrial PoE switch 8 ports can be configured to monitor connected PD's status in real time. Once the PD stops working and responding, the ALL-SGI8104v2PM will reboot the PoE port power and bring the PD back to work. It also greatly enhances the reliability in that the PoE port will reset the PD power, thus reducing administrator's management burden.

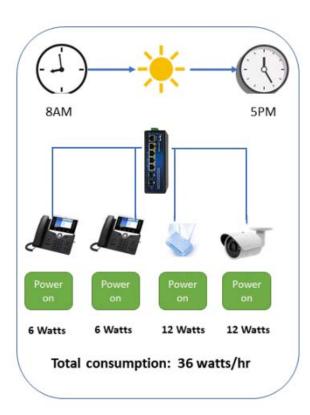


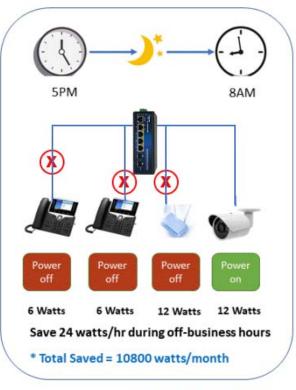
#### PoE Schedule Function for Energy Saving

For environmental protection purpose, the ALL-SGI8120PM switch Ethernet PoE can effectively control the power supply besides its capability of giving high watts power. The PoE schedule function helps 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.



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\_ 1000 BASE-T UTP With PoE

#### **Scheduled PD Re-starting**

The ALL-SGI8120PM smart switch PoE allows each of the connected PoE IP cameras or PoE wireless access points to reboot at a specific time each week. Therefore, it will reduce the chance of IP camera or AP crash resulting from buffer overflow.



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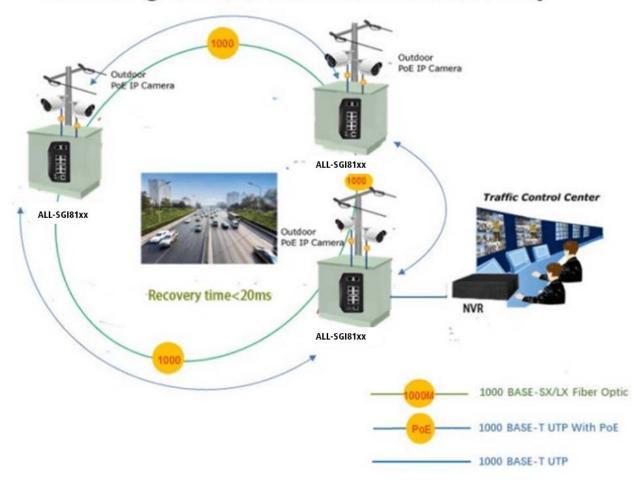
#### **Fast Recovery Redundant Ring for Critical Network Applications**

The ALL-SGI8120PM supports redundant ring technology and features strong, rapid self-recovery capability to prevent interruptions and external intrusions. It incorporates advanced ITU-T G.8032 ERPS technology, Spanning Tree Protocol (802.1s MSTP), and redundant power input system into customer's industrial automation network to enhance system reliability and uptime in harsh factory environments. In a certain simple Ring network, the recovery time of data link can be as fast as 20ms.



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## ERPS Ring for Video Transmission Redundancy

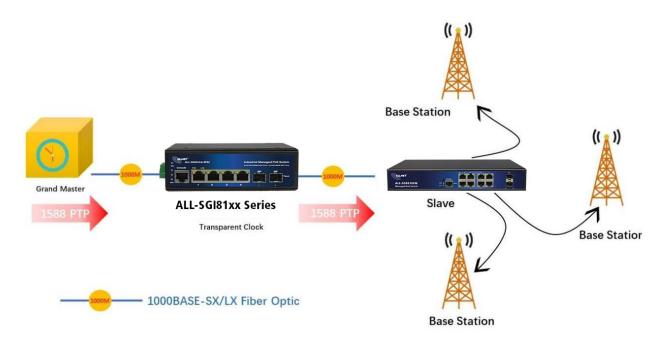


#### 1588 Time Protocol for Industrial Computing Networks

The ALL-SGI8120PM is ideal for telecom and Carrier Ethernet applications, supporting MEF service delivery and timing over packet solutions for IEEE 1588 and synchronous Ethernet.



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#### **Strong Layer 2 Features**

The ALL-SGI8120PM layer 2 Ethernet switch can be programmed for advanced Layer 2 switch management functions such as dynamic port link aggregation, 802.1Q tagged VLAN, Q-in-Q VLAN, private VLAN, Multiple Spanning Tree Protocol (MSTP), QoS, bandwidth control, IGMP snooping and MLD snooping. Via the aggregation of supporting ports, the ALL-SGI8120PM allows the operation of a high-speed trunk group that comes with multiple ports and supports fail-over as well.

#### **Efficient and Various Management Methods**

For efficient management, the ALL-SGI8120PM is equipped with console, Web and SNMP management interfaces.

With the built-in Web-based management interface, it offers an easy-to-use, platform-independent management and configuration facility.

For text-based management, it can be accessed via Telnet and the console port.

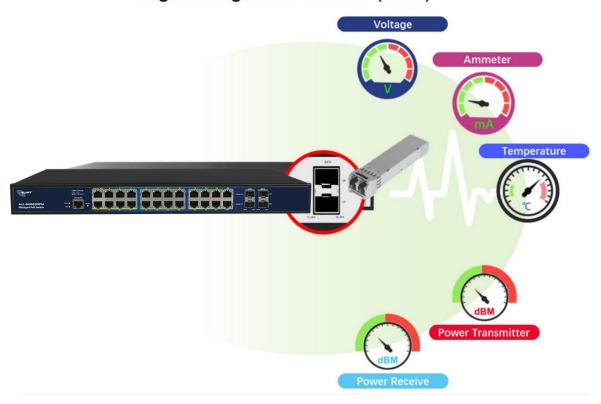
For standard-based monitor and management software, it offers SNMPv3 connection which encrypts the packet content at each session for secure remote management.

#### Intelligent PoE Switch SFP DDM Function

The ALL-SGI8120PM supports SFP-DDM (digital diagnostic monitor) function that greatly helps network administrator to easily monitor real-time parameters of the SFP transceivers, such as optical output power, optical input power, temperature, laser bias current, and transceiver supply voltage.



### Digital Diagnostic Monitor (DDM)



#### **Technical Details:**

Model	ALL-SGI8120PM
Copper Ports	16-10/100/1000BASE-T RJ45 auto-sensing ports
Fiber Ports	4-100/1000BASE-T SFP interfaces, supports 100/1000Mbps dual mode
PoE Ports	8-802.3af/802.3at PoE Injector Ports
Console Ports	1 x RS-232-to-RJ45 serial port (115200, 8, N, 1)
Switch Architecture	Store-and-Forward
Switch Fabric	40Gbps/non-blocking
Throughput	29.76Mpps @64 bytes
Address Table	8K entries
Share Data Buffer	4.1 Mb
Jumbo Frame	9216 Bytes
SDRAM	1Gb
Flash Memory	128Mb



Flow Control	IEEE 802.3x pause frame for full-duplex
	Back pressure for half-duplex
Reset Button	>2 sec.: Factory default and reset
Power Supply	48 ~ 57 VDC, 50/60Hz,Dual DC with PoE 12~55VDC without PoE function
PoE Standards	IEEE 802.3af Power over Ethernet/PSE
	IEEE 802.3at Power over Ethernet Plus/PSE
PoE Power Supply Type	Per Port 52V DC, 300mA. Max. 15.4 watts (IEEE 802.3af)
	Per Port 52V DC, 600mA. Max. 30 watts (IEEE 802.3at)
LED Indicators	Power: Green
	Solid onpower work normal,offpower disconnected
	System:Green
	Blinkwork normally, solid onsoft work abnormal, fast blinksoft upgrade
	PoE: Yellow
	Solid onPoE work normally, OffPoE doesn't work, BlinkPoE overload
	10/100/1000T RJ45 Interfaces (Port 1 to Port 16): 1000 LNK/ACT (Green), Blinkport connected with data transmission; Solid onport connected without data transmission
	100/1000Mbps SFP Interfaces (Port 17 to Port 20): Green
	Blink- port connected with data transmission; Solid on- port connected without data transmission
EMC	Surge Immunity:6KV Per: IEC61000-4-5
	ESD Protection: ESD Level 4 Per: IEC61000-4-2;EFT Level 4 Per: IEC61000-4-4
Dimension	165*145*68mm
Weight	1.5kg
Working Temperature	-40°C to 75°C
Storage Temperature	-40° to 80°C



MTBF	50,000hrs
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#### **Layer 2 functions**

Port configuration	Auto pogotistion Flow Control
Port configuration	Auto-negotiation Flow Control
	Port Mirror: TX/RX/BOTH; Many-to-1 monitor CPU
	Mirror
	Traffic statistics
Link Aggregation	Static link aggregation LACP(Dynamic Trunk/Static Trunk)
	Algorith based on Source/Destination MAC
	Algorithm based on Source/Destination IP
MAC Table	Aging Time
	Static MAC address
	Dynamic MAC address management
VLAN	4094 Active VLANs
	4094 VID
	802.1Q Tag VLAN
	Port VLAN Protocol VLAN MAC VLAN
	Voice VLAN
	802.1ad Q-in-Q tunneling Private VLAN (Protected port) GARP/GVRP
ACL	256ACLs L2, L3 e L4
	Time-based ACL IP ACL
	MAC ACL MAC-IP ACL
	User-Defined ACL
	ICMPv6
Spanning tree	802.1D Spanning Tree Protocol (STP) 802.1w Rapid Spanning Tree Protocol (RSTP)
	802.1s Multiple Spanning Tree Protocol (MSTP) Loop Guard



	Root Guard
	TC-BPDU Guard BPDU Guard
	BPDU Filter
Ring Protection	<20ms G.8032 ERPS Ring
	Fast Ring
Multicast	256 groups
	IGMP v1/v2/v3 Snooping, Fast Leave MLD Snooping
	Multicast VLAN IGMP filter MVR
	Multicast Routing
QOS	8 mapping IDs to 8 level priority queues CoS port- based
	CoS 802.1p-based
	CoS DSCP-based
	Scheduling algorithms SP, WRR, SP+WRR
	Storm Control (Broadcast, Multicast, Unknown Unicast) Bandwidth control per port
	SWRR, DWRR for Scheduling Flow Redirect
	Precedence TOS
	Rate Limiting(Ingress/Egress) Stri Priority
Security Features	Port Security
	MAC address filter
	ARP Association (Manual, ARP scanning, DHCP snooping) ARP Protection
	AAA DAI
	DoS (Denial of Service)
	Classification of packages based on: End.MAC, IP End, TCP / UDP Ports, Protocol Type;
	802.1x Authentication (port-based e MAC-based) TACACS/TACACS+ Authentication



	RADIUS Authentication DHCP Filter
	Guest VLAN SSLv2/SSLv3/TLSv1 SSHv1/SSHv2
	Restriction of WEB access based on: IP Address, And. MAC and Port; Port Isolation
	Loopback detection
Management	SNMP v1/v2c/v3 with Full Private MIBs RMON 4 groups
	WEB (HTTP/HTTPS)
	CLI (Telnet, Console, SSHv1/v2) Firmware upgrade via console/web/TFTP Configuration Backup/Reload
	Dual Firmware LLDP
	Configuration Export/Import CDP Aware
	OAM (IEEE802.3ah) CFM (IEEE802.1ag)
	sFlow
Synchronization,	Support IEEE1588v2 transparent clock
IEEE1588	
Other Features	DNS Client DHCP Relay DHCP Client DHCP Snooping DHCP Option 66 DHCP Option 67 DHCP Option 82 NTP/SNTP Client UPNP UDLD
PoE management	Total PoE power budget control Per port PoE function enable/disable PoE admin-mode control PoE port power feeding priority Per PoE port power limitation PD classification detection PD alive check PoE schedule Soft-reboot PoE Non-stop
Maintenance	Cable Diagnostics Ping



SFP DDM (Digital Diagnostics Monitoring)
Thermal protection
System log (Local and Remote)
Memory and CPU Monitoring

#### Layer 3 functions

Static Routing	IPv4 Unicast: Static Routing(Software Base)
	IPv6 Unicast: Static Routing(Software Base)
IPV6	IPv6 neighbor discovery (ND)
	Path maximum transmission unit (MTU) discovery Internet Control Message Protocol (ICMP) version 6 TCPv6/UDPv6
	Ping6 Telnet(v6) Http/Https Interface IPV6
	ACL IPV6

## **Attributes**

Attribute	Value
Anzahl Ports PoE/LAN:	8/8
Belüftung Switch:	Lüfterlos
Einsatzort Switch:	Industrial DIN
LAN Geschwindigkeit:	1Gbit/s
Management:	full managed
PoE Budget:	<300 Watt
PoE Port Leistung:	30W at
SFP Geschwindigkeit:	SFP 1GBit
Weight:	1.5 Kg
Warranty:	36.00 Months

## **Accessories**

Part No. Name

## www.allnet.de



134034	ALLNET ALL-B100-24VDC / Power-Booster 24VDC to 48~55VDC 90W
128033	ALLNET Switch Modul ALL4750-INDU SFP(Mini-GBIC), 1000Mbit MM
128034	ALLNET Switch Module ALL4751-INDU SFP(Mini-GBIC), 1000Mbit,
166757	ALLNET Switch Modul ALL4752-INDU SFP(Mini-GBIC), 1000Mbit, LX/LC, 20KM, Industrial, -40/+85 Grad,
193149	ALLNET Switch Modul ALL4761-INDU SFP(Mini-GBIC), 1000Mbit, WDM(Bidi)/LC, Tx1310nm/Rx1490nm, 9u, 20Km, Industrial -40/+85 Grad,
193150	ALLNET Switch Modul ALL4762-INDU SFP(Mini-GBIC), 1000Mbit, WDM(Bidi)/LC, Tx1490nm/Rx1310nm, 9u, 20Km, Industrial -40/+85 Grad,
140675	ALLNET Switch Module ALL4765 SFP(Mini-GBIC), 1000Mbit
200364	ALLNET 19"zbh. Gerätehalter für Hutschiene/DIN-Rail Geräte, T150mm/5HE, Lichtgrau, Frontmontage,
140523	Mean Well power supply - 48V 75W DIN rail, narrow
140523	Mean Well power supply - 48V 75W DIN rail, narrow
140522	Mean Well power supply - 48V 120W DIN rail, narrow
131244	Mean Well power supply - 48V 240W DIN rail
146994	Mean Well Power Supply - 48V 480W DIN Rail
140955	TP(RJ45) POE-Tester, at/af, Endspan/Midspan, standard, Synergy 21,
193972	ALLNET RJ45 Sicherungskupplung, Abwurfbuchse, PoE fähig, bis
99305	ALLNET / ALL95100 TP Cat 6 / PoE Surge arrester
105684	ALLNET ALL95112 / 12Port Overvoltage protection TP/ALL-IP
198028	ALLNET TP Cat 6 Überspannungs-/Blitzschutz Surge Protector A
193039	ALLNET 19"Wandgehäuse, 6HE, T488mm, Lichtgrau, IP55, SO-Serie, incl. 2-Fach Lüftereinheit
193040	ALLNET 19"Wandgehäuse, 9HE, T488mm, Lichtgrau, IP55, SO-Serie, incl. 2-Fach Lüftereinheit
193041	ALLNET 19"Wandgehäuse, 12HE, T488mm, Lichtgrau, IP55, SO-Serie, incl. 2-Fach Lüftereinheit

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