IPGS-2204DSFP

4 10/100/1000T + 2 Dual Speed SFP w/ 4-PoE at/af Managed Industrial Switch

- *Pro-Ring IIse for single ring self-recovery ring in 20ms*
- *Support PoE Plus 802.3at/af ;120W PoE budget;9.5~56V PoE input (12V model)*
- *PoE management incl. Detection, Delay and Scheduling*
- *Support Advanced SNMP including QoS, IGMP query & source only, MSTP, DDM*

12V model 48V model

OVERVIEW

The Lantech IPGS-2204DSFP is an 4-port 10/100/1000BaseT + 2-port Dual Speed SFP industrial PoE switch w/4 POE 802.3at/af Injectors and Pro-Ring2se single ring self-recovery in less than 20ms. The SFP connection is suitable with 100M or 1000M Dual Speed. The advanced SNMP management features include QoS for 4 queues, 802.1q VLAN, IGMP snooping, query ,source only for multicast IP surveillance, static multicast forwarding for non-IGMP camera, DDM*** as well as Web Ping, SNTP etc.

Compliant with 802.3at/af PoE Plus standard, the Lantech IPGS-2204DSFP is able to feed each PoE port up to 30 Watts@54 VDC providing the connected PD devices. The built-in relay contact is able to connect with alarm system and send SNMP trap and Syslog alert in case of power or connection failure. IPGS-2204DSFP-12V is built with Booster technology that can accept input voltage from 9.5V ~ 56V and deliver PoE power at 48V~56V to feed the PD.

Lantech IPGS-2204DSFP supports advanced PoE management including PoE detection, delay and scheduling. PoE detection can detect if the connected PD is hanging up then restart the PD; PoE delay is to delay power feeding when the switch is completely booted up; PoE scheduling is to allow pre-set power feeding schedule upon routine time table. The exclusive IGMP source only function can auto choose IGMP query for surveillance application. Static multicast forwarding enables multicast route to bind with port in case of non-IGMP cameras as video sources to avoid network flooding.

The innovative Pro-Ring 2se self-recovery scheme can recover Ring network in less than 20ms for single ring with only one step configuration. Lantech IPGS-2204DSFP 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 ,static multicast forwarding for non-IGMP cameras and QoS. It also supports Ping commands via Web to detect whether a specific device is connected for easy trouble-shooting.

The built-in factory reset button can restore all setting back to factory default in case of User name and Password are missing.

With voltage boost design, the IPGS-2204DSFP-12V can work from 12V/24V input power source and boost the voltage to 48/54VDC to feed the POE power over Ethernet cable for any vehicles that usually has 12/24V power source. The slim compact design is able to fit in variety of cabinets and space.

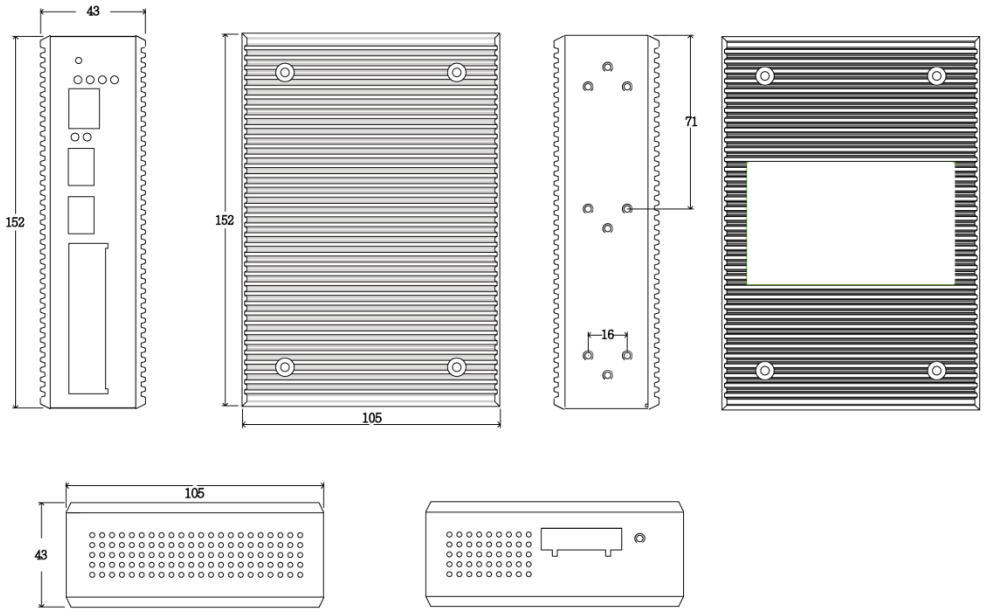
The Lantech IPGS-2204DSFP can support up to 6KV ESD contact per UTP port to minimize the burn down risk where the electronic static discharge is usually found. It is the best to be used in municipal, city surveillance, automation, transportation, mining, heavy Industrial factory where needs PoE functionality under harsh environment. The -E model can be used in extreme environments with an operating temperature range of -40°C to 75°C.

FEATURES & BENEFITS

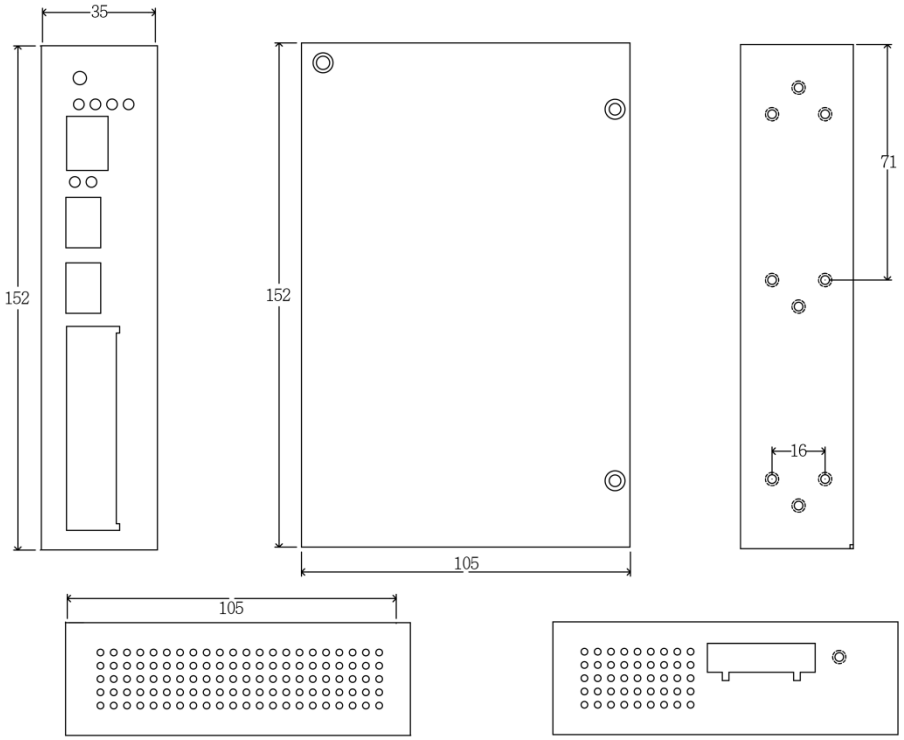
- **Pro-Ring 2se for self-recovery scheme in less than 20ms in Ring for single ring**
- **Embedded 4-port PoE 802.3at/af to feed power up to 30W@54V.**
- **PoE management including PoE detection, delay and scheduling for PD(power devices)**
- **PoE voltage boost from 12V to 48V (12V model)**
- **SFP slot supports 100/1000 Dual Mode with DDM*** for SFP diagnostic and monitoring**
- **Back-plane (Switching Fabric): 12Gbps**
- **8K MAC address table**
- **IP-30 Protection with DIN rail and wall mount design**
- **Dual Power Design for +DV power input**
- **Provides EFT protection 2000 VDC for power line**
- **Supports 6000 VDC ESD protection**
- **Support CPU load monitoring every 1,5,15 minutes and Web Ping to check if the connected device is alive**
- **IEEE 802.1d STP, IEEE 802.1w RSTP, IEEE 802.1s MSTP**
- **IGMP with Snooping / v1,v2 Query mode for Multi Media Application**
- **IGMP source only for auto query chosen in surveillance application**
- **Manual static multicast route 256 groups for non-IGMP cameras**
- **Port Based VLAN, 802.1Q Tag VLAN 256 groups**
- **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**
- **Security**
  - *Disable/Enable web MMI via console/telnet*
  - *Support MAC violation and Mac search to prevent host security*
  - *IP Source Guard: 10 IP address security access management to prevent unauthorized intruder*
  - *Login Security: IEEE802.1X/RADIUS*
  - *Support loopback protection to prevent physical layer failures*
- **SNMP Trap up to 3 trap stations**
  - *Device cold start, Power status, Authentication failure, Port Link up/Link down*
  - *PoE event*
- **Relay Alarm Output System Events**
- **TFTP Firmware Update**
- **Factory reset bottom can restore all setting back to factory default**

DIMENSIONS (unit=mm)

12V mdoel



48V mdoel



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 /at Power over Ethernet IEEE802.1d Spanning Tree IEEE802.1w Rapid Spanning Tree IEEE802.1s Multiple 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): 12Gbps
Transfer Rate	14,880pps for Ethernet port 148,800pps for Fast Ethernet port 1,488,000pps for Gigabit Fiber Ethernet port
MAC Address	8K MAC address table
Connectors	10/100/1000T: 4 x ports RJ-45 with Auto MDI/MDI-X function 100/1000 SFP port: 2 100/1000 SFP socket with DDM*** 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) 1000Base-T: 2-pair UTP/STP Cat. 5/ 5E/ 6 cable EIA/TIA-568 100-ohm (100m)
Optical Fiber	**1.25Gbps:** Multi mode: 0 to 550 m, 850 nm (50/125 µm); 0 to 2 km, 1310 nm (50/125 µm) Single mode: 0 to 10 km/ 30 km/ 40 km, 1310 nm (9/125 µm); 0 to 50 km/ 60 km/ 80km/ 120 km, 1550 nm (9/125 µm) **125Mbps:** Multi mode: 0 to 2 km/ 5 km, 1310 nm (62.5/125 µm) Single mode: 0 to 30 km, 1310 nm (62.5/125 µm) **WDM 1.25Gbps:** Single mode: 0 to 10 km/ 20 km/ 40 km/ 60 km, 1310 nm (9/125 µm); 0 to 80 km, 1490 nm (9/125 µm); 0 to 10 km/ 20 km/ 40 km/ 60 km/ 80 km, 1550 nm (9/125 µm) **WDM 125Mbps:** Single mode: 0 to 20 km/ 40 km/ 60 km/ 80 km, 1310 nm (9/125 µm); 0 to 20 km/ 40 km/ 60 km/ 80 km, 1550 nm (9/125 µm)
Protocol	CSMA/CD
PoE pin assignment	RJ-45 port # 1~#4 support 802.3at/af End-point, Alternative A mode. Per port provides up to 30W@54V capability. Positive (VCC+): RJ-45 pin 1,2. Negative (VCC-): RJ-45 pin 3,6.
PoE input voltage & Power feed voltage	Input V: 9.5V~56V Active Mode A /Output V: 48V/54V@15W/

	30W(IPGS-2204 DSFP-12V) 45~56V(af) 48V@15W 53~56V(at) 54V@30W
LED	**Per unit:** Power (Green), Power 1 (Green), Power 2 (Green), Fault (Yellow), Master (Green) **4 port 10/100/1000T:** Link/Activity (Green), Full duplex/Collision (Yellow) **SFP port:** LNK/ACT(Green)
Power Supply	PoE input 48V/54VDC; 9.5V~56V(IPGS-2204DSFP-12V); Dual power connective removable terminal block
PoE Budget	80W for 12V input, 120W for 24V and 48V/54V input
Overload current protection	Present
Operating Humidity	5% ~ 95% (Non-condensing)
Operating Temperature	Standard: -20°C~60°C / -4°F~140°F Wide Operating Temperature for E models: -40°C~75°C / -40°F~167°F
Storage Temperature	-40°C~85°C / -40°F~185°F
Case Dimension	IP-30, 12V model: 43(W) x 105(D) x 152(H) mm 48V model: 35(W) x 105(D) x 152(H) mm
Weight	660 g
Fan Number	0
Installation	Wall mount or DIN-type cabinet install
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
Stability Testing	IEC60068-2-32 (Free fall), IEC60068-2-27 (Shock), IEC60068-2-6 (Vibration)
Power Consumption	9.86 W (no PoE load) for Ethernet data at full load
Warranty	5 years

Software Specification

Management	SNMP v1 v2c, v3/ Web/Telnet/CLI
SNMP MIB	RFC 1215 Traps MIB, RFC 1213 MIBIIS, 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
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
Pro-Ring IIse	Pro-Ring 2se system covers Single-Ring for network recovery in less than 20ms up to 50 switches in a ring. 20ms recovery is on fiber port.
Ping detection	Support Ping command through Web to detect the connected devices
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) Double Tag VLAN (Q in Q)
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, IEEE802.1w Rapid Spanning Tree; IEEE 802.1s Multiple spanning tree
PoE Management	■ PoE Detection to check if PD is hang up then restart the PD ■ PoE Delay to send power when switch is completely boot up ■ PoE Scheduling to On/OFF PD upon routine time table
Quality of Service	The quality of service determined by port, Tag and IPv4 Type of service, IPv4/IPv6 Different Service
Class of Service	Supports IEEE802.1p class of service, per port provides 4 priority queues
Security	· *Disable/Enable web MMI via console/telnet* · *Support MAC violation and Mac search to prevent host security* · *IP Source Guard: 10 IP address security access management to prevent unauthorized intruder* · *Login Security: IEEE802.1X/RADIUS* · *Support loopback protection to prevent physical layer failures*
Port Mirror	Supports 3 mirroring types: "RX, TX and Both packet"
IGMP	Supports IGMP snooping v1,v2 IGMP Source only for query auto chosen Static Multicast Route for non-IGMP multicast 256 multicast groups and IGMP query
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
SNTP	Supports SNTP to synchronize system clock to Internet
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)
Relay Alarm	Provides one relay output for port breakdown, power fail alarm. Alarm Relay current carry ability: 1A @ DC24V
SNMP Trap	1. Cold start 2. Link down 3. Link up 4. Authorization fail 5. PoE port event
DHCP	Provides DHCP Client/ DHCP Server/ Port and IP Binding
DNS	Provide DNS client feature and support Primary and Secondary DNS server.
Firmware Update	Supports TFTP and HTTP firmware update
Factory reset	Factory reset bottom can restore all setting back to factory default
ifAlias	Each port allows importing 128bits of alphabetic string of word on SNMP and CLI interface

*Future Release

**Optional

***Optional DDM SFP required

ORDERING INFOMATION

- **IPGS-2204DSFP……...P/N: 8350-884**
  4 10/100/1000T + 2 Dual Speed SFP w/4 PoE Injectors 802.3at/af Industrial Managed Switch; -20°C to 60°C
- **IPGS-2204DSFP-E……..P/N: 8350-885**
  4 10/100/1000T + 2 Dual Speed SFP w/4 PoE Injectors 802.3at/af Industrial Managed Switch; -40°C to 75°C
- **IPGS-2204DSFP-12V……..P/N: 8350-886**
  4 10/100/1000T + 2 Dual Speed SFP w/4 PoE Injectors 802.3at/af Industrial Managed Switch; w/12V~56V PoE input; -20°C to 60°C
- **IPGS-2204DSFP-12V-E……..P/N: 8350-887**
  4 10/100/1000T + 2 Dual Speed SFP w/4 PoE Injectors 802.3at/af Industrial Managed Switch; w/12V~56V PoE input Industrial Switch; -40°C to 75°C

OPTIONAL ACCESSORIES

DIN Rail Power

- **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
- **8330-163** MINI GBIC 1000SX2 (LC/2km) Transceiver
- **8330-165** MINI GBIC 1000LX (LC/10km) Transceiver
- **8340-0591** MINI GBIC 1000LHX (LC/40km) Transceiver
- **8330-166** MINI GBIC 1000XD (LC/50km) Transceiver
- **8330-169** MINI GBIC 1000XD (LC/60km) Transceiver
- **8330-167** MINI GBIC 1000ZX (LC/80km) Transceiver
- **8330-170** MINI GBIC 1000EZX (120km) Transceiver
- **8330-168** MINI GBIC 1000T (100m) Transceiver
- **8330-061** 100Base LX 30KM, Single-mode, LC Transceiver
- **8330-060** 100Base FX 2KM, Multi-mode, LC Transceiver
- **8330-188** LTSFP-1000BX-10KM Transceiver (WDM 1310)
- **8330-189** LTSFP-1000BX-10KM Transceiver (WDM 1550)
- **8330-186** LTSFP-1000BX-20KM Transceiver (WDM 1310)
- **8330-187** LTSFP-1000BX-20KM Transceiver (WDM 1550)
- **8330-180** LTSFP-1000BX-40KM Transceiver (WDM 1310)
- **8330-182** LTSFP-1000BX-40KM Transceiver (WDM 1550)
- **8330-181** LTSFP-1000BX-60KM Transceiver (WDM 1310)
- **8330-183** LTSFP-1000BX-60KM Transceiver (WDM 1550)
- **8330-184** LTSFP-1000BX-80KM Transceiver (WDM 1490)
- **8330-185** LTSFP-1000BX-80KM Transceiver (WDM 1550)

All the above part-no ended with D are with Diagnostic function

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