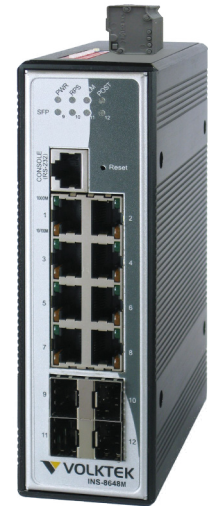


INS-8648M

Managed Industrial Ethernet Switch

8-port 10/100/1000BASE-T + 4 SFP Gigabit Ports



Description

Volktek's INS-8648M 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. Under DNV (Det Norske Veritas) certified for Industrial switch, the INS-8648M suits your heavy industrial environments in maritime & offshore applications and yet contains all the standard features of a managed switch.

Flexible management functions of the switch via Web and SNMP simplifies configuration of switch features such as port settings, security, QoS, VLANs etc. and reduces management burden. In case of any link failure, the INS-8648M'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 INS-8648M provides most rugged solutions for managing your network and is a reliable option for industrial networks.

Features Highlight

RoHS CE FC



Robust Switch Performance

INS-8648M 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.

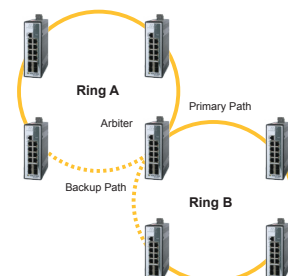


Port-based VLAN, IEEE 802.1Q VLAN, GARP and GVRP to ease network planning

Planning, designing and managing complex networks is now simplified with INS-8648M. 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 and deregisters 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.

Network Redundancy

- Volktek's industrial switches redundant ring architecture enhances network reliability and make them ideal for deploying secure automation network systems in tough outdoor industrial environments, such as ITS, maritime, mining, and manufacturing systems.
- New generation of Volktek Xpress Ring delivers a various choice of ring topologies, including Xpress Ring, Dual Xpress Ring, Dual Homing, in rapid recovery time (<20ms @ 250 switches).
- G.8032v2, Ethernet Ring Protection Switching (ERPS) protocol, provides protection for Ethernet traffic in a multiple ring topology with fast recovery time (less than 50ms).



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 INS-8648M'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.

Certificates & Approvals

Marine

Type Approval

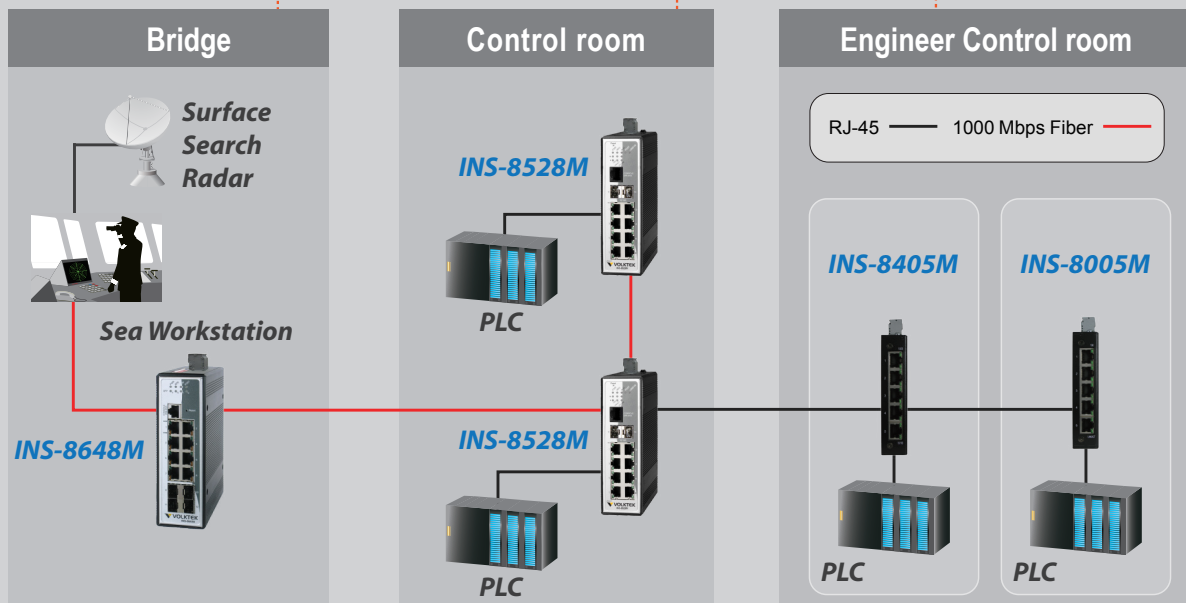


EN 60945



Marine Certifications Ensure Secure Communication Networks for Offshore Environments

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 802.1d	STP
IEEE 802.1w	RSTP
IEEE 802.1p	CoS Prioritization
IEEE 802.1q	VLAN Tagging
IEEE 802.1x	Port Authentication
IEEE 802.1ab	LLDP
Network management	
Configuration	Command Line Interface, Telnet, Web GUI, SNMP v1/v2c/v3, Management VLAN, Firmware Upgradable, Configuration Upload/Download
LAN	IEEE 802.1Q, GARP/GVRP support, Port-based VLAN, 4K active VLAN support
Redundancy	Xpress Ring, Dual Homing, ERPS, STP/RSTP, LACP
Security	Access Control List, SSH, Port Security, 802.1x Port Authentication, DHCP snooping, MAC limitation
Traffic control	IGMP snooping/Querier, QoS, Flow Control, Abnormal Traffic Detection, Rate Limitation, Storm Control, Port Isolation, Loop Detection
Diagnostics	LED status, SNMP trap, E-mail alarm, SFP DDMI, Port Mirroring, Real-time Statistic Traffic, SNTP, RMON, Syslog
Power	
Input Voltage	Primary inputs: 12~60VDC Redundant Inputs: 12~60VDC
Power Consumption	18W
Connection	6-pin Terminal block (Primary/Redundant Power Input)
Power Input Polarity Protection	Present
Power Voltage Drop Alarm	Present
ESD & Surge Protection	Present
Alarm Relay	One relay output with current carrying capacity of 1 A @ 24V DC
Interface	
Ports	8 x 10/100/1000Base-T (RJ-45) 4 x Gigabit SFP Slots 1 x Console Port (RJ-45 to RS-232)

Mechanical and Environment	
Housing	IP30 Protection
Mounting	DIN-Rail
Operating Temperature	-40°C~75°C
Storage Temperature	-40°C~85°C
Operating Humidity	10 to 95% RH (non-condensing)
Storage Humidity	5 to 95% RH (non-condensing)
Weight	860g
Dimension (WxHxD)	50x161.5x122.2mm (1.97x6.36x4.81 inch)
DIP Switch	Ports/PWR/RPS Alarm setting

Standards and Certifications	
EMI	FCC Part 15 Subpart B Class A EN55022 : class A EN 55011 : 2009 class A EN 61000-6-4
	EN 55024 EN 61000-6-2: IEC/EN 61000-4-2 (ESD) : Level 4 IEC/EN 61000-4-3 (RS) : Level 3 IEC/EN 61000-4-4 (Burst) : Level 3 IEC/EN 61000-4-5 (Surge) : Level 3 IEC/EN 61000-4-6 (CS) : Level 3

Approval & Test	
Marine	DNV 2.4, IEC-60945, IACS E10
Shock	IEC 60068-2-27
Freefall	IEC 60068-2-32
Vibration	IEC 60068-2-6

Ordering Information	
INS-8648M	8-port 10/100/1000Base-T + 4-slot Gigabit SFP Industrial Managed Switch

Optional Accessories	
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

*Industrial SFP with wide operating temperature from -40°C~85°C is available upon request.
*Specifications subject to change without notice.

Dimension

