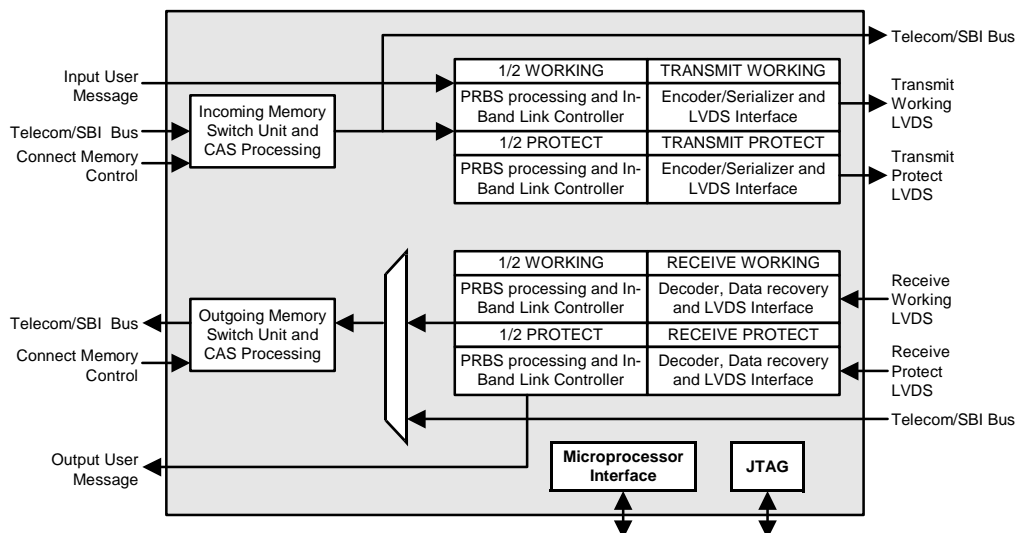


SBI Bus Serializer / STS-12 Time Slot Interchange

FEATURES

- Monolithic integrated circuit that implements conversion between byte-serial 19.44MHz SBI bus or 77.76MHz SBI336 bus and redundant 777.6Mbps bit-serial 8B/10B-base SBI336S bus.
- SBI converter and TDM time slot interchange.
- Quad byte wide 19.44MHz SBI bus to 777.6MHz serial SBI336S converter.
- Byte wide 77.76MHz SBI336 bus to 777.6MHz serial SBI336S converter.
- Quad byte wide 19.44MHz TelecomBus to serial 777.6MHz TelecomBus converter.
- Byte wide 77.76MHz TelecomBus to serial 777.6MHz TelecomBus converter.
- Quad byte wide 19.44 MHz SBI bus to byte wide 77.76 MHz SBI bus bridge.
- Quad byte wide 19.44 MHz TelecomBus to byte wide 77.76 MHz TelecomBus bridge.
- DS0, NxDS0, T1, E1, VT1.5, VT2, DS3 and E3 granular quad SBI to serial SBI336S time slot interchange.
- DS0, NxDS0, T1, E1, VT1.5, VT2, DS3 and E3 granular SBI336 to serial SBI336S time slot interchange.
- VT1.5, VT2, STS-1 quad 19.44MHz TelecomBus to serial TelecomBus switch. Requires J1 byte alignment.
- VT1.5, VT2, STS-1 77.76MHz TelecomBus to serial TelecomBus switch. Requires J1 byte alignment.
- With the Narrowband Switch Element, PM8620 NSE-20G, the SBS can be used to implement a switch fabric scalable to 20Gb/s.
- With the Narrowband Switch Element, PM8621 NSE-8G, the SBS can be used to implement a switch fabric scalable to 8Gb/s.
- Integrates two independent DS0 granularity Time Slot Interchange Switches (full duplex).
- Nominal latency through the SBS in DS0 mode is 125 μ S. Channel Associated Signaling (CAS) latency through the SBS in DS0 mode is two T1 multiframes (6 ms) or two E1 multiframes (4 ms).
- In TelecomBus mode or SBI mode without DS0 level switching nominal latency through the SBS is <16 μ S.
- The Time Slot Interchange Switch permits any receive or incoming byte from an input tributary to be mapped to any outgoing or transmit byte, respectively, on the associated output tributary.
- Supports working and protect serial SBI336 or TelecomBus links to support a redundant switch fabric architecture.
- Encodes and decodes byte wide SBI bus and SBI336 bus control signals for all SBI supported link types and clock modes for transport over the serial SBI336S interface.
- Encodes data from the Incoming SBI bus or TelecomBus stream to working and protect 777.6Mbps LVDS serial links with 8B/10B-based encoding.
- Decodes data from working and protect 777.6MHz LVDS serial links with 8B/10B-based encoding to the Outgoing SBI bus or TelecomBus stream.
- In SBI mode, switches Channel Associated Signaling bits, CAS, with all DS0 data.
- Uses 8B/10B-based line coding protocol on the serial links to provide transition density guarantee and DC balance and to offer a greater control character vocabulary than the standard 8B/10B protocol.
- Provides optional PRBS generation for each LVDS serial data link for off-line link verification. PRBS can be processed with minimum STS-1 granularity.
- Provides hardware and software control to coordinate the connection mapping of the local device, peer SBS devices and companion NSE switch devices.

BLOCK DIAGRAM



SBI Bus Serializer / STS-12 Time Slot Interchange

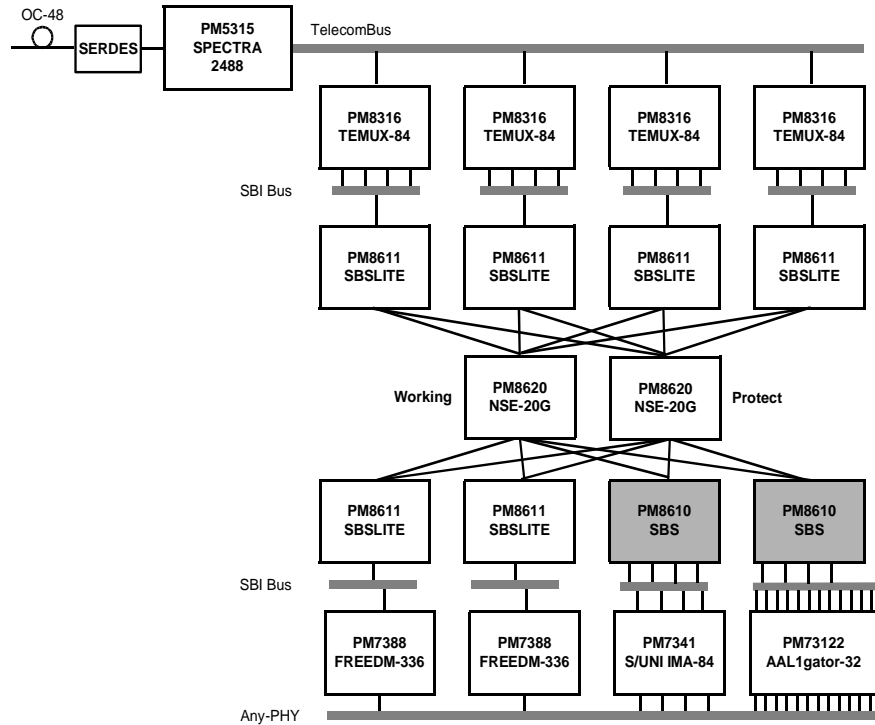
- Can communicate with PMC's NSE switch devices over an in-band communications channel in the LVDS links. This channel includes mechanisms for central switch fabric control and configuration.
- Derives all internal timing from a single 77.76 MHz system clock and a system frame pulse.
- Supports two sets of switch settings and a controlled method of changing settings on STS-12 frame boundaries.

- Channelized OC-12/OC-48 Any Service Any Port Switches.
- Voice Gateways.

- Serial backplane board interconnect and Shelf-to-Shelf cabled serials interconnect.

TYPICAL APPLICATIONS

CHANNELIZED OC-48/4xOC-12 ASAP



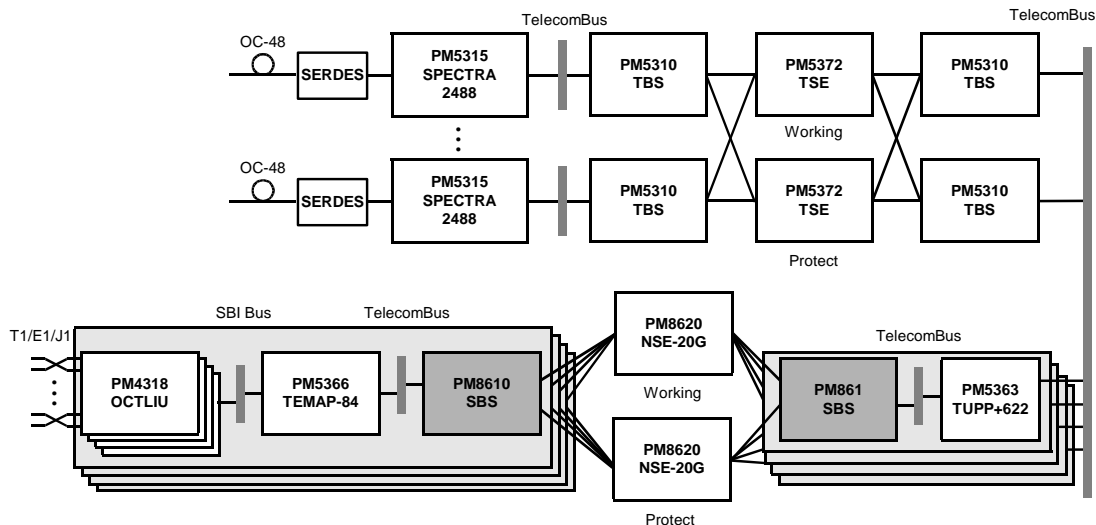
PHYSICAL CHARACTERISTICS

- Supports an IEEE P1149.1 JTAG test port.
- Provides 16-bit microprocessor bus interface for configuration, control and status monitoring.
- 1.8 V / 3.3 V 0.18µm CMOS technology.
- 352 ball 27 mm x 27 mm UPGA.
- -40°C to +85°C Industrial temperature Operation.

APPLICATIONS

- T1/E1 SONET/SDH Cross-connects and Add-Drop Multiplexers.
- OC-48 Multiservice Access Multiplexers.

NxOC-48 ADM WITH CHESS CHIP SET



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