

# L2+ Industrial Ring Managed Gigabit POE++ Switch 6-Port PoE++ Gigabit including 2\*2.5G SFP

IGM-642BT-2.5G

airlive®

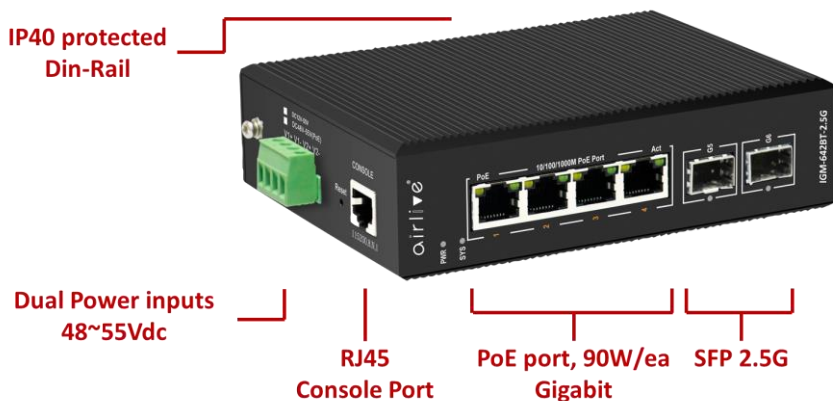


802.3bt 90w	Gigabit RJ45 & SFP 2.5G	Managed L2+ Switch L3 Routing	PoE management Watchdog	IPv6/IPv4 VLAN
Redundant Network	Ultra Fast Ring recovering	Dual Power inputs 48~55Vdc	-40°C~85°C	IP40, Din-Rail & Wall-Mount

## Overview

### Reliable Industrial-grade Managed POE Switch for extreme environment With VLAN and QoS

AirLive IGM-642BT-2.5G is a managed L2 + 6-port Gigabit PoE++ switch, including 4 PoE ports and 2x 2.5 Gbit/s SFP ports. Each PoE port supports 802.3bt/at/af up to 90W, Automatic Adjustment, -40°C to 85°C wide temperature range, IP40 metal shell extreme conditions through 4-pin terminal block (DC48 ~ 55V). Industrial 6-port L2 + Gigabit Switch provides comprehensive SNMP management functions, supports VLAN, port aggregation, QoS port mirroring, bandwidth control and token ring ERPS.



## Features

- All 6-port, each port delivers Gigabit high speed
- Extend the network further with 2x 2.5G SFP slots that accept fiber transceivers and go beyond the limits of Ethernet
- High PoE power, supports 802.3bt/at/af PoE++ up to 90W per port to ensure full power for connected device
- Automatically detect and offer power for connected PD
- Support L2 SNMP and WEB Smart management function, including DHCP Snooping, VLAN, IGMP, QoS, Spanning Tree, MAC Binding and Bandwidth Control
- Support PoE management
- Support PoE watchdog to automatically detect and restart crashed PD
- Clear Status display including traffic, CPU, Memory, POE consumption, per-port status
- Web-UI for easy management; CLI and Command Script for advance setting; SNMP for popular network tools management.

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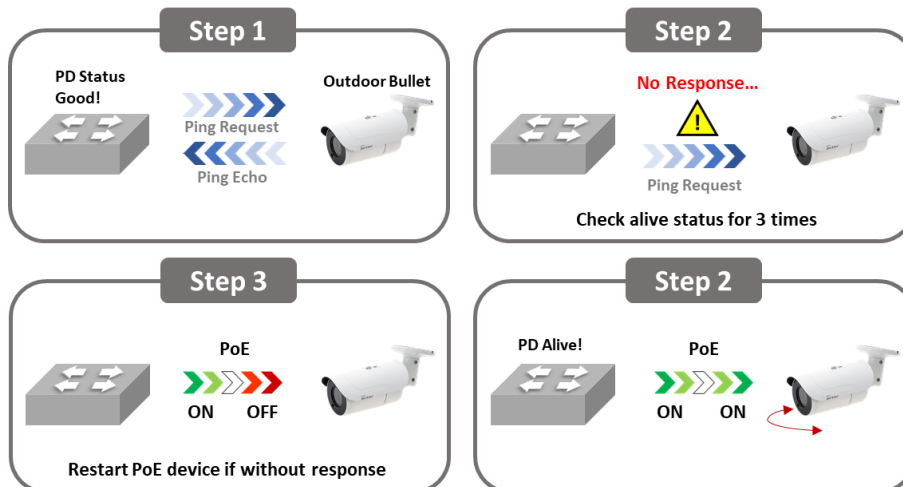
IGM-642BT-2.5G

## Efficient PoE Watch dog technology and PoE Management

The Switch IGM-642BT-2.5G supports high Power and each port at 90W auto adaptively. With PoE management function you can control PoE port setting, Timer setting and Timer reboot setting, and PoE watchdog. All the PoE management functions ensure full power for the connected PD and great reliability for the whole system. PoE 90W supports devices which need more power, this can be for example a POS system, Digital Signage, or LED lighting.

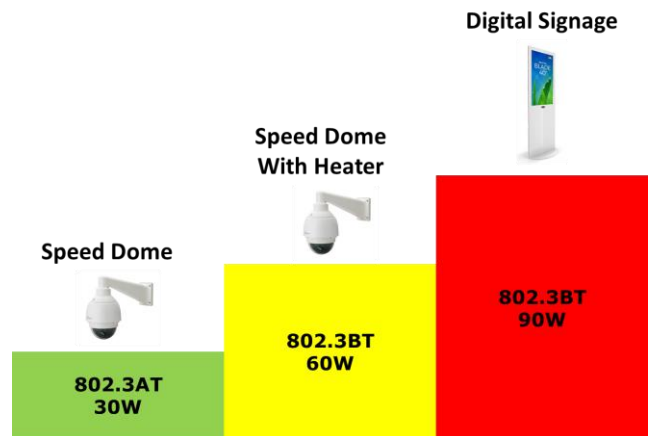
After PoE Watchdog function enabled, the IGM-642BT-2.5G switch works as a virtual security guard. When the POE port is continuously powered but there is no traffic, the POE watchdog will be triggered. After 2 minutes of detection, the power supply will be stopped and then powered on.

The PoE watchdog is particularly useful for cameras. For example, when the switch is turned on, it will recognize the front camera 24 hours a day, 7 days a week. If there is no data traffic from the camera, the camera is considered to be frozen, and the PoE watchdog is used to restart the front camera to solve the problem.



## 802.3BT 90W High Power output

AirLive IGM-642BT-2.5G Industrial switch supports the high-power output PoE++ at 90W per port. This higher output allows it to power more device than just an IP camera or Access point. The 90W PoE can be used to power on high power needed PoE Systems, Digital Signage or even PoE LED lighting and much more. Giving you much more flexibility on the usage, as you are no longer restricted to only 30W.



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## 6-Port PoE++ Gigabit including 2\*2.5G SFP



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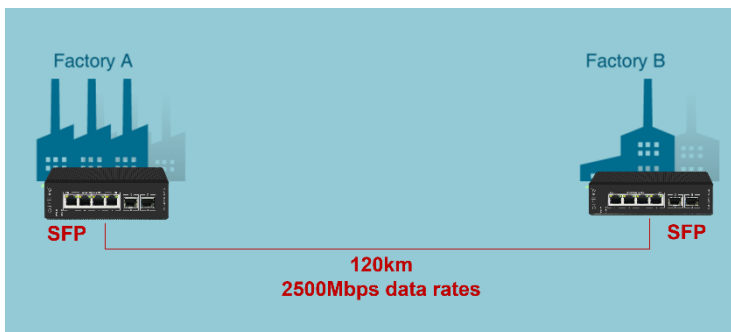
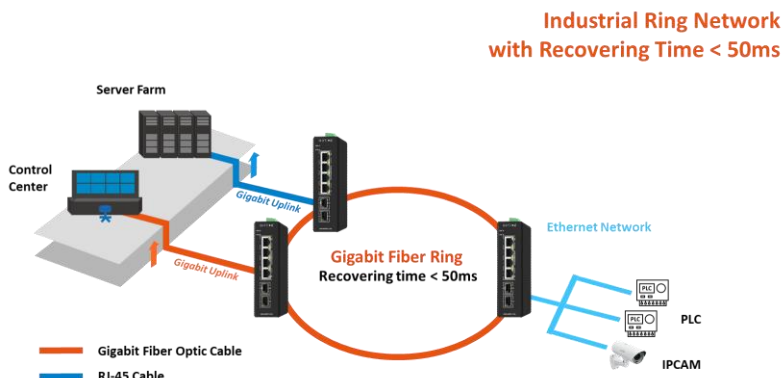
### Intelligence - Layer 2+ Manage Advanced Feature

The IGM-642BT-2.5G can be used for advanced switch management functions such as dynamic port link aggregation, Q-on-Q VLAN, rapid spanning tree protocol, QoS from layer 2 to layer 4, bandwidth control and IGMP inspection can be programmed. The switch offers VLANs with 802.1Q tags, and the permitted VLAN groups are up to a maximum of 255. By supporting port aggregation, the IGM-642BT-2.5G PoE enables the operation of a high-speed trunk that combines several ports. A maximum of 2 trunk groups with 2 ports trunk group and also supports failover.



### ERPS Ethernet Ring Protection

ERPS is supported by the IGM-642BT-2.5G Switch. ERPS supports multi-ring and multi-domain structures (master and sub rings) and optimizes the inspection mechanism in terms of two-way faults. In addition, it supports main device backup, load sharing and other work methods in <50ms switching. This means that when multiple switches have been placed in a Ring and the network work is interrupted, it will recover with in 50ms or less. Meaning the critical network like in harsh environments or automated production lines and surveillance will be online again with minimum loss of time. The ring network is also protected again loops.



### Fiber backbone for Long Distance

Extend the network further with SPF slots. Use the IGM-642BT-2.5G as a backbone of your network, which can reach up to 120KM in distance and 2500Mbps data transmission. (Depending on the SFP module used.)

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## Dual Power Inputs

The IGM-642BT-2.5G supports 2 DC power inputs for power redundancy. That greatly improves the reliability and uptime of a sensitive network in a harsh environment. When one of the DC power inputs fails, the second input will continue to power on the switch. The Switch supports an input of DC 48V ~ 55V. User can define policy for video conferring / voice data in high priority, to ensure your video meeting will not lag coursing by any networking jam.



Dual Power inputs  
DC48~55V POE

## Wide temperature coverage from -40°C ~ 85°C

The IGM-642BT-2.5G switch can operate from -40°C ~ 85°C. And each POE port has 6KV surge protection. It is the ideal solution for applications which work under hash environment and require stable network and PoE power, such as parking lot or IP surveillance. The IGM-642BT-2.5G has a rugged high strength compact size metal case which is rated at IP40 and has a DIN35 Rail connection making it ideal for network use in a heavy industry or factories. It can be placed in almost any harsh environment.



IGM-642BT-2.5G

## Industrial Application Harsh Environment

AirLive IGM-642BT-2.5G Industrial switch meets the high standard demands of providing reliable networking connectivity, able to withstand harsh industrial environment, and cost-effectively.



Model	AirLive IGM-642BT-2.5G
<p><b>Hardware</b></p> <ul style="list-style-type: none"> <li>• <b>Device Interface:</b> <ul style="list-style-type: none"> <li>4 x 90W PoE 10/100/1000 RJ45</li> <li>2 x ports Gigabit SFP 2.5G (compatible with 1.25G/155M)</li> <li>6-port totally</li> <li>1 x RJ45 console port</li> </ul> </li> <li>• <b>Standard</b> <ul style="list-style-type: none"> <li>IEEE802.3u 100Base-TX / 100Base-FX</li> <li>IEEE802.3ab Gigabit 1000Base-T</li> <li>IEEE802.3z Gigabit SX/LX (optical fiber)</li> <li>IEEE802.3x Flow Control and Back Pressure</li> <li>IEEE802.1d Spanning Tree (STP)</li> <li>IEEE802.1w Rapid Spanning Tree (RSTP)</li> <li>IEEE802.1s Multiple Spanning Tree (MSTP)</li> <li>IEEE802.1p Class of Service (QoS / CoS) traffic Prioritization (Multicast filtering function)</li> <li>IEEE802.1Q VLAN Bridge Operation</li> <li>IEEE802.1x Client/Server Access control and Authentication</li> <li>IEEE802.3at/af PoE</li> <li>IEEE802.3az Energy Efficient Ethernet</li> <li>IEEE802.1ab LLDP/ Device Link Layer Discovery Protocol</li> </ul> </li> <li>• <b>LED Indicators:</b> <ul style="list-style-type: none"> <li>PWR (power supply), SYS(System), 1-4 PoE, 1-4 Link &amp; ACT , 5-6 Link &amp; Act</li> </ul> </li> <li>• <b>Lighting Surge Protection:</b> <ul style="list-style-type: none"> <li>6KV (general mode), 2KV (differential mode), ESD15KV, Touch 8KV</li> </ul> </li> <li>• <b>Mechanical</b> <ul style="list-style-type: none"> <li>IP40 rugged high-strength metal case, DIN35 Rail Mounting</li> </ul> </li> </ul> <p><b>Power and PoE</b></p> <ul style="list-style-type: none"> <li>• <b>Protocol:</b> IEEE802.3bt (90W), IEEE802.3at (30W), IEEE802.3af (15.4W)</li> <li>• <b>PoE Port:</b> 4</li> <li>• <b>PoE Power Output / PoE Port:</b> max. 90 watts</li> </ul> <p><b>Switch Architecture   Performance</b></p> <ul style="list-style-type: none"> <li>• <b>Fiber Medium</b> <ul style="list-style-type: none"> <li>Multi-mode Fiber: 850nm, 1310nm</li> <li>Transmission Distance: 550m/2Km</li> <li>Single-mode Fiber: 1310nm, 1550nm</li> <li>Transmission Distance 20/40/60/80/100/120Km</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• <b>Switching architecture: Store and Forward</b> <ul style="list-style-type: none"> <li>Switch Capacity: Back-plan up to 18Gbps</li> <li>Switch packets Capacity; 13.39Mpps</li> <li>MAC Address: 8K</li> <li>Jumbo Frames: 9.6Kbytes</li> <li>Packet Buffer: 4Mb</li> <li>Flash Memory: 16MB</li> <li>DDR SDRAM: 128MB</li> </ul> </li> <li>• <b>L2 management Function</b> <ul style="list-style-type: none"> <li>• <b>Port Management</b> <ul style="list-style-type: none"> <li>Enable / Disable Port</li> <li>Speed, Duplex, MTU setting</li> <li>Flow-Control</li> <li>Port Information Check</li> </ul> </li> <li>• <b>Port Mirroring</b> <ul style="list-style-type: none"> <li>Support both side-way port</li> </ul> </li> <li>• <b>Port Speed Limit</b> <ul style="list-style-type: none"> <li>Port-based input/output bandwidth management</li> </ul> </li> <li>• <b>Port Isolation</b> <ul style="list-style-type: none"> <li>Support the downlink port isolation, and able to communicate with the uplink port</li> </ul> </li> <li>• <b>Storm Suppression</b> <ul style="list-style-type: none"> <li>Support unknown unicast, multicast, unknown multicast</li> <li>Broadcast type storm suppression</li> <li>Storm suppression based on bandwidth regulation and storm filtering</li> </ul> </li> <li>• <b>Link Aggregation</b> <ul style="list-style-type: none"> <li>Support static manual aggregation</li> <li>Support LACP dynamic aggregation</li> </ul> </li> <li>• <b>VLAN</b> <ul style="list-style-type: none"> <li>Support 4K VLAN</li> <li>Access, Trunk, Hybrid</li> <li>Support Port-based</li> <li>Support Generic GVRP dynamic VLAN registration</li> </ul> </li> <li>• <b>MAC</b> <ul style="list-style-type: none"> <li>Support static, dynamic, addition, deletion</li> <li>MAC address learning limit</li> <li>Dynamic aging time setting</li> </ul> </li> <li>• <b>Spanning Tree</b> <ul style="list-style-type: none"> <li>Support STP 802.1d Spanning Tree protocol</li> <li>Support RSTP 802.1w Spanning Tree protocol</li> <li>Support MSTP 802.1w Spanning Tree protocol</li> <li>Support BPDU protection</li> </ul> </li> <li>• <b>Multicast:</b> <ul style="list-style-type: none"> <li>Support Static addition, deletion</li> <li>Support IGMP-Snooping</li> <li>Support MLD-Snooping</li> <li>Support v1/2/3 dynamic multicast monitor</li> </ul> </li> <li>• <b>DDM:</b> Support SFP DDM</li> </ul> </li></ul>

\* Specification will be changed without prior notice





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<p><b>L2 Management Extension Function</b></p> <ul style="list-style-type: none"><li>• <b>ACL</b> Based on source MAC, destination MAC, Protocol type, source IP, destination IP, L4 port Support time-range time management</li><li>• <b>QoS</b> Based on 802.1p (CoS) classification Based on DSCP Classification Classification based on source IP, destination IP and port number Support SP, WRR, DRR scheduling strategy Support flow rate limit CAR</li><li>• <b>LLDP Discovery</b> Support LLDP discovery protocol</li><li>• <b>User Setting:</b> ADD/Delete users</li><li>• <b>Log:</b> User login, operation, status, events</li><li>• <b>Anti-attack (Security):</b> DOS defense (port-based) Support CPU protection and limits the rate of sending CPU packets ARP binding (IP, MAC, PORT binding)</li><li>• <b>Certification   Authentication</b> Support 802.1x port authentication Support AAA authentication Support TACAS+ authentication</li><li>• <b>Network diagnosis</b> Support Ping, Telnet, Trace</li><li>• <b>System Management</b> Device reset, configuration save/restore, upgrade management, time setting, etc.</li></ul> <p><b>L3 ( Layer 3 Switching ) and Router Function</b></p> <ul style="list-style-type: none"><li>• <b>Interface Configuration</b> Support virtual VLAN interface</li><li>• <b>ARP</b> Support check ARP</li><li>• <b>Router Function</b> Static Router</li></ul>	<p><b>System Management</b></p> <ul style="list-style-type: none"><li>• <b>CLI:</b> Support serial port command line management</li><li>• <b>TELNET:</b> Support serial command line management</li><li>• <b>SSH:</b> Support SSHv1/2 remote management</li><li>• <b>SNMP:</b> Support v1/2/3, support trap</li><li>• <b>WEB:</b> Support two layers setting</li><li>• <b>PoE:</b> Support PoE Power</li><li>• <b>Other Functions</b> Support DHCP Snooping Dying Gasp</li></ul> <p><b>Power Supply</b></p> <ul style="list-style-type: none"><li>• <b>Input Voltage:</b> DC48~55V</li><li>• <b>Input Type:</b> 4 Pin Terminal (block V1+V1- V2+ V1- Supports Dual Power Input)</li></ul> <p><b>Environment</b></p> <ul style="list-style-type: none"><li>• <b>Operating temperature:</b> -40~85°C</li><li>• <b>Storage temperature:</b> -40~85°C</li><li>• <b>Humidity:</b> 5%~95 % ( No condensation)</li></ul> <p><b>Standard package of switch</b></p> <ul style="list-style-type: none"><li>• <b>Product size:</b> 14.5 x 12.5 x 4 cm(L*W*H)</li><li>• <b>Package size:</b> 25 x 21 x 6.5 cm(L*W*H)</li><li>• <b>Product Weight:</b> N.W: 0.6KGs ; G.W: 0.8KGs</li><li>• <b>Package content:</b> 1 x Switch, 1 x Serial Cable</li></ul> <p><b>Standard carton package</b></p> <ul style="list-style-type: none"><li>• <b>Standard packing(L×W×H) :</b> 50.5×32×40cm</li><li>• <b>Standard packing quantity :</b> 20 (PCS) / ctn</li></ul> <p><b>Ordering Information</b></p> <ul style="list-style-type: none"><li>• <b>Model:</b> IGM-642BT-2.5G</li><li>• <b>Name:</b> L2+ Industrial Ring Managed Gigabit POE++ Switch 6-Port Gigabit including 2*2.5G SFP</li></ul>

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