SyncE IEEE 1588v2

NEW

MSW-4204S

4× GbE/RJ45 + 2× 1G/10G SFP+
L2+ Carrier Ethernet Switch with SyncE

The next generation Carrier Ethernet Network Interface Device (NID) is designed for mobile backhaul transportation of 4G LTE-A/5G network. The MSW-4204S is equipped with 2 SFP+ slots, dual rate 1G/10Gbps and 2 ports Gigabit RJ45 network interfaces. It can be configurable as either UNI or NNI device which are CE(Carrier Ethernet) 2.0 compliant for Metro Ethernet network deployments.

The MSW-4204S is positioned as an universal network interface device (NID) for most carrier Ethernet access applications. It has built-in hardware based Ethernet OAM engine and is compliant to the latest OAM standards to deliver the committed SLA performance KPIs measurement on a per service basis.

Precise Time synchronization

Every Ethernet copper or fiber port on MSW-4204S except management port can be configured to deliver the timestamp messages of SyncE or IEEE 1588v2 inside Ethernet packets for the precision time purpose of mobile backhaul network. MSW-4204S is built-in 1PPS/ToD input and output SMA connectors. The output SMA interface supports the waveform measurement of IEEE 1588v2 via external instrument as well as the input SMA interface can be connected to external time source as the reference clock for the network.

Features

- The next generation Ethernet demarcation device, at customer premise, fulfills the large-scale carrier Ethernet deployment for intelligent business connection and mobile backhaul services compliant to CE 2.0 standard.
- CE2.0 standards compliant product guarantees the full interoperability with other MEF certified equipment and reduces the risks and cost of Carrier Ethernet network deployment for operators and service providers.
- Advanced clock synchronization features for carrier Ethernet network allows operators to deliver time sensitive services with optimal stability and continuity in the end-to-end connectivity.

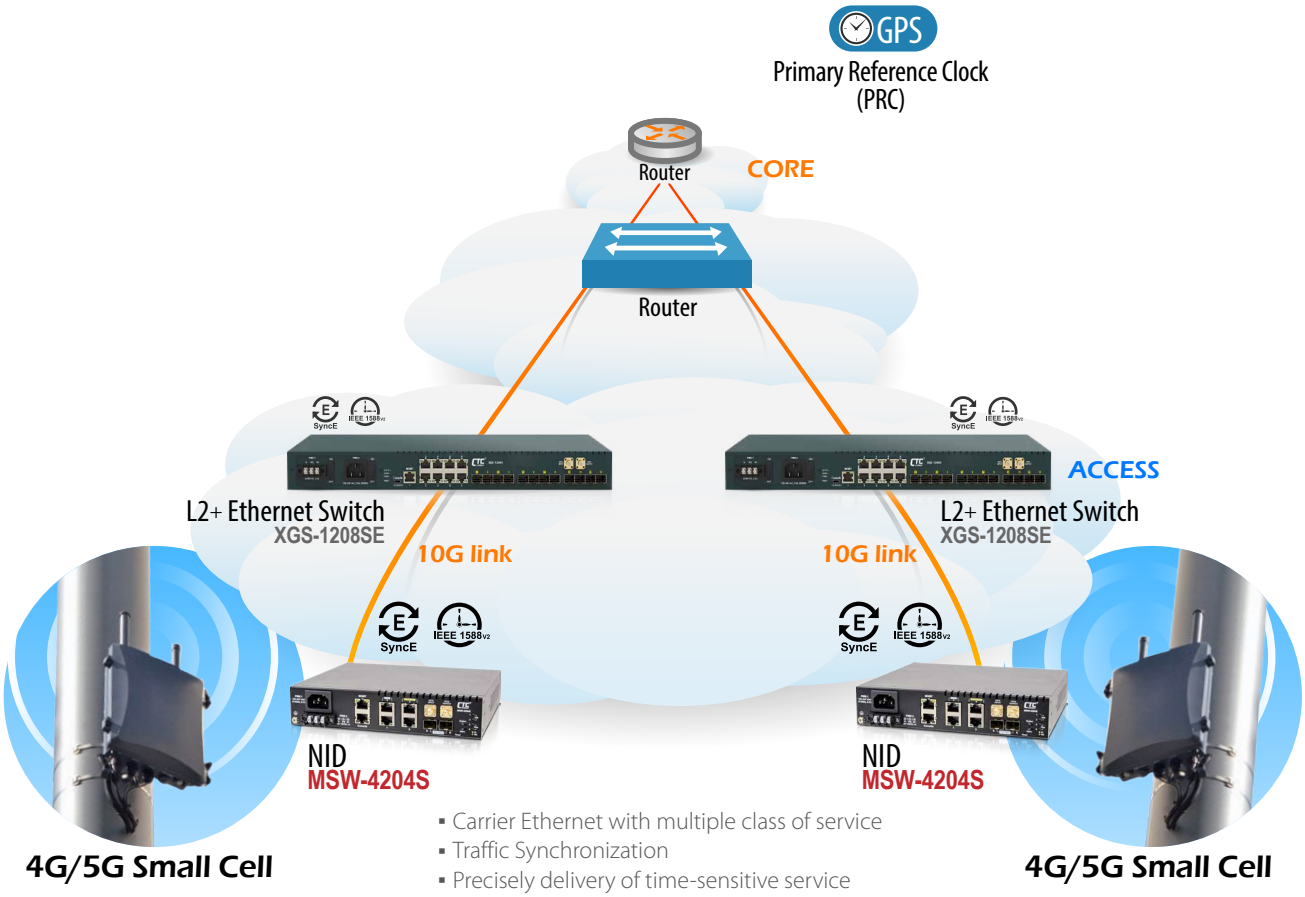
Specifications

Interface	Fiber port: 1G/10Gbps SFP+ × 2 Copper port: 10/100/1000Mbps RJ45 × 4 1PPS/ToD port: SMA connector × 2 (input/output)
Console/ToD Port	RJ45 × 1 (RS-232)
Management Port	10/100/1000Base-T RJ45 x 1
Switching Fabric Capacity	54Gbps
Packet Forwarding Rate	14880pps@10Mbps, 148800pps@100Mbps, 1488000pps@1000Mbps, 14880000pps@10Gbps,
Transmission Method	Store and Forward Switching
Packet Buffer	8M bits
MAC Table Size	16K
Jumbo Frame Size	10K Bytes
VLAN Feature	IEEE 802.1Q tagged VLAN (4K VLAN groups) IEEE 802.1ad QinQ VLAN Voice VLAN; MAC based VLAN; Protocol based VLAN; IP subnet based VLAN Private VLAN for port isolation; VLAN translation GVRP (GARP VLAN registration protocol)
Link Aggregation	Static trunk (SA, DA, IP, TCP/UDP port) IEEE 802.3ad LACP, 3 LACP trunk groups Max, 6 port Max. per LACP trunk
L2 Switching Protection	IEEE 802.1D STP/IEEE 802.1w RSTP/IEEE 802.1s MSTP ITU-T G.8031 ELPS/G.8032 ERPS
QoS Feature	Hierarchical QoS IEEE 802.1Qbb priority based flow control Hard wired IEEE 802.1p 8 priority queues per port CoS based traffic classification on switch port, VLAN ID, DSCP, TCP/UDP port IEEE 802.1p priority tag remarking; DSCP remarking Per Port/Queue based ingress/egress rate limit in steps of 100kbps 3 colors marker – CIR/EIR/Burst bandwidth control
Storm Control	Multicast/Broadcast/Unicast storm suppression with flooding control
Security	Static port security (MAC based) Per port limited MAC learning Port based/MAC base/single/multiple IEEE 802.1x access control

Security	128 ACL rules based on L2~L4 information RADIUS/TACACS+ authentication IP/MAC binding DHCP snooping/relay option 82 IP source guard & ARP inspection
IP Multicasting	IGMP snooping v1/v2/v3, IGMP proxy reporting MLD snooping v1/v2 IGMP fast leave IGMP query IGMP filtering/throttling MVR (Multicast VLAN Registration)
Management	WebGUI/Telnet CLI interface HTTPs, SSHv2 SNMP v1/v2c/v3 RMON I (1,2,3,9 groups) & RFC1213 MIB II Dying gasp in trap message DHCP client/relay TFTP/HTTP based firmware and configuration upgrade Port mirroring Event syslog server DNS client/proxy NTP client UPnP IPv4/IPv6 management SFF-8472 DDMI
Ethernet OAM	IEEE 802.3ah, IEEE 802.1ag, ITU-T Y.1731, RFC2544, ITU-T Y.1564
SyncE	ITU-T G.8261/G.8262/G.8264 on all Ethernet interfaces Sync status message support
IEEE 1588v2 PTP	ITU-T G.8263 slave clock ITU-T G.8273.2 boundary clock ITU-T G.8273.4 transparent clock ITU-T G.8265.1/ITU-T G.8275.1 telecom profile (optiation)
Power Input	100V~240VAC, -24 ~ -60VDC
Power Consumption	< 15W
Operating Temperature	0~50°C
Storage Temperature	-25~70°C
Humidity	5%~90% (non-condensing)
Dimension	215 × 190 × 44 mm (W×D×H)
Certification	CE, FCC class A

Application

Mobile backhaul application



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

Ordering Information

Model Name	Description
MSW-4204S-AC	1G RJ45 × 4 + 1G/10G SFP+ slots × 2 L2+ Carrier Ethernet Switch with SyncE and single AC power supply built-in
MSW-4204S-DC	1G RJ45 × 4 + 1G/10G SFP+ slots × 2 L2+ Carrier Ethernet Switch with SyncE and single DC power supply built-in
MSW-4204S-AD	1G RJ45 × 4 + 1G/10G SFP+ slots × 2 L2+ Carrier Ethernet Switch with SyncE and AC & DC power supply built-in

Optional Accessory

- 10G SFP+ Tran sceiver 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

- Rack Mount Kit

Model Name	Description
GSW/MSW-RMK	19" rack mount kit

Power Type

MSW – 4204S- □□

Example: MSW – 4204S