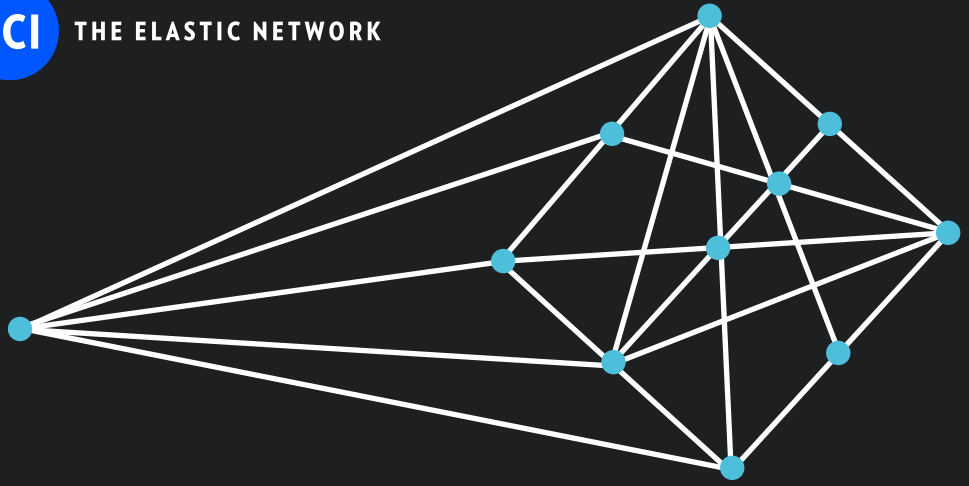


# NEPTUNE NPT-1050

## CONVERGED METRO ACCESS TRANSPORT



Neptune (NPT) is a family of carrier-class MPLS-based multiservice packet-optical transport platforms, offering best-in-class Carrier Ethernet and packet transport solutions for the metro. Neptune streamlines end-to-end metro service delivery by combining carrier-grade service assurance, visibility, and control, with packet efficiency and unparalleled L1 to L3 multiservice support. Neptune offers converged support for Ethernet, MPLS, OTN, and WDM to provide a powerful, flexible solution for high-performance services and Elastic MPLS. SDN and NFV capabilities allow Neptune to evolve to meet the rapidly-changing metro environment.



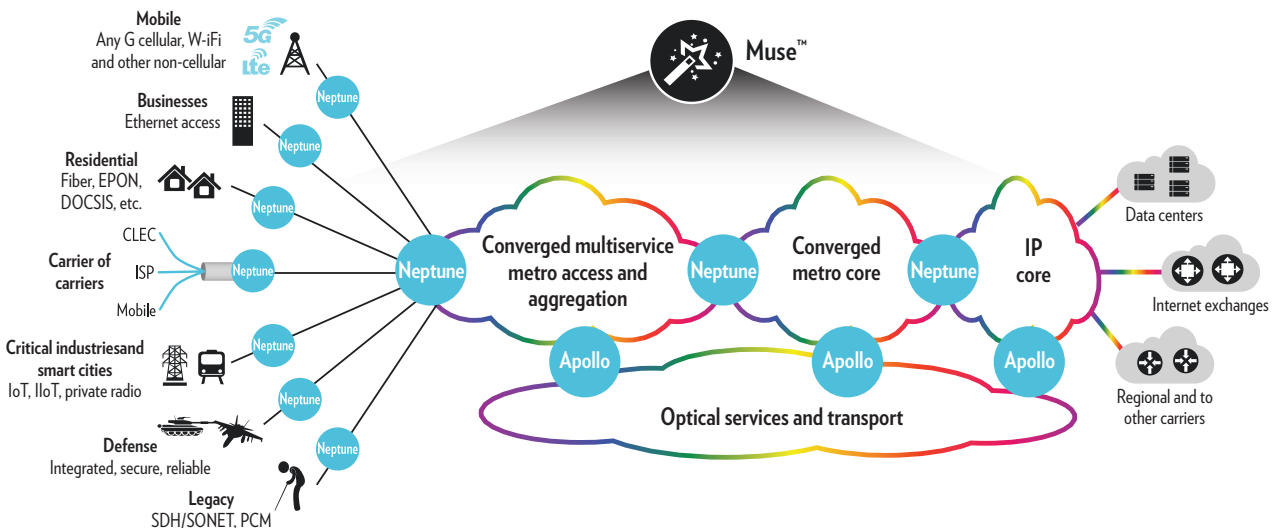
NPT-1050 is a compact, fully-redundant, modular, MPLS-based (IP and TP) multiservice packet transport platform. Equipped with 300Gbps packet switching and 100G interfaces and a port fan-out of 380G in just 1RU, NPT-1050 is optimized for high-capacity metro-access applications. Support for Ethernet, TDM (CES), and MPLS make NPT-1050 ideal for operators wanting a converged transport platform for new and legacy services. With such a rich and robust feature set, NPT-1050 is well-suited for a wide variety of applications and networking scenarios. These include; CES for TDM migration, mobile backhaul, wholesale services, residential multiplay, business VPNs, and mission-critical service delivery. Like all ECI's transport products, NPT-1050 is managed by ECI's Muse™ software suite.

**Elastic  
multiservice**

**Carrier-grade  
service assurance**

**Fully-managed across  
TDM and packet**

**Elastic  
scalability**



# Technical specifications

Packet	Switch: 100 Gbps/300 Gbps Services: MEF CE2.0 (E-Line, E-LAN, E-Tree, E-Access) PN and VPN based Ethernet and IP, MPLS (TP and IP), multicast and IPTV Max. Interfaces (100 Gbps configuration): 20 x 10/100/1000 Base-T, 40 x 100/1000 Base-X, 10 x 10GE Max. Interfaces (300 Gbps configuration): 23 x 10/100/1000 Base-T, 38 x 100/1000 Base-X, 20 x 10G or 12 x 10G OTN, 3 x 100G
TDM	Services: CES (SATO, CESoPSN and CEP) Max. 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 SATO, 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, FRR with LFA (local and remote), PW Redundancy (PWR), Virtual Router Redundancy Protocol (VRRP), Multisegment-PW, IEEE 802.3ad Ethernet Link, Link Aggregation (LAG) with LACP, Multi Chassis LAG (MC-LAG) Aggregation (LAG) with LACP, Multi Chassis LAG (MC-LAG)
OAM	Ethernet OAM (IEEE802.3ah, IEEE 802.1ag and ITU-T Y.1731 PM), IP/MPLS OAM ((link BFD, Ping, Trace-route), MPLS-TP OAM (G8113.2, RFC5860, Bidirectional Forwarding Detection (BFD), LDI, LSP ping, LSP trace route), RFC 2544 Generator, Y.1564 -Ethernet service activation (SLA), RFC 5357 Two-Way Active Measurement Protocol (TWAMP)
Traffic management	Traffic classification (based on Port, VLAN, Port+VLAN, IEEE 802.1p, IPv4/IPv6 TOS and DSCP), Diffserv based TM, network Connection Admission Control (CAC), 8 Classes of Service (CoS)
Topologies	Mesh, dual homing, multiring, ring, star, linear
Security	RADIUS (client authentication), SSH 2 SW integrity checking (SHA-2), SFTP, Access Control List (ACL), IEEE802.1x, control channel HMAC-256, Public key authentication, port blocked by default, MACsec
Management	Muse™ software suite (SDN orchestration and control), LightSOFT® NMS, EMS-NPT, SNMPv2/v3, LCT, CLI, NETCONF/YANG, PCEP, BGP-LS NETCONF/YANG
Power over Ethernet (PoE+)	Up to 30W
Pluggable SFP/CSFP/SFP+ support	Electrical, Colored C/DWDM, Tunable, non-colored, Compact SFP (CSFP), SFP+, bidirectional SFPs/SFP+ and QSFP28
Power input	-40 VDC to -72 VDC, 110 VAC to 230 VAC
Power dissipation	Typical: 150W
Operating temperature range	100G/300G configuration: -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, IEEE 1613 (electric utility substations), IEC 61850-3 (electric utility substations), EN 61000-6-5 (Immunity for substations)
Safety	EN 60950/2000, according to LVD Directive 72/23/EEC, EN 60825-1&2
EMS	EN 300 386-2, FTZ 1TR9, EN55032 radiation
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: <ul style="list-style-type: none"> <li>• 48 x 1GE, STM-1/4/OC-3/12/FC-1</li> <li>• 24 x STM-16/OC-48/FC-2</li> <li>• 12 x FC-4</li> <li>• 3 x 10GbE/FC-8/FC-12/STM-64/OC-192</li> <li>• 30/24/12 x SDI/HD-SDI/HD-SDI3G</li> </ul> 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
TDM	Max. service interfaces: CES: 96 x E1 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 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 RIBBON

Ribbon Communications (Nasdaq: RBBN), which recently merged with ECI Telecom Group, delivers global communications software and network solutions to service providers, enterprises and critical infrastructure sectors. We engage deeply with our customers, helping them modernize their networks for improved competitive positioning and business outcomes in today's smart, always-on and data-hungry world. Our innovative, end-to-end solutions portfolio delivers unparalleled scale, performance, and agility, including core to edge IP solutions, UCaaS/ CPaaS cloud offers, leading-edge software security and analytics tools, as well as packet and optical networking leveraging ECI's Elastic Network technology. To learn more about Ribbon, visit [rbbn.com](http://rbbn.com) and for more information about our packet and optical networking portfolio, visit [www.ecitele.com](http://www.ecitele.com)

