



## 2.488/2.667 GBPS ULTRA LOW POWER SONET/SDH TRANSCEIVER

### FEATURES

- OC-48/STM-16 SONET/SDH transceiver
- Selectable full-duplex transmission between standard rate of 2.488 Gbps or Forward Error Correction rate of 2.667 Gbps.
- Single-chip, integrated solution containing multiplexer (Mux), clock multiplication unit (CMU), demultiplexer (Demux), and clock data recovery (CDR) functions.
- 4-bit, 622.08/666.84-MHz, LVDS system interface
- Both line and system loopback modes
- Additional diagnostic features include lock detect and loss of signal.
- Meets SONET/SDH jitter requirements
- Low power dissipation of 550 mW typical
- Operates at 1.8V
- 1.8V or 3.3V CMOS I/O interface
- Standard CMOS fabrication process
- Two packages offered:
  - 100-pin QFP package, 14 mm  $\infty$  14 mm  $\infty$  1.4 mm
  - 100-pin BGA package, 11 mm  $\infty$  11 mm  $\infty$  1.71 mm

### SUMMARY OF BENEFITS

- Ultra low power consumption eliminates external heat sinks, fans for system airflow, and expensive high current power supplies.
- High integration reduces design cycle and time to market.
- Features increased port density per board and system.
- Selectable standard OC-48/STM-16 rate of 2.488 Gbps or Forward Error Correction rate of 2.667 Gbps, allowing for easy system configuration to maximize transmission bandwidth and data availability.
- Extensive diagnostic features provide easy system troubleshooting.
- Compliant with industry standards to reduce design cycle and time to market.
- CMOS-based device takes advantage of the most effective silicon economy of scale.

### APPLICATIONS

- OC-48/STM-16 transmission Equipment
- SONET/SDH optical modules
- ADD/DROP multiplexers
- Digital cross-connects
- ATM switch backbones
- Terabit and edge routers
- DWDM systems

### BCM8220 Application Block Diagram

