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Driver Support

Microsoft Windows 7*
Microsoft Windows Vista* (32 & 64 bit)
Microsoft Windows XP* (32 & 64 bit)
Microsoft Windows CE*
Microsoft Windows NT*
Microsoft Windows 2000 Server*
Microsoft Windows Server 2003* (32 & 64 bit)
SCO UnixWare* 7.x
Open Unix* 8.0
Novell ODI*
Novell Netware*
SUSE Linux Enterprise Server* 9.0
Red Hat Enterprise Linux* 4.0
Linux*
FreeBSD*
Sun Solaris*
Microsoft DOS*
VMWare ESX*

Intel® Advanced Networking Services

Teaming

Initiate a team with up to eight NICs.

Multi-Vendor Teaming

Allows teaming with third-party NICs and LOM solutions.

Adapter Fault Tolerance

Provides automatic redundancy for the server's network connection should the primary adapter fail.

Transmit and Receive Load Balancing

Balances network traffic across teamed network connections.

802.1q VLAN Tagging

Allows teaming in multiple sub-networks by creating virtual adapters.

Link Aggregation

Supports Intel® Link Aggregation, Fast EtherChannel, Gigabit EtherChannel, and IEEE 802.3ad standards. Continues to balance traffic even if one of the teamed connections loses link.

Intel® Ethernet
Controllers and PHYs



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0613/TR/MESH/ALM/750 320117-006US



Product	Codename	Device	Package Size/ Physical Package	Host Interface/ Bus Type	Performance Features	Target Applications	Management Features	Power (Max)	Power (Typical)	Power (Standby)	Operating Temp	Power Supply	Order Code	Footprint Compatible with:	Recommended for New Designs
10 GbE Silicon															
Intel® 82599ES	Niantic	Dual Port 10GbE MAC/PHY, KR, SFI, XAUI, KX/KX4, CX4, BX, SGMII	25x25 mm 576-pin Flip-Chip	PCI Express* v2.0 (5.0 GT/s) x8/x4/x2/x1	128 Tx and 128 Rx queues, Receive Side Coalescing (RSC), low latency interrupts, Intel® Ethernet Flow Director, Intel® Virtualization Technology for Connectivity (Intel® VT-c) (VMDq, SR-IOV), FCoE CRC offload, FCoE direct data placement	Enterprise servers, blades, embedded systems	IPMI pass-through via SMBus or NC-SI, iSCSI boot, WoL, PXE remote boot, VLAN filtering	~5.4 W (KR Dual Port) ~5.2 W (KX4 Dual Port)	4.5 W (KX4/KR Dual Port)	~1.3 W (D3 Cold, WoL enabled, 1000 Mb/s)	0-70° C	3.3, 1.2 V	JL82599ES	JL82599EN	Yes
Intel® 82599EB	Niantic	Dual Port 10GbE MAC/PHY, XAUI, KX/KX4, CX4, BX, SGMII	25x25 mm 576-pin Flip-Chip	PCI Express* v2.0 (5.0 GT/s) x8/x4/x2/x1	128 Tx and 128 Rx queues, Receive Side Coalescing (RSC), low latency interrupts, Intel® Ethernet Flow Director, Intel® Virtualization Technology for Connectivity (Intel® VT-c) (VMDq, SR-IOV), FCoE CRC offload, FCoE direct data placement	Enterprise servers, blades, embedded systems	IPMI pass-through via SMBus or NC-SI, iSCSI boot, WoL, PXE remote boot, VLAN filtering	~5.4 W (KR Dual Port) ~5.2 W (KX4 Dual Port)	4.5 W (KX4/KR Dual Port)	~1.3 W (D3 Cold, WoL enabled, 1000 Mb/s)	0-70° C	3.3, 1.2 V	JL82599EB	—	Yes
Intel® 82599EN	Niantic	Single Port 10GbE MAC/PHY, SFI	25x25 mm 576-pin Flip-Chip	PCI Express* v2.0 (5.0 GT/s) x8/x4/x2/x1	64 Tx and 64 Rx queues, Receive Side Coalescing (RSC), low latency interrupts, Intel® Ethernet Flow Director, Intel® Virtualization Technology for Connectivity (Intel® VT-c) (VMDq, SR-IOV), FCoE CRC offload, FCoE direct data placement	Enterprise servers, blades, embedded systems	Advanced: IPMI pass-through via SMBus or NC-SI, iSCSI boot standard: WoL, PXE remote boot, VLAN filtering	~4.1 W (KR) ~4.0 W (KX4)	~3.3 W (SFI)	~1.3 W (D3 Cold, WoL enabled, 1000 Mb/s)	0-70° C	3.3, 1.2 V	JL82599EN	JL82599ES	Yes
Intel® X540-AT2 Intel® X540-BT2	Twinville	Dual Port 10GbE MAC/PHY, 10GBase-T, 1000Base-T, 100Base-T	25x25 mm 576-pin Flip-Chip	PCI Express* v2.1 (5.0 GT/s) x8/x4/x2/x1	128 Tx and 128 Rx queues, Receive Side Coalescing (RSC), low latency interrupts, Intel® Ethernet Flow Director, Intel® Virtualization Technology for Connectivity (Intel® VT-c) (VMDq, SR-IOV), FCoE CRC offload, FCoE direct data placement	Enterprise servers, blades, embedded systems	IPMI pass-through via SMBus or NC-SI, iSCSI boot, WoL, PXE remote boot, VLAN filtering	~12.5 W (X540-AT2) ~14.0 W (X540-BT2)	~11.5 W (X540-AT2) ~13.0 W (X540-AT2)	~3 W (X540-AT2 - D3 Cold, WoL enabled, 100 Mb/s) ~4 W (X540-BT2 - D3 Cold, WoL enabled, 100 Mb/s)	0-55° C	3.3, 1.2 V	JLX540AT2 JLX540BT2	NHI350BT2 JLX540AT2 JLX540BT2	Yes
Intel® 82598EB	Qopin	Dual Port 10GbE MAC XAUI, KX4, CX4	31x31 mm 883-pin FCBGA	PCI Express* x8/x4/x2	32 Tx and 64 Rx queues, message signaled interrupts, receive side scaling, low latency interrupt, flow interrupt priority, priority grouping, congestion management, virtual machine device queues	Enterprise servers, blades, embedded systems	IPMI pass-through via SMBus or NC-SI, WoL, PXE remote boot, iSCSI boot, VLAN filtering	~5.4 W (KR Dual Port) ~5.2 W (KX4 Dual Port)	~4.8 W (Dual Port) ~3.5 W (Single Port)	~1.6 mW (D3 Cold, WoL enabled, 1000 Mb/s)	0-55° C	3.3, 1.8, 1.0 V	JL82598EB	—	—
10/100/1000 Silicon															
Intel® I350AM² Intel® I350AM⁴	Powerville	Dual Port GbE Controller MAC/PHY/SerDes/SGMII Quad Port GbE Controller MAC/PHY/SerDes/SGMII	17x17 mm 256-pin FCBGA	PCI Express* v2.1 (5.0 GT/s & 2.5 GT/s) x4/x2/x1	8 Tx and 8 Rx queues per port, Receive Side Scaling (RSS), Message Signal Interrupt Extension (MSI-X), UDP, TCP and IP checksum offloads, UDP and TCP Transmit Segmentation Offload (TSO), SCTP receive and transmit checksum offloads, stateless offloads (header splitting), jumbo frames (9.5k), Intel® VT-c (VMDq, SR-IOV), IEEE 1588 (time sync) / 802.1AS	Enterprise servers, blades, embedded systems	IPMI pass-through via SMBus or NC-SI, WoL, PXE remote boot, iSCSI boot, VLAN filtering	Intel® I350-AM ² ~2.1 W (Copper), ~1.8 W (SerDes) Intel® I350-AM ⁴ ~3.4W (Copper), ~2.3 W (SerDes)	~470 mW (D3 cold, WoL enabled, 100 Mb/s, EEE enabled)	-10-85° C	3.3, 1.8 V	NHI350AM2 NHI350AM4	NH82580EB NH82580DB	Yes	
Intel® I350-BT²	Powerville	Dual Port GbE Controller MAC/PHY/SerDes/SGMII	25x25 mm 576-pin Flip-Chip	PCI Express* v2.1 (5.0 GT/s & 2.5 GT/s) x4/x2/x1	8 Tx and 8 Rx queues per port, Receive Side Scaling (RSS), Message Signal Interrupt Extension (MSI-X), UDP, TCP and IP checksum offloads, UDP and TCP Transmit Segmentation Offload (TSO), SCTP receive and transmit checksum offloads, stateless offloads (header splitting), jumbo frames (9.5k), Intel® VT-c (VMDq, SR-IOV), IEEE 1588 (time sync) / 802.1AS	Enterprise servers, blades, embedded systems	IPMI pass-through via SMBus or NC-SI, WoL, PXE remote boot, iSCSI boot, VLAN filtering	Intel® I350-BT ² ~2.1W (Copper)	~470 mW (D3 cold, WoL enabled, 100 Mb/s, EEE enabled)	-10-85° C	3.3, 1.8 V	NHI350BT2	JLX540AT2	Yes	
Intel® 82580DB Intel® 82580EB	Barton Hills	Dual Port GbE Controller MAC/PHY/SerDes/SGMII Quad Port GbE Controller MAC/PHY/SerDes/SGMII	17x17 mm 256-pin FCBGA	PCI Express* v2.0 (5.0 GT/s & 2.5 GT/s) x4/x2/x1	8 Tx and 8 Rx queues per port, Receive Side Scaling (RSS), Message Signal Interrupt Extension (MSI-X), UDP, TCP and IP checksum offloads, UDP and TCP Transmit Segmentation Offload (TSO), SCTP receive and transmit checksum offloads, stateless offloads (header splitting), jumbo frames (9.5k), Intel® VT-c (VMDq), IEEE 1588 (time sync) / 802.1AS	Enterprise servers, blades, embedded systems	IPMI pass-through via SMBus or NC-SI, WoL, PXE remote boot, iSCSI boot, VLAN filtering	Intel® 82580DB ~2.1 W (Copper), ~1.4 W (SerDes) Intel® 82580EB ~3.3 W (Copper), ~2.0 W (SerDes)	~690 mW (D3 cold, WoL enabled, 100 Mb/s)	-10-85° C	3.3, 1.8 V	NH82580DB NH82580EB	NHI350AM2 NHI350AM4	Yes	
Intel® 82576EB²	Kawela	Dual Port GbE Controller MAC/PHY/SerDes/SGMII	25x25 mm 576-pin FCBGA	PCI Express* v2.0 (2.5 GT/s) x4/x2/x1	16 Rx and 16 Tx queues per port, Intel® QuickData Technology, MSI-X, Receive Side Scaling (RSS), checksum and segmentation offload, header splitting/replication, low latency interrupts, jumbo frames (9.5k), Intel® VT-c (VMDq, SR-IOV), IEEE 1588 (time sync) / 802.1AS, Security (IPsec offload, LinkSec ³)	Enterprise servers, blades, embedded systems	IPMI pass-through via SMBus or NC-SI, WoL, PXE remote boot, iSCSI boot, VLAN filtering	~2.4W (Copper) ~700 mW (SerDes)	~790 mW (D3 cold, WoL enabled, 100 Mb/s)	0-55° C	3.3, 1.8, 1.0 V	JL82576EB	JL82575EB	Yes	
Intel® 82575EB	Zoar	Dual Port GbE Controller MAC/PHY/SerDes/SGMII	25x25 mm 576-pin FCBGA	PCI Express* v2.0 (2.5 GT/s) x4/x2/x1	4 Rx and 4 Tx queues, MSI-X, Receive Side Scaling (RSS), checksum and segmentation offload, header splitting/replication, low latency interrupts, jumbo frames (9.5k), Intel® VT-c (VMDq)	Enterprise servers, blades, embedded systems	IPMI pass-through via SMBus or NC-SI, WoL, PXE remote boot, ASF 2.0, iSCSI boot, VLAN filtering	~2.4 W (Copper) ~700 mW (SerDes)	~780 mW (D3 cold, WoL enabled, 100 Mb/s)	0-70° C	3.3, 1.8, 1.0 V	JL82575EB	—	—	
Intel® 82572EI Intel® 82571EB	Rimon Ophir	Single Port GbE Controller Dual Port GbE Controller MAC/PHY/SerDes	17x17 mm 256-pin FCBGA	PCI Express* x4/x2/x1	2 Tx and 2 Rx queues per port, message signaled interrupts, receive side scaling, header splitting	Enterprise servers, blades, embedded systems	IPMI pass-through via SMBus or FMI, WoL, PXE remote boot, ASF 2.0, iSCSI boot, serial over LAN, VLAN filtering	Intel® 81572EI ~1.4 W (Copper), ~0.7 W (SerDes) Intel® 82571EB ~2.8 W (Copper), ~1.2 W (SerDes)	780 mW (D3 cold, WoL enabled, 100 Mb/s) for 82571EB	0-70° C 0-70° C ¹	3.3, 1.8, 1.1 V	HL82572EI HL82571EB	—	—	
Intel® I210-AT Intel® I210-IT	Springville	Single Port GbE Controller MAC/PHY	9x9 mm 64-pin QFN	PCI Express* v2.1 x1 (2.5 GT/s)	4 Tx and 4 Rx queues per port, Receive Side Scaling (RSS), Message Signal Interrupt Extension (MSI-X), UDP, TCP and IP Checksum offloads, UDP and TCP Transmit Segmentation Offload (TSO), SCTP receive and transmit checksum offloads, Stateless offloads (header splitting), jumbo frames (9.5k), IEEE 1588 (time sync) / 802.1AS, IEEE 802.1Qav Audio-Video Bridging	Server and embedded systems	IPMI pass-through via SMBus or NC-SI, MCTP protocol over SMBus, MCTP protocol over PCIe, WoL, PXE remote boot, iSCSI boot, VLAN filtering	~740 mW (I210-AT) ~800 mW (I210-IT)	~612mW	108 mW (D3 cold, WoL enabled, 100 Mb/s, EEE Enabled)	0-70° C -40-85° C	3.3 V	WG82574L WG82574IT	WG82583V	Yes
Intel® I210-IS	Springville	Single Port GbE Controller MAC/SerDes/SGMII	9x9 mm 64-pin QFN	PCI Express* v2.1 x1 (2.5 GT/s)	4 Tx and 4 Rx queues per port, Receive Side Scaling (RSS), Message Signal Interrupt Extension (MSI-X), UDP, TCP and IP Checksum offloads, UDP and TCP Transmit Segmentation Offload (TSO), SCTP receive and transmit checksum offloads, Stateless offloads (header splitting), jumbo frames (9.5k), IEEE 1588 (time sync) / 802.1AS, IEEE 802.1Qav Audio-Video Bridging	Server and embedded systems	IPMI pass-through via SMBus or NC-SI, MCTP protocol over SMBus, MCTP protocol over PCIe, WoL, PXE remote boot, iSCSI boot, VLAN filtering	~510 mW (I210-IS)	~363 mW	108 mW (D3 cold, WoL enabled, 100 Mb/s, EEE Enabled)	0-70° C	3.3 V	WG82583V	WG82574L WG82574IT	Yes
Intel® I211-AT	Pearsonville	Single Port GbE Controller MAC/PHY	9x9 mm 64-pin QFN	PCI Express* v2.1 x1 (2.5 GT/s)	2 Tx and 2 Rx queues per port, Receive Side Scaling (RSS), Message Signal Interrupt Extension (MSI-X), UDP, TCP and IP Checksum offloads, UDP and TCP Transmit Segmentation Offload (TSO), SCTP receive and transmit checksum offloads, Stateless offloads (header splitting), jumbo frames (9.5k), IEEE 1588 (time sync) / 802.1AS	Desktop and Embedded systems	WoL, PXE remote boot	~740 mW	~612mW	~108 mW (D3 cold, WoL enabled, 100 Mb/s, EEE Enabled)	0-70° C	3.3V	WG1211AT	WG1210AT	Yes
Intel® 82583V	Colleyville	Single Port GbE Controller MAC/PHY	9x9 mm 64-pin QFN	PCI Express* v1.1 x1	TCP segmentation offload, TCP, UDP, IPv4 checksum offload, VLAN support, 9k jumbo Frames	Consumer electronics, SFF embedded applications	PXE remote boot	~727 mW	~727 mW	188 mW (D3 cold, WoL enabled, 100 Mb/s)	0-85° C	3.3 V	WG82583V	WG82574L	Yes
Intel® 82574L Intel® 82574IT	Hartwell	Single Port GbE Controller MAC/PHY	9x9 mm 64-pin QFN	PCI Express* v1.1 x1	2 Tx and 2 Rx queues, TCP segmentation offload, TCP, UDP, IPv4 checksum offload, interrupt moderation, VLAN support, 9k jumbo frames, RSS, MSI, MSI-X	Server and embedded systems	IPMI pass-through via SMBus or NC-SI, WoL, PXE remote boot, iSCSI boot, VLAN filtering	~727 mW	~727 mW	188 mW (D3 cold, WoL enabled, 100 Mb/s)	0-85° C	Yes	Yes	82579LM	Yes
Intel® 82579LM	Lewisville	Single Port GbE PHY	6x6 mm 48-pin QFN	PCI Express*	2 Tx and 2 Rx queues, TCP segmentation offload, TCP, UDP, IPv4 checksum offload, interrupt moderation, jumbo frames (9k)	Mobile and embedded applications	Intel® vPRO Technology, MACSec (802.1ae), WoL, PXE Boot, iSCSI Boot and VLAN filtering	~ 630 mW	~ 620 mW	~176 mW (D3 cold, WoL enabled, 100 Mb/s, EEE Enabled)	0-85° C	3.3, 1.05 V	WG82579LM	82579V	Yes
Intel® 82579V	Lewisville	Single Port GbE PHY	6x6 mm 48-pin QFN	PCI Express*	2Tx and 2 Rx queues, TCP segmentation offload, TCP, UDP, IPv4 checksum offload, interrupt moderation, jumbo frames (9k)	Mobile and embedded applications	WoL, PXE Boot, and VLAN filtering	~ 630 mW	~ 620 mW	~176 mW (D3 cold, WoL enabled, 100 Mb/s, EEE Enabled)	0-85° C	3.3, 1.05 V	WG82579V	82579LM	Yes
Intel® 82577LM	Hanksville	Single Port GbE PHY	6x6 mm 48-pin QFN	PCI Express*	2Tx and 2 Rx queues, TCP segmentation offload, TCP, UDP, IPv4 checksum offload, interrupt moderation, jumbo frames (4k)	Mobile and embedded applications	Intel® vPRO Technology, WoL, PXE Boot, iSCSI Boot and VLAN filtering	~ 730 mW	~ 707 mW	~251 mW (D3 cold, WoL enabled, 100 Mb/s)	0-85° C	3.3, 1.05 V	WG82577LM	—	Yes
Intel® 82567LM	Boazman	Single Port GbE PHY	8x8 mm 56-pin QFN	PCI Express*	2 Rx and 2 Tx queues, jumbo frames (9k), RSS, on Intel ICH9M, ICH9, ICH10 chipsets	Enterprise clients, consumer, embedded systems	Intel® Active Management Technology, WoL, PXE remote boot, ASF 2.0	~680mW	~670mW	~140 mW (D3 cold, WoL enabled, 10 Mb/s)	0-85° C	3.3, 1.8, 1.05 V	WG82567LM	—	Yes
Intel® 82567V	Boazman	Single Port GbE PHY	8x8 mm 56-pin QFN	PCI Express*	TCP segmentation offload, TCP, UDP, IPv4 checksum offload	Enterprise clients, consumer, embedded systems	WoL, PXE remote boot, ASF 2.0	~680mW	~670mW	~140 mW (D3 cold, WoL enabled, 10 Mb/s)	0-85° C	3.3, 1.8, 1.05 V	WG82567V	—	Yes
Intel® 82573E/V	Vidalia	Single Port GbE Controller MAC/PHY	15x15 mm	PCI Express* x1	TCP segmentation offload, TCP, UDP, IPv4 checksum offload, interrupt moderation, jumbo frames	Enterprise clients, workstations, embedded systems	Intel® Active Management Technology, IPMI pass-through via SMBus, WoL, PXE remote boot, ASF 2.0	~1.5 W (82573E) ~1.4 W (82573V)	~1.4 W (82573E) ~1.3 W (82573V)	~408 mW (D3 cold, WoL enabled, 100 Mb/s) (82573E/V)	0-70° C	3.3, 2.5, 1.2 V	RC82573E RC82573V	—	Yes

All products are RoHS compliant. All products are compatible with all major operating systems. ¹ 0-70° C with thermal management ² Halogen-free ³ LinkSec enabled. Functionality available when the ecosystem is ready to support this new technology.