RC7017

Product Brief V2.00 2004-4 100M Ethernet & 8E1 merging multiplexer

Overview

The RC7017 is a mixed multiplexer, which integrates a PDH optical terminal and a 100BASE-FX Ethernet PHY transceiver. It transmits and receives 8 E1 and 100M full-speed full-duplex Ethernet data through a pair of optical fiber, and provides two Pseudo-CML (PCML) optical device interfaces to support optical protect switching. The RC7017 has built-in optical line Clock and Data Recovery (CDR) circuit, and the PCML interface can connect with optical transceiver directly. The optical interface supports Automatic Laser Shutdown/Reduction (ALS) operation.

The RC7017 provides Media Independent Interface (MII) like a PHY and needs a SWITCH to connect with public Ethernet network. The RC7017 supports NRZ and HDB3 E1 line codes, and provides EOW, abundant auxiliary channels and management UART. The configurations can be performed through pins and management UART.

Features

- Multiplexes 8 E1 signal and a full-speed 100M Ethernet frame
- Supplies dual optical ports with built-in CDR and supports connection with optical transceiver directly
- 1+1 line protection with ALS facility for eye safety
- Built-in E1 CDR, HDB3 CODEC and DPLL for jitter attenuation at E1 interface to allow simple LIU adopted
- Supports 64Kb/s interface to directly connect with PCM CODEC for order wire function
- Management UART for configuring and monitoring the chip at 9600bps or 19200bps
- Supports local and remote E1 loop-back
- Masks alarm automatically when no LIU installed
- Supports configured customer channels: up to 4 asynchronous serial channels or 2 serial channels + one E1
- 32 low-speed asynchronous sampling channels, which can be accessed through management UART or pins
- LQFP144 package and 3.3 Voltage power supply

Functional Block Diagram

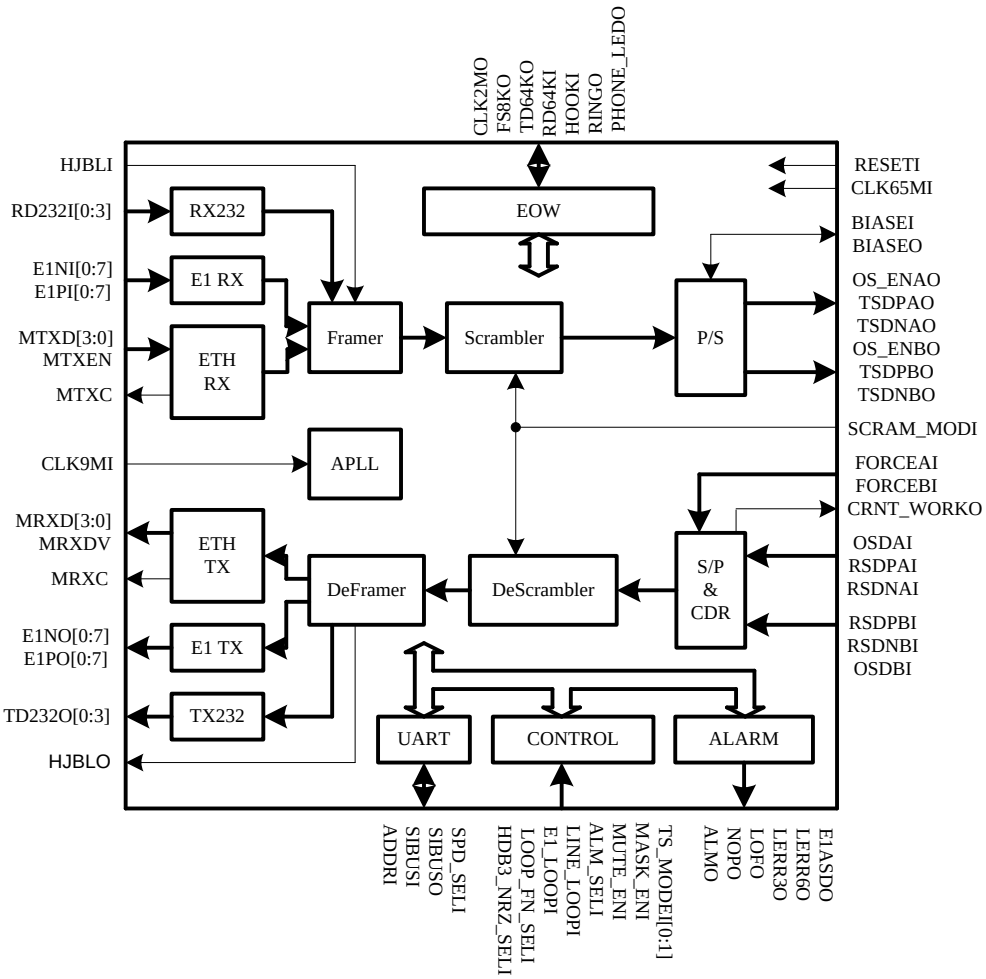

Figure 3-1 Functional Block Diagram

Application

- 8E1 TM Multiplexer
- 100M Ethernet & 8E1 TM Multiplexer