

IES-2008B

8 10/100TX Industrial Managed Switch

- *UL Class I Division II for Group A,B,C and D certified*
- *ATEX Directive 94/9/EC certified (-ATEX model)*
- *Pro-Ring2se for self-heal ring<20ms*
- *DLR (Device Level Ring) for self-heal ring<10ms***
- *Support Advanced SNMP including QoS, IGMP query & source only, CPU load monitoring*
- *Watchdog Design and Factory Default Button*
- *DNV Type Approved for Ships, Craft and Off-shore Platforms***



OVERVIEW

The Lantech IES-2008B is an 8-port 10/100BaseTX SNMP industrial switch with Pro-Ring II's self-recovery scheme in 20ms. The advanced SNMP management features include QoS for 4 queues, 802.1q VLAN, IGMP snooping, query and source only for multicast IP surveillance, SSH/SSL* as well as Web Ping, CPU load monitoring, SMTP and SMTP etc

The IES-2008B supports DLR** (Device Level Ring) that followed Ethernet/IP standard for industrial automation. The DLR can recover Ring network in less than 10ms with single ring up to 50 switches to form a ring topology. The Ethernet enabled PLCs can also connect to the IES-2008B.

The Pro-Ring2se self-recovery scheme can recover Ring network in less than 20ms with single ring up to 50 switches with one step setup. Lantech IES-2008B builds all the important management features required in large network like DHCP Client/Server, 802.1X authentication, IGMP Query / Snooping and source only for reverse multicast flow, and advanced QoS. It also supports Ping commands via Web to detect whether a specific device is still connected for easy trouble-shooting.

The IES-2008B has the relay contact that is able to connect with alarm system and send Email and SNMP trap alert in case of

power or port failure. It also has the built-in factory reset button and watchdog design can restore all setting back to factory default and automatically reboot the switch when CPU loading is find dead.

The IES-2008B is designed to meet with critical network environment with IP 30 enclosure and test under extensive Industrial EMI and Safety standards. With UL Class I Division II / ATEX Directive 94/9/EC approval, the IES-2008B can be implemented in hazardous or explosive condition without accelerating the damage. It's the best choice for inflammable environment where the liquid, gas and vapor etc might present the hazardous condition which generally to be find in mining, oil & gas, chemical, processing automation areas. It's also suitable for surveillance, factory automation, transportation, telecom / ISP outside terminal, heavy industrial factory and other factory assembly lines.

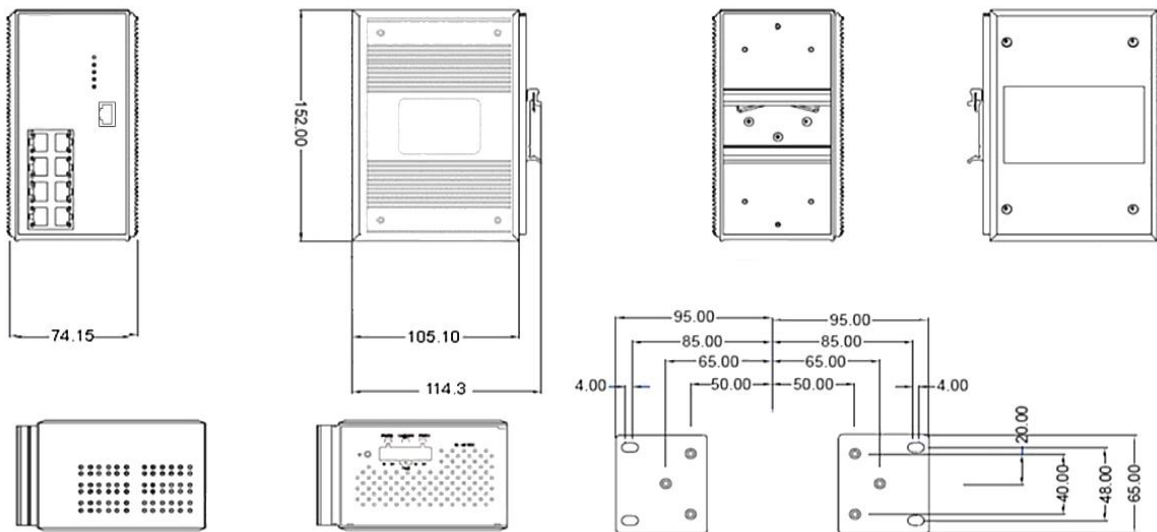
The Lantech IES-2008B is the best to be used in municipal, city surveillance, automation, transportation, mining, heavy Industrial factory and other factory assembly lines where needs reliable and robust network. The -E / -ATEX model can be used in extreme environments with an operating temperature range of -40°C to 75°C.

FEATURES & BENEFITS

- **Pro-Ring2se for self-recovery scheme in less than 20ms for single-ring with one setup**
- **DLR** (Device Level Ring): Followed Ethernet/IP standard for network recovery in less than 10ms up to 50 switches**
- **Back-plane (Switching Fabric): 1.6Gbps**
- **1Mbits Packet Buffer / 8K MAC address table**
- **UL Class I Division II for Group A,B,C and D certified**
- **ATEX Directive 94/9/EC certified (-ATEX model)**
- **IP-30 Protection with DIN rail and wall mount design**

- Provides EFT protection ±2000 VDC for power line
- Supports ±6000 VDC for ESD protection
- Support CPU load monitoring and Web Ping to check if the connected device is alive
- IEEE 802.1d Spanning Tree & IEEE 802.1w RSTP
- IGMP with Snooping and Query mode for Multi Media Application
- IGMP source only for reverse multicast application
- Static Multicast Route for non-IGMP application
- Port Based VLAN, 802.1Q Tag VLAN, GVRP
- Port Trunk with LACP
- Supports IEEE 802.1ab LLDP
- Supports IEEE 802.1p CoS, 4 priority queues per port
- 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
- TX, RX, Both of TX and RX Packet
- System Log Server/Client
- SMTP e-mail Alert up to 6 emails
- Security
 - Port Security: MAC address entries/Filter
 - IP Source Guard: IP address security management to prevent unauthorized intruder
 - Login Security: IEEE802.1X/RADIUS
- SNMP Trap
 - Device cold start, Power status, Authentication failure, Port Link up/Link down
- Relay Alarm Output System Events
- TFTP & Web Firmware Update & System Configure Restore/Backup
- Factory reset bottom can restore all setting back to factory default and Watchdog design to automatically reboot switch when CPU load is found dead

DIMENSIONS (unit=mm)



SPECIFICATION

Hardware Specification		
IEEE Standards	IEEE802.3 10Base-T Ethernet	
	IEEE802.3u 100Base-TX	
	IEEE802.3ab 1000Base-T	
	IEEE802.3z Gigabit fiber	
	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	
Switch Architecture	IEEE802.1Q VLAN Tag	
	IEEE802.1x User Authentication (Radius)	
	IEEE802.1ab LLDP	
	Back-plane (Switching Fabric): 1.6Gbps	
	Transfer Rate	14,880pps for Ethernet port 148,800pps for Fast Ethernet port 1,488,000pps for Gigabit Fiber Ethernet port
	Packet Buffer	1Mbits
MAC Address	8K MAC address table	
Flash ROM	4Mbytes	
DRAM	32Mbytes	
Connectors	10/100TX: 8 x ports RJ-45 with Auto MDI/MDI-X function RS-232 connector: RJ-45 type	
Network Cable	10Base-T: 2-pair UTP/STP Cat. 3, 4, 5/ 5E/ 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)	
Protocol	CSMA/CD	

LED	Per unit: Power (Green), Power 1 (Green), Power 2 (Green), Fault (Yellow), Master (Green) 8 port 10/100: Link/Activity (Green), Full duplex/Collision (Yellow)	identification and capability on the LAN
Power Supply	12V~48VDC(9V~56VDC);Dual power connector removable terminal block for master and slave power	Spanning Tree Supports IEEE802.1d Spanning Tree, IEEE802.1w Rapid Spanning Tree, IEEE 802.1s MSTP*
Overload current protection	Present	Quality of Service The quality of service determined by port, Tag and IPv4 Type of service, IPv4/IPv6 Different Service
Operating Humidity	5% ~ 95% (Non-condensing)	Class of Service Supports IEEE802.1p class of service, per port provides 4 priority queues
Operating Temperature	Standard: -20°C~60°C / -4°F~140°F Wide Operating Temperature (-E / -ATEX / -DNP model): -40°C~75°C / -40°F~167°F	Port Security Supports 100 entries of MAC address for static MAC and another 100 for MAC filter
Storage Temperature	-40°C~85°C / -40°F~185°F	Port Mirror Supports 3 mirroring types: "RX, TX and Both packet"
Case Dimension	IP-30, 74(W) x 114 (D) x 152 (H) mm	IGMP & Static Multicast Forwarding Supports IGMP snooping v1,v2 256 static multicast forwarding groups and IGMP query
Weight	850 g	IP Source Guard Supports 10 IP addresses that have permission to access the switch management and to prevent unauthorized intruder.
Fan Number	0	Login Security Supports IEEE802.1X Authentication/RADIUS/Telnet
Installation	Wall mount or DIN-type cabinet install	Flow Control Supports Flow Control for Full-duplex and Back Pressure for Half-duplex
EMI & EMS	FCC Class A, CE EN61000-4-2, CE EN61000-4-3, CE EN61000-4-4, CE EN61000-4-5, CE EN61000-4-6, CE EN61000-4-8, CE EN61000-4-11, CE EN61000-4-12, CE EN61000-6-2, CE EN61000-6-4	System Log Supports System log record and remote system log server
Safety	UL 60950 UL Class I Division II for Group A,B,C and D hazardous location ATEX Directive 94/9/EC (-ATEX model)	SMTP Supports SMTP Server and 6 e-mail accounts for receiving event alert
Stability Testing	IEC60068-2-32 (Free fall), IEC60068-2-27 (Shock), IEC60068-2-6 (Vibration)	SNTP Supports SNTP to synchronize system clock to Internet
Power Consumption	7 W at full load	Bandwidth Control & Storm Control 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), 100K~256000Kbps(1000) 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), 100K~256000Kbps(1000)
Warranty	5 years	Relay Alarm Provides one relay output for port breakdown, power fail alarm. Alarm Relay current carry ability: 1A @ DC24V
Software Specification		
Management	SNMP v1 v2c, v3/ Web/Telnet/CLI	SNMP Trap 1. Cold start 2. Link down 3. Link up 4. Authorization fail
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, LLDP MIB	DHCP Provides DHCP Client/ DHCP Server/ Port and IP Binding
System Information	Show detail info incl.Name , Version CPU load monitoring for every 1,5,15 minutes Display network parameters incl. Mac, IP, Gateway, Netmask Allow adding port description	DNS Provide DNS client feature and support Primary and Secondary DNS server.
Pro-Ring 2se	Pro-Ring 2se system Topologies for network recovery in less than 20ms up to 50 switches. Note:Pro-Ring2se is not compatible with Pro-Ring2s/Pro-RingII Pro-Ring I; 20ms recovery is on fiber port.	Firmware Update Supports TFTP/Web firmware update, TFTP backup and restore. White list for TFTP upgrade and configuration editable file
DLR** (Device Level Ring)	Followed Ethernet/IP standard for network recovery in less than 10ms up to 50 switches	Factory reset & Watchdog design Factory reset bottom can restore all setting back to factory default and Watchdog design to automatically reboot switch when CPU loading is too high
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)	ifAlias Each port allows importing 128bits of alphabetic string of word on SNMP and CLI interface
Port Trunk with LACP	LACP Port Trunk: 4 Trunk groups/Maximum 4 trunk members	
LLDP	Supports LLDP to allow switch to advise its	

*Future Release

**Optional

ORDERING INFORMATION

- **IES-2008B.....P/N: 8350-232**
8 10/100TX Pro-Ring IIs Managed Industrial Switch; -20°C to 60°C
- **IES-2008B-E.....P/N: 8350-233**
8 10/100TX Pro-Ring IIs Managed Industrial Switch; -40°C to 75°C
- **IES-2008B-DLR.....P/N: 8350-232-DLR**
8 10/100TX Pro-Ring IIs Managed Industrial Switch; -20°C to 60°C; DLR
- **IES-2008B-DLR-E.....P/N: 8350-233-DLR**
8 10/100TX Pro-Ring IIs Managed Industrial Switch; -40°C to 75°C; DLR
- **IES-2008B-DNV..... P/N: 8350-233DNV**
8 10/100TX Pro-Ring IIs Managed Industrial Switch; -40°C to 75°C; DNV type approval
- **IES-2008B-ATEX.....P/N: 8350-233-ATEX**
8 10/100TX Pro-Ring IIs Managed Industrial Switch; -40°C to 75°C; ATEX Directive 94/9/EC

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)

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