

CE 2.0



MSW-4428X

24 × GbE/SFP + 4 × GbE/RJ-45 with 4 × 10G/SFP+
L2+ Carrier Ethernet Switch

Aimed at Carrier Ethernet market application, CTC Union Technologies unveils the L2+ gigabit carrier Ethernet switch, MSW-4428X, which fully meets the attributes of Carrier Ethernet standards proposed by MEF (Metro Ethernet Forum). With the deployment of MSW4428X, 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 application.

The MSW-4428X is equipped with 24 100Base-FX/1000Base-X dual speed SFP slots, 4 ports GbE (10/100/1000Base-T) ports and 4 1G/10Gbps dual speed SFP+ uplink slots. It has built-in dual power supplies to enable power redundancy and enhance high network availability. It also 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.

// Features

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

Enables 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

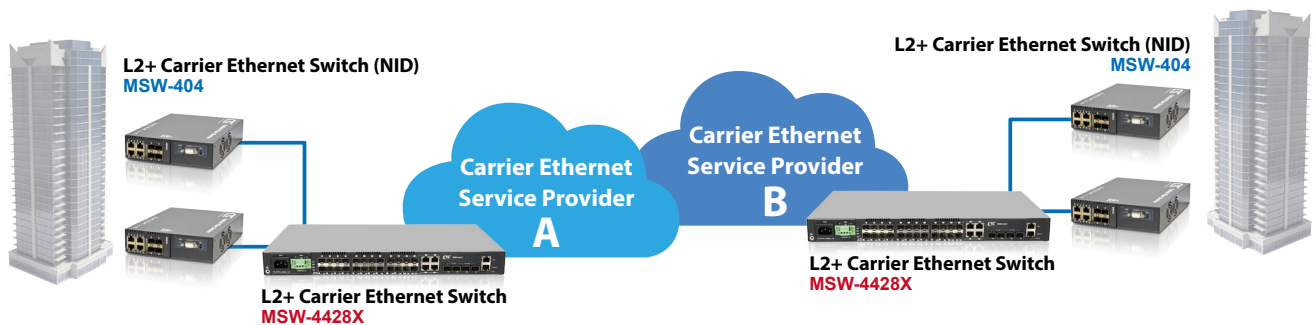
CE2.0 compliant product to guarantee the compatibility with other MEF certified equipment and reduce the risk and cost for Metro Ethernet network deployment of operators

// Specifications

Interface	100/1000Mbps SFP slots × 24 + 10/100/1000Base-T RJ45 × 4 + 1G/10Gbps SFP+ slot × 4
Console Port	RJ-45 console port × 1
Management Port	10/100/1000Base-T RJ45 × 1
Switching Fabric Capacity	136Gbps
Packet Forwarding Capacity	102Mpps
Filter & Forward Rate	14880pps at 10Mbps, 148800pps at 100Mbps, 1488000pps at 1Gbps, 14880000pps at 10Gbps
Transmission Method	Store and Forward Switching
Standards	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 802.3az; IEEE 802.3ah; IEEE 802.1ag; ITU-T Y.1731;
Packet Buffer	32M bits
Mac Table Size	32K
Jumbo Frames Size	10,240 bytes
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
QoS Feature	Hard wired 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; IEEE 802.3x flow control
L2 switching Protection	STP, RSTP, MSTP, ITU-T G.8031/G.8032

Trunking	IEEE 802.3ad LACP (Max. 16 trunking group, Max. 8 ports per trunking group)
Security	IEEE 802.1x port based access control; MAC based access control authentication; RADIUS/TACACS+ AAA, limited MAC address learning; IP/MAC binding, ACL rule based filtering; IP source guard, DHCP snooping/relay option 82; ARP inspection
IP Multicasting	IGMP throttling, IGMP filtering, IGMP fast leave; IGMP snooping v1/v2/v3, MVR, MLD snooping v1/v2
Storm Control	Unicast/Broadcast/Multicast storm suppression
Management	Web/Telnet CLI/SNMP/console interface; Web/CLI authentication; SSH v2; HTTPs; port mirroring; RSPAN; syslog; IPv6 management; NTP; IEEE 802.3az Energy/Efficient/Ethernet (EEE) power management; SFF-8472 DDMI
SNMP agent	SNMP v1/v2c/v3, RMON Group 1,2,3 and 9
Software Upgrade	TFTP/HTTP
Ethernet OAM	IEEE 802.3ah/IEEE 802.1ag/ITU-T Y.1731, RFC2544, ITU-T Y.1564
LED Display	Power, System, Console, Link/Act, Speed
Power Input	100V ~ 240V AC, -36 ~ -60V DC
Build in Power Module Combination	AC, DC, AD (AC+DC), AA (AC+AC) or DD (DC+DC)
Power Consumption	< 60W
Operating Temperature	-10 ~ 60°C
Storage Temperature	-25 ~ 70°C
Humidity	5% ~ 90% (non-condensing)
Dimension	440 × 250 × 43.5mm (WxDxH)
Certification	FCC, CE

// Application



// Ordering Information

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

// Optional Accessory

- 10G SFP+ Transceiver Module

Model Name	Description
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