CPS-3416-GT

16 10/100/1000TX + 2 Giga RJ + 2 Giga SFP

W/. 16- Port PoE Managed Switch

✓ Support 16-Port Hi power POE W/. 802.3at Standard

✓ Support SSH

✓ Support Denial-of-Service (DOS) prevention.

✓ IPV4 Based ACL

✓ Built in 802.3az for power saving

✓ Support SNMP V2c

✓ Support IPV6 Management

✓ Loop protection prevents network attack and Loopback cable protection

✓ Support Advanced SNMP including QoS, IGMP V2 /V3 snooping

OVERVIEW

■ Netzin CPS-3416-GT-S is a 16-port 10/100/1000BaseTX + 2-port GIGA RJ-45 + 2-port GIGA SFP+ W/. 16-port Hi-power POE Managed switch. The advanced SNMP management features include QoS for 8 queues, 802.1q VLAN, IGMP V2/V3 snooping and Loop protect prevents network attack and loopback cable protection, as well as SNTP and SMTP etc.

■ Netzin CPS-3416-GT-S builds all the important management features required in large network like DHCP Client, DHCP Server, IGMP Snooping, advanced QoS.

■ CPS-3416-GT-S provides a variety of advanced security features to safe guard your network. These security protection functions include SSH, Port Security, Storm Control, Denial-of- Service (DOS) Prevention, IP Source Guard etc.

■ CPS-3416-GT-S supports advanced QoS, By collaborating with Netzin's controller and application, the network administrators can designate the priority of streaming services based on different QoS requirements.

■ CPS-3416-GT-S prioritizes delay sensitive services such as voice and video streaming. It provides different classes of services, including flow-based.

■ The Netzin CPS-3416-GT-S With the powerful ACL utility, administrator can restrict sensitive portions of the network from unauthorized users and guard against network attacks. CPS-3416-GT-S support MAC-based ACL, IPV4-based ACL.

■ The Netzin CPS-3416-GT-S With built-in IEEE802.3az Energy Efficient Ethernet (EEE) feature and more innovative green feature, CPS-3416-GT-S can reduce energy consumption through much smart automatic detection, such as Link Down Power Saving, Cable Length Power Saving, No traffic or Small traffic Power Saving.

■ The Netzin CPS-3416-GT-S is the best to be used in Central management and prepare to be software define network.

FEATURES & BENEFITS

- RJ-45 Port Support Auto MDI/MDI-X Function
- Back-plane (Switching Fabric): 40 Gbps
- 16K MAC address table
- IPv6 management
- IEEE 802.1d Spanning Tree , IEEE 802.1w RSTP & IEEE 802.1s MSTP
- IGMP with Snooping and Query mode for Multi Media Application
- Port Based VLAN, 802.1Q Tag VLAN, GVRP
- SNMP Trap
  - Device cold start, Power status, Authentication failure, Ring changed, Port Link up/Link down.
- SNTP for time sync
- TFTP Firmware Update & System Configure Restore/Backup
- Port Trunk with LACP

- Supports IEEE 802.1ab LLDP
- Supports IEEE 802.1p CoS, 4 priority queues per port
- Port base, Tag Base and Type of Service Priority
- Supports Ingress Packet Filter and Egress Rate Limit
- Supports Broadcast/Multicast Packet Filter Control
- Port Mirror: Monitor traffic in switched networks
  - TX, RX, Both of TX and RX Packet
- Security
  - Port Security: MAC address entries/Filter/MAC violation
  - Denial-of-Service (DOS) Prevention
  - IP Source Guard
  - Loop Protection: prevents network attack, loopback cable detection and Miss-wiring avoidance
- Factory reset bottom can restore all setting back to factory default and Watchdog design to automatically reboot switch under certain circumstances.

SPECIFICATION

HARDWARE			
IEEE Standards	IEEE802.3 10Base-T Ethernet IEEE802.3u 100Base-TX IEEE802.3ab 1000Base-T IEEE802.3z Gigabit fiber IEEE802.3x Flow Control and Back Pressure IEEE802.3ad Port trunk with LACP IEEE802.3af Power over Ethernet IEEE802.1d Spanning Tree IEEE802.1w Rapid Spanning Tree IEEE802.1s Multiple Spanning Tree IEEE802.1p Class of Service IEEE802.1Q VLAN Tag IEEE802.1ab LLDP IEEE802.3az Power Saving	Optical Fiber	Distance: Multi-mode: 0 to 5 km, 1300 nm (50/125 μm, 800 MHz*km) 0 to 4 km, 1300 nm (62.5/125 μm, 500 MHz*km) Single mode: 0 to 40 km, 1310 nm (9/125 μm, 3.5 PS/(nm*km)) 0 to 80 km, 1550 nm (9/125 μm, 19 PS/(nm*km)) Min. TX Output: Multi-mode: -20 dBm Single mode: 0 to 40 km, -5 dBm; 0 to 80 km, -5 dBm Max. TX Output: Multi-mode: -14 dBm Single mode: 0 to 40 km, 0 dBm; 0 to 80 km, 0 dBm Sensitivity: -36 to -32 dBm(SM); -34 to -30(MM)
Switch Architecture	Back-plane (Switching Fabric): 40Gbps	Protocol	CSMA/CD
Transfer Rate	14,881pps for Ethernet port 148,810pps for Fast Ethernet port 1,488,100pps for Gigabit Fiber Ethernet port	LED	Per unit: Power1(Green), Fault(Red), System alive(Green) 18 port 10/100/1000: Link/Activity(Green), Speed(Green) SFP port: 2 x LNK/ACT(Green)
MAC Address	16K MAC address table	Power Supply	AC input 110V~240V,
PoE pin assignment	PoE pin assignment RJ-45 port # 1~# 16 support IEEE 802.3at+ End- point, Alternative A mode. Per port provides up to 30W Positive (VCC+): RJ-45 pin 3,6. Negative (VCC-): RJ-45 pin 1,2.	Overload current protection	Present
		Operating Humidity	5% ~ 95% (Non-condensing)
		Operating Temperature	Standard: 0°C~50°C / I-Type : -10°C~60°C
		Storage Temperature	-40°C~70°C
Connectors	10/100/1000TX: 16 x ports RJ-45 with Auto MDI/MDI-X function RS-232 connector: RJ-45 type	Case Dimension	440 (W) x200 (D) x 44 (H) mm ; Rack mount installation
		Weight	4280 g
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)	Fan Number	0
		EMI & EMS	CE / FCC
		Power Consumption	250 W (Within PoE load) for Ethernet data at full load
		Warranty	1 years

SOFTWARE

Management	SNMP v1 v2c, v3 / Web / Telnet / CLI	Port Mirror	Supports 3 mirroring types: "RX, TX and Both packet"
SNMP Agent	SNMP V1/V2c/V3	IGMP	Supports IGMP snooping v1, v2, V3 256 multicast groups
VLAN	Port Based VLAN IEEE 802.1Q Tag VLAN / VLAN ID (Up to 4K, VLAN ID can be assigned from 1 to 4096.)	IP Security	Support 10 IP addresses that have permission to access the switch management and to prevent unauthorized intruder.
Port Trunk with LACP	LACP Port Trunk: 4 Trunk groups/Maximum 4 trunk Members	Flow Control	Supports Flow Control for Full-duplex and Back Pressure for Half-duplex
LLDP	Supports LLDP to allow switch to advise its identification and capability on the LAN	System Log	Supports System log record and remote system log server
LLDP-MED	Support LLDP-MED via IPv6.		
Spanning Tree	Supports IEEE802.1d Spanning Tree and IEEE802.1w Rapid Spanning Tree; IEEE802.1s Multiple Spanning Tree	SNTP	Supports SNTP to synchronize system clock to Internet
IPV6 Management	Allow the user access by IPv4 or IPv6 And IPv6 supports the following features. • IPv4/IPv6 Dual Protocol Stack • Auto Configuration • IPv6 Neighbor Discovery • ICMPv6 • TFTP over IPv6 • Ping over IPv6 • DHCPv6	Bandwidth Control	Support ingress packet filter and egress packet limit
		SNMP Trap	1. Cold start 2. Link down 3. Link up 4. Authorization fail
		DHCP	Provides DHCP Client/ DHCP Server
Quality of Service	The quality of service determined by port, Tag and IPv4 Type of service, IPv4 Different Service	DNS	Provide DNS client feature and support Primary and Secondary DNS server.
Class of Service	Supports IEEE802.1p class of service, per port provides 4 priority queues	Firmware Update	Supports TFTP firmware update, TFTP backup and restore.
Port Security	Supports 100 entries of MAC address for static MAC and another 100 for MAC filter	Factory reset & Watchdog design	Factory reset bottom can restore all setting back to factory default and Watchdog design to automatically reboot switch under certain circumstances

*Future Release
**Optional

ORDERING INFOMATION

■ **CPS-3416-GT-S**
16 10/100/1000TX + 2 GIGA RJ-45+ 2 GIGA SFP+ W/. 16-port hi-power POE Managed Switch; 0°C to 50°C

■ **CPS-3416-GT-SI**
16 10/100/1000TX + 2 GIGA RJ-45+ 2 GIGA SFP+ W/. 16-port hi-power POE Managed Switch; -10°C to 60°C

OPTIONAL ACCESSORIES

Mini GBIC (SFP)

■ 8330-162	MINI GBIC 1000SX (LC/0.5km) Transceiver		■ 8330-188	LTSFP-1000BX-10KM Transceiver (WDM 1310)
■ 8330-163	MINI GBIC 1000SX2 (LC/2km) Transceiver		■ 8330-189	LTSFP-1000BX-10KM Transceiver (WDM 1550)
■ 8330-165	MINI GBIC 1000LX (LC/10km) Transceiver		■ 8330-186	LTSFP-1000BX-20KM Transceiver (WDM 1310)
■ 8340-0591	MINI GBIC 1000LHX (LC/40km) Transceiver		■ 8330-187	LTSFP-1000BX-20KM Transceiver (WDM 1550)
■ 8330-166	MINI GBIC 1000XD (LC/50km) Transceiver		■ 8330-180	LTSFP-1000BX-40KM Transceiver (WDM 1310)
■ 8330-169	MINI GBIC 1000XD (LC/60km) Transceiver		■ 8330-182	LTSFP-1000BX-40KM Transceiver (WDM 1550)
■ 8330-167	MINI GBIC 1000ZX (LC/80km) Transceiver		■ 8330-181	LTSFP-1000BX-60KM Transceiver (WDM 1310)
■ 8330-170	MINI GBIC 1000EZX (LC/120km) Transceiver		■ 8330-183	LTSFP-1000BX-60KM Transceiver (WDM 1550)
■ 8330-168	MINI GBIC 1000T (100m) Transceiver		■ 8330-184	LTSFP-1000BX-80KM Transceiver (WDM 1490)
■ 8330-061	100Base LX 30km, Single-mode, LC Transceiver		■ 8330-185	LTSFP-1000BX-80KM Transceiver (WDM 1550)
■ 8330-060	100Base FX 2km, Multi-mode, LC Transceiver			