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BSD-IPGS-3408GSFP

8 PoE AT/AF GIGA TX + 4 GIGA SFP PORT MANAGED INDUSTRIAL SWITCH

Overview

BSD- IPGS-3408GSFP is a high performance L2+ industrial Gigabit switch which provides L2 wire speed and advanced security function for network aggregation deployment. It delivers ITU G.8032 ring recovery less than 50ms, comprehensive QoS, IGMPv1/v2/v3 & routing. It also supports Cisco Discovery Protocol (CDP) and LLDP for Ciscoworks to detect the switch info and show on L2 map topology. The switch also has the RTC (real time clock) which can keep track of time always.

BSD-IGPS-3408GSFP 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. PoE scheduling allows pre-set power feeding schedule upon routine time table. BSD-IPGS-3408GSFP features ITU G.8032 ring which can be self-healed in less than 50ms up to 256 switches. It also supports MSTP that allows RSTP over Vlan for re-dundant links. The BSD- IGPS-3408GSFP DIDO function can support additional open/close physical contact for designated applications besides Port / Power events such as triggering an alarm if the switch is moved or sto-len. In case of events, the switch will immediately send an email & SMS text message to pre-defined addresses as well as SNMP Traps out. The optional environmental monitoring can detect switch overall temperature, volt-age and current where can send the SNMP traps, email and SMS alert when abnormal.

The BSD- IPGS-3408GSFP is designed with redundant power supply at 48VDC. Featured with relay contact alarm function, this switch is able to connect with alarm system in case of power failure. The BSD-IPGS-3408GSFP also provides 3000V EFT and 6000V ESD protection, which can reduce unstable situation caused by power line and Ethernet.

E Model

Key Features

4 1000 SFP +8 Giga L2 plus PoE Managed Industrial Switch (Total 12 Ports Switch)
Supports IEEE802.3at/af feeding power up to 30W/52V; 15W/48V per PoE port at 48~56VDC
Back-plane (Switching Fabric):24Gbps
16K MAC address table
DDM to support SFP diagnostic function (optional)
- *Automatically convert the raw data into dB values for TX power/RX power, making it easier to measure the fiber distance*

10KB Jumbo frame supported on 10/100/1000TX
PoE management including PoE scheduling and device detection
PoE per port status including ON/OFF, voltage, current and watts
User friendly UI, Auto topology drawing, topology demo
ITU G.8032 Ring protection in 50ms < 256 switches
- *Support various ring/chain topologies, including double ring*
- *Ring protection coverage data*
- Miss-wiring avoidance
- *LED indicator*
- *Email, traps, or SMS notification*
- Repowered auto ring restore
- *Ensure the switches in a ring to survive after power break-out is back*
- *The status can be shown in NMS when each switch is back*

Provides EFT protection 3000 VDC for power line.
Supports 6000 VDC Ethernet ESD protection
Provides ground isolation & DC to DC power isolation with 1500VDC
LACP load balancing to distribute the load

Built-in RTC(Real Time Clock)
Supports IEEE 802.1p Class of Service, per port provides 8 priority queues Port base, Tag Base and Type of Service Priority

IEEE 802.1d STP, IEEE 802.1w RSTP,802.1s MSTP VLAN redun-dancy
4K 802.1Q VLAN, Port based VLAN, QinQ

Supports IEEE 802.1ab LLDP,
Cisco CDP; LLDP info can be viewed via Web/Console/ IntriView (optional)
DHCP server / client
Bandwidth Control
- *Ingress Packet Filter and Egress Rate Limit*
- *Broadcast/Multicast Packet Filter Control*

TFTP/HTTPs firmware upgrade; Redundant firmware (optional) to avoid crashing in case of upgrading failure
System Event Log, SMTP Email alert and SNMP Trap for alarm support; 32 RMON counters
Relay Alarm Output System Events
Security
- *SSL/SSH/ACL L2&L3*
- *Port Security: MAC address entries/Filter/MAC-IP-Port binding*
- *IP Security: IP address security management to prevent unauthorized intruder.*
- *Management access control with priority*
- *Login Security: IEEE802.1X/RADIUS*

Multicast static route for non- IGMP camera to prevent flooding;
IGMP router port to assign query in ring
Multicast VLAN registration for metro video
IGMPv1,v2,v3 with Query mode for Multi Media
Factory reset button to restore setting to factory default
Watchdog design to auto reboot switch CPU is found dead
Optional environmental monitoring for system input voltage, current, ambient temperature
Supports DIDO(Digital Input/Digital Output)
IP30 metal housing with DIN rail design

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Hardware Specifications

Standards	IEEE 802.3 10Base-T Ethernet, IEEE 802.3u 100Base-TX , IEEE802.3z Gigabit fiber IEEE802.3x Flow Control and Back Pressure, IEEE802.3ad Port trunk with LACP IEEE802.1d Spanning Tree, IEEE802.1w Rapid Spanning Tree IEEE802.1s Multiple Spanning Tree IEEE 802.3ad Link Aggregation Control Protocol (LACP), IEEE 802.1AB Link Layer Discovery Protocol (LLDP) IEEE 802.1X User Authentication (Radius), IEEE802.1p Class of Service , IEEE802.1Q VLAN Tag, IEEE802.3at/af Power over Ethernet
Switch Architecture	Back-plane (Switching Fabric): 24Gbps Packet throughput ability (Full-Duplex): 23.8Mpps @64bytes
Transfer Rate	14,880pps for Ethernet port 148,800pps for Fast Ethernet port 1,488,000pps for Gigabit Fiber Ethernet port
Mac Address	16K MAC address table
Connectors	10/100/1000TX: 8 x RJ-45 type connector Mini-GBIC: 4 x 1000 SFP Sockets Power & P-Fail connector: 1 x 6-pole terminal block RS-232 connector: 1 x RJ-45 type connector
Network Cable	10Base-T: 2-pair UTP/STP Cat. 3, 4, 5 cable -EIA/TIA-568 100-ohm (100m) 100Base-TX: 2-pair UTP/STP Cat. 5/ 5E cable-EIA/TIA-568 100-ohm (100m) 1000Base-T 4 pair UTP/STP Cat5e cable or above-EIA/TIA 568 100-ohm (100m)
Optical Cable	Multi-mode: 50/125um~62.5/125um; Single mode: 9/125um Wavelength: 850nm (Multi-mode) / 1310nm (Single-mode)
Protocol	CSMA/CD
PoE pin assignment	RJ-45 port # 1~#8 support IEEE 802.3at End-point, Alternative A mode. Per port provides 30W at 52~56VDC/15W at 48V~56VDC. Positive (VCC+): RJ-45 pin 1,2. Negative (VCC-): RJ-45 pin 3,6.
LED	Per unit: Power 1 (Green), Power 2 (Green), P-Fail (Red) Ethernet port: Link/Activity (Green), Speed (Green); Mini-GBIC: Link/Activity (Green)
DI/DO	2 Digital Input (DI) : Level 0: -30~2V / Level 1: 10~30V Max. input current:8mA 2 Digital Output(DO): Open collector to 40 VDC, 200mA
Operating Humidity	5% ~ 95% (Non-condensing)
Operating Temperature	-20°C~60°C / -4°F~140°F (Standard model) -40°C~75°C / -40°F~167°F(-E model)
Storage Temperature	-40°C~85°C / -40°F~185°F
Power Supply	±48~56VDC, Redundant power input with +48~56VDC, -48V~56VDC work only with single power input
Power Consumption	18W
PoE Power Budget	240W
Dimensions	Metal case. IP-30, weight 900g 96.3(W) x 114 (D) x 152 (H) mm (-E model) 74.15(W) x 114 (D) x 152 (H) mm (Standard model)
Installation	DIN Rail
EMI & EMS	FCC Class A, CE EN61000-6-2, CE EN61000-6-4, CE EN61000-4-2, CE EN61000-4-3, CE EN61000-4-4, CE EN61000-4-5, CE EN61000-4-6, CE N61000-4-8, EN61000-4-11
Stability Testing	IEC60068-2-32 (Free fall), IEC60068-2-27 (Shock), IEC60068-2-6 (Vibration)
MTBF	N/A
Warranty	5 years

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Software Specifications

Management	SNMP v1 v2c, v3/ Web/Telnet/CLI
SNMP MIB	RFC 1215 Traps MIB, RFC 1213 MIBII, RFC 1157 SNMP MIB, RFC 1493 Bridge MIB, RFC 2674 VLAN MIB, RFC 1643 EtherLike, RFC 1757 RMON, RSTP MIB, Private MIB, LLDP MIB
ITU G.8032	Support ITU G.8032 v2 for Ring protection in less than 50ms for self-heal recovery < 256 switches which can be compatible with other ITU G.8032 metro switches Support various ring/chain topologies Ring covers data & packets
User friendly UI	Auto topology drawing , Topology demo DDM threshold monitoring with dB values (optional)
Port Trunk with LACP	LACP Port Trunk: 4 Trunk groups/Maximum 4 trunk members
LLDP & CDP	Supports LLDP to allow switch to advise its identification and capability on the LAN Cisco Discovery Protocol for topology mapping
PoE Port status	PoE Detection to check if PD is hang up then restart the PD PoE Scheduling to On/OFF PD upon routine time table Per port PoE status for ON/OFF, voltage, current and watts
VLAN	Port Based VLAN IEEE 802.1Q Tag VLAN (256 entries)/ VLAN ID (Up to 4K, VLAN ID can be assigned from 1 to 4096). QinQ
IPv6/IPv4	Present
Spanning Tree	Supports IEEE802.1d Spanning Tree and IEEE802.1w Rapid Spanning Tree, IEEE802.1s Multiple Spanning Tree
Quality of Service	The quality of service determined by port, Tag and IPv4 Type of service, IPv4 Different Service
Class of Service	Support IEEE802.1p class of service, per port provides 8 priority queues
IP Security	Supports 10 IP addresses that have permission to access the switch management and to prevent unauthorized intruder.
Login Security	Supports IEEE802.1X Authentication/RADIUS
Port Mirror	Support 3 mirroring types: “RX, TX and Both packet”
Network Security	Support 10 IP addresses that have permission to access the switch management and to prevent unauthorized intruder. 802.1X access control for port based and MAC based authentication/MAC-IP-Port binding Management access control with priority.256 Policy based Access Control List SSL/ SSH for Management,
IGMP	Support IGMP v1,v2,v3 with snooping and query; Supports static multicast routing 256. IGMP router port for assign another query
Multicast VLAN Registration	MVR enables multicast packets go through VLAN for VOD application
Bandwidth Control	Support ingress packet filter and egress packet limit. The egress rate control supports all of packet type. Ingress filter packet type combination rules are Broadcast/Multicast/Flooded Unicast packet, Broadcast/Multicast packet, Broadcast packet only and all types of packet. The packet filter rate can be set an accurate value through the pull-down menu for the ingress packet filter and the egress packet limit.

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Software Specifications

RTC	Built-in Real Time Clock to keep track of time always
Flow Control	Supports Flow Control for Full-duplex and Back Pressure for Half-duplex
System Log	Supports System log record and remote system log server
SMTP/Text SMS	Supports SMTP Server and 6 e-mail accounts for receiving event alert; can send SMS text alert via mobile
Relay Alarm	Provides one relay output for port breakdown, power fail and alarm. Alarm Relay current carry ability: 1A @ DC24V
Protection	Miss-wiring avoidance Repowered auto ring restore Loop protection
SNMP Trap	Up to 3 trap stations; trap types including: Device cold start, Authorization failure, Port link up/link down, DI/DO open/close PoE port event, Environmental abnormal
DHCP	Provide DHCP Client/ DHCP Server
DNS	Provide DNS client feature and support Primary and Secondary DNS server.
SNTP	Supports SNTP to synchronize system clock in Internet
Firmware Update	Supports TFTP firmware update, TFTP backup and restore.
Configuration upload and download	Supports text configuration file for system quick installation; Support factory reset button to restore all settings back to factory default USB dongle for auto restore/back up
IfAlias	Each port allows an alphabetic string of 128-byte assigned as its own unique name via the SNMP or CLI interface

Ordering Information

BSD-IPGS-3408GSFP: Industrial 8 10/100/1000TX PoE at/af + 4 Giga SFP Port Managed Ethernet Switch (-20 ° C to 60 ° C operating temperature)

BSD-IPGS-3408GSFP-E: Industrial 8 10/100/1000TX PoE at/af + 4 Giga SFP Port Managed Ethernet Switch (-40 ° C to 75 ° C wide operating temperature)

BSD-SFPGLC(SX):1.25 G 850nm 1000Base Multimode LC SFP Module 500m

BSD-SFPGLC: 1.25 G 1310 nm 1000Base Multimode LC SFP Module 2km

BSD-SFPGLC-20; 1.25G 1310nm 1000Base Singlemode LC SFP Module 20 km

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