

# LXT350/351

## Integrated T1/E1 S/H Transceivers with Crystal-less Jitter Attenuation

### General Description

The LXT350 and LXT351 are full-featured, fully-integrated transceivers for T1 and E1 short-haul applications. They are software switchable between T1 and E1 operation, and offer pulse equalization settings for all short-haul T1 and E1 line interface (LIU) applications.

The LXT350 and LXT351 are identical except for their control interface. The LXT350 provides both a serial I/O port for microprocessor control and a hardware control mode for stand alone operation. The LXT351 offers an Intel- or Motorola-bus compatible parallel I/O port for microprocessor control. Both incorporate advanced crystal-less digital jitter attenuation in either the transmit or receive data path starting at 3 Hz. B8ZS/HDB3 encoding/decoding and unipolar or bipolar data I/O are available. Both LIUs provide loss of signal monitoring and a variety of diagnostic loopback modes.

The LXT350/351 design uses an advanced double-poly, double-metal fabrication process and requires only a single 5-volt power supply.

### Applications

- T1/E1 Asynchronous Multiplexers
- Digital Loop Carrier - Subscriber Carrier Systems
- SDH/SONET Multiplexers
- T1/E1 LAN/WAN interfaces for Bridges

### Features

- Fully integrated transceiver for short-haul T1 or E1 interfaces
- Crystal-less digital jitter attenuation
  - Selectable either transmit or receive path
  - No crystal or high-speed external clock required
- Meet or exceed specifications in ANSI T1.403 and T1.408; ITU G.703, G.736, G.775 and G.823; ITU-T I.431; ETSI 300-166 and 300-233; and AT&T Pub 62411
- Support 75  $\Omega$  (E1 coax), 100  $\Omega$  (T1 twisted-pair) and 120  $\Omega$  (E1 twisted-pair) applications
- Fully restores the received signal after transmission through a cable with attenuation of 18dB, at 1024 kHz
- Five Pulse Equalization Settings for T1 short-haul applications
- Transmit/receive performance monitors with Driver Fail Monitor Open (DFM) and Loss of Signal (LOS) outputs
- Selectable unipolar or bipolar data I/O and B8ZS/HDB3 encoding/decoding
- QRSS generator/detector for testing or monitoring
- Output short circuit current limit protection
- Local, remote and analog loopback capability
- Multiple-register serial- or parallel-control interface
- Compatible with Level One's LXT360/361 T1/E1 Long Haul/Short Haul Transceiver (Universal LIU)

### LXT350 Transceiver Block Diagram

