HIRSCHMANN IT
A BELDEN BRAND

Product: MTS2948X-6Q-A

MAMMUTHUS Layer3 10Gigabit Ethernet Core Switch



Product Description

1U rack mount 10G Core Switch, 48 × 1/10G SFP+ slots, 6 × 40G QSFP+ slots, redundant PSU, advanced software

Technical Specifications

Product description

Type:	MTS2948X-6Q-A
Name:	MTS2948X-6Q-A
Description:	1U rack mount 10G Core Switch, 48 × 1/10G SFP+ slots, 6 × 40G QSFP+ slots, redundant PSU, advanced software
Part Number:	942999824
Port Type and Quantity:	48 × 1/10G SFP+ slots, 6 × 40G QSFP+ slots, 1 × USB, 2 × RJ45 console port, 1 × FE/GE RJ45 out of band management port, 1 × Reset Button
Heat Radiation Type:	Modular fans

More Interfaces

Power Supply:	2 × modular redundant PSUs, hot swappable

Power requirements

Operating Voltage:	100-240VAC 50-60Hz, redundancy PSU supported
Power Consumption:	200W

Ambient conditions

Permissible Humidity (Storage/Transport):	5% to 95%
Operating temperature:	-10-+55 °C
Minimum Storage Temperature:	-40-+70 °C
Relative humidity (non-condensing):	10-90 %

Mechanical construction

Overall Width:	440 mm
Overall Height:	44.2 mm
Overall Depth:	560 mm
Weight:	12.4 kg
Mount Type:	Rack mount

Software Specifications

Ethernet Feature	Port Feature	Port isolation; UNI/NNI isolation; UMB storm-control; combo port self-adaption
	MAC address management	Sticky MAC learning; VLAN and global MAC address; static MAC; MAC address removal alert
	VLAN	Support 4K VLAN; VLAN based on port/MAC/IP/protocol port number; VLAN Mapping N:1; PVLAN; Super-VLAN; GVRP
	QinQ	Q-in-Q and flexible Q-in-Q
	Redundancy	STP/MSTP/RSTP; BPDU Guard; Root Guard; Flap GuardLoop Guard; portfast test; BPDU message encryption; VIST; LBD; EIPS
	Port mirroring	N:1 port mirroring; data flow mirroring; RSPAN; ERSPAN; VLAN mirroring;
	Link aggregation	Dynamic link aggregation; static link aggregation; cross board/devices link aggregation; flow-based load balance
Router Feature	IPv4 protocol	TCP; UDP; Ping; TraceRoute; Telnet; FTP; TFTP; ICMPv4; DNS; UDP Helper; DHCP; DHCP server; DHCP Delay; DHCP Snooping; NTP; SNTP; support ARP and ARP Proxy
	IPv6 protocol	IPv4/IPv6 dual stack; TCP6; UDP6; RawIP6; Ping v6; TraceRoute6; Telnet6; FTPv6; TFTPv6; DNSv6; ICMPv6; VRRPv3; DHCPv6; ND; PMTUD

	IPv4 router protocol	Static route; RIPv1/v2; RIP; OSPF; IS-IS; BGP; GRE; IPIP tunnel; ECMP; Network load balancing
	IPv6 router protocol	IPv6 static route; RIPng; OSPFv3; IS-ISV6; BGPv4+; IPV6 transition tunnel; GREv6
Multicast	Layer2 multicast	IGMPv1/v2/v3 Snooping; multicast VLAN; support MLD v1/v2 Snooping
	Layer3 multicast	""IGMPv1/v2/v3; MLD v1/v2; multicast static router; IPv4 intra-domain multicast router; IPv4 inter-domain multicast router; IPv4 multicast "management; support MSDP/PIM-SM/PIM-DM/PIM-SSM/PIM-SDM; IPv6 intra-domain multicast router; IPv6 inter-domain multicast router; IPv6 multicast management; IPv6 multicast forwarding; MSDP for IPv6; support PIM-SMv6 and PIM-SSMv6"""
MPLS	MPLS	LDP; MPLS L3VPN
ACL/QOS	ACL	IPv4/IPv6 standard ACL; IPv4/IPv6 extended ACL; mixed ACL; MAC ACL; ACL based on port; ACL based on layer3 interface; ACL based on VLAN; global ACL; Ingress/Egress ACL; ACL matching log; time-based ACL
	QOS	Scheduling; 802.1p and DSCP priority mapping; traffic classification; traffic policing; traffic shaping; congestion management; congestion avoidance; speed limitation based on time domain; traffic policing based on time domain
Security function	Network security	Message validity test; URPF; ACL; port isolation; DHCP Snooping; DHCPv6 Snooping; IPSG; IPSGv6; AARF; Dynamic ARP Inspection; ARP Check; Host Guard; BPDU message encryption
	Management security	AAA; SSH v1/v2; USB-Key; log/configuration encryption; password strength check; login protection
	Access security	Portal certification; 802.1X certification; MAC certification; port security
Data center feature	VXLAN	VXLAN cross data center interconnection; VTEP; EVPN
	TRILL	TRILL transparent exchange network
	SDN	OpenFlow1.1/1.2/1.3; XML API/NETCONF; M-LAG
Device maintenance	Device management method	Console; Telnet; SSH v1/v2
	File management	FTP/TFTP upload/download files; formatting files; creating catalog; file management
	Network maintenance	Ping; TraceRoute; LSP Ping/Tracert function; interface loop monitoring
	Network management	SNMP v1/v2/v3; RMON; SSH v1/v2; IPFIX/SFLOW; support TR069
	OAM function	802.3ah OAM; 802.1ag OAM; ITU Y.1731 OAM
Reliability	Device reliability	Support PSU hot-plugging and fan module hot-plugging; support IOS backup and recovery; support configuration file backup and recovery
	Network reliability	VRRP; VBRP; VRRPv3; BFDv6; BFD for VRRP/BGP/IS-IS/RIP/OSPF/static router; support VRRP and TRILL linkage; ULFD; ULPP; Monitor Link
Stacking		Stackable, up to 8 devices in one stack

Mechanical stability

IEC 60068-2-6 vibration:	1 mm, 2 Hz-13.2 Hz, 90 min.; 0.7 g, 13.2 Hz-100 Hz, 90 min.; 3.5 mm, 3 Hz-9 Hz, 10 cycles, 1 octave/min.; 1 g, 9 Hz-150 Hz, 10 cycles, 1 octave/min
IEC 60068-2-27 shock:	15 g, 11 ms duration, 18 shocks

EMC interference immunity

EN 61000-4-2 electrostatic discharge (ESD):	4 kV contact discharge, 8 kV air discharge
EN 61000-4-3 electromagnetic field:	10V/m (80-1000MHz), 3V/m (1000-6000MHz)
EN 61000-4-4 fast transients (burst):	2 kV power line, 1 kV data line
EN 61000-4-5 surge voltage:	power line: 2 kV (line/earth), 1 kV (line/line), 1 kV data line
EN 61000-4-6 Conducted Immunity:	10 V (150 kHz-80 MHz)
EN 61000-4-8 power freq magnetic field:	30A/m
EN 61000-4-11 voltagedips,shortinterrupt:	0%(20ms), 40%(300ms), 70%(500ms), 0%(5s)

EMC emitted immunity

EN 55032:	EN 55032 Class A
EN 61000-3-2:	EN 61000-3-2 Class A
EN 61000-3-3:	EN 61000-3-3
FCC CFR47 Part 15:	FCC 47CFR Part 15, Class A

Approvals

FCC:	CE/FCC Compliant
China Network Access Certificate:	Compliant
CCC:	Compliant
Common Criteria:	EAL 2+
RoHS Compliant:	RoHS ((EU) 2015/863) and RoHS (GB/T26572-2011) compliant

Scope of delivery and accessories

Accessories to Order Separately:	Network Management Industrial HiVision, SFP, PSU module, fan module (A MTS2948X-6Q-A switch must have four fan modules to make it work properly)
Scope of delivery:	"Device, console cable, installation package, "*Power cord does not included in the package"

History

Update and Revision:	Revision Number: 0.101 Revision Date: 10-13-2026

Variants

Item #	Type
942999824	MTS2948X-6Q-A

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