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**

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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.
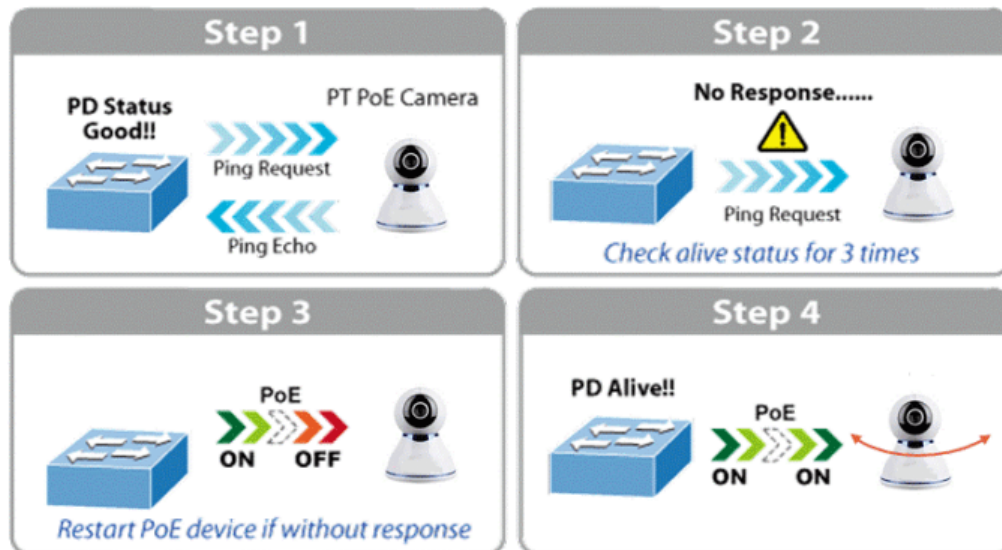
Extensive PoE management function

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
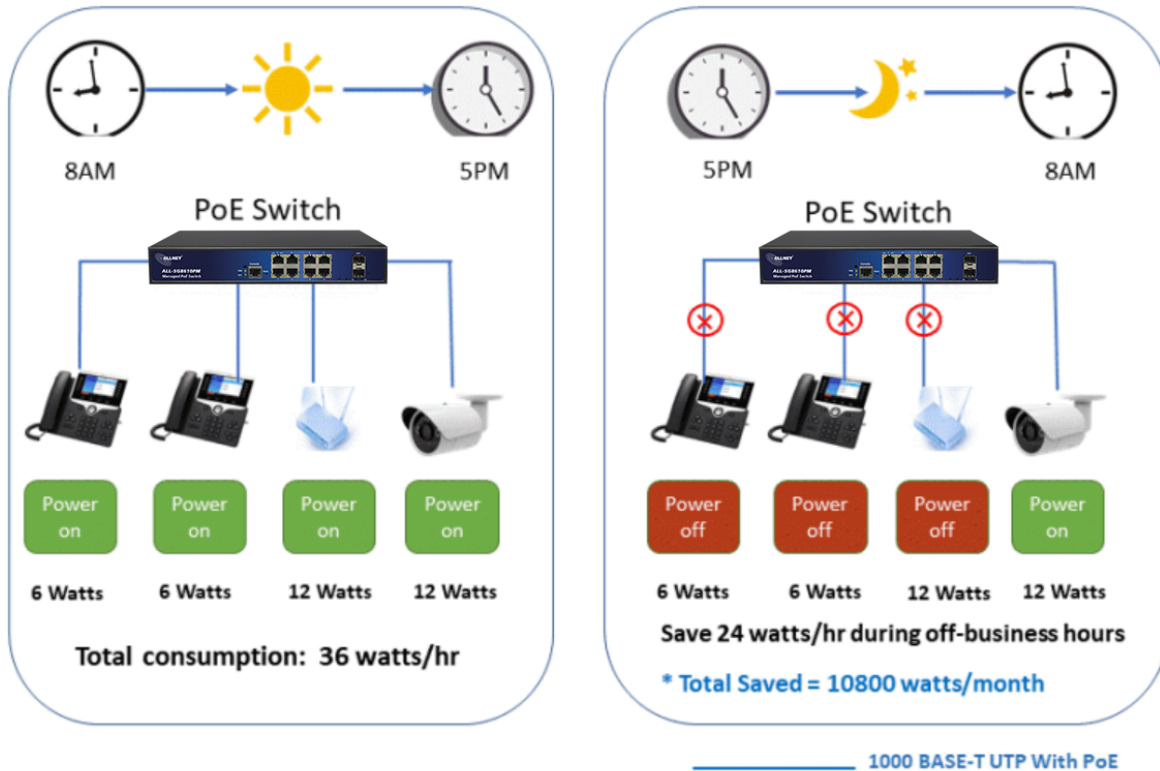- Prioritisation of the PoE port feed-in

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.

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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.

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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.

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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.

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ERPS Ring for Video Transmission Redundancy
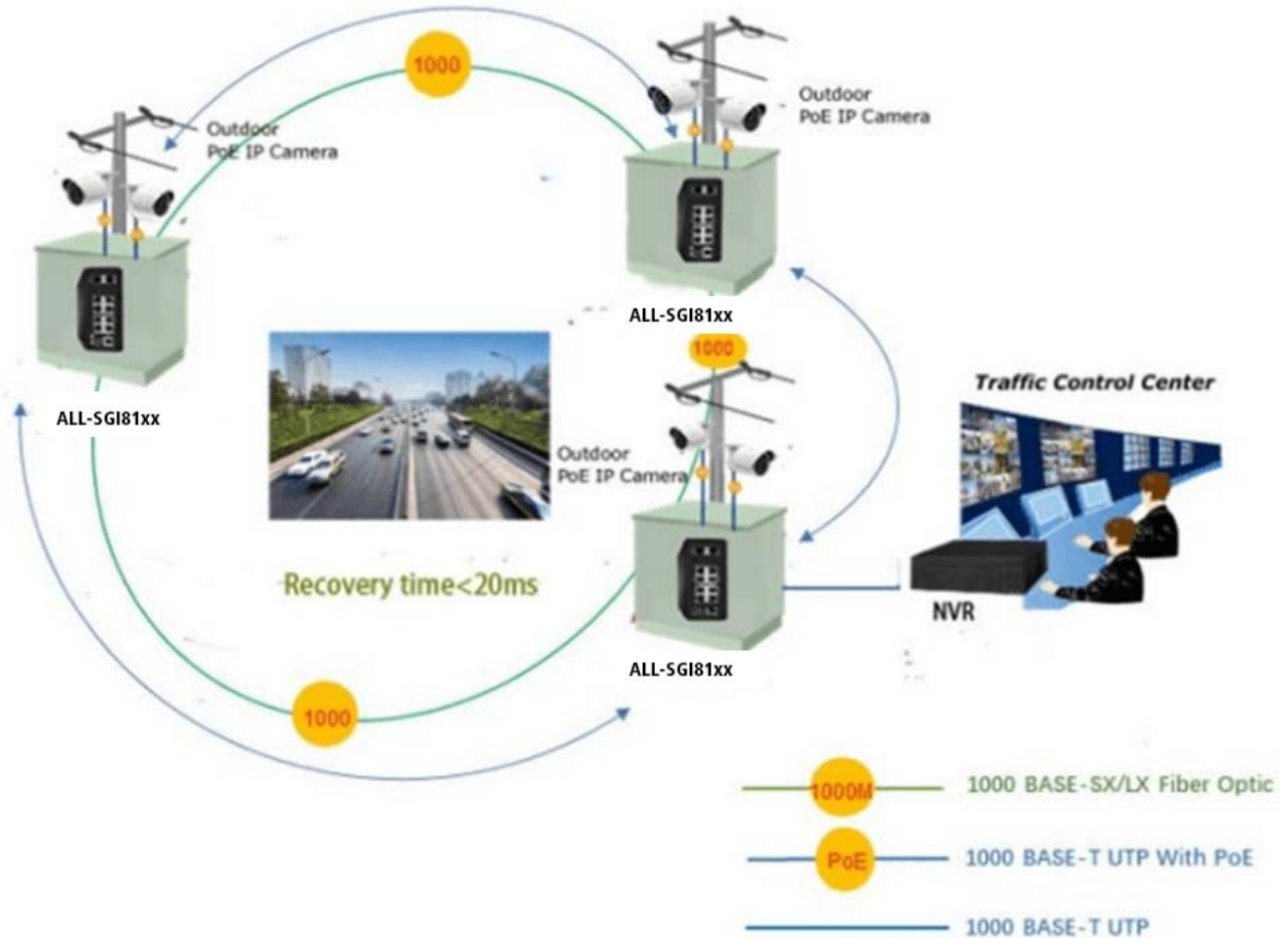
Strong layer 2 functions

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.

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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.
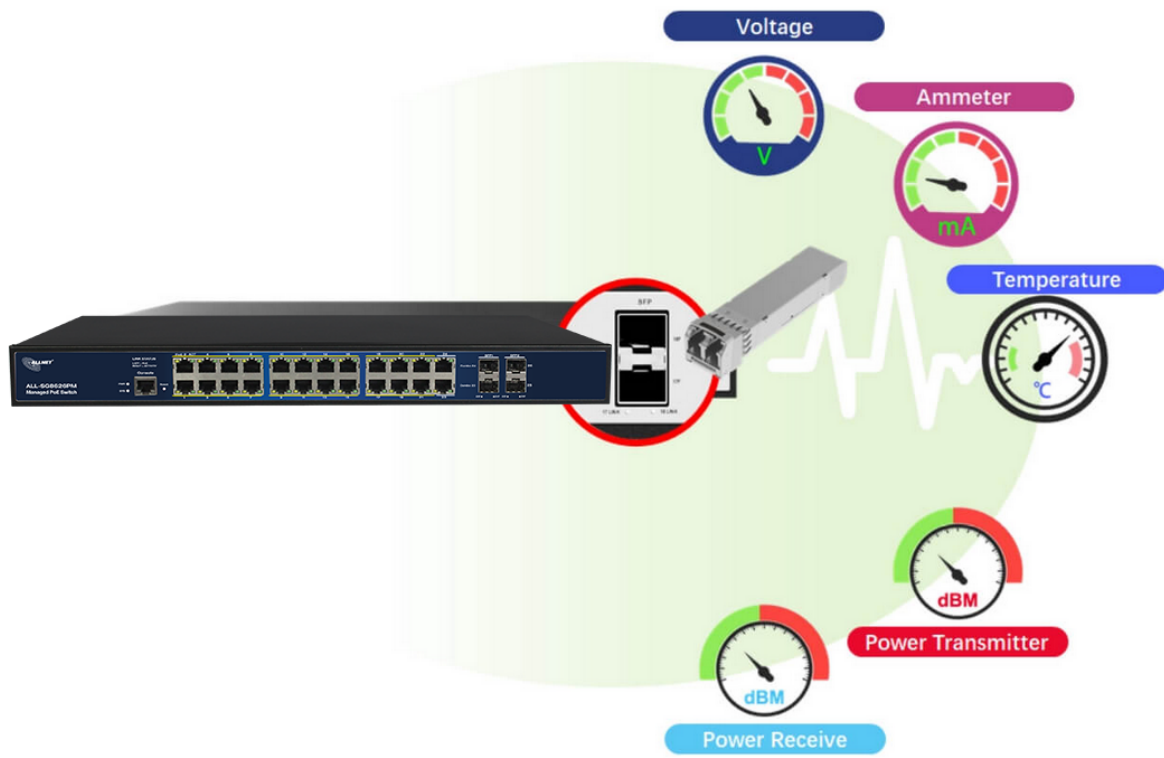
JSON-Java Script Object Notation API

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)

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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-SGI81xx 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)

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 JSONP object

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Technical data:

Model	ALL-SG8612PMJ
Copper Ports	8-10/100/1000BASE-T RJ45 auto-MDI/MDI-X ports
Fibre ports	2x1G 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

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	Solid on- PoE work normally, Off- PoE doesn't work, Blink - PoE overload
	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 10): Green
	Blink - port connected with data transmission; Solid on- port connected without data transmission
EMC	Surge Immunity:
	4KV Per: IEC61000-4-5
	ESD Protection:
	ESD Level 4 Per: IEC61000-4-2
	EFT Level 4 Per: IEC61000-4-4
Layer2 Functions	
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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	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

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	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;

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	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
Other features	DNS Client
	DHCP Relay
	DHCP Client
	DHCP Snooping
	DHCP Option 66
	DHCP Option 67
	DHCP Option 82 NTP/SNTP Client
	UPNP

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	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 neighbour 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
Dimension	222x225x44.5mm

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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:	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

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