

IES-2208C/E

8 10/100TX + 2 10/100/1000T/Dual Speed SFP Combo w/Pro-Ring

Managed Industrial Switch

- Wide operating temperature range from -40°C~75°C (-E model)
- Pro-Ring system covers X-Ring, Dual Homing, Couple Ring, and Dual Ring topology
- Wide range redundant power with polarity reverse protection



OVERVIEW

The Lantech IES-2208C is an 8-port 10/100 Base-TX + 2-port 10/100/1000T or 100/1000 SFP Industrial Switch with managed functionality. It supports full SNMP features, including QoS for 4 queues, 801.q VLAN, IGMP snooping and query mode as well as SNTp and SMTP.

The Lantech IES-2208C supports X-Ring, fast network recovery scheme in less than 10ms for up to 250 switches in a ring. Couple Ring and Dual Ring are able to ensure network recovery protection between X-Ring groups. Dual homing is to back up the X-Ring groups when connect to upper layer or the core switch.

Lantech-View 10node version is free bundle with the IES-2208C, in which it monitors and configures multiple Lantech industrial switches. Optional Lantech-View Pro can map up to unlimited

user with auto-layout, configuration and discovery.

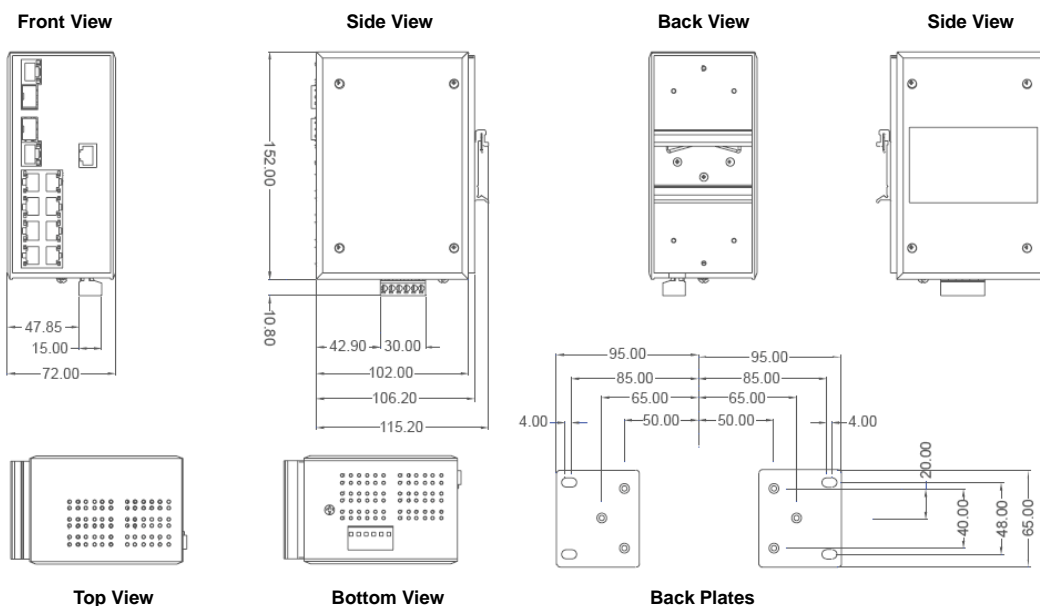
With relay contact to alarm system design, the IES-2208C can immediately notify of power failure and/ or port down events. In case of events, the Lantech IES-2208C will send emails to pre-defined addresses and send SNMP traps to stations.

The IES-2208C is designed to meet the demands of Industrial environments, comes packaged in a robust IP30 housing and has been tested extensively to meet Industrial EMI and EMC standards. Rigorous mechanical testing has also been undertaken to comply with free fall, shock and vibration stability test requirements, which ensure long term reliability in critical industrial environments. Thus, the Lantech IES-2208C is the best to use in automation, transportation, semi-conductor factory, heavy industrial factory and other factory assembly lines.

FEATURES & BENEFITS

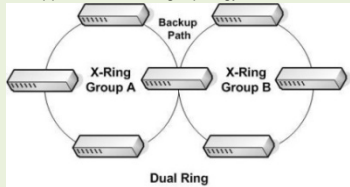
- **System Interface/Performance**
 - Supports 3000 VDC EFT Surge Protection and 6000VDC ESD for Industrial area that has un-stable power and electrostatic discharge
 - SFP(Mini-GBIC) supports 100/1000 Dual Mode
- **Wide Operating Temperature (-40°C ~75°C) for -E model**
- **Lantech-View, Windows-base Utility for multiple switch monitoring & configuration**
 - Supports Lantech-View Pro up to unlimited user edition
 - Lantech-View 10 node free bundle
- **Pro-Ring System**
 - X-Ring, Dual Homing, Couple Ring, and Dual Ring Topology
 - Provide redundant backup feature and the recovery time below 10ms
- **VLAN**
 - Port Based VLAN ; 802.1 Q Tag VLAN ;GVRP
- **QoS (Quality of Service)**
 - Support IEEE 802.1p Class of Service, Per port 4 queues
 - Port Base, Tag Base and Type of Service Priority
- **Port Trunk with LACP**
- **Support 802.1ab LLDP**
- **Security**
 - Port Security : MAC address entries/filter
 - IP Security: IP address security management to prevent unauthorized intruder.
 - Login Security: IEEE802.1X/RADIUS
- **IGMP**
 - Query mode for Multi Media Application
 - Support multicast filter
- **Spanning Tree**
 - IEEE802.1d Spanning Tree ;802.1w RSTP
- **Bandwidth Control**
 - Ingress Packet Filter and Egress Rate Limit
 - Broadcast/Multicast Packet Filter Control
- **System Event Log**
 - System Log Server/Client
 - SMTP e-mail Alert
 - Relay Alarm Output System Events
- **SNMP Trap**
 - Device cold start, Power status, Authentication failure, X-Ring topology changed, Port Link up/Link down

DIMENSIONS (unit=mm)



SPECIFICATION

Hardware Specification		Power Supply	
IEEE Standards	IEEE802.3 10BASE-T IEEE802.3u 100BASE-TX IEEE802.3z Gigabit fiber IEEE802.3ab 1000Base-T IEEE802.3x Flow control and Back-pressure IEEE802.1p COS IEEE802.1X Authentication/RADIUS IEEE802.1d Spanning Tree IEEE802.1w Rapid Spanning Tree IEEE802.1Q VLAN IEEE802.3ad Port trunk with LACP IEEE802.1ab LLDP	Power Supply	24VDC (9~56VDC), Redundant power with polarity reverse protects function and removable terminal block.
Switch Architecture	Back-plane (Switching Fabric): 5.6Gbps	Power Consumption	9.5 Watts
Transfer Rate	14,880pps for Ethernet port 148,800pps for Fast Ethernet port 1,488,000pps for Gigabit Fiber Ethernet port	Operating Humidity	5% to 95% (Non-condensing)
Packet Buffer	1Mbits	Operating Temperature	-20°C~60°C / -4°F~140°F (Standard model) -40°C~75°C / -40°F~167°F (E model)
Mac Address	8K MAC address table	Storage Temperature	-40°C~85°C / -40°F~185°F
Flash ROM	4Mbytes	Case Dimension	IP-30, 72mm (W) x 105mm (D) x 152mm (H)
DRAM	32Mbytes	Weight	1302 g
Connectors	10/100TX: 8 x RJ-45 10/100/1000T:2 x RJ-45 Mini GBIC: 2 slots for 100/1000M SFP transceiver RS-232 connector: RJ-45 type	MTBF	272761 hrs
Network Cable	10Base-T: 2-pair UTP/STP Cat. 3, 4, 5 cable EIA/TIA-568 100-ohm (100m) 100Base-TX: 2-pair UTP/STP Cat. 5/ 5E cable EIA/TIA-568 100-ohm (100m)	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 EN61000-4-11, CE EN61000-4-12, CE EN61000-6-2, CE EN61000-6-4
Optical Cable	Multi-mode: 50/125um~62.5/125um Single mode: 9/125um Available distance: 2km (Multi-mode)/30km (Single-mode) Wavelength: 1310nm (Multi-mode/Single-mode)	Safety	UL, cUL, CE/EN60950-1
Protocol	CSMA/CD	Stability Testing	IEC60068-2-32 (Free fall), IEC60068-2-27 (Shock), IEC60068-2-6 (Vibration)
LED	Per unit: Power/ Power 1/ Power 2 (Green), Fault (Red), Ring Master (Green) 8 10/100TX: Link/Activity (Green), Full duplex/Collision (Yellow) Combo Port: (Green / Green) SFP: Link/Activity (Green)	Warranty	5 years
Installation	DIN rail and wall mount ear	Software Specification	
		Management	SNMP v1 v2c, v3/ Web-browser/ Telnet/ CLI/ Lantech-View Management
		SNMP MIB	RFC 1215 Trap, RFC1213 MIBII, RFC 1157 SNMP MIB, RFC 1493 Bridge MIB, RFC 2674 VLAN MIB, RFC 1643 EtherLike, RFC 1757 RMON MIB, RSTP MIB, Private MIB
		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)
		Port Trunk with LACP	LACP Port Trunk: 4 Trunk groups/Maximum 4 trunk members
		LLDP	Supports LLDP to allow switch to advise its identification and capability on the LAN

Spanning Tree	Supports IEEE802.1d Spanning Tree and IEEE802.1w Rapid Spanning Tree	Bandwidth Control	Supports ingress packet filter and egress packet limit The egress rate control supports all of packet type and the limit rates are 100K~250Mbps 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 to 250Mbps
System Log	Supports System log record and remote system log server	Flow Control	Supports Flow Control for Full-duplex and Back Pressure for Half-duplex
Pro-Ring	Supports X-Ring, Dual Homing, Couple Ring and Dual Ring Topology. X-Ring provides redundant backup feature and the recovery time below 10ms for up to 250 switches in a ring. Dual Ring can connect two rings without couple ring and supports as following topology. 	SMTP	Supports SMTP Server and 6 e-mail accounts for receiving event alert
Quality of Service	The quality of service determined by port, Tag and IPv4 Type of service, IPv4/IPv6 Different Service	Relay Alarm	Provides one relay output for port breakdown, power fail and alarm Alarm Relay current carry ability: 1A @ DC24V
Class of Service	Supports IEEE802.1p class of service, per port provides 4 priority queues	SNMP Trap	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
Port Security	Supports 100 entries of MAC address for static MAC and another 100 for MAC filter	DHCP	Provides DHCP Client/ DHCP Server/ IP Relay functions
Port Mirror	Supports 3 mirroring types: "RX, TX and Both packet".	DNS	Provides DNS client feature and support Primary and Secondary DNS server.
IGMP	Supports IGMP snooping v1,v2 256 multicast groups and IGMP query Supports multicast filter	Firmware Update	Supports TFTP firmware update, TFTP backup and restore.
IP Security	Supports 10 IP addresses that have permission to access the switch management and to prevent unauthorized intruder.	Configuration upload and download	Supports binary configuration file for system quick installation
Login Security	Supports IEEE802.1X Authentication/RADIUS	ifAlias	Each port allows importing 128bit of alphabetic string of word on SNMP and CLI interface.
SNTP	Supports SNTP to synchronize system clock to Internet		

ORDERING INFORMATION

- **IES-2208C.....P/N: 8350-450**
8 10/100TX + 2 10/100/1000T with 100/1000 SFP Combo Industrial Switch,
Standard Operating Temperature (-20°C to 60°C)
- **IES-2208C-E.....P/N: 8350-440**
8 10/100TX + 2 10/100/1000T with 100/1000 SFP Combo Industrial Switch,
Wide Operating Temperature (-40°C to 75°C)

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
- **AD1024-24F** 24VDC, 1A, Wide AC Input, Convection Cooled, DIN Rail or Wall Mounted, RoHS, Operating Temp. -20°C~50°C
- **AD1240-48S** 48VDC, 5A, Wide AC Input, Build-in fan Cooled, DIN Rail or Wall Mounted, RoHS, Operating Temp. -20°C~50°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

Mini GBIC (SFP)

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| ■ 8330-162 MINI GBIC 1000SX (LC/0.5km) Transceiver | ■ 8330-188 LTSFP-1000BX-10KM Transceiver (WDM 1310) |
| ■ 8330-163 MINI GBIC 1000SX2 (LC/2km) Transceiver | ■ 8330-189 LTSFP-1000BX-10KM Transceiver (WDM 1550) |
| ■ 8330-165 MINI GBIC 1000LX (LC/10km) Transceiver | ■ 8330-186 LTSFP-1000BX-20KM Transceiver (WDM 1310) |
| ■ 8330-166 MINI GBIC 1000LHX (LC/40km) Transceiver | ■ 8330-187 LTSFP-1000BX-20KM Transceiver (WDM 1550) |
| ■ 8330-169 MINI GBIC 1000XD (LC/60km) Transceiver | ■ 8330-180 LTSFP-1000BX-40KM Transceiver (WDM 1310) |
| ■ 8330-167 MINI GBIC 1000ZX (LC/80km) Transceiver | ■ 8330-182 LTSFP-1000BX-40KM Transceiver (WDM 1550) |
| ■ 8330-168 MINI GBIC 1000T (100m) Transceiver | ■ 8330-181 LTSFP-1000BX-60KM Transceiver (WDM 1310) |
| ■ 8330-061 100Base LX 30KM, Single-mode, LC Transceiver | ■ 8330-183 LTSFP-1000BX-60KM Transceiver (WDM 1550) |
| ■ 8330-060 100Base FX 2KM, Multi-mode, LC Transceiver | ■ 8330-184 LTSFP-1000BX-80KM Transceiver (WDM 1490) |
| | ■ 8330-185 LTSFP-1000BX-80KM Transceiver (WDM 1550) |

Lantech Communications Global Inc.

www.lantechcom.tw
info@lantechcom.tw

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