



MULTIRATE 10-GBPS CDR/DEMULTIPLEXER WITH ELECTRONIC DISPERSION COMPENSATION

FEATURES

- Fully integrated CDR and demultiplexer with AGC and electronic dispersion compensator
- Compensates 3000-ps/nm chromatic dispersion
- Compensates 50 ps of digital group delay caused by PMD
- 1:16 demultiplexer (DEMUX) with LVDS outputs
- Very low power dissipation
- AGC with wide dynamic input range
- Channel quality monitor
- Phase and threshold adjust
- Two-wire interface
- Supports multiple data rates (OC-192, 10GE, FEC)
- Exceeds SONET/SDH jitter requirements
- 10-Gbps MSA compliant
- 1.8V power supply
- 1.8V or 3.3V CMOS I/Os
- 15 x 15-mm 150-pin BGA package

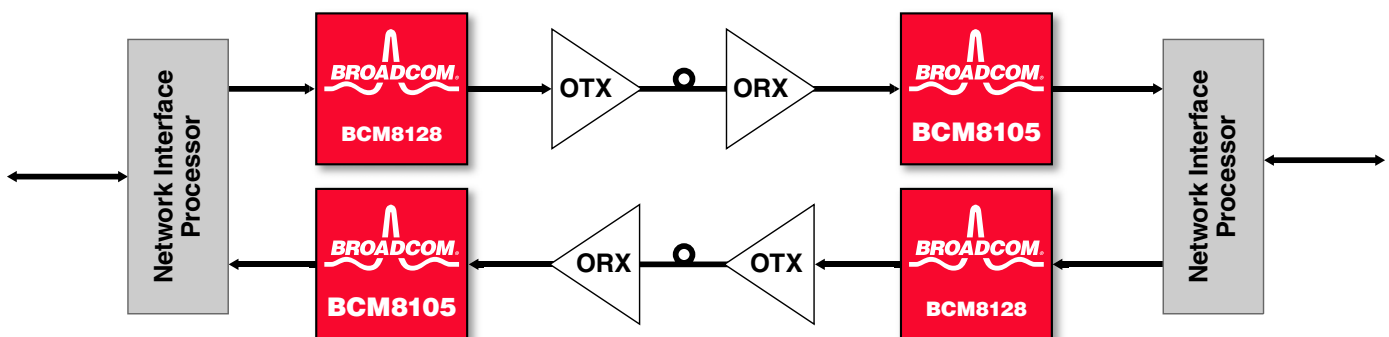
SUMMARY OF BENEFITS

- Extends the reach of single-channel and DWDM links
- Improves optical link budget
- Reduces need for expensive optics and passive dispersion compensation components
- Reduces system and maintenance cost
- Enables fast system design cycles
- High integration and low power dissipation enable lower-cost and higher-density systems

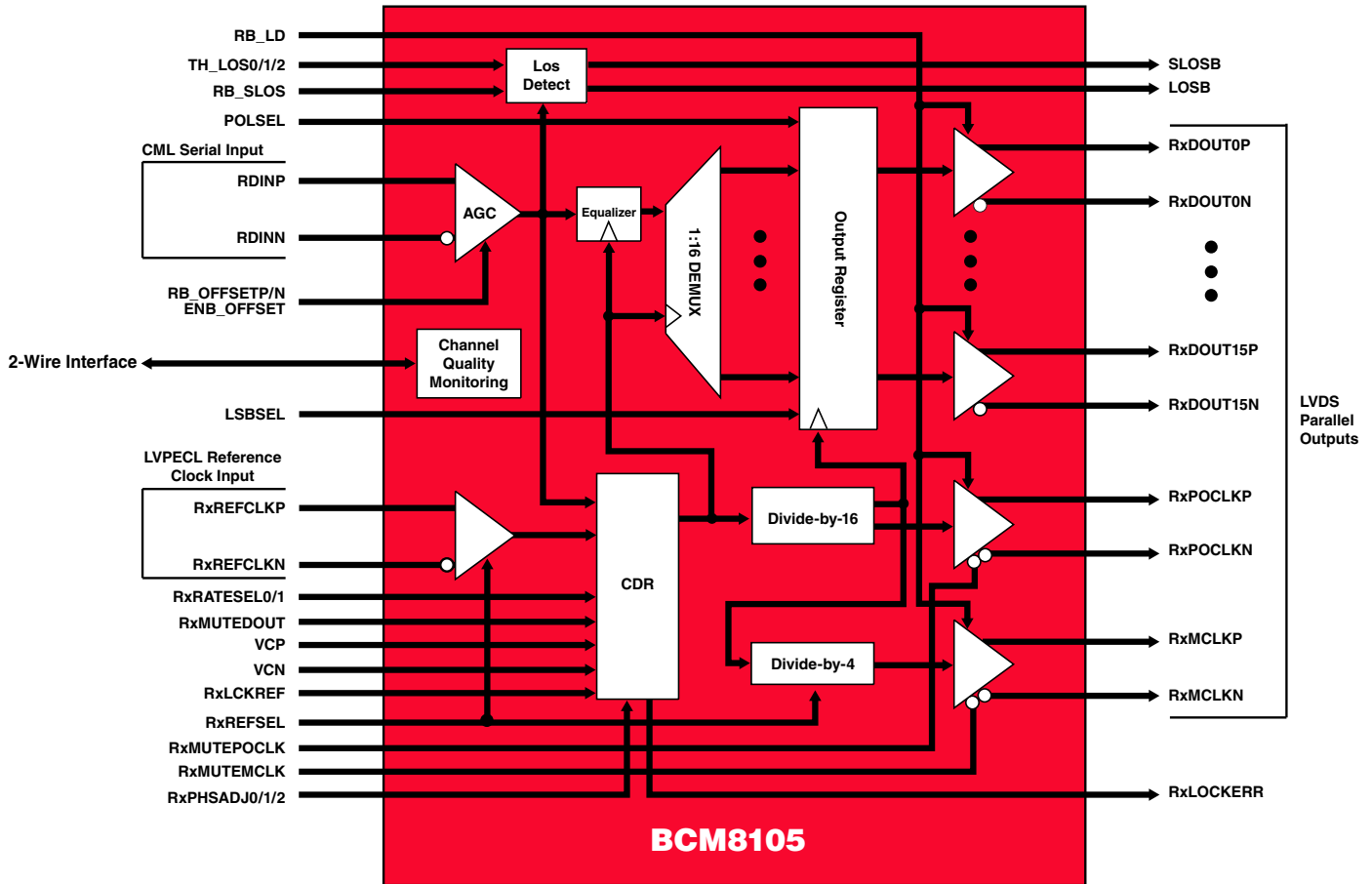
APPLICATIONS

- SONET/SDH transmission equipment and modules
- Multiservice provisioning platforms
- Add and drop multiplexers
- Cross-connects
- ATM equipment
- SONET/SDH measurement equipment
- Routers and switches

BCM8105 Functional Block Diagram



OVERVIEW



BCM8105 Block Diagram

The BCM8105 is a fully integrated, MSA-compliant, multirate SONET/SDH/10GE receiver supporting OC-192, 10 GbE, and FEC (forward error correction) datarates. The product integrates a high-performance clock and data recovery (CDR), 1:16 demultiplexer, electronic dispersion compensator (EDC), loss of signal (LOS) detection circuitry, and an advanced feature set.

The BCM8105 provides high jitter tolerance and low jitter generation to comply with Optical Networking Forum (OIF), IEEE 802.3TMae, Telcordia[®], ANSI, and ITU-T standards.

The BCM8105 reference clock input frequency is user-selectable to the line rate divided by either 16 or 64. The reference clock output and the LVDS receive parallel bus output can be squelched under user control.

The BCM8105 can be powered with a single 1.8V supply or a dual 1.8/3.3V supply without any special power supply sequencing requirements.

The BCM8105 comes in a 15 x 15-mm, 150-pin BGA package.

Broadcom[®], the pulse logo, Connecting everything[®], and the Connecting everything logo are among the trademarks of Broadcom Corporation and/or its affiliates in the United States, certain other countries and/or the EU. Any other trademarks or trade names mentioned are the property of their respective owners.

Connecting
everything[®]



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

© 2006 by BROADCOM CORPORATION. All rights reserved.

8105-PB03-R 04/14/06

Phone: 949-450-8700
Fax: 949-450-8710
E-mail: info@broadcom.com
Web: www.broadcom.com