

IPGS-5416MGSFP-16

16 10/100/1000T PoE at/af + 4 1G/2.5G SFP L2+ Industrial Managed

Ethernet Switch w/ Enhanced G.8032 Ring; 24V/48V input models

- Support IEEE802.3at/af up to 30W per port
- PoE management incl. Detection and Scheduling
- Enhanced G.8032 ring protection < 20ms for single ring. Supports auto mode*, enhanced mode, train mode*, multi-VLAN* and basic mode; Enhanced G.8032 ring covers multicast packets; MSTP 8/16*MSTI /RSTP; support MRP
- Miss-wiring avoidance & node failure protection
- User friendly UI, including auto topology drawing and DDM threshold monitoring with dB values***; Complete CLI
- Support LACP link aggregation, IGMP v3/router port, DHCP server & DHCP Option82; Port based DHCP distribution, Mac based DHCP server, QoS by VLAN**, SSH/SSL, HTTPS, INGRESS/EGRESS ACL L2/L3, TACACS+, QinQ**, SMS**



- Dual 24V/48V input voltage selection; Max PoE budget 120W @24V; 240W @48V
- Optional InstaView** for centralized backup, editing the configuration file and upgrade firmware
- USB port to backup, restore the configuration file and upgrade
- Wide range operation temperature (-E model):-40~75C/-40~167F

















OVERVIEW

Lantech IPGS-5416MGSFP-16 is a high performance L2+ (All Gigabit) Ethernet switch with 16 10/100/1000T + 4 1G/2.5G SFP w/16 PoE 802.3af/at Injectors which provides L2 wire speed and advanced security function for network aggregation deployment. It delivers ITU G.8032 enhanced ring recovery less than 20ms in single ring. It also supports train ring*, enhanced mode with easy configuration, comprehensive QoS, QoS by VLAN**, advanced security including INGRESS/EGRESS ACL L2/L3, TACACS+, SSH/SSL, Mac based DHCP server, DHCP Option 82, DHCP server, IGMPv1/v2/v3/router port, QinQ* which are important features required in large network. The Cisco Discovery Protocol (CDP) and LLDP are supported for Ciscoworks to detect the switch info and show on L2 map topology. The enhanced platform allows quick booting up time under 50 seconds.

Up to 16 Poe at/af ports w/advanced PoE management

Compliant with 802.3af/at standard, the Lantech IPGS-5416MGSFP-16 is able to feed each PoE port up to 30 Watt. Lantech IPGS-5416MGSFP-16 supports advanced PoE management including PoE detection and scheduling. PoE detection can detect if the connected PD hangs then restart the PD; PoE scheduling is to allow pre-set power feeding schedule upon routine time table. Each PoE ports can be Enabled/disabled, get the voltage, current, Watt, and temperature info displayed on WebUI.

Miss-wiring avoidance, Repowered auto ring* restore, Loop

protection

The IPGS-5416MGSFP-16 also embedded several features for stronger and reliable network protection in an easy and intuitive way. When the pre-set ring configuration failed or looped by miss-wiring, Lantech IPGS-5416MGSFP-16 is able to alert with the LED indicator and disable ring automatically. Repowered auto ring* restore function (node failure protection) ensures the switches in a ring to survive after power breakout is back. The status can be shown in NMS when each switch is back. Loop protection is also available to prevent the generation of broadcast storm when a dumb switch is inserted in a closed loop connection.

DHCP option 82 & Port based, Mac based DHCP, Option66*, IPv6 DHCP server**

DHCP option 82 and Port based DHCP function can offer the same IP address on port base or VLAN base where there is need to replace the new device connecting to Lantech switches to avoid any network disruption. The built-in DHCP Option 82 server offers the convenience of policy setting on the switch. Mac based DHCP server function assigns an IP address according to its MAC address to include dumb switches in DHCP network. DHCP option 66* is also supported. Optional IPv6 address resolution for DHCP server can be supported.

User friendly GUI, Auto topology drawing

The user friendly UI, innovative auto topology drawing and topology demo makes IPGS-5416MGSFP-16 much easier to



get hands-on. The complete CLI enables professional engineer to configure setting by command line.

Enhanced G.8032 ring, 8/16* MSTI MSTP; Optional MRP ring

Lantech IPGS-5416MGSFP-16 features enhanced G.8032 ring which can be self-healed in less than 20ms for single ring topology protection covering multicast packets. It also supports various ring topologies that covers multi-chain (under enhanced ring), train ring*, basic ring, multiple-VLAN ring* and auto-ring* by easy setup than others. The innovative auto-Ring* configurator (auto mode*) can calculate owner and neighbor in one step. It supports MSTP that allows each spanning tree for each VLAN for redundant links with 8/16* MSTI.

Optional MRP (Media Redundancy Protocol) can be supported for industrial automation networks.

QoS by VLAN** for legacy device

QoS by VLAN** can allow switch to tag QoS by VLAN** regardless the devices acknowledge QoS or not in which greatly enhance the bandwidth management in a network.

QinQ**, QoS QinQ** and GVRP supported

It supports the QinQ**, QoS QinQ**, GVRP for large VLAN segmentation.

IGMPv3, GMRP, router port, static multicast forwarding and multicast Ring protection

The unique multicast protection under enhanced G.8032 ring can offer immediate self-recovery instead of waiting for IGMP table timeout. It also supports IGMPv3, GMRP, router port and static multicast forwarding binding by ports for video surveillance application.

Editable configuration file; InstaView** for mass deployment

The configuration file of Lantech IPGS-5416MGSFP-16 can be exported and edited with word processor for the other switches configuration with ease. The factory reset button can restore the setting back to factory default

The built-in watchdog design can automatically reboot the switch when CPU is found dead. IPGS-5416MGSFP-16 also supports dual image firmware function*.

With optional InstaView, the configuration files can be mass

backup, mass-editable deployed and auto upgrading firmware in batch make maintenance easy.

The built-in USB port can upload/download the firmware through USB dongle for switch replacement.

2DI/2DO for relay contact and event alerting by email & traps

In case of event, the IPGS-5416MGSFP-16 is able to send an email & SMS** text message to pre-defined addresses as well as SNMP Traps out immediately. It provides 2DI and 2DO. When disconnection of the specific port was detected; DO will activate the signal LED to alarm. DI can integrate the sensors for events and DO will trigger the alarm while sending alert information to IP network with email and traps.

Environmental monitoring for switch inside information

The environmental monitoring can detect switch overall temperature, total PoE load, voltage and current where can send the SNMP traps, email and SMS** alert when abnormal.

Dual power 24V/48V input, high PoE budget

The Lantech IPGS-5416MGSFP-16 is designed with dual power supply at 44~56VDC (48V model) or 9.5V~56VDC input (24V model). The 48V model can have 240W PoE budget while 24V model can have 60W (12V input) or 120W (24V input) budget.

Industrial hardened design with high EFT and ESD protection

Lantech IPGS-5416MGSFP-16 features high reliability and robustness coping with extensive EMI/RFI phenomenon, environmental vibration and shocks usually found in factory, substation, steel automation, aviation, mining and process control. Featured with relay contact alarm function, the IPGS-5416MGSFP-16 is able to connect with alarm system in case of power failure or port disconnection. The IPGS-5416MGSFP-16 also provides $\pm 2000V$ EFT and $\pm 6000V$ ESD protection, which can reduce unstable situation caused by power line and Ethernet.

It is the best solution for Automation, transportation, surveillance, Wireless backhaul, Semi-conductor factory applications. The -E model can be used in extreme environments with an operating temperature range of -40°C to 75°C.

FEATURES & BENEFITS

- 16 100/1000T + 4 1G/2.5G SFP w/16 PoE 802.3af/at Injectors (Total 20 Ports Ethernet Switch)
- Embedded 16 PoE Injectors IEEE802.3af/at function to feed power up to 30W for active mode operation
- 48V input for PoE budget 240W; 24V input for PoE budget 120W
- PoE management including PoE detection and scheduling for PD (power devices)
- Back-plane (Switching Fabric): 40Gbps
- 16K MAC address table
- DDM to support SFP diagnostic function***
 - Automatically convert the raw data into dB values for TX power/RX power, making it easier to measure the fiber distance
- 10KB Jumbo frame

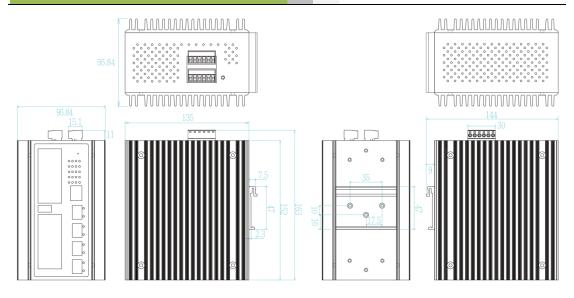
- User friendly UI, auto topology drawing, topology demo, complete CLI for professional setting
 - Enhanced G.8032 Ring protection in 20ms for single ring
 - Support various ring/chain topologies, including train ring*, enhanced ring, basic ring, auto ring*
 multiple VLAN ring*
 - Enhanced G.8032 ring configuration with ease
 - Auto ring* configuration(auto mode*) for single ring
 - Cover multicast and data packets protection
- Provides EFT protection ± 2000 VDC for power line.
- Supports ±6000 VDC Ethernet ESD protection
- Supports IEEE 802.1p Class of Service, per port provides 8 priority queues Port base, Tag Base and Type of Service Priority



- QoS by VLAN** to prioritize all devices in the network
- IEEE 802.1d STP, IEEE 802.1w RSTP,802.1s MSTP VLAN redundancy with 8/16** MSTI
- 4K 802.1Q VLAN, Port based VLAN, GVRP, QinQ**, QoS QinQ**
- Supports IEEE 802.1ab LLDP, Cisco CDP; LLDP info can be viewed via Web/ Console/ Lantech[™]
 InstaView**
- DHCP server / client / DHCP Option 82 relay / DHCP Option 82 server; Port based DHCP server; DHCP Option 66*; IPv6 address resolution for DHCP server**
- Mac based DHCP server to assign IP address that includes dumb switches in DHCP network
- Bandwidth Control
 - Ingress packet filter and egress rate limit
 - Broadcast/multicast packet filter control
- Relay alarm output system events
- Miss-wiring avoidance
 - LED indicator
- Repowered auto ring* restore
 - Ensure the switches in a ring to survive after power breakout is back
 - The status can be shown in NMS when each switch is back
- TFTP/SFTP**/HTTP firmware upgrade; LantechTM InstaView** for multiple upgrade
- System Event Log, SMTP Email alert, SMS** mobile (text) and SNMP Trap for alarm support; 32 RMON counters
- Security
 - SSL/SSH/INGRESS/EGRESS ACL L2/L3

- Port Security: MAC address entries/Filter/static
 MAC-Port binding
- IP Security: IP address security management to prevent unauthorized intruder.
- · TACACS+
- Login Security: IEEE802.1X/RADIUS
- HTTPS for secure access to the web interface
- Static multicast forwarding forward reversed IGMP flow with multicast packets binding with ports for IP surveillance application
- Multicast static route for non- IGMP camera to prevent flooding; IGMP router port to assign query in ring and for reversed multicast video flow
- IGMPv1,v2,v3 with Query mode for multi media
- Dual image firmware support*
- Factory reset button to restore setting to factory default
- Watchdog design to auto reboot switch when CPU is found dead
- Quick system booting up time under 50 seconds
- Environmental monitoring for system input voltage, current, ambient temperature and total PoE load
- Supports DIDO (Digital Input/Digital Output)
- Configuration backup and restoration
 - Supports text configuration file for system quick installation
 - USB port to upload/download firmware by USB dongle
- IP30 metal housing with DIN rail and Wall-mount** design

DIMENSIONS (unit=mm)





SPECIFICATION

Standards	IEEE802.3 10Base-T Ethernet IEEE802.3u 100Base-TX		applications
	IEEE802 3u 100Base-TX		
			60W at 12V input; 120W at 24V input(24V m
	IEEE802.3ab 1000Base-T	PoE pin	RJ-45 port # 1~#16 support IEEE 802.3at/af
	IEEE802.3z Gigabit fiber IEEE802.3x Flow Control and Back Pressure	assignment	End-point, Alternative A mode.
	IEEE802.3ad Port trunk with LACP		Positive (VCC+): RJ-45 pin 1,2.
	IEEE802.1d Spanning Tree		Negative (VCC-): RJ-45 pin 3,6.
	IEEE802.1w Rapid Spanning Tree	Power	Max. 21W
	IEEE802.1s Multiple Spanning Tree	Consumption	
	IEEE802.3ad Link Aggregation Control Protocol	Case Dimension	Metal case. IP-30,
	(LACP)		95.84 (W) x 135 (D) x 152 (H) mm
	IEEE802.1AB Link Layer Discovery Protocol (LLDP)	Weight	1.6 kg
	IEEE802.1X User Authentication (Radius) IEEE802.1p Class of Service	Installation	DIN Rail and Wall Mount** Design
	IEEE802.1Q VLAN Tag	EMI & EMS	FCC Class A,
	IEEE802.3at/af Power over Ethernet		CE EN55022 Class A, CE EN55024, CE
Switch	Back-plane (Switching Fabric): 40Gbps		EN61000-4-2, CE EN61000-4-3, CE EN6100 CE EN61000-4-5 ED3, CE EN61000-4-6, CE
Architecture			N61000-4-8, EN61000-4-11
Transfer Rate	14,880pps for Ethernet port	Railway	EN50155:2017, EN50121-3-2:2015,
	148,800pps for Fast Ethernet port	compliance*	EN50121-4:2015, EN61373:2010
	1,488,000pps for Gigabit Ethernet / Gigabit Fiber	Stability Testing	IEC60068-2-32 (Free fall), IEC60068-2-27 (\$
Mara Addus as	port	Clability looting	IEC60068-2-6 (Vibration)
Mac Address	16K MAC address table	MTBF	586,057 hours
Jumbo frame Connectors	10/100/1000T: 16 x ports RJ-45 with Auto	Warranty	5 years
Connectors	MDI/MDI-X function		Specification
	Mini-GBIC: 4 x 1G/2.5G SFP socket with DDMI	Management	SNMP v1 v2c, v3/ Web/Telnet/CLI
	RS-232 connector: RJ-45 type	SNMP MIB	RFC 1215 Traps MIB*,
	USB x 1	0111111	RFC 1213 MIBII
	Power & Relay connector: 1 x 6-pole terminal block		RFC 1158 MIBII
	DIDO : 1 x 6-pole terminal block		RFC 1157 SNMP MIB,
Network Cable	10Base-T: 2-pair UTP/STP Cat. 3, 4, 5/ 5E/ 6 cable		RFC 1493 Bridge MIB*
	EIA/TIA-568 100-ohm (100m)		RFC 1573 IF MIB
	100Base-TX: 2-pair UTP/STP Cat. 5/ 5E/ 6 cable EIA/TIA-568 100-ohm (100m)		RFC 2674 VLAN MIB*,
Optical Cable	1Gbps:		Partial RFC 1757 RMON,
Optical Cable	Multi mode: 0 to 550 m, 850 nm (50/125 μm); 0 to 2		RFC 2674 Q-Bridge MIB*; Bridge MIB,
	km, 1310 nm (50/125 μm)		LLDP MIB
	Single mode: 0 to 10 km/ 30 km/ 40 km, 1310 nm		RSTP MIB*
	(9/125 μm); 0 to 50 km/ 60 km/ 80km/ 120 km, 1550		Private MIB
	nm (9/125 µm)	ITU G.8032	Support ITU G.8032 v2/2012 for Ring protect
	2.5Gbps		less than 20ms for self-heal recovery (single
	Multi mode: 0 to 300 m, 850 nm (50/125 μm);		
	Single mode: 0 to 2 km/ 15 km/ 40 km, 1310 nm		enhanced mode)
	(9/125 μm); 0 to 40 km/ 80 km/ 100km, 1550 nm		Support various ring/chain topologies
	(9/125 μm)		Includes train ring*, auto ring*, basic single ri
	WDM 1Gbps:		enhanced ring, multiple-VLAN ring*
	Single mode: 0 to 10 km/ 20 km/ 40 km/ 60 km, 1310		Enhanced G.8032 ring configuration with east
	nm (9/125 µm); 0 to 80 km, 1490 nm (9/125 µm); 0		Cover multicast & data packets protection
	to 10 km/ 20 km/ 40 km/ 60 km/ 80 km, 1550 nm	PoE	PoE Detection to check if PD hangs then res
	(9/125 μm)	Management	PD
	WDM 2.5Gbps	Per Port PoE	On/ Off, voltage, current, watts, temperature
	Single mode: 0 to 5 km/ 20 km/ 40 km/ 60 km, 1310	Status	Auto topology drewing
	/1550nm (9/125 µm); 0 to 80 km, 1490/1550 nm	User friendly UI	Auto topology drawingTopology demo
	(9/125 μm)		 Auto configuration for G.8032(auto
LED	Per unit: Power 1 (Green), Power 2 (Green), FAULT		for single ring
	(Red); RM(Green)		■ DDM threshold monitoring with dB
	Ethernet port: Link/Activity (Green), Speed (Green);		values***
	PoE: Link/Act (Green); Mini-GBIC: Link/Activity		 Complete CLI for professional settir
	(Green)	Port Trunk with	LACP Port Trunk: 8 Trunk groups
DI/DO	2 Digital Input (DI) :	LACP	Overage to LLDD to the
	Level 0: -30~2V / Level 1: 10~30V	LLDP	Supports LLDP to allow switch to advise its
	Max. input current:8mA	CDP	identification and capability on the LAN
	2 Digital Output(DO): Open collector to 40 VDC,	Environmental	Cisco Discovery Protocol for topology mappi System status for input voltage, current, tota
0	200mA	Monitoring	load and ambient temperature to be shown i
Operating	5% ~ 95% (Non-condensing)		and sent alerting if any abnormal status
Humidity	20°C 60°C / 4°E 140°E (Standard model)	VLAN	Port Based VLAN
Operating Temperature	-20°C~60°C / -4°F~140°F (Standard model) -40°C~75°C / -40°F~167°F(-E model)		IEEE 802.1Q Tag VLAN (256 entries)/ VLAN
Temperature	-40°C~85°C / -40°F~185°F		to 4K, VLAN ID can be assigned from 1 to 40
Storage			OVDD 0:-0++ 0-0 0:-0++ D+
Storage Temperature			
Storage Temperature Power Supply	44~56VDC(48V model); 9.5V~56VDC(24V model)		GVRP, QinQ**, QoS QinQ**, Protocol based VLAN**; IPv4/IPv6 Subnet based VLAN**
Temperature		IPv6/4 Spanning Tree	

	(54V input is recommended for PTZ or heater	
	applications	
5.5.	60W at 12V input; 120W at 24V input(24V model)	
PoE pin	RJ-45 port # 1~#16 support IEEE 802.3at/af End-point, Alternative A mode.	
assignment	Positive (VCC+): RJ-45 pin 1,2.	
	Negative (VCC-): RJ-45 pin 3,6.	
Power	Max. 21W	
Consumption	M . I I I CO	
Case Dimension	Metal case. IP-30, 95.84 (W) x 135 (D) x 152 (H) mm	
Weight	1.6 kg	
Installation	DIN Rail and Wall Mount** Design	
EMI & EMS	FCC Class A, CE EN55022 Class A, CE EN55024, CE	
	EN61000-4-2, CE EN61000-4-3, CE EN61000-4-4,	
	CE EN61000-4-5 ED3, CE EN61000-4-6, CE	
Boilway	N61000-4-8, EN61000-4-11	
Railway compliance*	EN50155:2017, EN50121-3-2:2015, EN50121-4:2015, EN61373:2010	
Stability Testing	IEC60068-2-32 (Free fall), IEC60068-2-27 (Shock),	
	IEC60068-2-6 (Vibration)	
MTBF Warranty	586,057 hours 5 years	
	pecification	
Management	SNMP v1 v2c, v3/ Web/Telnet/CLI	
SNMP MIB	RFC 1215 Traps MIB*,	
	RFC 1213 MIBII	
	RFC 1158 MIBII RFC 1157 SNMP MIB.	
	RFC 1197 SINMP MIB, RFC 1493 Bridge MIB*	
	RFC 1573 IF MIB	
	RFC 2674 VLAN MIB*,	
	Partial RFC 1757 RMON,	
	RFC 2674 Q-Bridge MIB*; Bridge MIB,	
	LLDP MIB RSTP MIB*	
	Private MIB	
ITU G.8032	Support ITU G.8032 v2/2012 for Ring protection in	
	less than 20ms for self-heal recovery (single ring	
	enhanced mode)	
	Support various ring/chain topologies	
	Includes train ring*, auto ring*, basic single ring,	
	enhanced ring, multiple-VLAN ring*	
	Enhanced G.8032 ring configuration with ease Cover multicast & data packets protection	
PoE	PoE Detection to check if PD hangs then restart the	
Management	PD	
Per Port PoE Status	On/ Off, voltage, current, watts, temperature	
User friendly UI	■ Auto topology drawing	
	■ Topology demo ■ Auto configuration for G.8032(auto mode*)	
	for single ring	
	■ DDM threshold monitoring with dB	
	values*** ■ Complete CLI for professional setting	
Port Trunk with	LACP Port Trunk: 8 Trunk groups	
LACP		
LLDP	Supports LLDP to allow switch to advise its identification and capability on the LAN	
CDP	Cisco Discovery Protocol for topology mapping	
Environmental	System status for input voltage, current , total PoE	
Monitoring	load and ambient temperature to be shown in GUI and sent alerting if any abnormal status	
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, QinQ**, QoS QinQ**, Protocol based	
	VLAN**; IPv4/IPv6 Subnet based VLAN**	
IPv6/4	Present	



	IEEE802.1w Rapid Spanning Tree, IEEE802.1s Multiple Spanning Tree 8/16**MSTI
Quality of Service	The quality of service determined by port, Tag and IPv4 Type of service, IPv4 Differentiated Services Code Points - DSCP
Class of Service	Support IEEE802.1p class of service, per port provides 8 priority queues
QoS by VLAN**	Tagged QoS by VLAN** for all devices in the network
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
Port Mirror	Support 3 mirroring types: "RX, TX and Both packet"
Network Security	Support 10 IP addresses that have permission to access the switch management and to prevent
	unauthorized intruder.
	802.1X access control for port based and MAC
	based authentication/static MAC-Port binding
	Ingress/Egress ACL L2/L3
	SSL/ SSH for Management
	HTTPS for secure access to the web interface
	TACACS+ for Authentication
IGMP	Support IGMP snooping v1,v2,v3; Supports IGMP static route; 1024 multicast groups; IGMP router port; IGMP query; GMRP
Static multicast	Static multicast forwarding forward reversed IGMP
forwarding	flow with multicast packets binding with ports for IP surveillance application
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/Text	Supports SMTP Server and 8 e-mail accounts for		
SMS**	receiving event alert; can send SMS** text alert via mobile		
Relay Alarm	Provides one relay output for port breakdown, power		
	fail and alarm.		
Protection	Alarm Relay current carry ability: 1A @ DC24V Miss-wiring avoidance		
Flotection	Repowered auto ring* restore		
SNMP Trap	Up to 10 trap stations; trap types including:		
	 Device cold start 		
	 Authorization failure 		
	 Port link up/link down 		
	 DI/DO open/close 		
	 Typology change(ITU ring) 		
	 Power failure 		
	 Environmental abnormal 		
DHCP	Provide DHCP Client/ DHCP Server/DHCP Option		
	82 (Client & Server)/Port based DHCP; DHCP		
	Option 66*; IPv6 address resolution for DHCP server**		
Mac based DHCP	Assign IP address by Mac that can include dumb		
Server	switch in DHCP network		
DNS	Provide DNS client feature and support Primary and		
ONTE	Secondary DNS server.		
SNTP	Supports SNTP to synchronize system clock in Internet		
Firmware Update	Supports TFTP/SFTP** firmware update, TFTP		
	backup and restore; HTTP firmware upgrade;		
	Lantech [™] InstaView** for multiple upgrade		
Configuration	Supports editable configuration file for system quick		
upload and download	installation; Support factory reset button to restore all settings back to factory default; USB for auto		
- download	restore/backup. Optional InstaView for mass		
	backup, editing configuration and upgrade		
Dual Image	Support dual image firmware function		
Frimware*			

*Future release
**Optional
***Optional DDM SFP required

ORDERING INFOMATION

■ IPGS-5416MGSFP-16-48V......P/N: 8350-860

16 10/100/1000T PoE at/af up to 30W + 4 1G/2.5G Dual Speed SFP L2+ Industrial Managed Ethernet Switch; -20°C to 60° C; Environmental Monitoring; dual 44V~56V input; PoE budget 240W

■ IPGS-5416MGSFP-16-48V-E......P/N: 8350-861

16 10/100/1000T PoE at/af up to 30W + 4 1G/2.5G Dual Speed SFP L2+ Industrial Managed Ethernet Switch; -40°C to 75°C; Environmental Monitoring; dual 44V~56V input; PoE budget 240W

■ IPGS-5416MGSFP-16-24V......P/N: 8350-862

16 10/100/1000T PoE at/af up to 30W + 4 1G/2.5G Dual Speed SFP L2+ Industrial Managed Ethernet Switch; -20°C to 60°C; Environmental Monitoring; dual 9.5V~56V input, PoE budget 60W at 12V, 120W at 24V

■ IPGS-5416MGSFP-16-24V-E......P/N: 8350-863

16 10/100/1000T PoE at/af up to 30W + 4 1G/2.5G Dual Speed SFP L2+ Industrial Managed Ethernet Switch; -40°C to 75° C; Environmental Monitoring; dual $9.5V \sim 56V$ input, PoE budget 60W at 12V, 120W at 24V

OPTIONAL ACCESSORIES

48~54VDC DIN Rail Power for 802.3at Applications

■ NDR-480 Series 480W Single Output Industrial Din Rail Power; 90-264VAC / 127-370VDC 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)

■ NDR-240 Series 240W Single Output Industrial Din Rail Power, 90-264VAC / 127 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)

■ NDR-120 Series 120W Single Output Industrial Din Rail Power; 90-264VAC / 127-370VDC Input Range; Cooling by free air convection; RoHS2;

derating curve on NDR-120 Series datasheet)

Mini GBIC (SFP)

Industrial PoE Managed Ethernet Switches



■ 8330-162X	MINI GBIC 1000SX (LC/0.5km) Transceiver	8330-186	LTSFP-1000BX-20KM Transceiver (WDM 1310)
8330-163X	MINI GBIC 1000SX2 (LC/2km) Transceiver	8330-187	LTSFP-1000BX-20KM Transceiver (WDM 1550)
8330-165X	MINI GBIC 1000LX (LC/10km) Transceiver	8330-180	LTSFP-1000BX-40KM Transceiver (WDM 1310)
8340-0591	MINI GBIC 1000LHX (LC/40km) Transceiver	8330-182	LTSFP-1000BX-40KM Transceiver (WDM 1550)
8330-166	MINI GBIC 1000XD (LC/50km) Transceiver	8330-181	LTSFP-1000BX-60KM Transceiver (WDM 1310)
8330-169	MINI GBIC 1000XD (LC/60km) Transceiver	8330-183	LTSFP-1000BX-60KM Transceiver (WDM 1550)
8330-167	MINI GBIC 1000ZX (LC/80km) Transceiver	8330-184	LTSFP-1000BX-80KM Transceiver (WDM 1490)
8330-170	MINI GBIC 1000EZX (120km) Transceiver	8330-185	LTSFP-1000BX-80KM Transceiver (WDM 1550)
8330-168	MINI GBIC 1000T (100m) Transceiver	8330-262D	MINI GBIC 2.5G 850nm VCSEL (LC/0.3km) Transceiver
8330-188	LTSFP-1000BX-10KM Transceiver (WDM 1310)	8330-263D	MINI GBIC 2.5G 1310nm FP (LC/2km) Transceiver
8330-189	LTSFP-1000BX-10KM Transceiver (WDM 1550)	8330-265D	MINI GBIC 2.5G 1310nm DFB (LC/15km) Transceiver

All SFP ended with D are with Diagnostic function

Lantech Communications Global Inc.

www.lantechcom.tw info@lantechcom.tw

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