

# IES-2008B

## 8 10/100TX Industrial Managed Ethernet Switch

- *UL Class I Division II for Group A,B,C and D certified (C1D2/ATEX model)*
- *ATEX Directive 94/9/EC certified (C1D2/ATEX model)*
- *Pro-Ring2se for self-heal ring<20ms*
- *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\*\**



Non-DNV model



DNV model



## OVERVIEW

The Lantech IES-2008B is an 8-port 10/100BaseTX SNMP industrial Ethernet 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, Sntp and SMTP etc.

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-C1D2/ATEX 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.

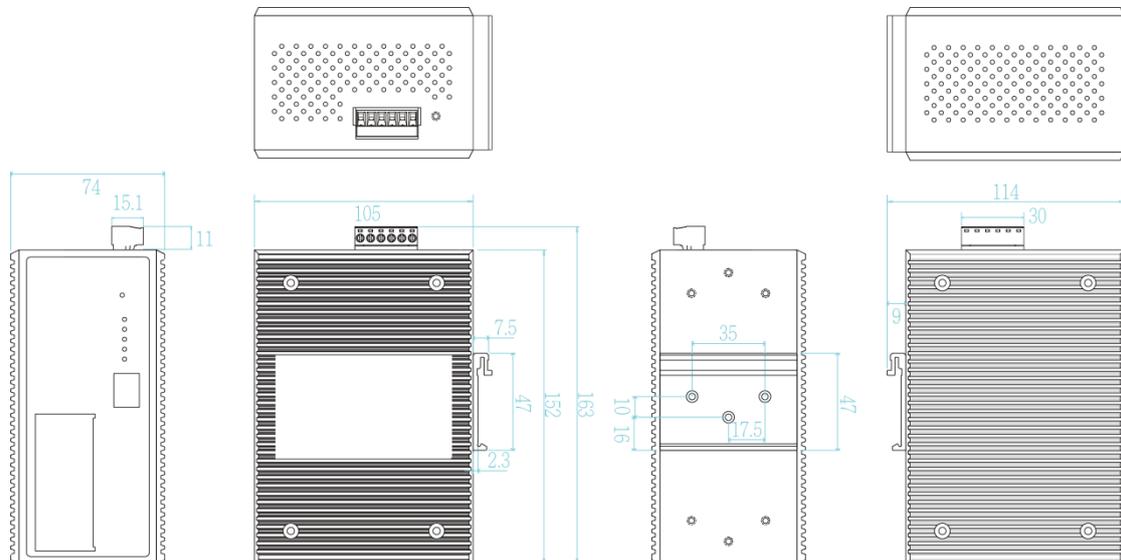
The Lantech IES-2008B is the best to be used in municipal, city surveillance, automation, transportation, mining, heavy Industrial factory and other factory assembly lines where needs reliable and robust network. The -E / -C1D2ATEX model can be used in extreme environments with an operating temperature range of -40°C to 75°C.

## FEATURES & BENEFITS

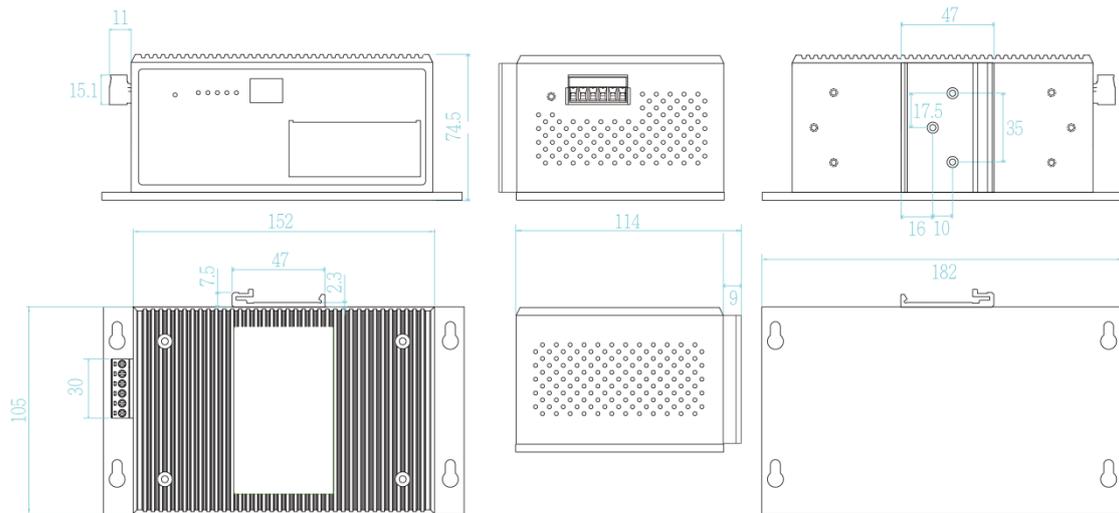
- Pro-Ring2se for self-recovery scheme in less than 20ms for single-ring with one setup
- Back-plane (Switching Fabric): 1.6Gbps
- 1Mbits Packet Buffer / 8K MAC address table
- UL Class I Division II for Group A,B,C and D certified
- ATEX Directive 94/9/EC certified (-C1D2/ATEX model)
- IP30 metal housing with DIN rail and Wall-mount\*\* design
- Provides EFT protection  $\pm 2000$  VDC for power line
- Supports  $\pm 6000$  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
- 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)

Non-DNV model



DNV model



**SPECIFICATION**

Hardware Specification		Case Dimension	IP-30, 74(W) x 105 (D) x 152 (H) mm (non-DNV model) 74.5(W) x 105 (D) x 182 (H) mm (DNV model)
IEEE Standards	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	Weight	850 g (non-DNV model) 1000 g (DNV model)
Switch Architecture	Back-plane (Switching Fabric): 1.6Gbps	Fan Number	0
Transfer Rate	14,880pps for Ethernet port 148,800pps for Fast Ethernet port	Installation	DIN Rail and Wall Mount** Design
Packet Buffer	1Mbits	EMI & EMS	FCC Class A, CE EN61000-6-2, 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 EN55032 Class A, CE EN55024
MAC Address	8K MAC address table	Safety	UL UL Class I Division II for Group A,B,C and D hazardous location ATEX Directive 94/9/EC (-C1D2/ATEX model)
Flash ROM	4Mbytes	Stability Testing	IEC60068-2-32 (Free fall), IEC60068-2-27 (Shock), IEC60068-2-6 (Vibration)
DRAM	32Mbytes	Power Consumption	7W at full load
Connectors	10/100TX: 8 x ports RJ-45 with Auto MDI/MDI-X function RS-232 connector: RJ-45 type	MTBF	1,034,882 hours
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)	Warranty	5 years
LED	<b>Per unit:</b> Power (Green), Power 1 (Green), Power 2 (Green), Fault (Yellow), Master (Green) <b>8 port 10/100:</b> Link/Activity (Green), Full duplex/Collision (Yellow) <b>R.M. indicator (Green)</b>	<b>Software Specification</b>	
Power Supply	12V~48VDC(9V~56VDC);Dual power connector removable terminal block for master and slave power	Management	SNMP v1 v2c, v3/ Web/Telnet/CLI
Overload current protection	Present	SNMP MIB	RFC 1215 Traps MIB, RFC 1213 MIBII RFC 1158 MIBII RFC 1157 SNMP MIB, RFC 1493 Bridge MIB, RFC 1573 IF MIB RFC 2674 VLAN MIB, Partial RFC 1643 EtherLike, Partial RFC 1757 RMON, RFC 2674 Q-Bridge MIB; Bridge MIB, RFC 2790 Host Resource MIB LLDP MIB* RSTP MIB* Private MIB
Operating Humidity	5% ~ 95% (Non-condensing)	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
Operating Temperature	Standard: -20°C~60°C / -4°F~140°F Wide Operating Temperature (-E / -C1D2/ATEX / -DNV model): -40°C~75°C / -40°F~167°F		
Storage Temperature	-40°C~85°C / -40°F~185°F		

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.	Internet	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)
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.)	Bandwidth Control & Storm Control	Provides one relay output for port breakdown, power fail alarm. Alarm Relay current carry ability: 1A @ DC24V
Port Trunk with LACP	LACP Port Trunk: 4 Trunk groups/Maximum 4 trunk members	Relay Alarm	1. Cold start 2. Link down 3. Link up 4. Authorization fail
LLDP	Supports LLDP to allow switch to advise its identification and capability on the LAN	SNMP Trap	Provides DHCP Client/ DHCP Server/ Port and IP Binding
Spanning Tree	Supports IEEE802.1d Spanning Tree, IEEE802.1w Rapid Spanning Tree	DHCP	Provide DNS client feature and support Primary and Secondary DNS server.
Quality of Service	The quality of service determined by port, Tag and IPv4 Type of service, IPv4/IPv6 Different Service	DNS	Supports TFTP/Web firmware update, TFTP backup and restore. White list for TFTP upgrade and configuration editable file
Class of Service	Supports IEEE802.1p class of service, per port provides 4 priority queues	Firmware Update	Factory reset bottom can restore all setting back to factory default and Watchdog design to automatically reboot switch when CPU loading is too high
Port Security	Supports 100 entries of MAC address for static MAC and another 100 for MAC filter	Factory reset & Watchdog design	
Port Mirror	Supports 3 mirroring types: *RX, TX and Both packet*		
IGMP & Static Multicast Forwarding	Supports IGMP snooping v1,v2 256 static multicast forwarding groups and IGMP query		
IP Source Guard	Supports 10 IP addresses that have permission to access the switch management and to prevent unauthorized intruder.		
Login Security	Supports IEEE802.1X Authentication/RADIUS/Telnet		
Flow Control	Supports Flow Control for Full-duplex and Back Pressure for Half-duplex		
System Log	Supports System log record and remote system log server		
SMTP	Supports SMTP Server and 6 e-mail accounts for receiving event alert		
SNTP	Supports SNTP to synchronize system clock to		

\*Future Release  
\*\*Optional

## ORDERING INFORMATION

- **IES-2008B.....P/N: 8350-232**  
8 10/100TX Pro-Ring IIs Industrial Managed Ethernet Switch; -20°C to 60°C
- **IES-2008B-E.....P/N: 8350-233**  
8 10/100TX Pro-Ring IIs Industrial Managed Ethernet Switch; -40°C to 75°C
- **IES-2008B-DNV..... P/N: 8350-233DNV**  
8 10/100TX Pro-Ring IIs Industrial Managed Ethernet Switch; -40°C to 75°C; DNV type approval
- **IES-2008B-C1D2/ATEX.....P/N: 8350-233-C1D2/ATEX**  
8 10/100TX Pro-Ring IIs Industrial Managed Ethernet Switch; -40°C to 75°C; ATEX Directive 94/9/EC

## OPTIONAL ACCESSORIES

### DIN Rail Power

- **MDR-40 Series** 40W Single Output Industrial Din Rail Power; 85-264VAC / 120-370VDC Input Range; Cooling by free air convection; RoHS2 ; Operating Temp. -20°C~70°C (ambient, derating each output at 4% per degree from 60°C ~ 70°C)
- **MDR-20 Series** 20W Single Output Industrial Din Rail Power; 85-264VAC / 120-370VDC Input Range; Cooling by free air convection; RoHS2 ; Operating Temp. -20°C~70°C (ambient, derating each output at 2.5% per degree from 50°C ~ 70°C)

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