

Intel® LXT973

Low-power, 2-port 10/100 Ethernet Transceiver With Intel® Carrier Class Ethernet Support

Product Description

The number of high-performance network applications demanding low power and design flexibility for Ethernet connectivity are growing rapidly. Applications that formerly required only single-port Ethernet connections now require access to multiple functions or even redundant (fault-tolerant) links. Cable modems, xDSL modems, IP telephones and telecom backplanes are just a few of the applications demanding dual Ethernet connections.

The Intel LXT973 is a dual-port 10/100Mbps Ethernet PHY transceiver providing a low-power, feature-rich solution for Ethernet networking. Expanding the industry-leading Intel portfolio of single and multi-port PHY solutions, the LXT973 combines reliability and ease-of-use functions such as auto MDI/MDIX, tolerance to a cable discharge event (CDE), and long-distance cable support (up to 200m) for more flexibility in "less than optimal" wiring environments.

Supporting completely independent transceiver operation, the LXT973 enables the implementation of fully redundant Ethernet links. Fault tolerance can be achieved by activating one Ethernet port and leaving the other port in standby mode in the event of link failure. Independent operation also allows for completely separate functions on each link, such as management information exchange at 10Mbps and data exchange at 100Mbps. LXT973 provides maximum flexibility while reducing system complexity by simplifying board design and component count.

The Intel Advantage

As a leader in Fast Ethernet technology, Intel's products enable robust systems that are easy to deploy. The LXT973:

- Offers the auto MDI/MDIX feature which allows the device to automatically detect and switch line pairs. This eliminates the need for cross-over cables and simplifies LAN installation.
- Incorporates Intel's advanced circuitry to withstand cable discharge events (CDEs) caused by static electricity in the twisted-pair cables.

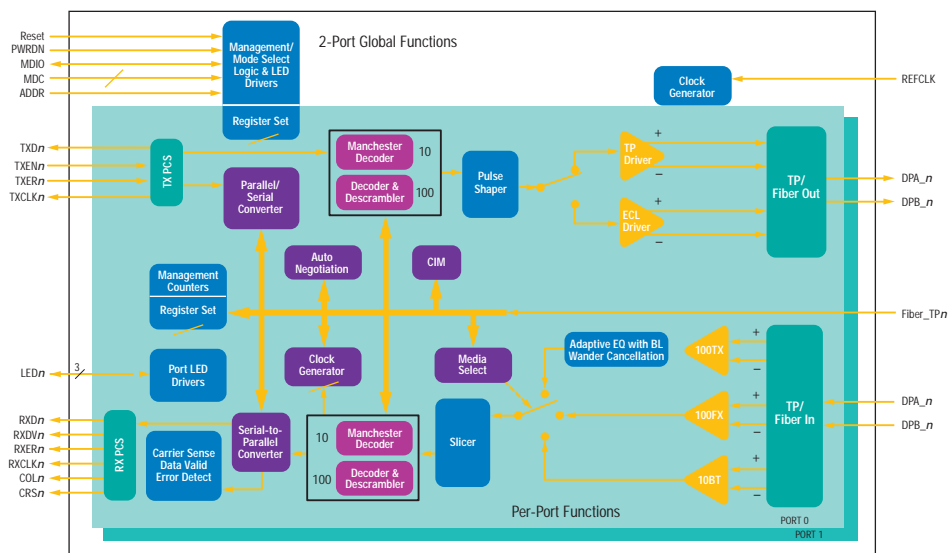
Intel® Carrier Class Ethernet

Many networking and telecom applications require high-performance Ethernet components capable of operating under harsh environmental conditions. Intel® Carrier Class Ethernet products support operation over the entire extended temperature range while providing features that increase reliability. Each device has an operation lifetime of at least 10 years with less than 100 failures per billion hours. All Intel Carrier Class Ethernet devices will be available a minimum of 5 years from product introduction.

The Intel Carrier Class Ethernet product portfolio includes solutions for Ethernet physical layer, switching and repeater technologies at a variety of speeds. Intel Carrier Class Ethernet products are ideal for applications where equipment must function reliably in uncontrolled environmental conditions such as base stations, telecom/network switches, factory floor equipment, and industrial computers.



LXT973 Block Diagram



Intel®
Internet Exchange
Architecture

intel®

Features

■ Two independent IEEE 802.3-compliant 10BASE-T 100BASE-TX (FX)10/100 ports	■ Reduces component count and simplifies design
■ Low power consumption—250mW per port typical	■ Helps reduce system cost and power
■ Independent MII with extended registers for each port	■ Provides system design flexibility
■ Automatic MDI/MDIX	■ Simplifies installation by eliminating the need for cross-over cables
■ Next page exchange	■ Enables extra information exchange during auto-negotiation
■ Auto-negotiation on each port	■ Provides fully independent operation for speed and duplex capability on each port
■ Integrated termination resistors	■ Minimizes board space
■ Device configuration via MDIO port or via external control pins	■ Enables operation in managed and unmanaged applications
■ Fiber support (via Pseudo-ECL) on each port	■ Enables use of twisted pair or fiber (via fiber-optic transceiver) media
■ 2.5V and 3.3V I/O compatibility	■ Provides flexible operation with several generations of MAC/switch products
■ All features supported at cable lengths up to 200m	■ Provides network design flexibility (longer distances) and robust operation in installations where cable quality is not optimal
■ Intel Carrier Class Ethernet support	■ Provides product options for commercial (0°C to +70°C) and extended (-40°C to +85°C) temperature ranges

Benefits

Applications

Low-power, dual-speed network applications including:

- Building block for telecom backplane systems
- Internet protocol (IP) telephones
- Twisted pair (TX) to fiber (FX) converter modules
- Customer premise equipment (CPE)

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

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