

Power over Ethernet

Powering Next Generation Network Solutions



VOLKTEK

PRODUCT FEATURES & BENEFITS

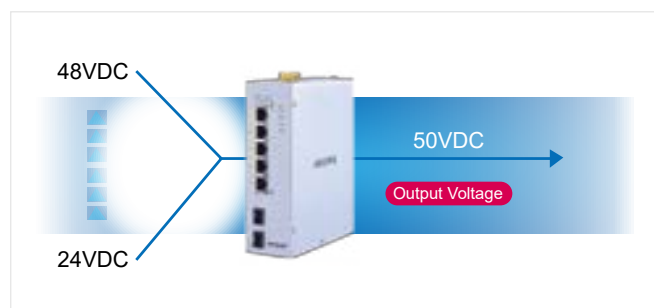


Robust Switch Performance

Built with field-hardened components, Volktek PoE Ethernet switches can withstand harsh environments such as constant vibration, heavy shocks, humidity and extreme temperatures ranging from -40°C to 75°C . These switches provide protection against surge, ESD, reverse polarity, and short circuit to deliver non-stop PoE power to various power devices.

Efficient Power Booster Technology

The dual power input and wide voltage input range of the Volktek Switch make it ideal for factory automation applications. With a voltage input range of 24~57VDC and the ability to boost power up to 50VDC for connected devices, the switch can support a wide range of power environments. Its advanced features ensure reliable and efficient network performance, making it an excellent choice for industrial networks that require scalability and flexibility.



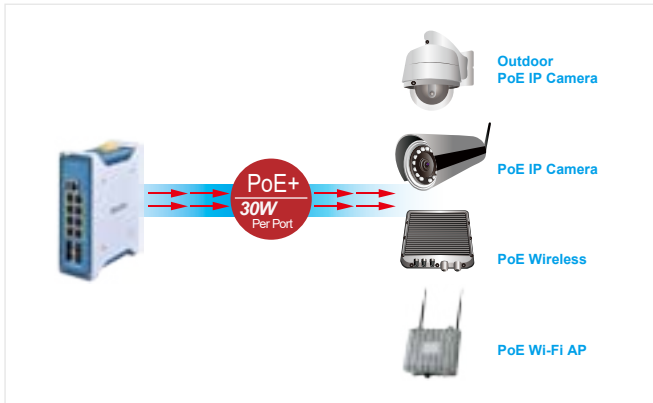
Supported IP-CAM Solutions

The Volktek PoE Switch is an advanced networking solution that supports ONVIF and can automatically discover ONVIF-aware IPcam devices, simplifying integration into surveillance applications. The switch can also add the devices to a topology map for easy visual management, with icons indicating their status in red, yellow, or green. With these advanced features, the switch provides a reliable and convenient solution for modern IP surveillance networks, ensuring scalability and efficiency.

Hardened Power Connector with User Friendly Design

The Volktek 4-Port PoE Switch is designed for modern surveillance networks, featuring a Mini-DIN connector for reliable power delivery to IP cameras and other devices. Its ability to support different power consumption levels minimizes disruptions, and the included adapter holder simplifies installation on a Din-Rail. With up to 4 PoE ports, advanced QoS capabilities, and redundant power supplies, the switch ensures optimal network performance. Ideal for industrial and rugged environments, the switch offers reliability, efficiency, and convenience for modern IP surveillance networks.



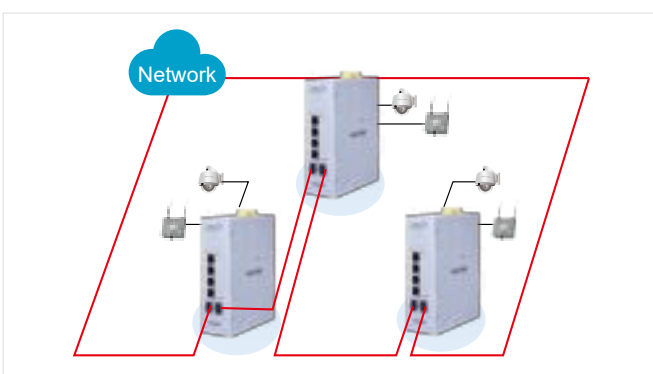
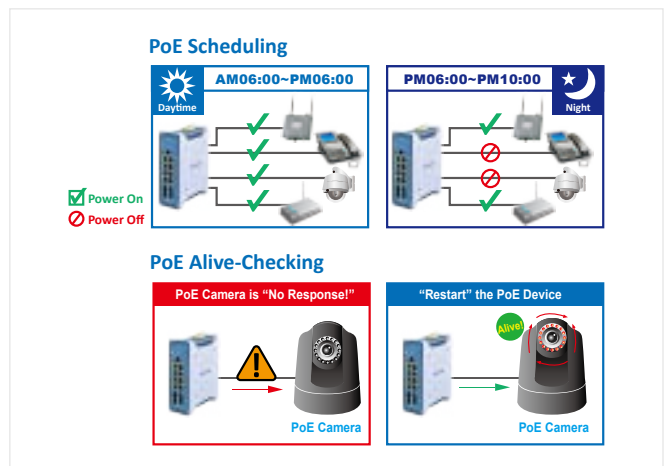


High-Power Budget for PoE Network Devices

Designed with IEEE 802.3af/at standards capable of delivering up to 30W of power per port over the existing Ethernet cable, Volktek PoE switches provide power to connected devices without the need of an external power source. The PoE switches allow simple plug-and-play installation of various PoE devices.

Intelligent PoE+ for Powered Devices

Elevate your power management experience with Volktek Managed PoE Switches. Boasting advanced features such as PoE scheduling for energy conservation, power feeding priority for critical devices, PD alive check for device health monitoring, per-port power budget control for tailored planning, and remote power on/off capabilities, Volktek Managed PoE Switches provide unparalleled efficiency and flexibility to enhance your life quality.

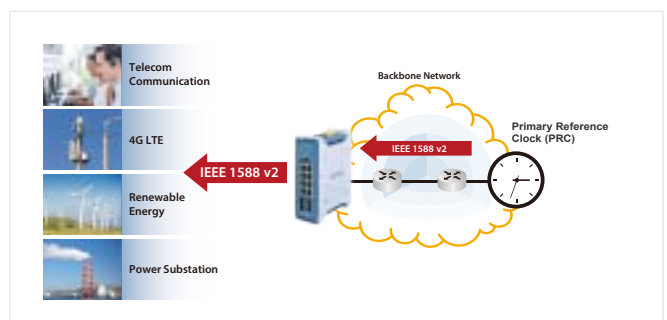


Redundant and Resilient Surveillance Network

Most Volktek PoE products are equipped with dual Gigabit SFP ports and various network redundancy protocols such as Volktek proprietary Xpress Ring, STP/RSTP/MSTP, Dual Homing, and Ethernet Ring Protection Switching (ERPS) to ensure network reliability.

IEEE 1588v2 PTP for Time Synchronization

Volktek PoE Ethernet switches support leading-edge IEEE 1588 v2 PTP time synchronization. This function enables the establishment of a stable and organized end-to-end connection between the switch in the outdoor cabinet and the regulatory core network.



Railways Solution



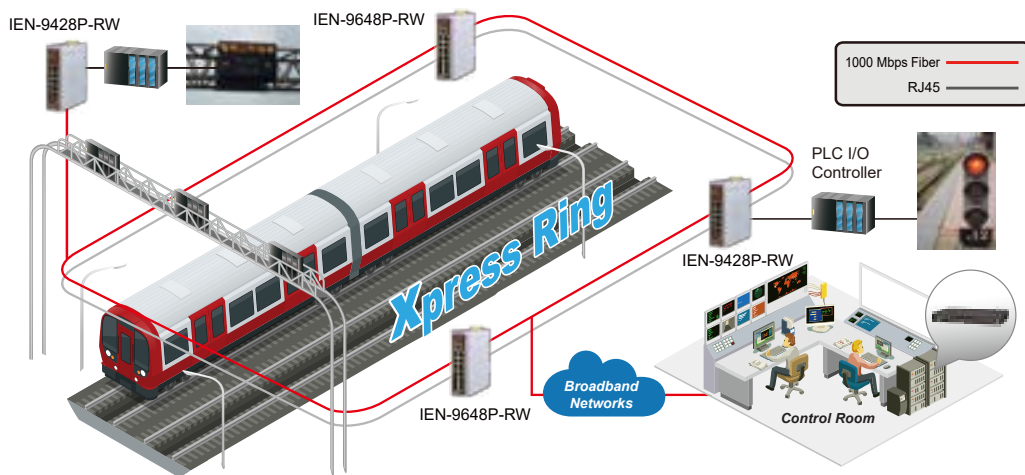
Customer's Requirements

Centralized traffic control (CTC) railway signaling consolidates train routing decisions. The system consists of a centralized train dispatcher's office that controls railroad interlocking and traffic flows. Network management involves the centralized traffic control for an optimum system with the following functions: Ethernet network design;

maintenance and control of the local network security; remediation of faulty equipment; maintaining appropriate quality standards in terms of network configurations and many more. To realize all these, switches must also be capable to work in these kinds of harsh conditions.

Proposed Solutions

- Xpress Ring and ERPS ring protocols recover from a network failure in a time scale of milliseconds. This ensures non-stop transmission of real-time video and data to control room.
- Volktek's embedded topology map discovers devices automatically and allows you to view their picture and link status, making debugging easy.
- Real-time link status and traffic statistics, informative network reporting functions.
- Provides auto-provisioning so that the network can be managed, with necessary upgrades and configurations performed remotely and automatically.
- Hardware monitors the board temperature and alarms the manager if any abnormal temperature is observed.



Products Applied



SEN-9425P-24V-RW
 Unmanaged Railway Certified PoE+ Industrial Switch
 4 x 10/100/1000 PoE+ & 1 x 10/100/1000 RJ45 & 2 x GbE SFP



SEN-9648P-24V-RW
 Managed Railway Certified PoE+ Industrial Switch
 8 x 10/100/1000 PoE+ & 4 x GbE SFP

Power Substation



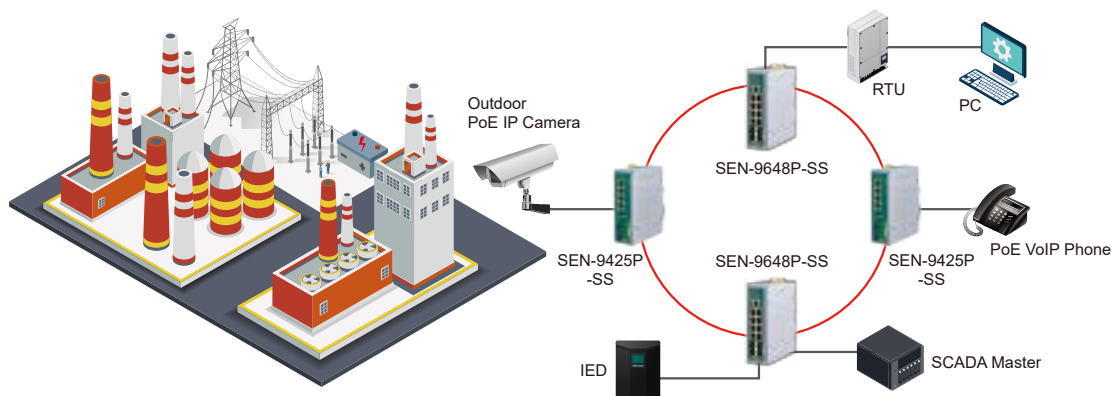
Customer's Requirements

Electric utilities realize the capabilities of Ethernet communications in the substation as Ethernet moves to gigabit speed backbones. As Ethernet networks provide more benefits compared to other approaches engineers use Ethernet networks in electric power substations for

an increasing number of applications, including automatic control, protection, remote maintenance, and disturbance analysis. They recognize that many of these functions are mission-critical and therefore specify redundant Ethernet networks to increase the availability.

Proposed Solutions

- Industrial grade switches provide better protection against ESD, and also certified with EMI/EMC protection. And also has overcurrent and overvoltage protection.
- Lower development and maintenance cost, since the switches are loaded with the advanced features.
- Auto-provisioning scripted files allow the user to update the firmware for the entire network instead updating by switch after the switch.
- Supports precise synchronization as per IEEE 1588v2 so that integrating all functions in now simple.
- Extensive management and filter functions plus a variety of redundancy protocols and port security.



Products Applied



SEN-9425P-24V-SS

Unmanaged Substation Certified PoE+ Industrial Switch
4 x 10/100/1000 PoE+ & 1 x 10/100/1000 RJ45 & 2 x GbE SFP



SEN-9648P-24V-SS

Managed Substation Certified PoE+ Industrial Switch
8 x 10/100/1000 PoE+ & 4 x GbE SFP

PRODUCT INTRODUCTION

L3 Managed PoE++ Switches



9561-8GP4XS-TSN
L3 Managed 8 x 10/100/1000 btPoE & 4 x 100/1G/10G SFP+ Industrial TSN Switch, USB Support

Layer 3 Routing
Seamless multi-network connectivity

Deterministic TSN
Guaranteed Bounded Latency

PRP/HSR Redundancy
Zero Downtime and Packet Loss

10G Uplinks
High-Bandwidth Data Performance

Managed PoE+ Switches



HNS-8615P
L2+ Managed 4 x 10/100/1000 PoE+ & 1 x 10/100/1000 RJ45 & 1 x FX/GbE SFP Industrial Switch



HNS-8605P
L2+ Managed 4 x 10/100/1000 PoE+ & 1 x 10/100/1000 RJ45 Industrial Switch



9560-16GP4XS-I
Managed 16 x 10/100/1000 RJ45 PoE+ & 4 x 1G/10G SFP+, USB Support



INS-8624P
L2+ Managed 4 x 10/100/1000 PoE+ & 2 x FX/GbE SFP Industrial Switch



IEN-8608PA-24V
L2+ Managed 8 x 10/100/1000 PoE+ Industrial Switch, USB Support



IEN-8608PA
L2+ Managed 8 x 10/100/1000 PoE+ Industrial Switch, USB Support



IEN-8648PA-24V
L2+ Managed 8 x 10/100/1000 PoE+ & 4 x GbE SFP Industrial Switch, USB Support



IEN-8648PA
L2+ Managed 8 x 10/100/1000 PoE+ & 4 x GbE SFP Industrial Switch, USB Support



9005-16GP2GS
L2+ Managed 16 x 10/100/1000 PoE+ & 2 x FX/GbE SFP Industrial Switch



9005-24GP2GS
L2+ Managed 24 x 10/100/1000 PoE+ & 2 x FX/GbE SFP Industrial Switch



9505-24GP4XS
L2+ Managed 8 x 10/100/1000 PoE++ & 16 x 10/100/1000 PoE+ & 4 x 1G/10G SFP+ Industrial Switch



PRODUCT APPLICATION



Tunnel Application



Highway Surveillance

Unmanaged PoE+ SPE Switches



7015-4P2T-T1L
 Unmanaged
 4 x 10BASE-T1L SPoE &
 2 x 10/100 RJ45 Industrial
 SPE PoE Switch

Unmanaged PoE+ Switches



HNS-8405P
 Unmanaged 4 x 10/100/1000
 PoE+ & 1 x 10/100/1000 RJ45
 Industrial Switch



HNS-8415P
 Unmanaged 4 x 10/100/1000
 PoE+ & 1 x 10/100/1000 RJ45
 & 1 x GbE SFP
 Industrial Switch



IEN-8205P-24V
 Unmanaged 4 x 10/100/1000
 PoE+ & 1 x 10/100/1000 RJ45
 Industrial Switch



INS-8224P
 Unmanaged 4 x 10/100/1000
 PoE+ & 2 x GbE SFP
 Industrial Switch



IEN-8225P-24V
 Unmanaged 4 x 10/100/1000
 PoE+ & 1 x 10/100/1000 RJ45
 & 2 x GbE SFP Industrial
 Switch



7160-7GP1GT-24V-I
 Premium unmanaged
 7 x 10/100/1000 PoE+ &
 1 x 10/100/1000 RJ45
 Industrial Switch



INS-8424P
 Unmanaged 4 x 10/100/1000
 PoE+ & 2 x GbE SFP
 Industrial Switch



UL Certified Switches



IEN-8205P-24V
 Unmanaged 4 x 10/100/1000
 PoE+ & 1 x 10/100/1000 RJ45
 Industrial Switch



IEN-8225P-24V
 Unmanaged 4 x 10/100/1000
 PoE+ & 1 x 10/100/1000 RJ45
 & 2 x GbE SFP Industrial
 Switch



7160-7GP1GT-24V-I
 Premium unmanaged
 7 x 10/100/1000 PoE+ &
 1 x 10/100/1000 RJ45
 Industrial Switch



SEN-9425P-24V-SS
 Unmanaged 4 x 10/100/1000
 PoE+ & 1 x 10/100/1000 RJ45
 & 2 x GbE SFP Industrial
 Switch
SUBSTATION APPROVAL



9060-4GP2GS-360W-I
 L2+ Managed 4 x 10/100/1000
 PoE++ & 2 x GbE SFP Switch,
 360Watt PoE budget
NEMA TS2 APPROVAL



SEN-9648P-24V-SS
 Managed 8 x 10/100/1000
 PoE+ & 4 x GbE SFP Industrial
 Switch, USB Support
NEMA TS2 APPROVAL




Shoreline Surveillance




PoE Solution for Base Stations

PRODUCT INTRODUCTION


Substation Certified Switches



SEN-9425P-24V-SS
 Unmanaged 4 x 10/100/1000 PoE+ & 1 x 10/100/1000 RJ45 & 2 x GbE SFP Industrial Switch
SUBSTATION APPROVAL




SEN-9428P-24V-SS
 Unmanaged 8 x 10/100/1000 PoE+ & 2 x FX/GbE SFP Industrial Switch,
SUBSTATION APPROVAL




SEN-9648P-24V-SS
 Managed 8 x 10/100/1000 PoE+ & 4 x GbE SFP Industrial Switch, USB Support
SUBSTATION APPROVAL

Railway Certified Switches



SEN-9425P-24V-RW
 Unmanaged 4 x 10/100/1000 PoE+ & 1 x 10/100/1000 RJ45 & 2 x GbE SFP Industrial Switch, **RAILWAY APPROVAL**




SEN-9428P-24V-RW
 Unmanaged 8 x 10/100/1000 PoE+ & 2 x FX/GbE SFP Industrial Switch,
RAILWAY APPROVAL




SEN-9648P-24V-RW
 Managed 8 x 10/100/1000 PoE+ & 4 x GbE SFP Industrial Switch, USB Support,
RAILWAY APPROVAL

DNV Certified Switches




SEN-9648PM-24V
 Managed 8 x 10/100/1000 PoE+ & 4 x GbE SFP Industrial Switch, USB Support,
DNV APPROVAL


NEMA TS2 Switches



9060-4GP2GS-240W-I
 L2+ Managed 4 x 10/100/1000 PoE++ & 2 x GbE SFP Switch, 240Watt PoE budget
NEMA TS2 APPROVAL



9060-4GP2GS-360W-I
 L2+ Managed 4 x 10/100/1000 PoE++ & 2 x GbE SFP Switch, 360Watt PoE budget
NEMA TS2 APPROVAL



SEN-9648P-24V-SS
 Managed 8 x 10/100/1000 PoE+ & 4 x GbE SFP Industrial Switch, USB Support
NEMA TS2 APPROVAL

PRODUCT APPLICATION



Railway Surveillance



Substation Surveillance

Managed PoE+ Switches



Model		9561-8GP4XS-TSN	HNS-8605P	HNS-8615P	9060-4GP2GS-I	9560-16GP4XS-I
Interface	RJ45	-	1 x 10/100/1000	1 x 10/100/1000	-	-
	PoE	8 x 10/100/1000 btPoE	4 x 10/100/1000 PoE	4 x 10/100/1000	4 x 10/100/1000	16 x 10/100/1000
	SFP	4 x 100/1G/10G SFP+	-	1 x FX/GbE	2 x GbE	4 x 1G/10G SFP+
	Console	1	-	-	1	1
	USB	1	-	-	Y	Y
Hardware	Jumbo Frame (Bytes)	16K	10K	10K	10K	12K
	MAC Entries	16K	8K	8K	16K	16K
	Automatic MDI/MDI-X	Y	Y	Y	Y	Y
	Switching Fabric	56Gbps	10Gbps	12Gbps	12Gbps	112Gbps
	Flow Control	Y	Y	Y	Y	Y
	Surge Protection	Y	Y	Y	Y	Y
	ESD Protection	Y	Y	Y	Y	Y
	Reverse Polarity Protection	Y	Y	Y	Y	Y
	Over Current Protection	Y	Y	Y	Y	Y
Power	DC Power Input	48 ~ 57VDC	48 ~ 57VDC	48 ~ 57VDC	48 ~ 57VDC	48 ~ 57VDC
	Redundant Power	Y	Y	Y	Y	Y
	Alam Contact	Y	Y	Y	Y	Y
	Power Isolation	Y	Y	Y	Y	Y
	System Power Consumption	19W	10W	10W	20W	22W
	PoE Power Budget	360W	120W	120W	240W-I: 240 Watt 360W-I: 360 Watt	240W
Industrial Standards & Certifications	FCC Part 15, CE	Y	Y	Y	Y	Y
	Shock Test	Y	Y	Y	Y	Y
	Freefall Test	Y	Y	Y	Y	Y
	Vibration Test	Y	Y	Y	Y	Y
Installation & operation information	Dimensions (WxHxD)	80 x 160 x 140.3 mm	31 x 136.3 x 105 mm	31 x 136.3 x 105 mm	50 x 161.5 x 119.9 mm	100 x 160 x 140 mm
	Weight	1,590g	500g	515g	970g	1,295g
	Housing	Aluminum, IP30	Metal, IP40	Metal, IP40	Aluminum, IP30	Aluminum, IP30
	Mounting Kit	DIN-Rail	DIN-Rail	DIN-Rail	DIN-Rail	DIN-Rail
	Operating Temperature	-40°C ~ 70°C (-40°F ~ 158°F)	-10°C ~ 60°C (14°F ~ 140°F)	-10°C ~ 60°C (14°F ~ 140°F)	-40°C ~ 75°C (-40°F ~ 167°F)	-40°C ~ 70°C (-40°F ~ 158°F)

Managed PoE+ Switches



Model		INS-8624P	IEN-8608PA-24V	IEN-8608PA	IEN-8648PA-24V	IEN-8648PA
Interface	PoE	4 x 10/100/1000	8 x 10/100/1000	8 x 10/100/1000	8 x 10/100/1000	8 x 10/100/1000
	SFP	2 x FX/GbE	-	-	4 x GbE	4 x GbE
	Console	-	1	1	1	1
	USB	-	Y	Y	Y	Y
Hardware	Jumbo Frame (Bytes)	10K	10K	10K	10K	10K
	MAC Entries	8K	16K	16K	16K	16K
	Automatic MDI/MDI-X	Y	Y	Y	Y	Y
	Switching Fabric	12Gbps	16Gbps	16Gbps	24Gbps	24Gbps
	Flow Control	Y	Y	Y	Y	Y
	Surge Protection	Y	Y	Y	Y	Y
	ESD Protection	Y	Y	Y	Y	Y
	Reverse Polarity Protection	Y	Y	Y	Y	Y
	Over Current Protection	Y	Y	Y	Y	Y
Power	DC Power Input	48 ~ 57VDC	24 ~ 57VDC	48 ~ 57VDC	24 ~ 57VDC	48 ~ 57VDC
	Redundant Power	Y	Y	Y	Y	Y
	Alam Contact	Y	Y	Y	Y	Y
	Power Isolation	Y	Y	-	Y	-
	System Power Consumption	10W	15W	15W	18W	18W
	PoE Power Budget	120W	240W/48V 120W/24V	240W	240W/48V 120W/24V	240W
Industrial Standards & Certifications	FCC Part 15, CE	Y	Y	Y	Y	Y
	Shock Test	Y	Y	Y	Y	Y
	Freefall Test	Y	Y	Y	Y	Y
	Vibration Test	Y	Y	Y	Y	Y
Installation & operation information	Dimensions (WxHxD)	57.3 x 175 x 126.4 mm	57.3 x 175 x 126.4 mm	57.3 x 175 x 126.4 mm	57.3 x 175 x 126.4 mm	57.3 x 175 x 126.4 mm
	Weight	795g	955g	955g	1,005g	1,005g
	Housing	Aluminum, IP40	Aluminum, IP40	Aluminum, IP40	Aluminum, IP40	Aluminum, IP40
	Mounting Kit	DIN-Rail	DIN-Rail	DIN-Rail	DIN-Rail	DIN-Rail
	Operating Temperature	-40°C ~ 75°C (-40°F ~ 167°F)	-40°C ~ 75°C (-40°F ~ 167°F)	-40°C ~ 75°C (-40°F ~ 167°F)	-40°C ~ 75°C (-40°F ~ 167°F)	-40°C ~ 75°C (-40°F ~ 167°F)

Managed PoE+ Switches



Model		Managed			SPE
		9005-16GP2GS	9005-24GP2GS	9505-24GP4XS	7015-4P2T-T1L
Interface	PoE++	-	-	8 x 10/100/1000	-
	PoE / SPOE	16 x 10/100/1000	24 x 10/100/1000	16 x 10/100/1000	4 x 10BASE-T1L SPoE
	SFP	2 x FX/GbE	2 x FX/GbE	4 x 1G/10G SFP+	-
	Console	1	1	1	-
	USB	-	-	1	-
Hardware	Jumbo Frame (Bytes)	10K	10K	12K	-
	MAC Entries	8K	8K	16K	1K
	Automatic MDI/MDI-X	Y	Y	Y	Y
	Switching Fabric	36Gbps	52Gbps	128Gbps	480Mbps
	Flow Control	Y	Y	Y	Y
	Surge Protection	Y	Y	Y	Y
	ESD Protection	Y	Y	Y	Y
	Reverse Polarity Protection	Y	Y	Y	Y
	Over Current Protection	Y	Y	Y	Y
Power	DC Power Input	48 ~ 57VDC / 100 ~ 240VAC	48 ~ 57VDC / 100 ~ 240VAC	D-I: 48-57VDC	20-30 VDC / 50-58 VDC
	Redundant Power	Y	Y	Y	-
	Alam Contact	Y	Y	Y	Y
	Power Isolation	Y	Y	Y	Y
	System Power Consumption	20W	20W	A-C: 22W, AA-C: 29W, D-I: 16W	4W
	PoE Power Budget	AC: 330W / 50°C, 260W / 60°C, DC: 480W / 75°C	AC: 330W / 50°C, 260W / 60°C, DC: 685W / 75°C	A-C: 450W / 50°C, AA-C: 685W / 50°C, D-I: 685W / 70°C	24V: 57W, 55V:132W
Industrial Standards & Certifications	FCC Part 15, CE	Y	Y	Y	Y
	Shock Test	Y	Y	Y	Y
	Freefall Test	Y	Y	Y	Y
	Vibration Test	Y	Y	Y	Y
Installation & operation information	Dimensions (WxHxD)	40 x 44 x 284 mm	40 x 44 x 284 mm	440 x 44 x 284 mm	31 x 136 x 105 mm
	Weight	4kg	4kg	A-C: 4.14KG, AA-C: 4.66KG, D-I: 3.74KG	525g
	Housing	Metal, IP30	Metal, IP30	Metal, IP30	Metal, IP40
	Mounting Kit	DIN-Rail	DIN-Rail	DIN-Rail	DIN-Rail
	Operating Temperature	AC version: -10°C ~ 60°C (14°F ~ 140°F) DC version: -40°C ~ 75°C (-40°F ~ 167°F)			A-C / AA-C version: 0 ~ 50°C (32 ~ 122°F) D-I version: -40 ~ 70°C (-40 ~ 158°F)

Unmanaged PoE+ Switches



Model		HNS-8405P	HNS-8415P	IEN-8205P-24V	INS-8224P	IEN-8225P-24V	7160-7GP1GT-24V-I	INS-8424P
Interface	RJ45	1 x 10/100/1000	1 x 10/100/1000	1 x 10/100/1000	-	1 x 10/100/1000	1 x 10/100/1000	-
	PoE	4 x 10/100/1000	4 x 10/100/1000	4 x 10/100/1000	4 x 10/100/1000	4 x 10/100/1000	7 x 10/100/1000	4 x 10/100/1000
	SFP	-	1 x GbE	-	2 x GbE	2 x GbE	-	2 x GbE
Hardware	Jumbo Frame (Bytes)	10K	10K	10K	10K	10K	9K	10K
	MAC Entries	8K	8K	8K	8K	8K	4K	8K
	Automatic MDI/MDI-X	Y	Y	Y	Y	Y	Y	Y
	Switching Fabric	10Gbps	12Gbps	10Gbps	12Gbps	14Gbps	14Gbps	12Gbps
	Flow Control	Y	Y	Y	Y	Y	Y	Y
	Surge Protection	Y	Y	Y	Y	Y	Y	Y
	ESD Protection	Y	Y	Y	Y	Y	Y	Y
	Reverse Polarity Protection	Y	Y	Y	Y	Y	Y	Y
	Over Current Protection	Y	Y	Y	Y	Y	Y	Y
Power	DC Power Input	48 ~ 57VDC	48 ~ 57VDC	24 ~ 57VDC	48 ~ 57VDC	24 ~ 57VDC	24 ~ 57VDC	48 ~ 57VDC
	Redundant Power	Y	Y	Y	Y	Y	Y	Y
	Alam Contact	Y	Y	-	Y	-	Y	Y
	Power Isolation	Y	Y	Y	Y	Y	Y	Y
	System Power Consumption	9W	10W	14W	10W	14W	17W	10W
	PoE Power Budget	120W	120W	120W	120W / 48V	120W	210W / 48V, 120W / 24V	120W
Industrial Standards & Certifications	FCC Part 15, CE	Y	Y	Y	Y	Y	Y	Y
	Shock Test	Y	Y	Y	Y	Y	Y	Y
	Freefall Test	Y	Y	Y	Y	Y	Y	Y
	Vibration Test	Y	Y	Y	Y	Y	Y	Y
Installation & operation information	Dimensions (WxHxD)	31 x 136.3 x 105 mm	31 x 136.3 x 105 mm	50 x 160 x 120 mm	50 x 160 x 120 mm	50 x 160 x 120 mm	50 x 160 x 120 mm	57.3 x 175 x 126.4 mm
	Weight	500g	515g	750g	696g	780g	1,033g	795g
	Housing	Metal, IP40	Metal, IP40	Metal, IP40	Metal, IP40	Metal, IP40	Metal, IP40	Aluminum, IP40
	Mounting Kit	DIN-Rail	DIN-Rail	DIN-Rail	DIN-Rail	DIN-Rail	DIN-Rail	DIN-Rail
	Operating Temperature	-10°C ~ 60°C (14°F ~ 140°F)	-10°C ~ 60°C (14°F ~ 140°F)	-10°C ~ 60°C (14°F ~ 140°F)	-10°C ~ 60°C (14°F ~ 140°F)	-10°C ~ 60°C (14°F ~ 140°F)	-10°C ~ 60°C (14°F ~ 140°F)	-10°C ~ 60°C (14°F ~ 140°F)

Certified PoE+ Switches



Unmanaged

Model		SEN-9425P-24V-SS	SEN-9425P-24V-RW	SEN-9428P-24V-SS	SEN-9428P-24V-RW
Interface	RJ45	1 x 10/100/1000	1 x 10/100/1000	-	-
	PoE	4 x 10/100/1000	4 x 10/100/1000	8 x 10/100/1000	8 x 10/100/1000
	SFP	2 x GbE	2 x GbE	2 x GbE	2 x GbE
	Console	-	-	-	-
	USB	-	-	-	-
Hardware	Jumbo Frame (Bytes)	10K	10K	10K	10K
	MAC Entries	8K	8K	8K	8K
	Automatic MDI/MDI-X	Y	Y	Y	Y
	Switching Fabric	14Gbps	14Gbps	20Gbps	20Gbps
	Flow Control	Y	Y	Y	Y
	Surge Protection	Y	Y	Y	Y
	ESD Protection	Y	Y	Y	Y
	Reverse Polarity Protection	Y	Y	Y	Y
	Over Current Protection	Y	Y	Y	Y
Power	DC Power Input	24 ~ 57VDC	24 ~ 57VDC	24 ~ 57VDC	24 ~ 57VDC
	Redundant Power	Y	Y	Y	Y
	Alam Contact	-	-	Y	Y
	Power Isolation	Y	Y	Y	Y
	System Power Consumption	14W	14W	13W	13W
	PoE Power Budget	120W	120W	240W / 48V, 120W / 24V	240W / 48V, 120W / 24V
Industrial Standards & Certifications	FCC Part 15, CE	Y	Y	Y	Y
	Shock Test	Y	Y	Y	Y
	Freefall Test	Y	Y	Y	Y
	Vibration Test	Y	Y	Y	Y
Installation & operation information	Dimensions (WxHxD)	50 x 161.5 x 119.9 mm	50 x 161.5 x 119.9 mm	50 x 161.5 x 119.9 mm	50 x 161.5 x 119.9 mm
	Weight	869g	869g	930g	930g
	Housing	Aluminum, IP30	Aluminum, IP30	Aluminum, IP30	Aluminum, IP30
	Mounting Kit	DIN-Rail	DIN-Rail	DIN-Rail	DIN-Rail
	Operating Temperature	-40°C ~ 75°C (-40°F ~ 167°F)	-40°C ~ 75°C (-40°F ~ 167°F)	-40°C ~ 75°C (-40°F ~ 167°F)	-40°C ~ 75°C (-40°F ~ 167°F)
Certification	Approval	UL, IEEE 1613, IEC 61850-3	EN 50155, EN 50121-4	IEEE 1613, IEC 61850-3	EN 50155, EN 50121-4

Certified PoE+ Switches



Managed

Model		SEN-9648P-24V-SS	SEN-9648P-24V-RW	SEN-9648PM-24V
Interface	RJ45	-	-	-
	PoE	8 x 10/100/1000	8 x 10/100/1000	8 x 10/100/1000
	SFP	4 x GbE	4 x GbE	4 x GbE
	Console	1	1	1
	USB	Y	Y	Y
Hardware	Jumbo Frame (Bytes)	10K	10K	10K
	MAC Entries	16K	16K	16K
	Automatic MDI/MDI-X	Y	Y	Y
	Switching Fabric	24Gbps	24Gbps	24Gbps
	Flow Control	Y	Y	Y
	Surge Protection	Y	Y	Y
	ESD Protection	Y	Y	Y
	Reverse Polarity Protection	Y	Y	Y
	Over Current Protection	Y	Y	Y
Power	DC Power Input	24 ~ 57VDC	24 ~ 57VDC	24 ~ 57VDC
	Redundant Power	Y	Y	Y
	Alam Contact	Y	Y	Y
	Power Isolation	Y	Y	Y
	System Power Consumption	18W	18W	18W
	PoE Power Budget	240W / 48V, 120W / 24V	240W / 48V, 120W / 24V	240W / 48V, 120W / 24V
Industrial Standards & Certifications	FCC Part 15, CE	Y	Y	Y
	Shock Test	Y	Y	Y
	Freefall Test	Y	Y	Y
	Vibration Test	Y	Y	Y
Installation & operation information	Dimensions (WxHxD)	50 x 161.5 x 119.9 mm	50 x 161.5 x 119.9 mm	50 x 161.5 x 119.9 mm
	Weight	955g	955g	955g
	Housing	Aluminum, IP30	Aluminum, IP30	Aluminum, IP30
	Mounting Kit	DIN-Rail	DIN-Rail	DIN-Rail
	Operating Temperature	-40°C ~ 75°C (-40°F ~ 167°F)	-40°C ~ 75°C (-40°F ~ 167°F)	-40°C ~ 75°C (-40°F ~ 167°F)
Certification	Approval	UL, IEEE 1613, IEC 61850-3, NEMA	EN 50155, EN 50121-4	DNV

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