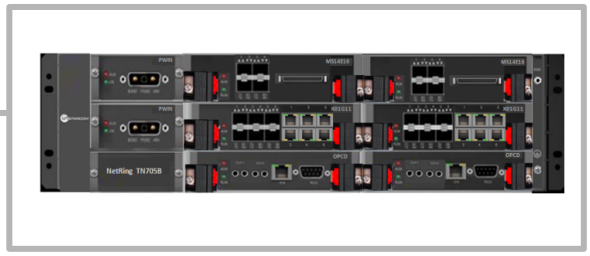
NetRing® TN705B

MPLS-TP PACKET OPTICAL AGGREGATION NETWORK SWITCH

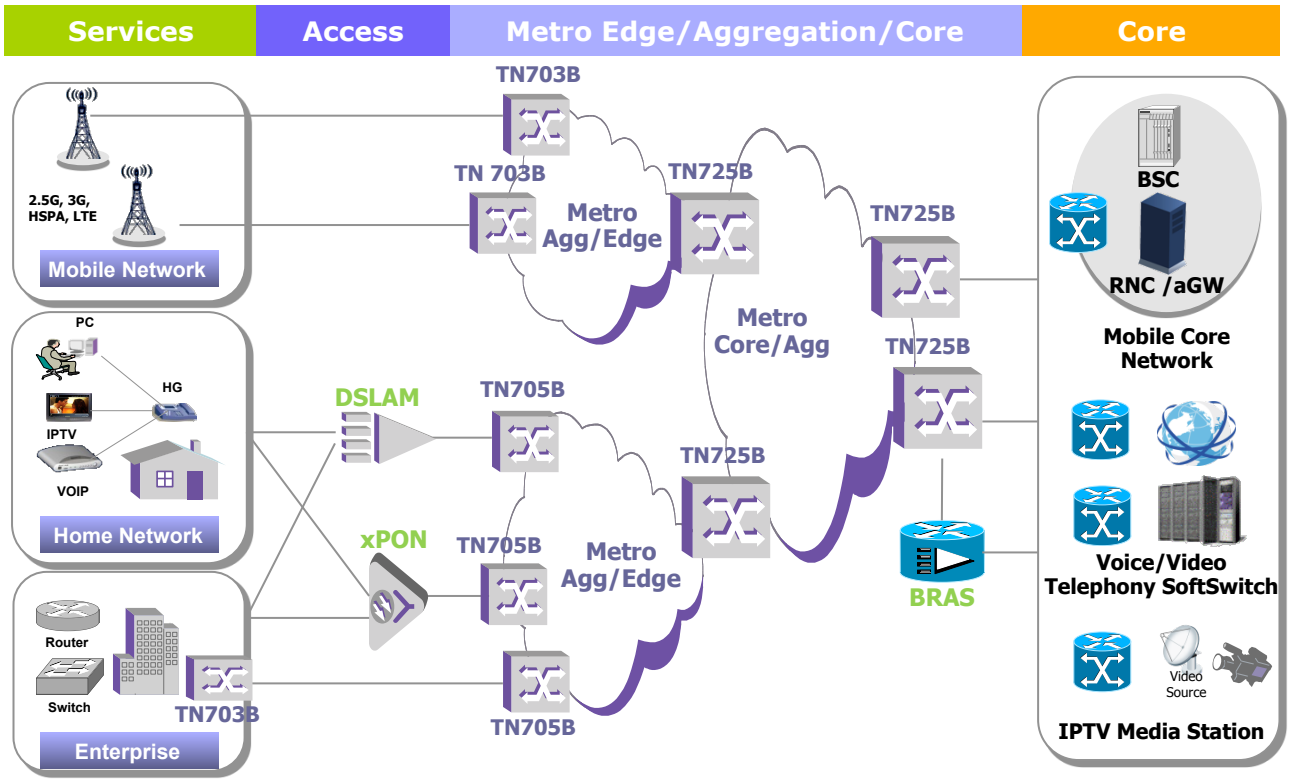


- **MPLS-TP BASED**
- **CARRIER CLASS DESIGN**
- **SMALL FOOTPRINT**
- **FULL PROTECTIONS**
- **IEEE 1588V2 AND SYNCE**
- **VPLS/H-VPLS SUPPORT**
- **QUALITY OF SERVICE**

In recent years, there has been a radical shift from traditional TDM based voice traffic to packet based data traffic. New services like 3G/4G, PTP, IPTV etc demand ever increasing data bandwidth. UTStarcom's NetRing® TN705B provides a unified platform for new data services over an all-packet aggregation switches. It is based on Pseudo Wire over MPLS-TP technology providing Ethernet aggregation. TN705B, together with other products in the TN portfolio provides optimal network solutions at the access layer and aggregation layer of MAN and substantially reduce the operational cost. TN705B can be used either as a customer edge or as a first level aggregation device in metro networks.

LAYERED ARCHITECTURE

With TN705B, Ethernet is aggregated over the Pseudo Wire layer where such payload is encapsulated and multiplexed/de-multiplexed into a single MPLS-TP tunnel. MPLS-TP layer provides aggregation tunnel for this traffic to be transferred across IP/MPLS/MPLS-TP network. At NNI physical layer TN705B uses Ethernet aggregation technologies.



Technical Specifications

SYSTEM CHASSIS

Dimensions	440 x 133 x 410mm WxHxD 3U, 19”/ETSI rack mountable
Standard guaranteed temperature	0℃ to 45 ℃
Power supply	-48V DC, dual inputs
Power consumption	200W (max)
Weight	10kg(empty)/ 18kg(full)

ACCESS CAPACITY

Interface	Max. ports per card	Max. ports per shelf
10 GE	1 (X01G11)	2
FE/GE	12 (X01G11)	24
STM-1	4 (MS14E16)	8
E1	16 (MS14E16)	32

PACKET PROCESSOR

Packet processing capacity 64Gbps full duplex switching fabric

MPLS-TP FEATURES

EXP-Inferred-PSC LSPs (E-LSP)

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

Bi-directional MPLS-TP trail

Diff-Serv support:

- 8 service levels for Ethernet traffic
- 2 service levels for TDM Emulation

QoS support:

- classification, mapping, metering, scheduling, congestion management

MPLS-TP OAM including protection switching

VPLS/H-VPLS

EMS/SNMS manual control the setup and release of PW and LSP

NETWORK MANAGEMENT

Centralized Network Management System

Geographical Redundancy of NMS

LCT (Local Craft Terminal)

NBI (TMF 814 CORBA)

CLIENT INTERFACES/SERVICES

Ethernet: E-Line, E-LAN and E-Tree

Interfaces: E1/STM-1(CES)/FE/GE/10GE

PROTECTION SCHEMES

Hardware Redundancy	1+1 power supply, 1+1 main control (OAM) 1+1 clock processing unit, 1+1 switch fabric
Network Protection	N:1/1:1/1+1 Linear Protection for LSP 1:1/1+1 PW protection LACP for GE/10GE client ports Dual homing protection 1+1 MSP for STM-1

TIMING/SYNCHRONIZATION

IEEE 1588V2 PTP

SyncE with Synchronization Status Message (SSM)

Free run: ±4.6ppm (ITU-T G.813)

Holdover: ±0.05ppm within 24 hours

Provide sync signal for 3G/LTE Base Station: External 2Mbit/s or 2MHz input and output interfaces

STANDARDS & RECOMMENDATIONS

IETF RFC 2597, RFC 2598, RFC 2698, RFC 2998, RFC 3031, RFC 3032, RFC 3270, RFC 3443, RFC 3813, RFC 3916, RFC 3985, RFC 4115, RFC 4197, RFC 4378, RFC 4379, RFC 4385, RFC 4448, RFC 4664, RFC 4717, RFC 4816, RFC 5254, RFC 5462, RFC 5586, RFC 5654, RFC 5659, RFC 5860, RFC 5921, RFC 5960, RFC 6073

IEEE 802.3, 1588V2, 802.1ad, 802.1ag, 802.1p, 802.1q, 802.3ah

ITU-T G.664, G.703, G.7041/Y.1303, G.707, G.773, G.774, G.775, G.783, G.8011, G.8011.1, G.8011.2, G.8011.3, G.8011.4, G.8011.5, G.805, G.806, G.809, G.8110/Y.1370, G.8110.1/Y.1370.1, G.8112/Y.1371, G.8113.1, G.8121/Y.1381, G.8121.1/Y.1381.1, G.813, G.8131/Y.1382, G.8151/Y.1374, G.823, G.825, G.826, G.8261, G.8262, G.8264, G.828, G.841, G.957, Y.1710, Y.1714, Y.1720, Y.1730, Y.1731

REGULATORY COMPLIANCES

CE, FCC Part 15

MEF Certification

MEF9, MEF14, CE2.0

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About UTStarcom, Inc.

UTStarcom is a global telecom infrastructure provider, focused on delivering innovative carrier-class broadband transport and access (both Wi-Fi and fixed line) products and solutions, optimized for mobile backhaul, metro aggregation, broadband access and Wi-Fi data offloading. UTStarcom was founded in 1991 and began trading on NASDAQ since 2000. It has operating entities in Tokyo, Japan; San Jose, USA; Hangzhou, China; and Delhi and Bangalore, India. In 2011, the Company deployed a revamped growth strategy that concentrates on broadband and selective investments into innovative companies providing media operation support services. For more information about UTStarcom, please visit http://www.utstar.com.

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