



## MULTI-RATE 10 Gbps 16:1 MULTIPLEXER WITH CLOCK GENERATION

### BCM8120 FEATURES

- Fully integrated multi-rate clock multiplication unit (CMU) and multiplexer (MUX)
- Multi-rate serial output data and clock
- 16:1 multiplexer with LVDS parallel data and clock inputs
- User-selectable reference clock frequency
- On-chip 16 x 10 FIFO eliminates system timing issues
- Lock detect
- Core power supply: 1.8V
- I/O power supply: CML, LVDS, and LVPECL at 1.8V and CMOS at 1.8 or 3.3V
- Power consumption: 580 mW typical @ 1.8V
- Standard CMOS fabrication process
- 15 x 15 mm, 120-pin BGA package

### SUMMARY OF BENEFITS

- Provides compliance with Optical Internetworking Forum (OIF), IEEE 802.3ae, Telcordia, and ITU-T industry standards.
- Reduces design cycle and time to market.
- High level of integration allows for higher port density solutions.
- CMOS-based device uses the most effective silicon economy of scale.
- Low power consumption eliminates the need for external cooling sources.
- Target applications:
  - Transmission equipment
  - Optical modules
  - ADD/DROP multiplexers
  - Digital cross-connects
  - ATM switch backbone
  - Test equipment
  - Terabit routers
  - Edge routers
  - Network Interface Cards (NIC)
  - Hubs and repeaters

### Application Block Diagram

