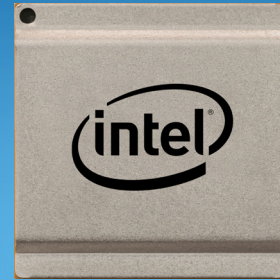# Intel® Ethernet Connection X557

10GBASE-T Connectivity Simplifies 10 Gb/s Ethernet Designs

Key Features

- Validated with Intel® Xeon® Processor D-based System-on-a-Chip (SoC) Product Family and Intel® Ethernet Controller XL710 family

- Single-port, dual-port, and quad-port 10GBASE-T PHY network interface

- Low power: 3.4 W/port

- Multi-speed: 100BASE-T, 1000BASE-T, and 10GBASE-T

- Designed to be used in conjunction with a triple-speed MAC interface. Interfaces supported: KR, XFI, KX, and SGMII

- IEEE 802.3az EEE (Energy Efficient Ethernet) Compliant

- On-die thermal sensor - Enables deployment in thermally constrained environments along with alarm and warning thresholds

- External SPI Flash interface

- Integrated MDI filter and advanced RFI cancellation

- 19 x 19 mm (single/dual port) or 25 x 25 mm (quad port) flip-chip BGA package

Overview

The Intel® Ethernet Connection X557 family is a 10 Gigabit Ethernet (GbE) copper networking Physical Layer (PHY) for workstation, server, and embedded designs that have critical space and power constraints. The Intel® Ethernet Connection X557 family offers three design options: X557-AT (single 10 GbE PHY), the X557-AT2 (dual 10 GbE PHY), and the X557-AT4 (quad 10 GbE PHY)that provides connectivity for Network Interface Cards (NICs) and LAN on Motherboard (LOM) applications that require 10GBASE-T capability.

Power Savings

Power efficiency is critical to IT specialists as energy consumption is a real OpEx concern:

Energy Efficient Ethernet (EEE) reduces power consumption during periods of low data activity. Energy is used to maintain the physical layer transmitters in a ready state to transmit data on the wire. During periods of low data traffic, EEE sends a low-power-idle signal to put the transmitters into a low power state saving power and cost. When data needs to be sent, EEE sends a normal idle signal to wake up the transmit system before data is due to be sent so there is no degradation of performance.

FEATURES	DESCRIPTION
GENERAL	
IEEE 802.3 auto-negotiation	• Automatic link configuration for speed, duplex and flow control
IEEE 802.3az EEE (Energy Efficient Ethernet) Compliant	• Reduces power consumption during periods of low data activity
Independent port enabling and link speeds	• Each port can be configured and operated at different speeds and in different modes
Automatic cross-over detection function (MDI/MDI-A)	• The PHY automatically detects which application is being used and configures itself accordingly
Autonomous on-die thermal management	• Monitor on-die temperature and react when the temperature exceeds a pre-defined threshold
Intel® Lead-free technology and RoHS-compliant	• Complies with the European Union directive 2011/65/EU to reduce the use of hazardous materials

INTEL® ETHERNET CONNECTION X557 PRODUCT CODES

CONFIGURATION	PRODUCT CODE	PRODUCTION MM#	PRODUCTION S SPEC	MEDIA TYPE
X557-AT	EZX557AT	941979	S LKW4	Tray
X557-AT	EZX557AT	942009	S LKW5	Tape and Reel
X557-AT2	EZX557AT2	941974	S LKVX	Tray
X557-AT2	EZX557AT2	941994	S LKVY	Tape and Reel
X557-AT4	EZX557AT4	941975	S LKVZ	Tray
X557-AT4	EZX557AT4	941995	S LKW3	Tape and Reel

SUPPORTED OPERATING SYSTEMS

For a complete list of supported network operating systems for Intel® Ethernet 500 Series Adapters visit: intel.com/support/EthernetOS

INTEL® ETHERNET ACCESSORIES

Intel® Ethernet Optics and Cables are proven, reliable solutions for high-density Ethernet connections. Combine these accessories with Intel® Ethernet 700 Series and 500 Series Network Adapters for dependable interoperability and consistent performance across the network. Learn more at intel.com/ethernet

Warranty
Intel limited lifetime hardware warranty, 90-day money-back guarantee (U.S. and Canada) and worldwide support.

Product Information
For information about Intel® Ethernet Products, visit: intel.com/ethernet

Customer Support
For customer support options in North America visit: intel.com/content/www/us/en/support/contact-support.html