

# Rackmount 28G PoE Switch for Critical Surveillance

## RP428

### Industrial 28G L2+ Rackmount PoE Ethernet Switch

RP428 is a rackmount 28G PoE switch with 24 Giga PoE+ ports, and 4 Giga fiber ports. The 28 full giga ports enhance the overall throughput for video surveillance applications. Rugged design and high PoE port density makes RP428 an ideal solution for critical surveillance applications.



### Features & Benefits

#### High Throughput Ethernet Switching

- 24 Giga PoE ports, and 4 Giga fiber ports
- DDM function for high quality fiber connectivity monitoring
- **16K** MAC address table
- **1.5Mbytes** Packet Buffer

#### Extreme PoE Capability

- 24-port IEEE 802.3af/at compliant PoE, up to 30W/port
- Up to **300W** PoE power budget
- PoE management including per-port Power Budget Control, PoE Scheduling, PD Alive Check and PoE Status

#### Management Features

- Various configuration including CGI WebGUI, CLI, SNMP and RMON
- IEEE **1588v1/v2 PTP** time management
- LLDP topology control
- USB for easy field configuration and firmware update
- Software utility interface for LAN devices management

#### Enhanced Cyber Security for Critical Applications

- **802.1X/RADIUS** port-based access control
- Port MAC secure learning
- Private VLAN/IP Security/Port Security
- HTTPs/SSH/ Management IP secure access
- L2-L7 Access Control List (ACL)

#### Rugged Design for Wayside Network Switching with Wide Power Input Range

- Excellent heat dissipation design for operating in **-40~75°C** environments
- High level EMC protection exceeding traffic control and heavy industrial standards' equipments
- IEC 61000-6-2/4 Heavy Industrial Environment
- EN50121-4 railway trackside EMC

Technology	
<b>Standard</b>	IEEE 802.3 10Base-T Ethernet
	IEEE 802.3u 100Base-TX Fast Ethernet
	IEEE 802.3u 100Base-FX Fast Ethernet Fiber
	IEEE 802.3ab 1000Base-T Gigabit Ethernet copper
	IEEE 802.3z Gigabit Ethernet Fiber
	IEEE 802.3x Flow Control and back-pressure
	IEEE 802.1AB Link Layer Discovery Protocol (LLDP)
	IEEE 802.1p Class of Service (CoS)
	IEEE 802.1Q VLAN and GVRP
	RFC 2460 Internet Protocol, Version 6 (IPv6)
	ITU-T G.8032 Ethernet ring protection switching(ERPS)
	IEEE 802.1D-2004 Rapid Spanning Tree Protocol (RSTP)
	IEEE 802.1S Multiple Spanning Tree Protocol (MSTP)
	IEEE 802.3ad Link Aggregation Control Protocol (LACP)
	IEEE 802.1x Port based Network Access Protocol
IEEE 1588 Precision Time Protocol v1/v2	
Performance	
<b>Switch Technology</b>	Store and Forward Technology with Non-Blocking Switch Fabric
<b>Number of MAC Address</b>	16K
<b>Packet Buffer Memory</b>	1.5Mbytes
<b>Transfer performance</b>	10Base-T: 14,880pps, 100Base-TX/FX: 148,800pps, 1000Base-TX/FX: 1,488,100pps
<b>VLAN</b>	256 VLANs
<b>VLAN ID</b>	1~4094
<b>Traffic Prioritize</b>	8 Priority Queues per Port
<b>Watchdog</b>	Hardware-based 10 seconds timer
Interface	
<b>Ethernet Port</b>	24 x 100/1000M RJ45, 24 x 802.3af/at PoE, Auto Negotiation 4 x 1000M SFP, DDM
<b>System LED</b>	3 x Power: Green On 1 x System Status: Ready: Green On, Firmware Updating: Green Blinking 1 x Alarm: Red On 1 x Ring Status: Normal (Green On), Wrong Port (Green Blinking), Abnormal (Amber On), Ring Port Fail (Amber Blinking)
<b>Giga Ethernet Port LED</b>	Link (Green On), Activity (Green Blinking), Speed 1000M(Amber On), Speed 10M/100M (Amber Off)
<b>Giga Ethernet PoE LED</b>	802.3af Activity (Green On), 802.3at Activity (Blue On)
<b>Giga SFP LED</b>	Port: Link (Green On), Activity (Green Blinking)
<b>Console</b>	1 x RJ45 based RS232 for System Configuration. Baud Rate: 115200.n.8.1
<b>USB</b>	1 x USB for Configuration/Firmware Update
<b>Digital Output (Alarm)</b>	1x Digital Output: Dry Relay Output with 1A /24V DC

Power Requirement	
<b>Operating Voltage</b>	AC110/220V (90-264VAC)
Software	
<b>Management Interface</b>	CGI WebGUI, Command Line Interface (CLI), Telnet, SNMP
<b>Time Management</b>	NTP, IEEE 1588 Precision Time Protocol v1/v2
<b>Network Management</b>	IPv4/IPv6, SNMP v1/v2c/v3/Trap, MIBs, RMON, LLDP, DHCP server/client/Option 82, TFTP, System Log, SMTP
<b>Traffic Management</b>	Flow Control, Port Trunk/802.3ad LACP, VLAN, Private VLAN, GVRP, GMRP, QinQ, Class of Service, Traffic Prioritize, IGMP Snooping v1/v2/v3, Rate Control, Port Mirror
<b>Security</b>	IEEE 802.1X/RADIUS, Port Security, Storm Control, SSH, SSL, QoS, L2-L7 Access Control List (ACL)
<b>Redundancy</b>	Rapid Spanning Tree Protocol (RSTP)/Multiple Spanning Tree Protocol (MSTP) ITU-T G.8032 Ethernet Ring Protection Switching (ERPS)*
Mechanical	
<b>Installation</b>	Rackmount
<b>Enclosure Material</b>	Aluminum and Steel
<b>Dimension</b>	440 x 44 x 378,5 mm(W x H x D)
<b>Ingress Protection</b>	IP40
<b>Weight</b>	8.2KG (full package)
Environmental	
<b>Operating Temperature &amp; Humidity</b>	-40°C~75°C , 10%~95% Non- Condensing
<b>Storage Temperature</b>	-40°C~85°C
<b>MTBF</b>	>202,000 hours
<b>Warranty</b>	5 years
Standard	
<b>Safety</b>	UL60950-1 Compliance
<b>Railway</b>	EN50121-4 Compliance
<b>EMI</b>	CISPR 22, FCC part 15B Class A
<b>EN50121-4 EMC Level</b>	IEC61000-4-2 ESD: 8KV(Air), 6KV(Contact) IEC61000-4-3 RS: 10V/m(80M~1GHz), 20V/m(800M~1G) IEC61000-4-4 EFT: 2KV(Power), 2KV(Signal Port, GND) IEC61000-4-5 Surge: Power: 1KV(Line to Ground/Line to Line), Signal Port: 1KV(Line to Ground/Line to Line) IEC61000-4-6 CS: 10Vrms(Power, Signal Port) IEC61000-4-8 Magnetic Field: 30A continues /300A for 1~3s



## Ordering Information

Model Name	Description
<b>RP428</b>	Industrial 28G L2+ Rackmount Managed PoE Switch
	<b>Package List</b>
	1 x Product Unit (Without SFP Transceiver)
	1 x Power Cord
	1 x Console Cable
	1 x Quick Installation Guide



## Optional Accessory

Item	
SFPGEM05	SFP, 1000Mbps, LC, multi, 550M, 0~70°C
SFPGEM05T	SFP, 1000Mbps, LC, multi, 550M, -40~85°C
SFPGEM05D	SFP, 1000Mbps, LC, multi, DDM, 550M, 0~70°C
SFPGEM05DT	SFP, 1000Mbps, LC, multi, DDM, 550M, -40~85°C
SFPGEM2	SFP, 1000Mbps, LC, multi, 2KM, 0~70°C
SFPGEM2T	SFP, 1000Mbps, LC, multi, 2KM, -40~85°C
SFPGEM2D	SFP, 1000Mbps, LC, multi, DDM, 2KM, 0~70°C
SFPGEM2DT	SFP, 1000Mbps, LC, multi, DDM, 2KM, -40~85°C
SFPGES10	SFP, 1000Mbps, LC, single, 10KM, 0~70°C
SFPGES10T	SFP, 1000Mbps, LC, single, 10KM, -40~85°C
SFPGES10D	SFP, 1000Mbps, LC, single, DDM, 10KM, 0~70°C
SFPGES30	SFP, 1000Mbps, LC, single, 30KM, 0~70°C
SFPGES30T	SFP, 1000Mbps, LC, single, 30KM, -40~85°C
SFPGES30D	SFP, 1000Mbps, LC, single, DDM, 30KM, 0~70°C
SFPXGM03D	SFP+, 10Gbps, LC, multi, DDM, 300M, 0~70°C
SFPXGS10D	SFP+, 10Gbps, LC, single, DDM, 10KM, 0~70°C
SFPGES10-A	SFP, 1000Mbps, LC, single, 10KM, BiDi TX-1310nm RX-1550nm, 0~70°C
SFPGES10-B	SFP, 1000Mbps, LC, single, 10KM, BiDi TX-1550nm RX-1310nm, 0~70°C
SFPGES10T-A	SFP, 1000Mbps, LC, single, 10KM, BiDi TX-1310nm RX-1550nm, -40~85°C
SFPGES10T-B	SFP, 1000Mbps, LC, single, 10KM, BiDi TX-1550nm RX-1310nm, -40~85°C
SFPGES10D-A	SFP, 1000Mbps, LC, single, DDM, 10KM, BiDi TX-1310nm RX-1550nm, 0~70°C
SFPGES10D-B	SFP, 1000Mbps, LC, single, DDM, 10KM, BiDi TX-1550nm RX-1310nm, 0~70°C