SNMP / BACnet IP communication

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> Mechanical characteristics

Boxes	Size W x H x D (mm)	Available customer space (minimum) W x H x D (mm)	Weight (kg)	Materials	Protection rating	CdA	Installation
High Box	300 x 400 x 150*	110 x 160 x 115 130 x 160 x 115	6.6	Poly-carbonate	IP65 / IK10	0.132	Wall or post mounted

* H with cable glands: + 35 mm / D with locks: + 20 mm

Connections

Mains	3 (2+PE) Screw terminals on the lighting arrester (230 V AC power supply)
PoE ports	8 RJ45 ports	Ethernet cable Category 5e or more (PoE/PoE+)/ Category 6a or more (HiPoE) shielded, straight or twisted cables
SFP ports	2 SFP ports	SFP module 1000 Mbps transceiver
Digital Input/ Dry Contact	Screw terminal with plug-in connector with polarizing slot

Cable feedthrough via 8 watertight cable glands (PSG22)

> PoE

PoE/PoE+/HiPoE Ports	4 ports, support PoE Power Pin Type: End-span (Mode A) IEEE 802.3af/at/bt - 15 W / 30 W / 60 W / 90 W per port
PoE/PoE+ Ports	4 ports, support PoE Power Pin Type: End-span (Mode A) IEEE 802.3af/at - 15 W / 30 W per port
Power	Per port PoE function configuration
PoE Budget	180 W

> Communication

Communication speed	PoE ports	10 / 100 / 1000 Mbps
	SFP ports	100 / 1000 Mbps
Application layer protocols	HTTPS, BACnet IP, SNMP (v1, v2c, v3), DHCP	
Network layer protocols	IPv4, ICMP	

> Switch properties

Priority Queues	8
Max. Number of VLANs	4094
VLAN ID Range	VID 1 to 4094
IGMP Groups	1024
MAC Table Size	Up to 8K MAC addresses
Jumbo Frame Size	9.6 KB

Performance

Capacity of the forwarding rate in Millions of Packets per Second (Mpps) (64-byte packets)	14.88 Mpps
Switching Capacity in Gigabits per Second (Gbps)	20 Gbps

Get more information on www.slat.com

> Switching characteristics	
Layer 2 Switching	
Spanning Tree Protocol (STP)	Standard Spanning Tree (STP) IEEE 802.1D
	Rapid Spanning Tree (RSTP) IEEE 802.1w
Aggregation	Link Aggregation Control Protocol (LACP) IEEE 802.3ad; Up to 5 groups, up to 8 ports per group
VLAN	Supports up to 4K VLANs simultaneously (out of 4094 VLAN IDs); Port-based VLAN; 802.1Q tag-based VLAN
IGMP v1/v2 Snooping	IGMP limits bandwidth-intensive multicast traffic to only the requesters; it supports 1024 multicast groups (source-specific multicasting is also supported)
Security	
Secure Sockets Layer (SSL), HTTPS	SSL encrypts the http traffic, allowing advance secure access to the browser-based management GUI in the switch
Port Sicherheit	Locks MAC Addresses to ports, and limits the number of learned MAC addresses
IP Source Guard	Prevents datagram with spoofed addresses from being in the network
Storm control	Prevents traffic on a LAN from being disrupted by a broadcast, multicast or unicast storm on a port
ACLs	Supports for up to 256 entries; Drop or rate limitation based on source and destination MAC, VLAN ID or IP address, protocol, port, differentiated services code point (DSCP) / IP precedence, TCP/ UDP source and destination ports, 802.1p priority, Ethernet type, Internet Control Message Protocol (ICMP) packets, IGMP packets, TCP flag
Quality of Service	
Hardware Priority Queue	Supports 8 hardware queues
Scheduling	Strict priority and weighted round-robin (WRR)
	Queue assignment based on DSCP and class of service (802.1p/ CoS)
Classification	Port based; 802.1p VLAN priority based; IPv4 precedence/ type of service (ToS) / DSCP based
Rate Limiting	Ingress policer; egress shaping and rate control; per VLAN, per port and flow based
Management (Web/SSL, SNMP, BACnet)	
Web GUI interface	Built-in switch configuration utility for browser-based device configuration (HTTPS). Supports configuration, system dashboard, maintenance and monitoring.
Firmware upgrade	Web browser upgrade (HTTPS)
Port mirroring	Traffic on a port can be mirrored to another port for analysis with a network analyzer or RMON probe. Up to N-1 (N is Switch's Ports) ports can be mirrored to a single destination port. A single session is supported.
Other management	Single IP management; HTTPS; RADIUS; DHCP Client; SNTP; cable diagnostics
Green Ethernet	
Link detection	Compliant IEEE802.3az Energy Efficient Ethernet Task Force. Automatically turns off power on Gigabit Ethernet RJ45 port when detecting link down or Idle of client. Active mode is resumed without loss of any packets when the switch detects the link up.
Cable length detection	Adjusts the signal strength based on the cable length. Reduces the power consumption for shorter cables.
Eco Mode	Shifts automatically to power-saving mode.
Discovery	
Link Layer Discovery Protocol (LLDP)	Used by network devices for advertising their identities, capabilities and neighbors on a IEEE 802 local area network, principally wired Ethernet.
The configuration of the switch functions is done via the embedded website.	

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> Signaling
1 LED for the "PoE Load" level on the front panel
1 LED for the product "Status" on the front panel
8 LEDs indicate the PoE activity on the corresponding port (green)
8 LEDs indicate the data transmission activity on the corresponding port (yellow)

> Environmental specifications	
Temperature	
Storage	-20°C à +45°C
Operating	at 100% load: -10°C … +45°C
	at 50% load: -10°C … +50°C
Humidity	
0 to 100 % condensing	
Altitude	
Above 2,000 m, the temperature decreases by 5% every 1,000 m.	
Service life	
10 years at 25°C product external environment, rated mains voltage, 75% load	

> Electrical characteristics	
Network Input	
AC network voltage	198 to 264 V AC
Frequency	45 to 65 Hz
Class	1
Inrush current	Limited by NTC
Neutral system	TT, TN, IT
Protection against	primary short-circuit and differential mode shock waves
Primary current @ 198 V	1.85 A
Primary current @ 264 V	1.70 A
Lightning arrestor	Type 2 / 10 kA
Functional characteristics	
Operates in power-saving mode when the backup is charged.	
On/Off function per PoE port.	
Filters disturbances of the electrical network.	
Fan-cooling.	
Configurable reboot function (stop and restart automatically) on each PoE-port.	
Indicates the % of the remaining autonomy.	
Protections	
Against atmospheric or industrial overvoltage on primary (10 kA lightning arrester).	
Against overload by power limitation to P_n +10%.	
Against overcurrent and short-circuits on the output by disconnecting the PoE port at I > I_n + 10%.	
Smart backup	
SYNAPS-PoE 8 is available with the backup pack	5F
Latest generation Lithium LiFePO4 Technology (no risk of thermal runaway).	
Lead-free, cadmium-free, 100% recyclable.	
Storage: 9 months without recharging.	
10 year service life.	
Advanced management settings, cell balancing, overload and overvoltage protection.	
A built-in push button disconnects the backup via a static switch. The battery is automatically reconnected when mains voltage is restored	

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Backup duration according to output power	
	Backup F
Operating power	Autonomy expressed in hours and minutes
10 W	2h07
20 W	1h29
30 W	1h09
40 W	0h55
50 W	0h46
60 W	0h40
70 W	0h35
80 W	0h31
90 W	0h28
100 W	0h25
110 W	0h23
120 W	0h21
130 W	0h20
140 W	0h18
150 W	0h17
160 W	0h16
170 W	0h15
180 W	0h14

> Standards

IEEE Standards

IEEE 802.1D	Standard Spanning Tree
IEEE 802.1w	Rapid Spanning Tree (RSTP)
IEEE 802.1Q	VLAN
IEEE 802.1X	Radius
IEEE 802.3ad	Link Aggregation Control Protocol (LACP)
IEEE 802.3i	10BaseT
IEEE 802.3u	100BaseT(X) and 100BaseFX
IEEE 802.3ab	1000BaseT(X)
IEEE 802.3z	1000BaseX
IEEE 802.3x	Flow Control
IEEE 802.3af	PoE
IEEE 802.3at	PoE+
IEEE 802.3bt	HiPoE (type 3 & 4)
IEEE 802.3az	Energy Efficient Ethernet

Electrical standards

Safety	EN 62368-1 (2020) + A11 (2020)
EMC - Immunity	EN 61000-6-1 (2007), EN 61000-6-2 (2019)
EMC - Emissions	EN 61000-6-3 (2007), EN 61000-6-4 (2019)
	EN 61000-3-2 (2019) (class A)
	EN 55032 (2015) (class B)

CE · RoHS 3 2015/865

Security standards

Transportation security	UN 38.3

> Accessories and options	> Accessories and options
Wall mounting kit	Converter: input IEEE 802.3af/at PoE to 12 or 24 V DC PoE
Cable protection kit	Surge protector for PoE/PoE+/HiPoE ports
Pole mounting kit	Coaxial extension kit for Ethernet / PoE network
Housing opening contact kit	Splice cassette

*SLAT reserves the right to modify the characteristics of its products without prior notice.

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