Integrated Add/Drop Multiplexer for 622 Mbit/s and 155 Mbit/s

FEATURES

- Fully integrated solution for OC-3/STM-1 or OC-12/STM-4 Add/Drop or Terminal Multiplexers
- Highly channelized PDH and Ethernet Client transport interfaces enable deployment of converged networking architectures on a single platform
- Integrated dual SONET/SDH interfaces each with 622Mbit/s high order and low order Tributary Unit Pointer Processing (TUPP)
- Full VT/TU ring closure for line protection
- Parallel Telecombus and Serial 622Mbit/s or 2.5Gbit/s ESSI interfaces for client interface scalability and driving backplane interfaces
- Integrated 2.5 Gbit/s STS/AU/VT/TU cross-connect allowing for future system expansion and addition of transport interfaces
- Optimized architecture for single card platforms or cost effective, multi-service card in larger MSPPs via 622Mbit/s or 2.5Gbit/s ESSI backplane interface

SONET/SDH INTERFACE

- Two multi-rate SONET/SDH interfaces capable of operation at 155 or 622Mbit/s
- Integrated clock recovery allowing direct interface to low-cost multi-rate optical transceivers
- Integrated clock synthesis generates line clock from 77.76MHz reference
- Auxiliary telecombus interface allows interface to line-side SONET/SDH framer, such as PM5319
- Complies with Bellcore, ANSI, and ITU specifications for Jitter Tolerance, Transfer, and Generation
- Full access to all SONET/SDH Overhead bytes
- High order path processing to STS-1/AU-3/TU-3 level
- Low order path processing to VT1.5/VT2/TU-11/TU-12 level

- Integrated Message Assisted Protection Switching (MAPS) processing for a fully hardware based automatic UPSR path selection
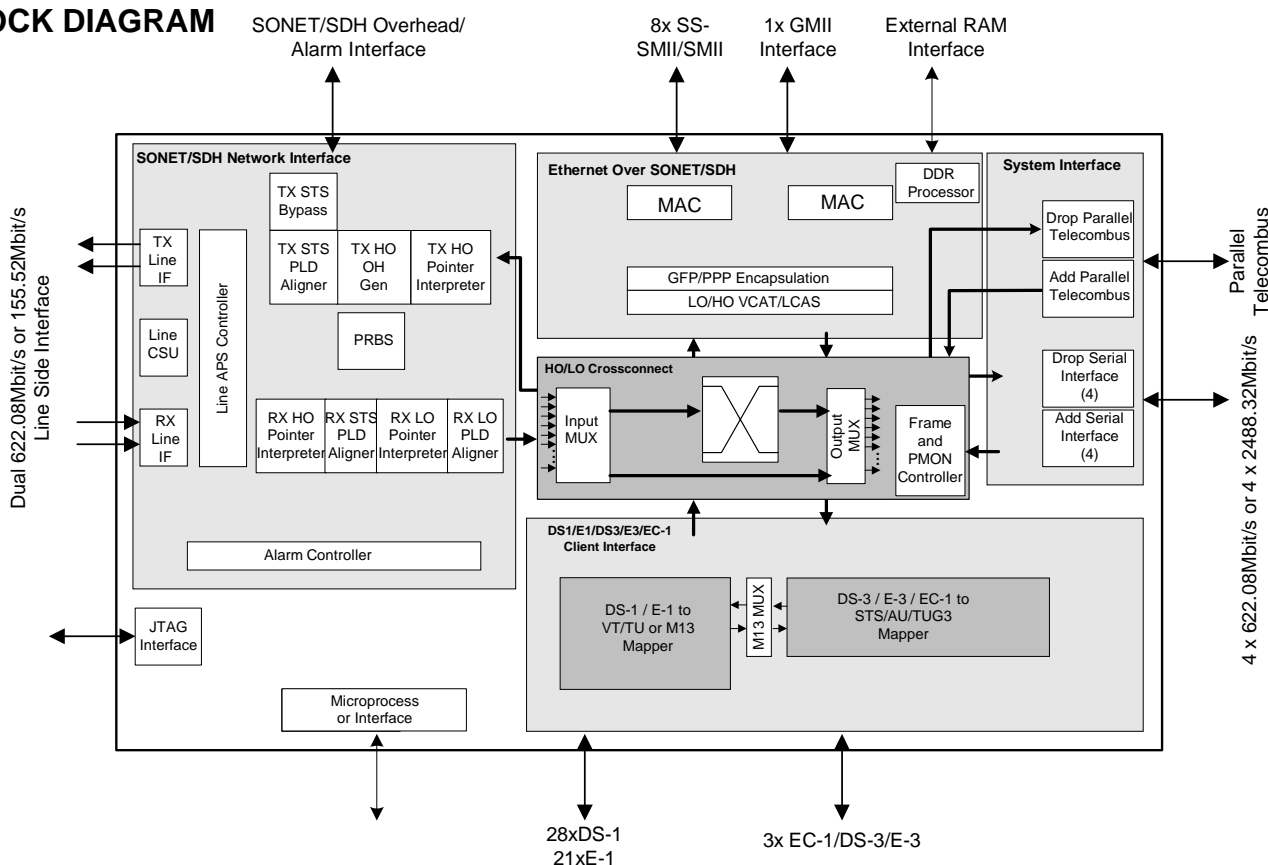
LOW / HIGH ORDER CROSS-CONNECT

- Integrated 2.5Gbit/s non-blocking memory based cross-connect supporting anycast traffic
- Support switching at STS/AU/VT/TU level and all legal concatenations
- Integrated MAPS processing for automated hardware based protection switching

PDH INTERFACES

- 28xT1 or 21xE1 framers with VT/TU Mapping or integrated M13 Multiplexing
- 3xDS-3, E-3 or EC-1 framers and mappers (per port selectable) with bi-directional performance monitoring and signaling
- One port of DS-3 Transmux into up to 28 VT1.5

BLOCK DIAGRAM

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- Parallel Telecombus allows interfacing to devices such as PM5341 or PM5366 to increase PDH client density

ETHERNET INTERFACES

- Maps up to 8 channels of full duplex 10/100 or a single Gigabit Ethernet into 155 or 622Mbits/s SONET/SDH
- Supports packet multiplexing capabilities enabling integrated GE grooming into multiple VCGs & 10/100 port aggregation into the same VCG
- Supports per port policing and rate limiting in increments of 64Kbit/s

- Flexible packet header insert and extract for VLAN and Ethernet Pseudowire MPLS support enabling MPLS Label Edge Router (LER)
- Supports multiple encapsulation protocols for worldwide interoperability including GFP-F, LAPS & flexible HDLC
- Supports Ethernet 802.3ah OAM packet insertion and extraction
- Supports GFP OAM as per GFP CMF (Client Management Frames)
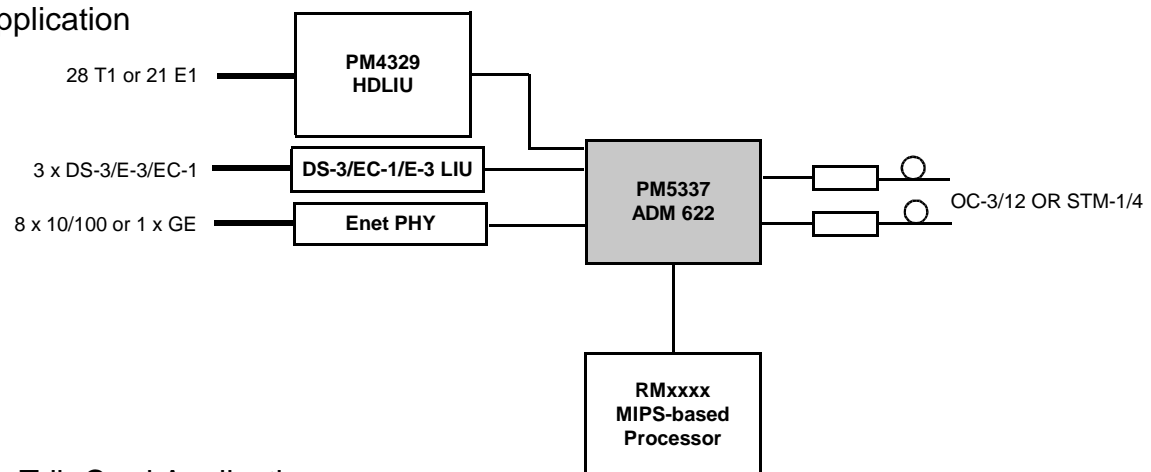- Performs virtual and contiguous concatenation according to ITU-T G.707 and ANSI T1.105

- Supports fully integrated hitless Link Capacity Adjustment Scheme (LCAS)
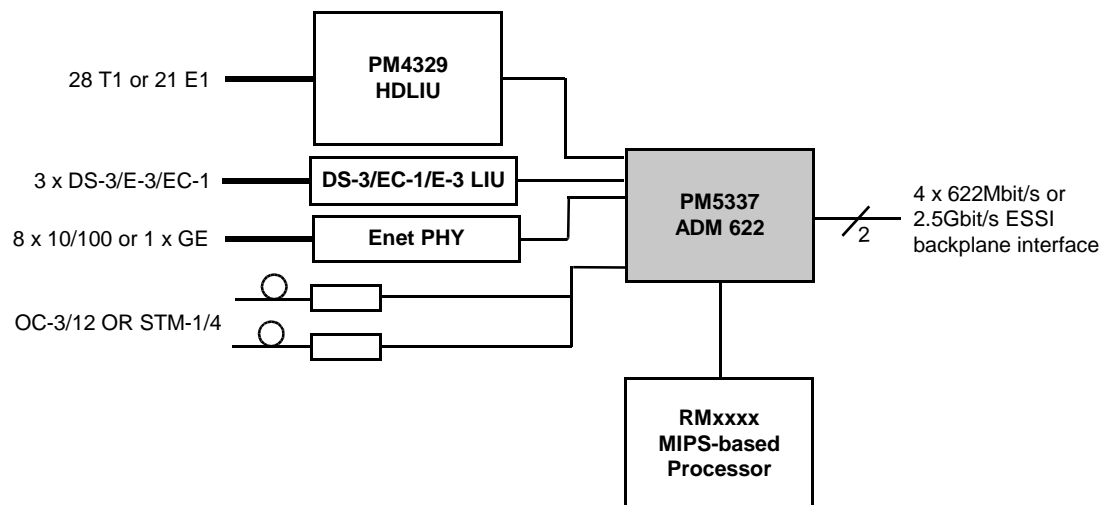- Supports up to 64 ms of differential delay

SYSTEM EXPANSION

- Four serial 622Mbit/s or 2.5Gbit/s ESSI interfaces for expansion or connection to a mate ADM 622 device
- Multi-drop parallel telecombus interface for client expansion capability
- Four serial 622Mbit/s or 2.5Gbit/s ESSI backplane interface into larger MSPPs to enable multiservice card architectures or connection to a mate ADM 622 device for equipment protection

TYPICAL APPLICATIONS

Pizza Box Application

Multi-Service Trib Card Application