

ALLNET Switch full managed Layer2+ 12 Port • 8x GbE • PoE Budget 300W • 8x PoE at • 4x SFP • 10" & 19" • Fanless • JSON API • ALL-SG8612PMJ

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Highlights:

- 8-port 10/100/1000Mbit/s with full PoE support
- 2x SFP slots for optional MiniGBICS
- PoE power 4x a' 30 watts (IEEE802.3at or 8x IEEE802.3af)
- FANLESS DESIGN with internal power supply
- Supports L2+ switching functions such as 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 advanced management via WEB, CLI, TELNET, SSH, SNMP.
- Support for cable diagnostics and SFP DDM.
- Supports PoE management, such as PoE schedule, PoE PD Alive.
- Supports G.8032 quick ring protocol. Self-recovery time <20ms.
- Supports DDM, SFP digital diagnostics & monitoring
- Support of IPV4 and IPV6 functions for static routing
- Support of memory and CPU monitoring
- 4KV overvoltage protection, 6KV contact/8KV air protection
- **PoE budget 300 W**
- **NEW: PoE & LAN JSON-Java-Script-Notation API for ON/OFF üvia remote**
- **NEW: Compact design that fits into both 10" and 19" network cabinets. (Both brackets are**



included in the scope of delivery, optional wall mounting "screws and cables, on-site)

Product description:

The ALL-SG8612PMJ is a fully managed Layer 2+ Gigabit PoE switch that features intelligent PoE functions to improve the availability of critical business applications. It offers IPv6/IPv4 management and an integrated L2+ Gigabit switching engine along with 8*10/100/1000BASE-T ports with 30 Watt 802.3at PoE+ and 2 Gigabit SFP slots. With a total power budget of up to 130 W for various types of PoE applications, it offers fast, secure and cost-effective Power over Ethernet network solutions for IP surveillance in small businesses and enterprises.

The ALL-SG8612PMJ is programmed for advanced switch management functions such as 802.1Q VLAN and Q-in-Q VLAN, Multiple Spanning Tree Protocol (MSTP), Loop and BPDU Guard, IGMP Snooping and MLD Snooping. In addition, the Link Layer Discovery Protocol (LLDP) is included as a layer 2 protocol to determine basic information about neighbouring devices in the local broadcast domain.

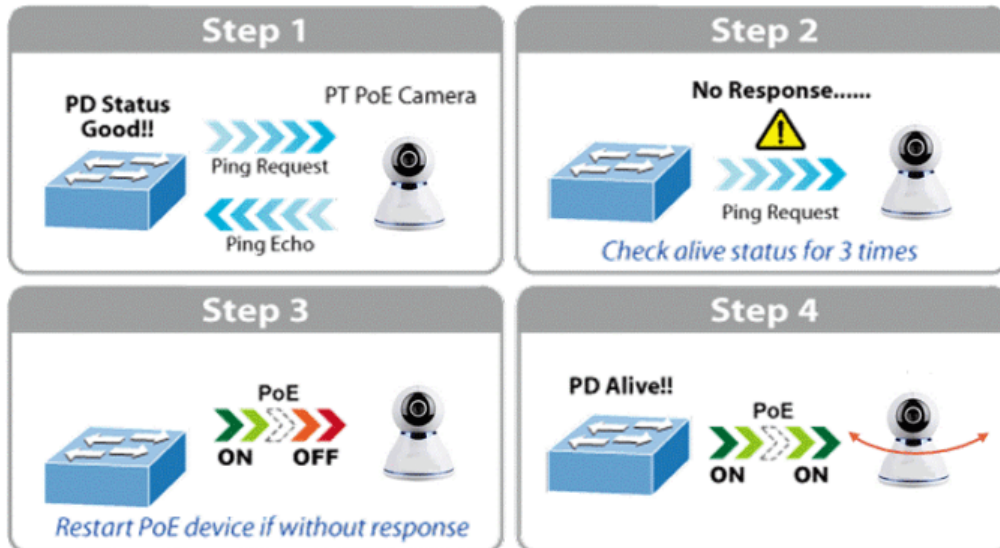
Extensive PoE management function

As a managed PoE switch for CCTV surveillance, wireless and VoIP networks, the ALL-SG8612PMJ has the following special PoE management functions:

- PoE PD alive check
- Timed rebooting of the power supply
- PoE schedule
- Monitoring of PoE utilisation
- Soft reboot PoE non-stop
- Prioritisation of the PoE port feed-in

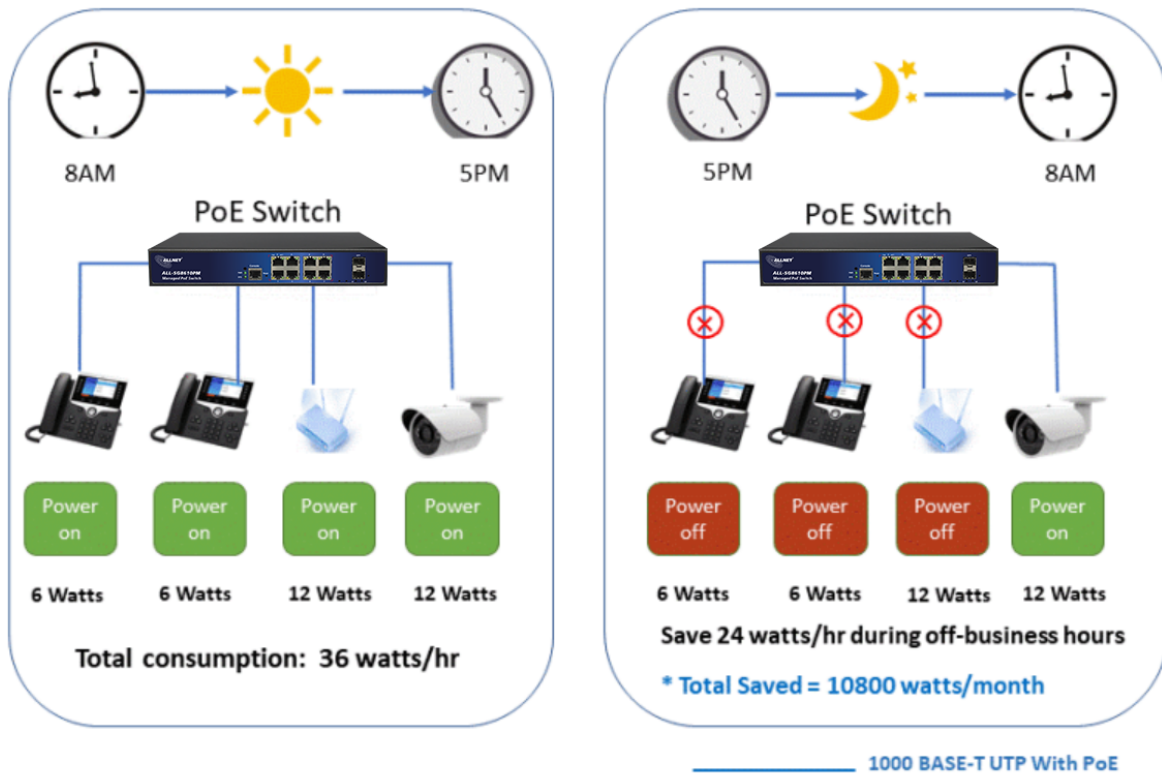
Intelligent PD alive check for frozen PDs

The 12-port ALL-SG8612PMJ can be configured to monitor the status of connected PDs in real time. As soon as the PD stops working and responding, the ALL-SG8612PMJ restarts the power supply to the PoE port and gets the PD up and running again. In addition, reliability is greatly improved by the fact that the PoE port resets the PD power supply, reducing the administrative burden on the administrator.



PoE schedule function for energy saving

To protect the environment, the ALL-SG8612PMJ Switch Ethernet PoE 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

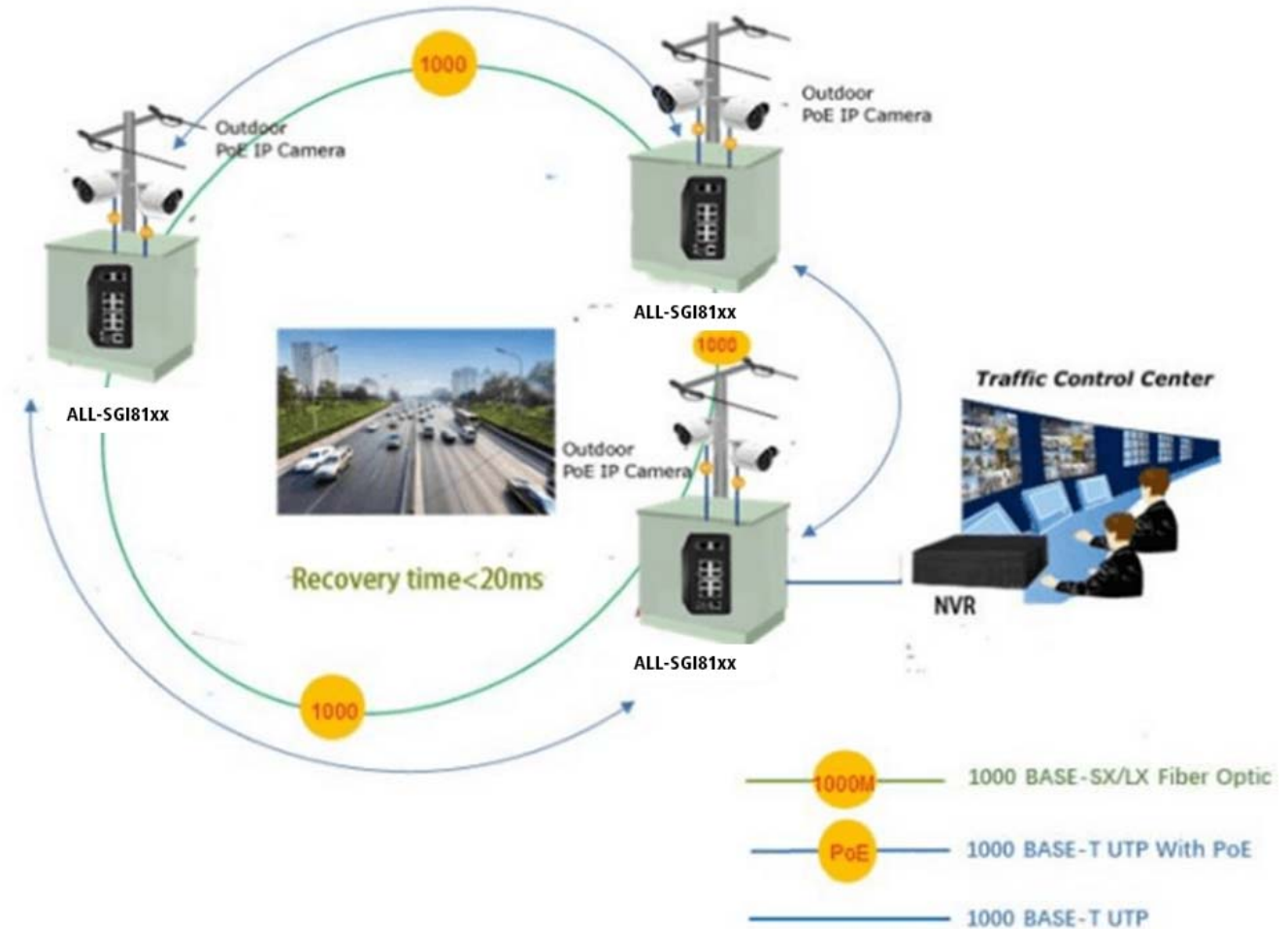
The ALL-SG8612PMJ intelligent PoE switch allows each of the connected PoE IP cameras or PoE wireless access points to be restarted at a specific time every week. This reduces the risk of the IP camera or AP crashing due to a buffer overflow.



Redundant ring with fast recovery for critical network applications

The ALL-SG8612PMJ 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 low as 20 ms.

ERPS Ring for Video Transmission Redundancy



Strong layer 2 functions

The ALL-SG8612PMJ 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-SG8612PMJ 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-SG8612PMJ is equipped with console, web and SNMP management interfaces.

With the integrated web-based management interface, it offers a user-friendly, platform-independent management and configuration option.

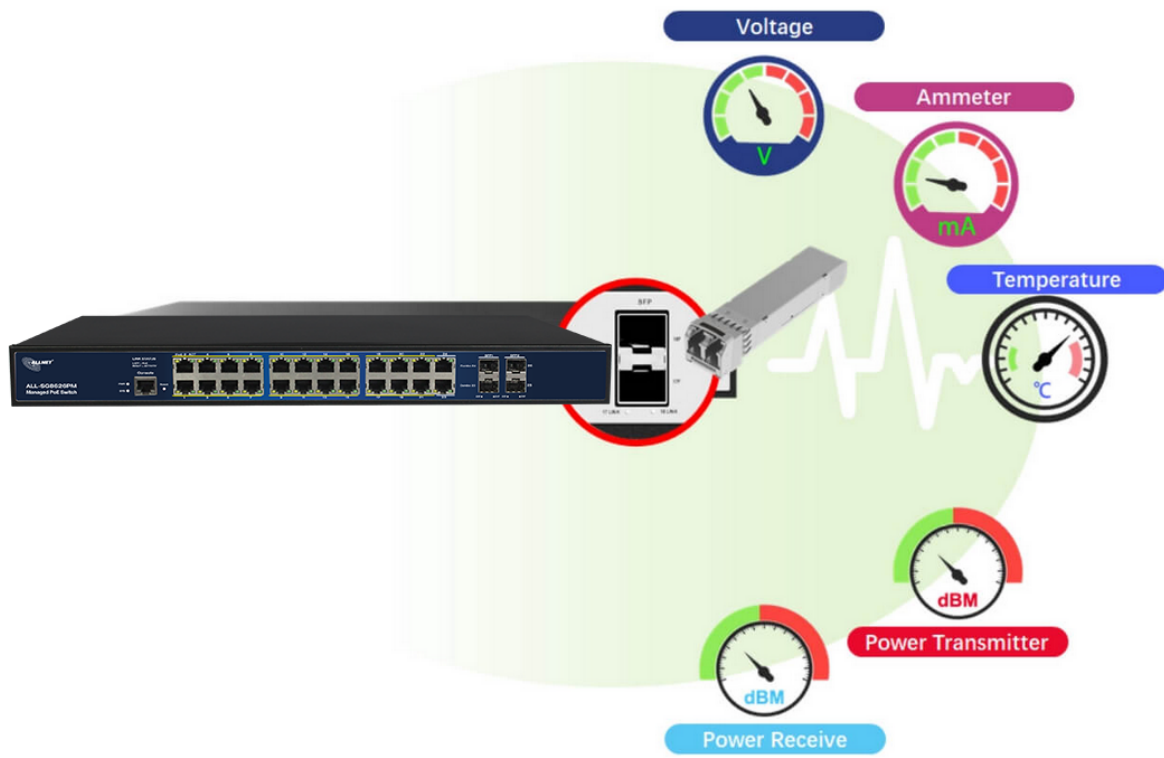
For text-based management, access is possible via Telnet and the console port.

For standards-based monitoring and management software, it provides an SNMPv3 connection that encrypts the packet contents for secure remote management during each session.

Intelligent PoE switch with SFP DDM function

The ALL-SG8612PMJ supports the SFP DDM (Digital Diagnostic Monitor) function, which allows the network administrator to easily monitor real-time parameters of the SFP transceivers, such as optical output power, optical input power, temperature, laser bias voltage and transceiver supply voltage.

Digital Diagnostic Monitor (DDM)



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 important.

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

JSON Examples



ALLNET JSON API (json output, switching with json response)



It will ONLY be switched, NO-sensor values read!

Valid for ALLNET PoE switch ALL-SG8826PMX-10G, ALL-SG8950PM, ALL-SG8926PM.
New additions from 2024: All ALL-SG86xx and ALL-SG81xx with the suffix "J" for JSON in the name.

In this description used Device IP is "192.168.0.100".
This must be replaced by the assigned address.

Description without Activated Basic authentication. If this is enable, you must pass the Authentication in URL.
(Basic Authentication: [https:// USER: PASSWORD@192.168.0.100/xml/json.php](https://USER:PASSWORD@192.168.0.100/xml/json.php))

Call "<https://192.168.0.100/xml/json.php>".

Parameter

„id={id}“ Number or name of the switching sensor / actuator
„set={0/1/toggle}“ Switch actuator off or on
„callback={objekt}“ (optional) Values are returned as JSON object

ALLNET GmbH

```

JSON Rohdaten Kopfzeilen
Speichern Kopieren Alle einklappen Alle ausklappen 🔍 JSON durchsuchen

{
  "0": {
    "id": "1",
    "name": "Port 1",
    "unit": "--",
    "type": "I",
    "value": "0",
    "error": 0
  },
  "1": {
    "id": "2",
    "name": "Port 2",
    "unit": "--",
    "type": "I",
    "value": "0",
    "error": 0
  },
  "2": {
    "id": "3",
    "name": "Port 3",
    "unit": "--",
    "type": "I",
    "value": "0",
    "error": 0
  },
  "3": {
    "id": "4",
    "name": "Port 4",
    "unit": "--",
    "type": "I",
    "value": "0",
    "error": 0
  },
  "4": {
    "id": "5",
    "name": "Port 5",
    "unit": "--",
    "type": "I",
    "value": "0",
    "error": 0
  },
  "5": {
    "id": "6",
    "name": "Port 6",
    "unit": "--",
    "type": "I",
    "value": "0",
    "error": 0
  },
  "6": {
    "id": "7",
    "name": "Port 7",
    "unit": "--",
    "type": "I",
    "value": "0",
    "error": 0
  },
  "7": {
    "id": "8",
    "name": "Port 8",
    "unit": "--",
    "type": "I",
    "value": "0",
    "error": 0
  }
}

```




Part No.: 232240
Vendor Part No.: ALL-SG8612PMJ

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Technical data:

Model	ALL-SG8612PMJ
Copper Ports	8-10/100/1000BASE-T RJ45 auto-MDI/MDI-X ports
Fibre ports	4x1G BASE-X SFP interfaces, supports 100M/1G Mbps dual mode
PoE ports	1~8-802.3af/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	20 Gbps/non-blocking
Throughput	14.88Mpps @64 bytes
Address Table	8K entries
Share Data Buffer	4 Mb
Jumbo Frame	9600 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	100~240V AC, 50/60Hz, 4A (max.)
Power consumption	Max. 300 watts/1122 BTU
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)
PoE budget	300W
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



	<p>Solid on- PoE work normally, Off- PoE doesn't work, Blink - PoE overload</p> <p>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</p> <p>100/1000Mbps SFP Interfaces (Port 9 to Port 10): Green</p> <p>Blink - port connected with data transmission; Solid on- port connected without data transmission</p>
EMC	<p>Surge Immunity:</p> <p>4KV Per: IEC61000-4-5</p> <p>ESD Protection:</p> <p>ESD Level 4 Per: IEC61000-4-2</p> <p>EFT Level 4 Per: IEC61000-4-4</p>
Layer2 Functions	
Port configuration	<p>Auto-negotiation flow control</p> <p>Port Mirror: TX/RX/BOTH; Many-to-1 monitor</p> <p>CPU Mirror</p> <p>Traffic statistics</p>
Link aggregation	<p>Static link aggregation</p> <p>LACP(Dynamic Trunk/Static Trunk)</p> <p>Algorithm based on Source/Destination MAC</p> <p>Algorithm based on Source/Destination IP</p>
MAC Table	<p>Aging Time</p> <p>Static MAC address</p> <p>Dynamic MAC address management</p>
VLAN	<p>4094 Active VLANs</p> <p>4094 VID</p> <p>802.1Q Tag VLAN</p>



	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



	<p>IGMP filter</p> <p>MVR</p> <p>Multicast routing</p>
QOS	<p>8 mapping IDs to 8 level priority queues</p> <p>CoS port-based</p> <p>CoS 802.1p-based</p> <p>CoS DSCP-based</p> <p>Scheduling algorithms SP, WRR, SP+WRR</p> <p>Storm Control (Broadcast, Multicast, Unknown Unicast)</p> <p>Bandwidth control per port</p> <p>SWRR, DWRR for Scheduling</p> <p>Flow Redirect</p> <p>Precedence</p> <p>TOS</p> <p>Rate limiting (Ingress/Egress)</p> <p>Stri Priority</p>
Security features	<p>Port Security</p> <p>MAC address filter</p> <p>ARP Association (Manual, ARP scanning, DHCP snooping)</p> <p>ARP protection</p> <p>AAA</p> <p>DAI</p> <p>DoS (Denial of Service)</p> <p>Classification of packages based on: End.MAC, IP End, TCP / UDP Ports, Protocol Type;</p>



	<p>802.1x Authentication (port-based e MAC-based)</p> <p>TACACS/TACACS+ Authentication</p> <p>RADIUS Authentication</p> <p>DHCP Filter</p> <p>Guest VLAN</p> <p>SSLv2/SSLv3/TLSv1</p> <p>SSHv1/SSHv2</p> <p>Restriction of WEB access based on: IP Address, And. MAC and Port;</p> <p>Port Isolation</p> <p>Loopback detection</p>
Management	<p>SNMP v1/v2c/v3 with Full Private MIBs</p> <p>RMON 4 groups</p> <p>WEB (HTTP/HTTPS)</p> <p>CLI (Telnet, Console, SSHv1/v2)</p> <p>Firmware upgrade via console/web/TFTP</p> <p>Configuration backup/reload</p> <p>Dual firmware</p> <p>LLDP</p> <p>Configuration Export/Import</p> <p>CDP Aware</p> <p>OAM (IEEE802.3ah)</p> <p>CFM (IEEE802.1ag)</p> <p>sFlow</p>
Other features	<p>DNS Client</p> <p>DHCP Relay</p> <p>DHCP Client</p> <p>DHCP Snooping</p> <p>DHCP Option 66</p> <p>DHCP Option 67</p> <p>DHCP Option 82 NTP/SNTP Client</p> <p>UPNP</p>



	UDLD
PoE management	<p>Total PoE power budget control</p> <p>Per port PoE function enable/disable PoE admin-mode control</p> <p>PoE port power feeding priority Per PoE port power limitation</p> <p>PD classification detection</p> <p>PD alive check PoE schedule</p> <p>Soft-reboot PoE non-stop</p>
Maintenance	<p>Cable Diagnostics</p> <p>Ping</p> <p>SFP DDM (Digital Diagnostics Monitoring)</p> <p>Thermal protection</p> <p>System log (Local and Remote)</p> <p>Memory and CPU Monitoring</p>
Layer 3 functions	
Static routing	<p>IPv4 Unicast: Static Routing(Software Base)</p> <p>IPv6 Unicast: Static Routing(Software Base)</p>
IPV6	<p>IPv6 neighbour discovery (ND)</p> <p>Path maximum transmission unit (MTU) discovery</p> <p>Internet Control Message Protocol (ICMP) version 6</p> <p>TCPv6/UDPv6</p> <p>Ping6</p> <p>Telnet(v6)</p> <p>Http/Https</p> <p>Interface IPV6</p> <p>ACL IPV6</p>
Dimension	222x225x44.5mm



Part No.: 232240
Vendor Part No.: ALL-SG8612PMJ

Weight	2 kg
Working Temperature	-10°C to 45°C
Storage Temperature	-20°C to 70°C
MTBF	50,000hrs

Attributes

Attribute	Value
Anzahl Ports PoE/LAN:	8/0
Belüftung Switch:	Lüfterlos
Einsatzort Switch:	Desktop;19";10";
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
Weight:	1 Kg
Warranty:	24.00 Months

Accessories

Part No.	Name
27947	ALLNET ALL4750 / Switch module SFP (mini Gbic), 1000Mbit, SX
59391	ALLNET ALL4753 / Switch module GBIC Mini module, 1000Mbit, L
59393	ALLNET ALL4755 / Switch module SFP (mini Gbic), 1000Mbit, ZX
59426	ALLNET ALL4751 / Switch module, GBIC mini module, 1000Mbit,
101189	ALLNET ALL4757 / Switch module SFP+ (mini Gbic), 10Gbit, SR/
101190	ALLNET ALL4758 / Switch module SFP+ (mini Gbic), 10Gbit, LR/
114334	ALLNET Switch Modul ALL4752 SFP(mini Gbic), 1000Mbit, LHX/LC
128033	ALLNET Switch Modul ALL4750-INDU SFP(Mini-GBIC), 1000Mbit MM
128034	ALLNET Switch Module ALL4751-INDU SFP(Mini-GBIC), 1000Mbit,



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Part No.	Name
128848	ALLNET Switch Module ALL4760 SFP+(Mini-GBIC), 10Gbit
140675	ALLNET Switch Module ALL4765 SFP(Mini-GBIC), 1000Mbit
143548	ALLNET Switch Module ALL4756 SFP(Mini-GBIC), 1000Mbit, ZX/LC
125116	ALLNET 10"Wandgehäuse, 3HE, Lichtgrau, SMM-Serie,
125117	ALLNET 10"Wandgehäuse, 6HE, Lichtgrau, SMM-Serie,
125118	ALLNET 10"Wandgehäuse, 9HE, Lichtgrau, SMM-Serie,