

<http://intel.com/go/ethernet>

## 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.



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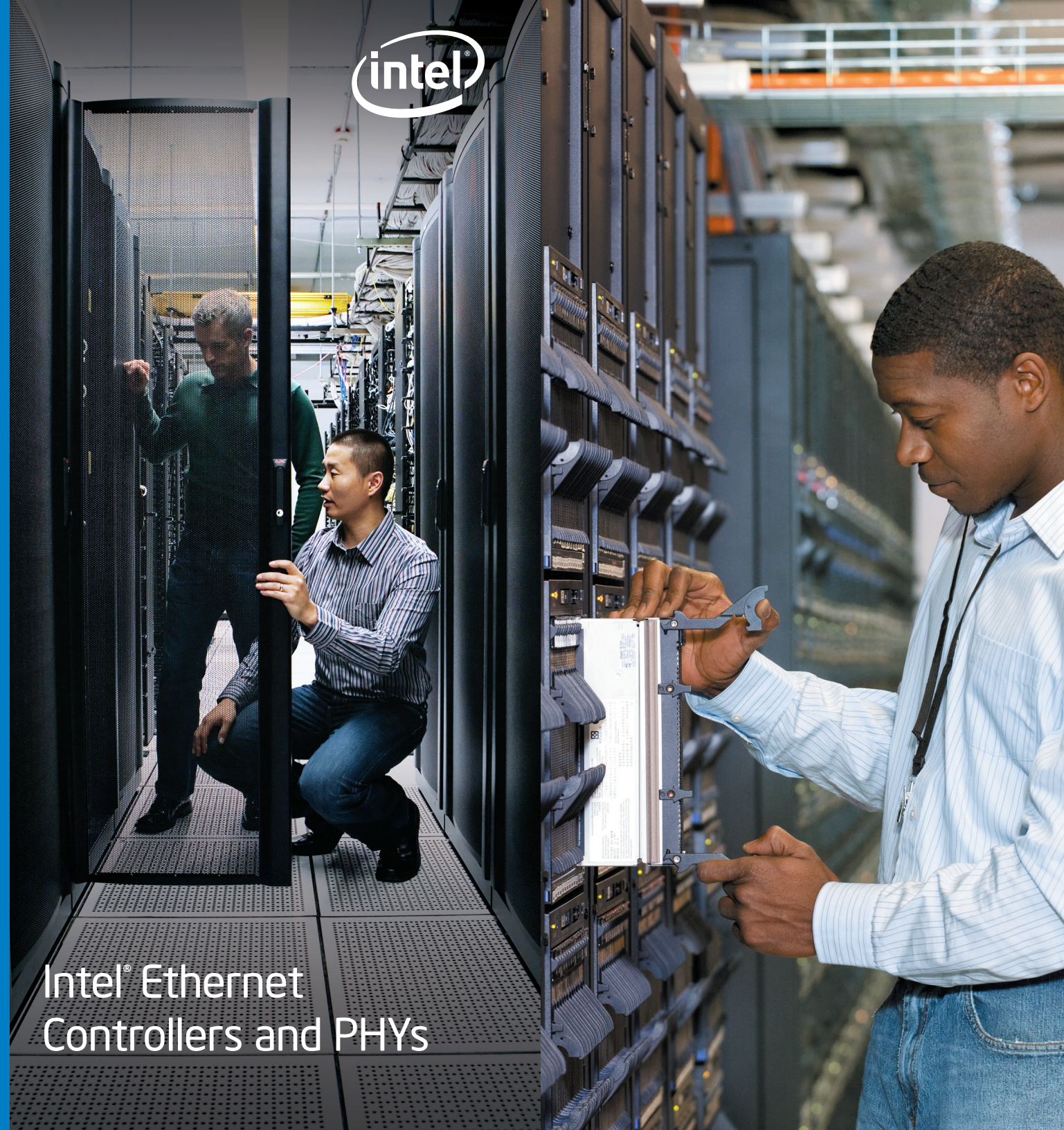
\*Other names and brands may be claimed as the property of others.

0410/TR/PMS/PP/500

320117-004US



Intel® Ethernet  
Controllers and PHYs



# Intel® Ethernet Controllers and PHYs

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Product	Device	Package Size/ Physical Package	Host Interface/ Bus Type	Performance Features	Target Applications	Management Features	Power (Typical)	Power (Standby)	Operating Temp	Power Supply	Order Code	Footprint Compatible with:
Intel® 82599ES	Dual Port 10GbE MAC/PHY, KR, SFI, XAUI, KX/KX4, CX4, BX, SGMII	25x25 mm 576-pin Flip-Chip	PCI Express* v2.0 (5 GT/s) x8/x4/x2/x1	Advanced: 128Tx, 128Rx queues, receive side coalescing (RSC), low latency interrupts, Intel® Ethernet Flow Director, Intel® Virtualization Technology for Connectivity (Intel® VT-c) (VMDq, VMDc), 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	5.5 W (KR Dual Port)  5.1 W (KX4 Dual Port)	1315mA @ 1.2 V (KX4) 61mA @ 3.3 V	0-70° C	1.2, 3.3 V	JL82599ES  JL82599EB	—
Intel® 82599EB	Dual Port 10GbE MAC/PHY, XAUI, KX/KX4, CX4, BX, SGMII	31x31 mm 883-pin FCBGA	PCI Express* x2/x4/x8	Intel® I/O Acceleration Technology 32Tx, 64Rx queues, message signaled interrupts, receive side scaling, direct cache access, 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	~4.8 W (Dual Port) ~3.5 W (Single Port)	21 mA @ 3.3 V 51 mA @ 1.8 V 486 mA @ 1.2 V	0-55° C	1.0, 1.8, 3.3 V	JL82598EB	—
Intel® 82580EB Intel® 82580DB	Quad Port GbE Controller Dual Port GbE Controller MAC/PHY/SerDes/SGMII	17x17 mm 256-pin PGBA	PCI Express* Gen 2.0 X4/x2/x1 (5.0 GT/s)	I/O Acceleration Technology (I/OAT), Receive Side Scaling (RSS), Direct Cache Access, and 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), 8 Tx and 8 Rx queues, 9500-byte jumbo frame support, Intel® VT-c and VMDq, IEEE 1588 (time stamp) / 802.1AS	Server and embedded systems/ applications	IPMI pass-through via SMBus or NC-SI, WoL, PXE remote boot, iSCSI boot, VLAN filtering	~3.4W (Copper)	86 mW (D3 cold, WoL enabled, 100 Mb/s) 45 mW (D3 cold, WoL disabled, no link)	-10-85° C	1.8, 3.3 V	NH82580EB NH82580DB	—
Intel® 82576EB <sup>2</sup>	Dual Port GbE Controller MAC/PHY/SerDes/SGMII	25x25 mm 576-pin FCBGA	PCI Express* v2.0 (2.5 GT/s) x1/x2/x4	Intel® I/O Acceleration Technology (Intel® QuickData Technology, MSI-X, RSS, Direct Cache Access, checksum and segmentation offload, header splitting/replication, low latency interrupts), 16Rx/16Tx queues/port, jumbo frames, Intel® VT for Connectivity (Virtual Machine Device Queues (VMDq), Virtual Machine Direct Connect (VMDc - PCI-SIG SR-IOV based), Security (IPsec offload, LinkSec <sup>3</sup> ), IEEE 1588 (time stamp)	Enterprise servers, blades, embedded systems	IPMI pass-through via SMBus or NC-SI, WoL, PXE remote boot, iSCSI boot, VLAN filtering	~2.1W (Copper) ~.7 W (SerDes)	15 mA @ 3.3 V 224 mA @ 1.8 V 243 mA @ 1.0 V	0-55° C	3.3, 1.8, 1.0 V	JL82576EB	82575EB
Intel® 82575EB	Dual Port GbE Controller MAC/PHY/SerDes/SGMII	25x25 mm 576-pin FCBGA	PCI Express* v2.0 (2.5GT/s) x1/x2/x4	Intel® I/O Acceleration Technology (Intel® QuickData Technology, MSI-X, RSS, Direct Cache Access, checksum and segmentation offload, header splitting/replication, low latency interrupts), 8Rx/8Tx queues/port, jumbo frames, Intel® VT for Connectivity (Virtual Machine Device Queues (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, ~2.8 W (SerDes)	171 mA @ 3.3 V	0-70° C	1.0, 1.8, 3.3 V	JL82575EB	—
Intel® 82571EB Intel® 82572EI	Single Port GbE Controller Dual Port GbE Controller MAC/PHY/SerDes	17x17 mm 256-pin FCBGA	PCI Express* x1/x2/x4	Intel® I/O Acceleration Technology 2Tx, 2Rx queues, message signaled interrupts, receive side scaling, header splitting	Enterprise servers, blades, embedded systems	IPMI pass-through via SMBus or FML, WoL, PXE remote boot, ASF 2.0, iSCSI boot, serial over LAN, VLAN filtering	~1.5 W, ~0.7 W (SerDes) ~2.8 W, ~1.8 W (SerDes)	220 mA @ 3.3 V 226 mA @ 3.3 V	0-70° C 0-70° C <sup>1</sup>	1.1, 1.8, 3.3 V	HL82572EI HL82571EB	—
Intel® 82583V	Single Port GbE Controller MAC/PHY	9x9 mm 64-pin QFN	PCI-e 1.1 (2.5 Ghz) x1	TCP segmentation offload, TCP, UDP, IPv4 checksum offload	Consumer electronics, SFF embedded applications	PXE remote boot	~700 mW	188 mW (D3 cold, WoL enabled, 100 Mb/s)	0-85° C	3.3 V	WG82583V	82574L
Intel® 82574L <sup>2</sup> Intel® 82574IT <sup>2</sup>	Single Port GbE Controller MAC/PHY	9x9 mm 64-pin QFN	PCI-e 1.1 (2.5 Ghz) x1	TCP segmentation offload, TCP, UDP, IPv4 checksum offload, interrupt moderation, VLAN support, 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	~700 mW	188 mW (D3 cold, WoL enabled, 100 Mb/s)	0-85° C -40-85° C	3.3 V	WG82574L WG82574IT	—
Intel® 82577LM	Single Port GbE PHY	6x6 mm 48-pin QFN	PCI Express*	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	~0.66 W	0.2 W @ 3.3 V (with WoL) 0.03 W @ 3.3 V (no WoL)	0-85° C	3.3, 1.05 V	WG82577LM	82578DM
Intel® 82578DM	Single Port GbE PHY	6x6 mm 48-pin QFN	PCI Express*	TCP segmentation offload, TCP, UDP, IPv4 checksum offload, interrupt moderation, jumbo frames (4k)	Desktop, workstation, server and embedded applications	Intel® vPRO™ Technology, WoL, PXE Boot, iSCSI Boot and VLAN filtering	~0.73 W	0.1 W @ 3.3 V (with WoL) 0.06 W @ 3.3 V (no WoL)	0-85° C	3.3, 1.2 V	WG82578DM	82577LM
Intel® 82573E/V Intel® 82573L	Single Port GbE Controller MAC/PHY	15x15 mm 196-pin TFBGA	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	~1.3 W ~1.2 W	11 mA @ 3.3 V 14 mA @ 3.3 V	0-70° C	1.2, 2.5, 3.3 V	RC82573E RC82573V RC82573L	—
Intel® 82545GM Intel® 82546GB	Single Port GbE Controller Dual Port GbE Controller MAC/PHY/SerDes	21x21 mm 364-pin TFBGA 364-pin PBGA	PCI-X 1.0 PCI/PCI-X* 33/66/133 MHz	TCP segmentation offload, large send offload, TCP, UDP, IPv4 checksum offload, interrupt moderation, jumbo frames	Enterprise servers, blades, embedded systems	IPMI pass-through via SMBus, WoL, PXE remote boot, ASF 2.0, VLAN filtering	~1.5 W ~2.6 W, ~1.5 W (SerDes)	125 mA @ 3.3 V 220 mA @ 3.3 V	0-70° C 0-55° C	1.5, 2.5, 3.3 V	RC82545GM FW82546GB	—
Intel® 82541PI Intel® 82541ER	Single Port GbE Controller MAC/PHY	15x15 mm 196-pin PBGA	PCI 2.3 33/66 MHz	TCP segmentation offload, TCP, UDP, IPv4 checksum offload	Enterprise clients, workstations, embedded systems	IPMI pass-through via SMBus, WoL, PXE remote boot, ASF 2.0	~1.0 W —	45 mA @ 3.3 V	0-70° C	1.2, 1.8, 3.3 V	G082541PI G082541ER	—
Intel® 82567LM <sup>2</sup>	Single Port GbE PHY	8x8 mm 56-pin QFN	PCI Express*	Jumbo frames, RSS, on Intel ICH9M, ICH9, ICH10 chipsets	Enterprise clients, consumer, embedded systems	Intel® Active Management Technology, WoL, PXE remote boot, ASF 2.0	~0.64 W	0.13 W @ 3.3 V	0-85°C	1.05, 1.8, 3.3 V	WG82567LM	—
Intel® 82567V	Single Port GbE PHY	8x8 mm 56-pin QFN	PCI Express*	On Intel® ICH8M, ICH9M, ICH9, ICH10 chipsets	Enterprise clients, consumer, embedded systems	Intel® Active Management Technology, WoL, PXE remote boot, ASF 2.0	~0.64 W	0.13 W 3.3 V	0-85°C	1.05, 1.8, 3.3 V	WG82567V	—

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