



PMC-Sierra, Inc.

Preliminary

PM7390
S/UNI®-MACH48

Multi-Service Access Device for Channelized Interfaces

FEATURES

- Single chip ATM and packet processor capable of processing STS-48/STM-16 aggregate payload.
- Optionally interprets the incoming AU-3/AU-4 pointers to locate payload frame boundaries.
- Provides 48 ATM cell delineation blocks, 48 bit/byte HDLC processors, 48 DS-3 mappers, 48 DS-3 framers, and 48 PLCP framers.
- Programmable assignments for allocating STS-1 timeslots to arbitrary DS3, STS-1/STM-0, STS-3c/STM-1, STS-12c/STM-4, or STS-48c/STM-16 channels.
- Implements the ATM Forum User Network Interface Specification and the ATM physical layer for Broadband ISDN according to CCITT Recommendation I.432.
- Implements the Point-to-Point Protocol (PPP) over SONET/SDH specification according to RFC 2615(1619)/1662 of

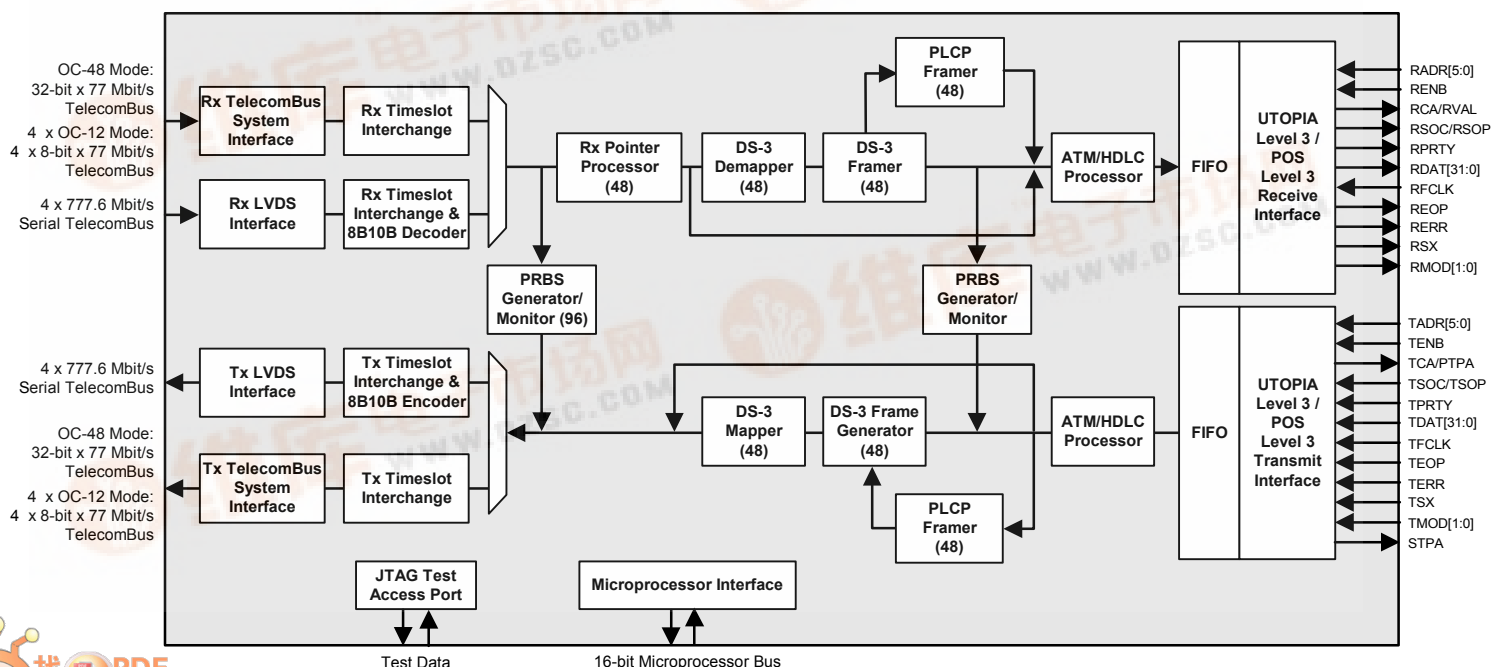
- the PPP Working Group of the Internet Engineering Task Force (IETF).
- Supports a set of four duplex byte-serial 77.76 Mbyte/s STS-12c/STM-4c line side parallel TelecomBus interfaces which can also be grouped into a single 32-bit-wide STS-48c/STM-16c line side TelecomBus interface.
- Optionally supports two sets of four 777.6 Mbit/s LVDS serial TelecomBus links to transmit and receive working and protection 4xSTS-12/STM-4 or 1xSTS-48c/STM-16c line side data.
- Provides UTOPIA Level 3 32-bit wide System Interface (clocked up to 104 MHz) with parity support for ATM applications.
- Provides SATURN® POS-PHY Level 3™ 32-bit System Interface (clocked up to 104 MHz) for Packet over SONET/SDH (POS), HDLC, or ATM applications.
- Provides per-channel PRBS insertion and detection.

- Provides a standard five signal IEEE 1149.1 JTAG test port for boundary scan board test purposes.
- Provides a generic 16-bit microprocessor bus interface for configuration, control, and status monitoring.
- Low power 1.8 V CMOS device with 3.3 V TTL compatible digital inputs and 3.3 V CMOS/TTL compatible digital outputs.
- 560 pin Ultra BGA package.

APPLICATIONS

- ATM and Multi-service Switches, routers, and packet switches.
- Channelized ATM and POS interfaces.
- SONET/SDH Add/Drop Multiplexers with data processing capabilities.

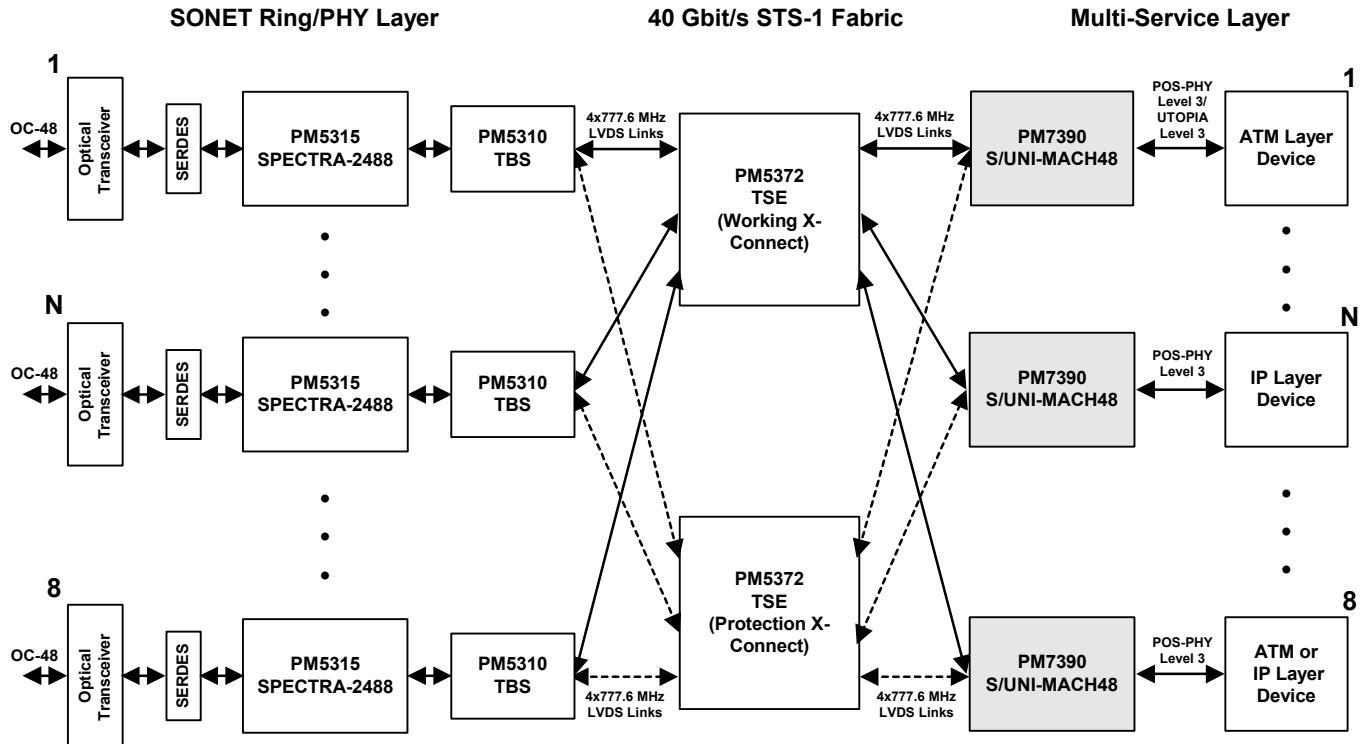
BLOCK DIAGRAM



Multi-Service Access Device for Channelized Interfaces

TYPICAL APPLICATION

Multi-Service ATM/POS Switch Port Application



STS-48/STM-16 APPLICATION WITH POS/ATM PROCESSING

