# VOLKTEK

# IEN-8424L

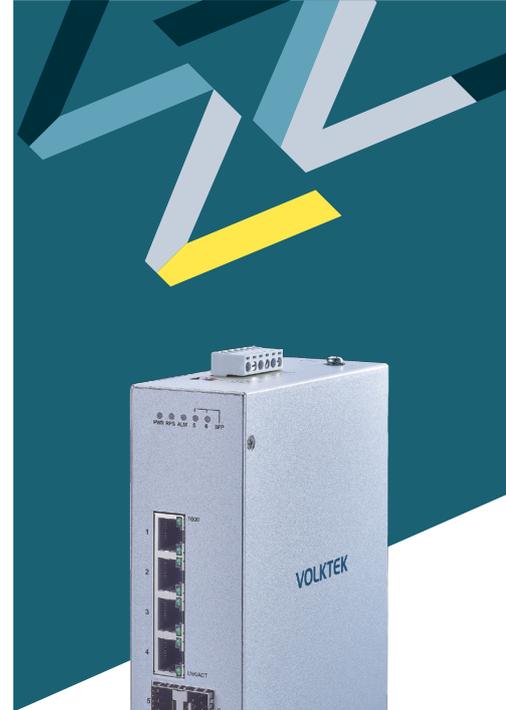## Lite Managed Gigabit Industrial Switch
## 4 x10/100/1000 RJ45 & 2 x FX/GbE SFP

## Description

The IEN-8424L is a Lite Managed Industrial Switch specifically designed to suit your heavy industrial environments and contains all necessary standard features to deploy in automation systems. Engineered with hardened components and enclosed in a rugged IP40 case, the IEN-8424L can operate in wide temperatures from -10°C to 60°C and has excellent tolerance capability to high vibration and shock.

Despite the fact that the IEN-8424L is perfectly designed to operate in extreme industrial conditions; the switch is equipped with a variety of management functions that let you configure communication parameters as you desire and monitor the network behavior in number of different simple ways. In addition, the switch is built with dual redundant power inputs to ensure reliability and maximize network up time. Other integrated features of the switch such as Auto-negotiation, Rate limitation and QoS optimizes your network performance and provide a secure network, offering a cost-effective solution in a small but powerful package.

**RoHS** CE FC | -10°C 60°C | IP Code 40 | Surge Protection | ESD Protection | Redundant Power | GREEN Solutions | DIN Rail

## Features Highlight

### Introducing the LAMUNGAN

LAMUNGAN is Volktek's embedded Element Management System that allows users to view the topology map of connected devices and neighboring switches along with the link status. Its LLDP feature allows it to advertise its identities and capabilities on the wired Ethernet. This map like feature simplifies the network connection viewing and helps patterning by clicking on the icon.
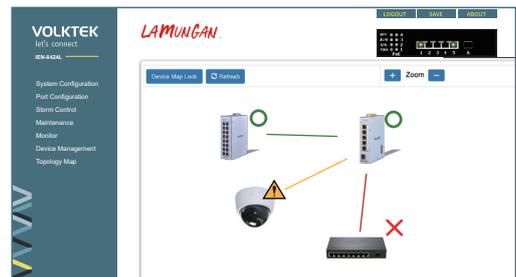
### Dashboard

The dashboard is an intelligent system provides apparent views of real-time switch parameters in an engaging, easy-view format for the end-users. Dashboard's at-a-glance designs with the color scheme enable the users for easy understanding and troubleshooting within the device and connected network.

### Wizard

The wizard is a smart assistant who provides the switch setup interfaces for the users. It allows users to go through a series of well-defined steps with easily manageable dialog boxes. It minimizes the complex setup procedures and easier to perform for an unfamiliar user.

### Robust Performance and Protection

Well-protected in an IP40 casing, the switch provides high level of immunity against EMI and EMS found in industrial environments. Along with those, the IEN-8424L is built with various protection features such as ESD Protection, Surge Protection, Over Current Protection, Reverse Polarity Protection and Short Circuit Protection to ensure continuous operation of mission-critical applications even in unstable power conditions.

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## Features Highlight

### Strong Protection Against Electrical Threats

IEN-8424L is incorporated with enhanced Reverse Polarity Protection function to provide safety against wrong combinations of positive and negative poles, which prevents huge internal circuitry damage. The Over Current Protection is designed with a secured fuse component to safeguard the device during sudden increase of current flow. In addition, a Power Isolation concept is used to separate the transmitted data from grounded noise enabling steady and noise free transmission.
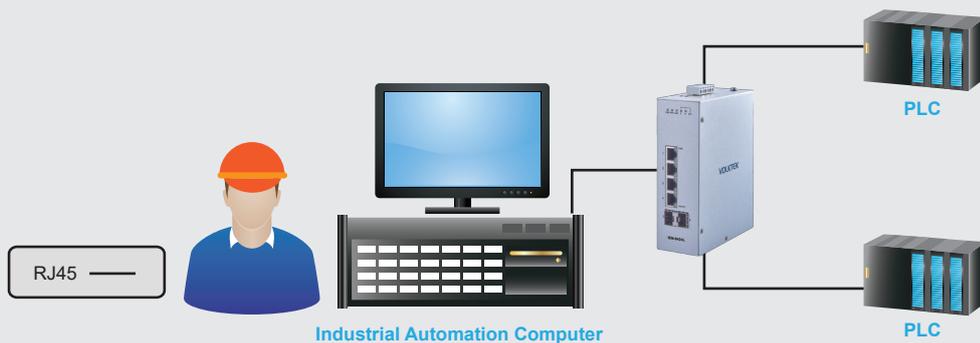
### Redundant Power Input

When taking the failure impact of mission-critical applications into consideration, the IEN-8424L development uses a standard of industrial terminal block along with wide-range redundant power inputs extending from 12 up to 60V DC. The redundant power provides continuous service even if the primary power fails, which results in a reliable and consistent network. In addition to this, the switch is also equipped with an alarm feature to notify the occurrence of power failure. This solution provides you with a quicker respond time and faster troubleshooting.

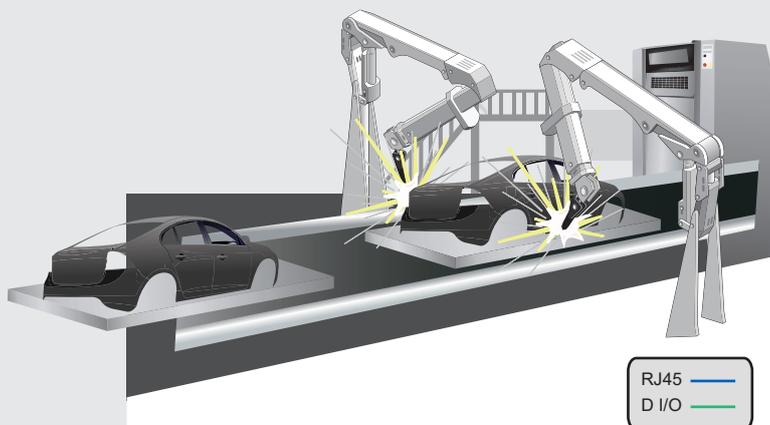| Primary Power Input | Secondary Power Input |
| --- | --- |
| Alarm | DC |
| 48V DC Power | 24V DC Power |

## Applications

In designing the IEN-8424L, the absolute necessary management functions were integrated to enable the configuration and monitoring of the switches. This allows the IEN-8424L switches to bring added value to areas where unmanaged switches cannot deliver the required performance. It can also be used when fully-managed switches are not needed, due to superfluous functionality or complex operation.

RJ45 ——

**Industrial Automation Computer**

**PLC**

**PLC**

Factory Automation

Factory Automation

## Factory Automation

RJ45 ——
D I/O ——

▶ **Relay Output Alarm for Power Failure**

The IEN-8424L is built with relay contact outputs that trigger alarms to notify network engineers in the event of power failure, and enables them to quickly respond and resolve high priority issues.
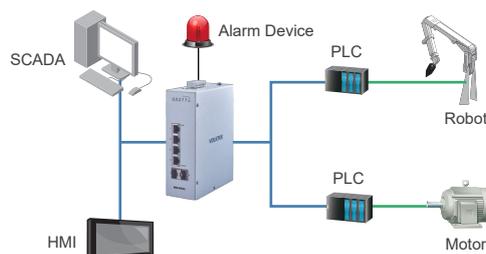
SCADA
Alarm Device
PLC
Robot
PLC
HMI
Motor

▶ **Redundant Power input**

The IEN-8424L has dual power inputs to provide a redundant system against power supply disruptions. In case of one power source failure, the other acts as a backup to remain continuous network power for critical industrial applications.

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## Specifications

| Standards | |
|---|---|
| IEEE 802.3 | 10BASE-T |
| IEEE 802.3u | 100BASE-TX |
| IEEE 802.3ab | 1000BASE-T |
| IEEE 802.3u | 100BASE-FX |
| IEEE 802.3z | 1000BASE-SX/LX |
| IEEE 802.3 | Nway Auto-negotiation |
| IEEE 802.3x | Flow Control |
| IEEE 802.1ab | LLDP |
| IEEE 802.1az | Energy Efficient Ethernet (EEE) |
| IEEE 802.1AB | LLDP |
| IEEE 802.1D | STP |
| IEEE 802.1w | RSTP |
| IEEE 802.1p | Class of Service |
| IEEE 802.1Q | VLAN tagging |
| IEEE 802.1X | Port Authentication |

| Interface | |
|---|---|
| Ports | 4 x 10/100/1000BASE-T (RJ45) |
| | 2 x 100FX/GbE SFP |
| DIP Switch | Primary/Redundant Power Voltage Drop Alarm setting |
| LED Panel | PWR, RPS, ALM, SFP, 1000, LNK/ACT |

| Features | |
|---|---|
| Performance | Jumbo frame Size: 10KBytes |
| | MAC Table Entries: 8K |
| | Switch Fabric: 12Gbps |
| Management | CLI, Telnet, SSH, HTTP, HTTPs, SNMP v1/v2c, SNMP v3, SNMP Trap, Management VLAN (MVLAN), Firmware upgradable, Configuration Backup/Restore, Syslog, SNTP, LLDP, DHCP Client, Port Mirroring Server (service) control, Port Utilization, Alarm Information, ModbusTCP, Topology Map, Dashboard, Installation Wizard Port Configuration (enable/disable,speed/duplex), ONVIF, Port Statistic, System reboot from remote side User Account with authority |
| Reliability | STP/RSTP, ERPS v1/v2 |
| VLAN | 802.1Q VLAN, Port-based VLAN (Port Isolation) |
| Traffic Control | 802.1p QoS, Flow Control, Traffic Monitor (Abnormal Traffic Detection), Storm Control, Port Isolation, Loop Detection Storm alarm threshold per port |
| Security | ACL (Access control list), Port Security (MAC limit) Port-based 802.1X, BPDU Guard BPDU Filter, ROOT Guard, Trusted Managed Host |

| Power | | |
|---|---|---|
| Input Voltage | Primary inputs: 20~60VDC | |
| | Redundant inputs: 20~60VDC | |
| Connection | Terminal Block | |
| Power Consumption | System: 10W | |
| Alarm Relay | One relay output, 1 A @ 24V DC | |

| Mechanical and Environment | |
|---|---|
| Housing | Metal (IP40 Protection) |
| Mounting | DIN-Rail |
| Operating Temperature | -10°C~60°C (14°F~140°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 | 430 g (0.95 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) |
| Shock | IEC 60068-2-27 |
| Freefall | IEC 60068-2-32 |
| Vibration | IEC 60068-2-6 |

| Ordering Information | |
|---|---|
| IEN-8424L | Lite Managed 4 x 10/100/1000 RJ45 & 2 x FX/GbE SFP Switch |

| Optional Accessories | |
|---|---|
| Power Supply | SDR-120-48: 120W DIN-Rail 48V DC Industrial Power Supply, -25°C~70°C (-13°F~158°F) |
| GBM-104 | 1000BASE-SX 1.25G, Multi-mode SFP, 500 m |
| GBM-123TS | 1000BASE-LX, Bi-Di SFP TX:1310/RX:1550 Single Mode, 10 km, 0°C~70°C (32°F~158°F) |
| GBM-123RS | 1000BASE-LX, Bi-Di SFP TX:1550/RX:1310 Single Mode, 10 km, 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.
* Specifications subject to change without notice.

## Dimension