The MN5300 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 MN5300 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 MN5300 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 MN5300 can apply in both User Provider Edge (UPE) and Network Provider Edge (NPE) solutions, NEC also introduces MN5200, which will mainly be positioned as UPE at metro network. For more detailed information on MN5200, please refer to its documentation data.

LAYER ARCHITECTURE

With MN5300, 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 MN5300 can use Ethernet and/or both SDH/SONET transport technologies. The architecture of MN5300 is described in the figure below:
**Technical Summary**

**HARDWARE**

**DIMENSIONS**  
320(H) x 440(W) x 410(D) mm (7U)

**WEIGHT**  
22kg (empty) / 41kg (full)

**TEMPERATURE**  
5 °C to 40 °C

**POWER SUPPLY**  
- 48V DC

**Max. POWER CONSUMPTION**  
Less than 700W fully loaded

**HUMIDITY**  
5% to 85% non-condensing

**INTERFACE**

<table>
<thead>
<tr>
<th>TYPE</th>
<th>PORTS per MODULE</th>
<th>MAX. PORTS per CHASSIS</th>
</tr>
</thead>
<tbody>
<tr>
<td>STM-64 POS</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>STM-16 POS</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>STM-1 POS</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>10 GE</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>GE</td>
<td>12</td>
<td>36</td>
</tr>
<tr>
<td>FE</td>
<td>12</td>
<td>36</td>
</tr>
<tr>
<td>ATM STM-1</td>
<td>8</td>
<td>64</td>
</tr>
<tr>
<td>SDH STM-1</td>
<td>8</td>
<td>64</td>
</tr>
<tr>
<td>E1/T1</td>
<td>32</td>
<td>64 with protection</td>
</tr>
</tbody>
</table>

**PROTECTION SCHEME**

Hardware redundancy:  
1+1 power supply, 1+1 OAM card, 1+1 SPCA card (Clock processing and switch fabric),  
2:1 32 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

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**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.
- The company names and product names given in this catalog are trademarks or registered trademarks of the respective companies.
- The configuration or specifications are subject to change without prior notice due to continual improvements.

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