

Feature:

- 1.6 to 2.5 Gbps operation
- 1.8V power supply, CMOS design
- Low power dissipation
- Minimal external components
- Recovered clock PLL training feature
- Programmable voltage output swing at high-speed serial output
- Local and remote serial loop-back capability
- Modular design to facilitate customization and process migration
- Slice concept used to facilitate integration of multiple ports

General Description:

The MXL2500A is a full speed Gigabit transceiver implemented using a digital CMOS technology. It can be used for high-speed bi-directional point-to-point data transmission. The transmitter accepts a 20bit parallel data at a reference clock frequency of 125 Mbps, serializes it, and outputs the serial data differentially at 20 times the input rate. The X20 frequency synthesizing PLL is fully integrated including the loop filter. The receiver accepts serial differential data at 2.5 Gbps, recovers the clock and data, de-serializes the data, and make the data available at the 20-bit wide bus.

Block Diagram

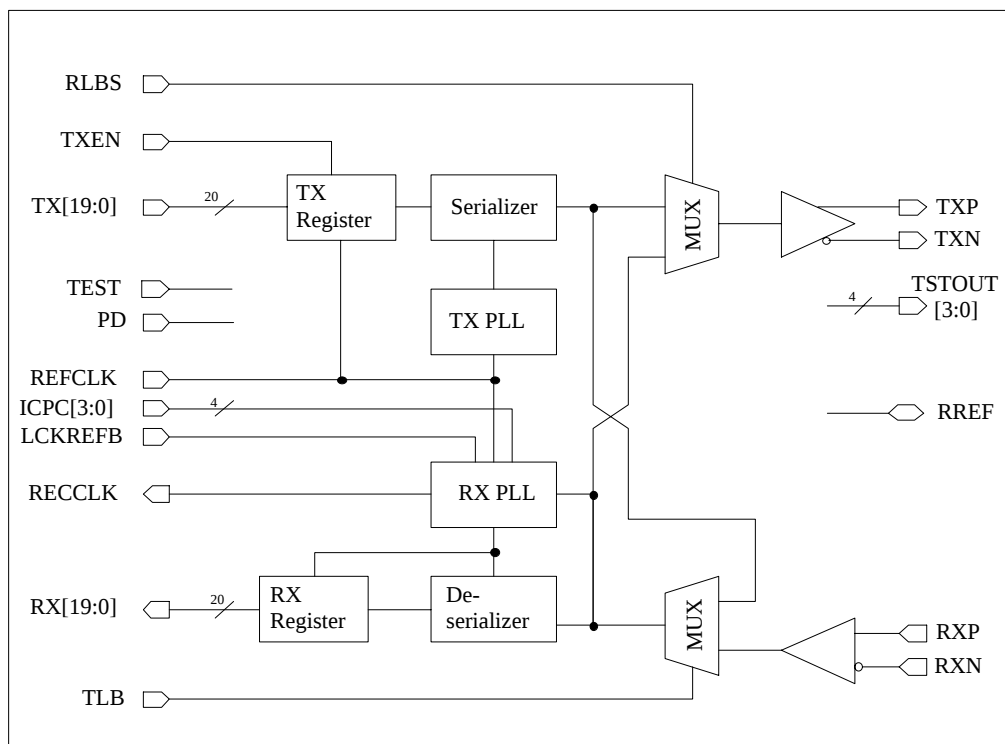


Figure 1: Transceiver Block diagram