

LT1258 --- Product Brief

12.5Gbps Quad-lane 2:2 Cross-Point Switch with Equalization and De-Emphasis

1. Features

- Support 1Gbps to 12.5Gbps Data Rate
- Input signal detect and output sink detect support
- Up to 4 forward and 4 backward lanes support
- 2x2 analog cross-point switch
- Data lane polarity swappable
- Equalization performance
 - PRBS31 25 dB@12.5Gbps
 - PRBS31 26 dB@11.5Gbps
 - PRBS31 27 dB@10.3125Gbps
- Programmable de-emphasis up to 8 dB
- Up to 1.2V output swing
- Programmable through pin selection, EEPROM or I2C/SMBus interface
- Selectable 2.5-V or 3.3-V supply voltage
- Support up to 400KHz I2C/SMBus slave

2. General Description

The Lontium LT1258 is a quad 2:2 cross-point switch or splitter with signal conditioning suitable for high-speed bus applications with data rates up to 12.5 Gbps. The

continuous time linear equalizer (CTLE) of the receiver provides adjustable boost to compensate up to 25 dB insertion-loss at 6.25 GHz. The transmitter features a programmable amplitude voltage levels to be selectable up to 1200 mVpp and de-emphasis up to 8 dB.

In order to save power consumption, the LT1258 can work well from 1.8V to 2.5V power supply in external LDO mode.

The LT1258 can be configured to support PCIe, CAUI-10, and SAS/SATA, 10G-KR, CPRI or other signaling protocols.

The LT1258 is fabricated in advanced CMOS process and implemented in 10mm x 5.5mm QFN54 package.

3. Applications

- 10G-KR
- CAUI-10
- SAS/SATA
- CPRI
- PCIe
- SGMII

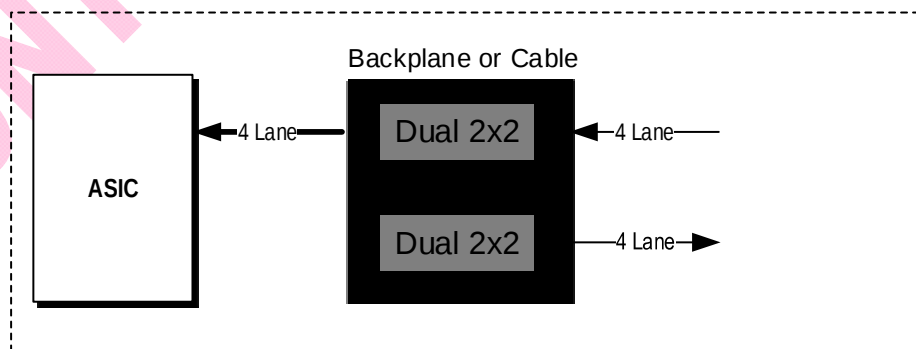


Figure 3.1 LT1258 Typical Application Diagram

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