



NEW



MSW-4428X

L2+ Gigabit Carrier Ethernet Switch

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The MSW-4428X is positioned as a layer 2+ Gigabit access switch solution. It is equipped with 24 100Base-FX/1000Base-X dual speed SFP slots, 4 ports GbE (10/100/1000Base-T) ports and 4 1000Base-X/10G Base-X dual speed SFP+ uplink slots. The MSW-4428X offers the best flexibility and scalability for the operators or service providers to deploy their Metro Ethernet network. With the deployment of MSW-4428X, operators or service providers can flexibly provision the bandwidth of either 100Mbps or 1000Mbps as well as uplink connection of Gigabit or 10G speed upon their service applications. The MSW-4428X has built-in dual power supplies to enable power redundancy and enhance high network availability.

Aimed at Metro Ethernet applications, the specifications of MSW-4428X fully meet the attributes of Carrier Ethernet proposed by MEF (Metro Ethernet Forum). It complies with CE2.0 standard to support E-Line/E-LAN/E-Tree/E-Access service and enables the bandwidth profile configuration delivering SLA (Service Level Agreement) for end-to-end performance characteristics as well as Ethernet OAM functionality to support carrier grade service OAM management rapidly detecting and recovering from the network incidents in real time.

Feature and Benefits

Fully dual rate architecture of fiber link port

Completely dual speed ports of fiber link to offer the scalable physical connection of Metro Ethernet network for operators

Fully Ethernet OAM enabled

Enabling Ethernet OAM features (IEEE 802.3ah/802.1ag/ITU-T Y.1731) to rapidly detect and recover network fault and save the OPEX for operators as well as increase customer satisfaction

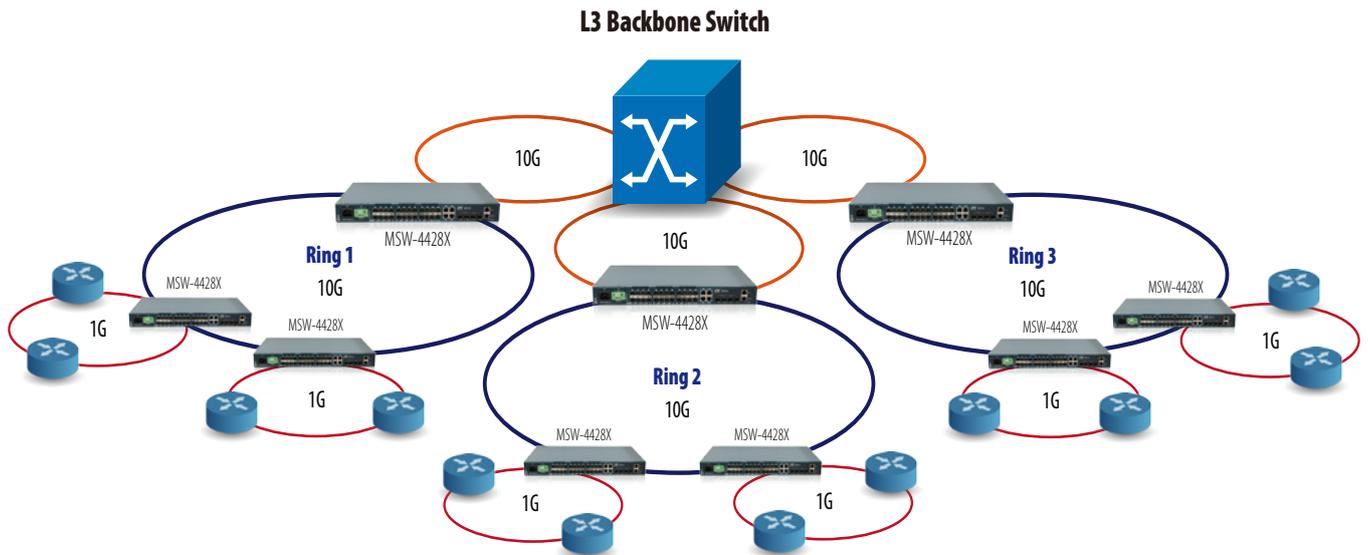
MEF standards compliant solution

CE2.0 compliant product to guarantee the compatibility with other MEF certified equipment and reduce the risk and cost for Metro Ethernet network deployment of operators

Specifications

Interface	100/1000Mbps SFP slots x 24 + 10/100/1000Base-T RJ45 x 4 + 1/10Gbps SFP+ slot x 4	Security	IEEE 802.1x port based access control MAC based access control authentication RADIUS authentication, limited MAC address learning IP/MAC binding, ACL rule based filtering, TACACS+ IP source guard, DHCP snooping/relay option 82 ARP inspection
Console Port	RJ-45 console port x 1	IP Multicasting	IGMP throttling, IGMP filtering, IGMP fast leave IGMP snooping v1/v2/v3, MVR, MLD snooping v1/v2
Management Port	10/100/1000Base-T RJ45 x 1	Storm Control Management	Unicast/Broadcast/Multicast storm suppression Web/Telnet CLI/SNMP/console interface Web/CLI authentication, SSH v2, HTTPs, port mirroring syslog, IPv6 management, NTP, SNMP
Switching fabric capacity	136Gbps	SNMP agent	SNMP v1/v2c/v3, RMON Group 1,2,3 and 9
Packet Forwarding capacity	101Mpps	Software upgrade	TFTP/HTTP
Filter & Forward Rate	14880pps at 10Mbps, 148800pps at 100Mbps, 1488000pps at 1Gbps, 14880000pps at 10Gbps	Ethernet OAM	IEEE 802.3ah/IEEE 802.1ag/ITU-T Y.1731, RFC2544, ITU-T Y.1564
Transmission Method Standard	Store and Forward Switching IEEE 802.3u, IEEE 802.3z, IEEE 802.3ae IEEE 802.1p, IEEE 802.1Q, IEEE 802.1ad, IEEE 802.1d IEEE 802.1w, IEEE 802.1s, IEEE 802.1x, IEEE 802.3ad IEEE 802.3ah, IEEE 802.1ag, ITU-T Y.1731	Timing Synchronization	IEEE 1588 V2
Packet Buffer	32M bits	MPLS feature	RFC5654 MPLS-TP
Mac Table Size	32K	LED display	Power, System, Console, Link/Act, Speed
Max. Packet Size	14K Bytes	Power input	100V ~ 240V AC, -36 ~ -60V DC
VLAN Feature	IEEE 802.1Q tagged VLAN(Max. 4K VLAN groups), port based VLAN MAC based VLAN, protocol based VLAN private VLAN, IEEE 802.1ad Q-in-Q, VLAN translation, GVRP	Build in power module combination	AC, DC, AD (AC+DC), AA (AC+AC) or DD (DC+DC)
QoS Feature	IEEE 802.1p 8 priority queues per port, CoS based on switch port; VLAN ID; DSCP; TCP/UDP port IEEE 802.1p priority tag remarking, DSCP remarking, Port based ingress/egress rate limit 3 colors marker-CIR/EIR/Burst bandwidth control	Power Consumption	< 60W
L2 switching Protection	STP, RSTP, MSTP, ITU-T G.8031/G.8032	Operating Temperature	0 ~ 50°C
Trunking	IEEE 802.3ad LACP (Max. 14 trunking group, Max. 8 ports per trunking group)	Humidity	5% ~ 90% (non-condensing)
		Dimensions	250x 440x 43.5mm (DxWxH)
		Certification	FCC, CE

Application Diagram



Ordering Information

Model Name	Description
MSW-4428X-AC	L2+ 10G Fiber Access Switch with build-in single AC power module
MSW-4428X-DC	L2+ 10G Fiber Access Switch with build-in single DC power module
MSW-4428X-AA	L2+ 10G Fiber Access Switch with build-in dual AC power module
MSW-4428X-DD	L2+ 10G Fiber Access Switch with build-in dual DC power module
MSW-4428X-AD	L2+ 10G Fiber Access Switch with build-in AC + DC power module

Power Type
MSW-4428X –
 Example: **MSW-4428X-AC**

Accessories

10G SFP+ Transceiver Module

SFM-1000-SR85	10G SFP+ SR/SW MMF 300m, 850nm VCSEL, 10G Ethernet/FC/SDH/SONET
SFS-1010-LR31	10G SFP+ LR/LW SMF 10km, 1310nm DFB DML, 10G Ethernet/FC/SDH/SONET
SFS-1040-ER55	10G SFP+ ER/EW SMF 40km, 1550nm DFB EML, 10G Ethernet/FC/SDH/SONET
SFS-1080-ZR55	10G SFP+ ZR/EW SMF 80km, 1550nm DFB EML, 10G Ethernet/FC/SDH/SONET