



## MSW-404

### 4x 10/100/1000Base-T + 4x 100/1000Base-X L2+ Gigabit Carrier Ethernet Switch (NID)

MSW-404 is a new generation of carrier grade Ethernet demarcation device for business connection and mobile backhaul transportation service delivered by carriers. The FRM220-MSW404 is equipped 4 SFP slots as 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-404 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 and ITU-T Y.1564 feature sets, the MSW-404 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 3 colors marker QoS traffic management to enable service providers management of bandwidth and to enforce SLA guarantees.

### Feature

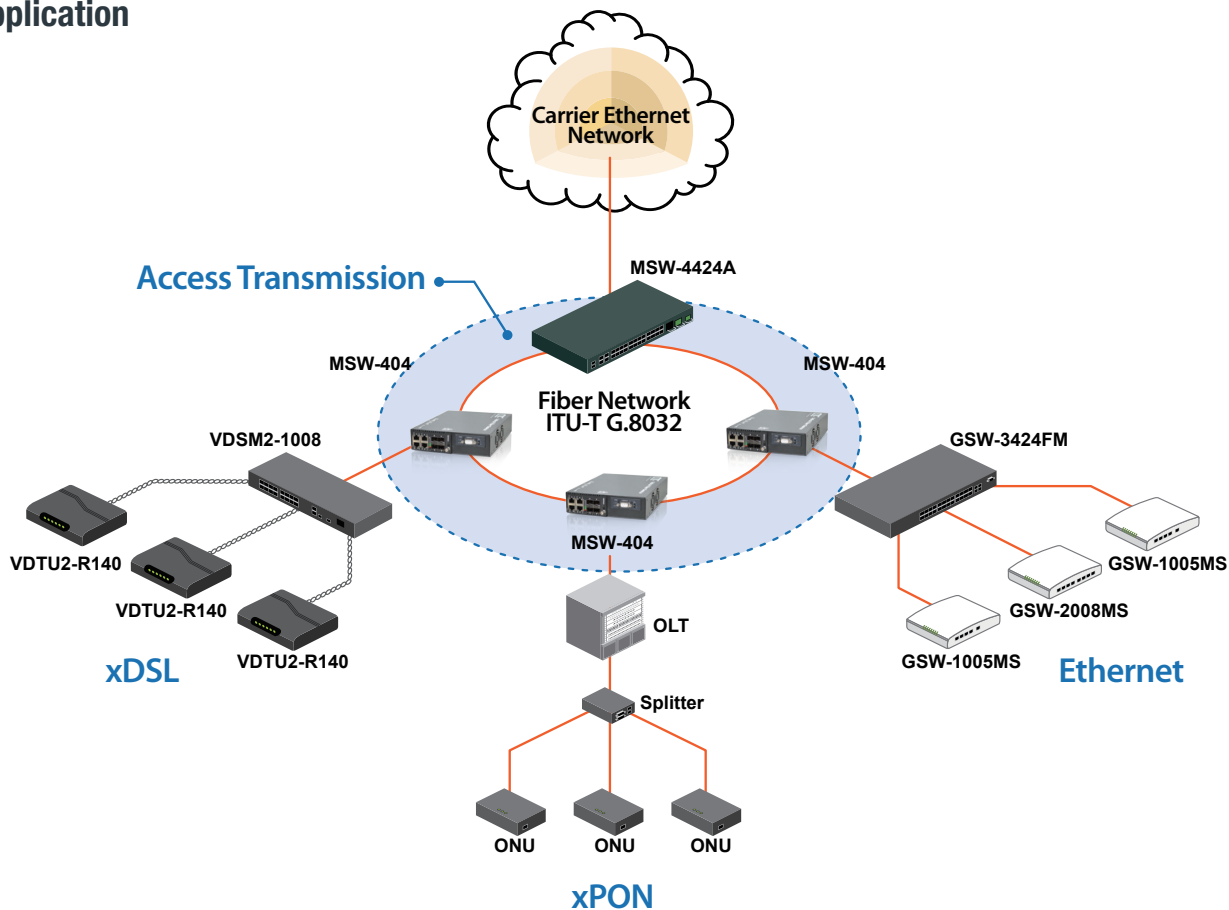
- The next generation of Ethernet demarcation device, at customer premise, fulfilling the large-scale carrier Ethernet deployment for intelligent business connection and mobile backhaul services complied to CE 2.0 standard.
- CE2.0 standards compliant product guarantees the fully interoperability with other MEF certified equipment and reduces the risks and cost of Carrier Ethernet network deployment for operators and service providers.

### Specifications

<b>Interface</b>	100/1000Mbps SFP slots x 4 + 10/100/1000Base-T RJ45 x 4
<b>Switching Fabric capacity</b>	16Gbps
<b>Filter &amp; Forward rate</b>	14880pps at 10Mbps, 148800pps at 100Mbps, 1488000pps at 1Gbps
<b>Switching Capacity</b>	16Gbps
<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, VLAN translation, GVRP
<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 3 colors marker-CIR/EIR/Burst bandwidth control
<b>L2 switching protection</b>	STP, RSTP, MSTP, ITU-T G.8031/G.8032 Ethernet ring protection
<b>Trunking</b>	IEEE 802.3ad LACP(Max. 4 trunking groups, Max. 8 ports per trunking group)
<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
<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>	Unknown Unicast/Broadcast/Multicast storm suppression

<b>Management</b>	Web/Telnet CLI/SNMP/console interface, Web/CLI authentication, SSH v2, HTTPs, port mirroring, syslog, IPv6 management, NTP, SNTP
<b>SNMP Agent</b>	SNMP v1/v2c/v3, RMON Group 1,2,3 and 9
<b>Software Upgrade</b>	TFTP/HTTP
<b>Ethernet OAM</b>	IEEE 802.3ah, IEEE 802.1ag, ITU-T Y.1731, RFC2544 ITU-T Y.1564
<b>MPLS feature</b>	RFC5654 MPLS-TP
<b>LED Display</b>	Power, System, Console, Link, Speed/Act
<b>Power Input</b>	100V ~ 240VAC, -18 ~ -75VDC
<b>Power Consumption</b>	< 20W
<b>Operating Temperature</b>	0 ~ 50°C
<b>Storage Temperature</b>	-25 ~ 70°C
<b>Humidity</b>	5% ~ 90% (non-condensing)
<b>Dimensions</b>	222.7 x 167.4 x 45.5 mm (D x W x H) (with CH02M Chassis)
<b>Regulatory</b>	FCC, CE

## Application



## Ordering Information

Model Name	Description
MSW-404-AC	4x SFP Slots in Dual Rate 100/1000Base-X and 4x 10/100/1000Base-T RJ45 OAM Managed Carrier Ethernet Switch with single AC power supply
MSW-404-DC	4x SFP Slots in Dual Rate 100/1000Base-X and 4x 10/100/1000Base-T RJ45 OAM Managed Carrier Ethernet Switch with single DC power supply
MSW-404-AD	4x SFP Slots in Dual Rate 100/1000Base-X and 4x 10/100/1000Base-T RJ45 OAM Managed Carrier Ethernet Switch with AC & DC power supply

Power Type  
**MSW - 404 -**   
 Example: **MSW - 404 - AC**