

ALLNET Switch full managed 12 Port Gigabit 130W / 8 x PoE / 4x Giga LAN / 4 x SFP+/ Layer 2+ / ALL-SG8616PMJ-10G

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Highlights:

- L2+ managed commercial PoE fibre switch is equipped with 12*10/100/1000Base-T RJ45 ports and 4*1/10G SFP+ fibre slot ports.
- Port 1-8 support IEEE 802.3af/at standard POE, single port POE power up to 30W.
- Port 9-12 can support 1GB Gigabit LAN
- Port 13-16 can support 1GB SFP slots or 10GB SFP+ slots
- Supports various PoE management functions, including PoE shedule, PoE PD-Alive, etc.
- Supports SFP DDM & cable diagnostics
- Supports G.8032 ERPS, self-detection time < 20 ms
- Supports 1588 V2.0, transparent clock
- Supports port aggregation
- 4KV & overvoltage protection, 6KV contact/8KV air ESD protection
- 19 inch bracket included in the scope of delivery

The ALL-SG8616PMJ-10G is a Layer2+ 10G uplink managed PoE fibre optic switch. It has 12x10/100/1000Base-T RJ45 ports and 4x1/10G SFP+ fibre MiniGBIC slot ports. Port 1-8 supports PoE according to IEEE 802.3af/with standard PoE power supply. Single port PoE power supply reaches 30W, and the maximum PoE output power is 130W. The switch can supply power to POE terminal devices such as wireless AP, webcam, VoIP phones, intercom for visual access control in the building, etc. via a patch cable/network cable etc. The switch is suitable for hotels, campuses, parks, shopping centres, scenic spots, hospitals, factories, dormitories and small and

medium-sized enterprises.

The ALL-SG8616PMJ-10G has the full Layer2+ network management function, supports IPV4/IPV6 management, supports static forwarding of the full line rate of the route, supports full security protection mechanisms, full ACL/QoS policy and rich VLAN

functions, and is easy to maintain and manage. functions and is easy to maintain and manage. The switch supports multiple network redundancy protocols STP/RSTP/MSTP and (ITU-T G.8032) ERPS(<50ms) to improve connection backup and network reliability. If the network fails, communication can be restored quickly. can be quickly restored to ensure critical uninterrupted communication for calls.

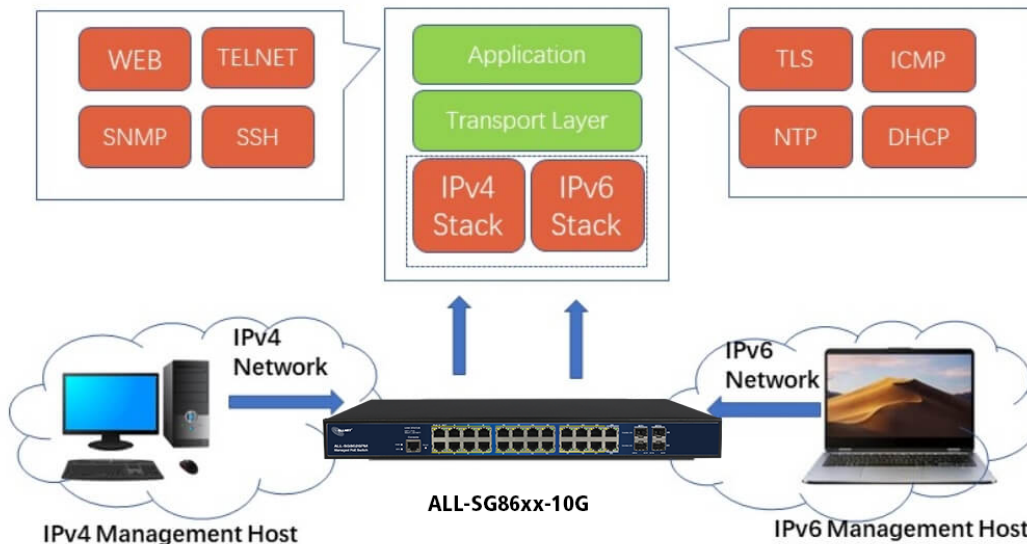
According to the actual application requirements, you can provide/perform multiple application services such as PoE power management, port traffic control, VLAN division and SNMP via the web network management mode.

10Gbps uplink capacity for high bandwidth applications

10G Ethernet is a major leap forward in the development of Ethernet. The 10G SFP+ sockets support dual-speed 10GBASE-SR/LR or 1000BASE-SX/LX, which means that the administrator can now flexibly select the appropriate SFP/SFP+ transceiver depending on the transmission distance or speed to efficiently expand the network. This is a cost-effective solution for SME networks to achieve the maximum performance of 10G networks.

Solution for IPv6 networks

With the IPv6/IPv4 dual stack and other management features, the ALL-SG8616PMJ-10G is the best choice for IP CCTV, VoIP and wireless solution providers to develop IPv6 networks. At the same time, they help SMEs to migrate their network infrastructures to the IPv6 era without additional investment.



Robust Layer 2 functions

The ALL-SG8616PMJ-10G can be programmed for advanced switch management functions, such as port aggregation, Q-in-Q VLAN, Spanning Tree Protocol, QoS, bandwidth control, ERPS, IGMP/MLD snooping, etc. The ALL-SG8616PMJ-10G enables the operation of a high-speed trunk that combines multiple ports.



Powerful security features

The ALL-SG8616PMJ-10G provides a comprehensive access control list (ACL) to enforce security at the network edge. It can be used to restrict network access by denying packets based on source and destination IP addresses, TCP/UDP port numbers or defined typical network applications. The protection mechanism also includes 802.1x port-based and MAC-based user and device authentication. The private VLAN function can be used to prevent communication between edge ports in order to protect user privacy.

Improved security and traffic control

The ALL-SG8616PMJ-10G supports the DHCP Snooping, IP Source Guard and Dynamic ARP Inspection functions to protect IP snooping from attacks and to discard ARP packets with invalid MAC addresses. The network administrator can now set up highly secure company networks with significantly less time and effort than before.

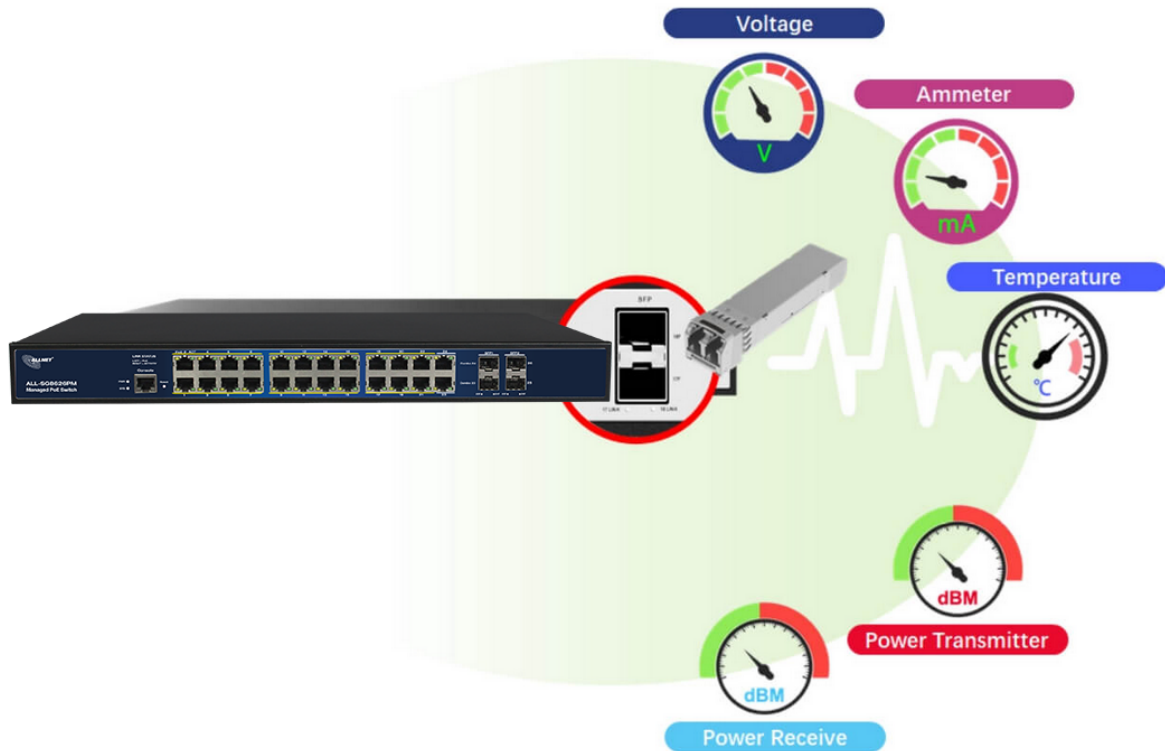
User-friendly, secure management

For efficient management, the ALL-SG8616PMJ-10G managed switch series is equipped with console, web and SNMP management interfaces. With the management interface, the ALL-SG8616PMJ-10G provides a user-friendly, platform-independent management and configuration option. The ALL-SG8616PMJ-10G supports SNMP and can be managed via any management software based on the standard SNMP v1 or v2 protocol. At the same time, the ALL-SG8616PMJ-10G offers Cisco-like commands via Telnet or the console port, so the customer does not have to learn new commands for these switches. In addition, the ALL-SG8616PMJ-10G offers secure remote management by supporting SSH, SSL and SNMP v3 connections, where packet contents can be encrypted at each session.

Intelligent SFP DDM function

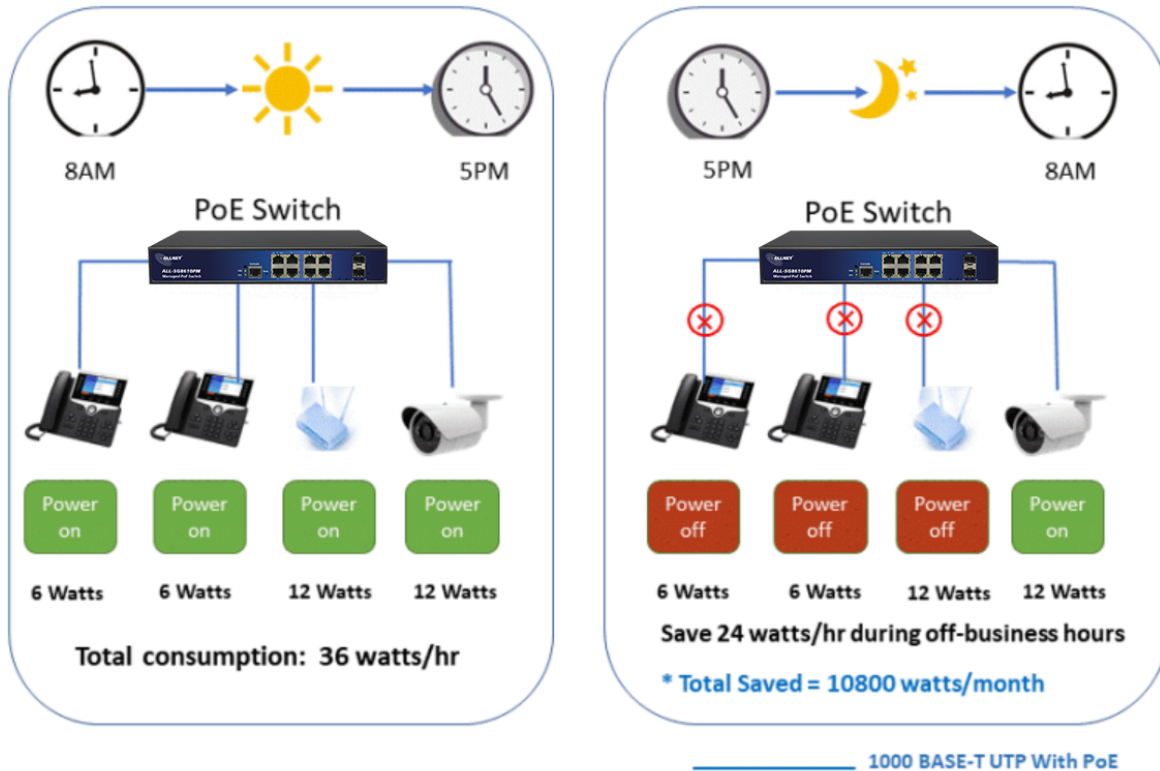
The ALL-SG8616PMJ-10G supports the SFP-DDM (Digital Diagnostic Monitor) function, which allows the network administrator to easily monitor real-time parameters of the SFP and SFP+ transceivers, such as optical output power, optical input power, temperature, laser bias voltage and transceiver supply voltage.

Digital Diagnostic Monitor (DDM)



PoE schedule function for energy saving

To protect the environment, the ALL-SG8616PMJ-10G 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

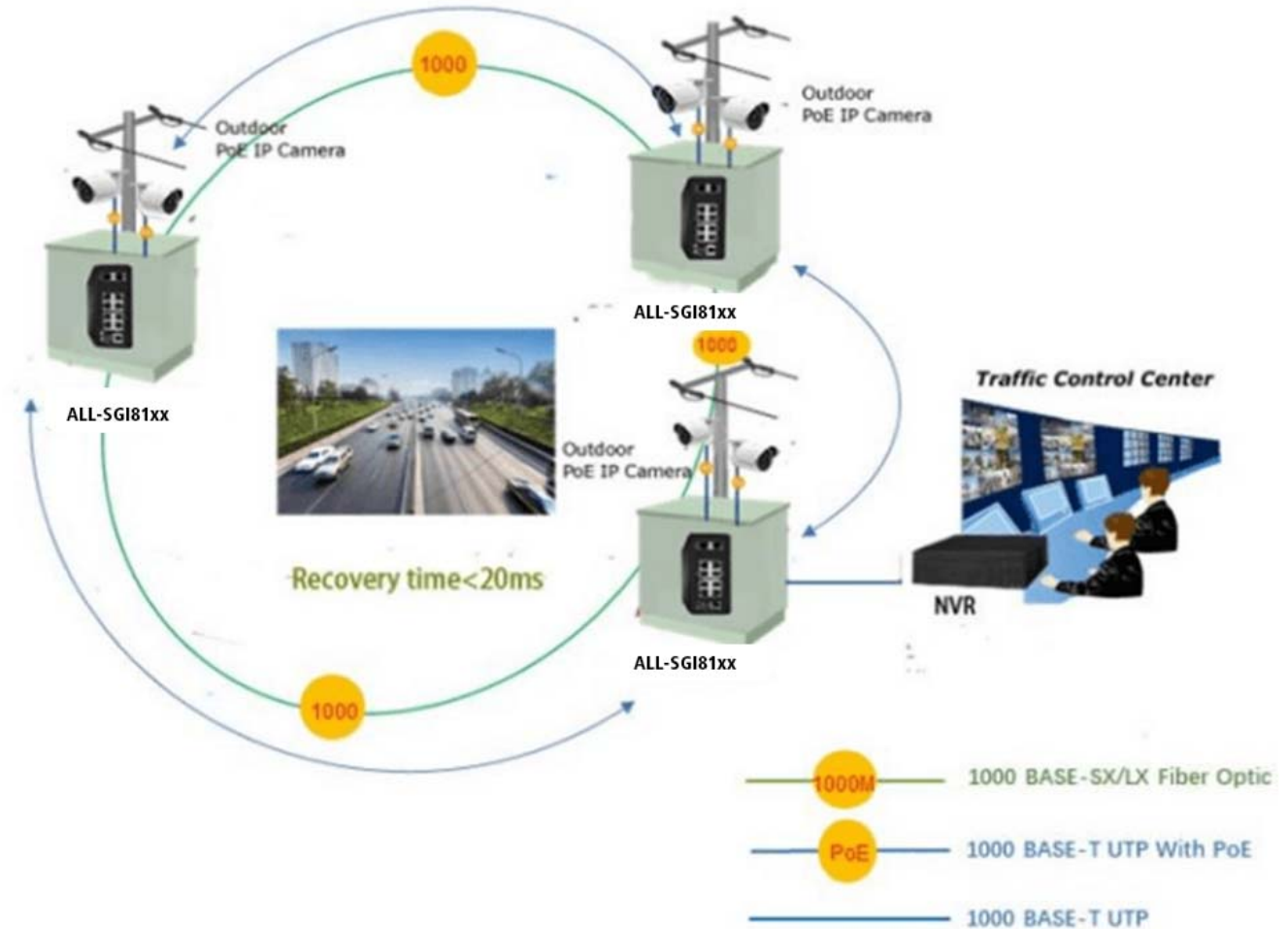
The ALL-SG8616PMJ-10G intelligent PoE switch allows each of the connected PoE IP cameras or PoE wireless access points to be restarted at a specific time every week. This reduces the risk of the IP camera or AP crashing due to a buffer overflow.



Redundant ring with fast recovery for critical network applications

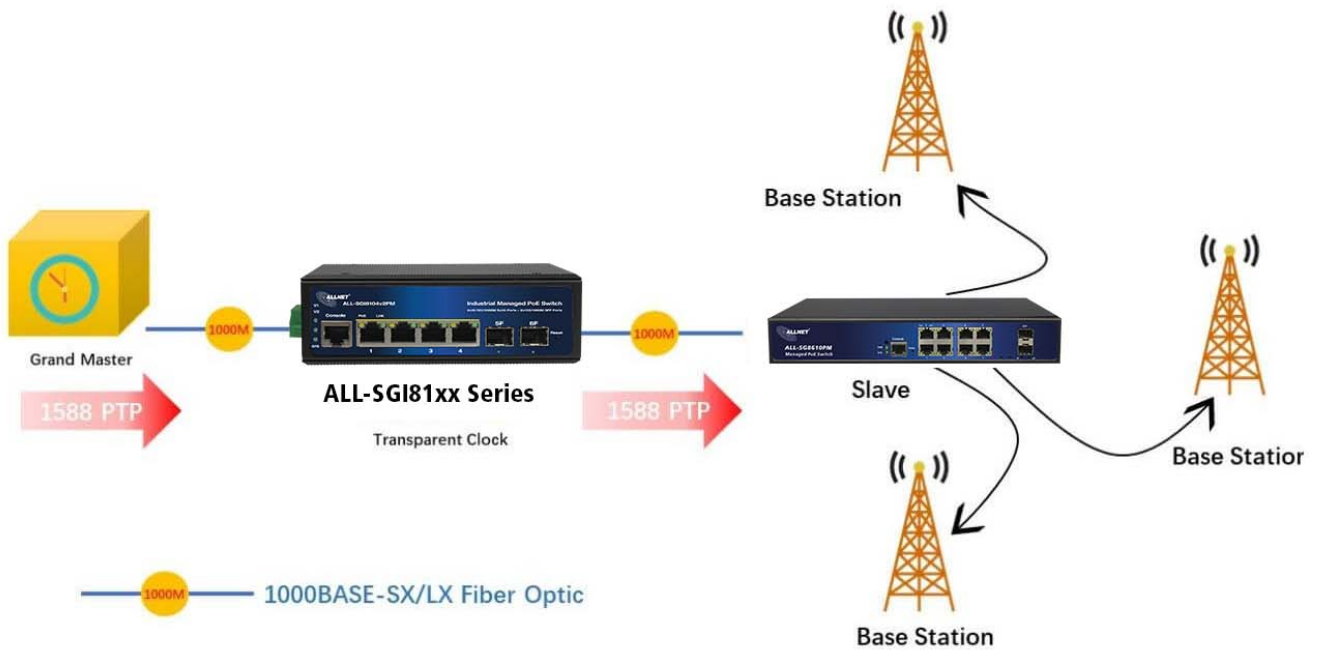
The ALL-SG8616PMJ-10G supports redundant ring technology and has a strong, fast self-recovery capability to prevent interruptions and external intrusions. It integrates advanced ITU-T G.8032 ERPS technology, Spanning Tree Protocol (802.1s MSTP) and a redundant power supply system into the customer's 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



1588 time protocol for industrial computer networks

The ALL-SG8616PMJ-10G is ideal for telecommunications and carrier Ethernet applications and supports MEF service provisioning and timing-over-packet solutions for IEEE 1588 and synchronous Ether



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

```



Part No.: 223952
Vendor Part No.: ALL-SG8616PMJ-10G

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Technical details:

Model	ALL-SG8616PMJ-10G
Port	12x10/100/1000Base-T RJ45 ports+ 4x 10G SFP+ ports
PoE port	Port 1~8 support PoE (802.3af/at)
Network Protocol	IEEE802.3 10BASE-T; IEEE802.3i 10Base-T; IEEE802.3u 100Base-TX; IEEE802.3ab 1000Base-T IEEE802.3z 1000Base-X IEEE802.3ae 10GBase-SR/LR IEEE802.3x
Ethernet port Feature	10/100/1000Base-T(X),Auto-sensing,Full/half duplex MDI/MDI-X self-adaption
Fibre port Feature	Gigabit SFP /10G SFP+ interface (Fibre module is not included, need to order separately, module options include single/multi mode, single/dual fibre, LC)
Forwarding Mode	Store and Forward (Full wire speed)
Switching Capacity	64Gpps(Non-blocking)
Forwarding Rate@64byte	31.6Mpps
MAC	32K
Buffer memory	32M
Jumbo frames	9.6K
Twisted PairTransmission	10BASE-T: Cat3,4,5 UTP(=100 metres) ; 100BASE-TX: Cat5 or later UTP(=100 metres) ; 1000BASE-X: Cat5e or later UTP(=100 metre)
Optical Cable	Multi Mode: 850nm 0-550M;Single Mode: 1310nm 0-40KM , 1550nm 0-120KM.
Power Supply Pin	Default: 1/2(+), 3/6(-);
MAX / Average Power per port	30W/15.4W
Total PWR / Input Voltage	130W (AC100-240V)
Power Consumption	Standby:<16W; Full Load:<120W
LED	Power indicator : PWR (green); system indicator : SYS (



	green) ; network indicator : Link (yellow); SFP fibre port :L/A (green); POE indicator : PoE (green)
Power supply	Built in power supply AC100~240V 50-60Hz 2.3A
Operation TEMP / Humidity	-10~+40°C; 5%~90% RH Non-condensing
Storage TEMP / Humidity	-20~+65°C; 5%~95% RH Non-condensing
Port lightning protection	Port lightning protection : 4KV 8/20us
Managed feature	
PoE management	Total power limit of PoE power supply PoE output power allocation per port, close /af/at PoE output priority configuration for each port PoE working state display per port Power delay start PoE work and time scheduling
Layer 3 Function	Support L2+ managed function, Support IPV4/IPV6 management Support layer3 soft routing (weak three tier) forwarding, Support different network segments, communication between different VLAN Support static routing / default routing 128, 1024 ARP software
VLAN	Support port based VLAN (4K), IEEE802.1q Support protocol based VLAN Support Access, Trunk, Hybrid three types of port configuration Support QinQ configuration
Port aggregation	Support LACP Support static polymerisation Support the largest 8 aggregation groups, each aggregation group supports 8 ports
Spanning Tree	STP (IEEE802.1d) RSTP (IEEE802.1w) MSTP (IEEE802.1s)
Industrial Ring Network Protocol	Support G.8032 (ERPS), support 255 loops at most, and supports 1024 devices per ring. The self healing time of the ring network is less than 20ms
Multicast	Support IGMP Snooping V1/V2 and support 1024



	<p>multicast groups at most. Support the user's quick departure mechanism Support MLD Snooping V1/V2 Support multicast VLAN</p>
Image	Bi-directional traffic mirroring supporting the basic port
QoS	<p>Diff-Serv QoS Each port supports 8 output queues Support 802.1p/DSCP priority mapping Support queue scheduling mechanism (SP, WRR, SP+WRR) priority tag Mark/Remark stream based packet filtering Support for stream based redirection Support flow based speed limit</p>
ACL	<p>Support L2 to L4 packet filtering function, can match the first 80 bytes of the message, provide based on the source MAC address, destination MAC address, source IP address, destination IP address, IP protocol type, TCP/UDP port, TCP/UDP port range, VLAN and other definition ACL. Support ACL based on port and VLAN</p>
Safety Characteristics	<p>Support user grading management and password protection Support IEEE802.1X authentication / centralised MAC address authentication Support AAA&RADIUS authentication Support the number of MAC address learning restrictions Support MAC address black hole Support SSH 2 to provide secure passwords for user login . Support SSL to ensure data transmission security Support port isolation Support the speed limit function of ARP message Support IP source address protection Support ARP intrusion detection function Support against DoS attacks</p>
VLAN	<p>Support port based VLAN (4K), IEEE802.1q Support protocol based VLAN Support Access, Trunk, Hybrid three types of port configuration Support QinQ configuration</p>
Port aggregation	<p>Support LACP Support static polymerisation</p>



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DHCP	Support DHCP Client Support DHCP Snooping Support DHCP Serve Support DHCP Relay
Management And Maintenance	Support Console/AUX Modem/Telnet/SSH2.0 CLI command line configuration Support WEB network management (HTTPS) Support FTP, TFTP, Xmodem Support SNMP V1/V2C/V3 Support one bond reduction



	Support NTP clock Support system work log Support ping detection Support cable state detection Support CPU instant utilisation status view Support link layer discovery protocol LLDP
System Requirements	Web browser: Mozilla Firefox 2.5 or higher, Google browser chrome V42 or higher, Microsoft Internet Explorer10 or later; Cat5e or later Ethernet cable; TCP/ IP, network adapter and network operating system (Microsoft Windows, Linux or Mac OS X) installed on every computer in the network

Attributes

Attribute	Value
Anzahl Ports PoE/LAN:	16/4
Belüftung Switch:	Lüfterlos
Einsatzort Switch:	Desktop
Extra Features:	JSON-PoE-API;
LAN Geschwindigkeit:	1Gbit/s
Management:	full managed
PoE Budget:	<200 Watt
PoE Port Leistung:	30W at
SFP Geschwindigkeit:	SFP+ 10GBit
Weight:	1 Kg
Warranty:	24.00 Months

Accessories

Part No.	Name
101189	ALLNET ALL4757 / Switch module SFP+ (mini Gbic), 10Gbit, SR/
149613	ALLNET Switch Module ALL4757-INDU SFP+(Mini-GBIC), 10Gbit



Part No.	Name
101190	ALLNET ALL4758 / Switch module SFP+ (mini Gbic), 10Gbit, LR/
149616	ALLNET Switch Module ALL4758-INDU SFP+(Mini-GBIC), 10Gbit
128848	ALLNET Switch Module ALL4760 SFP+(Mini-GBIC), 10Gbit
146282	ALLNET Switch Module ALL4767 SFP+(Mini-GBIC), 10Gbit
27947	ALLNET ALL4750 / Switch module SFP (mini Gbic), 1000Mbit, SX
128033	ALLNET Switch Modul ALL4750-INDU SFP(Mini-GBIC), 1000Mbit MM
59426	ALLNET ALL4751 / Switch module, GBIC mini module, 1000Mbit,
128034	ALLNET Switch Module ALL4751-INDU SFP(Mini-GBIC), 1000Mbit,
114334	ALLNET Switch Modul ALL4752 SFP(mini Gbic), 1000Mbit, LHX/LC
166757	ALLNET Switch Modul ALL4752-INDU SFP(Mini-GBIC), 1000Mbit, LX/LC, 20KM, Industrial, -40/+85 Grad,
59391	ALLNET ALL4753 / Switch module GBIC Mini module, 1000Mbit, L
59393	ALLNET ALL4755 / Switch module SFP (mini Gbic), 1000Mbit, ZX
136828	ALLNET Switch Module ALL4761 SFP(Mini-GBIC), 1000Mbit
193149	ALLNET Switch Modul ALL4761-INDU SFP(Mini-GBIC), 1000Mbit, WDM(Bidi)/LC, Tx1310nm/Rx1490nm, 9u, 20Km, Industrial -40/+85 Grad,
136829	ALLNET Switch Module ALL4762 SFP(Mini-GBIC), 1000Mbit
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
143548	ALLNET Switch Module ALL4756 SFP(Mini-GBIC), 1000Mbit, ZX/LC
208404	ALLNET Switch Modul ALL4765-INDU SFP(Mini-GBIC), 1000Mbit, RJ45(TP), Industrial -40/+85 Grad,
75932	Patchkabel RJ45 FTP(F/UTP) 0,25m grau, CAT5e, Synergy 21,
75939	Patchkabel RJ45 FTP(F/UTP) 0,5m grau, CAT5e, Synergy 21,
75946	Patchkabel RJ45 FTP(F/UTP) 1,0m grau, CAT5e, Synergy 21,
75959	Patchkabel RJ45 FTP(F/UTP) 2m grau, CAT5e, Synergy 21,
75966	Patchkabel RJ45 FTP(F/UTP) 3m grau, CAT5e, Synergy 21,
75973	Patchkabel RJ45 FTP(F/UTP) 5m grau, CAT5e, Synergy 21,
75979	Patchkabel RJ45 FTP(F/UTP) 7,5m grau, CAT5e, Synergy 21,
75986	Patchkabel RJ45 FTP(F/UTP) 10m grau, CAT5e, Synergy 21,
76091	Patchkabel RJ45, 15m grau, CAT5e, S-FTP(SF/UTP), Synergy 21,
76029	Patchkabel RJ45, 0,25m grau, CAT5e, S-FTP(SF/UTP), Synergy 21,

Part No.	Name
76036	Patchkabel RJ45, 0,5m grau, CAT5e, S-FTP(SF/UTP), Synergy 21,
76043	Patchkabel RJ45, 1,0m grau, CAT5e, S-FTP(SF/UTP), Synergy 21,
76056	Patchkabel RJ45, 2m grau, CAT5e, S-FTP(SF/UTP), Synergy 21,
76063	Patchkabel RJ45, 3m grau, CAT5e, S-FTP(SF/UTP), Synergy 21,
76070	Patchkabel RJ45, 5m grau, CAT5e, S-FTP(SF/UTP), Synergy 21,
76077	Patchkabel RJ45, 7,5m grau, CAT5e, S-FTP(SF/UTP), Synergy 21,
76084	Patchkabel RJ45, 10m grau, CAT5e, S-FTP(SF/UTP), Synergy 21,
76091	Patchkabel RJ45, 15m grau, CAT5e, S-FTP(SF/UTP), Synergy 21,
76117	Patchkabel RJ45, CAT6 250Mhz, 0,25m grau, S-STP(S/FTP), LSZH, Synergy 21,
76124	Patchkabel RJ45, CAT6 250Mhz, 0,5m grau, S-STP(S/FTP), LSZH, Synergy 21,
76133	Patchkabel RJ45, CAT6 250Mhz, 1,0m grau, S-STP(S/FTP), LSZH, Synergy 21,
76151	Patchkabel RJ45, CAT6 250Mhz, 2m grau, S-STP(S/FTP), LSZH, Synergy 21,
76160	Patchkabel RJ45, CAT6 250Mhz, 3m grau, S-STP(S/FTP), LSZH, Synergy 21,
76169	Patchkabel RJ45, CAT6 250Mhz, 5m grau, S-STP(S/FTP), LSZH, Synergy 21,
76178	Patchkabel RJ45, CAT6 250Mhz, 7,5m grau, S-STP(S/FTP), LSZH, Synergy 21,
76187	Patchkabel RJ45, CAT6 250Mhz, 10m grau, S-STP(S/FTP), LSZH, Synergy 21,
76196	Patchkabel RJ45, CAT6 250Mhz, 15m grau, S-STP(S/FTP), LSZH, Synergy 21,
140955	TP(RJ45) POE-Tester, at/af, Endspan/Midspan, standard, Synergy 21,
141255	Netzkabel 230V Schutzkontakt CEE7(Stecker)->Kaltgeräte IEC-C13(Buchse), 1m,Black IEC Lock
141254	Netzkabel 230V Schutzkontakt CEE7(Stecker)->Kaltgeräte IEC-C13(Buchse), 2m,Black IEC Lock
141256	Netzkabel 230V Schutzkontakt CEE7(Stecker)->Kaltgeräte IEC-C13(Buchse), 3m,Black IEC Lock
191685	ALLNET Switch Modul ALL4768 SFP+(Mini-GBIC), 10Gbit Singlemode, ER/LC, bis 40Km
191686	ALLNET Switch Modul ALL4769 SFP+(Mini-GBIC), 10Gbit Singlemode, ZR/LC, bis 80Km
188424	CyberPower USV, OR-Serie, 600VA/360W, Line-Interactive, LCD, 19"/1HE, USB/RS232, IEC C13 Kaltgeräte,
188433	CyberPower USV, OR-Serie, 650VA/360W, Line-Interactive, LCD, 19"/1HE, USB/RS232, CEE7-Schutzkontakt,
188435	CyberPower USV, OR-Serie, 1000VA/600W, Line-Interactive, LCD, 19"/1HE, USB/RS232, IEC C13 Kaltgeräte
188439	CyberPower USV, OR-Serie, 1500VA/900W, Line-Interactive, LCD, 19"/1HE, USB/RS232, IEC C13 Kaltgeräte



Part No.: 223952
Vendor Part No.: ALL-SG8616PMJ-10G

Part No.	Name
175260	GBIC-Mini, SFP+, 10GB, TP(RJ45), 10GBASE-T, kompatibel für Intel, Intel-Code
98686	ALLNET ALL3500 / IP Homeautomation Appliance, 4x Sensor-Port
104126	ALLNET ALL3505 / IP Homeautomation Appliance DIN-Rail 8x I2C
134571	ALLNET ALL3419 / IP Building-Autom. 3x I2C, 1x USB, LAN/WLAN
206211	ALLNET MSR Central "ALL5000v2" incl. 16 Sensor Ports & 19" for IP Building Automation
192187	ALLNET PoE RGBW-Lampe mit 1x MSR Sensorport / LAN / WIFI