

SONET/SDH Interface for 155 Mbit/s

FEATURES

- Provides an industry standard 8-bit, 77.76 MHz telecombus interface
- Multi-drop capability allows multiple devices to share the add/drop bus for redundancy or multiplexing purposes
- Full Time Slot Interchange (TSI) allows flexible mixing of traffic from the SONET/SDH and DS3/E3/EC-1 Interfaces.
- Supports diagnostic $2^{23}-1$ pseudo-random bit-sequence (PRBS) generation and monitoring.
- Provides a standard JTAG test-port for boundary scan board-test purposes.
- Provides a generic 16-bit microprocessor interface for control and monitoring.
- 15x15mm 196 ball CABGA package allows for flexible placement and routing

SONET/SDH INTERFACE

- SONET/SDH interface for OC-3/STM-1 (155.52 Mbit/s) rates.
- Integrated clock recovery & synthesis allows direct interface to low-cost optical transceivers
- Integrated clock synthesis generates line clock from 77.76 MHz reference
- Complies with Bellcore, ANSI, and ITU specifications for Jitter Tolerance and Jitter Generation
- High order path processing and alignment to STS-1/AU-3/TU-3 level
- Full access to all SONET/SDH Transport overhead bytes via a dedicated serial port
- Full access to all SONET/SDH STS-1/AU-3/TU-3 path overhead bytes via a dedicated serial port
- Full access to all DCC bytes via a dedicated serial interface
- Ring Control port provides real time detection of error conditions and insertion of alarms such as AIS & RDI
- Section and Path Trace filter and monitor checks for Trace Identifier Mismatch (TIM) and Trace Identifier Unstable (TIU) conditions

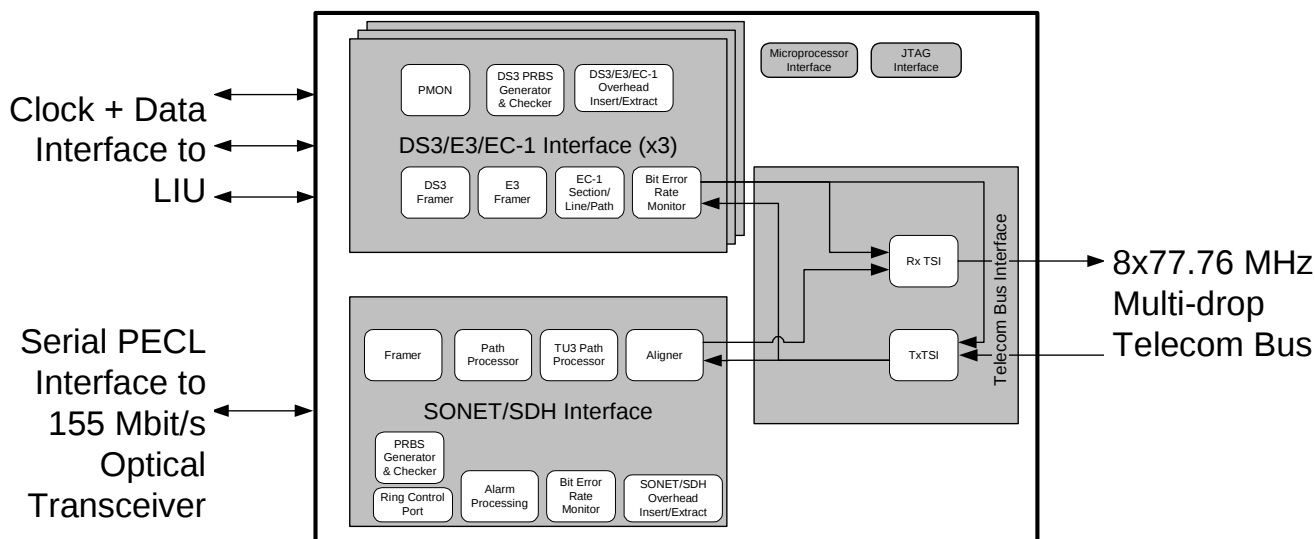
DS3/E3/EC-1 INTERFACE

- Flexible three-port DS3/E3/EC-1 Interface
- Supports clear channel mapping/demapping of DS3 or E3 into/from STS-1, AU-3, or TU-3
- Fully digital desynchronizers require no external PLLs for standards-compliant operation
- Integrated desynchronization CSU allows low rate reference clock at 44.736 MHz, 34.368 MHz, or 51.84 MHz
- Bi-directional digital jitter attenuation for DS3 and E3 streams allows interfacing to low cost LIUs
- Full bi-directional performance monitoring for DS3, E3, and EC-1 streams.
- Full access to DS3/E3/EC-1 Overhead bytes

APPLICATIONS

- SONET/SDH Add/Drop Multiplexers
- Terminal Multiplexers
- Customer Premise Equipment
- Media Gateways
- Multiservice Provisioning Platforms
- Channelized Router Interfaces
- Digital Cross-Connects

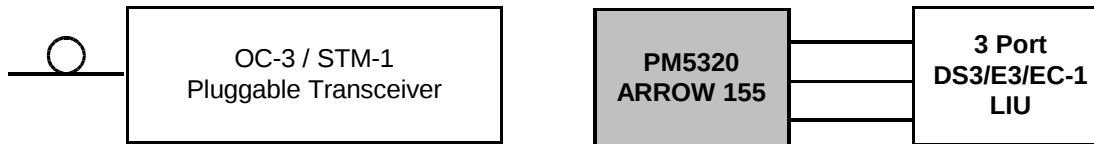
BLOCK DIAGRAM



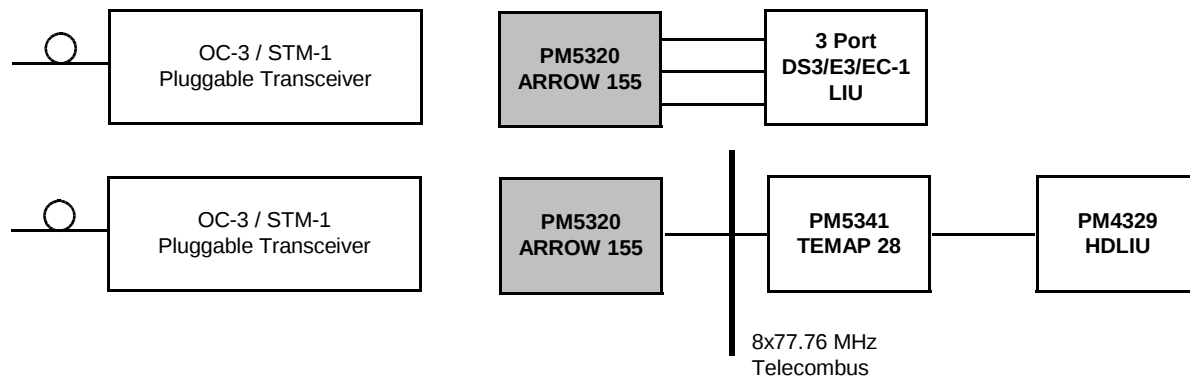
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TYPICAL APPLICATIONS

3 PORT DS3/E3/EC-1 TRANSPORT APPLICATION



TERMINAL MULTIPLEXER APPLICATION



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