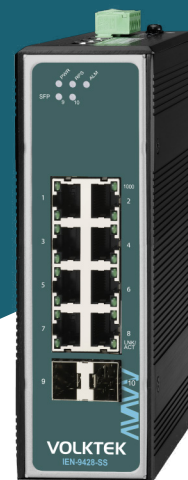# VOLKTEK

IEN-9428-SS

Unmanaged 8 x 10/100/1000 RJ45 & 2FX/GbE SFP Industrial Switch, Substation Approval, Aluminum

Description

IEN-9428-SS, 8-port 10/100/1000Base-T + 2-slot Gigabit SFP is the latest development of Volktek's Unmanaged Industrial Gigabit Ethernet Switch, specifically designed for high-speed industrial Ethernet networks that demands both, high bandwidths and rugged connectivity. IEN-9428-SS, unmanaged switch is designed for substation environments. IEN-9428-SS secured with IEEE 1613 and IEC 61850-3 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.

IEC 61850 standard prioritize the packets based on GOOSE and SMV type for mission-critical operation by default. Simple set up with no software or additional configuration needed, IEN-9428-SS proves to be a perfect solution for round the clock surveillance in hard-to-reach locations.

IEEE 1613
IEC 61850-3

-40°C 75°C
Wide Temperature

Wall Mount

RoHS

CE FC

IP Code 30

Redundant Power

DIN Rail

Features Highlight

Robust Switch Performance

IEN-9428-SS is enclosed within IP30 aluminum case and can able to sustain harsh temperature ranging between -40°C ~ 75°C. Along with this, the switch is built with various protection features such as ESD Protection, Surge Protection and Reverse Polarity Protection to deliver non-stop PoE service to the Powered Devices.

Cold -40°C   Hot 75°C

Redundant Power Supply

Considering the power failure impact in surveillance applications, IEN-9428-SS is developed for redundant power to provide continuous service resulting reliable and consistent network. In addition, the switch is equipped with alarm feature to notify the occurrence of power failure, helps in quick respond and faster trouble-shooting.

Advanced QoS Support

Understanding the need of smoother data transmissions for specific surveillance applications, the IEN-9428-SS supports IEEE 802.1p Quality of Service (QoS) which enhances bandwidth utilization to ensure time sensitive data gets delivered efficiently to mission-critical applications without any delay even during burst of high traffic. Addition to the beneficial fetures, the switch is also configured with efficient Storm Control functionalities which can only allow the traffic of a predefined rate. Both the QoS and Storm Control function can easily managed by DIP Switch without any burden of manual enable and disable.
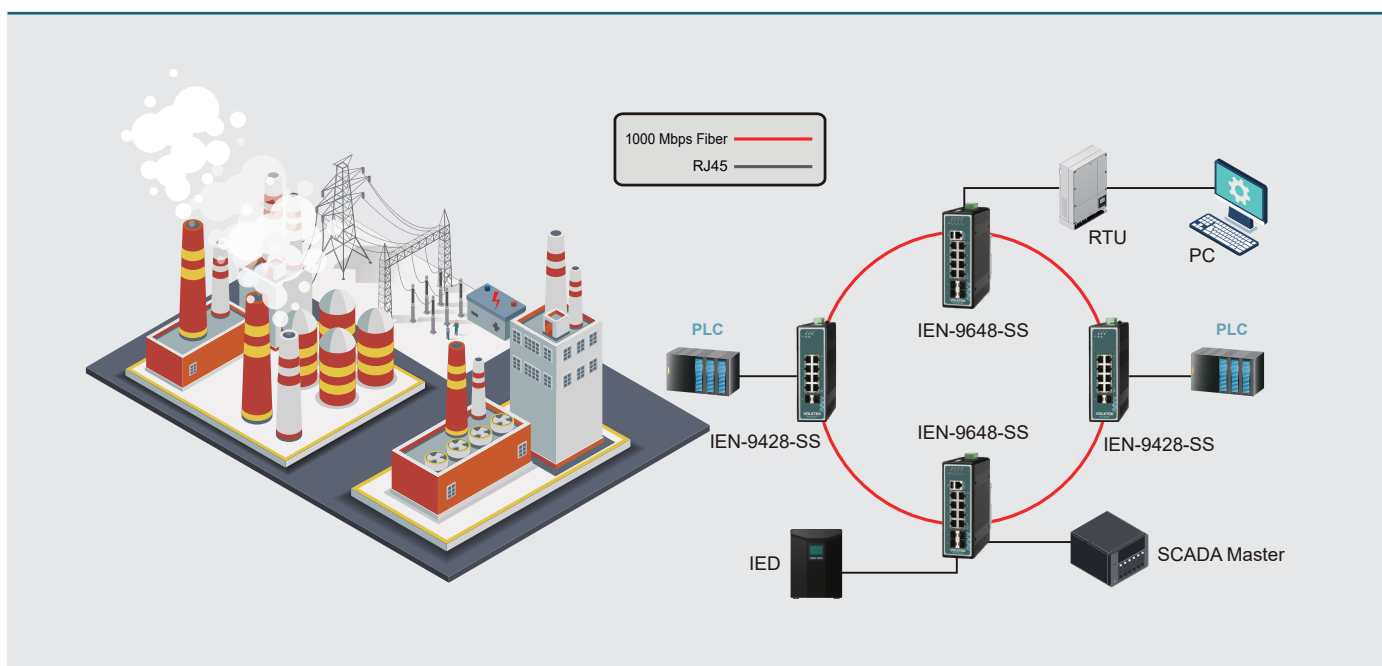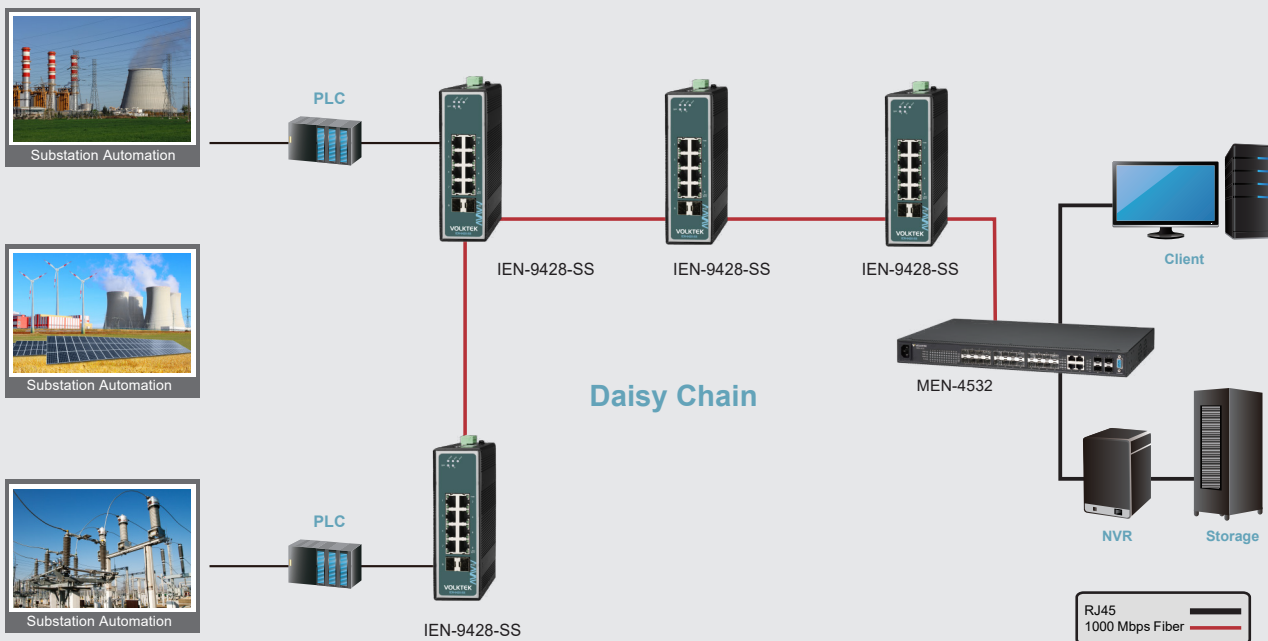
Eco-friendly Green Ethernet Design

To address the concerns of increasing power consumption, IEN-9428-SS implements IEEE 802.3az Energy Efficient Ethernet (EEE) compliant Green Ethernet technology. This eco-friendly design allows the switch to automatically adjust power consumption and conserve energy during the periods of low data activity. This helps you to lower the energy usage significantly and help you save operational costs.

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Applications

IEN-96XX-SS/94XX-SS series switches are designed to meet the demands of power substation automation systems (IEC 61850-3, IEEE 1613). The switches guarantee reliable operation in critical environments where vibration and shock are common place. Gigabit backbone, redundant ring increase the reliability of the communications and reduce cabling and wiring costs. These are compliant with mandatory sections of EN 50155, covering operating temperature, power input voltage, surge, ESD, and vibration, as well as conformal coating and power insulation, making the switches suitable for a variety of Railway applications.

Substation Automation

PLC

IEN-9428-SS   IEN-9428-SS   IEN-9428-SS

Client

Substation Automation

MEN-4532

Daisy Chain

NVR   Storage

PLC

IEN-9428-SS

Substation Automation

RJ45	
1000 Mbps Fiber	

IEN-9428-SS

1000 Mbps Fiber	
RJ45	

RTU

PC

PLC   IEN-9648-SS   PLC

IEN-9428-SS   IEN-9648-SS   IEN-9428-SS

IED   SCADA Master

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Specifications

Standards	
IEEE 802.3	10BASE-T
IEEE 802.3u	100BASE-TX/FX
IEEE 802.3ab	1000BASE-T
IEEE 802.3z	1000BASE-SX/LX
IEEE 802.3x	Flow Control
IEEE 802.1ab	LLDP
IEEE 802.3az	Energy Efficient Ethernet (EEE)

Interface	
Ports	8 x 10/100/1000BASE-T (RJ45)
	2 x 100FX/Gigabit SFP Slots
DIP Switch	Power voltage drop alarm setting (PWR & RPS), Broadcast strom control setting (STORM), Port-based QoS setting (QoS on P1 & P2), Fiber port speed setting (100FX on P9 & P10)
LED Panel	PWR, RPS, ALM, SFP, 1000, LNK/ACT

Features	
Performance	Max Jumbo Frame Size: 10KBytes
	MAC Table Entries: 8K
	Switch Fabric: 20Gbps
	L2 Forwarding Rate: 14.8Mpps

Power	
Input Voltage	12V~60VDC
Power Consumption	System: 13W
Alarm Relay	One relay output with current carrying capacity of 1 A @ 24V DC

Note :

*Specifications subject to change without notice.

*Industrial SFP with wide operating temperature from -40°C~85°C is available upon request

Mechanical and Environment	
Housing	Aluminum Case (IP30 protection)
Mounting Kit	DIN-Rail, Wall Mount/Rack-mount
Operating Temperature	-40°C~75°C
Storage Temperature	-40°C~85°C
Operating Humidity	5 to 95% RH (non-condensing)
Storage Humidity	5 to 95% RH (non-condensing)
Weight	930g
Dimension (WxHxD)	50x160x120 mm (1.97x6.3x4.72 inch)

Certifications		
CE	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
Freefall		IEC 60068-2-32
Vibration		IEC 60068-2-6
Power Substation		IEEE1613 IEC61850-3

Optional Accessories	
Power Supply	SDR-240P-48: 240W, 48V DC, 240W Single Output Industrial DIN Rail with PFC Function
Power Adapter	GST-160: 160W, 52V, Industrial Grade AC Power Adapter for PoE Switch, -30°C ~ 75°C
DIN-Rail Holder	DR-160 (for GST-160)
GBM-104	1000BASE-SX 1.25G, Multi-mode SFP, 500m
GBM-104-2	1000BASE-SX 1.25G, Multi-mode, 3.3V, 1310nm, 2Km
GBM-104-10	1000BASE-LX 1.25G, Single mode SFP, 10Km
GBM-123	1000BASE-LX Bi-di Single Mode SFP Module, 10Km

Dimension