

- Octal 6.25G/3.125G/1.25Gbps 2:1 MUX/1:2 DEMUX Devices for Serial Backplane Applications
- 4-Tap Adaptive Receive Equalizer to Compensate Backplane Attenuation as well as Crosstalk
- 4-Tap Transmit Equalizer with Programmable Coefficients for Optimized Performance
- 1.2/2.5-V Power Supply
- Low Jitter CML Serial Interface with On-Chip Termination
- Supports IEEE1149.1 JTAG
- Supports IEEE802.3 Defined MDIO Serial Control and Configuration Interface
- BIST Features to Support Testing Including PRBS Generator/Verifier
- On-Chip PLL to Provide Clock Synthesis from a Low-Speed Reference
- 19X19 Pins Full-Array FC-BGA Package with 1-mm Ball Pitch
- 100G, 50G, and 20G Throughput Modes

description

The TLK6B008 is a backplane transceiver for serial data communication supporting three different speeds and functional modes. In its highest bandwidth mode, 100G mode, it has eight 2:1 MUXs and 1:2 DEMUXs. The blunt end interface is comprised of sixteen 3.125-Gbps bi-directional serial data channels. The sharp end interface is comprised of eight 6.25-Gbps bi-directional serial channels to interface with the backplane, as illustrated in Figure 1.

In the other two functional modes, 50G mode (3.125 Gbps) and 20G mode (1.25 Gbps), the TLK6B008 acts as a re-timing repeater.

TLK6B008 supports the IEEE 802.3 management data input/output (MDIO) interface to allow ease in configuration and status monitoring of the link. Individual control of each serial link can be accomplished via the MDIO interface.

TLK6B008 supports the IEEE1149.1 JTAG test port for ease in board manufacturing test. It also supports a comprehensive series of built-in tests for self-test purposes including internal serial loop-back and PRBS generation and verification.

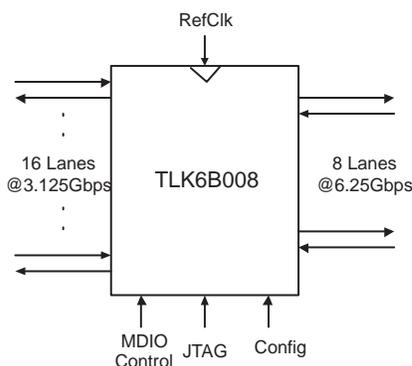


Figure 1. TLK6B008 Functional Block Diagram

TLK6B008 operates with a 1.2-V core supply and a 2.5-V supply for LVTTTL I/O's. A 1.8-V termination voltage is required for the 6.25-Gbps transmit interface.

TLK6B008 is packaged in a ball grid array (BGA) package and is characterized for operation from 0°C to 105°C junction temperature.



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