

# Neptune NPT-1200

## Converged Multiservice Metro Access and Aggregation

Netptune (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.



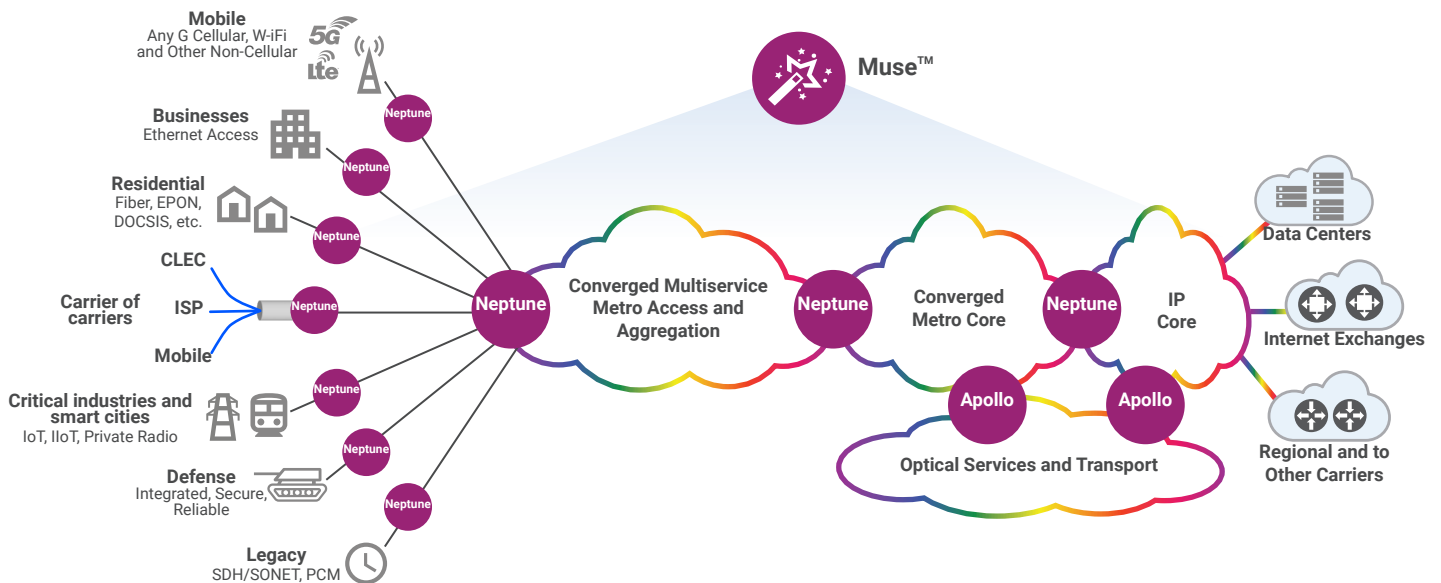
NPT-1200 is a compact, fully-redundant, modular, MPLS-based (IP and TP) multiservice packet transport platform. Equipped with 560Gbps packet switching and 100G interfaces in just 2RU, NPT-1200 is optimized for high-capacity metro aggregation. Support for Ethernet, TDM (CES), and MPLS make NPT-1200 ideal for operators wanting a converged transport platform for new and legacy services. With such a rich and robust feature set, NPT-1200 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-1200 is managed by ECI's Muse™ software suite.

**Elastic Multiservice**

**Carrier-Grade Service Assurance**

**Fully-Managed Across TDM and Packet**

**Elastic Scalability**



## Technical Specifications

<b>Packet</b>	Switch: 100 Gbps/320 Gbps/560 Gbps Services: MEF CE2.0 (E-Line, E-LAN, E-Tree, E-Access) PN and VPN based Ethernet and IP, MPLS (TP and IP), segment routing Max. Interfaces (100 Gbps configuration): 48 x 100/1000 FX, 10 x 10GE OTN Max. Interfaces (320 Gbps configuration): 64 x 100/1000 FX, 32 x 10GE OTN Max. Interfaces (560 Gbps configuration): 4 x 100G, 60 x 100/1000 BaseX, 32 x 10GE OTN
<b>TDM</b>	Services: CES (SATO, CESoPSN and CEP), MEF CE2.0 (E-Line, E-LAN, E-Tree, E-Access) PN and VPN based Ethernet and IP, MPLS (TP and IP), segment routing Max. Interfaces: 320 x E1/T1, 24 x STM-1/OC-3, 6 x STM-4/OC-12
<b>WDM</b>	CWDM, DWDM, muxponder, amplifiers
<b>Timing and Synchronization</b>	SyncE with ESMC, 1588v2, external timing 1PPS and TOD, internal stratum 3E clock (holdover state), primary and secondary sources (supports SSM bits), ACR, DCR, loop timing on SAToP, TDM bits (T3/T4), and SNTP
<b>Protection and restoration</b>	HW 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), Multi Segment-PW, IEEE 802.3ad Ethernet Link Aggregation(LAG) with LACP, Multi Chassis LAG (MC-LAG)
<b>OAM</b>	Ethernet OAM (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)
<b>Traffic management</b>	Traffic classification (based on Port, VLAN, Port+VLAN, IEEE 802.1p, IPv4/IPv6 TOS and DSCP), Diffserv based TM, Network wide Call Admission Control (CAC), 8 Classes of Service (CoS)
<b>Topologies</b>	Mesh, dual homing, multi-ring, ring, star, linear
<b>Security</b>	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 as default, MACsec
<b>Management</b>	MUSE software suite, MUSE LightSOFT® NMS, EMS-NPT, SNMPv2/v3, LCT
<b>Power over Ethernet (PoE+)</b>	Up to 30W
<b>Pluggable support</b>	Electrical, colored C/DWDM, tunable, non-colored, Compact SFP (CSFP), SFP+, bidirectional SFPs/SFP+ and QSFP28
<b>Power input</b>	-40 VDC to -72 VDC, 110 VAC to 230 VAC
<b>Power dissipation</b>	Typical: 300W
<b>Operating temperature range</b>	-25°C to +70°C (-13°F to 158°F) – 100G, -5°C to +50°C (23°F to 122°F) - 320G/560G
<b>Operating RH range</b>	5% to 95%
<b>Environmental standards</b>	NEBS –GR-63 Core, GR-1089 Core, ETS 300 019-1-3 Class 3.3 (100G) Class 3.2 (320G,560G), IEEE 1613 (electric utility substations), IEC 61850-3 (electric utility substations), EN 61000-6-5 (Immunity for substations)
<b>Safety</b>	EN 60950/2000, according to LVD Directive 72/23/EEC, EN 60825-1&2
<b>EMC</b>	EN 300 386-2, FTZ 1TR9, EN55032 radiation emissions (Class A)
<b>Physical dimensions</b>	H x W x D: 3.5" x 18.3" x 9.6" / 88 x 465 x 243 mm

## Expansion Unit

<b>OTN</b>	Services: Ethernet, storage, video, SDH/SONET Max. Service interfaces: 48 x 1GE, 3 x 10GE, 24/12/8/3/3 x FC-1/2/4/8/10, 9 x (SDI, HD-SDI, DVB-ASI), 30 x (STM-1/4/16, OC-3/12/48), 3 x STM-64/OC-192, 24 x OTU-1, 3 x OTU-2 Max. transport interfaces: 24 x OTU-1, 3 x OTU-2, 3 x OTU-2e Optical amplifiers DCFs
<b>Packet</b>	Max. service interfaces: 36 x 100BaseFX, 36 x 10/100BaseFE
<b>TDM</b>	Max. service interfaces: 96 x E1/T1, 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
<b>Physical dimensions</b>	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

## Corning Services GmbH

Ahrensburger Straße 8  
30659 Hanover  
Germany  
Tel: (+49)0511/740192-0  
Fax: (+49)0511/740192-100  
www.Corning-Services.de