

# IPES-0208GF (IP67/IP54)

8 10/100TX PoE at/af + 2 1000FX Industrial

Ethernet Switch

- EN50155 verification / E-mark certified
- Provides M12 connector with IP67 or IP54 rated protection
- IEEE802.3at/af up to 30W PoE output
- 12V power input boost to 54V output
- Optional 72V/110V input steps down to 54V output for IEEE 802.3at/af max.80W
- Wide Operating Temperature from -40°C to 75°C
- Wide range dual power inputs



IP67 Rated



IP54 Rated



## OVERVIEW

Lantech IPES-0208GF (IP67/IP54) is an 8 10/100 Base-TX+2 GigaFX w/8 PoE at/af injectors with M12-connector unmanaged industrial switch for IP67 or IP54 rated protection, which meets the high reliability requirements demanded by industrial rolling stock applications.

The IPES-0208GF (IP67/IP54) supports IEEE802.3at/af standard which can feed HI-power up to 30W at each PoE port for big power consumption devices like PTZ IP camera, High power wireless AP etc. The IPES-0208GF is able to take 12/24V input and boost to 54V output for PoE feeding in vehicle use with IEEE802.3at/af standard up to 30W per PoE port with maximum 70W output. 72V/110V input model can feed 48V PoE at max 80W.

The IPES-0208GF (IP67/IP54) is designed to meet with critical network environment with IP67/IP54 enclosure and M12 connectors for protection against dust and water. IP67 model

can be immersed 1 meter under water for 30 minutes long, so it is the best to place in the highly damp and moisture area in the train, vehicle or rail-side. Both have passed harsh environmental testing to comply with Industrial EMI and Safety standards as well as stability testing such as Free fall, Shock, and vibration. For a greater flexibility in application the IPES-0208GF (IP67/IP54) supports an extended operating temperature range from -40°C to 75°C.

The wide range dual power input from 9.5V~56V fits with most of train/vehicle usage. The 72V model offers dual power supply that can be powered from 50.4V to 90VDC while 110V model provides dual 43V to 137.5V inputs.

With EN45545-2 Fire & Smoke, EN50155 verification and E-mark certification, the IPES-0208GF (IP67/IP54) is best for railway and vehicle applications.

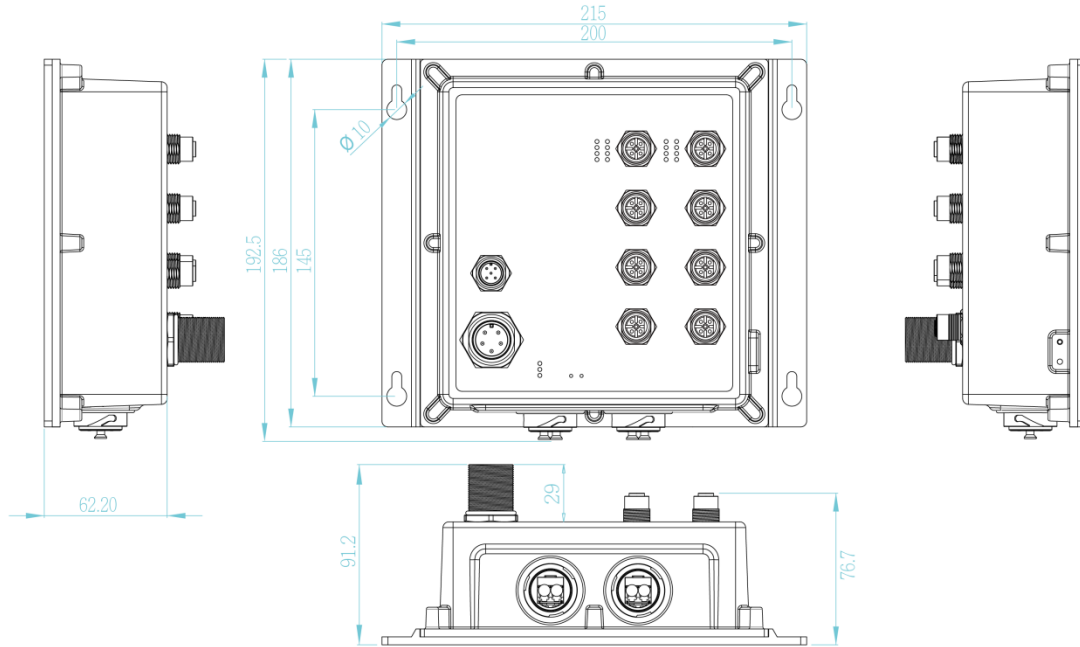
## FEATURES & BENEFITS

- 8 10/100TX+2GigaFX Unmanaged Industrial Switch with 8 PoE at/af M12 connectors and IP67/IP54 rated protection
- Supports IEEE802.3at/af feeding power up to 30W per PoE port at 12/24/48VDC
- Accept input voltage 12V and boost to 54V for PoE 802.3at/af maximum 70W output
- Dual Power Design with wide DC12/24/48V
- Back-plane (Switching Fabric): 5.6Gbps
- 8K MAC address table
- Wide Operating Temperature (-40°C ~75°C)
- Din rail\*\* and wall mount design
- EN45545-2 Fire & Smoke, EN50155 and EN61373 shock/vibration verification

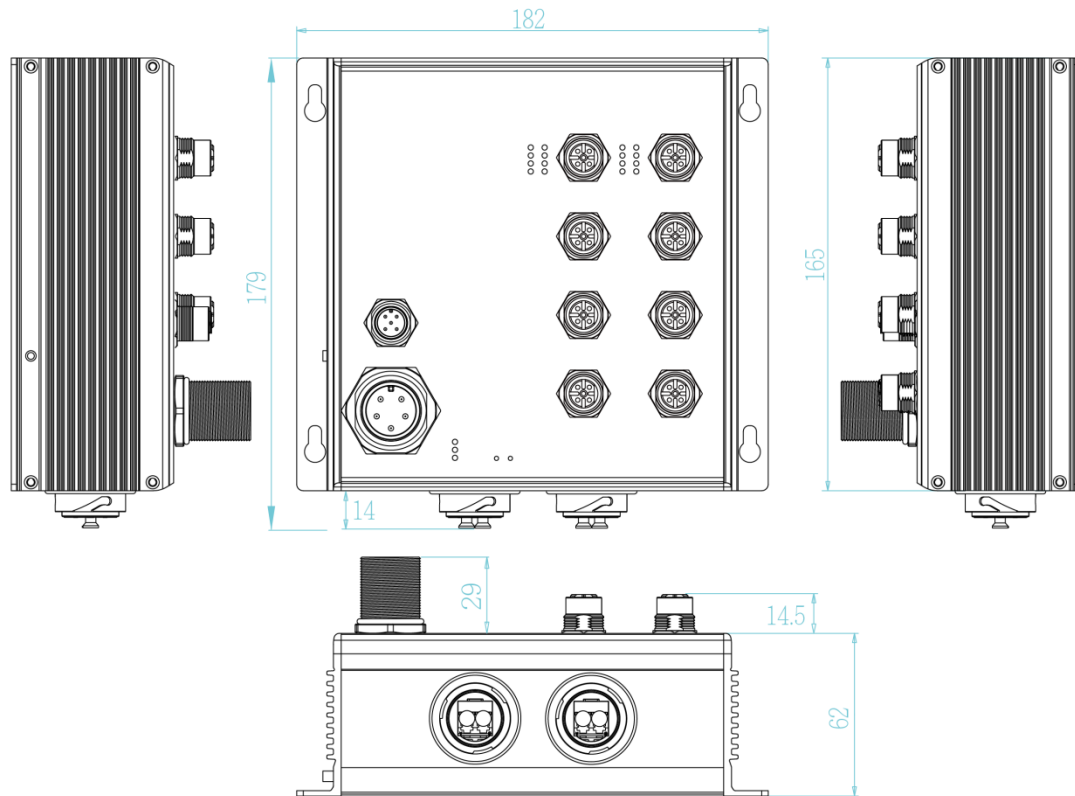
- E-mark certified
- Optional 72V model can accept dual 72V power input
- and feed 48V for PoE at/af at max 80W
- Optional 110V model can accept dual 110V power input and feed 48V for PoE at/af at max 80W

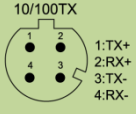
**DIMENSIONS (unit=mm)**

**IP67 model**



**IP54 model**



| Hardware Specification |  | Power Budget           | 240W for 45~56V input<br>(54V input is recommended for PTZ or heater applications)<br>70W for 12V input<br>120W for 24V input<br>80W for 72V Input<br>80W for 110V Input   |
|------------------------|--|------------------------|--|
| IEEE Standard          | IEEE802.3 10BASE-T Ethernet<br>IEEE802.3u 100BASE-T Ethernet<br>IEEE802.3z Gigabit fiber<br>IEEE802.3x Flow Control and Back Pressure<br>IEEE802.3at/af Power over Ethernet                          | Operating Humidity     | 5% to 95% (Non-condensing)   |
| Transfer Rate          | 14,880pps for Ethernet port<br>148,800pps for Fast Ethernet port<br>1,488,000pps for Gigabit Fiber Ethernet port   | Operating Temperature  | -40°C ~ 75°C (-40°F ~ 167°F)   |
| Mac Address            | 8K MAC address table   | Storage Temperature    | -40°C ~ 85°C (-40°F ~ 185°F)   |
| Connector              | 10/100T: 8 x M12, 4-pole D-coded, Female with auto MDI/MDI-X function<br>Giga-FX : 2 x LC connector for single mode or multi mode type fiber cable<br>Power connector: 1 x M12, 5-pole A-coded, Male | Case Dimension         | Aluminum case, IP-67,<br>215mm(W)x192.5mm(H)x91.2mm(D)<br>Aluminum case, IP-54<br>182mm(W)x179mm(H)x91mm(D)  |
| Giga Optical Cable     | Multi-mode: 50/125um~62.5/125um<br>Single mode: 9/125um<br>Available distance: 550m (Multi-mode)/10km (Single-mode)<br>Wavelength: 850nm (Multi-mode)/1310nm (Single-mode)                           | Weight                 | 1.4kgs (IP67); 1.2kgs(IP54)  |
| LED                    | Per unit: Power 1 (Green), Power 2 (Green), Ethernet: Link/Activity (Green)<br>GigaFX: Link/Activity (Green)   | Installation           | Din Rail**, Wall Mount Design  |
| PoE pin assignment     | M12 port # 1~ # 8 support IEEE 802.3at/af End-point. Per port provides up to 30W<br><br>                           | EMC                    | FCC Class A,<br>CE EN61000-4-2 (ESD),<br>CE EN61000-4-3 (RS),<br>CE EN-61000-4-4 (EFT),<br>CE EN61000-4-5 (Surge),<br>CE EN61000-4-6 (CS),<br>CE EN61000-4-8 (Magnetic Field),<br>CE EN55022 Class A, CE EN55024 |
| Power Supply           | 9.5~56VDC on standard model<br>50.4~90VDC on 72V model<br>43~137.5VDC on 110V model with input isolation   | Stability Testing      | EN61373 (Shock and Vibration)  |
| Power Consumption      | 10W for 12/24/48VDC<br>13.5W for 72/110VDC   | Verifications & Report | EN50155/EN50121-3-2/EN50121-4 verification<br>EN45545-2 R13/R22/R23/R24/R25 (EN ISO 4589-2,<br>EN ISO 5659-2, NF X70-100-1 & 2) Fire & Smoke verification  |
|                        |  | MTBF                   | 992,412 hrs (standards: IEC 62830)   |
|                        |  | Warranty               | 5 years  |

\*Pending  
\*\*Optional

## ORDERING INFORMATION

All model packages include M12 caps and wall mount bracket. All standard models are non-coating, optional coating models are available with -C model name.

- **IPES-0208GF-SX-67-12V.....P/N: 8361-548**  
8 10/100TX PoE at/af + 2 GigaSX 550M IP67 rated Industrial Switch w/M12 connectors; dual 9.5~56V input; -40~75C
- **IPES-0208GF-SX-54-12V.....P/N: 8361-5482**  
8 10/100TX PoE at/af + 2 GigaSX 550M IP54 rated Industrial Switch w/M12 connectors; dual 9.5~56V input; -40~75C
- **IPES-0208GF-LX-67-12V.....P/N: 8361-549**  
8 10/100TX PoE at/af + 2 GigaLX 10KM IP67 rated Industrial Switch w/M12 connectors; dual 9.5~56V input; -40~75C
- **IPES-0208GF-LX-54-12V.....P/N: 8361-5492**  
8 10/100TX PoE at/af + 2 GigaLX 10KM IP54 rated Industrial Switch w/M12 connectors; dual 9.5~56V input; -40~75C
- **IPES-0208GF-SX-67-72V.....P/N: 8361-550**  
8 10/100TX PoE at/af + 2 GigaSX 550M IP67 rated Industrial Switch w/M12 connectors; dual 50.4~90V input; -40~75C
- **IPES-0208GF-SX-54-72V.....P/N: 8361-5501**  
8 10/100TX PoE at/af + 2 GigaSX 550M IP54 rated Industrial Switch w/M12 connectors; dual 50.4~90V input; -40~75C
- **IPES-0208GF-LX-67-72V.....P/N: 8361-551**  
8 10/100TX PoE at/af + 2 GigaLX 10KM IP67 rated Industrial Switch w/M12 connectors; dual 50.4~90V input; -40~75C
- **IPES-0208GF-LX-54-72V.....P/N: 8361-5511**  
8 10/100TX PoE at/af + 2 GigaLX 10KM IP54 rated Industrial Switch w/M12 connectors; dual 50.4~90V input; -40~75C
- **IPES-0208GF-SX-67-110V.....P/N: 8361-552**  
8 10/100TX PoE at/af + 2 GigaSX 550M IP67 rated Industrial Switch w/M12 connectors; dual 43~137.5V input; -40~75C

- **IPES-0208GF-SX-54-110V.....P/N: 8361-5521**  
8 10/100TX PoE at/af + 2 GigaSX 550M IP54 rated Industrial Switch w/M12 connectors; dual 43~137.5V input; -40~75C
- **IPES-0208GF-LX-67-110V.....P/N: 8361-553**  
8 10/100TX PoE at/af + 2 GigaLX 10KM IP67 rated Industrial Switch w/M12 connectors; dual 43~137.5V input; -40~75C
- **IPES-0208GF-LX-54-110V.....P/N: 8361-5531**  
8 10/100TX PoE at/af + 2 GigaLX 10KM IP54 rated Industrial Switch w/M12 connectors; dual 43~137.5V input; -40~75C

## OPTIONAL ACCESSORIES

### M12/M23 Connector & Cable

- **ECONM23-5P(F)70CM CABLE** M23 power cable 90 degree angle, 70cm, 5 pin, Made in Taiwan
- **ECONM23-5P(F)70CM CABLE-C** M23 power cable 90 degree angle, 70cm, 5 pin, Made in China
- **ECAB124030MJS** 4 Pin M12 RJ45 Male 3 Meters; STP Cable
- **CON09000030** Fiber optical connector ASSY type

**Lantech Communications Global Inc.**

www.lantechcom.tw  
info@lantechcom.tw

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