

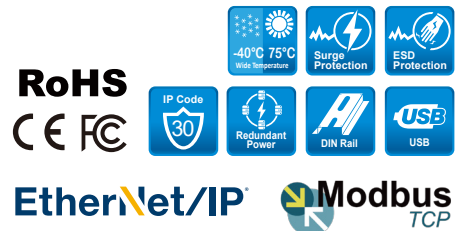
# IEN-8648A-EIP

Managed 8 x 10/100/1000 RJ45+ 4 x GbE SFP  
Industrial Switch, EtherNet/IP Approval

## Description

Volktek's IEN-8648A-EIP Managed Industrial switch is EtherNet/IP certified 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-8648A-EIP suits your heavy industrial environments and yet contains all the standard features of other switches. The EtherNet/IP enabled switches can be used in automation for greater operational management and network visibility.

The EIP (Ethernet Industrial Protocol) certified switches enable the real-time communication for automation control. EIP is an application layer protocol, transfers data by using TCP/IP stack. Basically, a factory floor consists of different networks with diversified procedures and tools. EIP converges them into one network and operates with one set of tools within a single access point without using vendor specific software. EIP provides a seamless communication between top floor to shop floor with improved response time and greater data throughput.



## Features Highlight

### Robust Switch Performance

IEN-8648A-EIP 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.



### Port-Based VLAN, IEEE 802.1Q VLAN, GARP and GVRP to ease network planning

Planning, designing and managing complex networks is now simplified with IEN-8648A-EIP. The switch supports VLANs which segment large networks into smaller parts and organize them into separate broadcast domains. This helps the administrators to control the traffic patterns, limit broadcast traffic and reduce broadcast storms. As the network expands, to provide control of increased VLANs, the switch offers GVRP feature, an application protocol of GARP, which registers devices and its ports depending on their availability. This feature prevents unnecessary network traffic transmitted by unregistered users and simplifies the network design irrespective of its size.

### Redundant Power 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 IEN-8648A-EIP'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 source will enable the switch to provide continuous service.

### EIP Networks: "Fireworks" for Industrial Automation

EtherNet/IP devices have electronic data sheets (EDS) files. These are specially formatted text files, as defined by the Control and Information Protocol (CIP) specifications, which represent the object model of the device. EDS file contains details about the readable and configurable parameters of the EtherNet/IP device. They also provide information about the I/O connections the device supports and the content of the associated data structures.

EtherNet/IP uses TCP/IP and UDP to send messages between one or more devices by using explicit and implicit message passing. For real-time messaging, EIP employs implicit messaging using UDP over IP and the data field contains no protocol information, only real time I/O data. Hence, the processing time is minimized as the meaning of the data is predefined at the time of connection.

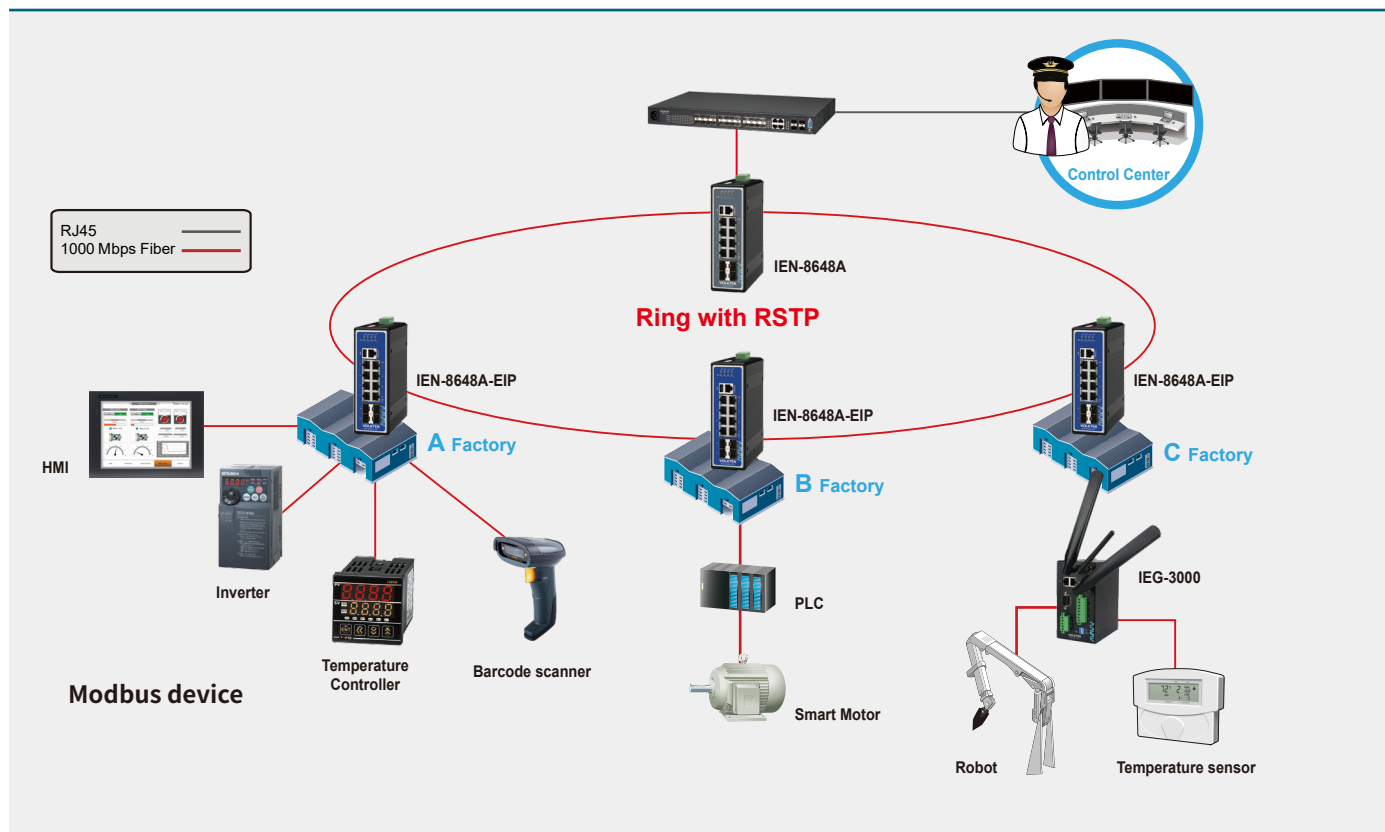


## Features Highlight

### Proprietary Technology Delivers Redundant Ring and Fast Recovery

Even a few seconds of missed communications due to link failures can cause inconvenience, and recovery can become critical. Volktek's proprietary Xpress Ring in IEN-8648A-EIP rapidly reacts to such link failures and recovers in less than 50ms, a much faster fail-over time to support nonstop transmissions. This is critical for networks handling heavy video and data traffic. In addition, ERPS, Dual Homing, LACP and RSTP provide a highly reliable network with redundancy connections whenever required and guarantee continuous network uptime.

## 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 802.3	Nway Auto-negotiation
IEEE 802.3x	Flow Control
IEEE 802.3ad	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	
Ports	8 x 10/100/1000BASE-T (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, SFP, 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, SNMP Trap, MVLAN, Firmware Upgradable, Configuration Backup/Restore, Syslog, SNTIP, PTP, LLDP, UDLD, DHCP Client/Relay/Option82, e-mail Alarm, Server Control, Mirroring, DDM, SFP Info, Auto-Provisioning, RMON Statistics, ModbusTCP
	STP/RSTP/MSTP, Xpress Ring, ERPS v1/v2, Dual Homing, LACP, Static Trunk, 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, IGMP Proxy/Filter, MLD, MVR, QoS, Flow Control, Rate Limit, Storm Control, Traffic Monitor, Port Isolation, Loop Detection, Static Route
Security	ACL, SSH, HTTPS, SNMPv3, Port-based 802.1x, TACACS+, Port Security, MAC Search, Refusal MAC, Sticky MAC, Static MAC, DHCP Snooping, DHCP Sever Screening, ARP Inspection, BPDU Guard/Filter, Root Guard, Managed Host

Power	
Input Voltage	Primary inputs : 12~60VDC
	Redundant inputs : 12~60VDC
Connection	Terminal Block
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 (-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 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
Freefall	IEC 60068-2-32
Vibration	IEC 60068-2-6
Ordering Information	
IEN-8648A-EIP	Managed 8 x 10/100/1000 RJ45 & 4 x GbE SFP Switch, EtherNet/IP Approval, -40°C~75°C (-40°F~167°F)
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
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)

\* 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

