



MULTI-RATE 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

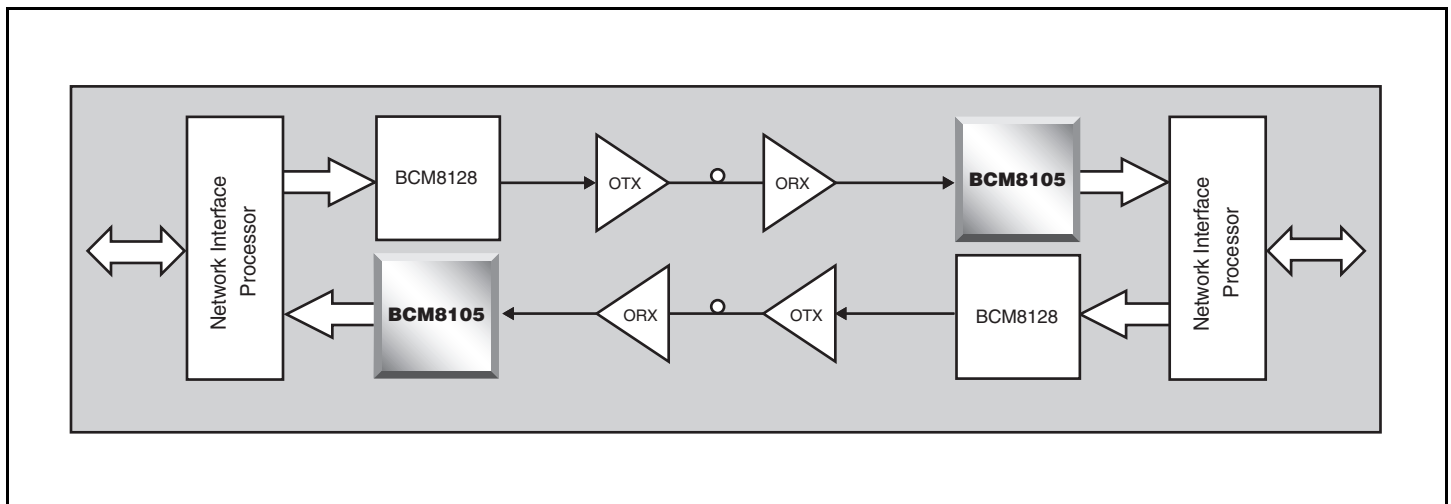
SUMMARY OF BENEFITS

- 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

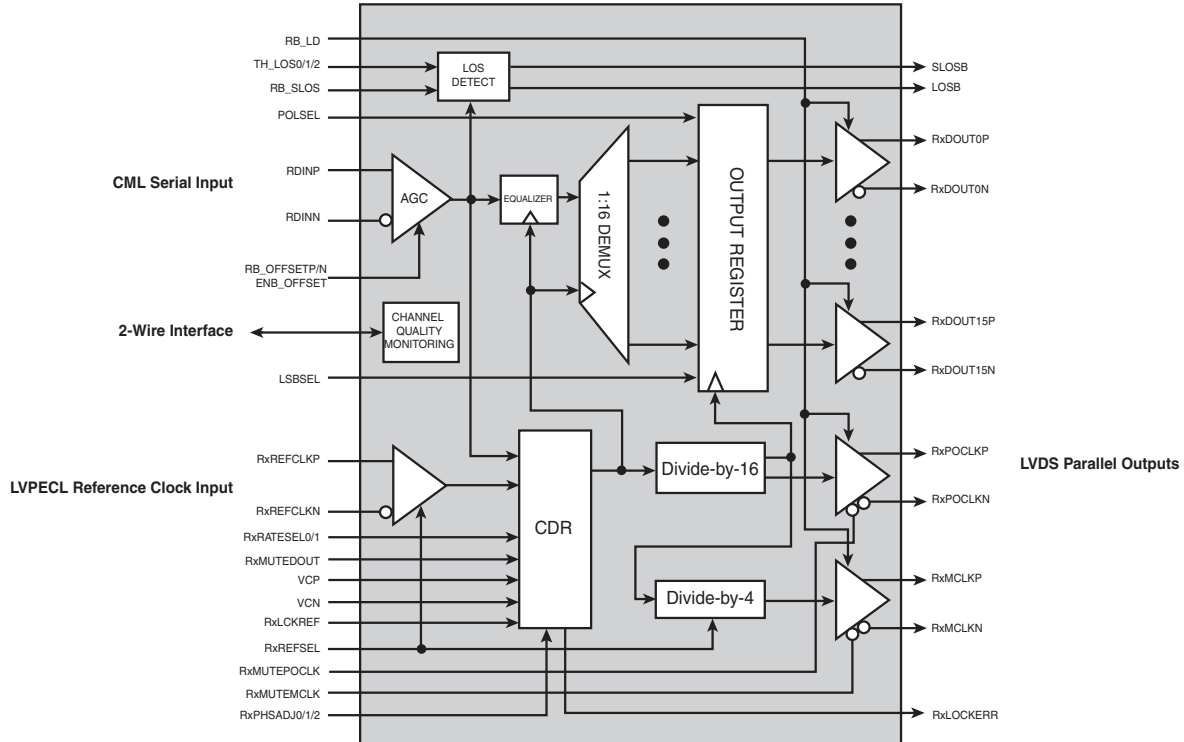
APPLICATIONS

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

BCM8105 Functional Block Diagram



BCM8105 OVERVIEW



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

The **BCM8105** provides high-jitter tolerance and low-jitter generation to comply with Optical Internetworking Forum (OIF), IEEE 802.3ae, 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.

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

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