Empowered by Innovation   **NEC**

MN5200

## PACKET TRANSPORT NETWORK SOLUTION

Construct Packet Transport Network with MN5200

The MN5200 is a new product based on Pseudowire over T-MPLS/MPLS-TP technology; it has been developed to overcome the data traffic consuming at most carrier's bandwidth in current SDH/SONET based infrastructure. As a convergence transport technology, the MN5200 is the key fact for today's metro network carriers and services providers. Equipped with enhanced data service processing capability and powerful network management function, the MN5200 can provide all-round network solutions at the access layer and aggregation layer of a Metropolitan Area Network (MAN), enormously reducing the operation cost. While MN5200 will mainly be positioned as User Provider Edge (UPE) at metro network, NEC also introduces the MN5300, which can be applied in both UPE and Network Provider Edge (NPE) solutions. For more detailed information on MN5300, please refer to its documentation data.

- **T-MPLS/MPLS-TP BASED**
- **MULTI SERVICE SUPPORT**
- **CARRIER CLASS DESIGN**
- **SMALL FOOTPRINT**
- **FULL PROTECTIONS**
- **QUALITY OF SERVICE**

LAYER ARCHITECTURE

With MN5200, the Ethernet, TDM (E1/T1 - SDH/SONET) or ATM payloads are transported over the Pseudowire layer, where the payloads can be encapsulated and multiplexed/de-multiplexed into a single T-MPLS/MPLS-TP tunnel. T-MPLS/MPLS-TP layer provides the transport tunnel for the traffic been transferred across the IP/MPLS core network. At physical layer, the MN5200 can use Ethernet and/or both SDH/SONET transport technologies. The architecture of MN5200 is described in the figure bellow:
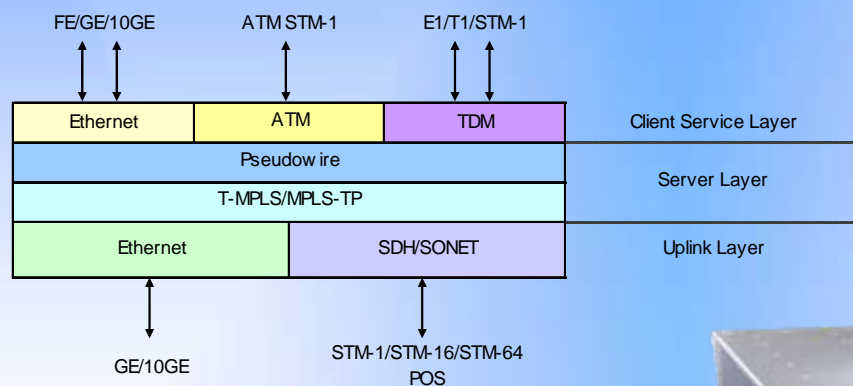
Technical Summary

HARDWARE

DIMENSIONS	133(H) x 440(W) x 410(D) mm (3U)
WEIGHT	11kg (empty) / 21kg (full)
TEMPERATURE	5 °C to 40 °C
POWER SUPPLY	−48V DC
Max.POWER CONSUMPTION	Less than 300W fully loaded
HUMIDITY	5% to 85% non-condensing

INTERFACE

TYPE	PORTS per MODULE	MAX. PORTS per CHASSIS
STM-64 POS	1	4
STM-16 POS	1	4
STM-1 POS	1	4
10 GE	1	4
GE	8/12	24
FE	8/12	24
ATM STM-1	4/8	8/16
SDH STM-1	4/8	8/16
E1/T1	16	16 with protection

PROTECTION SCHEME

Hardware redundancy:	1+1 power supply, 1+1 OPCA card (OAM, clock processing and switch fabric),
	1:1 E1/T1 Card Failure Protection (CFP)
Network Protection:	1+1 Linear MSP (ITU-T G.841 Annex B) for STM-1 (ATM or SDH)
	1:1 Linear MSP for STM-1 (ATM or SDH); 1+1 Linear protection for LSP
	1:1 Linear Protection for LSP

TIMING/SYNCHRONIZATION

POS interface: Line timing and SSM (S1 byte) transmission

GE/10GE interface: Line timing and SSM (control frame) transmission

Free run: ±4.6ppm (ITU G.813)

Holdover: ±0.05ppm within 24 hours

Provide sync signal for 3G Base Station: External timing output

Traceable STM-1 ATM interface as line timing source

NETWORK MANAGEMENT   SpectralWave MN9200(EMS), LCT (Local Craft Terminal)

STANDARDS & RECOMMENDATIONS

IETF   RFC3031, RFC3916, RFC 3985, RFC 4197, RFC 4553, RFC 4842, RFC 4717, RFC 4816, RFC 4448

ITU-T   G.8110, G.8110.1, Y.1711, Y.1720

DATA PACKET PROCESSOR

PACKET PROCESSING CAPACITY

88Gbps full duplex switching fabric

T-MPLS/MPLS-TP FEATURES

8K MPLS label per MN5200 Chassis (Shared by PW/LSP)

EXP-Inferred-PSC LSPs (E-LSP)

Label-only-Inferred-PSC LSPs (L-LSP)

Per platform Label space support

Bi-directional T-MPLS/MPLS-TP trail and Uni-directional T-MPLS/MPLS-TP trail

Diff-Serv support:

　　2 service levels for TDM Emulation (E1/T1, SDH/SONET)

　　4 service levels for statistical multiplexing traffic (ATM)

　　8 service levels supported in the Network (Data Service)

MPLS OAM including protection switching

Virtual Circuit Connection Verification (VCCV)

LSP TraceRoute

EMS/SNMS manually controls the setup and the release of PW and LSP

⚠ Safety Precautions	★ Before installing, connection or using this product, be sure to carefully read and observe the cautionary and prohibited matters provided in the instruction manual.

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For inquiries, contact :