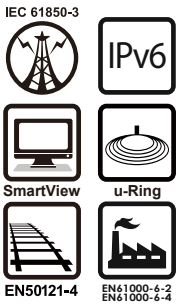

NEW

IPS-803GSM-DD

IEC 61850-3 8x 10/100Base-TX+ 3x 100/1000Base-X SFP Managed Switch ***(Dual isolated DC Input)***

IPS-803GSM-AD

IEC 61850-3 8x 10/100Base-TX+ 3x 100/1000Base-X SFP Managed Switch ***(AC+isolated DC Input)***

IPS-G803SM managed Fast Ethernet switch is designed to meet the demands of power substation systems and is fully compliant with the requirement of IEC 61850-3 and IEEE 1613. The switch provide a variety of redundant functions to increase the reliability of your communications system, including redundant and isolated power supplies (24/48 VDC) and 110/220 VDC/VAC), STP/RSTP/MSTP and ITU-T G.8032 Ethernet Ring Protection Switching (recovery time<50ms) and can compatibly work with other switches in the network for ring protection. The proprietary u-Ring (with recovery time of less than 20ms) can easy to work with a variety CTC industrial managed switch for ring protection. The switch also provide many function, such as Web management, SNMP, IGMP, VLAN, LACP, QoS, Security, IPv6, bandwidth control, port mirroring, cable diagnostics and Green Ethernet. IPS-803GSM can be managed centrally and conveniently by CTC SmartView Element Management System.

Features

- 8x 10/100/1000Base-T RJ-45 with 3x 100/1000Base-X SFP Fiber
- UL60950-1, CE, FCC, certification
- IEC61850-3, IEEE1613 certified for Power substation
- Redundancy isolated ±24/48 VDC power inputs (IPS-803GSM-DD)
- Isolated ±24/48VDC and 110/240VDC/VAC power input (IPS-803GSM-AD)
- Wide operating temperature -40~85°C
- DIN Rail mounting or wall mounting
- IP30 rugged metal housing
- Cable diagnostic, Measuring cable OK or broken point distance
- Supports IEEE802.3az EEE (Energy Efficient Ethernet) Management to optimize the power consumption
- STP, RSTP, MSTP, ITU-T G.8032 Ethernet Protection Ring(EPR),u-Ring for cabling redundant
- u-Ring for Redundant Ethernet Ring, recovery time<20ms in 250 units
- QoS, Traffic classification QoS, CoS, bandwidth control for Ingress and Egress, Storm Control, DiffServ
- IEEE802.1q VLAN, port based VLAN, MAC based VLAN, IP subnet based VLAN, Protocol based VLAN, VLAN translation, MVR
- Dynamic IEEE 802.3ad LACP Link Aggregation, Static Link Aggregation
- IGMP/MLD snooping V1/V2/V3, IGMP Filtering/ Throttling, IGMP query, IGMP proxy reporting, MLD snooping
- Security : Port based and MAC based IEEE802.1X, RADIUS, ACL, TACACS+, HTTP/HTTPS, SSL/SSH v2
- Software upgrade via TFTP and HTTP, redundant firmware in case of upgrade failure
- Supports DHCP client/Relay/Snooping/Snooping option 82/ Relay option 82
- Supports RMON, MIB II, Port mirroring, Event syslog, DNS, NTP/ SNTP, IEEE802.1ab LLDP
- Supports IPv6 Telnet server /ICMP v6, SNMP, HTTP, SSH/SSL, NTP/ SNTP, TFTP, QoS, ACL
- CLI, Web based management, **SNMP** v1/v2c/v3, Telnet server for management
- **SmartView** Management System

Specifications

IEEE Standard	IEEE 802.3 10Base-T Ethernet
	IEEE 802.3u 100Base-TX Fast Ethernet
	IEEE 802.3ab 1000Base-T Gigabit Ethernet
	IEEE 802.3z 1000Base-X Gigabit Ethernet
	IEEE 802.1d STP
	IEEE 802.1w RSTP
	IEEE 802.1s MSTP
	IEEE 802.1Q for VLAN Tagging
	IEEE 802.1X for Authentication
	IEEE 802.3ad for Port Trunk with LACP
	IEEE802.3x Flow Control and Back Pressure
	ITU-T G.8032/ Y.1344 EPR (Ethernet Protection Ring)
	IEEE 802.1ad Stacked VLANs, Q-in-Q
	IEEE 802.1p LAN Layer 2 QoS/CoS Protocol for Traffic Prioritization
	IEEE 802.1ab Link Layer Discovery Protocol (LLDP)
	IEEE 802.3az EEE (Energy Efficient Ethernet)
VLAN ID	4096
IGMP Group	256
Switch Architecture	Back-plane (Switching Fabric): 7.6Gbps
Data Processing	Store and Forward
Flow Control	IEEE 802.3x flow control, back pressure flow control
Jumbo Frame	9.6KB
MAC Address Table	8K

Network Connector	8x RJ-45
	10/100Base-TX auto negotiation speed
	Auto MDI/MDI-X function, Full/Half duplex
	3x 100/1000Base-X dual speed mode SFP slot, with DDMI
Console	RS-232 (RJ-45)
Network Cable	UTP/STP above Cat. 5e cable
	EIA/TIA-568 100-ohm (100m)
Protocols	CSMA/CD
LED	Per unit: Power 1 (Green), Power 2 (Green), Fault (Amber), CPU Act (Green) ,Ring Master (Yellow)
	Per RJ-45 port: Link/Active (Green)
	SFP Fiber Per port: Link/Active (Green)
Reverse Polarity Protection	Present for Power Input
Overload Current Protection	Present
CPU Watch Dog	Present
Power Input	**IPS-803GSM-DD** : Redundant Isolated DC ±24/48V (±18~72VDC) Input power (Removable Terminal Block)
	IPS-803GSM-AD : Redundant 1x Low Voltage Isolated DC and 1x High Voltage AC/DC DC: Isolated ±24/48V (±18~72VDC) Input power (Removable Terminal Block) AC: 88VAC~264VAC / DC: 85VDC~300VDC
Alarm Relay Contact	Relay outputs with current carrying capacity of 1 A @24VDC
Removable Terminal Block	Provide 2 Redundant power ,Alarm relay contact, 6 Pin
Operating Temperature	-40°C~85°C

Operating Humidity	5% to 95% (Non-condensing)
Storage Temperature	-40°C~85°C
Housing	Rugged Metal, IP30 Protection
Installation Mounting	DIN Rail mounting or wall mounting
EMC/EMS	CE, FCC
EMI	FCC Part 15 Subpart B Class A, EN 55022 Class A
EMS	EN61000-4-2 (ESD) Level 4, Criteria B
	EN61000-4-3 (RS) Level 3, Criteria A
	EN61000-4-4 (EFT) Level 4, Criteria A
	EN61000-4-5 (Surge) Level 4, Criteria B
	EN61000-4-6 (CS) Level 4, Criteria A
	EN61000-4-8 (Magnetic Field) Level 5, Criteria A
Safety	UL60950-1 (Pending)
Power substation	IEC 61850-3, IEEE 1613
Shock	IEC 60068-2-27
Freefall	IEC 60068-2-32
Vibration	IEC 60068-2-6
MTBF	TBD (Above 30 years)
Warranty	5 years

Software Specifications

Topology	
VLAN	IEEE 802.1q VLAN, up to 4095 ID
	IEEE 802.1q VLAN, up to 4095 Groups
	IEEE 802.1ad Q-in-Q
	Port Based VLAN
	MAC-based VLAN, up to 256 entries
	IP Subnet-based VLAN, up to 128 entries
	Protocol-based VLAN (Ethernt, SNAP, LLC), up to 128 entries
	VLAN Translation, up to 256 entries
	MVR (Multiple VLAN Registration)
Link Aggregation (Port Trunk)	Static (Hash with SA, DA, IP, TCP/UDP port), up to 5 trunk group
	Dynamic (IEEE 802.3ad LACP), up to 5 trunk group
Spanning Tree	IEEE802.1d STP
	IEEE802.1w RSTP
	IEEE802.1s MSTP
Loop Protection	Present
u-Ring	Easy set for Ethernet Protection Ring
	Recovery time <20ms
	Maximum 250 Node
ITU-T G.8032 / Y.1344 ERPS (Ethernet Ring Protection)	Convergence time <50ms
	Single Ring, Sub-Ring, Multiple ring topology network
QoS Feature	
Class of Service	IEEE802.1p 8 active priorities queues for per port
Traffic Classification QoS	IEEE802.1p based CoS
	IP Precedence based CoS
	IP DSCP based CoS
	QCL(QoS Control List): MAC Access control list (Source/ Destination MAC, Ether type, Priority ID/ VLAN ID)
	QCL: IP extended access control list (Source/ Destination IP, Protocol, TCP/UDP port number)
Bandwidth Control for Ingress	Rate in steps : 100 kbps / 1fps / 100fps
	Range : 100 kbps to 1Gbps / 1fps to 3300kfps
	Rate Unit : bit or frame
Bandwidth Control for Egress	Rate in steps : 100 kbps / 1fps / 100fps
	Range : 100 kbps to 1Gbps / 1fps to 3300kfps
	Rate Unit : bit or frame
	Per queue shaper
DiffServ (RF 2474) Remarking	
Storm Control	for Unicast, Broadcast, Multicast
IP Multicasting Feature	
IGMP / MLD Snooping	IGMP Snooping v1, v2, v3 / MLD Snooping v1, v2
	Port Filtering Profile
	Throttling
	Fast Leave
	Query

Security Features	
IEEE 802.1X	Port-Based
	MAC-Based
ACL	Number of rules : up to 256 entries
	for L2 / L3 / L4
RADIUS authentication & accounting	
TACACS+ authentication & accounting, TACACS+ 3.0	
HTTPS, HTTP	
SSL / SSH v2	
User Name Password Authentication	Local Authentication
	Remote Authentication (via RADIUS / TACACS+)
Management Interface Access Filtering	Web, Telnet / SSH
Management Features	
CLI	
Web Based Management	
Telnet	Server
SNMP	V1, V2c, V3
SW & Configuration Upgrade	TFTP, HTTP
	Redundant firmware in case of upgrade failure
RMON	RMON I (1, 2, 3, 9 group), RMON II
MIB II	RFC 1213
DHCP	Client
	Relay
	Snooping
	Snooping option 82
	Relay option 82
IP Source Guard	
Port Mirroring	
Event Syslog	Syslog server (RFC3164) (Support 1 server)
Warning Message	System syslog, e-mail, alarm relay
DNS	Client, Proxy
NTP /SNTP	
LLDP (IEEE 802.1ab)	Link Layer Discovery Protocol
	LLDP-MED

Software Specifications

IPv6 Features	
IPv6 Management	Telnet Server/ICMP v6
Stateless Auto Configuration	
SNMP over IPv6	
HTTP over IPv6	
SSH over IPv6	
IPv6 Telnet Support	
IPv6 NTP / SNTP Support	
IPv6 TFTP Support	
IPv6 QoS	
IPv6 ACL	Number of rules: up to 256 entries L2 / L3 / L4

Others Features	
Green Ethernet	Supports IEEE802.3az EEE (Energy Efficient Ethernet) Management to optimize the power consumption
	Determine the cable length and lowering the power for ports with short cables
	Lower the power for a port when there is no link
	LED Power Management : Adjustment LEDs intensity
Cable Diagnostic	Measuring cable OK or broken point distance

Application

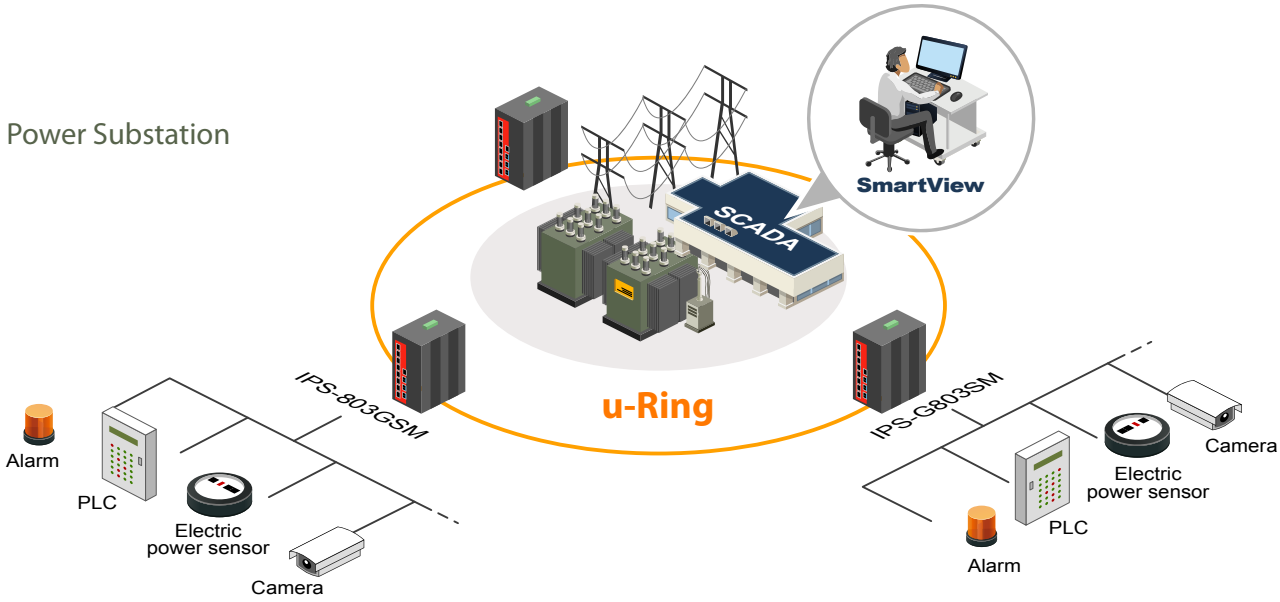

Figure : IPS Series in Power Substation Application

Ordering Information

Model Name	Description
IPS-803GSM-DD	IEC 61850-3 8x 10/100Base–TX+ 3x 100/1000Base–X SFP Ethernet Managed Switch (Dual isolated DC input)
IPS-803GSM-AD	IEC 61850-3 8x 10/100Base–TX+ 3x 100/1000Base–X SFP Ethernet Managed Switch (AC+isolated DC input)

Accessories

DR-4524	Industrial Power, Input 85 ~ 264VAC, Output 24VDC, 48W, -10 ~ +50°C
MDR-40-24	Industrial Power, Input 85 ~ 264VAC, Output 24VDC, 40W, -20 ~ +70°C
MDR-60-24	Industrial Power, Input 85 ~ 264VAC, Output 24VDC, 60W, -20 ~ +70°C
SFP Transceiver	Compatible, Reliable, 5-year Warranty

Power Type

IPS – 803GSM – □□

Example: IPS – 803GSM – DD

ISFP – M – 7 – 040 – 31 – E

- ISFP: Industrial SFP Transceiver
- M: Multi Mode; S: Single Mode; T: Copper
- 7: GbE; 5: FE
- Distance: 002(2km), 020(20km), 040(40km)
- 31: Wavelength
- E: -40~85°C; Blank: 0~70°C