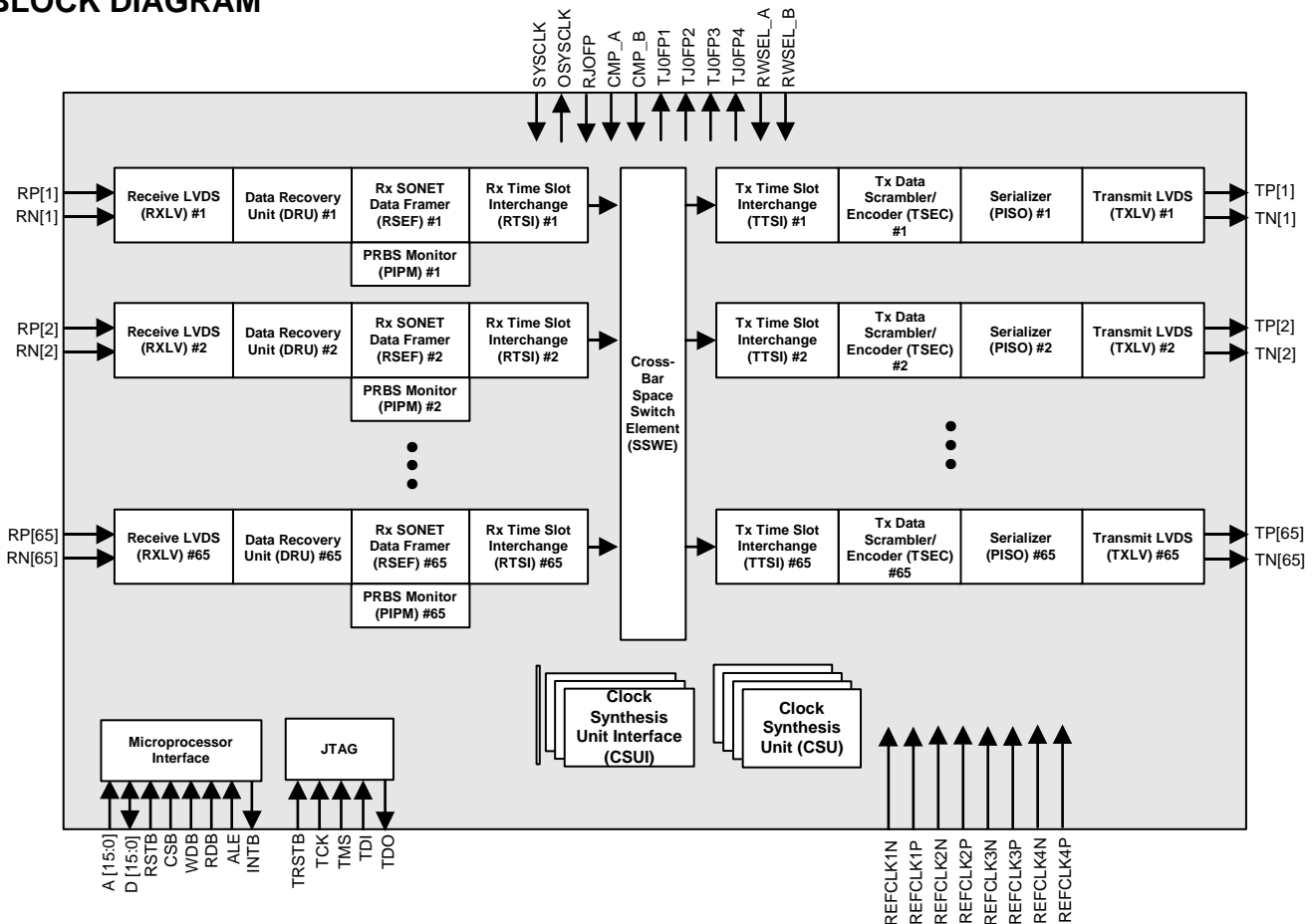


**9.953 Gbit/s Telecom Bus Serializer**

**FEATURES**

- The PM5307 TBS-9953 switches timeslots (down to an STS-1 granularity) from/to the line side interface to/from a system side working (W), protection (P), and optionally an auxiliary (A) interface.
- 4 sets of 16 port serial links:
  - 2 sets of 16 x 777.6 Mbit/s links (8B/10B encoded Serial TelecomBus).
  - 2 set of configurable 16 x 777.6 Mbit/s or 16 x 2.488 Gbit/s (SONET/SDH scrambled).
- Typical applications (line to system interfaces):
  - 16 x 777.6 Mbit/s to 3 x 16 x 777.6 Mbit/s (W,P,A)
  - 16 x 777.6 Mbit/s to 4x4x2.488 Gbit/s (W,P,A1,A2)
  - 2 x (16 x 777.6) Mbit/s to 2 x (2 x 4 x 2.488) Gbit/s (W, P) - Dual TBS
- 4 x 2.488 Gbit/s to 3 x 4 x 2.488 Gbit/s (W,P,A)
- Supports redundant working/protection time-space-time switch fabrics, including the PM5372 TSE and PM5374 TSE-160 devices.
- Supports STS-192c/STM-64c, STS-48c/STM-16c, STS-12c/STM-4c, and STS-3c/STM-1c traffic on the interface.
- Supports through-traffic, drop-traffic and protection switching in UPSR, 2-fiber BLSR and 4-fiber BLSR applications.
- Provides per link concatenated SONET PRBS generation/ monitoring for outgoing/ incoming LVDS data link for off-line link verification. 777.6 Mbit/s links can carry an STS-12c PRBS stream. 2.488 Gbit/s links can carry an STS-48c PRBS stream.
- Option to perform in-service link verification by checking and/or overwriting the Z2 byte of each constituent STS-1/STM-0 frame with a unique software programmable byte and its complement.
- Provides pins to coordinate updating of the connection map of the time-slot interchange blocks in the local device, peer PM5307 TBS-9953 devices, and companion PM5374 TSE-160 or PM5372 TSE devices.
- Provides two independent time domains for frame alignment purposes. The time domains for each link interface are selectable through the software interface.
- Driven by a 155.52 MHz reference clock.
- Implemented in 1.8 V core and 3.3 V I/O, 0.18  $\mu$ m CMOS and packaged in a 1152 ball FCBGA.
- Provides a standard IEEE 1149.1 JTAG port.

**BLOCK DIAGRAM**



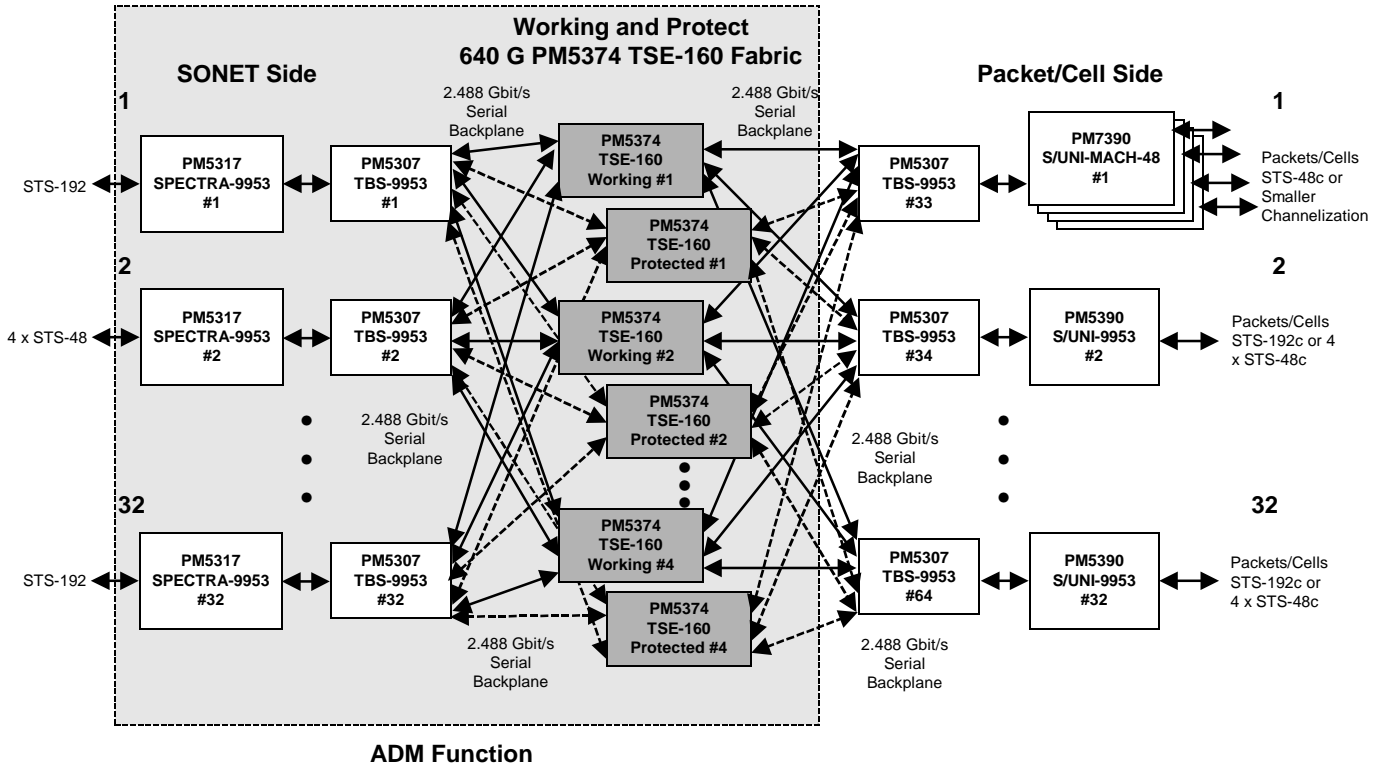
# 9.953 Gbit/s Telecom Bus Serializer

## APPLICATIONS

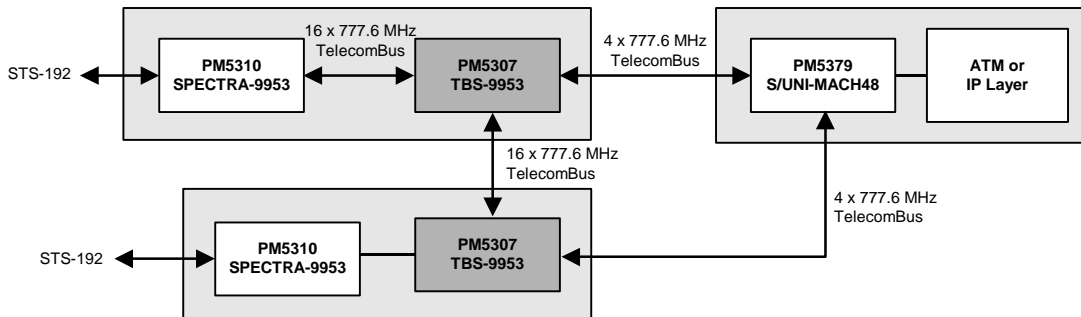
- Optical cross connects.
- SONET/SDH Add/Drop Multiplexers.
- Serial TelecomBus backplane driver.
- Multi-service provisioning platforms.
- SONET/SDH Digital Cross connects.

## TYPICAL APPLICATIONS

### MULTI-SERVICE SWITCH (WITH 2.488 GBIT/S SERIAL TELECOMBUS BACKPLANE)



### OC-192 MULTI-SERVICE ADD/DROP MULTIPLEXER



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