

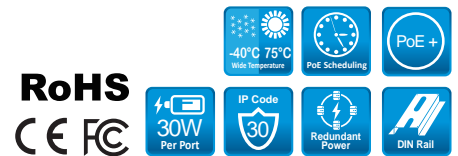
SEN-9648P-24V-RW

Managed 8 x 10/100/1000 PoE+ & 4 x GbE SFP Switch, Railway Approval

Description

Switch when used in railway applications has to hold certain certification to prove its ability whether it can be best fit for it or not. SEN-9648P-RW is certified with and EN 50155 and EN 50121-4 to use in railway applications so that it makes you feel trustworthy to use for surveillance or ticketing network in railway and bus stations. EN 50155, EN 50121-4 and EN 61373 certificates guarantee trustworthy operation in critical environments where vibration and shock are common place. With IP30 protection it exhibits extreme tolerance in harsh temperature environment ranging from -40°C to 75°C.

Complied with 8 PoE+ (IEEE 802.3af/at) Gigabit copper ports, the switch eliminates the need of running separate cables for power and data. 4 Gigabit SFP slots gives the advantages of configuring Ring topology or daisy chain topologies offering full-proof fiber advantages for a safe, reliable and long distance Gigabit connectivity.



Features Highlight

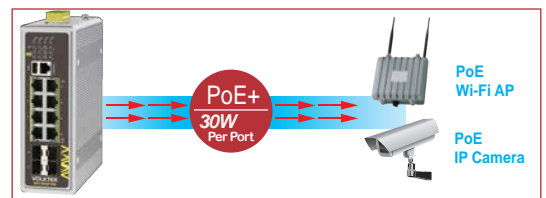
Robust Switch Performance

SEN-9648P-24V-RW is built with IP30 aluminum case protection, surge and ESD protection to deliver robust performance and withstand extreme conditions in Industrial environments. The SFP ports support 1000Mbps for high bandwidth transmissions and the SFP DDM feature enables service providers to monitor SFP parameters. In case of any abnormal hardware condition, the switch automatically sends warnings through email and relay output with real-time alarm messages. This assists the system administrators to immediately react to emergency events and diagnose the faults more efficiently for smoother network operations.



High-Power Budget for PoE Network Devices

To reduce the required time and cost of installing additional electrical sources, the SEN-9648P-24V-RW implements PoE+ technology. The switch supplies power over the same cable that is used to carry network traffic and delivers a high power budget of 240W to suit various power requirements. Using SNMP and Web interface, the PoE+ functions on each port can be enabled and disabled to save power and energy.



Intelligent PoE+ for Powered Devices

The SEN-9648P-24V-RW is designed with intelligent PoE+ features to utilize power more efficiently. To monitor real-time status of Powered Devices (PDs), the switch sends alive-checking packets to PDs. This reduces management burden and increases system reliability. Using power scheduling mechanism of the switch, administrators can set power on each port to a desired hourly/weekly schedule and can enable or disable the power output to these devices accordingly.



Redundant Power System

To guarantee power runs continuously the switch is designed to be simultaneously connected to two power supplies and an alarm through a standard industrial terminal block. If one power supply stops working the switch will start feeding its power on the alternative power supply and the alarm will go off to notify technicians about the event.



Features Highlight

Efficient network monitoring and proactive capability

In a network, the issues that impact network performance can be quickly resolved with the SEN-9648P-24V-RW most accepted and enhanced traffic management, monitoring and analysis protocols such as SNMP and RMON. SNMP allows end users to centrally manage different levels in a network and RMON gives the capability to monitor the network performance. Service providers can ensure a reliable network by identifying connectivity and performance issues and isolating the problem remotely on individual switches. This avoids high OPEX and provides administrators the control they need to manage a healthy and efficient network.

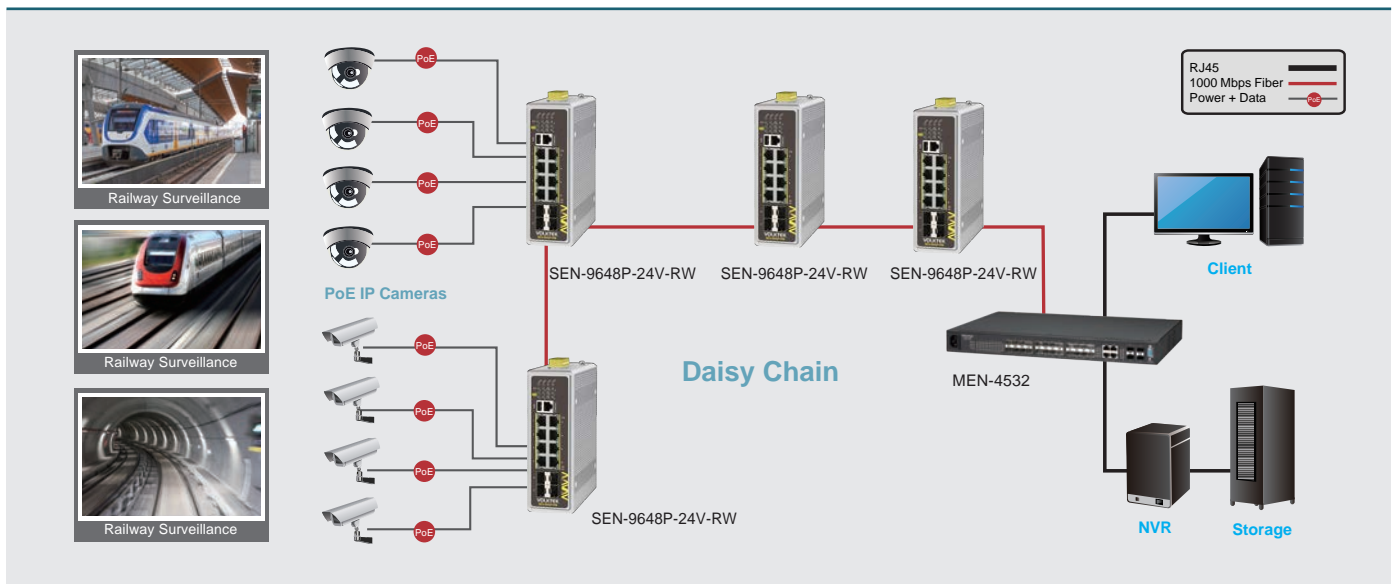
Bandwidth management to prevent unpredictable network status

Industrial surveillance applications need different levels of services delivered to them reliably without any transmission delays and interruptions. The SEN-9648P-24V-RW has comprehensive QoS mechanisms which assign priority to applications and sends only specific dedicated traffic to them. In addition, bandwidth management function of the switch allocates high bandwidths to mission-critical communications and reduce the bandwidth to applications that are less critical. With full control of limiting the bandwidth, the administrators can prevent unpredictable errors and utilize the bandwidth more effectively.

Redundant Ring and Fast Recovery for Surveillance System

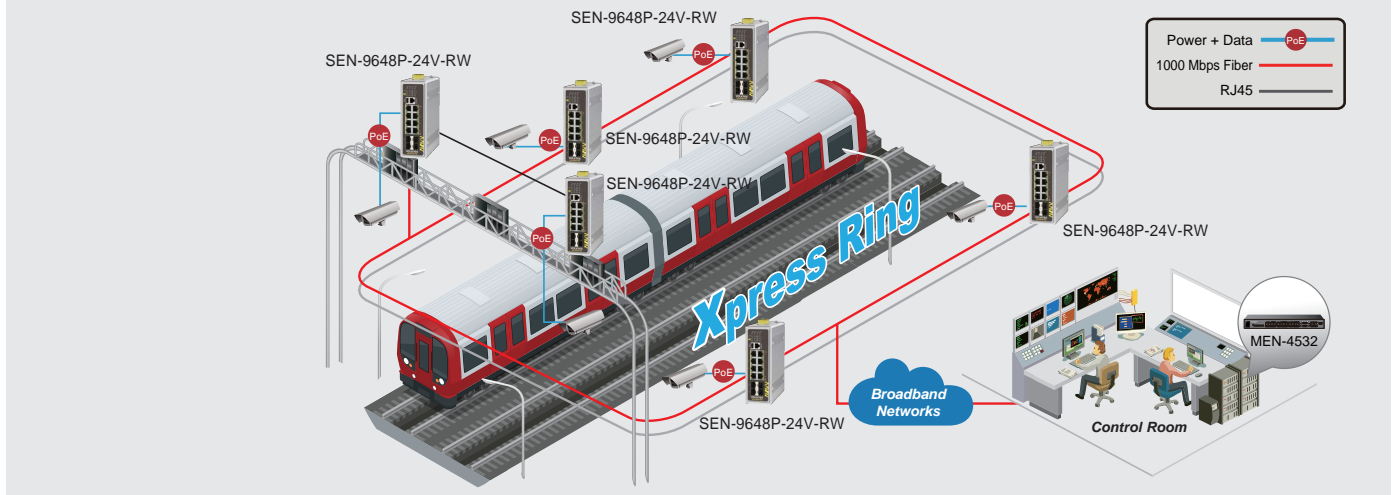
Even few seconds of missed communications due to link failures, especially in IP surveillance systems, can cause inconvenience and recovering it becomes very critical. Featuring with Xpress Ring, SEN-9648P-24V-RW can rapidly react to such link failures and recovers it within less than 10ms, a much faster fail-over time to support nonstop transmissions. And to handle the heavy traffic load of video and data, the switch implements.

Applications



Redundant Ring

It incorporates, advanced Redundant Ring technologies, into customer's industrial automation and surveillance network to enhance system reliability and uptime in harsh factory environments.



Specifications

Standards	
IEEE 802.3	10BASE-T
IEEE 802.3u	100BASE-TX
IEEE 802.3ab	1000BASE-T
IEEE 802.3z	1000BASE-SX/LX
IEEE 802.3	Nway Auto-negotiation
IEEE 802.3x	Flow Control
IEEE 802.3ad	Power over Ethernet
IEEE 802.3af	Power over Ethernet Plus
IEEE 802.3at	Energy Efficient Ethernet (EEE)
IEEE 802.3az	Link Aggregation
IEEE 802.1AB	LLDP
IEEE 802.1ad	QinQ
IEEE 802.1D	STP
IEEE 802.1w	RSTP
IEEE 802.1s	MSTP
IEEE 802.1p	Class of Service
IEEE 802.1Q	VLAN Tagging
IEEE 802.1X	Port Authentication
IEEE 1588v2	PTP
Interface	
	8 x 10/100/1000BASE-T (PoE RJ45)
	4 x GbE SFP Slots
Ports	1 x RJ45 Console Port
	1 x USB Port
DIP Switch	Primary/Redundant Power Voltage Drop Alarm setting
LED Panel	PWR, RPS, ALM, POST, SFP, PoE, 1000, LNK/ACT
Features	
	Jumbo frame Size: 10KBytes
	MAC Table Entries: 16K
Performance	Active VLAN: 4K
	Switch Fabric: 24Gbps
	L2 Forwarding Rate: 17.9Mpps
Management	CLI, Telnet/SSH, HTTP/HTTPS, SNMP v1/v2c/v3, SNMP Trap, MVLAN, Firmware Upgradable, Configuration Backup/Restore, Syslog, SNTP, LLDP, UDLD, DHCP Client, DHCP Option 82, e-mail Alarm, Service Control, DDM
Reliability	STP/RSTP/MSTP, Xpress Ring, ERPS v1/v2, Dual Homing, LACP, Code Redundancy
VLAN	IEEE 802.1Q, GARP/GVRP, Port-based VLAN, MAC-based VLAN, IP-based VLAN, Protocol-based VLAN, QinQ
Traffic Control	IGMP snooping/Throttling/Proxy, MVR, QoS, Flow Control, Abnormal Traffic Detection, Rate Limit, Storm Control, Port Isolation, Loop Detection
Security	ACL, SSH, Port Security, Port-based 802.1x, MAC-based 802.1x, TACACS+, MAC limit, MAC Search, Refusal MAC, Static MAC, DHCP Snooping, DHCP Sever Screening, ARP Inspection, BPDU Guard/Filter, Root Guard, Management Host
PoE/PoE+	Scheduling, PD Alive Check, PoE Power On/Off, Feeding Power Budget Control
Power	
Input Voltage	Primary inputs: 24~57VDC Redundant inputs: 24~57VDC
Connection	Terminal Block
Power Consumption	System: 18W PoE Power Budget: 240W @ 48V or 124W @ 24V
Alarm Relay	One relay output, 1A @ 24V DC
Mechanical and Environment	
Housing	Aluminum (IP30 Protection)
Mounting	DIN-Rail
Operating Temperature	-40°C~75°C (-40°F~167°F) 70°C Railway Certified
Storage Temperature	-40°C~85°C (-40°F~185°F)
Operating Humidity	5 to 95% RH (non-condensing)
Storage Humidity	5 to 95% RH (non-condensing)
Weight	955 g (2.1 lb)
Dimension (WxHxD)	50 x 160 x 120 mm (1.97 x 6.3 x 4.72 in)
Certifications	
EMI	FCC Part 15 Subpart B Class A, EN 55022: class A EN 55011: 2009 class A, EN 61000-6-4
EMS	EN 55024, EN 61000-6-2, EN 61000-4-2 (ESD) EN 61000-4-3 (RS), EN 61000-4-4 (Burst) EN 61000-4-5 (Surge), EN 61000-4-6 (CS) EN 61000-4-8 (PFMF)
Shock	IEC 60068-2-27
Freelfall	IEC 60068-2-32
Vibration	IEC 60068-2-6
Rail Traffic	EN 50155 EN 50121-4
Ordering Information	
SEN-9648P-24V-RW	Managed 8 x 10/100/1000 PoE+ & 4 x GbE SFP Switch, Railway Approval
Optional Accessories	
Power Supply	SDR-480P-48: 480W DIN-Rail 48V DC Industrial Power Supply, -25°C~70°C (-13°F~158°F)
GBM-104	1000BASE-SX 1.25G, Multi-mode SFP, 500m

Note :

* The SFP communication distance upon the request.

* Industrial SFP with wide operating temperature from -40°C~85°C (-40°F~185°F) is available upon request.

* Specifications subject to change without notice.

Dimension

