I(P)GS-3208MGT

8 GE (w/8 PoE) + 2 2.5GE L2+ NAT Router Switch



OVERVIEW

The Lantech I(P)GS-3208MGT (OS2 Pro platform) is a compact router switch, offering a total PoE budget up to 240W (52V model), designed for 24V/52V input applications. It features 8 10/100/1000T + 2 1G/2.5G Copper ports, along with 8 PoE 802.3af/at Ethernet ports. The switch offers Layer 2 management, NAT, unique AUTO-FEED configuration, MQTT, advanced security functions and Health diagnostic snapshot maintenance to ensure reliable and easy onboard network deployment. Its WebGUI and complete CLI interface make configuration straightforward for all skill levels. Additionally, the OPEN API document format enhances central management efficiency, making it ideal for fleet management and AIoT applications. Compliance with ITxPT*, and E-marking* certifications ensure the product meets world-class standards for vehicle performance and reliability.

PoE budget up to 240W (52V model) for 8 Ports with PD detection, auto PD reboot, scheduling and PoE & Ethernet power input galvanic isolation; support Perpetual*/Fast PoE

IPGS-3208MGT supports maximum PoE budget of 240W for 52V model, 120W for 24V and 80W for 24VI model with advanced PoE management features, including PoE auto-detection and scheduling. The PoE detection function can identify if a connected Powered Device (PD) becomes unresponsive and then auto-restart the PD. Moreover, PoE scheduling allows for a pre-set power feeding schedule based on a routine timetable. Each PoE port can be enabled or disabled, and it provides information on voltage, current, power (W), and temperature.

Perpetual* and Fast PoE provides immediate and continuous power to devices during PSE switch reboots.

Galvanic isolation between the power input and Ethernet power system enhances safety. Extra PoE galvanic isolation on 802.3at/af ports insulates the power input from PoE Ethernet ports, preventing damage from cabling and grounding incidents to the Ethernet switch.

PoE models: Dual power 24Vdc/52Vdc input, high PoE budget

The PoE model is designed with dual power supply at 9-36VDC input (24VI model) and can provide 80W PoE budget. 24V model can support dual power 12-57VDC and can provide 120W PoE budget, the 52V model can support dual power 52-57VDC input and can offer 240W PoE budget.

Non PoE models: 24Vdc input voltage selection

The non-PoE model is designed with dual power supply at 12-57VDC input (24VI model). 9-36VDC input (24VI-IGN

model). The Ethernet galvanic isolation is built in.

Comprehensive Network Protection Against DDoS and Layer 2 Threats

Lantech OS2Pro generation integrates advanced security mechanisms to safeguard both switches and networks. Key features include DDoS attack mitigation, 802.1X port-based authentication, Dynamic ARP Inspection (DAI), IP Source Guard, and Port Security, providing multi-layer protection against spoofing, unauthorized access, and traffic floods. These security capabilities ensure stable, resilient network operation.

Lantech OS2 PRO Platform with advanced L2 management and L3 routing protocols incl. OSPF and RIP V1&V2

The switch developed on Lantech OS2 Pro platform is equipped with Layer 2 management and some Layer 3 routing protocols, including OSPF and RIP V1,V2. Engineered for diverse applications, this platform also supports a range of features such as NAT, Port forwarding, multiple Static IP address, DHCP server/option/client/relay/port based, VLAN, IGMP, RSTP/ G.8032 enhanced ring recovery, LACP etc.

Support Open API document for Restful API for better switch performance

The switch supports an OPEN API that uses JSON format to access and manipulate data using GET, PUT, POST, and DELETE methods, thereby avoiding the CPU utilization associated with traditional SNMP management.

Sleep Mode & efficient PoE timer under Ignition-Off State on IGN model

The PoE-IGN model supports network operation for up to 60 minutes before entering Sleep Mode (0.048W), preventing unnecessary reboots when power is restored. It also includes a configurable PoE timer, with a default delay of 10 minutes after ignition-off.

The Ignition timer allows flexible configuration of both individual PoE port shutdown delays and system shutdown (Sleep Mode), ranging from 30 seconds to 60 minutes (default: 60 minutes). This design eliminates the need for additional relay wiring and enables remote PoE timer configuration anytime, from anywhere.

mDNS (Multicast DNS) and DNS server/client feature and MQTT-role of Publisher or Broker

It supports mDNS (Multicast DNS) which enables hosts in the LAN to discover and communicate with devices each other in compliance with the DNS protocol, without requiring a traditional DNS server. The switch can act as MQTT Publisher or Broker that can send data to the broker then broker distributors the “payload” to the subscribers all in a very lightweight protocol.

Reliable eMMC for better power efficiency and reliability

The switch utilizes eMMC for firmware storage. The eMMC’s standard interface streamlines the design process while delivering improved power efficiency and enhanced reliability, thereby extending the storage’s lifespan.

Auto feed configuration for swapped new switches for Seamless Network Maintenance, USB port for backup, restoring configuration and upgrading firmware

The switch supports auto-feed configuration features that revolutionize network switch setup and management. It ensures that new and replacement switches automatically receive the correct configurations without manual intervention. Additionally, it supports the traditional way of uploading or downloading the firmware / configuration through a USB dongle.

User-friendly GUI, Auto topology drawing, Editable configuration text file, Enhanced Environmental Monitoring, CPU watchdog, Snapshot switch information for trouble-shooting analysis

The user-friendly UI, innovative auto topology drawing, and topology demo make the Lantech switch much easier to use. The complete CLI enables professional engineers to configure settings via the command line. The configuration file can be exported as a text file, allowing it to be easily edited and reconfigured for mass deployment. It supports enhanced environmental monitoring of actual input voltage, current, ambient temperature, and total power load (including PoE if any) where user can set threshold to trigger an alert or event log. The built-in watchdog design can automatically reboot the switch if the CPU becomes unresponsive. With the distinctive Snapshot feature, the switch can gather data, including port statistics, system core information, configuration, and event logs, either at a specific point in time or by scheduling, to address switch issues and analyze the root cause promptly.

E-marking & ITxPT* certificate, ISO 7637-2 compliant High reliability with PoE & Ethernet isolation and polarity reversal protection design and extended working temperature*

The switch is designed with dual power inputs and is capable of withstanding EMI/RFI interference in the onboard or industrial harden network. The redundant power input design integrates inrush current protection also protects against polarity reversal. Additionally, the galvanic isolation feature shields the system from power transients often present in onboard and outdoor networks. The -E model can be used in extreme environments with an operating temperature range of -40°C to 75°C.The switch complies with ITxPT* public transport standards and E-marking*. The E-marking* certificate makes it the most suitable for bus, carriage and other vehicle applications.

OPTIONAL FEATURES

Optional IEC 62443-4-2 Model with Physical Tamper Resistance and a Variety of Security Measures

For enhanced cybersecurity, the optional IEC 62443-4-2 is available on standard models. This includes over 90 security measures such as vulnerability checking, encrypted files, public key management, strong password enforcement, account management, and both penetration and stress testing. It emphasizes protection against unauthorized access, tampering, and malware through detailed log events and roots of trust security IC.

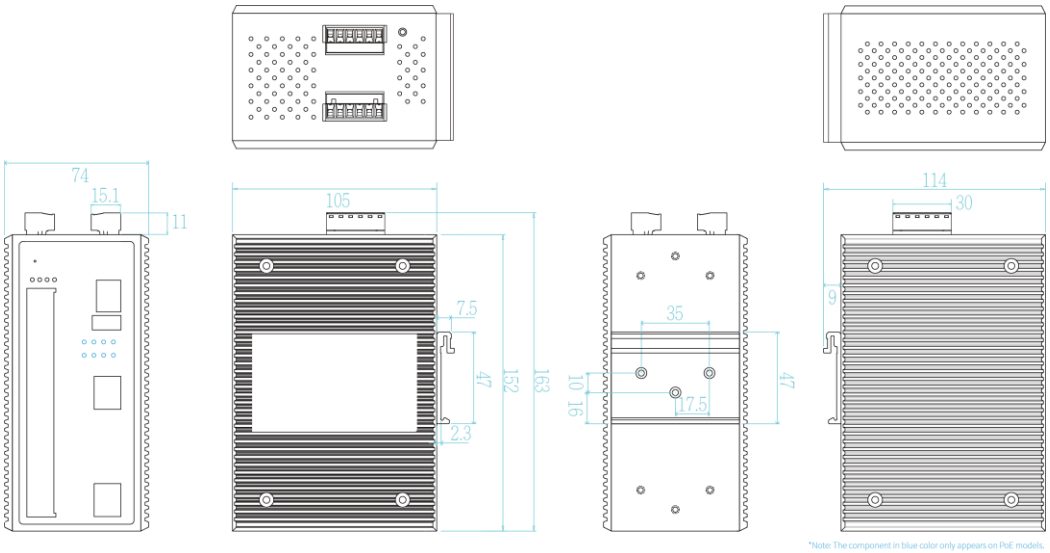
Optional LantechView for Lantech devices maintenance

LantechView** can automatically discover Lantech devices on the network, providing seamless configuration management across multiple IP subnets and VLAN areas (single device and batch). It also supports firmware management, allowing single and batch verification and simultaneous upgrades to the latest firmware versions. To learn more about Lantech LantechView** software solutions, please refer to
https://www.lantechcom.tw/global/eng/download/datasheet/D-LantechView.pdf

OS2 Pro vs. OS2 Pro - SEC models comparison

	OS2 Pro	OS2 Pro - SEC
Management	Web UI/Telnet complete CLI command line	Web UI/Telnet complete CLI command line
IEC 62443-4-2 Cyber Security	NA	Y, need optional license
Hardware Environmental Monitoring	Y	Y
Boot up time	Within 60sec.	Around 90sec.

DIMENSIONS (unit=mm)



SPECIFICATIONS

Hardware Specification

Standards	IEEE802.3 10Base-T Ethernet IEEE802.3u 100Base-TX IEEE802.3ab 1000Base-T Ethernet IEEE802.3x Flow Control and Back Pressure IEEE802.3ad Port trunk with LACP IEEE802.1d Spanning Tree IEEE802.1w Rapid Spanning Tree IEEE802.1s Multiple Spanning Tree IEEE802.3ad Link Aggregation Control Protocol (LACP) IEEE802.1AB Link Layer Discovery Protocol (LLDP) IEEE802.1X User Authentication (Radius) IEEE802.1p Class of Service IEEE802.1Q VLAN Tag IEEE802.3at/af Power over Ethernet (PoE model)
Switch Architecture	Back-plane (Switching Fabric): 26Gbps
Transfer Rate	14,880pps for Ethernet port 148,800pps for Fast Ethernet port 1,488,000pps for Gigabit Ethernet port
Mac Address	16K MAC address table
Jumbo frame	10KB
Connectors	10/100/1000T: 8 x ports RJ-45 with Auto MDI/MDI-X function (Router/LAN configurable) 1G/2.5G: 2 x RJ45 Copper (Router/LAN configurable) Power & Relay connector: 1 x 6-pole terminal block RS-232 connector: RJ-45 type USB x 1
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-TX: 2-pair UTP/STP Cat. 5/ 5E/ 6 cable EIA/TIA-568 100-ohm (100m)
LED	Per unit: Power 1 (Green), Power 2 (Green), FAULT (Red); RM(Green) Ethernet port: Link/Activity (Green), Speed (Amber) PoE: Link/Act (Green)
Operating Humidity	5% ~ 95% (Non-condensing)
Operating Temperature	-40˚C ~ 75˚C (-40˚F ~ 167˚F) (-E model) -20˚C ~ 60˚C (-4˚F ~ 140˚F)
Storage Temperature	-40°C~85°C / -40°F~185°F
Power Supply	PoE model: 9-36VDC (24VI model w/PoE & Ethernet galvanic isolation) 12-57VDC (24V model w/Ethernet galvanic isolation) 52-57VDC (52V model w/Ethernet galvanic isolation) Non-PoE model: 12-57VDC (24VI model w/Ethernet galvanic isolation) 9-36VDC (24VI-IGN model w/Ethernet galvanic isolation)
PoE Budget (PoE model)	24VI model: 80W at 24Vdc 24V model: 120W at 24Vdc 52V model: 240W at 52Vdc (above)
PoE pin assignment (PoE model)	RJ-45 port # 1~#8 support IEEE 802.3at/af End-point, Alternative A mode. Positive (VCC+): RJ-45 pin 1,2. Negative (VCC-): RJ-45 pin 3,6.
Power Consumption	7W (w/o PoE load)
Case Dimension	Metal case IP30 105mm(W)x152mm(H)x74mm(D)
Weight	900g
Installation	DIN Rail and Wall Mount** Design
EMI & EMS	FCC Class A, CE EN55032 Class A, CE EN55024, 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 EN61000-6-2, CE EN61000-6-4
Vehicle Certificate	E24 marking* (UN ECE R10),R118 ITxPT label*

MTBF	TBC (standards: IEC 62380)

Software Specification

Lantech OS2PRO Platform
Download Software Datasheet

(https://www.lantechcom.tw/global/eng/download/datasheet/D-OS2PRO.pdf)

*Future release
**Optional

ORDERING INFORMATION

Model names add -SEC for Cybersecurity models; add -E for wide temp. models; add -gPTP for gPTP models.
＊To support environmental sustainability, a console cable will not be included with each device by default. If your project requires one, please contact your sales representative.

- **IPGS-3208MGT-8-24VI-E…..…….…..... P/N: 8351-18701**
  8 10/100/1000T PoE at/af + 2 1G/2.5G Copper + L2+ NAT router Switch w/ PoE & Ethernet galvanic isolation; 9~36VDC dual input; -40°C to 75°C
- **IPGS-3208MGT-8-24VI ……..…….…..... P/N: 8351-18702**
  8 10/100/1000T PoE at/af + 2 1G/2.5G Copper + L2+ NAT router Switch w/ PoE & Ethernet galvanic isolation; 9~36VDC dual input; -20°C to 60°C
- **IPGS-3208MGT-8-24VI-IGN-E…..…….…..... P/N: 8351-18703**
  8 10/100/1000T PoE at/af + 2 1G/2.5G Copper + L2+ NAT router Switch w/ PoE & Ethernet galvanic isolation; 9~36VDC dual input w/ignition; -40°C to 75°C
- **IPGS-3208MGT-8-24VI-IGN ……..…….…..... P/N: 8351-18704**
  8 10/100/1000T PoE at/af + 2 1G/2.5G Copper + L2+ NAT router Switch w/ PoE & Ethernet galvanic isolation; 9~36VDC dual input w/ignition; -20°C to 60°C
- **IPGS-3208MGT-8-24V-E…..…….…..…..... P/N: 8351-18705**
  8 10/100/1000T PoE at/af + 2 1G/2.5G Copper + L2+ NAT router Switch w/ Ethernet galvanic isolation; 12~57VDC dual input; -40°C to 75°C
- **IPGS-3208MGT-8-24V …..…….…..... P/N: 8351-18706**
  8 10/100/1000T PoE at/af + 2 1G/2.5G Copper + L2+ NAT router Switch w/ Ethernet galvanic isolation; 12~57VDC dual input; -20°C to 60°C
- **IPGS-3208MGT-8-52V-E…..…….…..... P/N: 8351-18707**
  8 10/100/1000T PoE at/af + 2 1G/2.5G Copper + L2+ NAT router Switch w/ Ethernet galvanic isolation; 52~57VDC dual input; -40°C to 75°C
- **IPGS-3208MGT-8-52V…..…….…..... P/N: 8351-18708**
  8 10/100/1000T PoE at/af + 2 1G/2.5G Copper + L2+ NAT router Switch w/ Ethernet galvanic isolation; 52~57VDC dual input; -20°C to 60°C
- **IGS-3208MGT-24VI-E…..…….…..... P/N: 8351-18709**
  8 10/100/1000T + 2 1G/2.5G Copper + L2+ NAT router Switch w/ Ethernet galvanic isolation; 12~57VDC dual input; -40°C to 75°C
- **IGS-3208MGT-24VI…..…….…..... P/N: 8351-18710**
  8 10/100/1000T + 2 1G/2.5G Copper + L2+ NAT router Switch w/ Ethernet galvanic isolation; 12~57VDC dual input; -20°C to 60°C
- **IGS-3208MGT-24VI-IGN-E…..…….…..... P/N: 8351-18711**
  8 10/100/1000T + 2 1G/2.5G Copper + L2+ NAT router Switch w/ Ethernet galvanic isolation; 9~36VDC dual input w/ignition; -40°C to 75°C
- **IGS-3208MGT-24VI-IGN…..…….…..... P/N: 8351-18712**
  8 10/100/1000T + 2 1G/2.5G Copper + L2+ NAT router Switch w/ Ethernet galvanic isolation; 9~36VDC dual input w/ignition; -20°C to 60°C

*For all detailed part nos. and model names, please refer to
https://www.lantechcom.tw/global/eng/download/datasheet/P-I(P)GS-3208MGT.pdf

OPTIONAL ACCESSORIES

Software package

Please refer to the software datasheet (https://www.lantechcom.tw/global/eng/download/datasheet/D-OS2PRO.pdf)

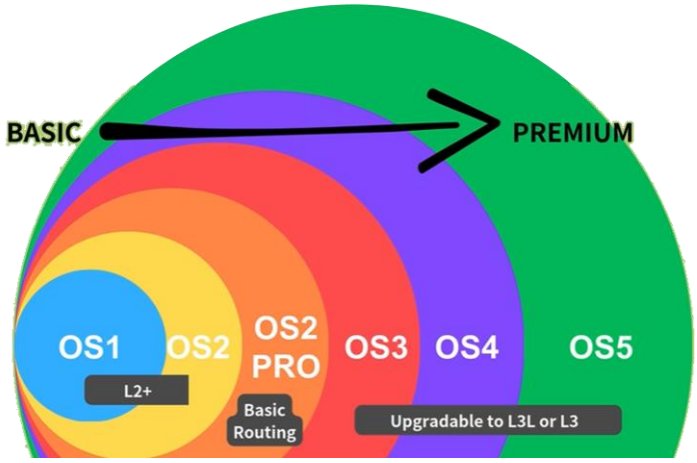
48~54VDC DIN Rail Power for 802.3at Applications

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 ;

Operating Temp. -20°C~70°C (ambient, derating each output at 2.5% per degree from 50°C ~ 70°C; For 115VAC, please refer to derating curve on NDR-120 Series datasheet)

Managed Switch OS Generations

We offer a comprehensive range of managed switches, from OS1 and OS2 with rich L2+ management features, to OS2 PRO with basic routing functionality, and OS3, OS4, and OS5, which can be upgraded with optional Layer 3 Lite or Layer 3 capabilities to meet diverse customer needs. Note: Model differences include both software features and hardware specifications.



[LEARN MORE]

→ OS2PRO Generation

→ OS3/OS4 Generation

→ OS5 Generation

[CHECK THE DIFFERENCES]

→ Generation Comparison Table

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