VOLKTEK

IEN-8648A

Managed 8 x 10/100/1000 RJ45 & 4 x GbE SFP Industrial Switch

Description

Volktek's IEN-8648A 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 80°C and also has an excellent tolerance capability to high vibration and shock. As an Industrial switch, the IEN-8648A 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-8648A's Xpress Ring technology offers a very fast recovery time of less than 50ms to ensure continous network services. The switch offers hassle-free fiber deployments which makes it an ideal solution for industrial network applications. The IEN-8648A provides most rugged solutions for managing your network and is a reliable option for Industrial networks.

Modbus TCP

RoHS

Features Highlight

Robust Switch Performance

IEN-8648A is built with IP40 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. 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.

Code Redundancy

The configuration file of the switch may be lost due to various reasons such as upgrading to a new firmware or power fluctuations and can lead to network down situation. To avoid such situations, the IEN-8648A provides a perfect alternate solution using its code redundancy feature with its dual flash. The dual flash memory allows the switch to store a backup file of primary configuration on one flash space. Even if the primary configuration file is lost, the backup file will enable the switch and ensure that your network is running continuously.

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'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.

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Features Highlight

Efficient network monitoring and proactive capability

In a network, the issues that impact network performance can be quickly resolved with the IEN-8648A's most accepted and enhanced traffic management, monitoring and analysis protocols such as SNMP and SFP DDMI (Digital Diagnostics Monitoring Interface). SNMP allows to centrally manage different levels in a network and SFP DDMI enabled on the switch, administrators can easily monitor and troubleshoot SFP parameters such as temperature, voltage, laser bias current and evaluate SFP's working condition. User can ensure a reliable network by identifying connectivity and performance issues and isolating the problem remotely on individual switches.

Comprehensive QoS Mechanisms to Assign Priority

Industrial applications need different levels of services delivered to them reliably without any transmission delays and interruptions. The IEN-8648A 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.

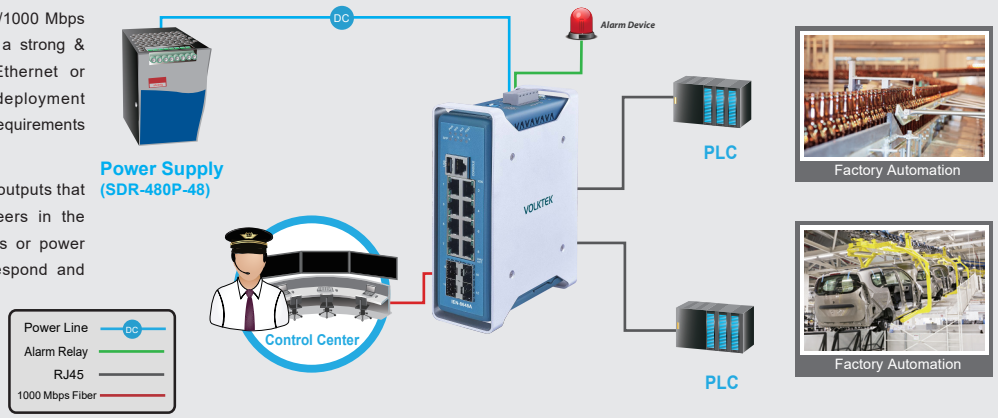
Proprietary Technology Delivers Redundant Ring and Fast Recovery

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 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

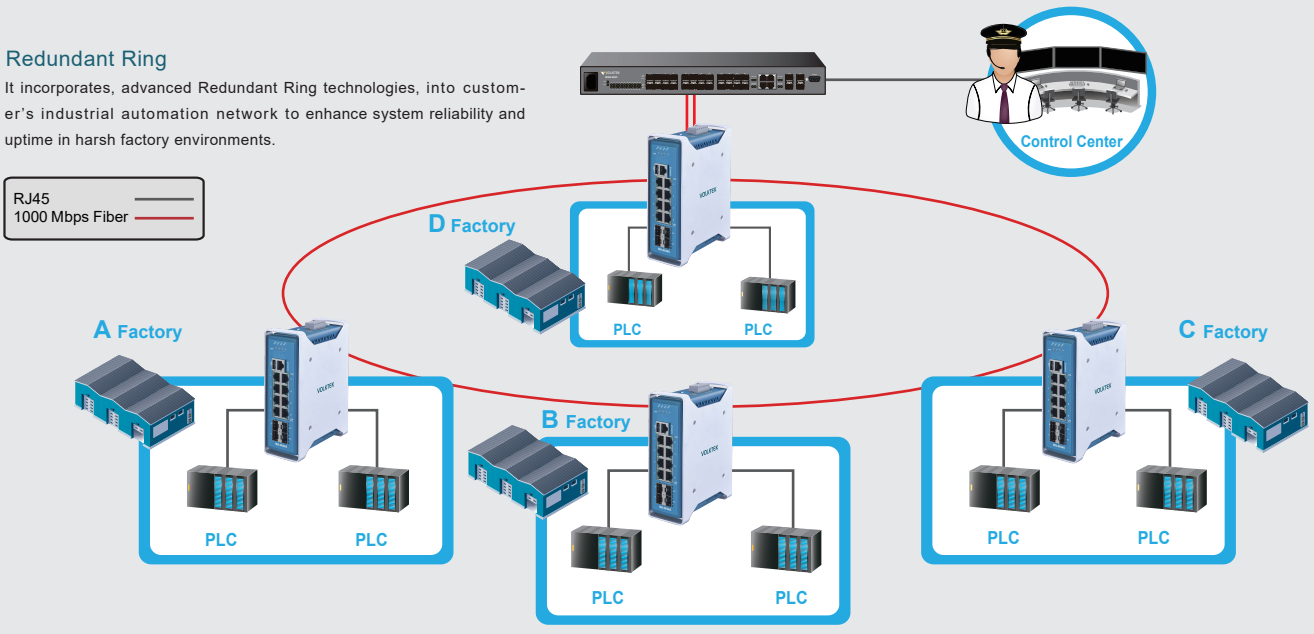
The IEN-8648A is compatible with 10/100/1000 Mbps through RJ45 transceivers to guarantee a strong & stable connection of Ethernet, Fast Ethernet or Gigabit Ethernet, providing flexible deployment options to satisfy industrial networking requirements

The IEN-8648A is built with relay contact outputs that trigger alarms to notify network engineers in the event of any malfunction of ports status or power failure, and enables them to quickly respond and resolve high priority issues.



Redundant Ring

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



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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 802.1AB	LLDP
IEEE 802.1ad	QinQ
IEEE 802.3az	Energy Efficient Ethernet (EEE)
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, 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, SNTP, PTP, LLDP, UDLD, DHCP Client/Relay/Option82, e-mail Alarm, Server Control, Mirroring, DDM, SFP Info, Auto-Provisioning, RMON Statistics, ModbusTCP
Reliability	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 (IP40 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 164.9 x 122.2 mm (1.97 x 6.49 x 4.81 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	Managed 8 x 10/100/1000 RJ45 & 4 x GbE SFP Industrial Switch
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.*

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Dimension