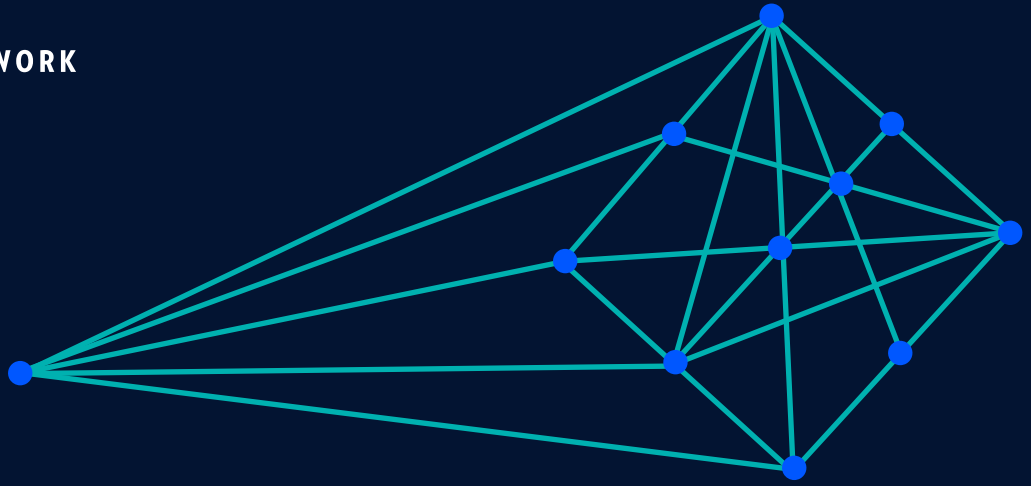# ECI
THE ELASTIC NETWORK

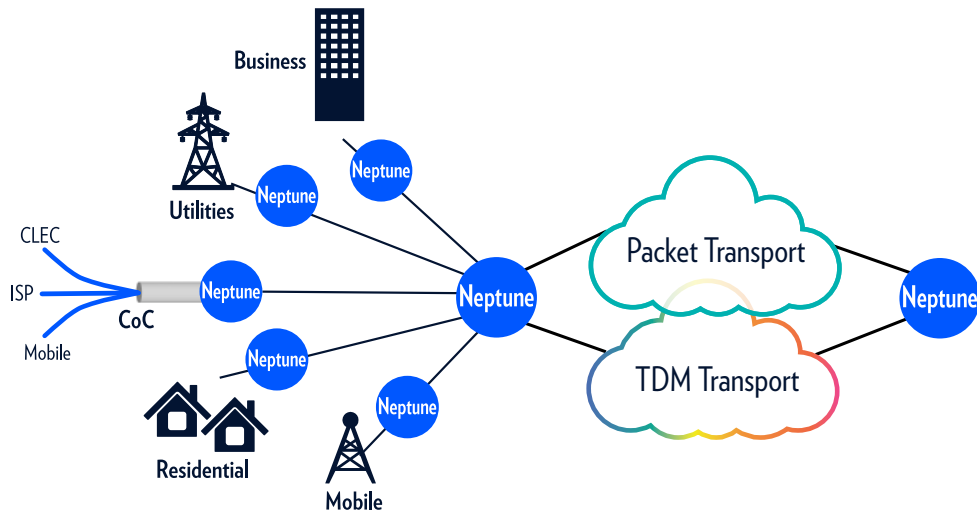# NEPTUNE
NPT-1050

HYBRID METRO ACCESS TRANSPORT

The NPT-1050 is an extremely compact, high-capacity hybrid multiservice transport platform. A member of ECI's Neptune (NPT) product line, the Hybrid NPT-1050 is only 1RU in height, fully redundant, supports up to 100 Gbps capacity, and is optimized for high-capacity metro access nodes. The Neptune product line streamlines end-to-end metro service delivery by combining carrier-grade service assurance, visibility, and control with packet efficiency and unparalleled multiservice support. This includes native TDM, Packet, and OTN. Neptune offers a powerful, flexible, and efficient E2E metro solution for high-performance services through convergence of Ethernet (MEF CE2.0 certified), MPLS-TP, OTN, WDM, and TDM. It also supports NFV services and SDN applications, which are compulsory in today's challenging metro environment.

With such a rich and robust feature set, the NPT-1050 is well-suited for a wide variety of applications and networking scenarios. These include mobile backhaul, wholesale services, residential multiplay and business VPN connectivity services. Like all ECI's transport products, NPT-1050 is managed by the unified multilayer NMS.

Unmatched multiservice	**Compact and high-capacity**	**Carrier-grade**	**Independent native processing**
TDM, Ethernet, MPLS-TP, OTN	metro access and aggregation	redundancy and service assurance	both TDM and Ethernet

Technical specifications

Packet	**Switch:** 100 Gbps **Services:** MEF CE2.0 (E-Line, E-LAN, E-Tree, E-Access) PN and VPN based Ethernet and IP, MPLS -TP **Max. Interfaces:** 20 x 10/100/1000 Base-T, 40 x 100/1000 Base-X, 10 x 10GE
TDM	**Matrix:** 15 Gbps with 4/3/1 connectivity (100% LO granularity) **Services:** Native TDM, CES (SAToP , CESoPSN and CEP) **Max. native Interfaces:** 5 x STM-16, 14 x STM-4, 14 x STM-1, 9 x DS3/E3, 189 x E1 **Max. CES interfaces:** 96 x E1/T1, 12 x STM-1/OC-3, 3 x STM-4/OC-12
WDM	CWDM, DWDM, muxponder , amplifiers
Timing and synchronization	SyncE with ESMC, 1588v2, external timing 1PPS and TOD, internal stratum 3 clock (holdover state), primary and secondary sources (supports SSM bits), ACR, DCR, loop timing on SAToP, TDM bits (T3/T4), and SNTP
Protection and restoration	Hardware redundancy for common units, IO hardware Protection (IOP), RSTP/MSTP, G.8032 Ethernet Ring Protection (ERP), MPLS-TP FRR, Dual FRR, 1:1 Linear protection, PW Redundancy (PWR), Multisegment-PW, IEEE 802.3ad Ethernet Link Aggregation (LAG) with LACP, Multi-Chassis LAG (MC-LAG)
OAM	Ethernet OAM (IEEE802.3ah ,IEEE 802.1ag and ITU-T Y.1731 PM), MPLS-TP OAM (G8113.2)(CC/AIS/RDI/LB/LT/DM), Bidirectional Forwarding Detection (BFD), RFC 2544 generator, Y.1564 Ethernet service activation (SLA)
Traffic management	Traffic classification (based on port, VLAN, Port+VLAN, IEEE 802.1p, DSCP), Diffserv based TM, network-wide Call Admission Control (CAC), 8 Classes of Service (CoS)
Topologies	Mesh, dual homing , multiring, ring, star, linear
Security	RADIUS (client authentication), SSH 2 , SW integrity verification (SHA-2), SFTP, Access Control List (ACL), IEEE802.1x, control channel HMAC-256, Public key authentication, Port blocked as default
Management	LightSOFT® NMS, EMS-NPT, SNMPv2/v3, LCT, Muse™
Power over Ethernet (PoE+)	Up to 30W
Pluggable SFP/CSFP/SFP+ support	Electrical, colored C/DWDM, tunable, noncolored, Compact SFP (CSFP), SFP+ , and bidirectional SFPs/SFP+
Power input	-40 VDC to -72 VDC, 220V
Power dissipation	Typical: 150W
Operating temperature range	-25°C to +70°C (-13°F to 158°F)
Operating RH range	5% to 95%
Environmental standards	ETS 300 019-1-3 Class 3.3, ETS 300 019-2-3 Class 3.3, EN55022 Radiation Emissions (class A), IEEE 1613 (electric utility substations), IEC 61850-3 (electric utility substations), EN 61000-6-5 (immunity for substations)
Safety	EN60950-1
EMS	EN 300 386
Physical dimensions	H x W x D: 1.7" x 18.3" x 10.4" / 44 x 465 x 263 mm

Expansion Unit

OTN	**Services:** Ethernet, storage, video, SDH/SONET **Max. service interfaces:** • 48 x 1GE, STM-1/4/OC-3/12/FC-1 • 24 x STM-16/OC-48/FC-2 • 12 x FC-4 • 3 x 10GbE/FC-8/FC-12/STM-64/OC-192 • 30/24/12 x SDI/HD-SDI/HD-SDI3G **Max. transport interfaces:** 24 x OTU-1, 3 x OTU-2/e
Packet	Max. service Interfaces: 36 x 10/100base-T, 36 x 100 base-X 12x100/1000 Base-X, 24 x 10/100/1000 Base-T
TDM	**Max. service interfaces:** • Native: 189 x E1, 9 x E3/DS3, 12 x STM-1 • CES: 96 x E1 • Native or CES: 72 x (n x 64Kbps ,FXO, FXS, 2/4W E&M, V24 (RS232) , V35, V36 ,V11, RS422, RS449, C37.94, OMNI, CODIR , G.703 64K over TDM or packet
Physical dimensions	H x W x D: 3.5" x 17.4" x 9.6" / 88 x 443 x 243 mm

Specifications subject to change without notice

Contact us to find out how our ELASTIC networks can help your business grow

ABOUT ECI

ECI is a global provider of ELASTIC network solutions to CSPs, utilities as well as data center operators. Along with its long-standing, industry-proven packet-optical transport, ECI offers a variety of SDN/NFV applications, end-to-end network management, a comprehensive cyber security solution, and a range of professional services. ECI's ELASTIC solutions ensure open, future-proof, and secure communications. With ECI, customers have the luxury of choosing a network that can be tailor-made to their needs today – while being flexible enough to evolve with the changing needs of tomorrow. For more information, visit us at **www.ecitele.com**

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