



Neptune NPT-1020

Metro Access Transport for Packet and TDM

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.



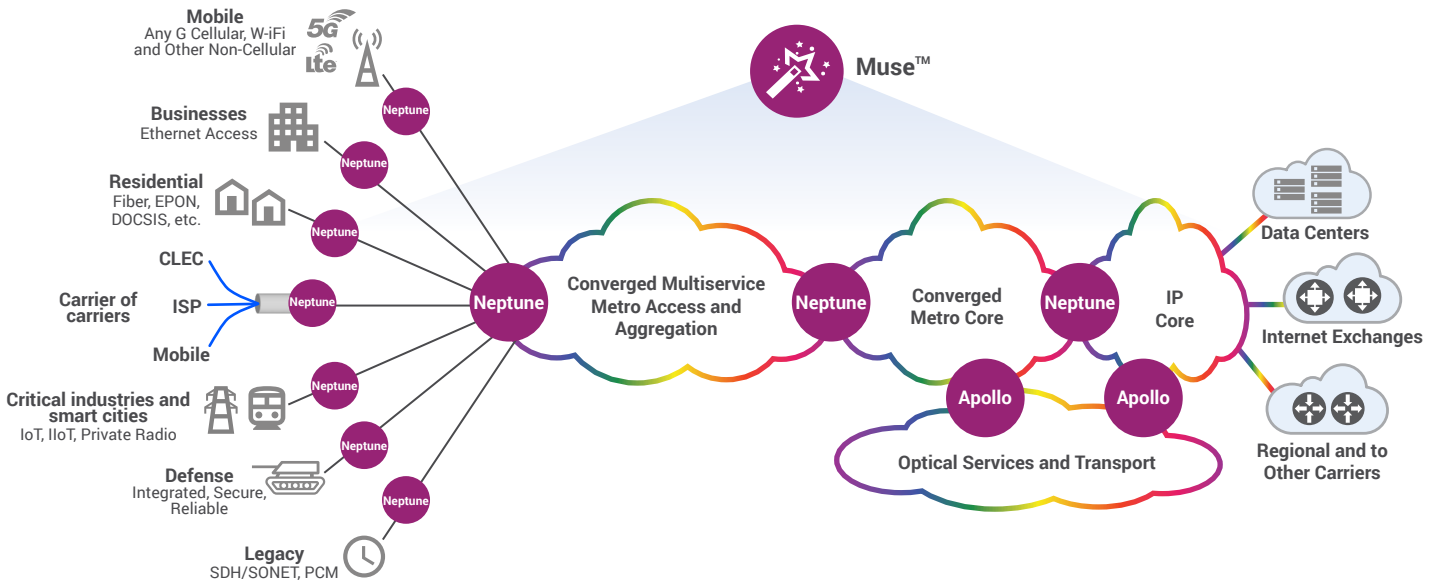
NPT-1020 is an extremely compact multiservice packet transport platform, supporting Ethernet, TDM, and MPLS-TP. Its 1RU height and 60Gbps packet switch make it optimized as a high-capacity CPE. Support for native TDM and TDM over CES/CEP make NPT-1020 ideal for operators looking for a modern packet platform on which to evolve their legacy TDM network. With such a rich and robust feature set, NPT-1020 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 Ribbon's transport products, NPT-1020 is managed by Ribbon's Muse™ software suite.

Elastic Multiservice

Carrier-Grade Service Assurance

Fully-Managed Across TDM and Packet

Elastic Scalability



Technical Specifications

Packet	Switch: 60 Gbps (10 GbE based configuration)/10 Gbps (GbE configuration) Services: MEF CE2.0 (E-Line, E-LAN, E-Tree, E-Access) PN- and VPN-based Ethernet and IP, MPLS-TP Rooted multipoint for multicast and IPTV Max. Interfaces: 16 x 10/100/1000 Base-T 8 x 100/1000 Base-X 4 x 10GE
TDM	Matrix: 2.5 Gbps with 4/3/1 connectivity (100% Low order granularity) Services: Native TDM, CES (SAToP, CESoPSN and CEP) Max. Native Interfaces: 3 x STM-4, 4 x STM-1, 3 x DS3/E3, 84 x E1 Max. CES Interfaces: 32 x E1/T1, 4 x STM-1/OC-3, 1 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 power supply units, IO 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, Multichassis 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 and DSCP), Diffserv-based TM, Network Connection Admission Control (CAC), 8 Classes of Service (CoS)
Topologies	Mesh, dual homing , multi-ring, 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 by default
Management	MUSE Lightsoft NMS, EMS-NPT, SNMPv2/v3, LCT, LightAPPS
Power over Ethernet (PoE+)	Up to 30W
Performance monitoring	Electrical, colored C/DWDM, tunable, non-colored, Compact SFP (CSFP)SFP+, bidirectional SFPs/SFP+
Operating temperature range	-40 VDC to -72 VDC, 110 VAC to 230 VAC
Operating RH range	5% to 95%
Environmental standards	NEBS –GR-63 Core, GR-1089 Core, 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	EN60950-1
EMC	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, 24x10/100/1000 Base-T
TDM	Max. service interfaces: <ul style="list-style-type: none"> 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

Specifications subject to change without notice

Contact Us

We are here to help. Contact us about our IP Wave solutions.