PM5369 TUPP 9953

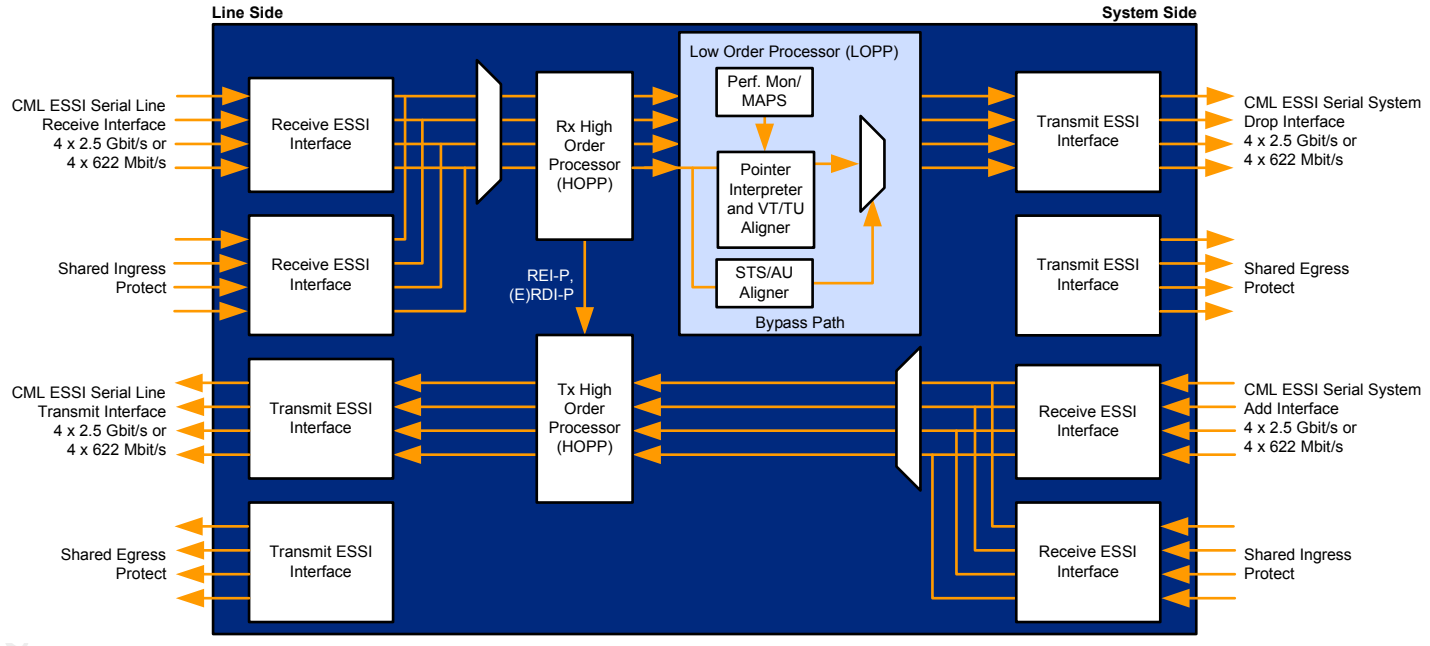
Tributary Unit Payload Processor for 9953 Mbit/s

Released Product Brief

Product Highlights

- Configurable, multi-channel payload processor for aligning SONET virtual tributaries (VTs) or SDH tributary units (TUs) in an STS-192/STM-64 or STS-48/STM-16 data stream
- Supports High Order (STS/AU) pointer processing, payload processing, and path termination/monitoring
- Supports Low Order (VT/TU) pointer processing, payload processing, and path monitoring
- On the line side, provides working Serial Receive and Transmit ESSI (Extended SONET Serial Interface) CML links. Links are configurable as:
  - 4xSTS-48/STM-16 2488.32 Mbit/s SONET/SDH framed interfaces; or
  - 4xSTS-12/STM-4 622.08 Mbit/s SONET/SDH framed interfaces
- On the system side, provides working Add and Drop Serial ESSI links. Links are configurable as:
  - 4xSTS-48/STM-16 2488.32 Mbit/s SONET/SDH framed
  - interfaces; or
  - 4xSTS-12/STM-4 622.08 Mbit/s SONET/SDH framed interfaces
- Independently configurable (2488.32 Mbit/s or 622.08 Mbit/s) Line and System Interfaces
- Provides a set of Ingress and Egress shared protection links
- Provides a per-link Space switch on egress interfaces
- Provides a steady-state latency of:
  - 21 ìs from line Receive to system DROP for VT1.5
  - 2.5 ìs from system ADD to line TX
- Provides hardware based Message Assisted Protection Switching (MAPS) support to work with a centralized fabric (e.g., PM5370 WSE 40)
- Supports independent Line Receive and System Drop transport frame alignment for high-order traffic
- Supports independent transport, high-order payload and tributary multi-frame alignments for low-order traffic
- Supports independent Line Transmit and System Add transport frame alignments
- On the receive path, provides optional SDH payload conversion of:
  - AU4/VC4/TUG3/TU3/VC3/C3 to AU3/VC3/C3; or
  - AU3/VC3/C3 to AU4/VC4/TUG3/TU3/VC3/C3; or
  - AU4/VC4/TUG3/TUG2 to AU3/VC3/TUG2; or
  - AU3/VC3/TUG2 to AU4/VC4/TUG3/TUG2
- On the transmit path, provides optional SDH payload conversion of:
  - AU3/VC3/C3 to AU4/VC4/TUG3/TU3/VC3/C3; or
  - AU4/VC4/TUG3/TUG2 to AU3/VC3/TUG2; or
  - AU3/VC3/TUG2 to AU4/VC4/TUG3/TUG2
- Allows for low order (VT/TU) processing bypass
- Supports high-order ESSI transport overhead transparency
- Supports line and system diagnostic and facility loopbacks
- Provides optional PRBS generation and monitoring features for ESSI offline link verification
- Provides a generic 16-bit microprocessor bus interface for configuration, control, and status monitoring
- Provides a standard 5-signal IEEE 1149.1 JTAG test port for boundary scan test purposes

Block Diagram



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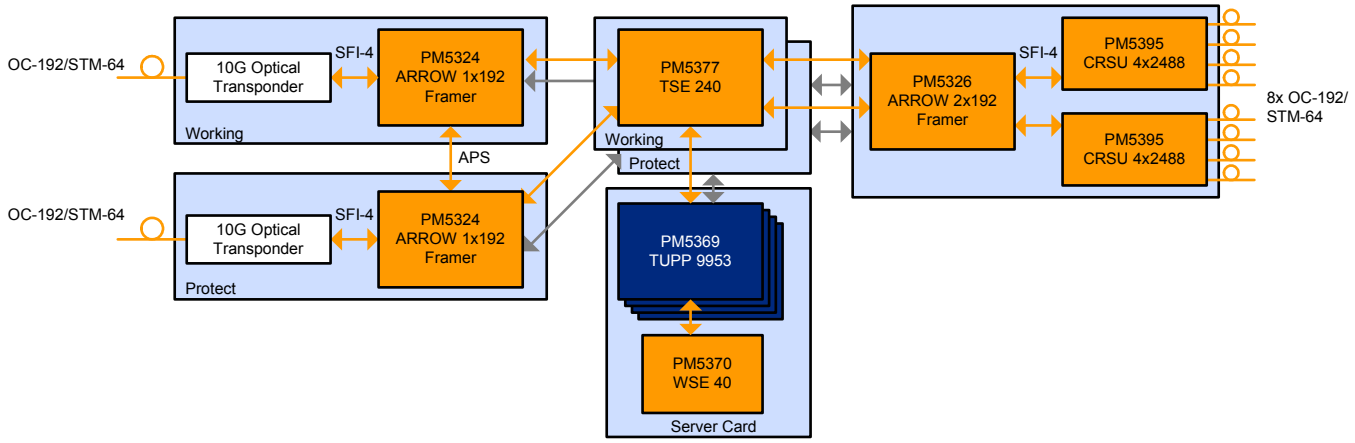
Package

- Implemented in a 1.2 V core and 2.5 V I/O 0.13ìm CMOS technology. Inputs are 3.3 V tolerant
- Packaged in a 672-ball FCBGA
- Top-hat, 27 mm x 27 mm
- Power when full bandwidth is used (OC-192/STM-64 applications using 2.488 Mbit/s links) is 6.91 W typical
- Power when 1/4 bandwidth is used (OC-48/STM-16 applications using 622 Mbit/s links) is 2.64 W typical

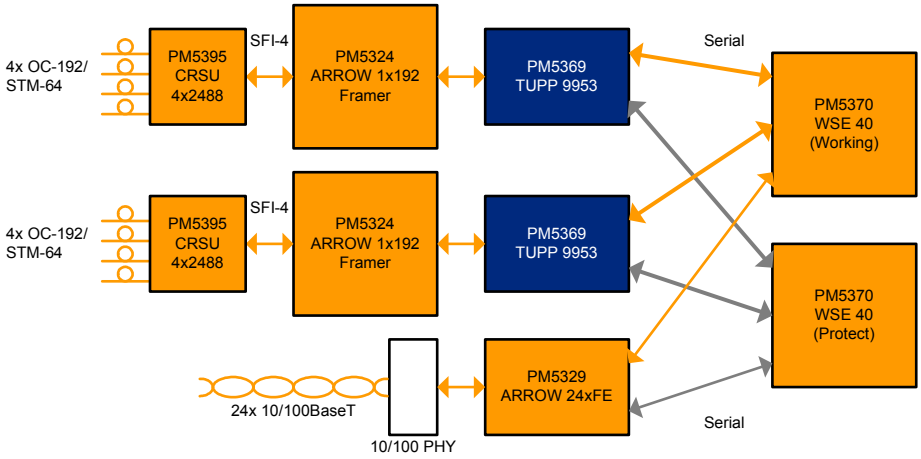
Applications

- SONET/SDH Add-Drop Multiplexer (ADM)
- SONET/SDH Digital Cross-connect (DCC)
- Multi-service Provisioning Platforms (MSPP)
- Multi-service ADM (MS-ADM)
- Multi-Service Switch
- Optical Access Mux
- Terminal Multiplexers

OC-192/STM-64 Optical Cross-Connect with 40G VT/TU Cross-Connect Server Card



OC-48/STM-16 VT/TU ADM/Cross-Connect



Further Resources

Technology Webpage

www.pmcs.com/products/optical_network/

Technical Documentation

www.pmcs.com/resources/downloads_support.html

About PMC

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