

Product Selection Guide

Managed

Unmanaged

	Model	INS-840G	INS-8408A	INS-8415	INS-8008	INS-806	INS-802	INS-801
Interface	10/100Base-TX	-	-	-	8	8	-	5
	10/100/1000Base-T	16	8	5	-	-	-	-
	1000Base-SX/LX	-	-	1	-	-	2x100Base-FX	-
	1000Base-SX/LX	-	-	-	-	-	-	-
Hardware	Jumbo Frame (Bytes)	10K	9K	10K	1536	1518	1518	1536
	MAC Entries	8K	8K	8K	2K	2K	2K	1K
	Fan-less	Y	Y	Y	Y	Y	Y	Y
	Automatic MDI/MDI-X on RJ-45	Y	Y	Y	Y	Y	Y	Y
Power	Switching Fabric	32Gbps	16Gbps	12Gbps	1.6Gbps	1.6Gbps	2Gbps	1Gbps
	DC Power Input	12 ~ 60VDC	9 ~ 57VDC	20 ~ 57VDC	18 ~ 30VDC	9 ~ 48VDC	9 ~ 48VDC	9 ~ 48VDC
	Redundant Power	Y	Y	Y	N	Y	Y	Y
	Max Power Consumption	12W	5W	10W	4W	9W	12W	7W
Mechanical & Environmental	Dimensions (W x H x D)	50x162x120mm	50x116x100mm	31x136x105mm	110x73.8x23.4mm	50x162x120mm	50x162x120mm	50x120x100mm
	Weight	840g	480g	515g	145g	780g	780g	480g
	Operating Temperature	-40°C ~ 75°C	-40°C ~ 70°C	-20°C ~ 60°C	-40°C ~ 85°C	-40°C ~ 70°C	-40°C ~ 70°C	-40°C ~ 70°C
	Storage Temperature	-40°C ~ 85°C	-40°C ~ 85°C	-40°C ~ 85°C	-40°C ~ 85°C	-40°C ~ 85°C	-40°C ~ 85°C	-40°C ~ 85°C
	Operating Humidity	10% ~ 95% (no-condensing)	10% ~ 95% (no-condensing)	10% ~ 95% (no-condensing)	10% ~ 95% (no-condensing)	10% ~ 95% (no-condensing)	10% ~ 95% (no-condensing)	10% ~ 95% (no-condensing)
	Storage Humidity	5% ~ 95% (no-condensing)	5% ~ 95% (no-condensing)	5% ~ 95% (no-condensing)	5% ~ 95% (no-condensing)	5% ~ 95% (no-condensing)	5% ~ 95% (no-condensing)	5% ~ 95% (no-condensing)

	Model	INS-8405	INS-8005	INS-8405M	INS-8005M
Interface	10/100Base-TX	-	5	-	5
	10/100/1000Base-T	5	-	5	-
	100Base-FX	-	-	-	-
	100Base-FX	-	-	-	-
Hardware	Jumbo Frame (Bytes)	9K	1536	9K	1536
	MAC Entries	2K	2K	2K	2K
	Fan-less	Y	Y	Y	Y
	Automatic MDI/MDI-X on RJ-45	Y	Y	Y	Y
Power	Switching Fabric	10Gbps	1Gbps	10Gbps	1Gbps
	DC Power Input	9 ~ 48VDC	18 ~ 30VDC	9 ~ 48VDC	18 ~ 30VDC
	Redundant Power	N	N	N	N
	Max Power Consumption	4W	3W	4W	3W
Mechanical & Environmental	Dimensions (W x H x D)	24x110x74mm	24x110x74mm	24x110x74mm	24x110x74mm
	Weight	160g	145g	160g	145g
	Operating Temperature	-40°C ~ 70°C	-40°C ~ 70°C	-40°C ~ 70°C	-40°C ~ 70°C
	Storage Temperature	-40°C ~ 85°C	-40°C ~ 85°C	-40°C ~ 85°C	-40°C ~ 85°C
	Operating Humidity	10% ~ 95% (no-condensing)	10% ~ 95% (no-condensing)	10% ~ 95% (no-condensing)	10% ~ 95% (no-condensing)
	Storage Humidity	5% ~ 95% (no-condensing)	5% ~ 95% (no-condensing)	5% ~ 95% (no-condensing)	5% ~ 95% (no-condensing)

Product Selection Guide / Unmanaged Industrial Media Converters

	Model	Serial Media Converters		Ethernet Media Converters		Ethernet Media Converters	
		IRF-631	IRF-629	IMC-661	IMC-662	IMC-561	IMC-562
Interface	Serial	RS-232	RS-422/485	-	-	-	-
	10/100/1000Base-T	-	-	1	2	1	2
	100-FX/1000-SX/LX	1x100Base-FX	1x100Base-FX	1 slot 100FX/GbE	1 slot 100FX/GbE	1 slot 100FX/GbE	1 slot 100FX/GbE
	100-FX/1000-SX/LX	1x100Base-FX	1x100Base-FX	1 slot 100FX/GbE	1 slot 100FX/GbE	1 slot 100FX/GbE	1 slot 100FX/GbE
Hardware	Jumbo Frame (Bytes)	-	-	10K	10K	10K	10K
	MAC Entries	-	-	8K	8K	8K	8K
	Monitoring-Management	-	-	LFS/LLB	LFS/LLB	LFS/LLB	LFS/LLB
	Automatic MDI/MDI-X on RJ-45	-	-	Y	Y	Y	Y
Power	Dip Switch	Y	Y	Y	Y	Y	Y
	DC Power Input	9 ~ 32VDC	9 ~ 32VDC	20 ~ 57VDC	20 ~ 57VDC	20 ~ 57VDC	20 ~ 57VDC
	Redundant Power	N	N	Y	Y	Y	Y
	Max Power Consumption	3W	3W	5.5W	7W	5.5W	7W
Mechanical & Environmental	Dimensions (W x H x D)	90x32x110mm	90x32x110mm	50x120x100mm	50x120x100mm	50x116x100mm	50x116x100mm
	Weight	280g	280g	450g	460g	380g	390g
	Operating Temperature	0°C ~ 50°C	0°C ~ 50°C	-40°C ~ 80°C	-40°C ~ 80°C	-20°C ~ 60°C	-20°C ~ 60°C
	Storage Temperature	-40°C ~ 80°C	-40°C ~ 80°C	-40°C ~ 85°C	-40°C ~ 85°C	-40°C ~ 85°C	-40°C ~ 85°C
	Operating Humidity	10% ~ 95% (no-condensing)	10% ~ 95% (no-condensing)	10% ~ 95% (no-condensing)	10% ~ 95% (no-condensing)	10% ~ 95% (no-condensing)	10% ~ 95% (no-condensing)
	Storage Humidity	5% ~ 95% (no-condensing)	5% ~ 95% (no-condensing)	5% ~ 95% (no-condensing)	5% ~ 95% (no-condensing)	5% ~ 95% (no-condensing)	5% ~ 95% (no-condensing)

ABOUT VOLKTEK

Volktek is built around the belief that technology is for people, and with the ideal of making technology easy to use and affordable a principle reflected in the choice of name for the company. The name volktek is derived from the German word for "people" and "technology", and is formed by bringing these two together: thus People's Technology.

Volktek is positioned as a provider of optical Ethernet solutions. With a focus on designing and manufacturing optical Ethernet products, Volktek is ideally placed to meet the need of clients looking for high-quality, radiation-free data transmission over long distances.

*For more information, please contact us or visit our website: www.volktek.com

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Industrial Ethernet

Powering Next Generation
Automation Network Solutions



Product Selection Guide

Managed

Unmanaged

	Model	INS-8648	INS-8624	INS-8628	INS-8615	INS-8605	INS-8648M	INS-8628M
Interface	10/100Base-TX	-	-	8	-	-	-	8
	10/100/1000Base-T	8	4	-	5	5	8	-
	1000Base-SX/LX	4	-	-	-	-	4	-
	100-FX/1000-SX/LX	-	2	2	1	-	-	2
Hardware	Jumbo Frame (Bytes)	10K	10K	10K	10K	10K	10K	10K
	MAC Entries	16K	8K	16K	8K	8K	16K	16K
	Fan-less	Y	Y	Y	Y	Y	Y	Y
	Surge Protector	Y	Y	Y	Y	Y	Y	Y
Network Function	Automatic MDI/MDI-X on RJ-45	Y	Y	Y	Y	Y	Y	Y
	SFP Information	Y	Y	Y	Y	Y	Y	Y
	SFP DDMI	Y	Y	Y	Y	Y	Y	Y
	Switching Fabric	24Gbps	12Gbps	5.6Gbps	12Gbps	10Gbps	24Gbps	5.6Gbps
Traffic Management & QoS	Code Redundancy	Y	-	Y	-	-	Y	Y
	Static Link Trunking	Y	Y	Y	Y	Y	Y	Y
	LACP Support	Y	Y	Y	-	-	Y	Y
	STP/RSTP/MSTP	Y	STP/RSTP	Y	STP/RSTP	STP/RSTP	Y	Y
Network Security	Dual Homing	Y	Y	Y	-	-	Y	Y
	Xpress Ring	Y	-	Y	-	-	Y	Y
	Loop Detection	Y	Y	Y	Y	Y	Y	Y
	Auto-recovery Timer	Y	Y	Y	Y	Y	Y	Y
Network Management	IGMP Snooping	Y	Y	Y	Y	Y	Y	Y
	MVR	Y	-	Y	-	-	Y	Y
	GARP/GVRP	Y	-	Y	-	-	Y	Y
	Tag-based VLAN	Y	Y	Y	Y	Y	Y	Y
Power	Port-based VLAN	Y	Y	Y	Y	Y	Y	Y
	Active VLAN Support	4094	256	4094	256	256	4094	4094
	Management VLAN	Y	Y	Y	Y	Y	Y	Y
	Priority Queue	8 hardware	8 hardware	8 hardware	8 hardware	8 hardware	8 hardware	8 hardware
Mechanical & Environmental	Traffic Classification	Y	Y	Y	Y	Y	Y	Y
	Network Storm Control	Y	Y	Y	Y	Y	Y	Y
	Traffic Monitor with auto-recovery	Y	Y	Y	Y	Y	Y	Y
	Rate Limiting	Y	Y	Y	Y	Y	Y	Y
	802.1x Support	Y	Y	Y	-	-	Y	Y
	Port Security	Y	Y	Y	Y	Y	Y	Y
	Access Control	Y	Y	Y	-	-	Y	Y
	Port Isolation	Y	Y	Y	Y	Y	Y	Y
	DHCP Snooping	Y	-	Y	-	-	Y	Y
	ARP Inspection	Y	-	Y	-	-	Y	Y
	SSH Support	Y	Y	Y	Y	Y	Y	Y
	SNMP	Y	Y	Y	Y	Y	Y	Y
	SNMP Trap	Y	Y	Y	Y	Y	Y	Y
	RMON Statistics	Y	Y	Y	Y	Y	Y	Y
	Mirroring	Y	Y	Y	Y	Y	Y	Y
	SNTF	Y	Y	Y	Y	Y	Y	Y
	LLDP	Y	Y	Y	Y	Y	Y	Y
	eMail Alarm	Y	Y	Y	Y	Y	Y	Y
	Local Console	Y	-	Y	-	-	Y	Y
	Telnet CLI	Y	Y	Y	Y	Y	Y	Y
	Web-based GUI	Y	Y	Y	Y	Y	Y	Y
	Firmware Upgradeable	Y	Y	Y	Y	Y	Y	Y
	Configuration Backup/Restore	Y	Y	Y	Y	Y	Y	Y
	Alarm Warning	Y	Y	Y	Y	Y	Y	Y
Power	DC Power Input	12 ~ 60VDC	20 ~ 57VDC	12 ~ 60VDC	20 ~ 57VDC	20 ~ 57VDC	12 ~ 60VDC	12 ~ 60VDC
	Redundant Power	Y	Y	Y	Y	Y	Y	Y
	Max Power Consumption	18W	10W	12W	10W	10W	18W	12W
	Dimensions (W x H x D)	50 x 162 x 120 mm	50 x 162 x 120 mm	50 x 162 x 120 mm	31 x 136 x 110mm	31 x 136 x 110mm	50 x 162 x 120 mm	50 x 162 x 120 mm
Mechanical & Environmental	Mouting	DIN-Rail			DIN-Rail			
	Operating Temperature	-40°C ~ 75°C			-20°C ~ 60°C			-40°C ~ 75°C
	Storage Temperature	-40°C ~ 85°C			-40°C ~ 85°C			-40°C ~ 85°C
	Operating Humidity	10% ~ 95% (no-condensing)			10% ~ 95% (no-condensing)			10% ~ 95% (no-condensing)
	Storage Humidity	5% ~ 95% (no-condensing)			5% ~ 95% (no-condensing)			5% ~ 95% (no-condensing)
	Storage Humidity	5% ~ 95% (no-condensing)			5% ~ 95% (no-condensing)			5% ~ 95% (no-condensing)

Hardware Highlight



Robust Switch Performance

- Volktek industrial switches are built with field-hardened components and enclosed in rugged IP30 grade case to can withstand harsh industrial environments such as constant vibration, heavy shocks, humidity and even extreme temperatures ranging from -40°C to 75°C.
- Volktek industrial switches are built with industrial grade design in order to ensure continuous operation of mission-critical applications even in tough and unstable industrial environments.

Industrial Grade EMC Protection Design

- Volktek industrial switches are built with robust protection features including surge protection and ESD protection to deliver increased level of immunity against industrial voltage transients.
- Volktek industrial switches comply with Industry standards EN61000-6-2 and EN61000-6-4 to withstand upto 8KV high ESD protection level and dual power inputs to provide a very high reliable system.



Marine Certifications Secure Communication Networks

- Volktek industrial switches are DNV and GL certified, helping ensure reliable operation in Marine and Offshore environments.
- Volktek Magaged gigabit switch form a gigabit redundant backbone to handle critical communication between sonar system and the bridge.

Managed Switches

- INS-8648**
Managed Industrial Ethernet Switch
8-port 10/100/1000Base-T
+ 4 SFP Gigabit Ports
- INS-8528**
Managed Industrial Ethernet Switch
8-port 10/100Base-TX
+ 2-slot 100FX/Gigabit SFP
- INS-8605**
Managed Industrial Ethernet Switch
5-port 10/100/1000Base-T
- INS-8615**
Managed Industrial Ethernet Switch
5-Port 10/100/1000Base-T + 1-slot
Gigabit SFP

DNV Switches

- INS-8648M**
Managed Industrial Ethernet Switch
8-port 10/100/1000Base-T
+ 4-slot Gigabit SFP
- INS-8528M**
Managed Industrial Ethernet Switch
8-port 10/100Base-TX
+ 2-slot 100FX/Gigabit SFP
- INS-8405M**
Unmanaged Industrial
Gigabit Ethernet Switch
5-port 10/100/1000Base-T
- INS-8005M**
Unmanaged Industrial
Ethernet Switch
5-port 10/100Base-TX

Unmanaged Media Converters

- IMC-661** -40~75°C
Unmanaged Industrial Ethernet Media Converter
1-port 10/100/1000Base-T + 1-slot 100FX/Gigabit SFP
- IMC-662** -40~75°C
Unmanaged Industrial Ethernet Media Converter
2-port 10/100/1000Base-T + 1-slot 100FX/Gigabit SFP
- IMC-561** -20~60°C
Unmanaged Industrial Ethernet Media Converter
1-port 10/100/1000Base-T + 1-slot 100FX/Gigabit SFP
- IMC-562** -20~60°C
Unmanaged Industrial Ethernet Media Converter
2-port 10/100/1000Base-T + 1-slot 100FX/Gigabit SFP



Unmanaged Switches

- INS-801**
Unmanaged Industrial Ethernet Switch
5-port 10/100Base-TX
- INS-802**
Unmanaged Industrial Ethernet Switch
8-port 10/100Base-TX + 2-slot 100Base-FX SFP
- INS-806**
Unmanaged Industrial Ethernet Switch
8-port 10/100Base-TX
- INS-840G**
Unmanaged Industrial Gigabit Ethernet Switch
16-port 10/100/1000Base-T
- INS-8005**
Unmanaged Industrial Ethernet Switch
5-port 10/100Base-TX
- INS-8405**
Unmanaged Industrial Gigabit Ethernet Switch
5-port 10/100/1000Base-T
- INS-8008**
Unmanaged Industrial Ethernet Switch
8-port 10/100Base-TX
- INS-8415**
Unmanaged Industrial Gigabit Ethernet Switch
5-port 10/100/1000Base-T + 1-slot Gigabit SFP
- INS-8408A**
Unmanaged Industrial Gigabit Ethernet Switch
8-port 10/100/1000Base-T



Factory Automation



- Key Features**
- ✓ High Mean Time Between Failures (MTBF) and withstand 5 years warranty for any repairing or replacement.
 - ✓ Support high data transmission rate to monitor through Automation Optical Inspection (AOI).
 - ✓ Withstand Anti-shock and vibration design to operate on Computer Numerical Control (CNC).

Maritime and Offshore



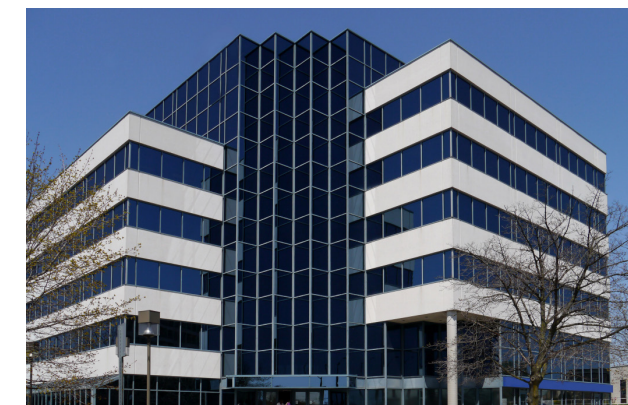
- Key Features**
- ✓ High level EMC certification.
 - ✓ Built with stainless-Steel for antirust protection.
 - ✓ Wide operating temperature for reliability in harsh environments.
 - ✓ Conducted vibration, high voltage, compass safe distance, salt mist tests, humidity tests.

Intelligent Transportation System



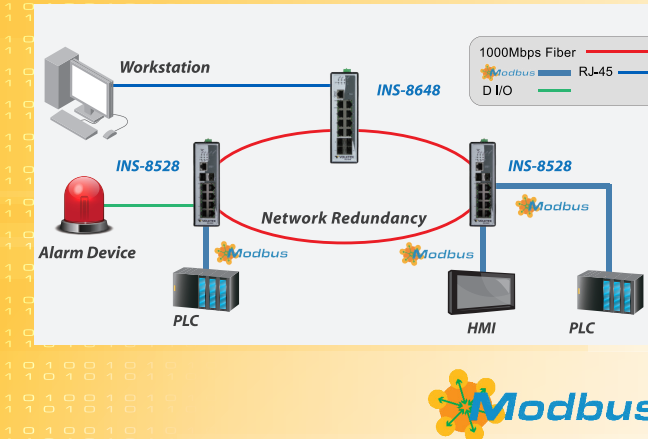
- Key Features**
- ✓ Long distance transmissions with high bandwidths for traffic flow management.
 - ✓ High reliability to be used in outdoor application.
 - ✓ Optical bandwidth utilization for video transmission for parking management.
 - ✓ Link and power redundancy for traffic dashboard management.

Building Automation



- Key Features**
- ✓ High bandwidth and transmission rate for access control system.
 - ✓ Link and power redundancy to deploy Intranet.
 - ✓ Optimal bandwidth utilization for video transmissions.
 - ✓ Compact size for building interlayer placement.
 - ✓ Reliable for Fire protection system networking.

Software Highlight

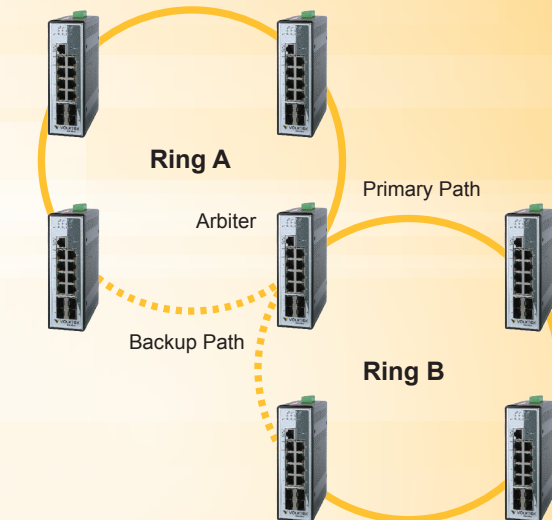


Industrial Compatible Protocols

- Volktek's industrial Ethernet solutions can optimize PLC network performance, efficiency, and flexibility. Our managed industrial Ethernet switches are interoperable with industrial protocols such as Ethernet/ IP, ProfitNet and Modbus. These innovative services are easily accessible from a user-friendly web GUI with a single click.
- Every device is ruggedized to excel in mission-critical applications for production and process automation and can be integrated into any large-scale distributed SCADA monitoring system.

Milliseconds Scale Network Recovery

- 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

- 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).
- ERPS allows the switches to communicate with other industrial devices satisfying requirement of multiple rings for redundancy in mission critical applications.

