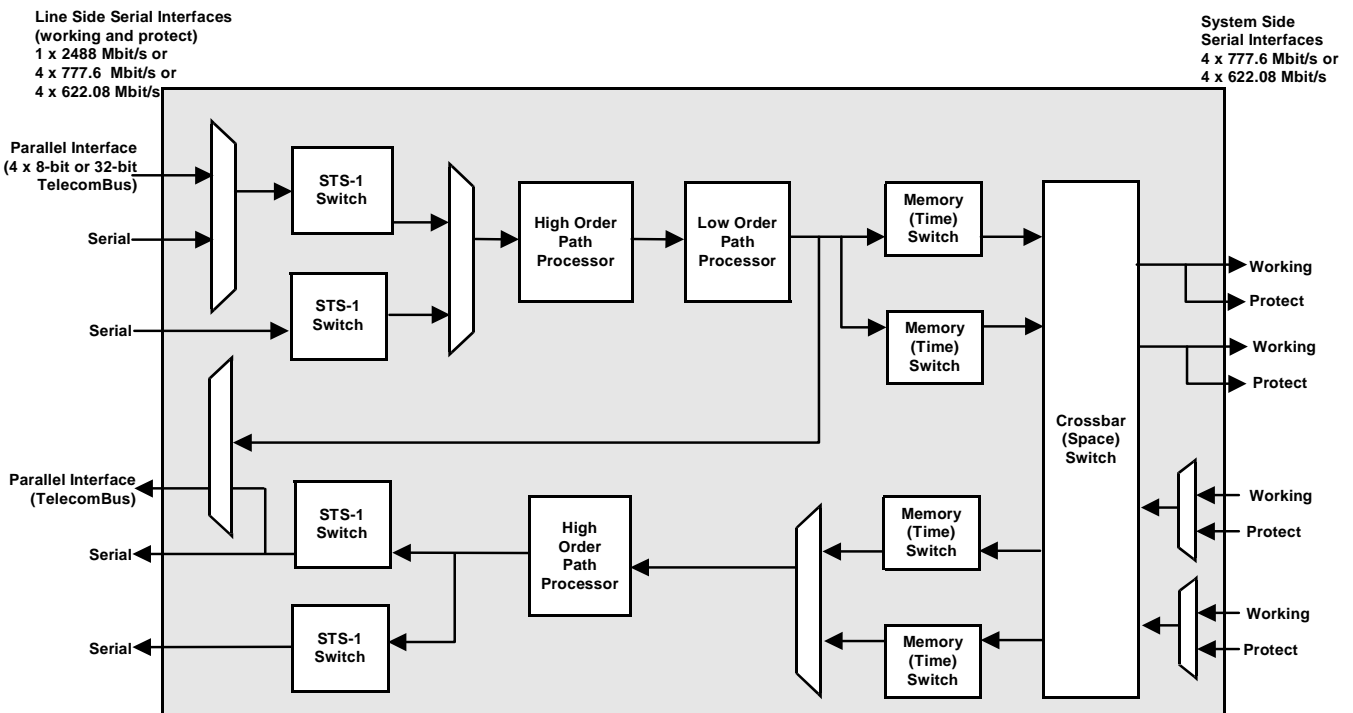


SONET/SDH Tributary Unit Payload Processor for 2488.32 Mbit/s

FEATURES

- Configurable, multi-channel, payload processor for aligning SONET virtual tributaries (VTs) or SDH tributary units (TUs) in an STS-48/STM-16 or four STS-12/STM-4 byte serial data streams.
- 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.
- Integrates 4 x STS-12/STM-4 VT level payload processors, 2 x ingress and egress STS-1/STM-0 granular time slot interchanges, 8 x ingress and egress STS-12/STM-4 VT level time switches, and an STS-192/STM-64 VT level space switch (crossbar).
- Integrated crossbar allows for hair-pinning and OC-48 Add Drop Mux (ADM) functionality.
- Can be set up to operate in one of four applications:
 - Hair-pinning (from line ingress to line egress).
 - OC-48 ADM with internal crossbar.
 - NxOC-48 ADM with external crossbar (internal crossbar is bypassed).
- Payload Processing Only Configuration.
- On the line side, provides a 4 x 8-bit or 32-bit 77.76 MHz parallel TelecomBus interface as well as redundant working and protect ingress and egress serial RASIO™ links. Links are configurable as:
 - 4 x STS-12/STM-4 622.08 Mbit/s SONET/SDH framed interfaces.
 - 4 x STS-12/STM-4 777.6 Mbit/s 8B/10B encoded TelecomBus interfaces.
 - 1 x STS-48/STM-16 2.488 Gbit/s SONET/SDH framed interface. This is tied to one link and the other three links are unused.
- On the system side, provides redundant working and protect ingress and egress serial RASIO links. Links are configurable as:
 - 8 x STS-12/STM-4 622.08 Mbit/s SONET/SDH framed interfaces.
 - 8 x STS-12/STM-4 777.6 Mbit/s 8B/10B encoded TelecomBus interfaces.
- Independently configurable line and system interface rates.
- Provides optional PRBS generation and monitoring features for CML off-line link verification.
- Supports Signal Fail (SF) and Signal Degrade (SD) for each VT/TU path and provides user-provisionable BER thresholds for each SD/SF test that range from 10⁻³ to 10⁻¹².
- Supports contiguously concatenated payloads (STS-3c, STS-12c/AU-4-4c, STS-48c/AU-4-16c).
- On the ingress path, provides optional SDH payload conversion of:
 - AU3/VC3/C3 to an AU4/VC4/TUG3/TU3/VC3/C3.
 - AU3/VC3/TUG2 to AU4/VC4/TUG3/TUG2.
 - AU4/VC4/TUG3/TU3/VC3/C3 to AU3/VC3/C3.
 - AU4/VC4/TUG3/TUG2 to AU3/VC3/TUG2.
- On the egress path, provides optional SDH payload conversion of an AU3/VC3/C3 to an AU4/VC4/TUG3/TU3/VC3/C3.
- Supports any legal mix of VT1.5, VT2, VT3, VT6, TU11, TU12, TU2, or TU3 tributaries. Each VT group or TUG2 can be configured to carry one of four tributary types. TUG2s can be multiplexed into VC3s or TUG3s. Each TUG3 can also be configured to carry a single TU3.

BLOCK DIAGRAM



SONET/SDH Tributary Unit Payload Processor for 2488.32 Mbit/s

- Supports 16-byte or 64-byte format tributary path trace messages (tributary trail trace identifiers).
- Supports High Order path termination for any legal mix of STS-1/AU-3, STS-3c/AU-4, STS-12c/AU-4-4c, and STS-48c/AU-4-16c.
- Provides dedicated interfaces to optionally extract the entire high/low order path overhead from the ingress data for external processing and provides

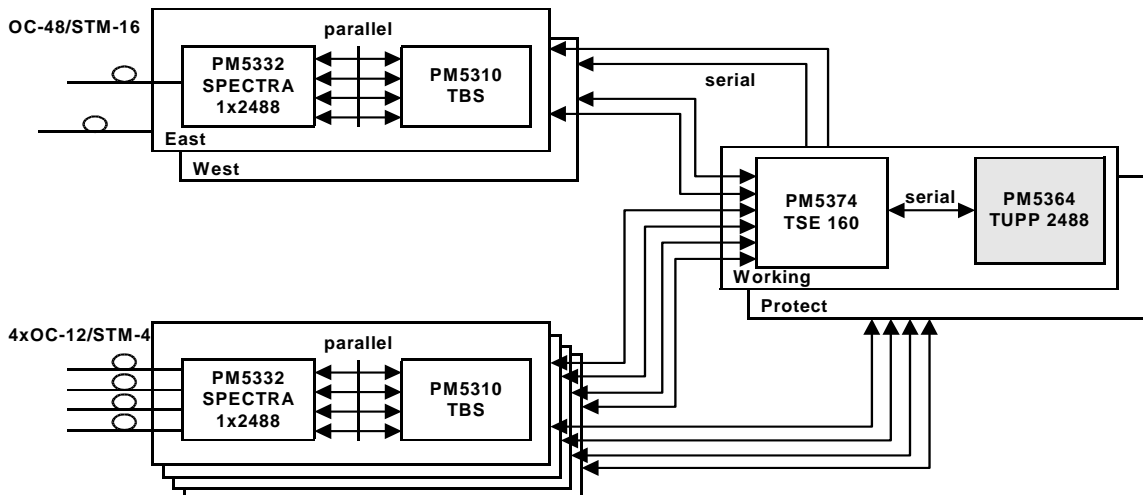
- a dedicated interface to optionally insert the high order path overhead into the egress data stream.
- Provides a standard 5 signal IEEE 1149.1 JTAG test port for boundary scan test purposes.
- Implemented in 1.2 V core and 2.5/3.3 V I/O 0.13µm CMOS technology. I/Os are either 2.5 V or configurable as either 2.5 V or 3.3 V.
- 580-ball CSBGA+ package (35 mm x 35 mm).

APPLICATIONS

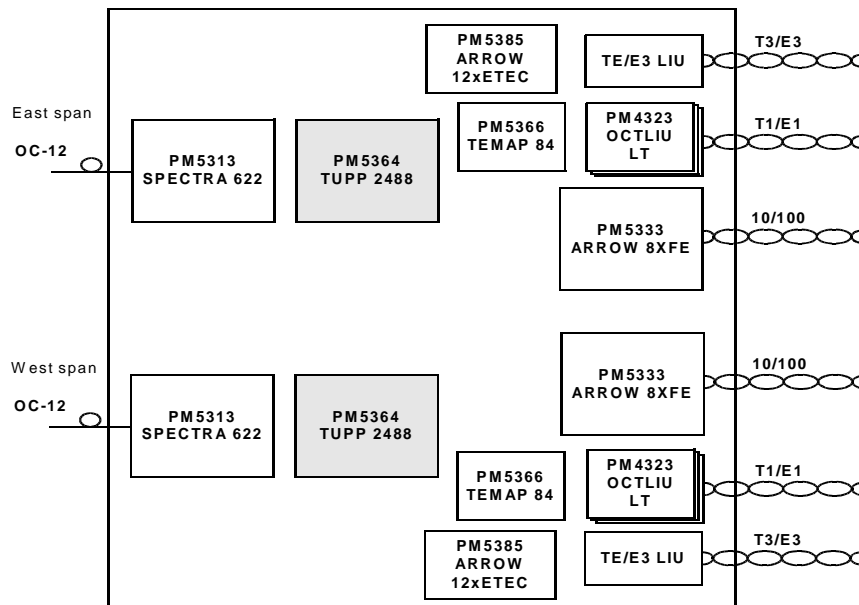
- SONET/SDH Add-Drop Multiplexer.
- SONET/SDH Digital Cross-Connect .
- Multi-Service Provisioning Platforms (MSPP).
- Multi-Service ADM (MS-ADM).
- Multi-Service Switch.
- Optical Access Mux.
- Terminal Multiplexers.

TYPICAL APPLICATIONS

OC-48 OPTICAL CROSS-CONNECT WITH A 2.5G VT/TU CROSS-CONNECT



OC-3/12 OR STM-1/4 VT/TU BASED ADM



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