

Preliminary



## MSW-404SE

**4x 100/1000Base-x SFP slots + 4x  
10/100/1000Base-T RJ45 Carrier Ethernet  
Switch (NID) with Sync. Ethernet**

The CTC Union's MSW-404SE is the new generation of carrier grade Ethernet demarcation device for business connection and mobile backhaul transportation service delivered by carriers. The MSW-404SE is equipped 4 SFP slots in dual rate 100/1000Base-X and 4 ports 10/100/1000Base-T RJ45 network interfaces. It is designed to enable E-Line, E-LAN, E-Tree services which are CE (Carrier Ethernet) 2.0 compliant for Metro Ethernet network deployments.

The MSW-404SE device enables carriers and service providers to delivered SLA-based network service with extensive fault detection and diagnostic capabilities which are compliant with the latest Ethernet OAM standards such as IEEE 802.3ah, IEEE 802.1ag and ITU-T Y.1731. With built-in RFC2544 feature sets, The MSW-404SE also enables the service providers to perform the SLA verification anytime to ensure the quantitative latency, jitter and throughput delivery performance indexes. The CE2.0 compliant functions support EVCs and hierarchical QoS traffic management to enable service providers managing bandwidth and enforce SLA guaranteed.

MEF 22.1 defines the standard how Metro Ethernet service is adopted into the traffic transportation in the mobile backhaul application. The mobile service is time sensitive and required accurately packet delivery over a clocking synchronized network to transmit packetized data from a mobile device among base stations without loss. The MSW-404SE supports Synchronized Ethernet to fulfill the IP converged services (data, voice, video) over synchronous Ethernet aware carrier Ethernet network.

### Features

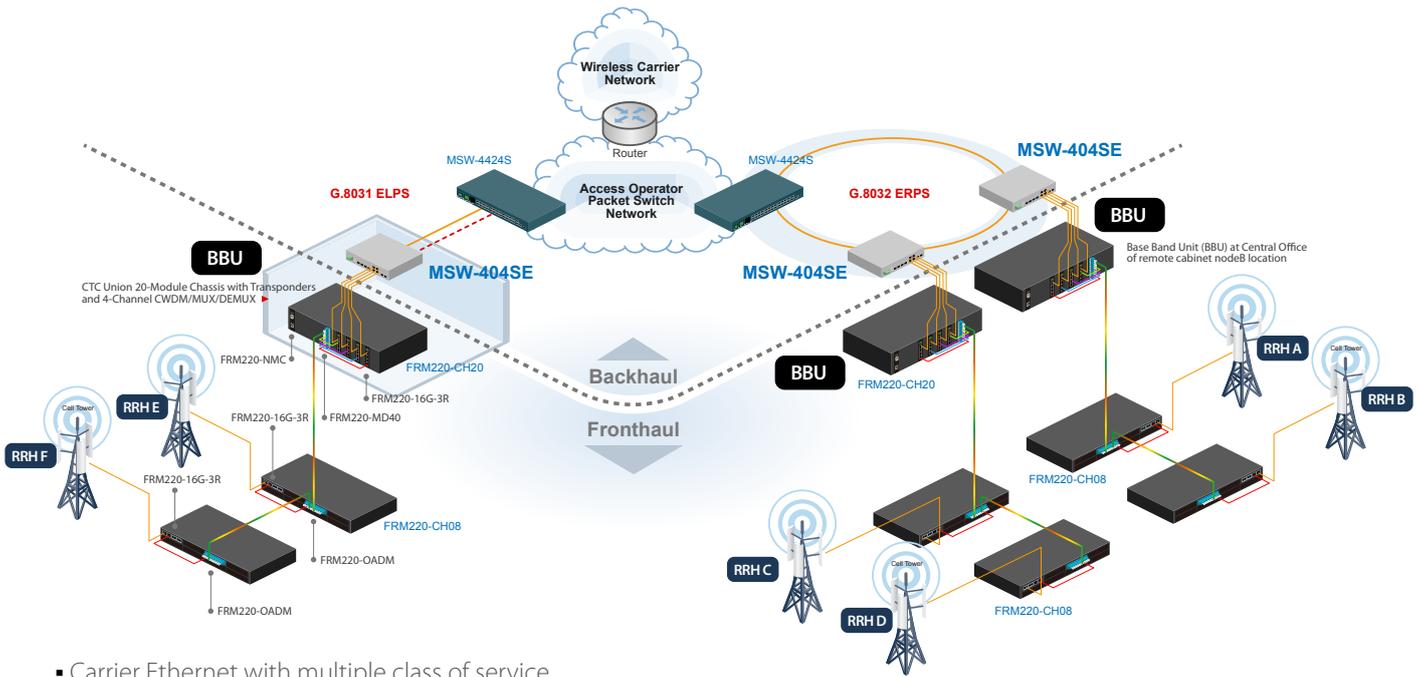
- The next generation of Ethernet demarcation device, at customer premise, fulfilling the large-scale carrier Ethernet deployment for intelligent business connection and mobile backhaul services complied to CE 2.0 standard.
- MEF 9/14 standards compliant product guarantees the fully interoperability with other MEF certified equipment and reduces the risks and cost of Carrier Ethernet network deployment for operators and service providers.
- Advanced clock synchronized features for carrier Ethernet network allows operators to deliver time sensitive services with optimal stability and continuity in the end-to-end connectivity.

### Specifications

<b>Interface</b>	100/1000Mbps SFP slots X 4 + 10/100/1000Base-T RJ45 X 4
<b>Console Port</b>	DB-9 RS-232 console port X 1
<b>Filter &amp; Forward Rate</b>	10M (14880/14880pps); 100M (148800/148800pps); 1000M (1488000/1488000pps)
<b>Transmission Method</b>	Store and Forward Switching
<b>Standard</b>	IEEE 802.3u, IEEE 802.3z, IEEE 802.3ae, IEEE 802.3x, IEEE 802.1p, IEEE 802.1Q, IEEE 802.1ad, IEEE 802.1D, IEEE 802.1w, IEEE 802.1s, IEEE 802.1x, IEEE 802.3ad
<b>Packet Buffer</b>	8M bits
<b>MAC Table Size</b>	8K
<b>Max. Packet Size</b>	10K Bytes
<b>VLAN Feature</b>	IEEE 802.1Q tagged VLAN, port based VLAN, MAC based VLAN, protocol based VLAN, private VLAN, IEEE 802.1ad Q-in-Q
<b>QoS Feature</b>	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
<b>L2 switching protection</b>	STP, RSTP, MSTP, ITU-T G.8031/G.8032 Ethernet ring protection

<b>Trunking</b>	IEEE 802.3ad LACP
<b>Security</b>	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, IP source guard
<b>IP Multicasting</b>	IGMP throttling, IGMP filtering, IGMP fast leave, IGMP snooping v1/v2/v3, MVR, MLD snooping v1/v2
<b>Storm Control</b>	Unicast/Broadcast/Multicast storm suppression
<b>Management</b>	Web/Telnet CLI/SNMP/console interface, Web/CLI authentication, SSH v2, HTTPs, port mirroring, system syslog, IPv6 management, NTP, SNTP
<b>SNMP Agent</b>	SNMP v1/v2c/v3
<b>Software Upgrade</b>	TFTP/HTTP/HTTPS
<b>Ethernet OAM</b>	IEEE 802.3ah, IEEE 802.1ag, ITU-T Y.1731, RFC2544
<b>Timing Synchronization</b>	ITU-T G.8262 Synchronous Ethernet, IEEE 1588v2
<b>LED Display</b>	Power, System, Console, Link, Speed/Act
<b>Power Input</b>	100V ~ 240VAC, -36 ~ -60VDC
<b>Power Consumption</b>	< 20W
<b>Operating Temperature</b>	0 ~ 50°C
<b>Humidity</b>	5% ~ 90% (non-condensing)
<b>Dimensions</b>	250 x 218 x 44 mm (D x W x H)
<b>Regulatory</b>	FCC, CE, RoHS compliant

## Application



- Carrier Ethernet with multiple class of service
- Traffic Synchronization
- Precisely delivery of time-sensitive service

## Ordering Information

Model Name	Description
MSW-404SE	4x 100/1000Base-x SFP slots + 4x 10/100/1000Base-T RJ45 Carrier Ethernet Switch with Sync. E

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 Example: MSW – 404SE