NetRing™ 10000-I

STM-64 MULTI-SERVICE OPTICAL TRANSPORT PLATFORM

COMPACT THIRD GENERATION MSTP SYSTEM DELIVERS COST-EFFECTIVE SERVICES AND INTEGRATED FUNCTIONALITY

- **FULL SDH SUPPORT**
- **MULTI-SERVICE PROVISIONING**
- **MULTIPLE TOPOLOGY SUPPORT**
- **FULL PROTECTION SCHEMES**
- **RPR OVER SDH**

NetRing™ 10000-I is a multi-service optical transport system designed to simplify service provider networks, dramatically reducing both operational and capital expenditures. The system enables the delivery of SDH services and next-generation data services—including ATM, Fast Ethernet and Gigabit Ethernet—rapidly, efficiently and cost-effectively. The highly integrated NetRing 10000-I platform unifies the functions of a next-generation SDH Add-Drop Multiplexer (ADM), Digital Cross-connect System (DCS), ATM / Ethernet aggregation switch plus Resilient Packet Ring (RPR) in a single carrier-class shelf.

MULTI-SERVICE PROVISIONING

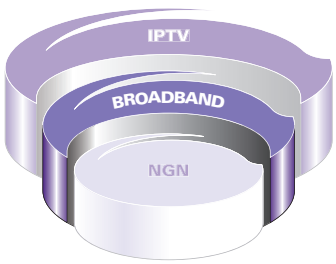
NetRing 10000-I supports continuous and virtual concatenation at VC-12/3/4 in SDH. It also supports Generic Framing Procedure (GFP), Link Capacity Adjustment Scheme (LCAS), RPR and provides built-in Ethernet service functions. GFP protocol is used to map FE/GE services into NxVC-12/3/4 for transmission. In addition, the platform supports Layer 2 switching and flow control.

NetRing 10000-I also supports ATM service, providing STM-1 and Inverse Multiplexing for ATM (IMA) interfaces.

FLEXIBLE CONFIGURATION

According to network requirements, the NetRing 10000-I can be flexibly configured to support STM-1, STM-4, STM-16 and STM-64. It supports multiple Network Element (NE) types, including TM, ADM, REG and MADM, and is able to add/drop various low-rate SDH/PDH signals directly into/from 10Gbit/s (STM-64) SDH signals. The NetRing 10000-I provides cross-connect functionality for VC12/3/4 services between lines, between line and tributary, as well as between tributary and tributary.

MULTIPLE NETWORK / EQUIPMENT-CLASS PROTECTION SUPPORT



NetRing 10000-I supports Multiplex Section Protection (MSP), Subnetwork Connection Protection (SNCP), Path Protection (PP), Dual Node Interconnection (DNI), 2F/4F MS-SPRING, E1 1:2 and 1:3 Card Failure Protection (CFP), E3/DS3 E4/STM-1e 1:1 CFP, STP, and 802.1w RSTP.

NetRing 10000-I supports M:N hot standby for power system, clock 1+1 hot backup, crossconnect 1+1 hot backup, and 1+1 controller protection.

Technical Specifications

HARDWARE

SYSTEM CHASSIS

DIMENSIONS	709mm X 483mm X 453mm (HxWxD)
WEIGHT	43Kg
OPERATING TEMPERATURE	5°C ~ 40°C
POWER	–48VDC, –40V ~ –69V Operating Range
POWER CONSUMPTION	654W fully loaded
COMPLIANCE	FCC Part 15 Class A, UL1950, CE, VCCI, MEF, Latest ITU-T Standard. Telcordia GR-253-CORE, IEEE802.3,802.3u/z/ad; 802.1/q/p/d/s/w, 802.17, 802.3x
OPERATING HUMIDITY	5%RH ~ 85%RH @ 30°C

INTERFACE

NETWORK INTERFACE

STM-64	1 port, max. 4 ports in 1 shelf and 8 ports in 1 rack	I-64.1, S-64.2b, L-64.2ae (65KM), L-64.2cl (80KM), L-64.2cl+ FEC (120KM)
STM-16	1/2 port, max. 17 ports in 1 shelf and max. 34 ports in 1 rack	I-16, S-16.1, S-16.2, L-16.1 L-16.2
STM-4	4/8 port(s), max. 68 ports in 1 shelf and 136 ports in 1 rack	I-4, S-4.1, L-4.1, L4.2
STM-1	4/8/16 port(s), max. 176 ports in 1 shelf and 352 ports in 1 rack	I-1, S-1.1, L-1.1, L-1.2

TRIBUTARY INTERFACE

10/100BaseT/Fx	16 ports, max. 144 ports in 1 shelf and max. 288 ports in 1 rack
GbE, SX or LX	2/4 ports, max. 18/36 ports in 1 shelf and max. 36/72 in 1 rack
GbE+10/100BaseT/Fx	4GE + 12FE ports, max. 36GE+108FE in 1 shelf and max. 72GE+216FE in 1 rack
STM-1 Electrical	16 ports, max. 176 ports in 1 shelf and 352 ports in 1 rack
E1	63 ports, max. 567 ports in 1 shelf and max. 1134 ports in 1 rack
E3/D3	12 ports, max. 84 ports in 1 shelf and max. 168 ports in 1 rack
T1	56 ports, max. 504 ports in 1 shelf and max. 1008 ports in 1 rack

CROSS-CONNECTION

SDH CAPACITY	HO 512X512 VC4 & LO 4032X4032 VC12
TYPE	Unidirectional, Bi-directional, Broadcast, Multicast, Drop and Continue

TIMING/SYNCHRONIZATION

SSM, External Bits Clock of Stratum 3 or better, Primary and secondary E1 external timing references, STM-n line timing reference. Hold over, Free runs.

NETWORK MANAGEMENT

TL1, LCT (local Craftsman Terminal), NetManTM 6000 OMC-O (EMS), TMF814

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About UTStarcom, Inc.
UTStarcom is a global leader in IP-based, end-to-end networking solutions and international service and support. The company sells its broadband, wireless, and handset solutions to operators in both emerging and established telecommunications markets around the world. UTStarcom enables its customers to rapidly deploy revenue-generating access services using their existing infrastructure, while providing a migration path to cost-efficient, end-to-end IP networks. Founded in 1991 and headquartered in Alameda, California, the company has research and design operations in the United States, China, Korea and India. UTStarcom is a FORTUNE 1000 company. For more information about UTStarcom, visit the company's Web site at www.utstar.com

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