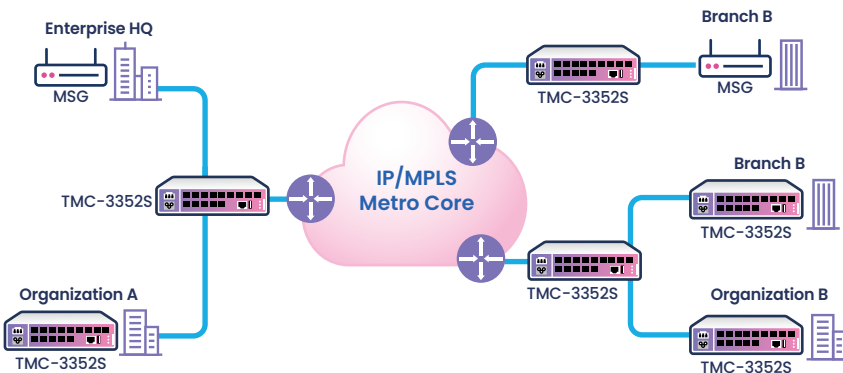


## TMC-3352S

TMC-3352S is a compact 10G NID providing 4x10G SFP+ network interfaces and 12x1G SFP user interfaces in half 19" space. It is designed for 1G/10G leased-line service delivery and 4G/5G mobile backhaul. The support of standard CE2.0 services (E-Line, E-LAN, E-Tree, E-Access), and advanced OAM, SLA, resiliency features, ensures service providers great flexibility and reliability in service design and deployment. Temperature hardened HW design and the support of SyncE and IEEE1588v2 make TMC-3352S ready for mobile backhaul.

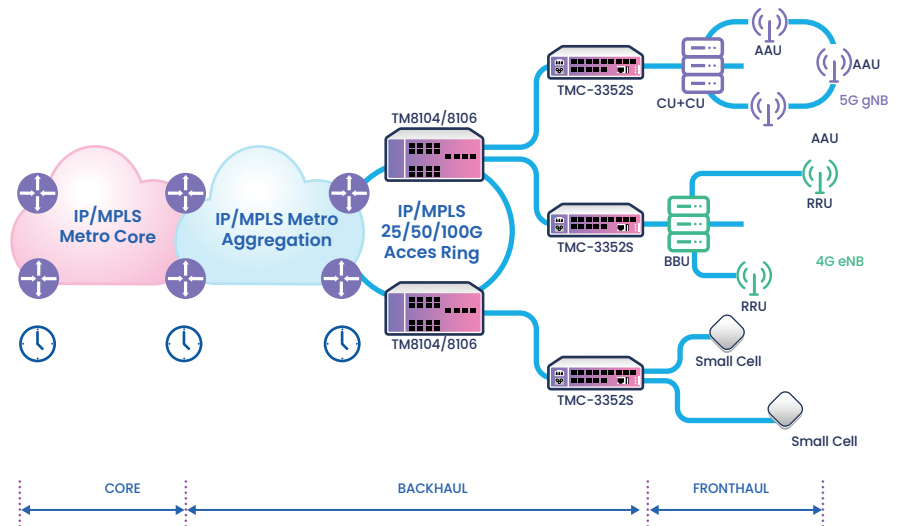
### Highlights

<b>Power Reliability</b>	Dual hot-swappable power supply with voltage/temperature monitoring
<b>Compact HW Design</b>	Half-19" in width help service providers save installation space greatly
<b>Extended Temperature Range</b>	Operating temperature range from -20 °C to +65 °C
<b>Flexible Service Delivery</b>	Standard CE2.0 service (E-Line, E-LAN, E-Tree, E-Access) delivery Flexible traffic classification guarantees customer-defined service SLA
<b>Committed Network Resiliency</b>	Protection mechanism including switchport backup, Link Aggregation, ITU-T G.8031 and ITU-T G.8032, guarantee network resiliency in chain, star, mesh, dual-homing and ring topologies
<b>OAM &amp; Hardware-based SLA</b>	Hardware-based IEEE802.lag/ITU-T Y.1731 end-to-end CFM (CCM interval up to 3.3ms), hardware-based ITU-T Y.1731 end-to-end SLA performance monitoring (1us measurement resolution) speed up service provisioning and troubleshooting Standard RFC2544, Y.1564 SAT tests for various types of services available
<b>IPv4/v6 Dual-Stack</b>	IPv6 for management/services help customers plan their future network evolution
<b>Synchronization</b>	SyncE and IEEE1588v2 ready for mobile backhaul



### Mobile Backhaul

TMC-3352S supports the services with full flexibility and high reliability. In addition, its compact HW design (half 19" wide) helps service providers save installation space, its wide-range operating temperature (-20-65 °C) ensures the device to work stably in harsh environment, and its support of SyncE and IEEE1588 V2 guarantees accurate synchronization along the service delivery.



### Application

#### Business Leased Line Service Delivery

TMC-3352S is able to deliver 1G/10G standard

and hardware-based CFM and SLA ensure service providers easier way to deploy and manage the services. Various fault detection and protection mechanisms guarantee high availability and stability of services.



### Ethernet Service

- MAC address table: 32k
- Jumbo frame up to 12288 Bytes
- 4,094 VLANs, IEEE802.1Q VLAN, IEEE802.1ad QinQ
- Layer 2 control protocol (L2CP) handling
- Super VLAN
- Private VLAN (PVLAN) with primary, community and isolated type

### Multicast

- IGMP v1, v2, v3
- IGMP Snooping, MVR, VLAN copy, Proxy

### QoS

- Flexible traffic classification based on MAC, IP, port, VLAN, CoS, DSCP, etc.
- Traffic policing with color-aware and color-blind mode, two-rate three-color marker
- Hierarchical CAR
- 8 local priority, 8 queues per port
- WRED
- Traffic shaping per queue/port
- SP/WRR/SP+WRR queue scheduling

### Reliability

- IEEE802.1ax Link aggregation group, manual, LACP
- Switchport backup
- STP, RSTP, MSTP, MRSTP
- ITU-T G.8031 ELPS and G.8032 ERPS based on port or CFM, switchover time less than 50ms
- Port/VLAN-based Ethernet loop detection
- Ethernet fault propagation,

### OAM

- IEEE 802.3ah EFM-OAM
- IEEE 802.1ag/ITU-T Y.1731 CFM
- ITU-T Y.1731 performance monitoring (LM, DM) for Ethernet
- RFC2544 for Ethernet, Y.1564 for Ethernet,
- 10G throughput test
- Layer 2 loopback with MAC swap

### Security

- CPU CAR
- CPU anti-attack for Land, Ping of death, ICMP unreachable/redirecting/forward, Tear drop, Smurf, Fraggle, WinNuke, TCP malformed
- DHCPv4/v6 Snooping
- ARP filter, DAI
- IPv4/v6 IPSG
- ACL based on VLAN, CoS, MAC, Ethernet Type, IP or user-define
- RADIUS, TACACS+, DOTIX
- Storm control (broadcast, multicast, DLF)
- Port-security MAC

### Maintenance and Management

- Zero-touch provisioning based on standard DHCP
- SNMP v1/v2/v3 based GUI management
- CLI management by local CONSOLE, Telnet and SSHv2
- KeepAlive, RMON, LLDP, Syslog
- SFP digital diagnostic management (DDM)
- CPU, memory monitoring
- Voltage and temperature monitoring

### Synchronization

- NTP, SNTP
- SyncE
- IEEE1588 v2 TC

### Specifications

<b>Performance</b>	Switching capacity: 52Gbps x 2
<b>Physical Interface</b>	1 x CONSOLE (USB); 1 x management port (RJ-45) Client interfaces: 12 x 1G SFP Network interfaces: 4 x 10G SFP+
<b>Power Supply</b>	Dual, hot-swappable version available AC: 220V, 100~240V DC: -48V, -36~-72V Power Consumption: ≤40W
<b>Environmental</b>	Operating: Temperature: -20~65°C Humidity: 10~90% non-condensing Storage and Transportation: Temperature: -25~75°C
<b>Dimensions</b>	220(W)mm x 266(D)mm x 44(H)mm

### Compliances

<b>Standards &amp; protocols</b>	CE, UL, FCC compliance EMC Class A RoHS compliance IEEE802.3, 802.3u, 802.3z, 802.3-2008 IEEE802.1D, 802.1Q, 802.1p, 802.1ad IEEE802.1ax, ITU-T G.8031, G.8032 IEEE802.3ah, 802.1ag, ITU-T Y.1731 IEEE802.1AB MEF6, 9, 10, 11, 13, 14, 16, 17, 20, 31, 36 MEF CE2.0 Compliance RFC826, 768, 793 RFC792, 4443 RFC2131, 2132, 3046, 3315, 4649 RFC1112, 2236, 3376, 4605, 3618, 2362, 2710, 4541 IEEE1588v2 ITU-T G.8261, G.8262, G.8264
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### Ordering Information

#### Equipment

Part No	Description
<b>TMC-3352S-AC/S</b>	Compact 10G NID, half-19" wide, 4x10G SFP+ for uplink, 12x1G SFP for downlink, CONSOLE and SNMP ports for management, single swappable AC power supply
<b>TMC-3352S-DC/S</b>	Compact 10G NID, half-19" wide, 4x10G SFP+ for uplink, 12x1G SFP for downlink, CONSOLE and SNMP ports for management, single swappable DC power supply
<b>TMC-3352S-AC/D</b>	Compact 10G NID, half-19" wide, 4x10G SFP+ for uplink, 12x1G SFP for downlink, CONSOLE and SNMP ports for management, dual hot-swappable AC power supply
<b>TMC-3352S-DC/D</b>	Compact 10G NID, half-19" wide, 4x10G SFP+ for uplink, 12x1G SFP for downlink, CONSOLE and SNMP ports for management, dual hot-swappable DC power supply
<b>TMC-3352S-AC_DC</b>	Compact 10G NID, half-19" wide, 4x10G SFP+ for uplink, 12x1G SFP for downlink, CONSOLE and SNMP ports for management, one hot-swappable AC power supply and one hot-swappable DC power supply

#### Power supplies

<b>TMC-3352S-ACPS-x:</b>	AC power supply for TMC-3352
<b>TMC-3352S-DCPS-x:</b>	DC power supply for TMC-3352

#### ABOUT TELCO SYSTEMS

Telco Systems delivers a portfolio of Network Edge (Carrier Ethernet and MPLS) demarcation, aggregation, and uCPE solutions that enables service providers to create intelligent, service-assured, CE-compliant networks for mobile backhaul, business services and cloud networking. Telco Systems end-to-end Ethernet, SDN/NFV-ready product portfolio delivers significant advantages to service providers, utilities, and city carriers competing in a rapidly evolving telecommunications market. Telco Systems is a wholly owned subsidiary of BATM Advanced Communications.

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TMC 3352-S

