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SEN-9648PM-24V

L2+ Managed 8 x 10/100/1000 PoE+ & 4 x GbE SFP Industrial Switch, DNV Marine Approval



Description

SEN-9648PM-24V Managed Industrial switch is equipped with 8 port 10/100/1000Base-T and 4 Gigabit SFP slots that are PoE+ compliant. Under DNV (Det Norske Veritas and Germanischer Lloyd) certified for Industrial switch, the SEN-9648PM suits your anti-corrosion harsh environments in marine & offshore applications and contains all the standard features of a industrial managed PoE switch. Engineered with hardened components and enclosed in a rugged case, the switch can operate in wide temperatures from -40°C to 75°C and excellent tolerance capability to high vibration and shock.

SEN-9648PM-24V supplies up to 30W on its 8 PoE+ (IEEE 802.3at) ports to satisfy the Ethernet and Power demands for an interactive network with its advanced and time saving PoE+ features that allow users to automate PDs such as WLAN Access Points, VoIP phones, IP Cams. Moreover, SEN-9648PM-24V is a Layer 2 switch that offers additional enhanced features for encompassed management with RMON, SNMP v1/v2c/v3, SNTP, network recovery in milliseconds, and advanced network cybersecurity features and traffic control.



Features Highlight

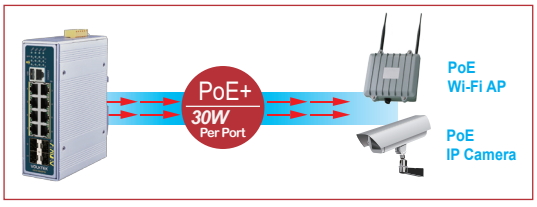
Robust Switch Performance

SEN-9648PM-24V 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.



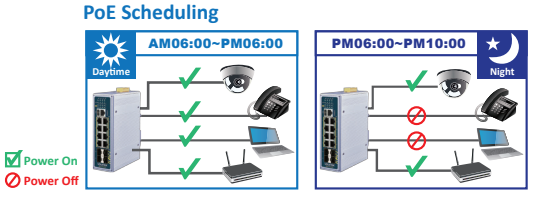
High-Power Budget for PoE Network Devices

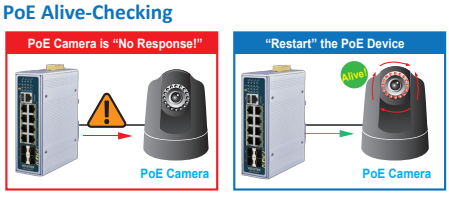
To reduce the required time and cost of installing additional electrical sources, the SEN-9648PM-24V implements PoE+ technology. The switch supplies power over the same cable that is used to carry network traffic and delivers a high power budget of 240W to suit various power requirements. Using SNMP 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-9648PM-24V is designed with intelligent PoE+ features to utilize power more efficiently. To monitor real-time status of 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.



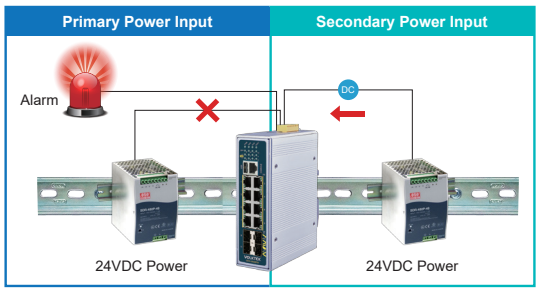


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Features Highlight

Redundant Power Input system

Mission-critical industrial applications need to operate without any interruptions because even a minimum network downtime can hugely impact the overall output. Providing continuous power as well as data to such applications is now made easy with SEN-9648PM-24V's redundant power system. The switch is designed with standard industrial terminal block for redundant power. In case the primary power supply fails, the secondary power will enable the switch to provide continuous service.



Efficient network monitoring and proactive capability

In a network, the issues that impact network performance can be quickly resolved with the SEN-9648PM-24V's 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-9648PM-24V 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

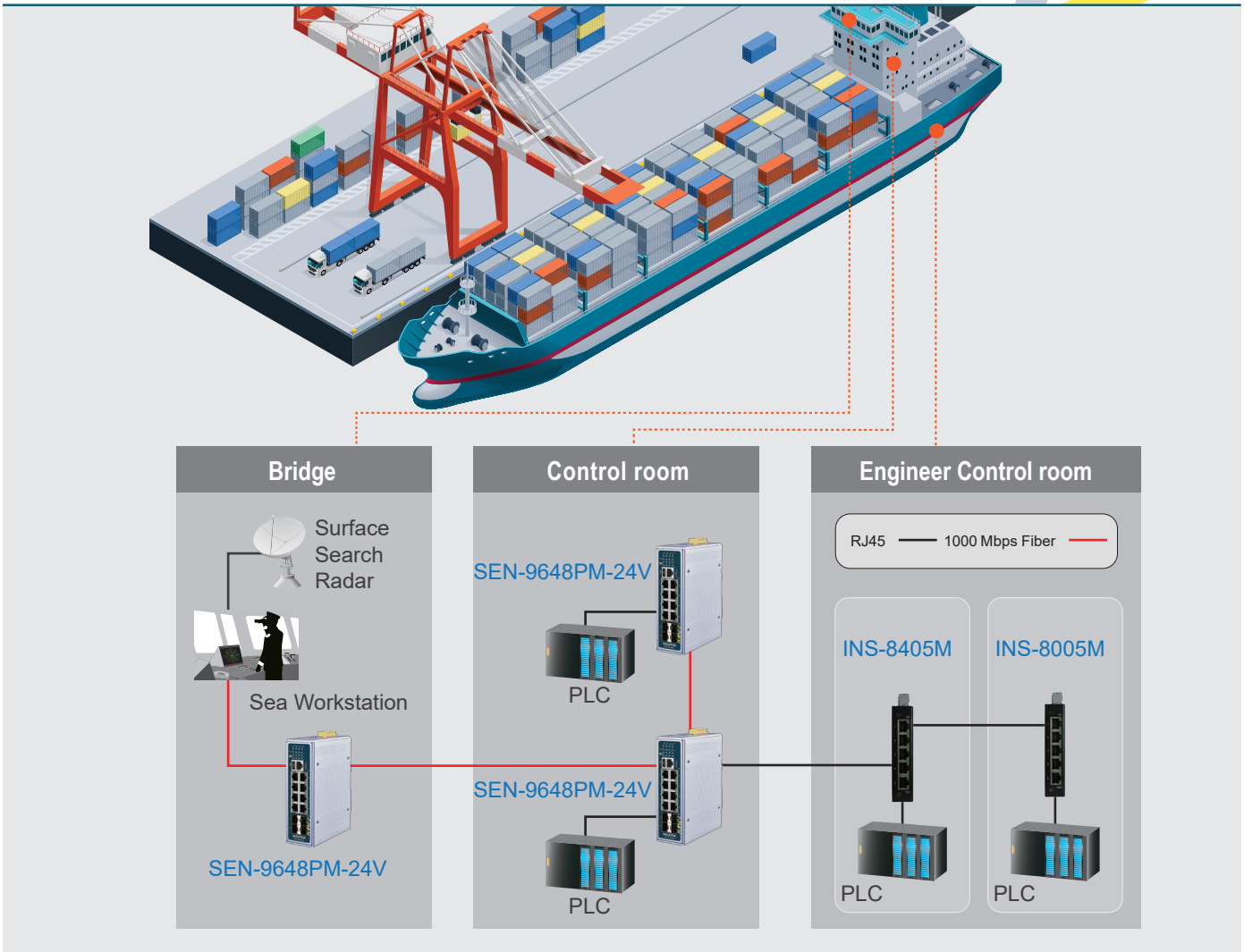
Even few seconds of missed communications due to link failures, especially in IP surveillance systems, can cause inconvenience and recovering it becomes very critical. Featuring with Xpress Ring, SEN-9648PM-24V can rapidly react to such link failures and recovers it within less than 10ms, a much faster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

Certificates & Approvals



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Applications



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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	Link Aggregation
IEEE 802.3af	Power over Ethernet
IEEE 802.3at	Power over Ethernet Plus
IEEE 802.3az	Energy Efficient Ethernet (EEE)
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	
Ports	8 x 10/100/1000BASE-T (PoE RJ45) 4 x GbE SFP Slots 1 x RJ45 Console Port 1 x USB Port
DIP Switch	Primary/Redundant Power Voltage Drop Alarm setting
LED Panel	PWR, RPS, ALM, POST, PoE, 1000, LNK/ACT
Features	
Performance	Jumbo frame Size: 10KBytes MAC Table Entries: 16K Active VLAN: 4K Switch Fabric: 24Gbps L2 Forwarding Rate: 17.9Mpps
Management	CLI, Telnet/SSH, HTTP/HTTPs, SNMP v1/v2c/v3, RMON, 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, Modbus TCP
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: 120W@24VDC 240W@48VDC
Alarm Relay		One relay output, 1 A @ 24V DC
Mechanical and Environment		
Housing		Aluminum (IP30 Protection)
Mounting		DIN-Rail
Operating Temperature		-40°C~75°C (-40°F~167°F)
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 161.5 x 119.9 mm (1.97 x 6.35 x 4.72 in)
Certifications		
CE	EMI	FCC Part 15 Subpart B Class A EN 55011 / BS EN 55011 Class A EN 55032 / BS EN 55032 Class A EN 61000-6-4 / BS EN 61000-6-4
	EMS	EN 55035 / BS EN 55035 EN 61000-6-2 / BS 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)
Marine		DNV-CG-0339: 2021 IEC 60945, IACS E10 (Rev.10 2024) LR certify environmental category ENV1, ENV2, and ENV3
Shock		IEC 60068-2-27
Freefall		IEC 60068-2-31
Vibration		IEC 60068-2-6
Ordering Information		
SEN-9648PM-24V		L2+ Managed 8 x 10/100/1000 PoE+ & 4 x GbE SFP Switch, -40°C~75°C (-40°F~167°F)
Optional Accessories		
Power Supply		SDR-480P-48: 480W DIN-Rail 48VDC Industrial Power Supply, -25°C~70°C (-13°F~158°F)
GBM-104		1000BASE-SX 1.25G, Multi-mode SFP, 500m
GBM-123TS		1000BASE-LX, Bi-Di SFP TX: 1310/RX: 1550 Single Mode, 10Km, 0°C~70°C (32°F~158°F)
GBM-123RS		1000BASE-LX, Bi-Di SFP TX: 1550/RX: 1310 Single Mode, 10Km, 0°C~70°C (32°F~158°F)

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.
* The highest degree of temperature operation certified by DNV is (Class D) -25°C~70°C (-13°F~158°F), and the nominal voltage of 24VDC for DNV type approval is specified.
* The switch enclosure is designed to meet IP30 ingress protection, while the device is DNV type approved with an ingress protection rating of IP20.
* Specifications subject to change without notice.

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Dimension

