

# IES-2208F-67

## 8 10/100TX + 2 100FX M12 / IP67 Managed Industrial Switch

- Pro-Ring II covers X-Ring (Legacy-Ring) and Pro-Ring II system (X-Ring II , Advanced Dual Homing, Daisy Couple Ring and Multi Couple Ring Topology)
- Provides M12 connector with IP-66/67 rated protection
- Wide Operating Temperature from -40°C to 75°C



### OVERVIEW

Lantech IES-2208F-67 is an 8 10/100 Base-TX + 2 100FX with M12-connector Managed Industrial Switch for IP66/67 rated protection. The full SNMP management features are including QoS for 4 queues, 801.q VLAN, IGMP snooping and query mode as well as SNTP and SMTP. The PTP(Precision Time Protocol) client will be future supported.

Equipped with DC 9V-56V power input design, Lantech IES-2208F-67 can support redundant power supply input to ensure power runtime. It also supports relay contact to connect with alarm system, which can immediately notify of power failure and/or port down events. In case of events, Lantech IES-2208F-67 will immediately send an email to pre-defined addresses and send trap to stations.

Lantech IES-2208F-67 supports our X-Ring (Legacy-Ring) and Pro-Ring II system. X-Ring(Legacy-Ring), an auto-recovery path within 10ms up to 250 Lantech Industrial Switches; Pro-Ring II is a new Ring mechanism for Lantech Industrial Switches in which it eliminates the need to pre-set the Master

switch in previous Pro-Ring and yet to protect the network by much secure topologies than ever. It works as a Ring Chain to reduce the risk of master switch linking down whereas the setup becomes much easier. Pro-Ring II can be backward compatible with old Pro-Ring by down-grading the Ring scheme to old one.

IES-2208F-67 is designed to meet with critical network environment with IP67 enclosure and M12 connectors for protection against water and dust ingress. It has passed harsh environmental testing to comply with Industrial EMI and Safety standards. Besides 1.2KVA Hi-Pot abnormal test, it also passed stability testing such as Free fall, Shock, and Vibration. For a greater flexibility in application the IES-2208F-67 supports an extended operating temperature range from -40°C to 75°C.

Lantech L-Key (M12) can be used to quickly configure the IES-2208F-67 on site without the need for an IP connection or notebook PC. Lantech IES-2208F-67 is an ideal choice for critical industrial environments such as smelters, crusher plants, open cut mines etc.

### FEATURES & BENEFITS

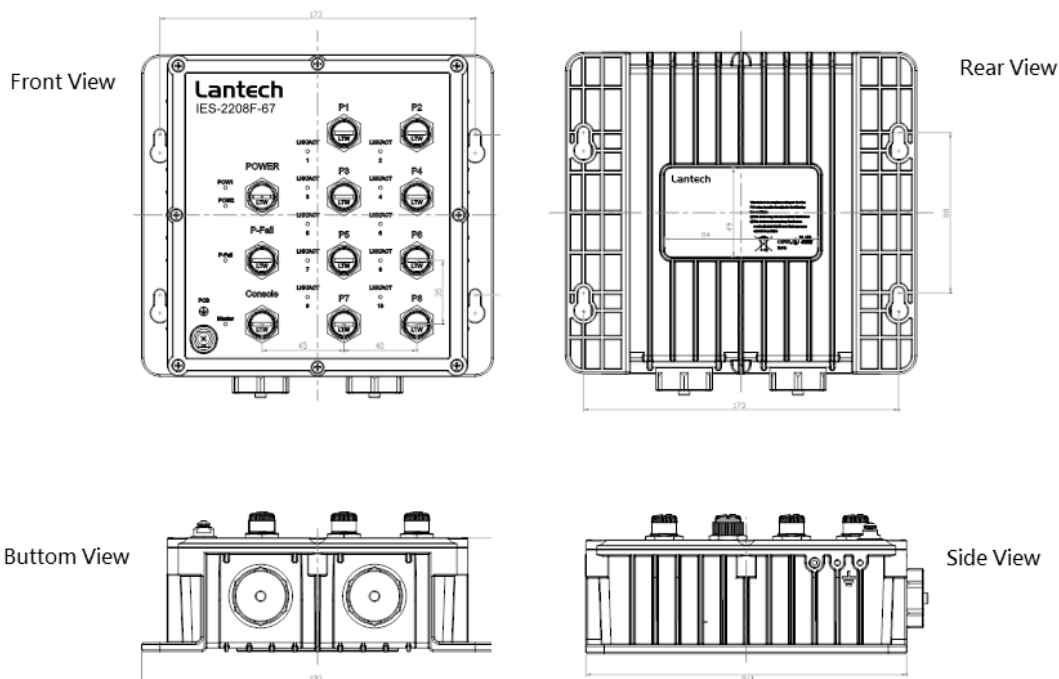
- **8-port 10/100TX + 2-port 100FX Managed Industrial Switch with M12 connectors and IP66/67 rated protection**
- **Back-plane (Switching Fabric): 5.6Gbps**
- **1Mbits Packet Buffer**
- **IGMP with Snooping and Query mode for Multi Media Application**
- **8K MAC address table**
- **Redundant Power Design with wide DC9V-56V input**
- **IEEE 802.1d Spanning Tree & IEEE 802.1w RSTP**
- **Port Based VLAN, 802.1Q Tag VLAN, GVRP**
- **Pro-Ring II**
  - X-Ring (Legacy-Ring) and Pro-Ring II system (X-Ring II , Advanced Dual Homing, Daisy Couple Ring and Multi Couple Ring Topology)
  - Provide redundant backup feature and the recovery time below 10ms.
- **Port Trunk with LACP**
- **Supports IEEE 802.1ab LLDP**
- **IEEE 802.1p Class of Service, per port 4 priority queues**
- **Port base, Tag Base and Type of Service Priority**
- **Supports Ingress Packet Filter and Egress Rate Limit**
- **Supports Broadcast/Multicast Packet Filter Control**
- **Port Mirror: Monitor traffic in switched networks**
- **System Log Server/Client**
- **Security**
  - Port Security: MAC address entries/Filter
  - IP Security: IP address security management to prevent unauthorized intruder
  - Login Security: IEEE802.1X/RADIUS
- **SNMP Trap**
  - Device cold start, Power status, Authentication failure,

X-Ring II topology changed, Port Link up/Link down, port events

- Relay Alarm Output System Events

- IGMP with Query mode for Multi Media Application
- TFTP Firmware Update and System Configure Restore/Backup

**DIMENSIONS (unit=mm)**



**SPECIFICATIONS**

Hardware Specification	
IEEE Standard	IEEE802.3 10Base-T Ethernet IEEE802.3u 100Base-TX IEEE802.3x Flow Control and Back Pressure IEEE802.3ad Port trunk with LACP IEEE802.3af Power over Ethernet IEEE802.1d Spanning Tree IEEE802.1w Rapid Spanning Tree IEEE802.1p Class of Service IEEE802.1Q VLAN Tag IEEE802.1x User Authentication (Radius) IEEE802.1ab LLDP IEEE1588 PTP client*
Switch Architecture	Back-plane (Switching Fabric): 5.6Gbps
Transfer Rate	14,880pps for Ethernet port 148,800pps for Fast Ethernet port
Packet Buffer	1Mbits
MAC Address	8K MAC address table
Connector	10/100TX: 8 x M12 4-pole D-coded with auto MDI/MDI-X function 2 100FX/LC (LX/SX) connectors RS-232 connector: 1 x M12 8-pole A-coded
Network Cable	10Base-T: 2-pair UTP/STP Cat. 3, 4, 5, 6 cable EIA/TIA-568 100-ohm (100m) 100Base-TX: 2-pair UTP/STP Cat. 5/ 5E/ 6 cable EIA/TIA-568 100-ohm (100m)
Optical Cable	Multi-mode: 50/125um-62.5/125um Single mode: 9/125um Available distance: 0.5km (Multi-mode)/10km (Single-mode) Wavelength: 1310nm (Multi-mode/Single-mode)
Protocol	CSMA/CD
LED	<b>Per unit:</b> Power 1 (Green), Power 2 (Green), P-Fail (Red), R-Master (Green) <b>Ethernet:</b> Link/Activity (Green, Fiber: Link/Activity (Green)

Power Supply	DC 9-56V, Redundant power with M12 5-pole A-coded connector
Reserve polarity protection	Present
Overload current protection	Present
Power Consumption	14W
Operating Temperature	-40°C~75°C / -40°F~167°F
Storage Temperature	-40°C~85°C / -40°F~185°F
Operating Humidity	5% ~ 95% (Non-condensing)
Case Dimension	IP-67, 193mm (W) x 176mm (H) x 62.5mm (D)
Weight	1630g
Installation	Wall mount design
EMI & EMS	FCC Class A, CE EN61000-4-2 (ESD), CE EN61000-4-3 (RS), CE EN-61000-4-4 (EFT), CE EN61000-4-5 (Surge), CE EN61000-4-6 (CS), CE EN61000-4-8, CE EN61000-6-2, CE EN61000-6-4
Stability Testing	IEC60068-2-32 (Free fall), IEC60068-2-27 (Shock), IEC60068-2-6 (Vibration)
MTBF	320,420 hours
Warranty	5 years

Software Specification	
Management	SNMP v1 v2c, v3/ Web/Telnet/CLI
SNMP MIB	RFC 1215 Traps MIB, RFC 1213 MIBII, RFC 1157 SNMP MIB, RFC 1493 Bridge MIB, RFC 2674 VLAN MIB, RFC 1643 EtherLike, RFC 1757 Rmon, RSTP MIB, Private MIB, PoE MIB,LLDP MIB

**Industrial EN50155 Switches**

VLAN	Port Based VLAN IEEE 802.1Q Tag VLAN (256 entries)/ VLAN ID (Up to 4K, VLAN ID can be assigned from 1 to 4096.) GVRP (256 Groups)	receiving event alert
Port Trunk with LACP	LACP Port Trunk: 4 Trunk groups/Maximum 4 trunk members	SNTP
LLDP	Supports IEEE802.1ab LLDP, the advertising of the switch's Identity and capabilities	Supports SNTP to synchronize system clock in Internet
Spanning Tree	Supports IEEE802.1d Spanning Tree and IEEE802.1w Rapid Spanning Tree	Bandwidth Control
Pro-Ring II	X-Ring (Legacy-Ring) and Pro-Ring II system (X-Ring II, Advanced Dual Homing, Daisy Couple Ring and Multi Couple Ring Topology). Provides redundant backup feature and the recovery time below 10ms	Support ingress packet filter and egress packet limit The egress rate control supports all of packet type and the limit rates are 100K~102400Kbps(10/100), Ingress filter packet type combination rules are Broadcast/Multicast/Unknown Unicast packet, Broadcast/Multicast packet, Broadcast packet only and all of packet. The packet filter rate can be set from 100K~102400Kbps(10/100),
Quality of Service	The quality of service determined by port, Tag and IPv4 Type of service, IPv4/IPv6 Different Service	Relay Alarm
Class of Service	Supports IEEE802.1p class of service, per port provides 4 priority queues	Provides one relay output for port breakdown, power fail and alarm Alarm Relay current carry ability: 1A @ DC24V
Port Security	Supports 100 entries of MAC address for static MAC and another 100 for MAC filter	SNMP Trap
Port Mirror	Supports 3 mirroring types: *RX, TX and Both packet*	Up to 3 Trap stations Cold start, Port link up, Port link down, Authentication Failure, Private Trap for power status, Port Alarm configuration, Fault alarm, X-Ring topology change
IGMP	Supports IGMP snooping v1,v2 256 multicast groups and IGMP query	DHCP
IP Security	Supports 10 IP addresses that have permission to access the switch management and to prevent unauthorized intruder.	Provides DHCP Client/ DHCP Server/ IP Relay functions
Login Security	Supports IEEE802.1X Authentication/RADIUS	DNS
Flow Control	Supports Flow Control for Full-duplex and Back Pressure for Half-duplex	Provides DNS client feature and support Primary and Secondary DNS server
System Log	Supports System log record and remote system log server	Firmware Update
SMTP	Supports SMTP Server and 6 e-mail accounts for	Supports TFTP firmware update, TFTP backup and restore.
		Configuration upload and download
		Supports binary format configuration file for system quick installation

\*Future Release  
\*\*Optional

**ORDERING INFORMATION**

- **IES-2208F-67-MM.....P/N: 8360-480**  
8 10/100TX + 2 100FX (MM, 2KM) IP67 rated Managed Industrial Switch w/M12 connectors
- **IES-2208F-67-SM.....P/N: 8360-481**  
8 10/100TX + 2 100FX (SM, 30KM) IP67 rated Managed Industrial Switch w/M12 connectors

**OPTIONAL ACCESSORIES**

**DIN Rail Power**

- **AD1048-24FS** 24VDC, 2A, Wide AC Input, Convection Cooled, DIN Rail or Wall Mounted, RoHS, Operating Temp. -20°C~50°C (ambient, derating each output at 2.5% per degree from 50°C ~ 75°C, which means the output is 18 Watts at 75°C.)
- **AD1024-24F** 24VDC, 1A, Wide AC Input, Convection Cooled, DIN Rail or Wall Mounted, RoHS, Operating Temp. -20°C~50°C (ambient, derating each output at 2.5% per degree from 50°C ~ 75°C, which means the output is 9 Watts at 75°C.)
- **AD1240-48S** 48VDC, 5A, Wide AC Input, Build-in fan Cooled, DIN Rail or Wall Mounted, RoHS, Operating Temp. -20°C~50°C (ambient, derating each output at 2.5% per degree from 50°C ~ 70°C)
- **AD1120-48F** 48VDC, 2.5A, Wide AC Input, Build-in fan Cooled, DIN Rail or Wall Mounted, RoHS, Operating Temp. -20°C~50°C (ambient, derating each output at 2.5% per degree from 50°C ~ 70°C)

**M12 Connector / Cable**

- **ECON120005MM** 5 Pin M12 Power Male Connector
- **ECON120004FF** 4 Pin M12 RJ45 Female Connector
- **ECON120003FF** 3 Pin M12 Relay Female Connector
- **ECAB125030F0** 5 Pin M12 Power Female 3M Cable
- **ECAB124030MJ** 4 Pin M12 RJ45 Male 3M Cable
- **ECAB123030M0** 3 Pin M12 Relay Male 3M Cable
- **ECAB124030MM** 4 Pin M12 Male-Male 3M Cable

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