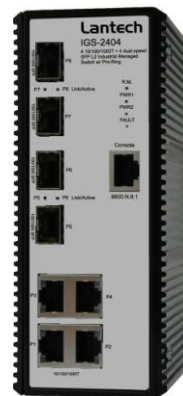


IGS-2404-E

4 10/100/1000T + 4 100/1000 Dual Speed SFP

Managed Industrial Switch /w Pro-Ring II

- Wide-range redundant power design
- 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)
- Relay Alarm Output System Events
- IP-30 metal housing with DIN rail and wall mount design



OVERVIEW

The Lantech IGS-2404-E is a 4 10/100/1000T + 4 100/1000 Dual Speed SFP Managed Industrial Switch /w Pro-Ring II. The SFP interface supports both 100M and Giga fiber. The Lantech IGS-2404-E redundant power design and Pro-Ring II features ensure a high-performance and reliable network connection.

The Lantech IGS-2404-E is designed with redundant power supply and wide power input range: $\pm 9\sim 56$ VDC. Featured with relay contact function, the IGS-2404-E is able to connect with alarm system in case of power or port failure. The IGS-2404-E also provides 3000V EFT and 4000V ESD protections, which can reduce unstable condition caused by power line and Ethernet.

The Lantech IGS-2404-E supports X-Ring (Legacy-Ring) and

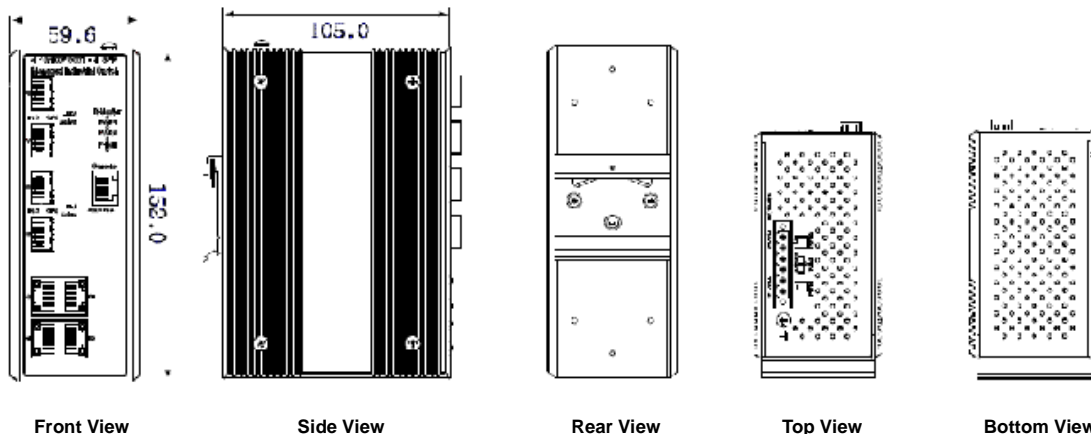
Pro-Ring II system. X-Ring(Legacy-Ring), an auto-recovery path within 10ms up to 250 Lantech Industrial Switches; Pro-Ring II is a new Ring mechanism for Lantech Industrial Switches in which it eliminates the need to pre-set the Master switch in previous Pro-Ring and yet to protect the network by much 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.

The Lantech IGS-2404-E can set Back-up Masters in Pro-Ring II to ensure the most secure network. It is the best solution for Automation, transportation, surveillance, Wireless backhaul, Semi-conductor factory and assembly lines.

FEATURES & BENEFITS

- 4 10/100/1000T + 4 100/1000 Dual Speed SFP L2 Managed Industrial Switch (Total 8 Port Switch)
- RJ-45 Port Support Auto MDI/MDI-X Function.
- Conforms to IEEE 802.3 10Base-T, 802.3u 100Base-TX, and IEEE 802.3ab 1000Base-T.
- IEEE 802.3x flow Control Support.
- Store-and-Forward Switching Architecture.
- Back-plane (Switching Fabric):16Gbps
- SFP (Mini-GBIC) Support 100/1000 Dual Mode.
- 1Mbits Packet Buffer & 8K MAC address table
- Wide-range redundant power design with power polarity reverse protection.
- Pro-Ring II
 - X-Ring (Legacy-Ring)
 - Pro-Ring II system (X-Ring II , Advanced Dual Homing, Daisy Couple Ring and Multi Couple Ring Topology)
- Provides EFT protection 3000 VDC for power line.
- Supports 4000 VDC Ethernet ESD protection
- Provides Ground Isolation Protection
- Supports IEEE 802.1p Class of Service, per port provides 4 priority queues Port base, Tag Base and Type of Service Priority
- IEEE 802.1d Spanning Tree & IEEE 802.1w RSTP
- Port Based VLAN, 802.1Q Tag VLAN
- Supports Ingress Packet Filter and Egress Rate Limit.
- System Log Server/Client.
- SMTP e-mail Alert
- Relay Alarm Output System Events
- Security
 - SSL/SSH
 - Port Security: MAC address entries/Filter
 - IP Security: IP address security management to prevent unauthorized intruder.
 - Login Security: IEEE802.1X/RADIUS
- IGMP/MLD with Query mode for Multi Media
- TFTP Firmware Update and System Configure Restore/Backup.
- IP30 metal housing with DIN rail and wall mount design

DIMENSIONS (unit=mm)



SPECIFICATION

Hardware Specification	
Standards	IEEE 802.3 10Base-T Ethernet IEEE 802.3u 100Base-TX IEEE802.3ab 1000Base-T IEEE802.3z Gigabit fiber IEEE802.3x Flow Control and Back Pressure IEEE802.3ad Port trunk with LACP IEEE802.1d Spanning Tree IEEE802.1w Rapid Spanning Tree IEEE802.1p Class of Service IEEE802.1Q VLAN Tag IEEE802.1x User Authentication (Radius) IEEE802.1ab LLDP
Switch Architecture	Back-plane (Switching Fabric): 16Gbps Packet throughput ability (Full-Duplex): 23.8Mpps @64bytes
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	10/100/1000T: 4 x RJ-45 type connector Mini-GBIC: 4 x 100/1000 SFP Sockets Power & P-Fail connector: 1 x 6-pole terminal block RS-232 connector: 1 x RJ-45 type connector
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) 1000Base-T: 4-pair UTP/STP Cat. 5E cable or above EIA/TIA-568 100-ohm (100m)
Optical Cable	Multi-mode: 50/125um-62.5/125um; Single mode: 9/125um Available distance: 2km (Multi-mode) / 30km (Single-mode) Wavelength: 850nm (Multi-mode) / 1310nm (Single-mode)
Protocol	CSMA/CD
LED	Per unit: Power 1 (Green), Power 2 (Green), P-Fail (Red), R-Master (Green) Ethernet port: Link/Activity (Green), Speed (Green); Mini-GBIC: Link/Activity (Green)
Operating Humidity	5% ~ 95% (Non-condensing)
Operating Temperature	-40°C~85°C / -40°F~185°F
Storage Temperature	-40°C~85°C / -40°F~185°F
Power Supply	±9~56VDC, 18~36VAC**, Redundant power with polarity reverse protect function and removable

Power Consumption	<table border="1"> <thead> <tr> <th colspan="2">DC input</th> <th>12V</th> <th>24V</th> <th>36V</th> <th>48V</th> </tr> </thead> <tbody> <tr> <td rowspan="2">Un- load</td> <td>A</td> <td>0.954</td> <td>0.429</td> <td>0.312</td> <td>0.225</td> </tr> <tr> <td>W</td> <td>11.448</td> <td>10.296</td> <td>11.232</td> <td>10.8</td> </tr> <tr> <td rowspan="2">Full Load</td> <td>A</td> <td>1.442</td> <td>0.635</td> <td>0.442</td> <td>0.321</td> </tr> <tr> <td>W</td> <td>17.304</td> <td>15.24</td> <td>15.912</td> <td>15.408</td> </tr> </tbody> </table>	DC input		12V	24V	36V	48V	Un- load	A	0.954	0.429	0.312	0.225	W	11.448	10.296	11.232	10.8	Full Load	A	1.442	0.635	0.442	0.321	W	17.304	15.24	15.912	15.408
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Case Dimension	Metal case. IP-30, 59.6 (W) x 105 (D) x 152 (H) mm																												
Weight	900 g																												
Installation	DIN Rail and Wall Mount Design																												
EMI & EMS	FCC Class A, CE EN61000-6-2, CE EN61000-6-4, CE EN61000-4-2, CE EN61000-4-3, CE EN61000-4-4, CE EN61000-4-5, CE EN61000-4-6, CE N61000-4-8, EN61000-4-11																												
Safety	UL508, UL Class I Division II for Group A,B,C and D hazardous location																												
Stability Testing	IEC60068-2-32 (Free fall), IEC60068-2-27 (Shock), IEC60068-2-6 (Vibration)																												
MTBF	289,385 hrs																												
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, LLDP MIB																												
Pro-Ring II	Supports 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 for a ring of up to 250 switches																												
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																												
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)																												
IPv6	Support dual stack for IPv4 and IPv6																												

	Support Plug and Play function IPv6 Logo Committee certified Perform with following RFCs: ● RFC 2460 – IPv6 Specification ● RFC 4861 – Neighbor Discovery for IPv6 ● RFC 4862 – IPv6 Stateless Address Auto-configuration ● RFC 1981 – Path MTU Discovery for IPv6
Spanning Tree	Supports IEEE802.1d Spanning Tree and IEEE802.1w Rapid Spanning Tree
Quality of Service	The quality of service determined by port, Tag and IPv4 Type of service, IPv4 Different Service
Class of Service	Supports IEEE802.1p class of service, per port provides 4 priority queues
Port Security	Support 256 entries of MAC address for static MAC and another 256 for MAC filter
SSL	Support Secure Sockets Layer to protect the data access from WEB browser, compliant with SSL V2, V3 and TLS V1.0
SSH	Support Security Shell for Telnet and compliant with SSH-V2 Perform with RFC 4252, RFC 4253 and RFC 4254
Port Mirror	Supports 3 mirroring types: "RX, TX and Both packet".
Multicast Filtering	<i>Dynamic:</i> Support IGMP snooping v1, v2 and MLD snooping v1. Support 256 multicast groups Support IGMP and MLD query <i>Static:</i> Support 256 static multicast groups
IGMP/MLD	<i>Dynamic:</i> Support IGMP snooping v1, v2 and MLD snooping v1. Support 256 multicast groups Support IGMP and MLD query <i>Static:</i> Support 256 static multicast groups
IP Security	Supports 10 IP addresses that have permission to access the switch management and to prevent unauthorized intruder.
Login Security	Supports IEEE802.1X Authentication/RADIUS
Bandwidth Control	Support ingress packet filter and egress packet limit. The egress rate control supports all of packet type.

	Ingress filter packet type combination rules are Broadcast/Multicast/Flooded Unicast packet, Broadcast/Multicast packet, Broadcast packet only and all types of packet. The packet filter rate can be set an accurate value through the pull-down menu for the ingress packet filter and the egress packet limit.
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
Relay Alarm	Provides one relay output for port breakdown, power fail and alarm. Alarm Relay current carry ability: 1A @ DC24V
SNMP Trap	Up to 3 trap stations; trap types including: ● Device cold start ● Authorization failure ● Port link up/link down
DHCP	Provide DHCP Client/ DHCP Server/ Port-IP Binding
DNS	Provide DNS client feature and support Primary and Secondary DNS server.
SNTP	Supports SNTP to synchronize system clock in Internet
Firmware Update	Supports TFTP firmware update, TFTP backup and restore.
Configuration upload and download	Supports binary format configuration file for system quick installation
IfAlias	Each port allows an alphabetic string of 128-byte assigned as its own unique name via the SNMP or CLI interface

*Future release

**Optional

***The Recovery Time of X-Ring: SFP<10ms ; G-T<150ms

ORDERING INFORMATION

- **IGS-2404 -E.....P/N: 8350-850**
4 10/100/1000T + 4 100/1000 Dual Speed SFP L2 Managed Industrial Switch; -40°C to 85°C
- **IGS-2404 -E-AC.....P/N: 8350-850-AC**
4 10/100/1000T + 4 100/1000 Dual Speed SFP L2 Managed Industrial Switch; -40°C to 85°C; 18~36VAC

OPTIONAL ACCESSORIES

DIN Rail Power

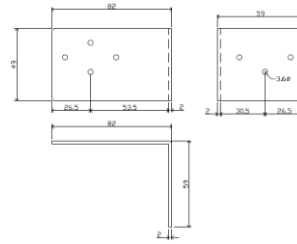
- **AD1048-24FS** 24VDC, 2A, Wide AC Input, Convection Cooled, DIN Rail or Wall Mounted, RoHS, Operating Temp. -20°C~50°C (ambient, derating each output at 2.5% per degree from 50°C ~ 75°C, which means the output is 18 Watts at 75°C.)
- **AD1024-24F** 24VDC, 1A, Wide AC Input, Convection Cooled, DIN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

Mini GBIC (SFP)

- | | |
|--|--|
| ■ 8330-162 MINI GBIC 1000SX (LC/0.5km) Transceiver | ■ 8330-061 100Base LX 30KM, Single-mode, LC Transceiver |
| ■ 8330-163 MINI GBIC 1000SX2 (LC/2km) Transceiver | ■ 8330-188 LTSFP-1000BX-10KM Transceiver (WDM 1310) |
| ■ 8330-165 MINI GBIC 1000LX (LC/10km) Transceiver | ■ 8330-189 LTSFP-1000BX-10KM Transceiver (WDM 1550) |
| ■ 8340-0591 MINI GBIC 1000LHX (LC/40km) Transceiver | ■ 8330-186 LTSFP-1000BX-20KM Transceiver (WDM 1310) |
| ■ 8330-166 MINI GBIC 1000XD (LC/50km) 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) |
| ■ 8330-170 MINI GBIC 1000EZ (120km) Transceiver | ■ 8330-181 LTSFP-1000BX-60KM Transceiver (WDM 1310) |
| ■ 8330-168 MINI GBIC 10/100/1000T (100m) 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) |
| ■ 8330-065 100Base FX 5KM, Multi-mode, LC Transceiver | ■ 8330-185 LTSFP-1000BX-80KM Transceiver (WDM 1550) |

Rack Mounting Kit

- **MBAK19002** L-Bracket that can change 90 degree of DIN rail mounting



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