



## Surveillance VLAN 28-Port 2.5GbE PoE++ L2 Switch with 4 10GbE SFP+ Ports

TGS-5428PLX

### FEATURES

- 24 2.5GbE 90W PoE++ Multi-Gigabit RJ45 ports and 4 10GbE SFP+ ports
- One-click to create Surveillance VLAN and auto-discover, auto-enrolled Surveillance compliant devices at once
- Dedicated Intelligent Thermal Controller to control fan speeds for power saving and noise reduction
- PoE powered devices (PD) alive check to enhance the reliability of the network
- Dual-firmware image for robust failover mechanisms
- Guaranteed PoE long distance to 200 meters
- Power backfeed protection to avoid damaging the PoE ports
- IP Surveillance VLAN and Voice VLAN to enhance video and voice quality
- DHCP snooping to protect the integrity of the legitimate DHCP server and its operations
- IEEE 802.3bt/at/af PoE++ compliant, up to 90W per port (total power budget: 400W) for powering PoE-enabled devices
- Supports SNMP v1/v2c/v3, Access Control List (ACL), QoS, 802.1Q VLAN, IPv4/IPv6, Port Trunking, Port Mirroring, IGMP v1/v2/v3 Snooping and etc.
- Supports 200Gbps backplane bandwidth, 169.28Mpps forwarding rate, 32K MAC address table and 12KB jumbo frame

### OVERVIEW

The EDIMAX Pro TGS-5428PLX is a versatile Layer switch designed for SMB and enterprise networks. With 24 2.5GbE 802.3bt 90W PoE++ RJ45 ports and 4 10GbE SFP+ ports for Gigabit fiber uplinks. It offers powerful and reliable network connectivity providing sufficient bandwidth and fast speed demanding applications such as data transferring, backup, video conferencing, IP surveillance, and Wi-Fi 6/6E APs.

This switch is specifically designed for surveillance systems which feature such as one-click VLAN setting and Auto-Enrollment, making it easy to set up and manage. The long-range mode allows for power and data transmission up to 200 meters at a guaranteed speed of 10Mbps, making it ideal for IP cameras and remote network devices.

The TGS-5428PLX is also equipped with smart layer 2 management features such as SNMP v1/v2c/v3, Dual Firmware, Access Control List (ACL), DHCP Snooping, QoS, CoS, STP, 802.1Q VLAN, IPv4/IPv6, Port Trunking, IGMP v1/v2/v3 Snooping, and Port Mirroring. These features provide a scalable, secure, and reliable switch solution for your network. The switch is easy to operate with a user-friendly web-based management utility.

### Quick Installation of Surveillance Devices

The TGS-5428PLX offers feature-rich IP Surveillance VLAN to prioritize IP video traffic with ease, which also supports network cameras and network video recorders (NVRs). These functions provide IP surveillance installers easy setup, quick discovery, configuration, and devices control on the network. Just plug-and-play, the One-click VLAN setting with Auto-Discovery, Auto-Enrollment makes the surveillance networks configuration with.

### Boost the Network Connection to 2.5G Multi-Gig and 10GbE SFP+ Uplink

Easily boost the network bandwidth and speed with existing network cabling for cost saving. Equipped with 24 2.5G Multi-Gigabit RJ45 ports for high-speed connections, the TGS-5428PLX breaks the gigabit barrier and supports the full potential of Wi-Fi 6/6E APs. The 4 dedicated SFP+ 10GbE fiber ports for up to 40Gbps of fiber-optic uplinking capability also allowing the TGS-5428PLX to be easily deployed in multiple physical locations, such as branches, retails, or remote workgroup environment for larger network access.

## Power Saving Implementation with Intelligent Thermal Controller

With a dedicated and intelligent microchip for cooling system control, the TGS-5428PLX can measure and control fan speeds, also turn on/off each fan for power saving and noise reduction.

## Powerful 90W PoE++ Solution with PD Alive Check

The TGS-5428PLX switch offer high-speed data network connection and power supply to faraway Powered Devices (PDs) up to 90W per port. Connected to any IEEE 802.3af/at/bt end-nodes such as speed dome IP cameras, Digital Signage, color touch-screen Voice over IP (VoIP) telephones, multi-channel wireless LAN access points, information kiosk, POS system, and thin client, the PoE Powered Device Alive Check feature monitors real-time status of connected PDs by ping action (sending alive-checking packets). If a PD fails to respond, the TGS-5428PLX PoE++ Switch will reboot the PD, which enhances network reliability and reduces administration workload.

## Stable and Reliable Network with Dual Firmware

The dual firmware feature allows switches to have two firmware stored. You can set up and implement an active and a backup firmware. If the current firmware faces problems, you can activate the backup firmware right away to reduce downtime.

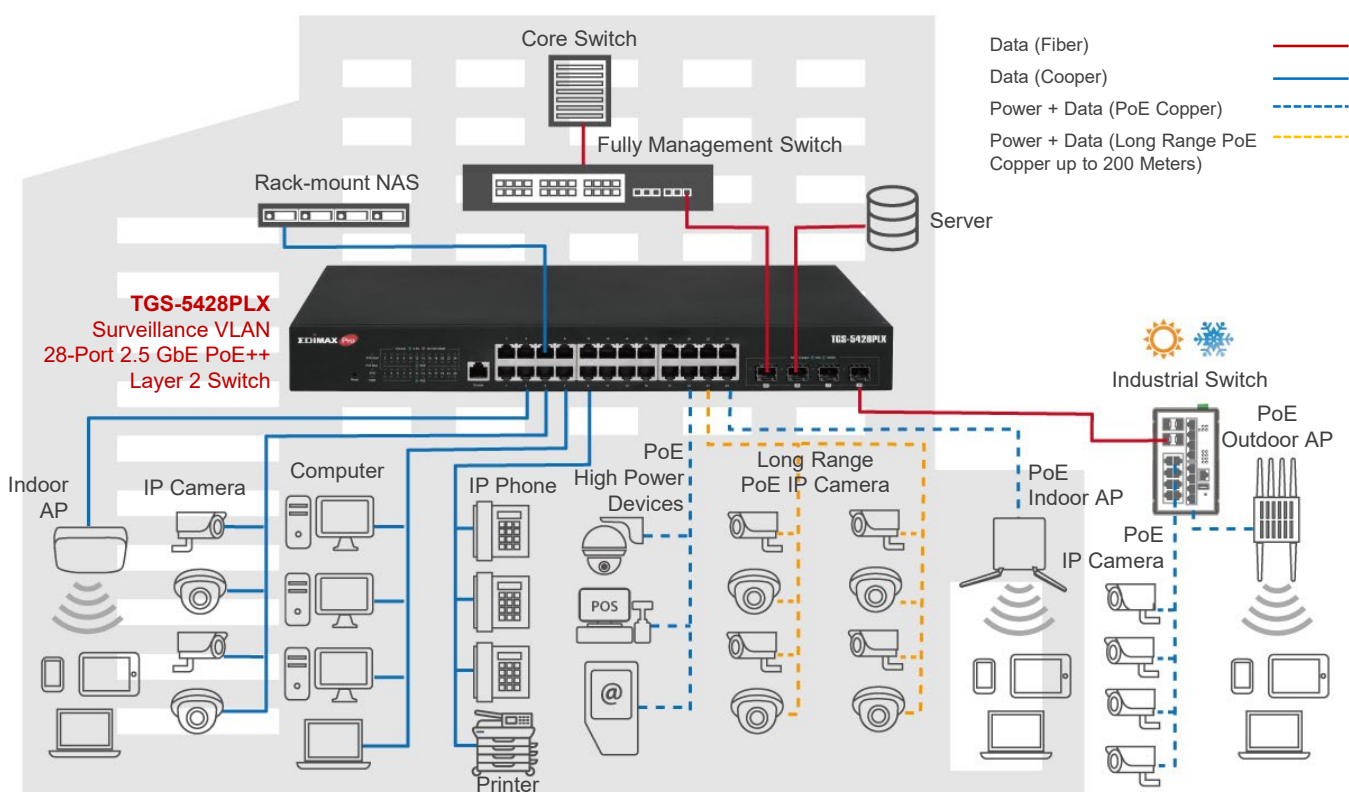
## Safety Guard Your Devices with Power Backfeed Protection

The TGS-5428PLX supplies up to 90W of electricity per port and has a total power supply of 400W to power any 802.3bt/at/af compliant PoE/PoE+/PoE++ devices. With built-in PoE detection capability, the TGS-5428PLX is able to verify whether the connected device is IEEE802.3bt/at/af compliant. Moreover, with the power backfeed protection, the TGS-5428PLX can avoid damaging the PoE ports.

## Intuitive and Powerful Smart Layer 2 Management

The TGS-5428PLX is designed for small-and-medium business (SMB) and enterprise networks that require smart layer 2 network management. This layer 2 switch meets the network growing need by providing advanced essential features such as SNMP v1/v2c/v3, Access Control List (ACL), QoS, CoS, STP, 802.1Q VLAN, Link Aggregation, Broadcast Storm Control, Loop Detection/Prevention, IPv4/IPv6, Port Trunking, Port Mirroring and more. Further optimizing the performance of business networks. Experience fast and easy operations with just a few simple clicks through the user-friendly web-based management utility, your network is ready to use with ease.

## APPLICATION DIAGRAM



## POE DEVICES

Complies with IEEE 802.3af (PoE), IEEE 802.3at (PoE+) and IEEE 802.3bt (PoE++) Standards and supports PoE PD (Power Device) up to 90W per PoE port, total PoE power budget up to 400W per switch.

The diagram illustrates the PoE capabilities of the Edimax TGS-5428PLX switch. It features three horizontal bars representing different PoE standards, each with a list of supported devices. A central image of the switch is shown with a blue lightning bolt icon pointing to its ports, and a callout box indicating its specifications: 2.5GbE, 802.3bt PoE++, and up to 90W per port.

Standard	Power Budget	Supported Devices
PoE 802.3af	up to 15.4W	802.11n Access Point, Biometric Access Control, IP Phone, Thin Client
PoE+ 802.3at	up to 30W	802.11n High Power AP, Alarm System, PTZ/Speed Dome IP Camera, Video IP Phone, RFID Reader
PoE++ 802.3bt	up to 90W	802.11ac/ax Access Point, Digital Signage, Information Kiosk, POS System, PTZ/Speed Dome IP Camera

2.5GbE  
802.3bt PoE++  
Up to 90W per Port

## SPECIFICATIONS

### HARDWARE

Ports	<ul style="list-style-type: none"> <li>24 x RJ45 2.5GBase-T 2.5 Gigabit PoE++ Ports</li> <li>4 x SFP+ 10GBase-X 10 Gigabit Uplink Ports</li> <li>1 x RJ45 Console Port (Console Cable Included)</li> </ul>
Buttons	Reset button
LED Indicators	<ul style="list-style-type: none"> <li>SYS ALM: System Alert</li> <li>PoE Max.: PoE Power Budget Alert</li> <li>SYS: System Booting Status</li> <li>PWR: System Power Status</li> <li>Link/Act: Connection and Transmission Status (Port 1-24 RJ45, Port 25-28 SFP+)</li> <li>PoE: PoE Status</li> </ul>
Power Input	100-240V AC, 50-60Hz, Internal Power Supply
Total Power Budget	400W
Mounting	Desktop / Rack-mount (Rack-mount Kit Included)
Housing	Metal
Fan	3 x Fan with Intelligent Thermal Controller
Dimensions	441 (W) x 270 (D) x 44 (H) mm (17.36 (W) x 10.63 (D) x 1.73 (H) inches)
Weight	4.45kg (9.81lb)

### PERFORMANCE

Switching Capacity / Backplane	200Gbps
Forwarding Rates	Max. 169.28Mpps (64-byte Package Size)
MAC Address Table	32K
Jumbo Frame	12KB
Packet Buffer	16Mb

### POWER OVER ETHERNET

Standard	IEEE 802.3bt (PoE++), IEEE 802.3at (PoE+) IEEE 802.3af (PoE)
Power Output	Up to 90W per port
Pin Assignment	IEEE 802.3at/af: Alternative A (Pin 1,2/3,6) IEEE 802.3bt: Alternative A & B (Pin 1,2/3,6 & Pin 4,5/7,8)
Management	PoE Status, PoE Scheduling, PoE Priority, PoE On/Off, PoE PD Alive Check
Long Range	Guaranteed PoE long distance to 200 meters at 10Mbps
Power Backfeed Protection	Built-in

### OTHERS

Standard	<ul style="list-style-type: none"> <li>IEEE 802.3u 100Base-TX Fast Ethernet</li> <li>IEEE 802.3ab 1000Base-T Gigabit Ethernet</li> <li>IEEE 802.3bz 2.5GBase-T 2.5G Ethernet</li> <li>IEEE 802.3z 1000Base-SX/LX Gigabit Ethernet over fiber</li> <li>IEEE 802.3ae 10GBase-X Gigabit Ethernet over fiber</li> <li>IEEE 802.3af Power over Ethernet (PoE)</li> <li>IEEE 802.3at Power over Ethernet (PoE+)</li> <li>IEEE 802.3bt Power over Ethernet (PoE++)</li> <li>IEEE 802.3x Full-duplex and flow control</li> <li>IEEE 802.1p Quality of Service (QoS)</li> <li>IEEE 802.1x Port-based Network Access Control (PNAC)</li> <li>IEEE 802.1Q Virtual LANs VLANs</li> <li>IEEE 802.1d Spanning Tree Protocol (STP)</li> <li>IEEE 802.1s Multiple Spanning Tree Protocol (MSTP)</li> <li>IEEE 802.1w Rapid Spanning Tree Protocol (RSTP)</li> <li>IEEE 802.1AB Link Layer Discovery Protocol (LLDP), LLDP-MED (Media Endpoint Discovery)</li> <li>IEEE 802.3ad Link Aggregation Control Protocol (LACP)</li> <li>IEEE 802.3az Energy Efficient Ethernet</li> </ul>
Environmental Condition	Temperature: <ul style="list-style-type: none"> <li>Operating: 0~50°C (32~122°F)</li> <li>Storage: -40~70°C (-40~158°F)</li> </ul> Humidity: <ul style="list-style-type: none"> <li>Operating: 10~90% (NonCondensing)</li> <li>Storage: 10~90% (NonCondensing)</li> </ul>
Certifications	FCC, CE

### SMART FEATURES

Quality of Service (QoS)	<ul style="list-style-type: none"> <li>Rate limiting on packets sent and received by an interface</li> <li>8 queues on each port</li> <li>WRR, SP, WRR+SP queue scheduling algorithms</li> <li>Re-marking of the 802.1p priority and DSCP priority</li> <li>Rate limiting in each queue and traffic shaping on ports</li> </ul>
Class of Service (CoS)	<ul style="list-style-type: none"> <li>IEEE 802.1p class of service (SPQ, WRR)</li> <li>Port-based CoS</li> <li>IP TOS precedence</li> <li>802.1p VLAN Information based CoS</li> <li>DSCP based CoS</li> <li>TCP/UDP Based CoS</li> </ul>
Spanning Tree	<ul style="list-style-type: none"> <li>IEEE 802.1d Spanning Tree Protocol (STP)</li> <li>IEEE 802.1s Multiple Spanning Tree Protocol (MSTP)</li> <li>IEEE 802.1w Rapid Spanning Tree Protocol (RSTP)</li> </ul>
VLAN	<ul style="list-style-type: none"> <li>Up to 256 VLANs and 4096 VLAN IDs</li> <li>802.1Q tag-based VLAN</li> <li>Port-based VLAN</li> <li>Surveillance VLAN</li> <li>Voice VLAN</li> <li>MAC VLAN</li> <li>GVRP</li> </ul>
IPv6	<ul style="list-style-type: none"> <li>IPv6 over Ethernet (RFC 2464)</li> <li>Dual-stack (RFC 4213)</li> <li>ICMPv6 (RFC 4884)</li> <li>Neighbor discovery (RFC 4861)</li> <li>Auto configuration</li> <li>Static IPv6 address and prefix length</li> <li>Static IPv6 default gateway</li> <li>IPv6 duplicate address detection</li> </ul>
Port Trunking	<ul style="list-style-type: none"> <li>IEEE 802.3ad LACP Trunk-Static Trunk</li> <li>Up to 8 trunk groups</li> </ul>
IGMP Snooping	<ul style="list-style-type: none"> <li>IGMP v1/v2/v3 snooping</li> <li>Block unknown multicast traffic</li> </ul>
Port Mirroring	Port Mirroring Traffic Direction: <ul style="list-style-type: none"> <li>Both (Ingress and Egress)</li> <li>Ingress</li> <li>Egress</li> </ul>
Security	<ul style="list-style-type: none"> <li>RADIUS</li> <li>TACACS+</li> <li>AAA</li> <li>Management Access</li> <li>Authentication Manager</li> <li>Port Security</li> <li>Protected Port</li> <li>Broadcast Storm Control</li> <li>DoS</li> <li>Dynamic ARP Inspection</li> <li>DHCP Snooping</li> <li>IP Source Guard</li> <li>BPDU Guard</li> <li>Remote Access: HTTPS/SSH/HTTP/Telnet/Session Timeout</li> </ul>
Management	<ul style="list-style-type: none"> <li>User Interface: Web-based management</li> <li>User Account: Login account configuration</li> <li>Firmware Upgrade: Firmware upgrade by WEB</li> <li>Syslog: Support event log, alarm log and security log</li> <li>Dual-firmware image for failover mechanisms</li> <li>ACL (Access Control List)</li> <li>CLI (Command-Line Interface)</li> <li>User Account: Login account configuration</li> <li>SNMP v1/v2c/v3</li> </ul>

Maximum performance, actual data rates, and coverage will vary depending on network conditions and environmental factors. Product specifications and design are subject to change without notice.

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