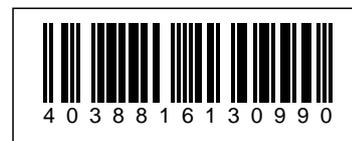# ALLNET Switch industrial full managed Layer2+ 12 Port GbE • PoE Budget 240W • 8x PoE at • 4x SFP • Fanless • DIN • JSON API • ALL-SGI8112PMJ

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ALLNET Switch industrial full managed Layer2+ 12 Port GbE • PoE Budget 240W • 8x PoE at • 4x SFP • Lüfterless • DIN • JSON API • ALL-SGI8112PMJ

Highlights:

- 8 Gigabit ports with PoE AF-AT support up to 30Watt per port
- 4x SFP ports for fibre optic Gbics e.g. ALL4750-INDU / ALL4751-INDU etc.
- PoE ports 1-8 max. PoE IEEE802.3at 30W
- Layer2+ features such as 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
- Freeless metal housing with optimised heat dissipation
- Easy to use as a table-top device, wall-mounted or top-hat rail
- Extended temperature range from -40°C ~ +75°C
- Hat rail bracket included in the scope of delivery
- **NEW: PoE & LAN JSON-Java-Script-Notation API for ON/OFF üvia Remote**

ALL-SGI8112PMJ Industrial Switch is a managed Layer 2+ Gigabit PoE switch with 8-port Gigabit 802.3af/at PoE and 4-port Gigabit SFP slot port. It is specifically designed to build a full Gigabit backbone to deliver reliable and

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Page 1/14

fast data in demanding industrial environments and to forward data to remote networks over fibre optic cables. It features a robust IP40 enclosure and a redundant power supply system. The industrial managed switch offers user-friendly but advanced IPv6/IPv4 management interfaces and a soft reboot PoE non-stop function. It is the best investment for industrial companies looking to expand or upgrade their network infrastructure.

Features:

- Support of L2+ switching functions including 802.1Q VLAN, mirroring, port isolation, IGMP snooping, DHCP snooping, LLDP, PoE+ management, IP source guard, ARP inspection, ACLs etc.
- Support of Spanning Tree STP(802.1D) and RSTP(802.1W) and MSTP(802.1s)
- Support of extended management via WEB, CLI, TELNET, SSH, SNMP.
- Support for cable diagnostics
- Two firmware backups
- Supports PoE management, such as PoE schedule, PoE PD alive, port PoE priority, soft reboot PoE N on-stop
- Supports G.8032 quick ring protocol. Self-recovery time <20ms
- Supports IEEE1588 v2, transparent clock (TC)
- Supports DDM, SFP digital diagnostics & monitoring
- Supports IPV4 and IPV6 functions for static routing
- Supports memory and CPU monitoring
- 6KV &overvoltage protection (6KV common mode, 2KV differential mode), 6KV contact/8KV air ESD protection

The technical features and stable housing make the switch the ideal solution for industrial applications. Supplied without power supply - please order separately!
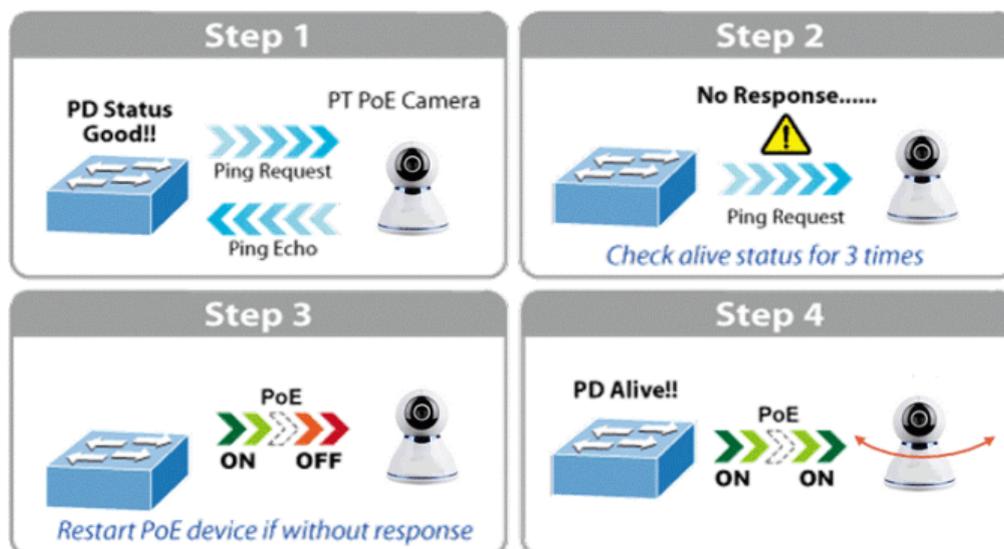
PoE schedule function for energy saving

To protect the environment, the ALL-SGI8112PMJ Ethernet PoE switch can effectively control the power supply in addition to its ability to deliver high wattage. The PoE schedule function helps to enable or disable the PoE power supply for each PoE port during specific time intervals and is a powerful feature that helps SMEs or enterprises to save power and money.
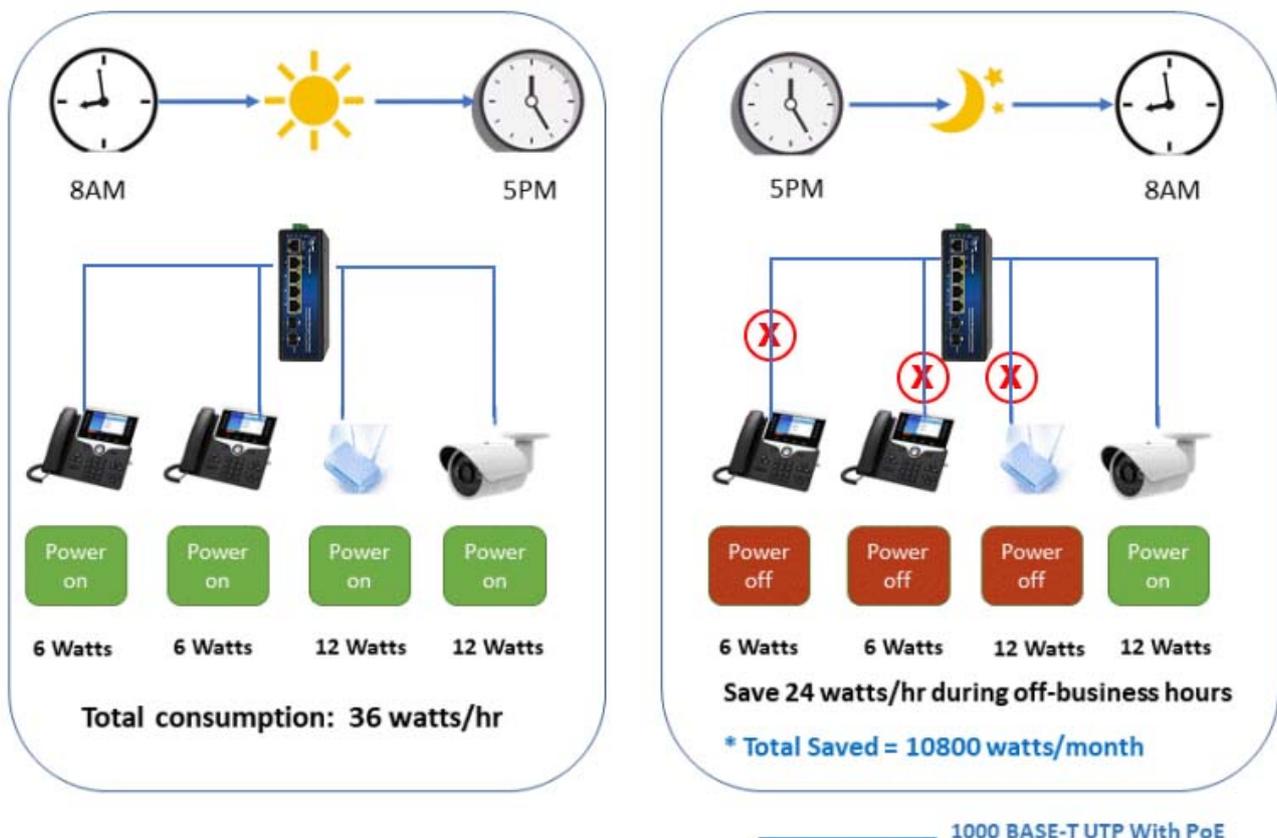
Planned PD restart

The ALL-SGI8112PMJ intelligent PoE switch allows each of the connected PoE IP cameras or PoE wireless access points to be restarted at a specific time every week. This reduces the risk of the IP camera or AP crashing due to a buffer overflow.

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Redundant ring with fast recovery for critical network applications

The ALL-SGI8112PMJ supports redundant ring technology and has a strong, fast self-recovery capability to prevent interruptions and external intrusions. It integrates advanced ITU-T G.8032 ERPS technology, Spanning Tree Protocol (802.1s MSTP) and a redundant power supply system into the customer's industrial automation network to improve system reliability and uptime in harsh factory environments. In a given simple ring network, the data link recovery time can be as fast as 20 ms.

ERPS Ring for Video Transmission Redundancy

1588 time protocol for industrial computer networks

The AALL-SGI8112PMJ is ideal for telecom and carrier Ethernet applications and supports MEF service provisioning and timing-over-packet solutions for IEEE 1588 and synchronous Ethernet.

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Page 5/14
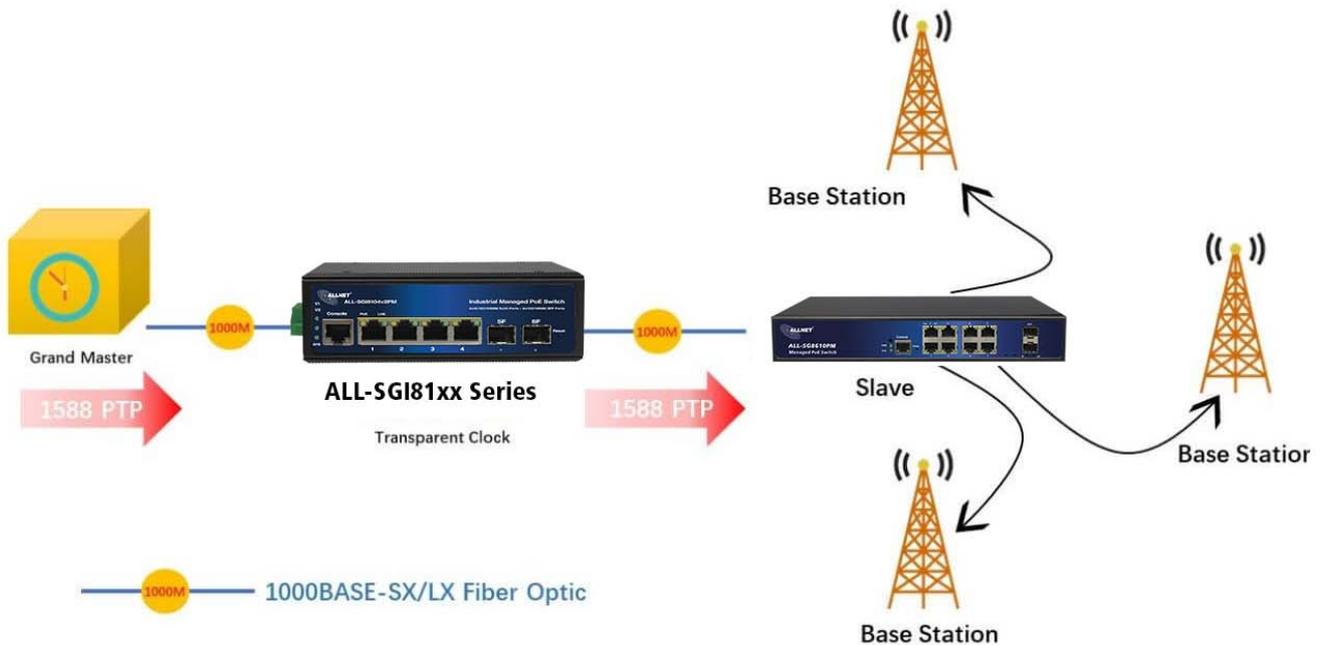
Strong layer 2 functions

The ALL-SGI8112PMJ 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. By aggregating the supporting ports, the ALL-SGI8112PMJ enables the operation of a high-speed trunk group that has multiple ports and also supports fail-over.

Efficient and versatile management methods

For efficient management, the ALL-SGI8112PMJ is equipped with console, web and SNMP management interfaces. With the integrated web-based management interface, it offers user-friendly, platform-independent management and configuration options. For text-based management, access is possible via Telnet and the console port.

Intelligent PoE switch with SFP DDM function

TheALL-SGI8112PMJ supports the SFP DDM (Digital Diagnostic Monitor) function, which enables the network administrator to easily monitor real-time parameters of the SFP transceivers, e.g. optical output power, optical input power, temperature, laser bias voltage and transceiver supply voltage.

 The technical features and stable housing make the switch the ideal solution for industrial applications. Supplied without power supply unit - please order separately!

 JSON-Java Script Object Notation API

With the JSON API, the ADMIN can create a special user and grant this user authorisation for JSON. We have focussed on 2 functions that we consider to be important.

- PoE ON/OFF & LAN Port Enabled/Disabled (for switches with PoE function)
- LAN Port Enabled/Disabled (for switches without PoE)

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Page 7/14

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Page 8/14

Technical details:

Model	ALL-SGI8112PMJ
Copper Ports	8-10/100/1000BASE-T RJ45 auto-sensing ports
Fibre 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	24Gbps/non-blocking
Throughput	17.856Mpps @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
Power Consumption	without PoE ?12W
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 on--power work normal,off--power disconnected System:Green Blink--work normally, solid on--soft work abnormal, fast blink--soft upgrade PoE: Yellow Solid on-PoE work normally, Off--PoE doesn't work, Blink--PoE overload

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	10/100/1000T RJ45 interfaces (Port 1 to Port 8): 1000 LNK/ACT (Green), Blink--port connected with data transmission; Solid on--port connected without data transmission 100/1000Mbps SFP Interfaces (Port 9 to Port 12): Green Blink- port connected with data transmission; Solid on-port connected without data transmission
EMC	6KV surge protection (6KV common mode, 2KV differential mode), 6KV contact/8KV air ESD Surge Immunity:6KV Per: IEC61000-4-5 ESD Protection: ESD Level 4 Per: IEC61000-4-2;EFT Level 4 Per: IEC61000-4-4
Dimension	165x123x53.5mm
Weight	1.0kg
Working temperature	-40°C to 75°C
Storage Temperature	-40°C to +80°C
MTBF	50,000hrs
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) Algorithm 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

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Page 10/14

	Port VLAN Protocol VLAN MAC VLAN
	Voice VLAN
	802.1ad Q-in-Q tunnelling 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

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Page 11/14

Precedence TOS Rate Limiting(Ingress/Egress) Stri Priority	
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	
SNMP v1/v2c 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	
Support IEEE1588v2 transparent clock	
Other features	DNS Client DHCP Relay DHCP Client DHCP Snooping DHCP Option 66 DHCP Option 67 DHCP Option 82 NTP/SNTP Client UPNP UDLD

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Attributes

Attribute	Value
Anzahl Ports PoE/LAN:	8/4
Belüftung Switch:	Lüfterlos
Einsatzort Switch:	Industrial DIN
Extra Features:	JSON-PoE-API;
LAN Geschwindigkeit:	1Gbit/s
Management:	full managed
PoE Budget:	<300 Watt
PoE Port Leistung:	30W at
SFP Geschwindigkeit:	SFP 1GBit
SFP Port Anzahl:	4
Weight:	1,06 Kg
Warranty:	24.00 Months

Accessories

Part No.	Name
219493	ALLNET DIN-RAIL wall mount enclosure, T220mm, light gray, IP66, SP, 16x M25 ALL-DIN-101-AC
219572	ALLNET DIN-RAIL Wallmount/PoE Smart-Managed Switch T220mm, Light Gray, IP66, SP, ALL-DIN-SGI8012PM
144991	ALLNET ALL-PR2012P-E / PoE Outdoor IP67 Repeater AT - AT
189128	ALLNET PoE 2x Extender Repeater Outdoor Switch IP67
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, Singlemode, Industrial, -40/+85 Grad,
193149	ALLNET Switch Modul ALL4761-INDU SFP(Mini-GBIC), 1000Mbit, WDM(Bidi)/LC, Tx1310nm/Rx1490nm, 9u, 20Km, Singlemode, Industrial -40/+85 Grad,
193150	ALLNET Switch Modul ALL4762-INDU SFP(Mini-GBIC), 1000Mbit, WDM(Bidi)/LC, Tx1490nm/Rx1310nm, 9u, 20Km, Singlemode, Industrial -40/+85 Grad,
208404	ALLNET Switch Modul ALL4765-INDU SFP(Mini-GBIC), 1000Mbit, RJ45(TP), Industrial

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Page 13/14

Part No.	Name
	-40/+85 Grad,
99305	ALLNET / ALL95100 TP Cat 6 / PoE Surge arrester
198028	ALLNET TP Cat 6 Überspannungs-/Blitzschutz Surge Protector A
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
146996	Mean Well Power Supply - 48V 960W DIN Rail
140955	TP(RJ45) POE-Tester, at/af, Endspan/Midspan, standard, Synergy 21,

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Page 14/14