MTS1080

10G Carrier Ethernet non-FEC Version

| Multi-port 10GbE Ethernet transport switch: cost effective 10G transport networks compared to SDH/SONET MSPP 10G networks

| 1U 19inch rack with up to 24 1GbE Ethernet user ports and up to two 10GbE line ports

| Built-in WDM OADM or MUX/DEMUX, with transmission of up to forty times 10GbE via a single pair of fiber using DWDM technology

| Guaranteed bandwidth and QoS with Network circuit provisioning and Ethernet Automatic Protection Switching (EAPS)

| User traffics, management transparency and security are ensured through VLAN tunnelling

| Support point-to-point, linear, and circuit networks topology: support ADM functions

The MTS1080 is a next generation high density Ethernet transport switch with up to 24x1000BaseFx SFP (fiber optic port) switched ports and two 10GbE uplink ports. The uplink ports are implemented using XFP modules. Single pair of fiber transmission is possible by using XFPs with DWDM technology.

With this system, 1GbE port based circuit could be provisioned from end to end with guaranteed bandwidth and QoS by using network circuits OAM&P and VLAN tunneling. In addition, by supporting Ethernet Automatic Protection Switching (EAPS according to RFC3619), Ethernet ring topologies can be established. EAPS is similar to the Spanning Tree Protocol (STP) but offers the advantage of recovering link failures in significantly less time (<50 ms) than STP (several seconds) or Rapid Spanning Tree (<1 second). In addition, EAPS permits ring based operation without xSTP. This circuit based transport network is significantly more bandwidth- and cost-effective than corresponding SDH/SONET MSPP systems.

Due to VLAN tagging (acc. to 802.1Q) this system is able to transparently interconnect networks of different customers while maintaining complete isolation between their networks. Using the tunneling feature (QinQ), service providers can use a single VLAN to support customers who have multiple VLANs.

Its extended management features offer customers a product that fulfills current standard network requirements. The system supports in-band remote management, and offers GUI based Network Management Software, CLI, and SNMP agent. The system supports port and circuit performance monitoring for both optics and Ethernet.

Hardware Features

| 24 x 1000BaseFx fibre optic ports with SFP interfaces
| Up to 2 x 10 GbE ports with XFP: short, long or DWDM
| 1U rack mount 19 inch

Performance Features

| VLAN tunnelling
| Ethernet Automatic Protection Switching (EAPS)
| Performance monitoring on all ports
| Circuit Bandwidth and hard QoS guarantees

Management Features

| SNMPv.2 Agent and CLI
| Secure configuration via SSHv2 (Secure Shell) terminal
| Permanent remote in-band management
| GUI based network management: FCAPS
| Remote flash software update

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Application Example figure A below: 10G Ethernet Service Delivery
Using MTS1080 as an Edge Switch at customer premeses, carriers can offer service level agreement based on different fee standards - Gold, Silver, Bronze, Normal. Packets labeled Gold have highest priority to pass, with no danger of losing frames even when there is over subscription (traffic jam). Normal (Standard) service is still based on availability - traffics would be dropped when there is over subscription
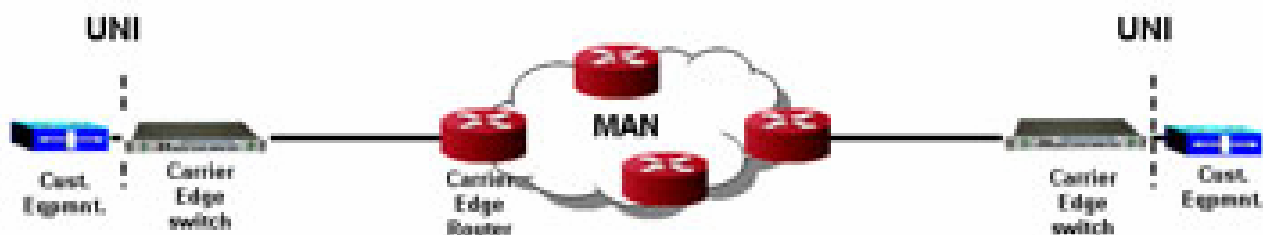

Figure A

Application Example figure B below: Packet ADM over WDM
MTS1080 can allow packet ADM in conjunction with WDM equipment. In this example, at WDM node A, several MTS1080 brings 138xGE on to WDM ring, and then drop certain numbers at other WDM nodes
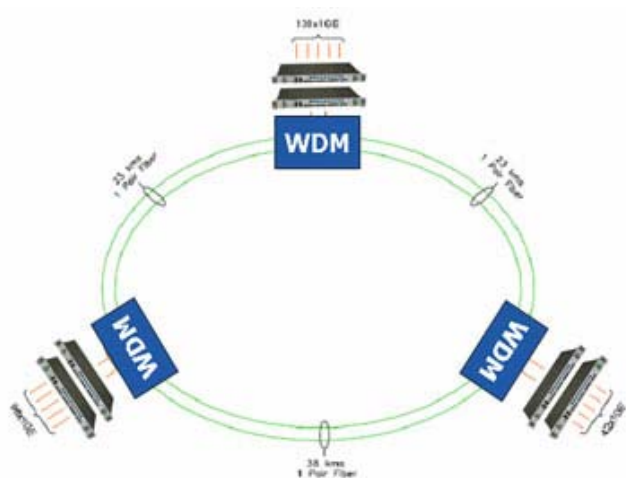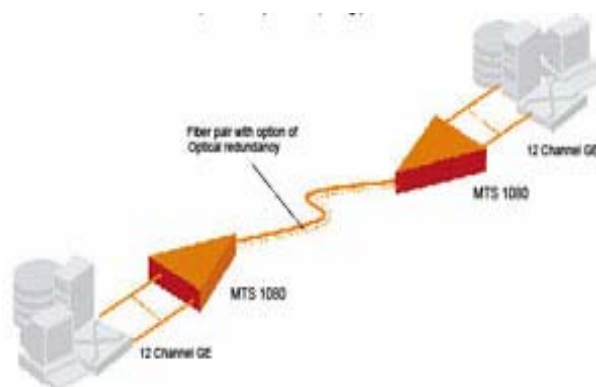
Application Example figure C below: Point to Point Ethernet Aggregation

Figure B

Figure C

MTS1080 shelf

MTS1080 | 10G Carrier Ethernet W. OTN Wrapper

Technical Information

Fiber Optic User Ports	
Port Density	12 or 24
Data Rate	1000Base Fx
Wavelength or Distance	Choose SFP separately
Single Fiber Solution	Support Bi-Directional SFP
Fiber Optic Line Ports (SFP)	
Port Density	1 or maximum 4
Data Rate	10 GbE
Wavelength or Distance	Choose XFP separately
Single Fiber Solution	Optional
Ethernet Features	
Bandwidth Limitation	tamper-proof in steps of 1 Mbps per port
Performance Monitoring	Yes
DHCP Client Support	Yes
VLAN Support	Port, EVC or Flow based tagging and QinQ. Policing/Shaping/Scheduling
Supported MAC Addresses	4096
Link Protection (EAPS)	acc. RFC3619
Network Management	
Ethernet Port	Telnet/SSH
Local Craft	RS232 (VT100)
User Interface	SNMPv.2, CLI, GUI
Secure Configuration	SSHv2 (Secure Shell) terminal
Operating Conditions	
Temperature	- 5 to + 55 °C
Humidity	5 to 85% non-condensing
Mechanical	
1U 19″ Rackmount	44x 437 x 250 (H x W x D, mm)
Power compsumtion	<75W

Revision History

Date	Revision	Brief Description
9/19/2007	1.0	First release
1/17/2008	2.1	Added Application A,B,C and Feature

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