

Intel® LXT388

Dual T1/E1/J1 Transceiver

Intel Delivers

Intel introduces a family of T1/E1 3.3V transceivers that are pin-to-pin and software compatible. This LXT product series includes the Intel® LXT380, LXT381, LXT384, and LXT386 (detailed in separate product briefs), and the LXT388 (detailed in this product brief). With Intel's range of transceivers, you have the flexibility to change from E1-only design to T1/E1 designs and migrate from two to eight ports (or vice versa) with little time and effort.

The Intel® LXT388 is a multipurpose 3.3V short-haul PCM transceiver for use in either 1.544Mbps (T1 or J1) or 2.048Mbps (E1) applications. It incorporates four receivers and two transmitters in a single 100-pin LQFP package.

The LXT388 provides an advanced crystal-less, digital Jitter Attenuator (JA) that meets CTR12/13 and the latest SONET/SDH requirements. You can configure the LXT388 as a dual transceiver with transmit and receive jitter attenuator and driver performance monitor. You can also use the LXT388 as a quad receiver.

Intel Advantage

With the introduction of its LXT38x series, Intel offers a transceiver that supports G.772 nonintrusive performance monitoring. This feature allows one channel to eavesdrop on other channels for remote monitoring and

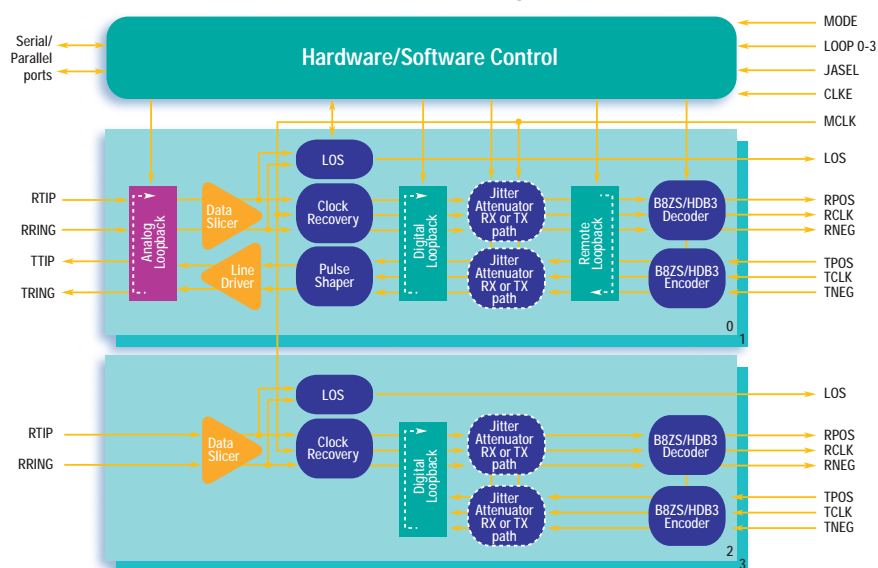


debugging purposes without interrupting service. This powerful tool can help you reduce system downtime and achieve faster time-to-market.

The Intel® LXT388 also offers Intel® Hitless Protection Switching (Intel® HPS), which incorporates fast tri-stateable drivers and a constant delay JA. The Intel® HPS helps you reduce system cost by eliminating costly mechanical relays and opto-isolators in 1+1 protection and redundancy applications. The switch from primary to backup board is less than 1µs—more than 1,000 times faster than mechanical relay—and helps eliminate loss of frame synchronization. A maximum of 1 bit error is generated when Intel® HPS is used instead of relays, which can generate more than 6,000 bit errors.

Intel®
Internet Exchange
Architecture

LXT388 Block Diagram



intel®

Features

■ Intel® Hitless Protection Switching	■ Helps eliminate expensive and space-consuming relays in 1+1 protection and redundancy applications
■ Transmit and receive JA	■ Meets CTR12/13 and the latest SONET/SDH requirements
■ Driver Performance Monitor (DPM)	■ Enables failure monitoring of the transmitter
■ Configurable as a dual transceiver or a quad receiver	■ Provides flexible solutions with a wider range of options
■ Ability to migrate from E1 to T1/E1 circuits and from two to eight channels while maintaining similar software and package pinouts	■ Helps reduce system cost and speed time-to-market
■ 3.3V supply with 5V-tolerant inputs	■ Easy integration, lower power consumption

Benefits

Support Collateral/Tools

Item	Description	Order Number
Support Products	■ LXT388 Dual T1/E1/J1 Transceiver Data Sheet	249269
	■ LXT384 Design Assistant	248836
	■ LXD386—Evaluation Board for Quad T1/E1 Applications Developer Manual	249215
	■ LXT384/386/388 Frequently Asked Questions (FAQs)	249183
Application Notes	■ Transformer Specification for Intel® Transceiver Applications	249133
	■ LXT380/381/384/386/388 Redundancy Applications	249134
	■ LXT384/386/388 Twisted Pair Interface—without Component Changes	249138
	■ Intel® Hitless Protection Switching Backup Board not Powered	249143

Applications

- SONET/SDH tributary interfaces
- Digital cross connects
- Public/private switching trunk line interfaces
- Microwave transmission systems
- M13 and E1-E3 multiplexer
- Test and monitoring equipment

Intel® Internet Exchange Architecture

Intel® Internet Exchange Architecture (IXA) is an end-to-end family of high-performance, flexible and scalable hardware and software development building blocks designed to meet the growing performance requirements of today's networks. Based on programmable silicon and software building blocks, Intel® IXA solutions enable faster development, more cost-effective deployment, and future upgradability of network and communications systems. Additional information can be found at www.intel.com/IXA.

Intel Access

Developer Web Site	http://developer.intel.com
Intel® Internet Exchange Architecture Home Page	http://intel.com/IXA
Networking Components Home Page	http://developer.intel.com/design/network
Intel Literature Center	http://developer.intel.com/design/litcentr (800) 548-4725 7 a.m. to 7 p.m. CST (U.S. and Canada) International locations please contact your local sales office.
General Information Hotline	(800) 628-8686 or (916) 356-3104 5 a.m. to 5 p.m. PST

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