

## IEN-9648-SS

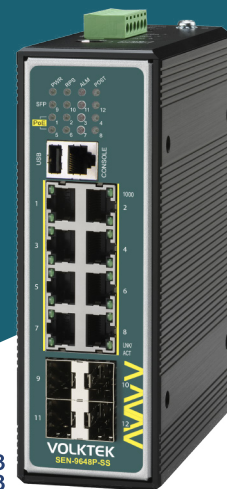
Managed 8 x 10/100/1000 RJ45 & 4 x GbE SFP  
Industrial Switch, Substation Approval, Aluminum

### Description

Volktek's IEN-9648-SS Managed Industrial switch is equipped with 8 port 10/100/1000BASE-T and 4 Gigabit SFP slots. Engineered with hardened components and enclosed in a rugged case, the switch can operate in wide temperatures from -40°C to 75°C and also has an excellent tolerance capability to high vibration and shock. As an Industrial switch, the IEN-9648-SS suits your heavy industrial environments and yet contains all the standard features of other switches.

Flexible management functions of the switch via Web and SNMP simplifies configuration of switch features such as port settings, security, QoS, VLAN etc. and reduces management burden. In case of any link failure, the IEN-9648-SS's Xpress Ring technology offers a very fast recovery time of less than 10ms to ensure continuous network services. The switch offers hassle-free fiber deployments which makes it an ideal solution for industrial network applications. The IEN-9648-SS provides most rugged solutions for managing your network and is a reliable option for Industrial networks.

IEEE 1613  
IEC 61850-3



### Features Highlight

#### Robust Switch Performance

IEN-9648-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.



#### Redundant Power Supply

Considering the power failure impact in surveillance applications, IEN-9648-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 troubleshooting.

#### Advanced QoS Support

Understanding the need of smoother data transmissions for specific surveillance applications, the IEN-9648-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.

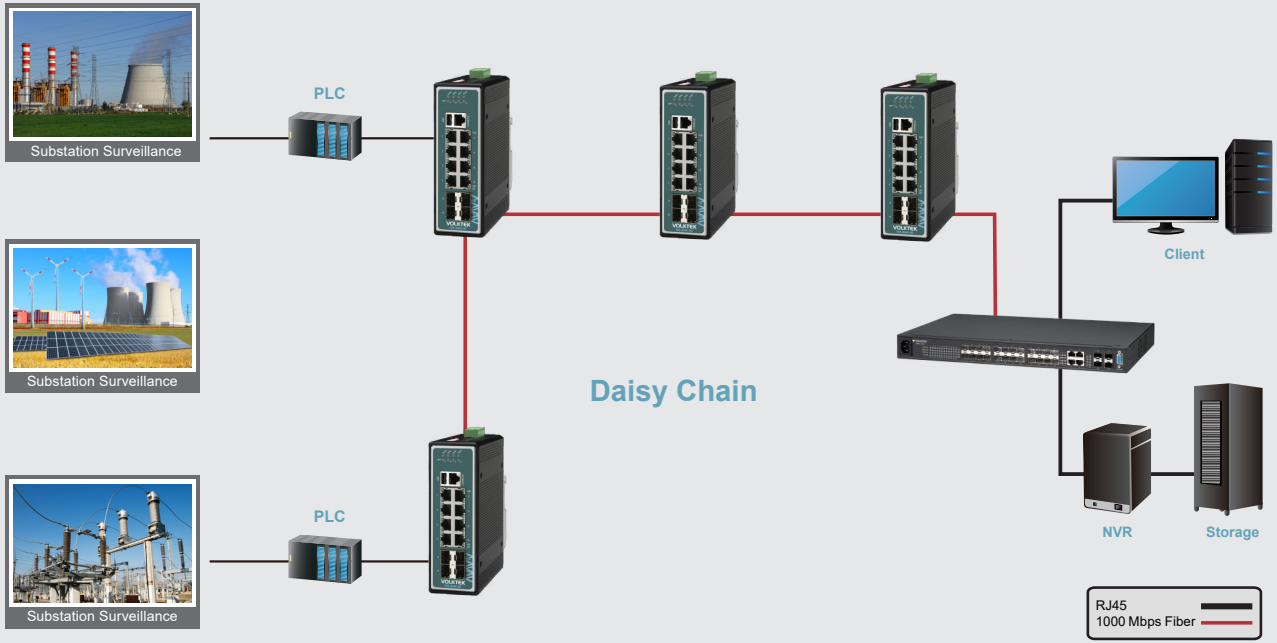
#### Eco-friendly Green Ethernet Design

To address the concerns of increasing power consumption, IEN-9648-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.

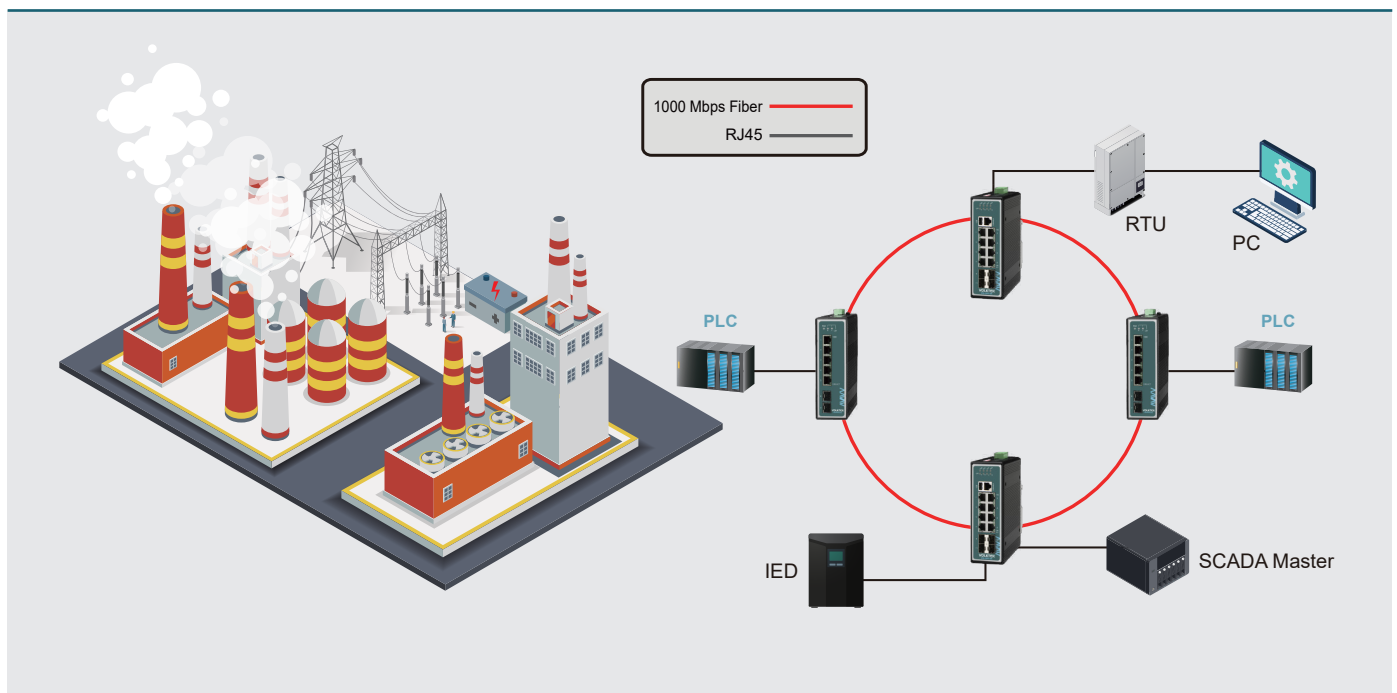


## Applications

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.



## Applications



## Specifications

Standards	
IEEE 802.3	10BASE-T
IEEE 802.3u	100BASE-TX
IEEE 802.3ab	1000BASE-T
IEEE 802.3z	1000BASE-SX/LX
IEEE 802.3x	Flow Control
IEEE 802.3ad	Link Aggregation
IEEE 802.1AB	LLDP
IEEE 802.1D	STP
IEEE 802.1w	RSTP
IEEE 802.1s	MSTP
IEEE 1588v2	PTP
IEEE 802.1p	Class of Service
IEEE 802.1Q	VLAN Tagging
IEEE 802.1X	Port Authentication
IEEE 802.3az	Energy Efficient Ethernet (EEE)
Interface	
Ports	8 x 10/100/1000BASE-T (RJ45)
	4 x Gigabit SFP Slots
	1 x RJ-45 Console Port
	1 x USB Port
DIP Switch	Primary/Redundant Power Voltage Drop Alarm setting
LED Panel	PWR, RPS, ALM, POST, 1000, 10/100
Features	
Performance	Jumbo frame Size: 10KBytes
	MAC Table Entries: 16K
	Active VLAN: 4K
Management	Switch Fabric: 24Gbps
	L2 Forwarding Rate: 17.9Mpps
	CLI, Telnet/SSH, HTTP/HTTPS, SNMP v1/v2c/v3, SNMP Trap, MVLAN, Firmware Upgradable, Configuration Backup/Restore, Syslog, SNT, LLD, 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
Power	
Input Voltage	Primary inputs : 12V~60VDC Redundant inputs : 12V~60VDC
Power Consumption	System : 18W
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
Storage Temperature	-40°C~85°C
Operating Humidity	5 to 95% RH (non-condensing)
Storage Humidity	5 to 95% RH (non-condensing)
Weight	955g
Dimension (WxHxD)	50x160x120mm (1.97x6.3x4.72inch)
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
Freefall	IEC 60068-2-32
Vibration	IEC 60068-2-6
Power Substation	IEEE1613 IEC61850-3
Optional Accessories	
Power Supply	SDR-480P-48: 480W DIN-Rail 48V DC Industrial Power Supply, -25°C~70°C
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 is available upon request.

\* Specifications subject to change without notice.

## Dimension

