4G ports Gigabit Advanced Managed Industrial Ethernet Switches

PTS 740/746 Series

- IEC 61850-3 and IEEE 1613(power substation) compliant
- 4 Gigabit ports solution ideal for building dual Gigabit redundant rings
- Proprietary Ring Protocol "Fi Ring" (recovery time < 20 ms), RSTP,STP for network redundancy
- SNMPv3, IEEE 802.1X, HTTPS, and SSH to enhance network security
- Easy network management through web browser,CLI,Telnet /serial console, Windows utility and SNMP
- Industrial-grade design with -40° C to 85° C operating temperature and redundant power inputs

Overview

The PTS 740/746 series are designed to meet the demands of power substation automation systems (IEC 61850-3, IEEE 1613). 4 Gigabit Ethernet ports are ideal for building dual Gigabit redundant rings. The "Fi Ring" redundant ring (recovery time < 20ms), RSTP and STP can increase system reliability and network availability.

Features and Benefits

- PTS 740:
  8x10/100BaseTX ports+2x100BaseFX ports+4x1000BaseX(SFP slots)
  PTS 746:
  16x10/100BaseTX ports+4x1000BaseX(SFP slots)
- Command Line Interface (CLI) for quickly configuration major managed functions
- Proprietary Ring Protocol "Fi Ring" (recovery time < 20 ms),RSTP and STP for network redundancy
- IGMP snooping for filtering multicast traffic
- Port-based VLAN, IEEE 802.1Q VLAN, and GVRP to ease network planning
- Support port mirroring
- Support Access Control List(ACL)
- Storm control for any combination of multicast, broadcast and DLF traffic control
- QoS and ToS/DiffServ to increase determinism
- Port Trunking for optimum bandwidth utilization
- SNMPv3, IEEE 802.1X, HTTPS, and SSH to enhance network security
- SNMPv1/v2c/v3 for different levels of network management
- RMON for efficient network monitoring and proactive capability
- Bandwidth management prevents unpredictable network status
- Lock port function for blocking unauthorized access based on MAC address
- Automatic alarm through e-mail, relay output
- Works with FirstMile FiVision NMS industrial network management software for traffic monitoring and easy network troubleshooting

Specifications

Standards:
IEEE 802.3
IEEE 802.3u
IEEE 802.3z
IEEE 802.3x for Flow Control
IEEE 802.1D-2004 for STP
IEEE 802.1w for Rapid STP
IEEE 802.1Q for VLAN Tagging
IEEE 802.1p for Class of Service
IEEE 802.1X for Authentication
IEEE 802.3ad for Port Trunk with LACP

Protocols:
IGMPv1/v2, GVRP, SNMPv1/v2c/v3, DHCP Client, TFTP, SNTP, SMTP, RMON, HTTP, HTTPS, Telnet, Syslog, SSH, SNMP Inform, SNTP Server/Client

MIB:
MIB-II, Ethernet-Like MIB, P-BRIDGE MIB, Q-BRIDGE MIB, Bridge MIB, RSTP MIB, RMON MIB Group 1, 2, 3, 9

Flow Control:
IEEE 802.3x flow control, back pressure flow control

Switch Properties
Priority Queues: 4
Max. Number of Available VLANs: 4094
VLAN ID Range: VID 1 to 4094
IGMP Groups: 256
MAC Table Size: 8K
Packet Buffer Size: 2 Mbit

Interface:
Fiber Ports: 1000BaseX(SFP slots), 100Base FX(SC connector)
RJ45 Ports: 10/100BaseTX or 10/100/1000BaseTX
Console Port: RS-232(RJ45 connector)

Specifications (cont.)

Alarm Contact:
2 relay outputs with current carrying capacity of 1A@24VDC

Power Requirements:
Input Voltage: 24 VDC (18 to 36VDC), redundant dual inputs
Input Current:
PTS 740 : <0.55A@24VDC
PTS 746 : <0.55A@24VDC
Overload Current Protection: Present
Reverse Polarity Protection: Present
Connector: 6-contact terminal blocks

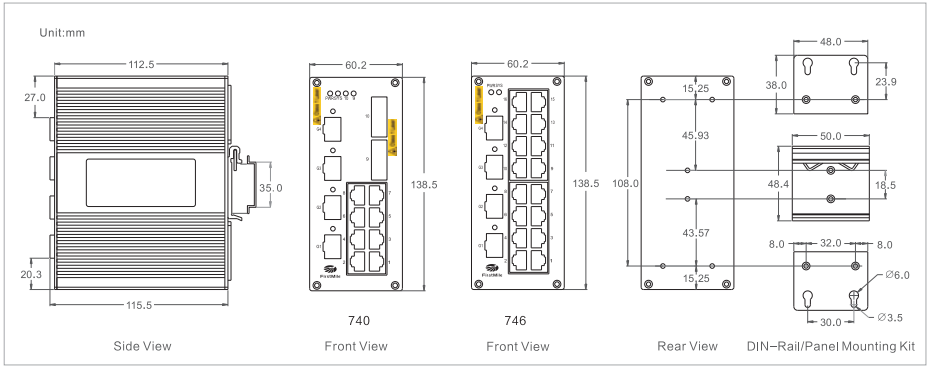
Physical Characteristics :
Housing: Metal, IP30 protection
Dimensions: 60.2 x 115.5 x 138.5 mm
Weight: 760g
Installation: DIN-Rail mounting, wall mounting

Environmental Limits:
Operating Temerature: -40 to +85 ° C (-40 to 185° F)
Storage Temperature: -40 to +85° C (-40 to 185° F)
Ambient Relative Humidity: 5 to 95% (non-condensing)

Standards and Certifications:
Power Automation: IEC 61850-3, IEEE 1613
Safety: UL 60950-1
EMI: FCC Part 15 Subpart B Class A, EN 55022 Class A
EMS:
EN 61000-4-2 (ESD) Level 4, EN 61000-4-3 (RS) Level 3, EN 61000-4-4 (EFT) Level 4, EN 61000-4-5 (Surge) Level 4, EN 61000-4-6 (CS) Level 3, EN 61000-4-8 Level 3
Shock: IEC 60068-2-27
Freefall: IEC 60068-2-32
Vibration: IEC 60068-2-6

Warranty Period: 5 years

Dimensions



Ordering Information

Available Models	Transceiver Type(only for 740)		
PTS 740 PTS 746	002	2km	Dual-fiber MMF 1310nm
	020	20km	Dual-fiber SMF 1310nm
	040	40km	Dual-fiber SMF 1310nm
	060	60km	Dual-fiber SMF 1310nm
	080	80km	Dual-fiber SMF 1550nm
	120	120km	Dual-fiber SMF 1550nm
	20A	20km	BiDI SMF 1310nm
	20B	20km	BiDI SMF 1550nm
	40A	40km	BiDI SMF 1310nm
	40B	40km	BiDI SMF 1550nm
	60A	60km	BiDI SMF 1310nm
	60B	60km	BiDI SMF 1550nm
	80A	80km	BiDI SMF 1310nm
	80B	80km	BiDI SMF 1550nm

Note:The PTS 740/746 series support up to 4x 1000BaseX(SFP slots). Please find the compatible SFP module in Appendix