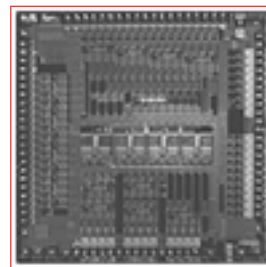




BCM8501 PRODUCT Brief



STS-192c/STM-64c POS/ATM FRAMER AND MAPPER

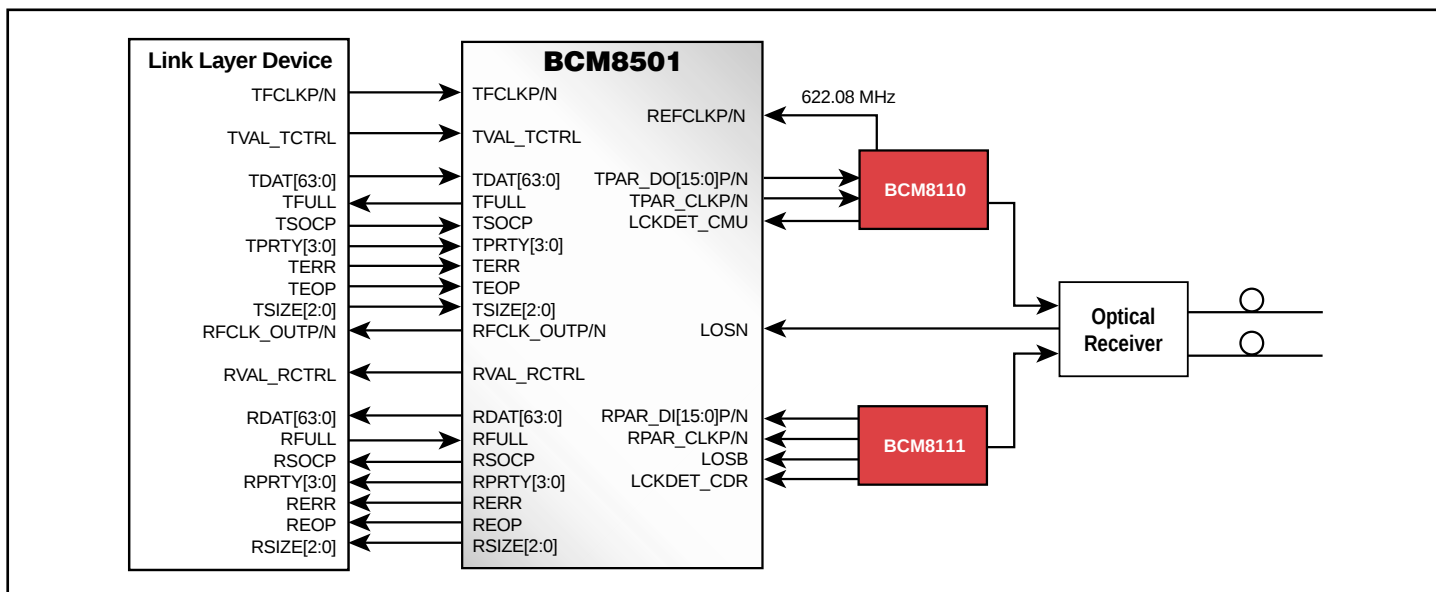
BCM8501 FEATURES

- Provides ATM and Packet over SONET/SDH (POS) STS-192c (9.953 Gbps) PHY.
- Inserts and extracts ATM cells or POS packets into/from the SONET Synchronous Payload Envelope (SPE).
- Filters and captures Automatic Protection Switch (APS) bytes (K1,K2).
- Detects signal degrade and signal failure threshold crossing alarms.
- Captures and debounces the synchronization status byte (S1).
- Extracts and inserts the 16-byte or 64-byte section trace (J0), path trace (J1) messages, and section/line data communication channels (DCC).
- Provides a generic, 16-bit microprocessor interface for device control and register access.
- Provides standard IEEE 1149.1 Joint Test Action Group (JTAG) test port for boundary scan.
- Provides a 16-bit, 622.08 MHz, LVDS line interface.
- Provides a serial interface for SONET/SDH transport overhead bytes.
- Provides a 16-bit General Purpose Input/Output (GPIO).

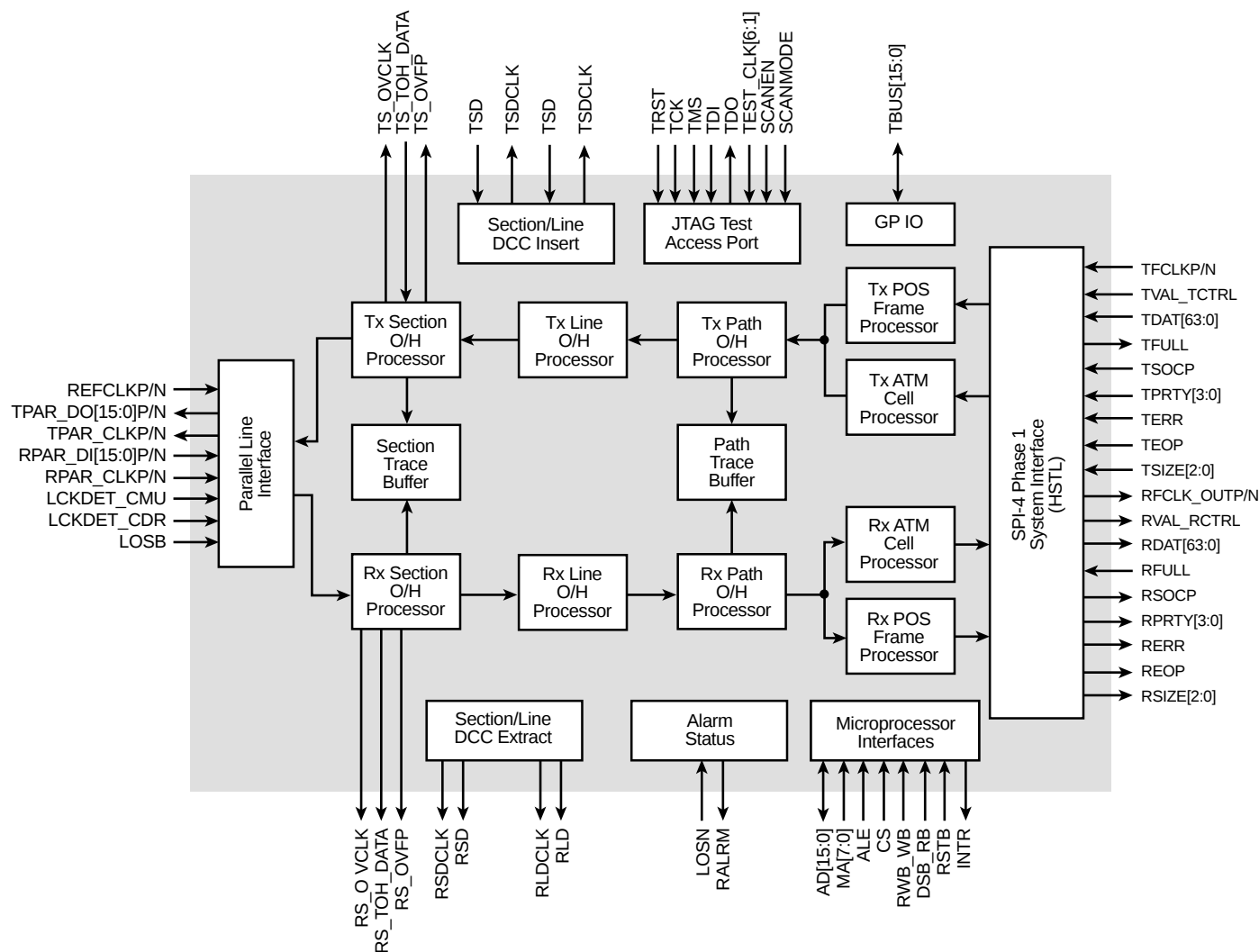
SUMMARY OF BENEFITS

- Low power, 1.8/3.3V CMOS technology.
- Packaged in a 612-pin HSBGA (Heat Sink Ball Grid Array).
- Industrial temperature range from -40°C to +85°C.
- CMOS-based device uses the most effective silicon economy of scale.
- Low-power consumption eliminates the need for external cooling sources.
- Target applications:
 - WAN and Edge ATM switches
 - Multiprotocol switches
 - Layer 3 switches
 - Routers, packet switches, and hubs

Application Diagram



Internal Block Diagram



The **BCM8501** User Network Interface is a monolithic integrated circuit that implements SONET/SDH processing, ATM mapping, and Packet over SONET mapping functions at the STS-192c/STM-64-64c 9.953 Gbps rate. The **BCM8501** is configured, controlled, and monitored through a generic 16-bit microprocessor bus interface. The **BCM8501** also provides a standard five-signal IEEE 1149.1 JTAG test port for boundary scan board test purposes.

The **BCM8501** uses a low power, +1.8V, 0.18 μ CMOS technology. It has LVTTTL/CMOS-compatible digital input/outputs. The CMOS I/O operates at 3.3V. The **BCM8501** is packaged in a 35 x 35 mm, 612-pin HSBGA package.

Broadcom® and the pulse logo® are registered trademarks of Broadcom Corporation and/or its subsidiaries in the United States and certain other countries.

For more information please contact us at:
Phone: 949-450-8700, FAX: 949-450-8710
Email: info@broadcom.com



Visit our web site at: www.broadcom.com

© 2001 by BROADCOM CORPORATION. All rights reserved.

8501-PB01-R-8.24.01

BROADCOM CORPORATION
 16215 Alton Parkway, P.O. Box 57013
 Irvine, California 92619-7013