Telco Systems’ T-Metro 8100 is a next-generation, high-density, standalone service aggregation platform providing carrier Ethernet 2.0, MPLS, IP (Layer 3), and SDN (OpenFlow and NETCONF). T-Metro 8100 offers massive service scalability, carrier class resiliency, and an industry-leading features like QoS and OAM (operations, administration and management).

This best-in class service switch allows carriers to offer 100GE connectivity and aggregation to meet the growing pressure for more bandwidth and lower price per gigabit. With 960G capacity in a compact 1RU chassis, the T-Metro 8100 provides a wide range of port density, management and resiliency making it the platform of choice for wide-scale carrier Ethernet adoption, implementation, and network transformation.

T-Metro 8100 is designed for service providers who need high reliability and flexibility to aggregate multiple services over 1GE, 10GE and 100GE port rates in a metro Ethernet environment. It offers a full MPLS provider edge (PE) solution with integrated, advanced MPLS/HVPLS and IP/MPLS capabilities, and multi rate ports flexibility between 100GE, 40GE, 10GE and 1GE, 40GE, 10GE or 1GE ports.

By using 100GE, carriers can gradually move from dark fiber xWDM transport to active fiber and lower their total cost of ownership.

**100GE MPLS Cloud-based Service Solution**

Cloud-based services pose new challenges for service providers. T-Metro 8100 addresses these challenges using MPLS to provide low latency L2VPN, high availability, and end-to-end service assurance using advanced OAM tools and increased scalability.

T-Metro 8100 complements the T-Metro 8000 (T-Metro 8006 and TM-8001) Aggregation and Cloud Gateway Family by driving high capacity 100GE rings into the aggregation layer to support high-bandwidth cloud applications and mobile backhaul networks. With the addition of T-Metro 8100, Telco Systems offers service providers cloud-to-edge and cloud-to-cloud end-to-end services, assuring an exceptional level of experience for the end-user while optimizing carrier resources.

**L3 Support**

T-Metro 8100 provides comprehensive solutions and services with native IP support, including Virtual Routing and Forwarding (VRF), IP static routing, and dynamic routing protocols like OSPF and BGP. T-Metro 8100 also supports Dynamic Host Configuration Protocol (DHCP) for dynamically distributing network configuration parameters, and Virtual Router Redundancy Protocol (VRRP).

The T-Metro 8100 leverages Telco Systems’ field-proven, carrier grade BiNOX operating system – common among all its platforms – to provide a robust and advanced multi-layer software platform to support administration, and maintenance requirements. Hardware-based QoS allows for very high QoS granularity independent of physical ports or services, while an embedded test head supports end-to-end SLA measurement and assurance. It also offers advanced OAM, supporting hundreds of services with ITU-T Y.1731 SLM, RFC 2544* and Y.1564* measuring the network performance.

**SDN Support**

T-Metro 8100 provides full SDN support with comprehensive adoption of NETCONF, the network configuration protocol, and YANG, its data modeling language. It also supports OpenFlow 1.3.1 with a simple software upgrade to ViNOX OS (available separately).

**PRODUCT HIGHLIGHTS**

- 2x 100GE/40GE or 16x 10GE, 4x 40GE or 16x 10GE and 8x 10GE Fabric interface ports, wire speed non-blocking 960G switch in 1RU
- Full MPLS (VPWS, VPLS, HVPLS) Provider Edge and IP/MPLS
- Highly scalable solution to support large amount of services
- Enhanced Quality of Service and service granularity support
- Extended hardware-based OAM*
- MEF CE 1.0/2.0, IEEE, ITU-T and IETF standards compliance for multi-vendor interoperability
- Integrated with EdgeGenie Orchestrator for full network lifecycle management
- ITU-T Y.1731 SLM support, RFC 2544 and Y.1564 network performance testing
- Extensive service redundancy (xSTP, FRR, G.8032, G.8031*, dual homing)
- Enhanced control plane and routing features (OSPF, IS-IS, LDP, RSVP-TE)
- Low power consumption to reduce OPEX
- Redundant hot-swappable DC power supplies and fan tray
- Support for 19” and 23” racks
- Support for short and long-haul optical interconnect
T-Metro® 8100 | HIGH DENSITY 100GE SERVICE AGGREGATION PLATFORM AND CLOUD GATEWAY

PRODUCT SPECIFICATIONS

Hardware Characteristics
- 2 x 100GE/40GE (QSFP28/QSFP+), or 16 x 10GE (using MPO breakout cable and SFP+), 4 x 40GE (40G QSFP+) or 16 x 10GE (using MPO breakout cable and SFP+) and 8 x 10GE (SFP+) ports, Wire speed non-blocking 960Gbps full duplex switching capacity in 1RU, support for short and long-haul optical interconnect

Services
- E-LAN, E-Line, E-Tree and E-Access MEF services compliance, IEEE 802.1Q brid- ing, IEEE 802.1ad Q-in-Q (TLS), MPLS L2VPN - Full VPLS PE, MTU, HPLS, VPWS, “OpenFlow support

Timing
- SyncE and IEEE 1588v2

Resiliency
- Sub-50ms RSVP-TE FRR, secondary LSP
- ITU-T G.8032, G.8031*, xSTP, resilient link, dual homing VPLS/ HVPLS* LAG (Static/IEEE 802.3ad LACP/Multi-chassis)*

Quality of Service
- Per port/EVC/flow single/dual rate limiting
- Hierarchical rate limit per port/EVC/flow
- SP, WRR and hybrid frames scheduling, CoS marking and mapping per EVC

Multicast Management
- IGMP v1/v2/v3

OAM
- Hardware-based IEEE 802.3ah EFM, IEEE 802.1ag CFM

Testing & Monitoring
- ITU-T Y.1564 and RFC2544 test head and service performance analyzer
- In-service testing capabilities, ITU-T Y.1731 SLUM/DMM
- Per port/EVC/VLAN/CoS, hardware-based flexible MAC-based loopbacks

Management
- Console, Telnet, SSHv2, Radius, TACACS+, SNMP v1/2/3, xFTP, NTP, DNS resolver

Security
- ACLs, RADIUS, SSHv2, SNMPv3, SFTP, port security, broadcast storm prevention, secured access

General Specifications
- Dimensions 1.75”H (1RU) x 19”W x 20”D (44.45 x 482.6 x 508mm)
- Weight 12.68lbs. (5.75kg)
- Power Dual redundant, hot-swappable DC 24V/48VDC, Max power consumption: 200W
- Operating temp. 0ºC to 45ºC
- Humidity Up to 95%, non-condensing
- Fan Load sharing, speed controlled, hot-swappable

Regulatory Compliance
- Class A (Canada), EN 300386, Telcordia GR-1089 issue 4

Environmental Compliance
- Full RoHS

Safety Requirements
- UL 60950, EN 60950, IEC 60950, IEC 60825-1, CSA 22.2 No. 950, Class 1 Laser product safely (eye safety)

KEY APPLICATIONS
- High-density business services and carrier Ethernet network aggregator
- Mobile backhaul carrier Ethernet/MPLS aggregator
- SDN networks with NETCONF and OpenFlow support
- Cloud gateway – cloud-to-cloud and cloud-to-edge connectivity
- Cost-optimized DSLAM, CMTS and OLTs aggregation
- 100GE service aggregation
- 100GE OAM collector
- Carrier exchange, interconnect

ORDERING INFORMATION

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TM-8100-2DC</td>
<td>T-Metro 8100 platform with fixed 2x 100GE (QSFP28) and 48x 1GE/10GE (SFP+) unpopulated ports, fan tray, 2x 24/48VDC PEM</td>
</tr>
<tr>
<td>VINOX- TM8100-L</td>
<td>VINOX is a next generation carrier grade networking operating system which supports multiple transport technologies such as Carrier Ethernet, IP/MPLS and OpenFlow 1.3.1, Supporting MEF GE2.0 services, high resiliency, QoS, DLM and next generation management protocols like NETCONF and YANG. VINOX-TM-8100-L runs on TM-8100</td>
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**Please refer to the release notes for the exact list of supported transceivers

*Future feature
**VINOX software (purchased separately)