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Model 4259

2-Channel T1/E1 Transceiver MIX Module



Features

- PCM interfaces available for both T1 and E1
- Meets AT&T and CCITT requirements
- Supports CRC4 error checking and generation
- Interfaces to 75-ohm coax, and 100-ohm or 120-ohm twisted pair

Ordering Information

Model	Description
4259	2-ch T1/E1 Transceiver MIX module

Options:

-001	T1 interface
-002	E1 interface

General Information

Model 4259 is a 2-channel, full-duplex PCM transceiver MIX module for T1 and E1 (PCM-30) signals. High-performance PCM line interface logic is followed by frame encoding/decoding options for T1 or E1, HDLC controller, and dual port RAM.

Line Interface Unit and Framer

Two identical and separate subsystems support each full-duplex line. The line interface unit (LIU) mates with separate transmit and receive transformers providing isolation and impedance matching for 75, 100, and 120 ohm lines.

The LIU extracts and generates clock and data, and interfaces directly to a frame aligner/generator for either T1 or E1, specified when the unit is ordered. The frame aligner/generator device is socketed and can be easily replaced in the field with a pin-compatible device supporting the other standard (available as an option).

HDLC Controller

The HDLC controller moves data between channel tables in the 8k x 16 dual-port RAM and the framer, so that the MIX bus can easily address data for each channel. Each time the HDLC controller fills or empties a data buffer, it sends an interrupt message into the interrupt queue FIFO, which stores up to 1k entries. The MIX bus reads the FIFO to determine which tables need to be serviced. The MIX interface can be interrupted each time an entry is made into the queue FIFO.

Serial Interface

An auxiliary RS-422 serial clock and data interface with FIFO buffering and interrupt generation to the MIX bus supports general purpose serial I/O.

Applications

This module is ideal as general purpose PCM interface for VMEbus workstations and embedded systems. It supports the most popular standard formats using the integral T1 and E1 framers.

Specifications

PCM line connections: T1 (1.544 Mbps) or E1 (2.048 Mbps) data rates; two inputs and two outputs on front panel telephone connectors; line impedance 75, 100 or 120 ohms, transformer coupled, jumper selectable

T1 frame aligner: Brooktree BtT9170, complies with ANSI T1.403, CCITT G.733; N(4F), SF(12F), ESF(24F) framing modes bit 7 stuffing, B8ZS or transparent

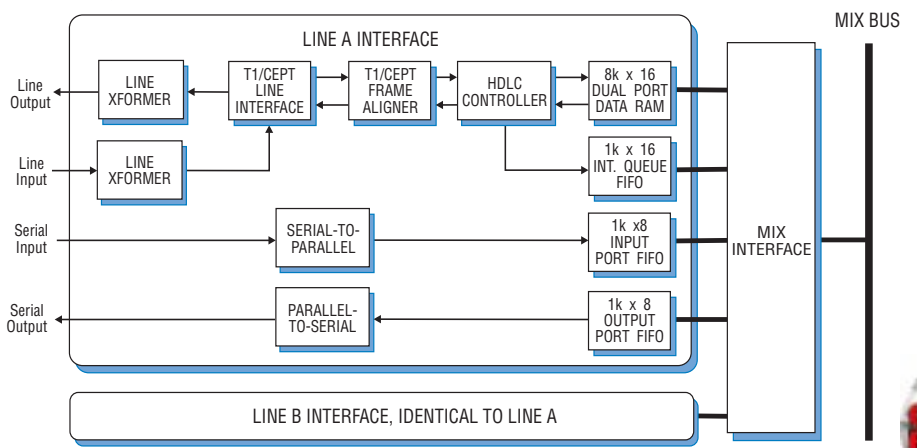
CEPT frame aligner: Brooktree BtP9170, complies with CCITT G.704, G.706, G.732 specifications; CAS, CCS, and Clear Channel framing modes, HDB3 line coding, CRC-4 checking

HDLC controller: Brooktree Bt8071, complies with CCITT ISDN primary and hyperchannel specifications; supports 32 full duplex HDLC/SDLC protocols

MIX interface: dual-port data RAM, 8k x 16, each channel; 1k x 8 input and output FIFOs and 1k x 16 interrupt queue FIFO, each channel; interrupt, control and status registers

Power: 0.5 A at +5 V from the MIX bus

Block Diagram, Model 4259



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