

LXT305A

Integrated T1/E1 Short-Haul Transceiver with Transmit JA

General Description

The LXT305A is a fully integrated transceiver for both North American 1.544 Mbps (T1) and International 2.048 Mbps (E1) applications. Transmit pulse shapes (T1 or E1) are selectable for various line lengths and cable types.

The LXT305A provides transmit jitter attenuation starting at 3 Hz, and is microprocessor controllable through a serial interface. It is especially well suited for applications in which the T1/E1 signals are demultiplexed from a higher rate service such as DS3 or SONET/SDH. This demultiplexing results in a gapped clock which the 305A smooths out.

The LXT305A, an advanced double-poly, double-metal CMOS device, requires only a single 5-volt power supply.

Applications

- SDH / SONET Equipment
- M13 Multiplexers
- Digital microwave Radio
- PCM / Voice Channel Banks
- Data Channel Bank / Concentrator
- T1 / E1 multiplexer
- Digital Access and Cross-connect Systems (DACs)
- Computer to PBX interface (CPI & DMI)
- High-speed data transmission lines
- Interfacing Customer Premises Equipment to a CSU
- Digital Loop Carrier (DLC) terminals

Features

- Low power consumption (400 mW maximum)
- Constant low output impedance transmitter, regardless of data pattern (3Ω typical)
- High transmit and receive return loss exceeds ETS 300166 and G.703
- Compatible with most popular PCM framers
- Line driver, data recovery and clock recovery functions
- Minimum receive signal of 500 mV
- Selectable slicer levels (T1/E1) improve SNR
- Programmable transmit equalizer shapes pulses to meet DSX-1 pulse template from 0 to 655 ft
- Local and remote loopback functions
- Transmit Driver Performance Monitor (DPM) output
- Receive monitor with analog/digital Loss of Signal (LOS) output per G.775
- Receiver jitter tolerance 0.4 UI from 40 kHz to 100 kHz
- Transmit jitter attenuation starting at 3 Hz
- Serial control interface
- Available in 28-pin DIP and PLCC

LXT305A Block Diagram

