



Neptune NPT-1300

Metro Aggregation Transport

NPT-1300 is a compact, high-capacity MPLS-based (IP and TP) multiservice packet transport platform, optimized for high-capacity metro aggregation applications. Exceptional density means that it can support up to 1Tbps capacity in a 3RU shelf and provides 100G/200G per slot with 100G and 200G coherent interfaces, while providing full redundancy. Ribbon's Neptune



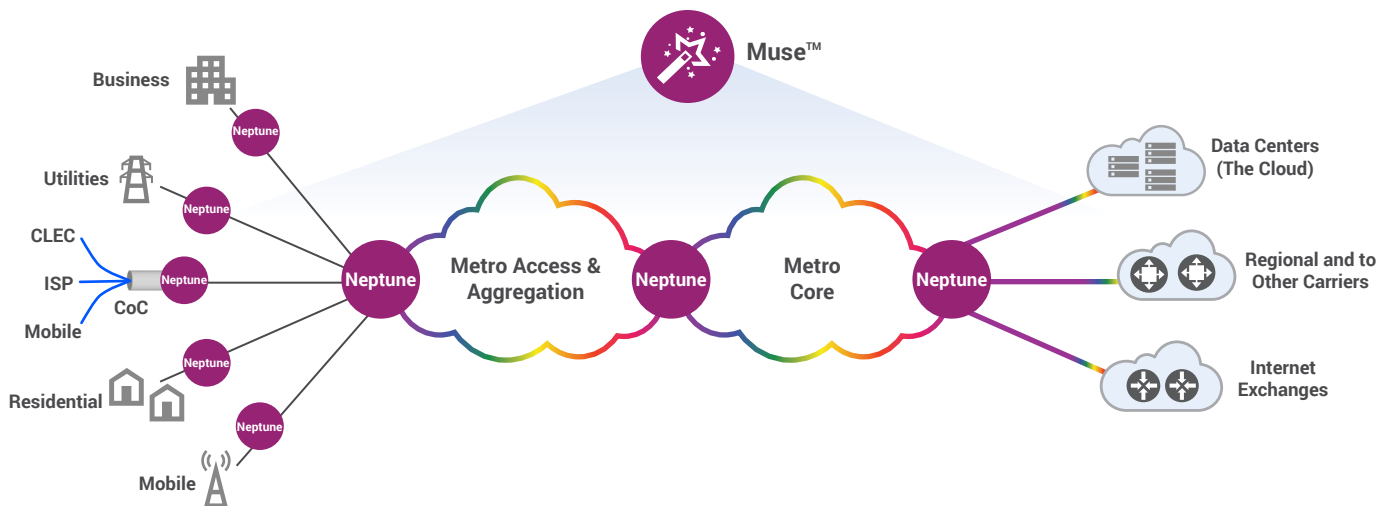
product line streamlines end-to-end metro service delivery by combining carrier-grade service assurance, visibility, and control with packet efficiency and unparalleled multiservice support. Neptune offers a powerful, flexible, and efficient end-to-end metro solution for high-performance L2 and L3 services. It achieves this by converging IP, Elastic MPLS (IP and TP), Ethernet (MEF CE2.0 certified), OTN wrapping, WDM, and TDM. Neptune also provides NFV services and SDN applications, which are compulsory in today's metro environment. With such a rich and robust feature set, NPT™-1300 is well suited for a wide variety of applications and networking scenarios. These include mobile backhaul (3G, 4G, and 5G), wholesale service delivery, residential multiplay, and business VPN connectivity services. As with all Ribbon's transport products, NPT-1300 is managed by Ribbon's MUSE LightSOFT®.

Unmatched Multiservice

Compact and High-Capacity
access and aggregation

Carrier-Grade Redundancy
and service assurance

Elastic MPLS
both IP and TP



Technical Specifications

Packet	Switch: 920 Gbps (1.6T future) 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 140 x 100/1000 BaseX, 56 x 10GE, 36 x 10GBE OTN, 6 x 100GBE, 4 x 100GE OTU-4, 2 x 200G OTUC2
TDM	Services: CES (SATO, CESoPSN and CEP) Max. Native Interfaces: 224 x E1/T1, 28 x STM-1/OC-3, 7 x STM-4/OC-12
WDM	CWDM, DWDM, Amplifiers, IPoDWDM, 100GBE coherent interfaces
Timing and Synchronization	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
Protection and restoration	Hardware redundancy for common units, RSTP/MSTP, G.8032 Ethernet Ring Protection (ERP), 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)
OAM	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)
Traffic management	Traffic classification (based on Port, VLAN, Port+VLAN, IEEE 802.1p, IPv4/IPv6 TOS and DSCP), Diffserv based TM
Topologies	Mesh, dual-homing, multi-ring, 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 as default, MACsec
Management	MUSE software suite, MUSE LightSOFT® NMS, EMS-NPT, SNMPv2/v3, LCT, CLI, NETCONF/YANG, PCEP, BGP-LS, MUSE for SDN orchestration and control
Power over Ethernet (PoE+)	Up to 30W
Pluggable support	Electrical, C/DWDM, tunable, non-colored, Compact SFP (CSFP), SFP+, bidirectional SFPs/SFP+, QSFP28
Power input	-40 VDC to -72 VDC
Power dissipation	Typical: 500W
Operating temperature range	-25°C to +65°C (-13°F to 149°F)
Operating RH range	5% to 95%
Environmental standards	NEBS GR-63 Core, GR-1089 Core, ETS 300 019-1-3 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
EMC	EN 300 386-2, FTZ 1 TR9, EN55032 radiation emissions (class A)
Physical dimensions	H x W x D: 3.5" x 18.3" x 9.6" / 132 x 465 x 243 mm

Expansion Unit

WDM	Optical amplifiers, DCFs
TDM	Max. service interfaces: 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: 5.2" 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 at rbbn.com