Product Guide
Intel® Ethernet Controllers

Networks that respond to reality

Intel® Ethernet Products, with speeds from 1 to 200Gbps, move data faster with innovative technologies and architecture that scale with business demands.

Intel® Ethernet 800 Series Controllers

Supports speeds up to 200Gbps and includes innovative and versatile capabilities to optimize workload performance.

Broad port density and speed combinations

E835 Controllers offer one of the broadest port densities and speed combinations in the market today, ideal for mixed-speed legacy environments, and for transitioning between speed generations.

Modernizing the data center is made easier and less disruptive through driver compatibility for 800 Series Controllers guaranteeing software consistency across generations of products.

Configuration options for 200Gb and 100Gb controllers

The Ethernet Port Configuration Tool (EPCT) is a versatile solution for port-constrained networks. New port configurations can be achieved in just two easy steps: select new configuration and reboot.

Optimized for data-intensive and timing-sensitive workloads

Designed to efficiently move data across storage, HPC, cloud, and communications environments, combining high-bandwidth connectivity, low-latency RDMA, flexible port configurations, and precise IEEE 1588 PTP and PTM timing.

Move Data Faster

Intel Ethernet products are designed to integrate seamlessly into existing environments. Extensive validation and global support help customers deploy with confidence and operate at scale.

Compatibility and interoperability

- Extensive conformance testing to IEEE and Ethernet Technology Consortium standards
- Comprehensive operating system and hypervisor support
- Broad network interoperability testing for best-in-class compatibility

Predictable performance

- Optimized for Intel® architecture
- Data Plane Development Kit (DPDK) enabled for faster network functions virtualization (NFV), advanced packet forwarding, and highly-efficient packet processing

Outstanding product support

- Integrated diagnostics
- Defined lifecycle support
- Global customer pre- and post-product support
- Adherence to regulatory and environmental requirements

Intel® Ethernet E835 Controllers

Open, standards-based, Intel® Ethernet E835 Controllers offer leading performance, concurrent support for RDMA (iWARP and RoCEv2) up to 200Gb, modern security, and manageability without the technical complexity and high cost of proprietary technologies.

Modernizing the data center is made easier and less disruptive through driver compatibility for 800 Series Controllers (E835, E830 and E810), guaranteeing software consistency across generations of products.

Product	Connection Speed	Ports	Host Interface	Package Size/ Physical Package	Network Interfaces Supported	Order Codes
 E835-CCAM1, -CCEM1	200/100/50/25/10GbE	1, 2, 4, or 8	PCIe 5.0 x8 or PCIe 4.0 x16	23mm x 23mm	200GbE: 200GBASE-KR4, CR4 100GbE: 100GBASE-KR4, CR4, CR2, KR2; CAUI-4; 100GAUI-2, -4 50GbE: 50GBASE-KR2, CR2, CR, KR; 50GAUI-2, -1; LAUI-2 25GbE: 25GBASE-KR, CR, CR1/KR1; AUI 10GbE: KR, SFI 1GbE: KX 100M: SGMII	Commercial temp: EZE835CCAM1 Extended temp: EZE835CCEM1
 E835-CAM1	100GbE	1	PCIe 5.0 x8 or PCIe 4.0 x16	23mm x 23mm	100GbE: 100GBASE-KR4, CR4, CR2, KR2; CAUI-4; 100GAUI-2, -4 50GbE: 50GBASE-KR2, CR2, CR, KR; 50GAUI-2, -1; LAUI-2 25GbE: 25GBASE-KR, CR, CR1/KR1; AUI 10GbE: KR, SFI 1GbE: KX 100M: SGMII	EZE835CAM1
 E835-XXVAM2	25/10GbE	1 or 2	PCIe 5.0 x8 or PCIe 4.0 x16	23mm x 23mm	25GbE: 25GBASE-KR, CR, CR1/KR1; AUI 10GbE: KR, SFI 1GbE: KX 100M: SGMII	EZE835XXVAM2

Intel® Ethernet E810 Controllers

Efficient workload-optimized performance for Ethernet speeds up to 100Gbps. Innovative and versatile capabilities optimize high-performance server workloads.

Product	Connection Speed	Ports	Host Interface	Package Size/ Physical Package	Network Interfaces Supported	Order Codes
 E810-CAM1/CAM2	100/50/25/10GbE	1 or 2	PCIe 4.0	25 mm x 25 mm	100GbE: 100GBASE-KR4, CR4, CR2, KR2; CAUI-4; 100GAUI-2, -4 50GbE: 50GBASE-KR2, CR2, CR, KR; 50GAUI-2, -1; LAUI-2 25GbE: 25GBASE-KR, CR, CR1/KR1; AUI 10GbE: KR, SFI 1GbE: KX 100M: SGMII	EZE810CAM1 EZE810CAM2
 E810-XXVAM2	25/10/1GbE	2	PCIe 4.0	21 mm x 21 mm	50GbE: 50GAUI-2, -1; LAUI-2 25GbE: 25GBASE-KR, CR, CR1/KR1; AUI 10GbE: KR, SFI 1GbE: KX 100M: SGMII	EYE810XXVAM2

Intel Ethernet 700 Series Controllers

Broad interoperability, critical performance optimizations and increased agility for Communications, Cloud and the Data Center.

Product	Connection Speed	Ports	Host Interface	Package Size / Physical Package	Network Interfaces Supported	Order Codes
 XL710-BM1/BM2	40/10/1GbE	1 or 2	PCIe 3.0 (8.0 GT/s)	25 mm x 25 mm 576-pin Flip-Chip	40GbE: QFSP+, KR4, CR4, XLPPI, XLAUI 10GbE: SFP+, KR, SFI, XAUI, KX4 1GbE: KX, SGMII	FTXL710-BM1 FTXL710-BM2
 XXV710-AM2	25/10/1GbE	2	PCIe 3.0 (8.0 GT/s)	25 mm x 25 mm FCBGA	SFI, KR, KR4, XAUI, KX, KX4, SGMII	FTXXV710-AM2
 X710-BM2	10/1GbE	2	PCIe 3.0 (8.0 GT/s)	25 mm x 25 mm	SFI, KR, XAUI, KX, KX4, SGMII	FTX710-BM2
 X710-AT2/TM4	10/1GbE	2 or 4	PCIe 3.0 (8.0 GT/s)	22 mm x 22 mm	X710-AT2: 10GBASE-T, NBASE-T, 1000BASE-T, 100BASE-TX X710-TM4: 10GBASE-T, NBASE-T, 1000BASE-T, 100BASE-TX, KR, SFI, KX, SGMII	EZX710AT2 EZX710TM4
 V710-AT2	5/2.5/1Gb E and 100Mb	2	PCIe 3.0	22 mm x 22 mm FCBGA	NBASE-T and 802.3bz 5/2.5GBASE-T, 1000BASE-T, 100BASE-TX	EZV710AT2

Intel Ethernet 600 Series Controllers

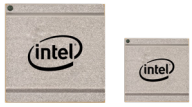
At just 4.47 watts of total power consumption for dual port 10GBASE-T, these controllers are designed for power and thermal-constrained devices and environments. The E610 controllers offer the latest advances in 10GBASE-T and 2.5GBASE-T connectivity, with advanced security features and a pin-compatible design. The 600 Series software is compatible with designs based on Intel Ethernet 500 Series architecture to maximize existing application investments.

Product	Connection Speed	Ports	Host Interface	Package Size / Physical Package	Network Interfaces Supported	Order Codes
 E610-XAT, XAT2, XAIT2	10/5/2.5/1GbE, 100Mb	1 or 2	PCIe 4.0	16 mm x 14 mm	10GBASE-T, 2.5GBASE-T, 1GBASE-T 2.5GBASE-T, 1GBASE-T 100BASE-TX	Commercial temp: FUE610XAT, FUE610XAT2 Extended temp*: FUE610XAIT2
 E610-IAT2, IAIT2	2.5/1GbE, 100Mb	2	PCIe 4.0	16 mm x 14 mm	2.5GBASE-T, 1GBASE-T 100BASE-TX	Commercial temp: FUE610IAT2 Extended temp: FUE610IAIT2

*2-port only

Intel Ethernet 500 Series Controllers and PHYs

Legacy 10GBASE-T Ethernet Controllers and PHYs for embedded/IOT, desktop, workstation, and value server.

Product	Connection Speed	Ports	Host Interface	Package Size / Physical Package	Network Interfaces Supported	Order Codes
 X557-AT2/AT4	10/1GbE (PHY only)	2 or 4	N/A	X557-AT2: 19 mm x 19 mm X557-AT4: 25 mm x 25 mm	KR, KX, 100BASE-T, 1000BASE-T, 10GBASE-T, SGMII	EZX557AT2, EZX557AT4
 X550-AT2	10/5/2.5/1GbE (NBASE-T in Linux only)	2	PCIe 3.0 (8.0 GT/s)	17 mm x 17 mm	100BASE-T, 1000BASE-T, 10GBASE-T	ELX550AT2

Gigabit Ethernet Controllers

Low-cost, quality controllers for new designs requiring 1-4 ports.

Product	Connection Speed	Ports	Host Interface	Package Size / Physical Package	Network Interfaces Supported	Order Codes
 I226-LM/V/IT	2.5GbE	1	PCIe 3.1 (3.0 GT/s)	7 mm x 7 mm	NBASE-T	KTI226L KTI226V KTI226IT
 I225-IT/K/LM/V	2.5GbE	1	PCIe 3.1 (3.0 GT/s)	7 mm x 7 mm	NBASE-T	KTI225IT, KTI225K, KTI225LM, KTI225V
 I350-AM2/AM4	1GbE	2 or 4	PCIe 2.0 (5.0 GT/s)	17 mm x 17 mm	1000BASE-T, SGMII, SERDES	NHI350AM2, NHI350AM4
 I210-AT/IS/IT/CL/CS	1GbE	1	PCIe 2.1 (2.5 GT/s)	9 mm x 9 mm	I210-IS, -CS and -CL: SGMII, SERDES I210-AT and -IT: 1000BASE-T	WGI210AT, WGI210IS, WGI210IT Automotive: WGI210CL, WGI210CS

Retimers

Retimers extend the reach of Ethernet signals. Intel Ethernet Connection C827 enables system designers to optimize PCB material cost for longer channel routes on server and embedded designs.

Product	Connection Speed	Ports	Host Interface	Package Size / Physical Package	Network Interfaces Supported	Order Codes
 C827-AM1/IM1	25GbE	4	N/A	14 mm x 14 mm	100GbE: KR4/CR4, CAUI-4 50GbE: KR2/CR2 (Consortium) 40GbE: XLAUI, XLPPI, KR4/CR4 10GbE: SFF-8431, SFI, KR	EZC827AM, EZC827IM

Gigabit Ethernet PHY Connections

This Intel Ethernet Connection, at just 6 mm x 6 mm, is designed for mobile, desktop, workstation, and value-server designs that have critical space and power constraints.

Product	Connection Speed	Ports	Host Interface	Package Size / Physical Package	Network Interfaces Supported	Order Codes
 I219-LM/V	1GbE	2	Proprietary	6 mm x 6 mm	1000BASE-T	WGI219LM, WGI219V

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