

Features:

- Complies with Cisco Serial-GMII Specification revision 1.8
- 1.25Gbps (625MHz) operation
- LVDS I/O
- Jitter performance exceeds standard specification
- 1.2V/3.3V dual power supply, CMOS design
- Low power dissipation
- Optional transmit pre-emphasis
- Local and remote serial loop-back capability
- Modular design to facilitate customization and process migration
- TSMC 0.13um process technology

General Description:

MXL-SRDS-SGMII is a Serial Gigabit Media Independent Interface SerDes implemented in digital CMOS technology. The SerDes IP offers data transfer rate of 1.25Gbps, for both upstream & downstream direction, meeting Cisco Serial-GMII standard.

The transmitter accepts a 10-bit parallel data, serializes it, and outputs the serial data through LVDS transmitter. The receiver accepts serial LVDS data at up to 1.25Gbps, recovers the clock and data, de-serializes the data, and makes the data available at the parallel bus.

MXL-SRDS-SGMII is capable of generating low-jitter outputs in the noisy environment typical of million-gate SOC.

Block Diagram

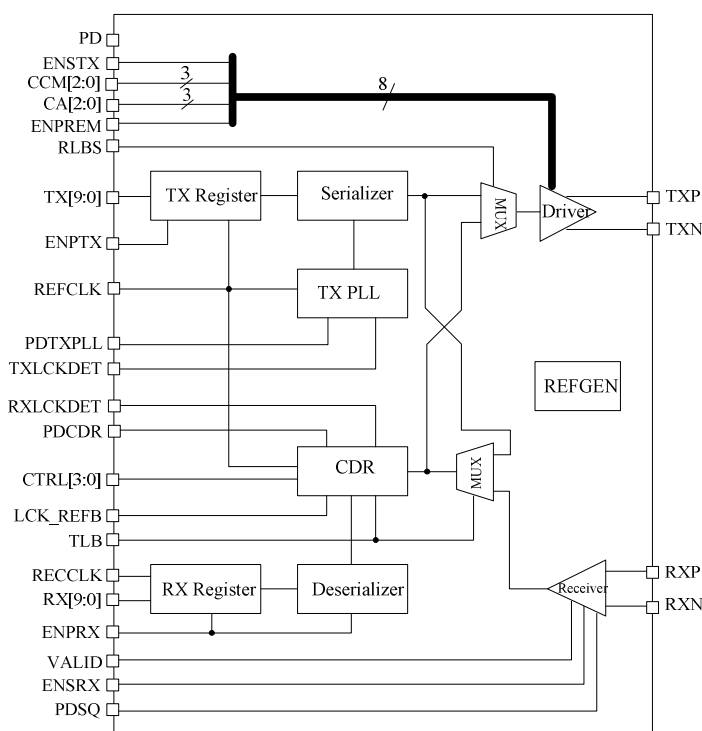


Figure 1: SerDes Block diagram