EtherMap™-48 Device
OC-48 SONET/SDH Ethernet Mapper
TXC-06710

PRODUCT INFORMATION

FEATURES

- Single STS-48/STM-16 or 4xSTS-12/STM-4 line-side interfaces
- On-chip 622 MHz clock synthesis
- 4xSTS-12/STM-4 and STS-48/STM-16 Framing
- Transport Overhead Termination and Processing
- Supports contiguous Concatenation at STS-1 granularity
- Pointer tracking at AU-4-16c/AU-4-4c/AU4/AU3/TU3 levels
- Full Duplex cross connect at both STS-1-VC-3 and TU-3-VC-3 granularity, with facility for Line and Terminal side STS-1 Path level loopbacks
- Full Path Overhead Processing and Termination, at the HO/LO Path Level.
- Retiming at HO Path Level (STS-1 through STS-48/48c level)
- Ring ports, K1/K2 ports, TOH and POH ports for TOH/POH Bytes
- Full support for HO Virtual Concatenation to ANSI T1.105/ ITU-T G.707/G.783 with or without LCAS (ITU-T G.7042)
- Terminal-side interfaces for 4x GMII interfaces (Gigabit Ethernet with MAC) and up to 24x SMII Interfaces (100 Mbit/s Ethernet)
- Terminal-side Serial Data and Reference clock interfaces for the 4x1.25 GHz SerDes for 8B/10B block encoded clients
- Provides Ethernet 100/1000 Mbit/s Framed PDU mapping over GFP (ITU-T G.7041) or LAPS (ITU-T X.86)
- Provides transparent GFP mapping for standard 8B/10B block coded clients, such as Gigabit Ethernet, Fibre Channel (ANSI X3.230), ESCON (ANSI X3.296), and FICON.
- Provides configuration and Flow Control support for over-subscribed operation of Gigabit Ethernet (4xGigE into a single OC-48) or Fast Ethernet clients
- Mailbox interface with API for device configuration with higher level messages
- 2.5 V/3.3 V I/O, 1.3 V core
- 676-lead SFC Ball Grid Array package

DESCRIPTION

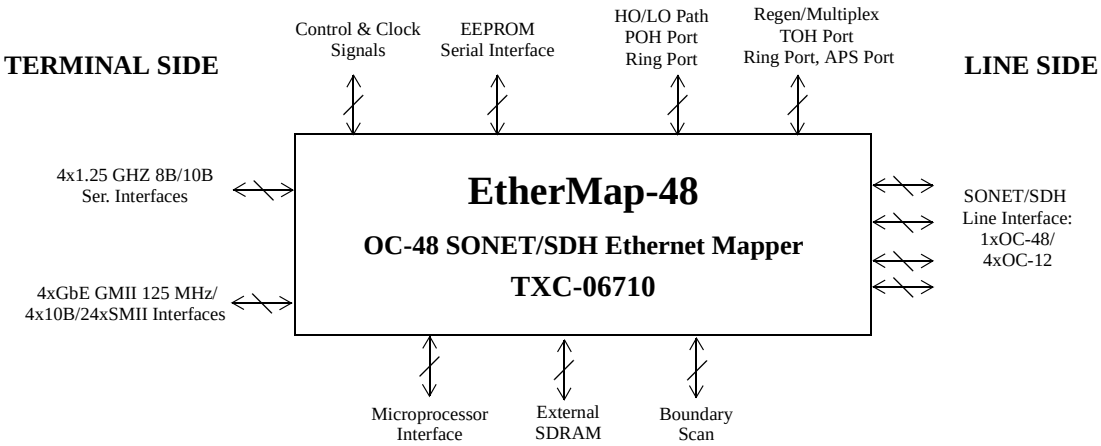
The EtherMap™-48 Device is a highly integrated, STS-48/STM-16 rate SONET/SDH VLSI device, for mapping of Gigabit/100BaseT Ethernet and 8B/10B block encoded traffic like Gigabit Ethernet, Fibre Channel, FICON, ESCON into SONET/SDH Transport. The EtherMap-48 addresses Metro applications such as the transport of switched Ethernet for point-to-point connections of aggregated Ethernet and Packet traffic, and Storage Area Networks (SAN).

The EtherMap-48 SONET/SDH interface consists of one full duplex STS-48/STM-16 channels, which can also operate at a 4xSTS-12/ STM-4 rate. The EtherMap-48 provides single OC-48 or Quad OC-12 framing. There is full TOH/POH processing and monitoring, along with full Virtual Concatenation and LCAS support.

The EtherMap-48 Ethernet interface consists of four 1.25GHz SerDes for the 8B/10B clients, including Gigabit Ethernet, and 4xGMII interfaces for Gigabit Ethernet, lead-multiplexed with 24xSMII Fast Ethernet interface. Over-subscription for mapping four Gigabit Ethernet streams into a single STS-48/STM-16 by statistical multiplexing are supported via configuration and built-in flow control mechanisms.

APPLICATIONS

- SONET/SDH add/drop and terminal multiplexers
- Multi-service access platforms
- Next generation Ethernet switches
- Storage Area Network Equipment
- Transparent LAN services
- Ethernet Private Line Services



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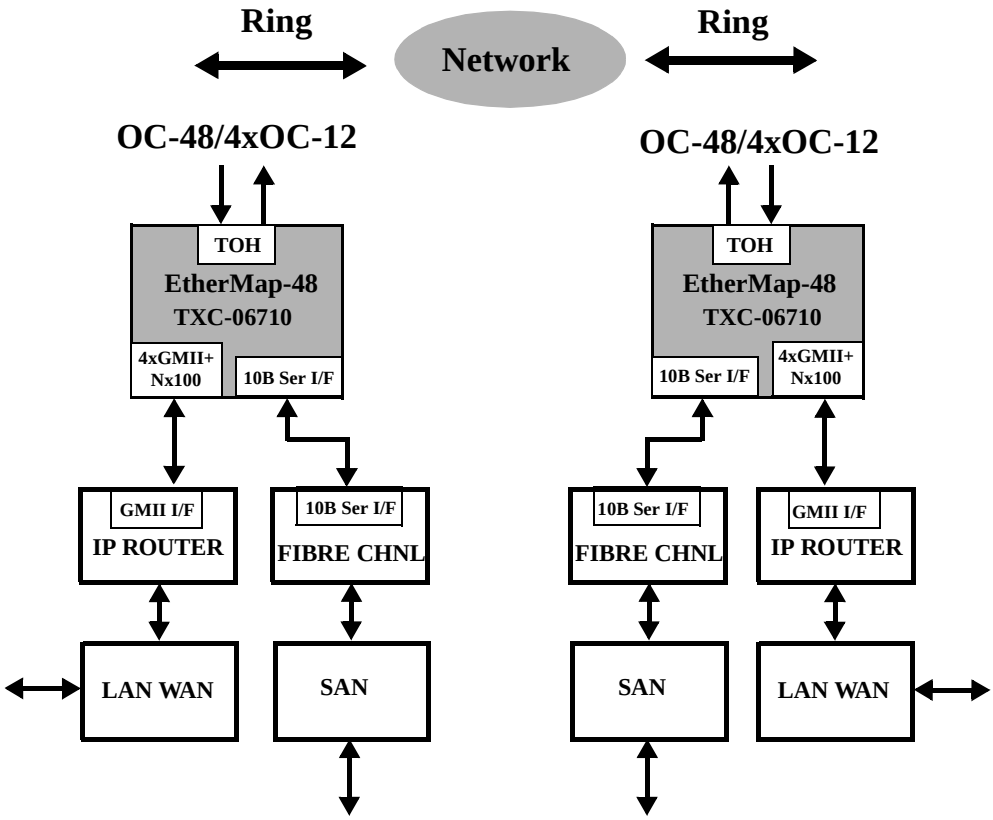
APPLICATION DIAGRAM

Ethernet/Fiber Channel Over SONET Application



RELATED PRODUCTS

- TXC-04226 Ethernet into STS-3/STM-1 SONET/SDH Mapper VLSI Device (EtherMap-3)
- TXC-06212 Programmable, High Performance ATM/PPP/TDM SONET/SDH Terminator for Level 12 with Enhanced Features VLSI Device (PHAST-12E)

FURTHER INFORMATION

Contact TranSwitch for technical and ordering information on these products.

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