DATA SHEET

Communications

XRT7302

Two Channel E3, DS3, STS-1 Line Interface Unit

Features
- Meets E3/DS3/STS-1 jitter tolerance requirements
- Contains a 4-wire microprocessor serial interface
- Full loop-back capacity
- Transmit and receive power down modes
- Full redundancy support
- Single +5V power supply
- Uses minimum external components
- Operates over the industrial temperature range
- Available in an 80-pin TQFP package

Applications
- Multiplexers (access, backbone and inverse)
- Remote access servers and concentrators
- Videoconferencing systems
- Digital service unit/channel service units (DSU/CSUs)
- PBX trunk cards
- WAN switches (cell/ATM, frame relay, and multiservice)
- Digital cross-connects systems (DCS)
- CO switch trunks
- Wireless base stations

Driven by a growing demand from telco carriers and a further penetration of private WANs, T1/E1 (1.5/2.0Mbps) have rapidly become an industry standard. In the near term, next generation T3/E3 (45/34Mbps) speeds have already shown wide acceptance by leading networking equipment manufacturers.

The XRT7302 is a single-chip, dual-channel DS3/E3/STS-1 transceiver. Based upon standard BiCMOS, the XRT7302 can replace some of the industry's best multi-chip solutions.

The XRT7302 provides the essential elements for any E3, DS3, and STS-1 transmission applications including DSU/CSU, digital cross-connects, multiplexers, routers and ATM switches/concentrators. It is capable of operating over coaxial cable at E3 rates, or 34.368 Mega bits per second (Mb/s), DS3 rate of 44.736Mb/s, and STS-1 rate of 51.84Mb/s.

The versatility of the XRT7302 follows in the footsteps of other EXAR devices. There are many advantages of the new single-chip solution for designers. For example, it is compliant with leading industry standards including ITU-T G.775, G.823, G.824, Bellcore TR-NWT-000499, and ANSI T1.404. It incorporates an on-chip transmit clock duty-cycle correction circuit to guarantee pulse template compliance without the need for tight control on the transmit clock duty cycle.

Each channel of the XRT7302 can also be configured independently either through hard wire connection (hardware mode) or a 4-wire serial interface (host mode) to operate in any of the three data rates. The XRT7302 provides loopback and transmit line monitoring enabling designers to build in redundancy without other external components. Also, a change to external components is not essential to support different data rates; it requires a change only to the reference clock.