Intel® LXT386

Quad T1/E1/J1 Transceiver

Intel® Internet Exchange Architecture

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 LXT388 (detailed in separate product briefs), and the LXT386 (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® LXT386 is a quad 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 four transmitters in a single 100-pin LQFP or 160 PBGA package.

The LXT386 provides an Intel® Hitless Protection Switching (Intel® HPS) feature and an advanced crystal-less Jitter Attenuator (JA) that meets CTR12/13 and the latest SONET/SDH requirements. You can configure the LXT386 as a three-channel transceiver with the additional channel configured as a G.772-compliant non-intrusive performance monitor.

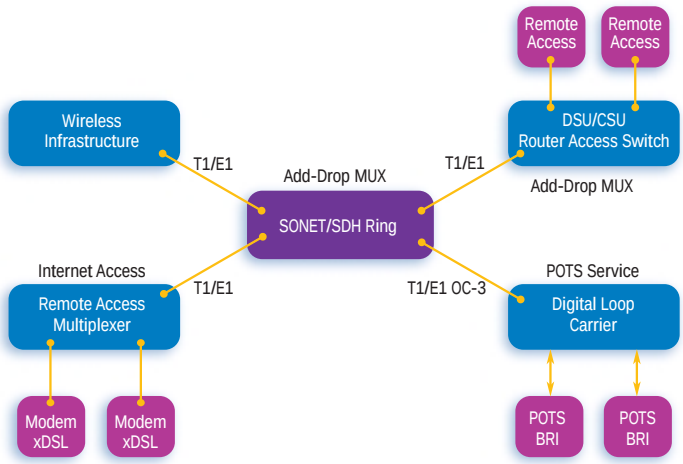
Intel Advantage

With the introduction of its LXT38x series, Intel offers a transceiver that supports G.772 non-intrusive 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® LXT386 incorporates fast tri-stateable drivers and a constant delay JA. 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 back-up board is less than 1µs—more than 1,000 times faster than mechanical relays—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. Analog and digital JTAG can also help reduce test costs by reducing test times.

Application Diagram



Features	Benefits
■ Intel® Hitless Protection Switching	■ Helps eliminate expensive and space-consuming relays in 1+1 protection and redundancy applications
■ Nonintrusive performance monitor	■ Allows eavesdropping on other channels without interrupting service
■ Analog and digital JTAG	■ Helps reduce test costs and increase test coverage
■ 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	■ Enable easy integration and lower power consumption

Support Collateral/Tools

Item	Description	Order Number
Support Products	■ LXT386 Quad T1/E1/J1 Transceiver Data Sheet	249253
	■ LXT386 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
	■ LXT380/384/386/388 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

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 7a.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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