DATA SHEET

XTM SERIES

TM-301/II CHASSIS

Compact and Flexible Network Element Platform

The XTM Series contains a wide range of active and passive plug-in units optimized for cost-effective Layer 1 and Layer 2 transport. These plug-in units can be mounted in any of these three enclosures: TM-3000/II, TM-301/II and TM-102/II. The selection of enclosure is based on the number of needed slots and expected space for upgrades.

A TM-301/II chassis, for example, can be equipped with any mix of dense wavelength-division multiplexing (DWDM) and coarse wavelength-division multiplexing (CWDM) plug-in units in either single-fiber or fiber pair configurations.

A Compact and Flexible System Platform

The TM-301/II chassis is the medium capacity enclosure, with up to four full-sized slots for Layer 0, Layer 1 or Layer 2 plug-in units and up to four half-sized slots typically used for Layer 0 plug-in units such as CWDM add/drop filters or other optical units. The TM-301/II chassis can be configured to any network element (NE) type or combination of NE types. The generic backplane imposes no restrictions on NE type or NE combination. This flexible approach is unique and eliminates the challenges associated with static NE types, such as terminal multiplexer only or add-drop multiplexer only NEs.

Carrier Class

The TM-301/II chassis has redundant fan units and dual redundant primary power modules (A+B configuration). All connections are made from the front.

Key benefits:

- Compact and highly flexible, allowing configuration to any network element type
- Reconfigurable card cage
- Generic backplane enables multiple network element configurations
- Dual fan units and primary power inlets for maximum availability and carrier-class performance
- Low power design for low power consumption

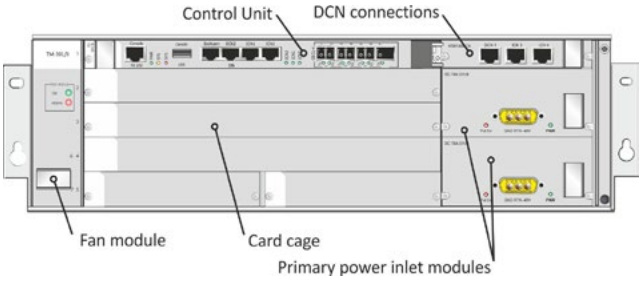

Fig 1. TM-301/II Chassis.

Reconfigurable Card Cage

The card cage has one dedicated slot for a Control Unit (CU). The following two slots are for full-sized plug-in units, such as Transponders, Muxponders, Optical Filters, Amplifiers, etc. The two following slots can mechanically be configured as half-sized or full-sized slots. Half-sized units are normally passive optical devices (e.g. add-drop filters). Some active half-sized units are also available. See technical documentation for more details.

The actual configuration is detected by the Control Unit and is displayed via the management system.

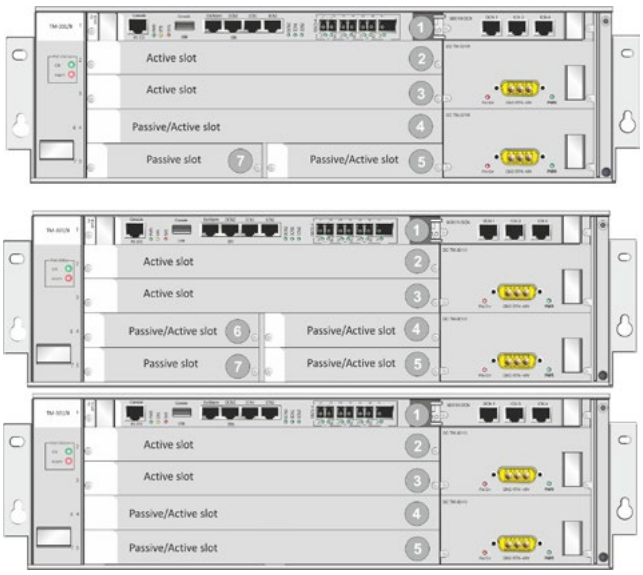

Fig 2. TM-301/II Card Cage Configurations.

When a unit is inserted into a card slot, the slot position is detected by the unit and forwarded to the CU. The CU contains the Infinera Embedded Node Manager (ENM) and provides an aggregated management view of all units within the TM-301/II chassis. The CU has a backup copy of all traffic unit configurations and upon board replacement, the previous configuration and correct software version can be downloaded to the new unit from the CU.

Similarly, all traffic units have a backup copy of the CU configuration, i.e. NE configuration. Upon CU failure, the replacement board can be set into the previous configuration automatically.

Resilience

Redundant fan units and primary power inlets ensure the reliability of the TM-301/II chassis. Protection of traffic can be established in many ways, depending on traffic unit type. Some Layer 1 units provide 1+1 line protection directly. Other traffic units can be configured for equipment protection while Layer 2 units provide protection schemes like Ethernet ring protection. See separate documentation for further details.

Low Power Design

A fully equipped TM-301/II chassis consumes a maximum of only 595 watts (W), with many configurations requiring considerably lower power consumption. Low power consumption in combination with a small footprint reduces site costs and enables more capacity to be handled at sites with restrictions on power consumption, cooling and space.

Specifications

Dimensions	Height: 3U / 133 mm (5.2 in) Depth: 280 mm (11 in) Width: 445 mm (17.5 in) (excl. mounting brackets)
Primary Power	DC-inlets. Redundant, hot swap
Cooling	Redundant fan units. Hot swap
Mounting	ETSI, 19", 23"
LAN/ Management Connections	RJ45
Primary Power Range, DC	48 VDC (40.5 – 57 VDC), 15A Class III
Max Power at DC Powering	595 W
Max Inrush Current @ -48 VDC	>25Apk, >1ms
Primary Power Range AC	External AC/DC converter AC-DC-1RU-1K2 100-240VAC, 50/60Hz, 2x20-8A
Max Power at AC Powering	670 W
Max Inrush Current @ AC	>50Apk, >100ms

Specifications and Features Are Subject to Change

Infinera