VT/TU PAYLOAD ALIGNER/PROCESSOR

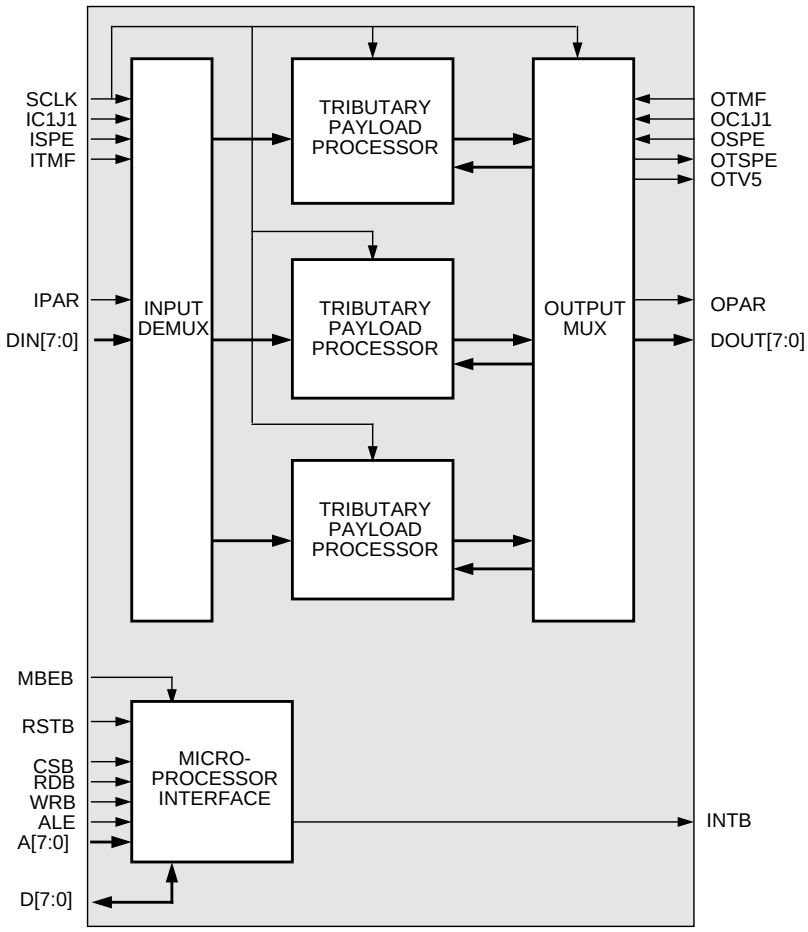
FEATURES

- A configurable, multi-channel, payload processor for alignment of SONET virtual tributaries (VTs) or SDH tributary units (TUs). Processes an STS-3 or STM-1 byte-serial data stream.
- Transfers all incoming tributaries in the three STS-1 synchronous payload envelopes of an STS-3 byte-serial stream to the three STS-1 synchronous payload envelopes of an outgoing STS-3 byte-serial stream.
- Transfers all incoming tributaries in the single AU4 or three AU3 administrative units of an STM-1 byte-serial stream to the single AU4 or three AU3 administrative units of an outgoing STM-1 byte-serial stream.
- Compensates for pleisiochronous relationships between incoming and outgoing higher level (STS-1, AU4, AU3) synchronous payload envelope frame rates through processing of the lower level (VT6, VT3, VT2, VT1.5, TU3, TU2, TU12, or TU11) tributary pointers.
- Provides for multiframe synchronization or ring closure at the headend node in a SONET/SDH ring.
- Provides independently configurable AU3/AU4 frame format on incoming and outgoing directions.
- Configurable to process any legal mix of tributaries such as VT1.5, VT2, VT3, VT6, TU11, TU12, TU2, or TU3. 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 TU3.
- Optionally frames to the H4 byte in the path overhead to determine tributary multiframe boundaries. Internally generated H4 bytes are inserted into the outgoing administrative units.
- Verifies parity on the IC1J1 and ISPE signals and on the incoming data stream and generates parity on the outgoing data stream.
- Detects loss of pointer and re-acquisition for each tributary and optionally generates interrupts. Loss of pointer detection can optionally generate tributary path AIS.
- Allows insertion of all zeros or all ones tributary idle code with unequipped indication and valid pointer into any tributary.
- Operates in conjunction with the PM5343 STXC SONET/SDH Transport Overhead Terminating Transceiver, the PM5344 SPTX SONET/SDH Path Terminating Transceiver and the PM5371 TUDX Tributary Unit Cross-Connect to provide a complete SONET/SDH ADM from Photonics down to the Tributary mapper.
- Allows insertion of tributary path AIS into any tributary.
- Operates from a single 19.44 MHz clock.
- Provides a generic 8-bit microprocessor bus interface for configuration, control, and status monitoring.
- Low power, +5 Volt, CMOS technology, TTL compatible inputs and outputs.
- Available in a 160 pin PQFP package (28 by 28mm).

APPLICATIONS

- SONET/SDH Add-Drop and Terminal Multiplexers
- SONET/SDH Broadband Cross-Connects
- SONET/SDH and ATM test Equipment

BLOCK DIAGRAM



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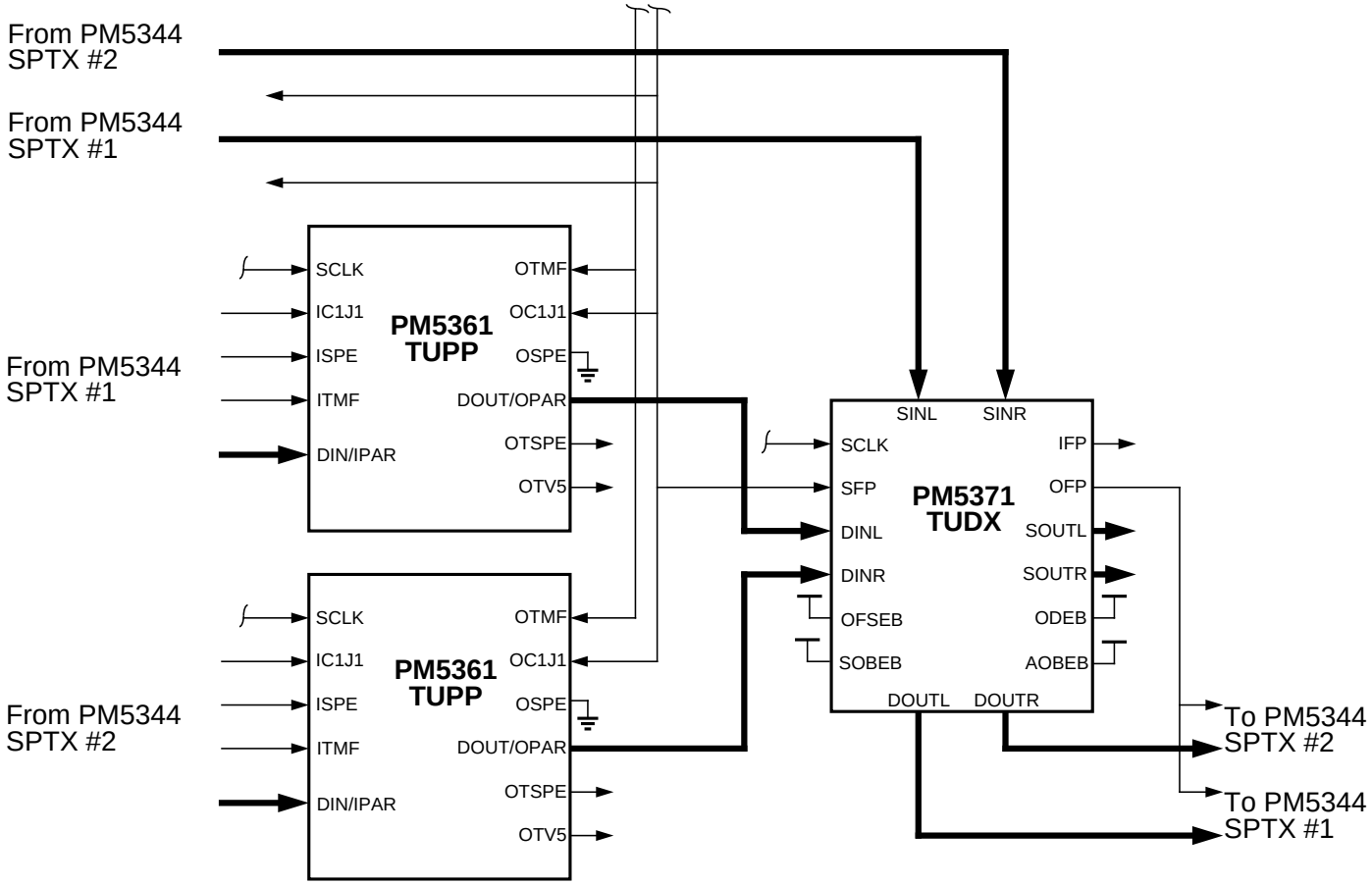
TYPICAL APPLICATION:

SONET/SDH TRIBUTARY CROSS-CONNECT



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