



■ Features

- 16 10/100/1000BaseT Ports
- 8 100/1000Base(X/T) combo ports
- 4 1000/2500BaseX SFP Ports
- L3 routing features
- Industrial hardware. Operating wide temperature -40°C ~ 75°C

■ Description

Features and Benefits

- Support network redundancy for < 50 ms recovery time
- Support Media Redundancy Protocol based on IEC62439
- Any two ports can establish a self-recovery ring and support multiple independent self-recovery rings
- With functions of data packet dropout protection and quick recovery from network failure
- Multi L3 routing protocol meets the requirement of private network and provides smooth transition
- Support various multicast protocols and strong safety protection mechanism
- Provide bandwidth service with different levels in Ethernet service by speed limiting and traffic shaping in QoS of L2
- Support function of the static and dynamic allocation as well as limitation of CPU and real-time monitor the key operating parameters, including CPU utilization rate, RAM, supply voltage and mainboard voltage.
- Provide a full set of network management, monitoring and alarm system and support OPC
- Dual redundant power supplies design
- MTBF >800, 000 hours

■ Specifications

Technical Specifications - I

- IEEE 802.3 CSMA/CD method and physical Layer specifications
- IEEE 802.1p Priority Queuing
- IEEE 802.1q VLAN tagging
- IEEE 802.1d Spanning Tree Algorithm
- IEEE 802.1w Rapid Spanning Tree
- IEEE 802.1s Multiple Spanning Tree
- IEEE 802.3ac VLAN Tagging
- IEEE 802.1x Authentication
- IEEE 802.3ad Link Aggregation
- IEEE 802.3x Flow Control
- IEEE 802.3 Ethernet
- IEEE 802.3u Fast Ethernet
- IEEE 802.3z Gigabit Ethernet
- IEEE 802 Networks
- RFC 768 UDP
- RFC 791 IP
- RFC 792 ICMP
- RFC 793 TCP
- RFC 826 ARP
- RFC 854 Telnet Client & Server
- RFC 904 Exterior Gateway Protocol Formal Specification
- RFC 1027 Using ARP to Implement Transparent Subnet Gateways
- RFC 1058 RIP
- RFC 1059 1119 NTPv1/2
- RFC 1112 IGMP
- RFC 1191 Path MTU Discovery
- RFC 1256 ICMP Router discovery protocol
- RFC 1267 A Border Gateway Protocol 3 (BGP-3)
- RFC 1388 RIP Version 2 Carrying Additional Information
- RFC 1403 BGP OSPF Interaction

Technical Specifications - II

- RFC 1519 CIDR (Classless Inter-domain Routing)
- RFC 1587 OSPF NSSA
- RFC 1765 OSPF Database Overflow
- RFC 1812 Requirements for IP Version 4 Routers
- RFC 1994 PPP Challenge Handshake Authentication Protocol (CHAP)
- RFC 2068 HTTP
- RFC 213 DHCP Server
- RFC 2138 RADIUS
- RFC 2139 RADIUS Accounting
- RFC 2236 IGMPv2
- RFC 2328 OSPF V2
- RFC 2338 VRRP
- RFC 2362 PIM-SM/DM
- RFC 2370 The OSPF Opaque LSA Option
- RFC 2474 DiffServ Precedence
- RFC 2475 DiffServ Core and Edge Router Functions
- RFC 2597 DiffServ Assured Forwarding,
- RFC 2598 DiffServ Expedited Forwarding
- RFC 2644 Directed Broadcasts
- RFC 2865 Remote Authentication Dial In User Service (RADIUS)
- RFC 3046 DHCP Relay Agent Information Option
- RFC 3222 Forwarding Information Base (FIB)
- GMRP GARP
- GVRP GARP
- SSH2 Secure Shell 2
- IGMP snooping
- SNMPv3

Specifications

Hardware Description

Backplane Bandwidth	144Gbps
CPU	600MHz RISC
Switch Architecture	Store and Forward
MAC Table Size	16K
Packet Buffer Size	1.5M
Exchange Rate	148,800 pps/100M ports; 1,488,000 pps /1000M ports

Software Functions

Management Mode	Web, serial port, STD-17 MIB-II, STD-58 SMIPv2, STD-59 RMON, STD-62 SNMPv3, SNMPv2c, SNMPv1, RFC2668 MAU, RFC2925 Ping MIB, Private MIBs
Diagnosis Mode	Indicator light, journal file, relay, RMON, port mirroring, TRAP
Redundancy	MSTP, RSTP, port trunking
Time Synchronization	NTP, SNTP
Others	IPv4/IPv6 multicast, storm control, MC/BC protection, JumboFrame

Mechanical Characteristics

Vibration	IEC 60068-2-6
Shock	IEC 60068-2-27
Freefall	IEC 60068-2-31
Circuit Board	Approved by IPC

Environment

MTBF	> 800,000 hours
Storage Temperature	-40°C ~ 85°C
Operating Temperature	-40°C ~ 75°C (-40°C ~ 60°C, when using the 2.5Gbps optical module)
Ambient Relative Humidity	5% ~ 95% (non-condensing)

Electromagnetic Characteristics

EMI	FCC 47 CFR Part 15 Class A EN55022 Class A
EMS	IEC (EN)61000-4-2, Class 4 IEC (EN)61000-4-3, Class 3 IEC (EN)61000-4-4, Class 4 IEC (EN)61000-4-5, Class 4 IEC (EN)61000-4-6, Class 3 IEC (EN)61000-4-9, Class 5

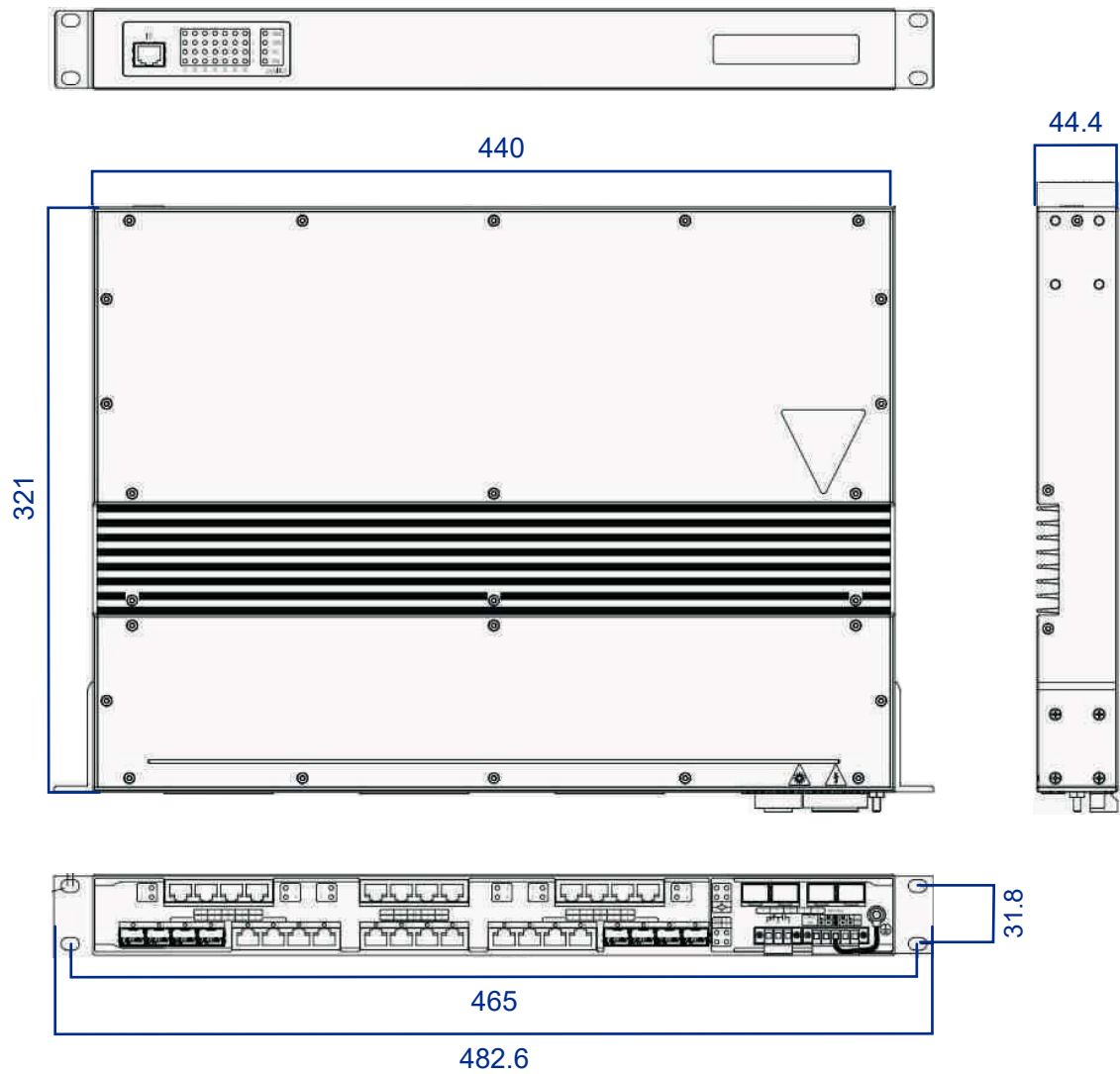
Certification Information (In Process)

Product Safety	CE.CB.IEC.IECEE IEC/EN60950-1 FCC Part 15 Subpart B Class A IEC/EN55022 Class A
Industrial Control Industry	UL/cUL61010

Physical

Dimensions(W x H x D) (mm)	440 × 44.4 × 321
Protection Grade	IP40
Weight	4.1KG (maximum)
Power Consumption	40W (maximum)

■ Mechanical Drawings (Unit = mm)



■ Ordering Codes

Model Number	Description
XTR-R3028G-8C4F-T-X6M (AC)	Layer-3 enhanced, 16 10/100/1000BaseT Ports, 8 100/1000Base(X/T) COMBO Ports, and 4 1000/2500 Base X SFP Ports (SFP module not included), dual isolated 100-240V power inputs.
XTR-R3028G-8C4F-T-X6M (DC)	Layer-3 enhanced, 16 10/100/1000BaseT Ports, 8 100/1000Base(X/T) COMBOPorts, and 4 1000/2500 BaseX SFP Ports (SFP module not included), dual 18- 60VDC power inputs.

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