

ALLNET Layer2 + Switches

The ALLNET Layer2 + switches provide significantly more functions than traditional Smart Managed switches.

The full-managed 2+ switches provide extended VLAN and management capabilities for a reliable enterprise network infrastructure.

In addition, the PoE functions offer a clear plus of port-specific administration possibilities.



PD Alive function



DHCP Server by VLAN



PoE Power Management



Auto-Variable Speed Fan



JSON 3rd Party PoE ON/OFF



PoE Scheduling



Voice VLAN



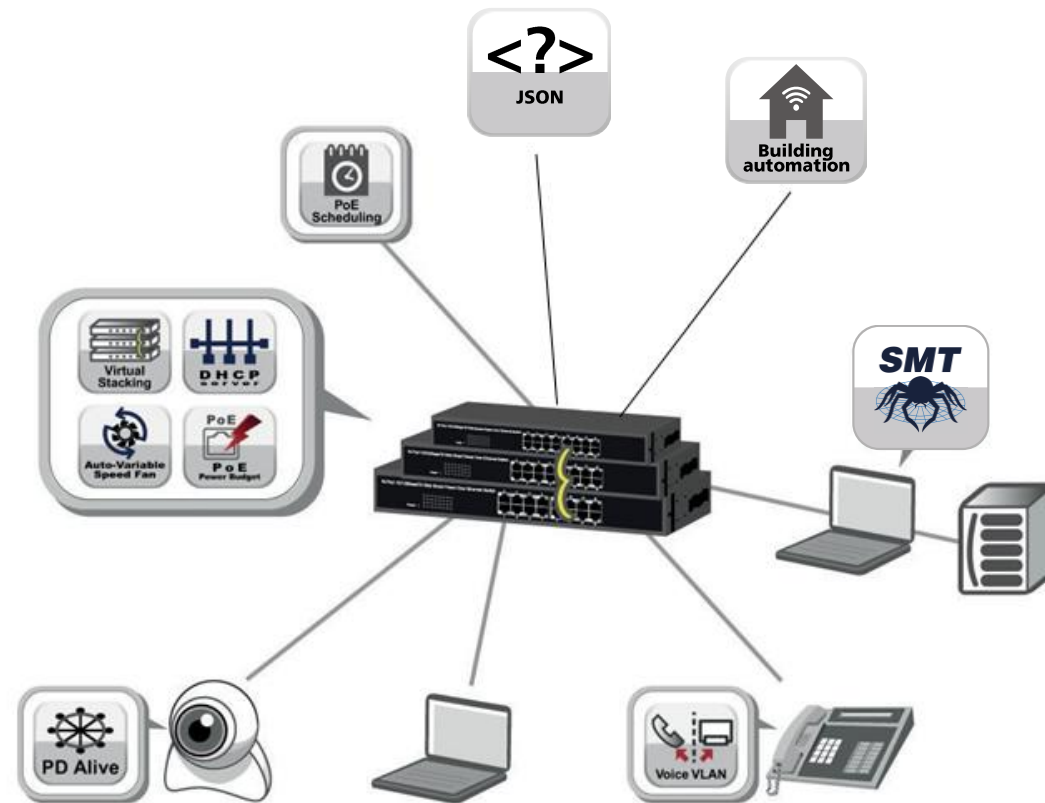
Virtual/Physically Stacking



SMT



Integration in ALLNET
Building-Automation-Hardware





Schedule Scheme Configuration

Name	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Start Time		End Time	
								Hour	Minute	Hour	Minute
Weekdays	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	09	00	18	00
Holidays	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	00	00	23	59
User Defined 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	00	00	23	59
User Defined 2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	00	00	23	59
User Defined 3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	00	00	23	59

Save Reset

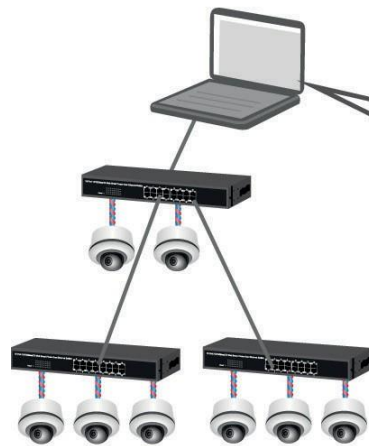
PoE IP CAMs will be powered according to PoE schedule

PoE Scheduling						
Sun	Mon.	Tues.	Weds.	Thurs.	Fri.	Sat.
0:00~23:59	9:00~18:00	9:00~18:00	9:00~18:00	9:00~18:00	9:00~18:00	0:00~23:59

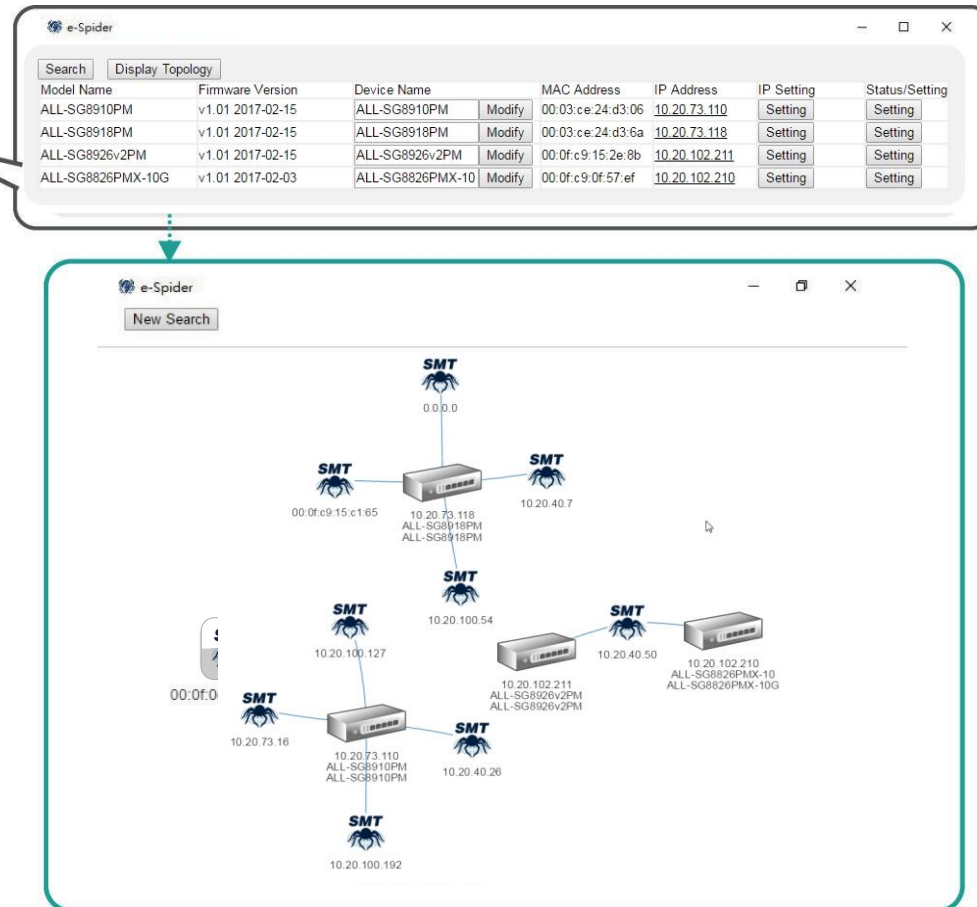
Schedule

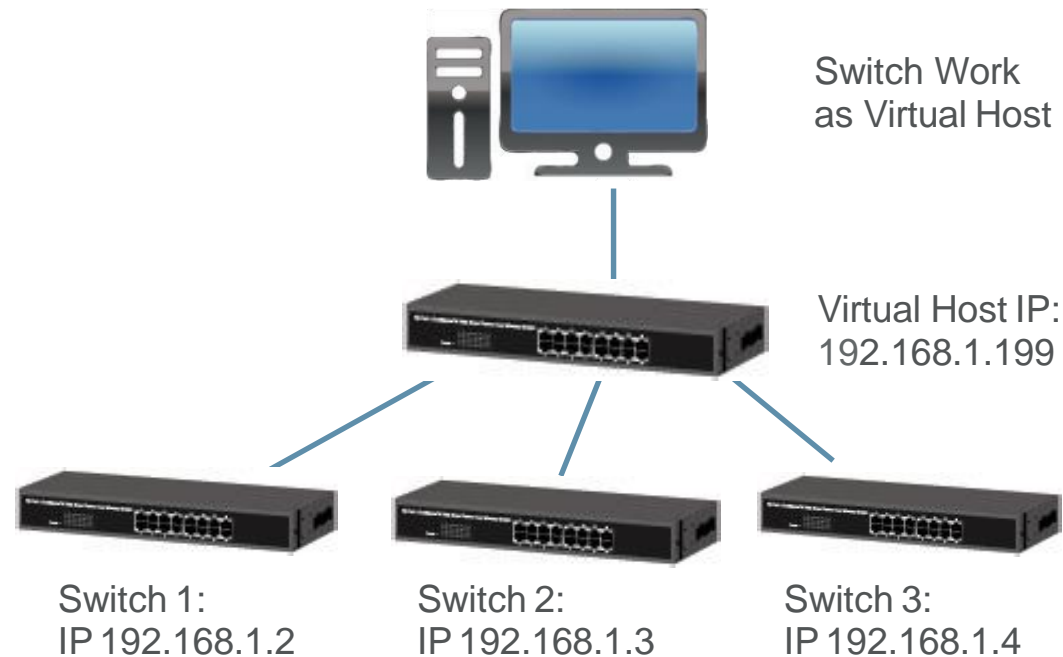
<>
Disable
Disable
Weekdays
Holidays
User Defined 1
User Defined 2
User Defined 3

PoE scheduling function allows you to make a set of general scheduling rules that can be applied to individual port on the PoE switch, allowing the PDs (Powered Devices, such as IP CAM or wireless AP) only to be powered during the set time period.

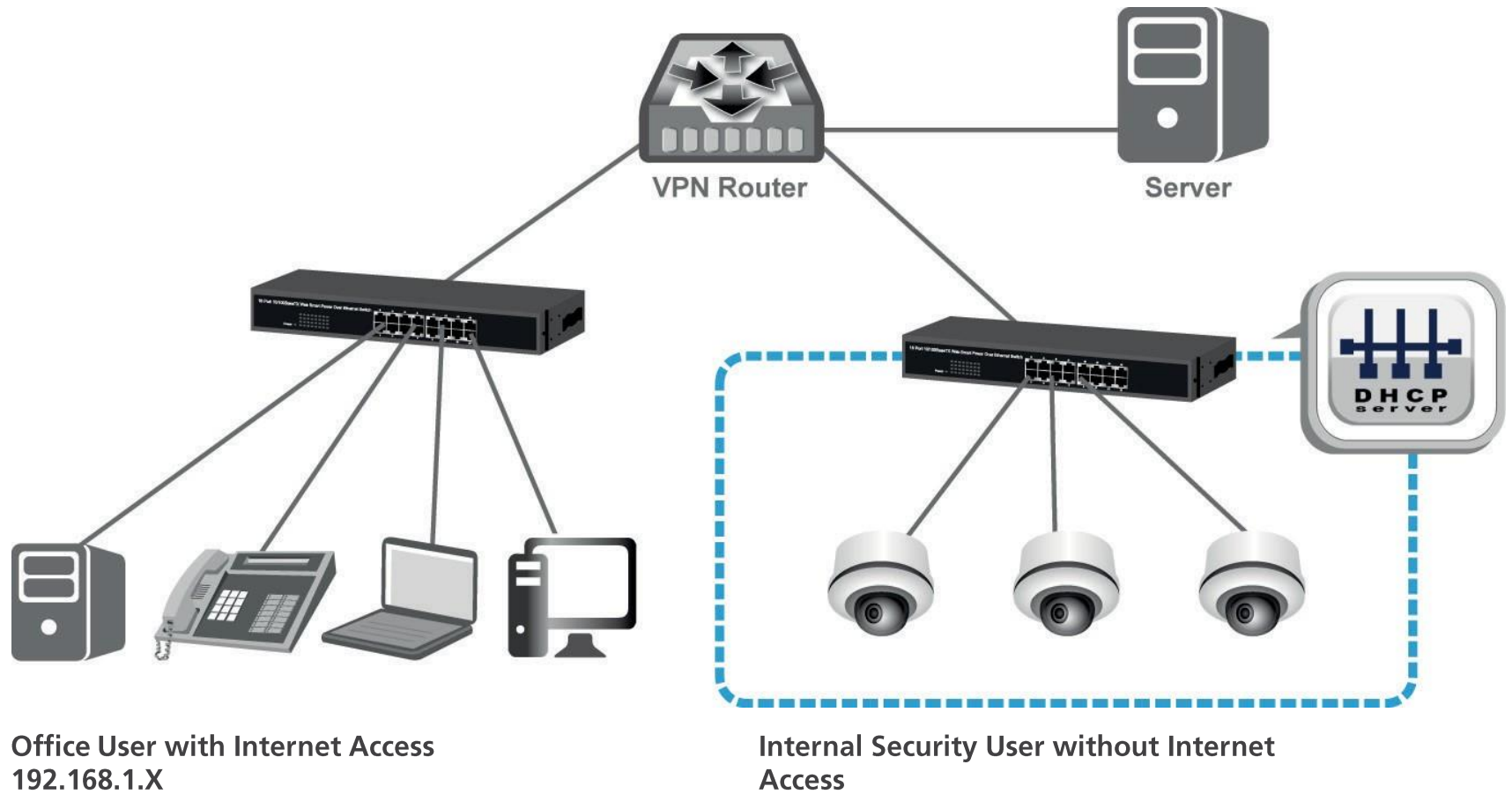


SMT-spider provides advance so- lution for intelligent topology, it can diagnosis the systems status.





With virtual stacking, all the switches in the network can be accessed via a single IP address (the IP address of the virtual host). There's no need to memorize all the switch's IP address, and all switch managements can be centralized, therefore saving time and effort.



Power Over Ethernet Configuration

Reserved Power determined by	<input checked="" type="radio"/> Class	<input type="radio"/> Allocation	<input type="radio"/> LLDP-MED
Power Management Mode	<input checked="" type="radio"/> Actual Consumption	<input type="radio"/> Reserved Power	

PoE power can be reserved by:

- Class
- Allocation
- LLDP-MED

PoE Power Supply Configuration

Primary Power Supply [W]	120
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Power Management Mode:

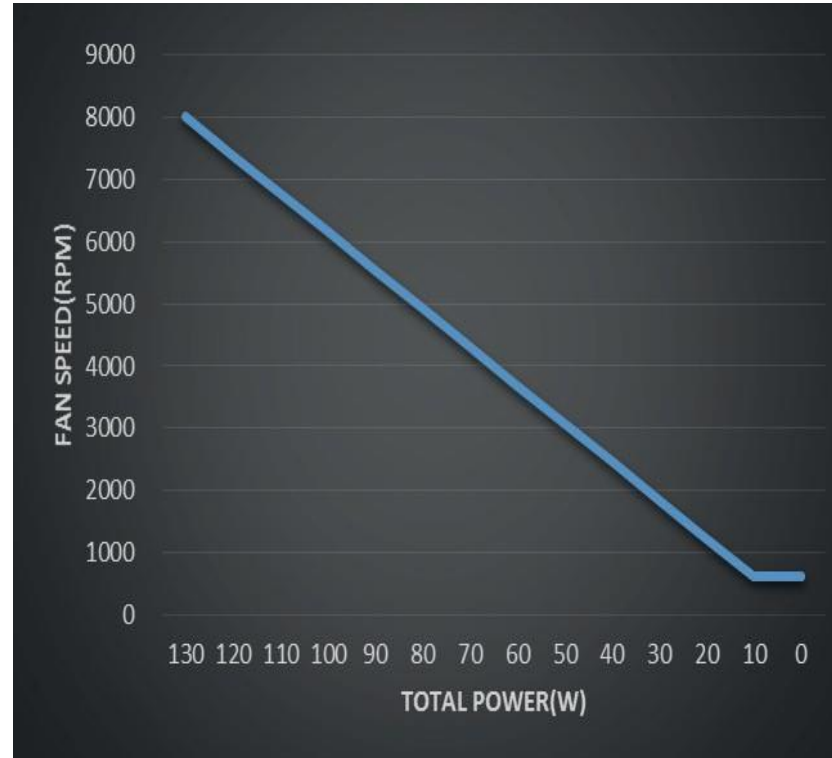
- Actual Consumption
- Reserved Power

PoE Port Configuration

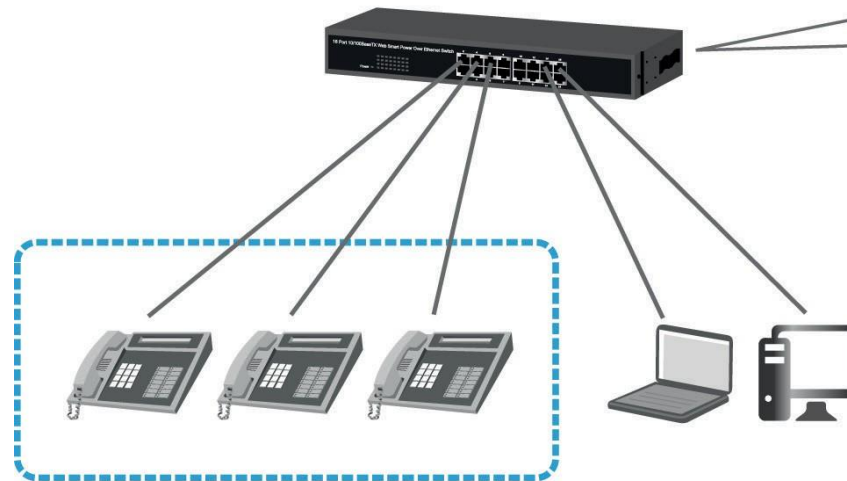
Port	PoE Mode	Priority	Maximum Power [W]	PD Alive Enable	PD IP Address	Interval Time(5~30s)	Retry Count(1~6)	PD Boot Time(10~180s)
*	<> v	<> v	15.4	<> v	0.0.0.0	<> v	<> v	<> v
1	PoE+ v	Low v	15.4	Disable v	0.0.0.0	5 v	2 v	10 v
2	PoE+ v	Low v	15.4	Disable v	0.0.0.0	5 v	2 v	10 v
3	PoE+ v	Low v	15.4	Disable v	0.0.0.0	5 v	2 v	10 v
4	PoE+ v	Low v	15.4	Disable v	0.0.0.0	5 v	2 v	10 v
5	PoE+ v	Low v	15.4	Disable v	0.0.0.0	5 v	1 v	10 v
6	PoE+ v	Low v	15.4	Disable v	0.0.0.0	5 v	2 v	10 v
7	PoE+ v	Low v	15.4	Disable v	0.0.0.0	5 v	2 v	10 v
8	PoE+ v	Low v	15.4	Disable v	0.0.0.0	5 v	2 v	10 v

Save Reset

Auto-Variable Speed Fan



The lower total power consumption, the slower fan speed spinning , keeping the environment quiet.



IP Phones are separated from other network devices via voice VLAN, thus have the top priority when transmitting VoIP data-stream and ensure the quality of the phone communication.

Voice VLAN Configuration

Mode	Disabled
VLAN ID	1000
Aging Time	86400 seconds
Traffic Class	7 (High)

Port Configuration

Port	Mode	Security	Discovery Protocol
*	<>	<>	<>
1	Disabled	Disabled	OUI
2	Disabled	Disabled	OUI
3	Disabled	Disabled	OUI
4	Disabled	Disabled	OUI
5	Disabled	Disabled	OUI
6	Disabled	Disabled	OUI
7	Disabled	Disabled	OUI
8	Disabled	Disabled	OUI
9	Disabled	Disabled	OUI
10	Disabled	Disabled	OUI

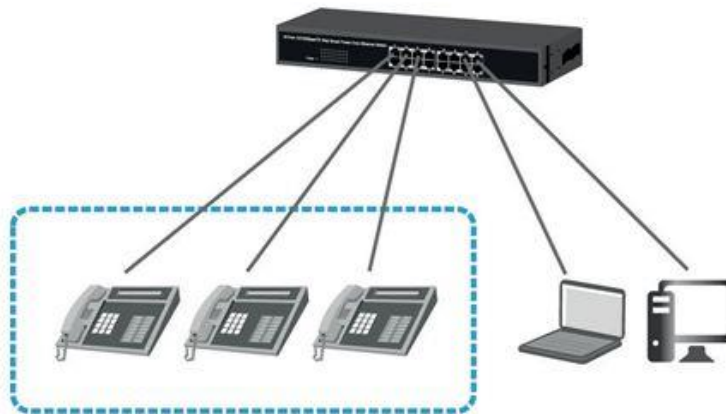
Save Reset

Voice VLAN OUI Table

Delete	Telephony OUI	Description
<input type="checkbox"/>	00-01-e3	Siemens AG phones
<input type="checkbox"/>	00-03-6b	Cisco phones
<input type="checkbox"/>	00-0f-e2	H3C phones
<input type="checkbox"/>	00-60-b9	Philips and NEC AG phones
<input type="checkbox"/>	00-d0-1e	Pingtel phones
<input type="checkbox"/>	00-e0-75	Polycom phones
<input type="checkbox"/>	00-e0-bb	3Com phones

Add New Entry

Save Reset

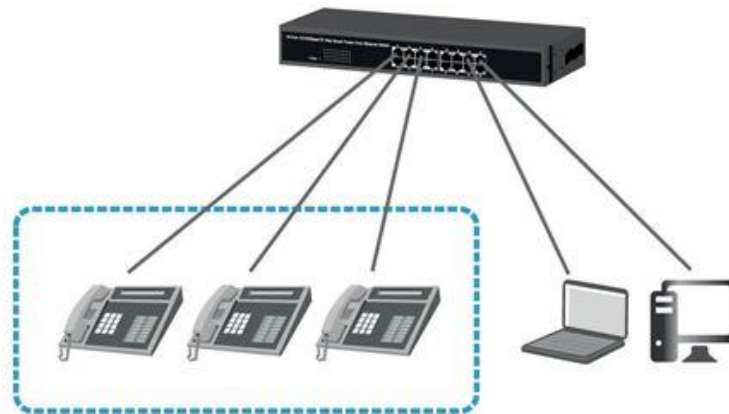


The JSON 3rd Party API supports to turn ON/OFF the PoE ports from external Software / APP / etc. The programmer can create his own software and right to turn only the PoE Ports ON/OFF by HTTP or HTTPS.

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



id	
Command (URL)	<code>http://192.168.0.100/xml/jsonswitch.php?id=2</code>
Explanation	here is determined with which actuator to be switched. Is the parameter „set“ not set the device returns only the status (0/1).
Response	<pre>{ "result": { "id": "2", "status": 0 } }</pre>
set	
Command (URL)	<code>http://192.168.0.100/xml/jsonswitch.php?id=2&set=1</code>
Explanation	(optional) with this parameter, the on / off switching command is set. It returns always the status before switching and the command themselves.
Response	<pre>{ "result": { "id": "2", "status": 0, "set": "1" } }</pre>
callback	
Command (URL)	<code>http://192.168.0.100/xml?id=2&set=0&callback=demo</code>
Explanation	(optional) can be set to get back the data as a JSONP object.
Response	<pre>demo({ "result": { "id": "2", "status": 1, "set": "0" } })</pre>



Integration of the ALLNET MSR control panels, which can switch the PoE ports ON / OFF depending on sensors or time control. Possible extensions for alerting / initiating the PoE port could include, movement, inputs, outputs, counting pulses, current measurement, shock, temperature, humidity, magnetic contacts, etc.






ALLNET Building Automation

[Link to Building Automation](#)



L2+ Full Management Gigabit PoE Switches



Part No.	Model No.	Ports	PoE Port	SFP	PoE Budget	Product Photo
122261	ALL-SG8950PM	50	48 PSE	2 * 10G SFP+	430 Watt	
112082	ALL-SG8826PMX (Stackable)	28	24 PSE	2 * 10G SFP+ 2 * 10G SFP+	430 Watt	
137465	ALL-SG8926v2PM	28	24 PSE	2 SFP/RJ45 Combo	430 Watt	
137467	ALL-SG8918PM	18	16 PSE	2 SFP/RJ45 Combo	300 Watt	
137466	ALL-SG8910PM	10	8 PSE	2 SFP/RJ45 Combo	240 Watt	

10 Gigabit SFP Uplinks with 10/100/1000 Ethernet

Cisco		ALLNET
Catalyst 2960S-48FPD-L		ALL-SG8950PM
Catalyst 2960S-48LPD-L		ALL-SG8950PM
Catalyst 2960S-24PD-L	=	ALL-SG8826PMX
Catalyst 2960S-48TD-L		ALL-SG8950M
Catalyst 2960S-24TD-L		ALL-SG8826MX

1 Gigabit SFP Uplinks with 10/100/100 Ethernet

Cisco / HP		ALLNET
Catalyst 2960S-48FPS-L		ALL-SG8950PM
Catalyst 2960S-48LPS-L		ALL-SG8950PM
Catalyst 2960S-24PS-L		ALL-SG8926PM
HP 2560 Series 48 Port PoE	=	ALL-SG8950PM
HP 2560 Series 48 Port		ALL-SG8950PM

		L2+ Full Management (Intelligent) PoE Switch	Web Smart PoE Switch
Hardware	Standard	IEEE 802.3 - 10BaseT	IEEE 802.3 - 10BaseT
		IEEE 802.3u - 100BaseTX	IEEE 802.3u - 100BaseTX
		IEEE 802.ab - 1000BaseT	IEEE 802.ab - 1000BaseT
		IEEE 802.3z - 1000BaseSX/LX	IEEE 802.3z - 1000BaseSX/LX
		IEEE 802.3af - PoE (Power Over Ethernet)	IEEE 802.3af - PoE (Power Over Ethernet)
		IEEE 802.3at - PoE+	IEEE 802.3at - PoE+
		IEEE 802.3az – EEE (Energy-Efficient Ethernet)	IEEE 802.3x - Full-duplex and Flow Control
		IEEE 802.3x - Full-duplex and Flow Control	IEEE 802.1x - Port-based Network Access Control
		IEEE 802.1x - Port-based Network Access Control	IEEE 802.1Q - VLAN
		IEEE 802.1Q – VLAN	IEEE 802.1p - Class of Service
		IEEE802.1v - Protocol VLAN	IEEE 802.1D - Spanning Tree
		IEEE 802.1p - Class of Service	IEEE 802.1w - Rapid Spanning Tree
		IEEE 802.1d - Spanning Tree Protocol	IEEE 802.3ad - Link Aggregation Control Protocol (LACP)
		IEEE 802.1w - Rapid Spanning Tree Protocol	
		IEEE 802.1s - Multiple Spanning Tree	
		IEEE 802.3ad - Link Aggregation Control Protocol (LACP)	
		IEEE 802.1AB - LLDP (Link Layer Discovery Protocol)	
	Ports	10/100/1000 Base RJ45 Port × 8/16/24/48	10/100/1000 Base RJ45 Port × 8/16/24
		Individual 100/1000 Base-X Combo RJ45/ SFP Port × 2	1000M Combo RJ45/SFP Port × 2/4
	RJ45 Ports	Auto-negotiation, Auto MDI/MDIX	
	MAC Address	8K	8K
	Jumbo Frame	9K	9.6K
	Buffer Memory	4Mb	500K
	Dimension	440 × 331 × 44 mm (L × W × H)	440 × 220 × 44 mm (L × W × H)
	Weight	4.7 KG	4.7 KG
	Operating Temperature	0 to 45°C	
	Storage Temperature	-20 to 90°C	
	Humidity	10 to 90% RH (non-condensing)	
	Certification	CE, FCC Class A	

Comparison Layer 2+ „Full-Managed vs. Layer 2 „Smart-Managed“

Layer 2 Features	PoE Management	Enable/Disable per-port	Enable/Disable per-port
		PoE Status	PoE Status
		Priority Setting per-port	
		Maximum Power per-port/system	
		PoE Mode Setting per-port	
		PD Classification,	
		PD Alive	
		PoE Scheduling	
	Spanning Tree	IEEE 802.1D - Spanning Tree	IEEE 802.1D - Spanning Tree
		IEEE 802.1w - Rapid Spanning Tree	IEEE 802.1w - Rapid Spanning Tree
		IEEE 802.1s - Multiple Spanning Tree	
	Flow Control	802.3x (Full-duplex) / Back-Pressure (Half-duplex)	
	VLAN	Ø VLAN Group: 4K	Ø VLAN Group: 24
		Ø Tagged VLAN : 4K	Ø Tagged VLAN: 24
		Ø QinQ	Ø VLAN ID: 1~ 4094
		Ø Port-Based VLAN	
		Ø MAC-Based VLAN	
		Ø Protocol-Based VLAN	
		Ø Voice VLAN	
		Ø Private VLAN	
		Ø MVR	
	Link Aggregation	IEEE 802.3ad - Link Aggregation Control Protocol (LACP)	Static Trunk & IEEE 802.3ad with LACP
		Max. Group: 13	
		Max. Ports/Group: 16	

Comparison Layer 2+ „Full-Managed vs. Layer 2 „Smart-Managed“



Layer 2 Feature		Ø IGMP Snooping v1/v2/v3	Ø IGMP Snooping v1/v2
(contd.)	IGMP Snooping	Ø IPv6 MLD Snooping v1/v2	Ø Querier support/ IGMP Filtering, IGMP Leave Proxy, Immediate Leave
		Ø Querier support/ IGMP Filtering, IGMP Leave Proxy, Immediate Leave	
	Storm Control	Broadcast / Multi-cast / Un-known Unicast	Broadcast / Multi-cast / Un-known Unicast
		Ø Number of Priority queue: 8 queues/ port	Ø Number of Priority queue: 4 queues/ port
		Ø Scheduling for priority queue: WRR/Strict Priority scheduling/Hybrid	Ø Scheduling for priority queue: WRR/Strict Priority scheduling
		Ø CoS:	Ø CoS:
		Ø 02.1p/ IP Precedence/ IP TOS Precedence	Ø 02.1p/ IP Precedence/ IP TOS Precedence
		Ø IP DSCP/ Port based Priority	Ø IP DSCP/ Port based Priority
		Ø Rate Limiting: Ingress/Egress: 1Kbps/ 1pps granularity	Ø Rate Limiting: Ingress/Egress: 1Kbps/ 1pps granularity
		Ø DiffServ (RFC2474) remarking	
	IPv4/IPv6	Supports IPv4/IPv6 Protocol	
Lite Layer 3 Feature	DHCP Server	Support DHCP server	No
	Static Routing	Supports Static Routing 64	No
Management	Management Interface	Web Based Management	Web Based Management
		Command Line Interface (CLI)	
		Telnet	
	SNMP	Support v1, v2c, v3	Supports v1, v2c
	RMON	RMON (1,2,3, & 9 groups)	N/A
	NTP/LLDP	Supports NTP/LLDP	N/A
	UPnP	Supports UPnP	N/A
	Remote Ping	Supports Remote Ping	N/A
	DHCP	Client/ Relay/ Option82/ Snooping	Client
	Port Mirroring	One to One/ Many to One	One to One/ Many to One
	e-Spider	Support e-Spider and network topology	Support e-Spider, no network topology

ALLNET brings the world of IT, building automation and video surveillance with the combined automation solution together. This happens by the use of the new ALLNET Layer 2+ switches which have additional management functions that allow them to work together with the ALLNET control centers. In the web interface of the control center you are now able to integrate the ports of the Layer2+ switches which means that you can not only access your building automation products, like sensors and actors but also your IT network. Furthermore it's now possible to create generic events with a video surveillance software.

Klick



Thank you!

Gerhard Zerwes
Head of ALLNET Brand Q2/2017