

## T-Metro 8106

### MODULAR 1.2Tbps Service Demarcation Device (SDD)



#### THE NEED

Versatile & robust Network Edge platforms are essential for telecom providers, aiming to cater for multi-service offerings combined with demarcation capabilities for SLA assurance. Today's demand is for a high-performance rapidly deployed Service Demarcation Device (SDD) with advanced features and low cost per port.

#### THE SOLUTION

Telco Systems T-Metro 8106 is the Industry's leading 1.2Tbps MEF CE 3.0-ready, modular, multipurpose, ultra- high capacity 1.2Tbps SDD platform. It enables 100Ge Demarcation with 100Ge line-rate OAM tests, managed services like L2/ L3 VPN, aggregate impressive number of 1/10Ge interfaces and hence assure rapid adaptability to service providers' changing service offerings while strengthening evolving business strategy.

- Up to six 100Ge interfaces
- Dedicated 100Ge OAM hardware
- Interchangeable modules - Expand-as-you-grow
- L2/L3 VPNs over MPLS functionality
- Hot swappable power supplies and fans
- CPU redundancy

The T-Metro 8106 offers Industry-leading capabilities. It combines a high-density, standalone and SLA-enabling Carrier Ethernet platform backed by powerful switching capacity of up to 1.2Tbps Its service scalability, carrier-class resiliency, and advanced features include L2 & L3 VPN, IPv4/6 support, line-rate OAM, enable multiple use cases like :Off Net aggregation, Direct Internet Access (DIA), CoC (Carrier of Carriers) demarcation, 100Ge Fan-out and 100Ge Add & Drop.

Telco Systems T-Metro 8106 is offered as a basic future-proof 2U high full rack unit, with optional cards for expanding the number of ports. Its carrier-grade features include hot-swappable fans, dual power supplies (AC/DC), 100GE OAM, CPU redundancy.

The T-Metro 8106 enables:

1. OPEX and CAPEX Reduction : The SDD significantly reduces cost of deployment and management with its single, flexible platform. One platform that handles impressive number of interfaces for multi- service environment.
2. Business agility growth : The SDD offers rapid deployment of new services and services growth at a controllable pace. The modularity design supports multiple use cases, hence



### BUSINESS SERVICES - L2/L3 VPN

- Off-net/on-net
- Multi-tenancy support
- 100Ge Hardware OAM
- Flexible SLA Management



### E-RATE/EDUCATION

- Campus network interconnectivity and aggregation
- 100Ge Hardware OAM
- Flexible SLA management
- Modular (configured via software)
- Multi-tenancy support



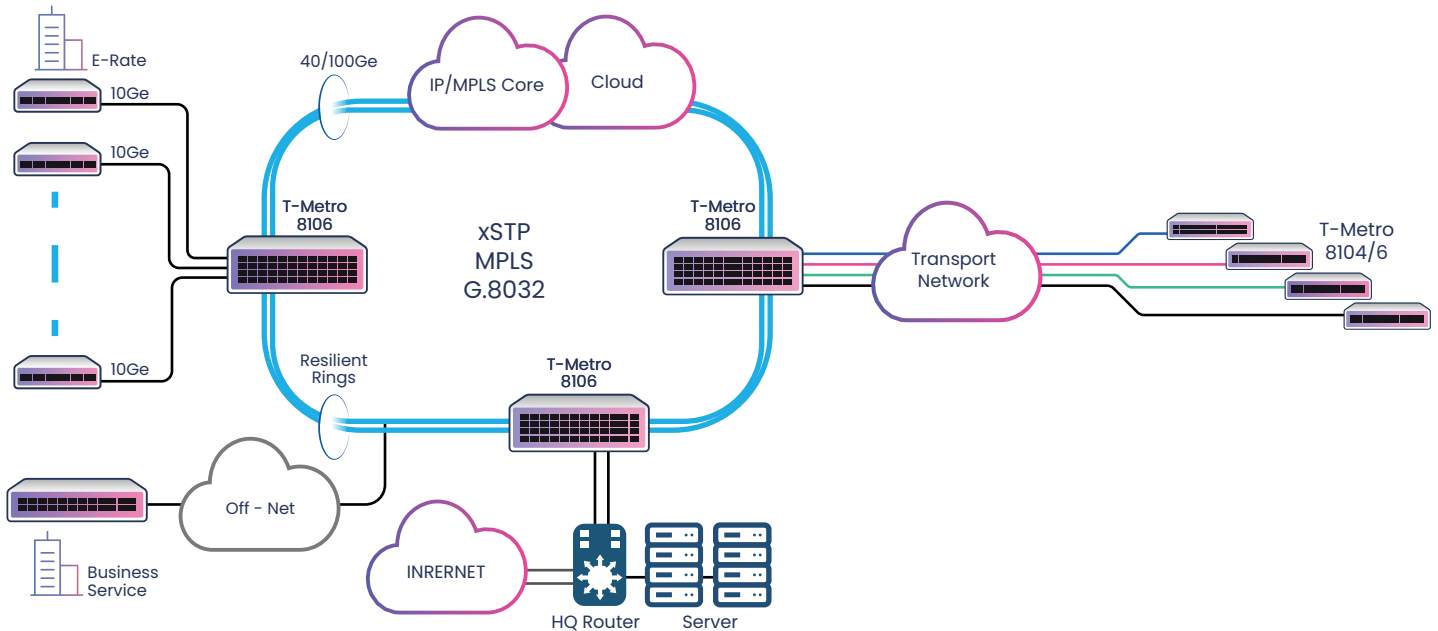
### CLOUD & DATA CENTER CONNECTIVITY

- Cloud access aggregation
- High bandwidth
- Low latency
- Flexible SLA management
- Assured connectivity



### 10G GPON

- Premium Broadband
- Cost effective price
- Flexible SLA Management
- Shared & dedicated BW
- Low Latency



Interfaces	Service Assurance	Supported Services	Resiliency
<ul style="list-style-type: none"> <li>• 2 x 40/100Ge + 16 x 1/10Ge</li> <li>• 2 x 40/100Ge + 64 x 1/10Ge</li> <li>• 6 x 40/100Ge + 16 x 1/10Ge</li> </ul>	<ul style="list-style-type: none"> <li>• Hardware-based 100Ge service tests</li> <li>• ITU-T Y.1564 and RFC2544 test head and service performance analyzer</li> <li>• In-service testing capabilities</li> <li>• TU-T Y.1731 SLM/DMM per port/EVC/VLAN/COS</li> <li>• MEF 46,48,49 - SAT Power Play</li> <li>• TWAMP</li> </ul>	<ul style="list-style-type: none"> <li>• MPLS L2/L3 VPN</li> <li>• IEEE 802.1Q bridging</li> <li>• IEEE 802.1ad Q-in-Q</li> <li>• 2-tag management (push / pop / swap) for c-tag and s-tag</li> <li>• Full VPLS PE, MTU, HVPLS, VPWS</li> <li>• BFD</li> <li>• MPLS L2/L3 VPN</li> </ul>	<ul style="list-style-type: none"> <li>• Sub-50ms RSVP-TE FRR</li> <li>• TI-LFA</li> <li>• Dual-homing VPLS/HVPLS</li> <li>• Secondary LSP</li> <li>• ITU-T G.8031 (1:1), G.8032, xSTP, resilient links</li> <li>• LAG (Static/IEEE 802.3ad LACP/ Multi-chassis)</li> <li>• Up to 44 LAGs</li> <li>• CPU Redundancy</li> </ul>

### TECHNICAL SPECIFICATIONS

<b>Hardware Characteristics</b>	2xQSFP28 + 16xSFP+ or 2xQSFP28 + 64xSFP+ or 6xQSFP28 + 16xSFP+ ports Wire speed non-blocking up to 1.2Tbps full duplex switching capacity in 2RU
<b>Services</b>	IEEE 802.1Q bridging, IEEE 802.1ad Q-in-Q (TLS), MPLS L2VPN- Full VPLS PE, MPLS L3 VPN (BGP), MTU HVPLS, VPWS, IPv6 PE, Ipv4/6 Dual Stack networking
<b>Resiliency</b>	Sub-50ms RSVP-TE FRR, TI-LFA, secondary LSP ITU-T G.8032, G.8031, xSTP, resilient link, dual homing VPLS/HVPLS LAG (Static/IEEE 802.3ad LACP/Multi-chassis), CPU redundancy (L2)
<b>Quality of Service</b>	<b>Per port/EVC/flow single/dual rate limiting</b> Hierarchical rate limit per port/EVC/flow SP, WRR and hybrid frames scheduling CoS marking and mapping per EVC
<b>Multicast Management</b>	IGMP v1/v2/v3
<b>OAM</b>	Hardware-based IEEE 802.1ag CFM, IEEE 802.3ah EFM
<b>Testing &amp; Monitoring</b>	MEF 46, 48, 49 ITU-T Y.1564 and RFC2544 test head and service performance analyzer In-service testing capabilities, ITU-T Y.1731 SLM/DMM Per port/EVC/VLAN/COS, hardware-based flexible MAC-based loopbacks
<b>Management</b>	Console, Telnet, SSHv2, Radius, TACACS+, SNMP v1/2/3, xFTP, NTP, DNS resolver, NETCONF
<b>Network Protocols</b>	MPLS/L3: IS-IS, OSPF, BGP, RSVP-TE, LDP, Segment Routing L2: xSTP, G.8032, LACP, MC-LAG, L2-Tunneling
<b>Security</b>	ACLs, RADIUS, SSHv2, SNMPv3, SFTP, port security, broadcast storm prevention, secure access
<b>General Specifications</b>	Dimensions 2RU H x 19"W x 13.7"D (133.35 x 482 x 350mm) Weight: 9kg - 14.5kg Power: Dual redundant, hot-swappable AC or DC 24/-48VDC Max power consumption: 400W Operating temperature: 0°C to 50°C Humidity: Up to 95%, non-condensing Fan: Load sharing, speed controlled, hot-swappable
<b>Regulatory Compliance</b>	European CE marking, EN 55022 Class A, CISPR 22 Class A, EN55024:1998+A1, EMC Immunity, Harmonics: EN 61000-3-2/IEC 61000-3-2, Voltage fluctuations: EN 61000-3-3/IEC 61000-3-3, ESD: EN 61000-4-2/IEC 61000-4-2, RFI-AM: EN 61000-4-3/IEC 61000-4-3, EFT: EN 61000-4-4/IEC 61000-4-4, Surges: EN 61000-4-5/IEC 61000-4-5, Conducted: EN61000-4-6/IEC 61000-4-6, Voltage DIP: EN 61000-4-11/IEC 61000-4-11, EMC Emissions, FCC 47 CFR Part 15 Class A, ICES-003 Issue 4 Class A (Canada), EN 300386, Telcordia GR-1089 issue 4
<b>Environmental and Safety</b>	Full RoHS, NEBS3 compliant UL 60950, EN 60950, IEC 60950, IEC 60825-1, CSA 22.2 No. 950, Class 1 Laser product safety (eye safety)

Part Number	Part Number
<b>TM8106-2QS-O-2XX</b>	T-Metro 8106 Service Demarcation Device, high Capacity, 2RU Chassis includes : 2 x QSFP28 + 16 x SFP+, Line Card, hot-swappable Fan Tray, O = HW OAM module, hot-swappable redundant AC or DC PSU (XX= AC or DC)
<b>TM8106-2QS-64-O-2XX</b>	T-Metro 8106 Service Demarcation Device, high Capacity, 2RU Chassis includes : 2 x QSFP28 + 64 x SFP+, Line Card, hot-swappable Fan Tray, O = HW OAM module, hot-swappable redundant AC or DC PSU (XX= AC or DC).
<b>TTM8106-6QS-O-2XX</b>	T-Metro 8106 Service Demarcation Device, high Capacity, 2RU Chassis includes : 6 x QSFP28 + 16 x SFP+, Line Card, hot-swappable Fan Tray, O = HW OAM module, hot-swappable redundant AC or DC PSU (XX= AC or DC).
<b>TM8106-48SFP+</b>	Expansion Line Card for T-Metro 8106 Base with 48x1/10GE SFP+ Ports
<b>TM8106-4QSFP28</b>	Expansion Line Card for T-Metro 8106 Base with 4x40/100GE QSFP28 Ports
<b>TM8106-OAM</b>	Expansion module for T-Metro 8104 Base. Enables HW OAM acceleration capabilities
<b>TM8106-ACPS</b>	T-Metro 8104 110/220V AC PWR SUPPLY AC PWR Supply + Plug type
<b>TM8106-DCPS</b>	T-Metro 8106 48V DC PWR SUPPLY
<b>TM8106-BRKT-XXIN</b>	XX (XX = 19 or 23) - inch Ear SIDE BRACKETS for T-Metro 8106
<b>TM8106-FAN</b>	Fan for T-Metro 8106

### 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.

To learn more, visit Telco Systems at <http://www.telco.com>

