



## T-METRO® 8006

### HIGH DENSITY SERVICE AGGREGATION PLATFORM AND CLOUD GATEWAY

Telco Systems' T-Metro 8006 is a next generation Ethernet high density service aggregation platform that provides massive service scalability, carrier-class resiliency, and an industry-leading feature set that supports Hierarchical Quality of Service (HQoS), operation, administration and maintenance (OAM) tools, and L2VPN capabilities. This best-in class service aggregation platform and cloud gateway allows carriers to offer cloud-based services, business Ethernet and mobile backhaul to the edge. With a scale of 1T of bandwidth in a compact 6RU chassis, the T-Metro 8006 provides best-in-class throughput, densities, monitoring and resiliency. Enabling a wide variety of services and an easy migration to a converged service environment, the T-Metro 8006 is the platform of choice to enable wide-scale Carrier Ethernet adoption, implementation, and transformation.

The T-Metro 8006 is based on AdvancedTCA open carrier grade industry standard architecture, enabling seamless integration of additional boards from other vendors and allowing for the creation of new services and solutions. This future-proofs the provider network by supporting value-added services. The T-Metro 8006 is designed for service providers who need the reliability of the traditional SONET/SDH quality of service and the flexibility to deliver multiple services in 1G/10G/40G\*/100G\* port rate Metro Ethernet environments.

#### Cloud Services Solution

Cloud based services pose new challenges for service providers. The T-Metro 8006 extends Telco Systems' demarcation and aggregation solutions to the core to provide end-to-end cloud-to-edge and cloud-to-cloud services and ensures an exceptional level of experience for the end-user while optimizing carrier resources.

#### Cost-effective L2 Multi 10/40/100GE Aggregation Switch

Advanced Layer 2 networking allows total flexibility in deployment, provisioning, and delivery of Ethernet services. Physical and virtual networking capabilities provide automated address management and discovery, bandwidth profiles, advanced traffic classes, and complete control over how subscriber traffic is transported across a service provider's network. Its reliable, non-blocking architecture and redundancy features ensure maximum uptime.

The T-Metro 8006 leverages Telco Systems' field proven, carrier grade BiNOX operating system to provide a robust and advanced multi-layer software platform to support operations, administration, and maintenance requirements. Hardware-based QoS and HQoS allows for very high QoS granularity, independent of physical ports or VLANs, while an embedded test head supports end-to-end SLA measurement and assurance. Telco Systems' EdgeGenie Orchestrator™ CE 2.0 & SDN/NFV Management System offers a modular and complete solution for the full life cycle of network deployment. EdgeGenie Orchestrator's modules include a Carrier Ethernet/MPLS end-to-end service management system with an SDN controller (TelcoController) module that manages OpenFlow switches, and an NFV Orchestrator (TelcoOrchestrator) module that directs distributed NFV deployments, including TelcoApps VM initiation, configuration and maintenance, service attachment and chaining, and VNF resiliency.

Modular in design, the T-Metro 8006 allows service providers gradual growth of their infrastructure, with a fully redundant system that has no single point of failure. With up to 120/240G per line card in 1G/10G/40G\*/100G\* Ethernet speeds, the T-Metro 8006 offloads traffic from the core router to save expensive core resources.

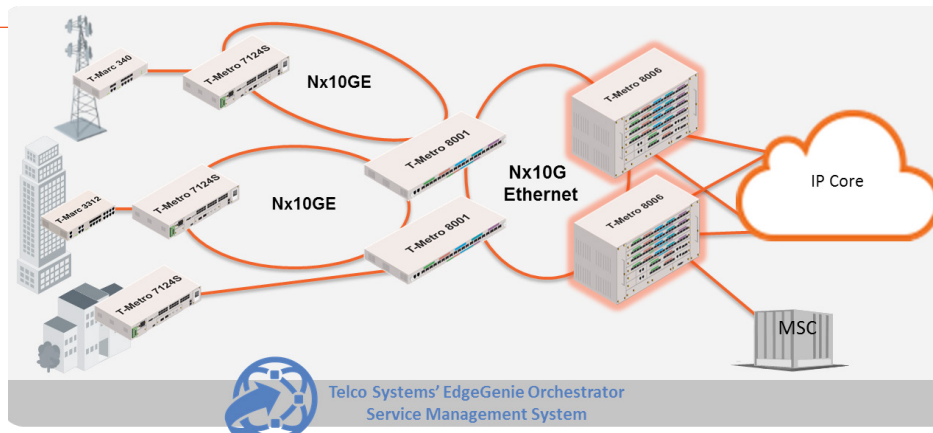


### PRODUCT HIGHLIGHTS

- Purpose-built, highly available, modular, scalable architecture
- Compact size: 6RU height, 19" rack-mountable enclosure
- Holds up to 4 line cards and 2 CPU blades
- 10 Gigabit Ethernet, wire speed non-blocking at 480G/960G\* Gigabit Carrier Ethernet service switch
- MEF CE 1.0/2.0 compliance, IEEE, ITU-T and IETF standards compliance for multi-vendor interoperability
- EdgeGenie Orchestrator Service Management for full life cycle support of end-to-end Ethernet services
- Enhanced security and maximum protection mechanisms – G.8031, G.8032, multi-chassis LAG, xSTP
- Field upgradeable, redundant hot-swappable modules, power supplies and fans
- BiNOX operating system
- Enhanced Hierarchical Quality of Service (HQoS) and service granularity support
- Advanced high scale OAM support: connectivity check, performance monitoring, embedded throughput tests

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### PRODUCT SPECIFICATIONS

<b>Hardware Characteristics</b>	Wire speed, modular ATCA (AdvancedTCA®) based design 6RU chassis: up to 2 x CPU matrix management modules and up to 4 switching line cards Line card with 32/62 x 1GE ports Line card with 20 x 1/10GE ports 8 x 10Gbps + 2 x 40Gbps* 480/960GE full duplex switch capacity
<b>Services</b>	MEF Carrier Ethernet 2.0 (CE 2.0) services, IEEE 802.1Q bridging, IEEE 802.1ad, Q-in-Q (TLS)
<b>Resiliency</b>	ITU-T G.8032*, G.8031*, xSTP, resilient link; LAG (Static/IEEE 802.3ad LACP) Hot swappable, redundant AC/DC power supply
<b>Quality of Service</b>	Per port/EVC/flow single/dual rate limiting Hierarchical rate limit per port/EVC/flow SP, WRR and hybrid frames scheduling, CoS marking & mapping per EVC
<b>Multicast Mgmt</b>	IGMP snooping v1/v2/v3 over Ethernet*
<b>OAM</b>	Hardware-based IEEE 802.3ah EFM, IEEE 802.1g CFM
<b>Testing &amp; Monitoring</b>	ITU-T Y.1564 and RFC2544 test head and service performance analyzer In-service testing capabilities, ITU-T Y.1731 PM, SM and SLM 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
<b>Security</b>	ACLs, RADIUS, SSHv2, SNMPv3, SFTP, port security, broadcast storm prevention, secured access
<b>General Specifications</b>	<p>Dimensions: Height: 265.8mm (6U) Width: 448mm (17.64") (19" rack mount) Depth: 413.4mm (16.27") Excluding handles, latches and cable holders</p> <p>Weight: AC Base system: 22.2kg (49lbs) DC base system: 21.1kg (46.5lbs) Fully assembled for full redundancy: AC configuration: 40.3kg (88.8lbs) DC configuration: 36.3kg (80lbs)</p> <p>Power: - Dual redundancy, hot swappable PEM modules; -48/-60V DC (-36VDC to -60VDC) @ 50A, one feed per PEM OR - Up to 3 redundant, self-cooled, hot swappable power supplies; Input power 90 - 240V AC</p> <p>Operating temp: AC configuration: -5°C to 55°C (23°F to 131°F) Short term (16 hour): -5°C to 55°C (23°F to 131°F) DC configuration: -5°C to 50°C (23°F to 122°F)</p> <p>Storage temp: -40°C to 70°C (-40°F to 158°F)</p> <p>Humidity: Up to 95%, non-condensing</p> <p>Fan Trays: 2 x fully redundant, load sharing, speed controlled, hot-swappable</p>
<b>Regulatory Compliance</b>	European CE marking, EN 55022 Class A, CISPR 22 Class A, EN55024:1998+A1, NEBS compliant, 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: EN 61000-4-6/ 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 Compliance</b>	Full RoHS
<b>Safety Requirements</b>	UL 60950, EN 60950, IEC 60950, IEC 60825-1, CSA 22.2 No. 950, Class 1 Laser product safety (eye safety)

### KEY APPLICATIONS

- ☐ Best price-performance Carrier Ethernet aggregator
- ☐ Mobile backhaul solution
- ☐ Cloud gateway – cloud-to-cloud and cloud-to-edge connectivity
- ☐ Multi-service aggregation
- ☐ Cost optimized DSLAM, CMTS and OLTs aggregation
- ☐ Carrier exchange, interconnect

### ORDERING INFORMATION

Part Number	Description
<b>TM8006 base system</b>	T-Metro 8006 platform 19" chassis with card cage supporting up to 6 8U front boards, and 6 8U rear transition module (RTM) boards; 1 x CPU (CPM640) module; 1 x USB-Serial Console Cable Device; 1 x Shelf Manager; 1 x DC PEM OR 1 x AC PSU; 1 x fan tray; 1 x air filter tray; filler blades and blank RTM panels for empty slots; cable management holders. <i>Note: Additional power supply units, modules, and fan trays are required for redundancy.</i>
<b>TM8000-CPM640</b>	Management CPU and matrix module. Required for dual redundancy
<b>LC-8020-10GE</b>	20 ports unpopulated 1/10G SFP/ SFP+ module
<b>LC-8062-1GE</b>	30/60 ports unpopulated 1000BaseX (SFP/CSFP) line card
<b>TM8006-DCPS</b>	-48V DC power supply Required for dual redundancy
<b>TM8006-ACPS-x</b>	110, 220V AC power supply. Required for full redundancy
<b>TM8006-Fan</b>	Hot-swappable dual fan tray. Required for dual redundancy
<b>TM8000-SHMM</b>	Shelf Manager module – required for full redundancy

\*Future feature  
Note: 'x' specifies power supply and cord types:  
NA for North America, EUR for Europe, UK for United Kingdom, IL for Israel



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