Intel® Ethernet Converged Network and Server Adapters

Connectivity you can count on

Reliable Performance
- Broad OS support
- Optimized for Intel® Architecture
- Low latency Ethernet

Best Choice for Virtualization
- Outstanding virtualization performance with Intel® Virtualization Technology for Connectivity
- Leadership in virtual system scalability with Flexible Port Partitioning (FPP) and intelligent offload
- Broad VM support (VMware ESXi*, Microsoft Hyper-V*, KVM* and Xen*)

Unified Networking
- Full line of 10GbE Converged Network Adapters (CNA)
- Fibre Channel over Ethernet
- iSCSI with trusted, native OS support
- Support for data center bridging with lossless Ethernet

Platform Optimization
- Integrated PCI Express*
- Intel® Direct Data I/O Technology

Compatibility tested for trouble-free interoperability with network infrastructure elements.

Broad selection from 10/100 Mbps to 10 Gbps, for copper or fiber, from PCI to PCI Express*, BASE-T to SFP+, with network reach from 1 meter to 10 kilometers and in single- to quad-port configurations. Other form factors including custom mezzanine cards and express modules are available upon request.

Performance and reliability backed by more than 30 years of network connectivity experience and Intel worldwide customer support.

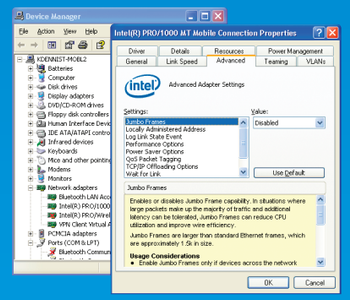
Easy installation and management with Intel® Advanced Network Services (Intel® ANS) and Intel® PROSet for Windows Device Manager* and other tools.

Worldwide availability and environmentally friendly for compliance with global market requirements.

Quick and Easy Converged Network and Server Adapter Management

Powerful point-and-click configuration tool for advanced adapter features, connection teaming, even VLANs, with Intel® PROSet for Windows Device Manager*.

- **Convenient access** to Intel® PROSet Utility, now integrated in Windows Device Manager.
- **Simple, integrated tools** make it easy to manage and troubleshoot Ethernet connections in both servers and client computers.
- **Supports multi-vendor teaming** for adapter compatibility with most on-board connections.



Ethernet Everywhere. It Just Works.

www.intel.com/go/ethernet

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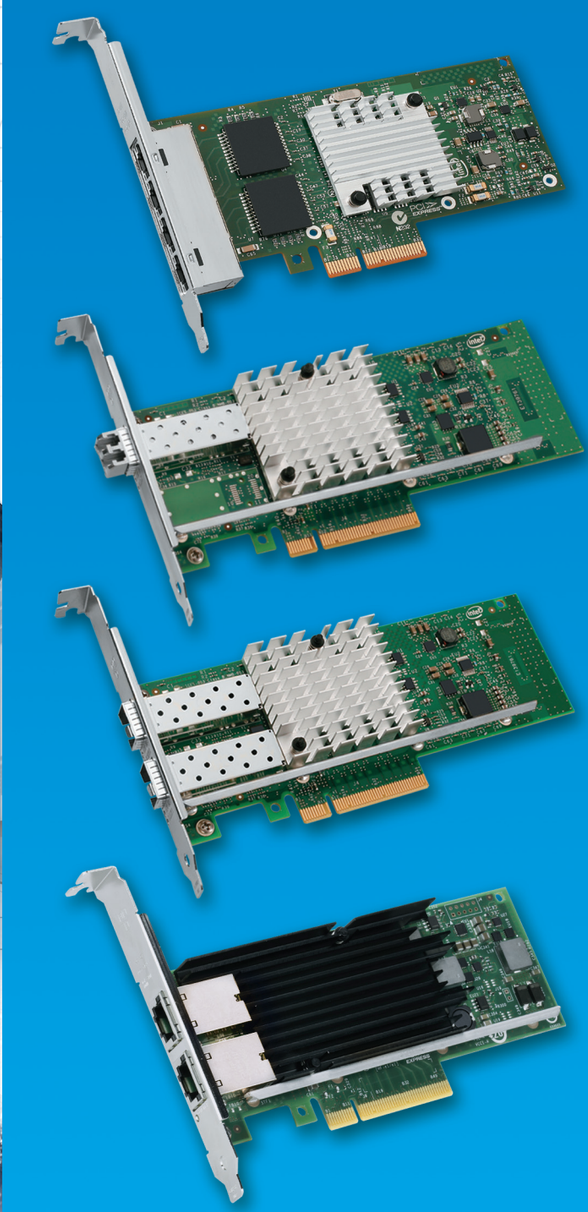
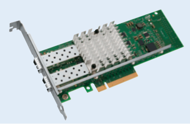
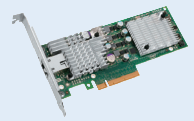
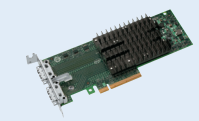
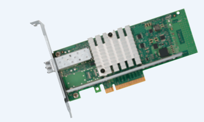
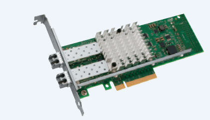
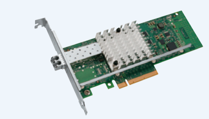
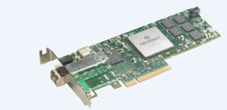
Intel® Ethernet Converged Network and Server Adapters

Product Selection Guide

UPDATED APRIL 2012

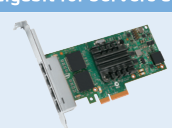
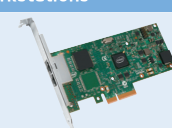
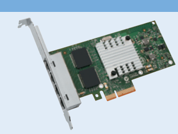
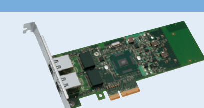
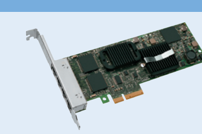
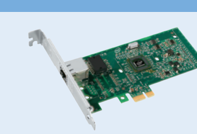
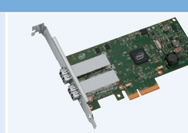
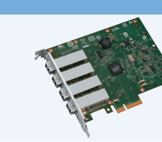
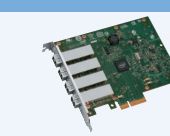
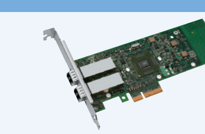
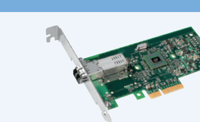


Reliable Performance ▪ Best Choice for Virtualization ▪ Unified Networking

Speed	10 Gigabit for Servers and Workstations									
										
	Copper						Fiber			
Brand Name	**Intel® Ethernet Converged Network Adapter X540-T2**	**Intel® Ethernet Converged Network Adapter X520-DA2**	**Intel® Ethernet Server Adapter 10 Gigabit AT2**	**NetEffect™ Ethernet Server Cluster Adapter CX4**	**NetEffect™ Ethernet Server Cluster Adapter DA**	**Intel® Ethernet Server Adapter 10 Gigabit CX4 Dual Port**	**Intel® Ethernet Converged Network Adapter X520-SR1**	**Intel® Ethernet Converged Network Adapter X520-SR2**	**Intel® Ethernet Converged Network Adapter X520-LR1**	**NetEffect™ Ethernet Server Cluster Adapter SFP+ SR**
Product Code	**X540T2**	**E10G42BTDA**	**E10G41AT2**	**E10G81GT2CX4**	**E10G81G2P**	**EXPX9502CX4**	**E10G41BFSR**	**E10G42BFSR**	**E10G41BFLR**	**E10G81GF2SR**
Ethernet Controller(s)	Intel® X540	Intel® 82599ES	Intel® 82598EB	NetEffect™ NE020	NetEffect™ NE020	Intel® 82598EB	Intel® 82599ES	Intel® 82599ES	Intel® 82599ES	NetEffect™ NE020
Connector & Cable Medium	RJ-45 Copper	SFP+ Direct Attach Copper	RJ-45 Copper	CX4 Copper	SFP+ Direct Attach Copper	CX4 Copper	LC Fiber Optic	LC Fiber Optic	LC Fiber Optic	LC Fiber Optic
Cabling Type	Category-6 up to 55 m Category-6A up to 100 m	SFP+ Direct Attached Twin Axial Cabling up to 10 m	Category-6 up to 55 m Category-6A up to 100 m	8 pair, 100 ohm Twin Axial Cabling up to 15 m	SFP+ Direct Attached Twin Axial Cabling up to 10 m	8 pair, 100 ohm Twin Axial Cabling up to 15 m	MMF 62.5/50 µm up to 300 m	MMF 62.5/50 µm up to 300 m	SMF up to 10 km	MMF 62.5/50 µm up to 300 m
Slot Type, Maximum Bus Speed & Slot Width	PCI Express* 2.1 5.0 GT/s Lane x 8 Lane	PCI Express* 2.0 5.0 GT/s Lane x 8 Lane	PCI Express* 2.0 2.5 GT/s Lane x 8 Lane	PCI Express* 1.1 2.5 GHz/Lane x 8 Lane	PCI Express* 1.1 2.5 GHz/Lane x 8 Lane	PCI Express* 2.0 2.5 GT/s Lane x 8 Lane	PCI Express* 2.0 5.0 GT/s x 8 Lane	PCI Express* 2.0 5.0 GT/s x 8 Lane	PCI Express* 2.0 5.0 GT/s x 8 Lane	PCI Express* 1.1 2.5 GHz/Lane x 8 Lane
Ports	Dual Port	Dual Port	Single Port	Single Port	Single Port	Dual Port	Single Port	Dual Port	Single Port	Single Port
Supported Slot Height(s)	Low Profile and Full Height	Low Profile and Full Height	Low Profile and Full Height	Low Profile and Full Height	Low Profile and Full Height	Low Profile and Full Height	Low Profile and Full Height	Low Profile and Full Height	Low Profile and Full Height	Low Profile and Full Height
Intelligent Offloads	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Intel® VT for Connectivity	On-chip QoS and Traffic Management, Flexible Port Partitioning, Virtual Machine Device Queues (VMDq), PCI-SIG* SR-IOV capable	On-chip QoS and Traffic Management, Flexible Port Partitioning, Virtual Machine Device Queues (VMDq), PCI-SIG* SR-IOV capable	On-chip QoS and Traffic Management, Virtual Machine Device Queues (VMDq), Hypervisor-based Port Partitioning	NA	NA	On-chip QoS and Traffic Management, Virtual Machine Device Queues (VMDq), Hypervisor-based Port Partitioning	On-chip QoS and Traffic Management, Flexible Port Partitioning, Virtual Machine Device Queues (VMDq), PCI-SIG* SR-IOV capable	On-chip QoS and Traffic Management, Flexible Port Partitioning, Virtual Machine Device Queues (VMDq), PCI-SIG* SR-IOV capable	On-chip QoS and Traffic Management, Flexible Port Partitioning, Virtual Machine Device Queues (VMDq), PCI-SIG* SR-IOV capable	NA
Storage over Ethernet	iSCSI, FCoE, NFS	iSCSI, FCoE, NFS	iSCSI, FCoE, NFS	iSCSI, NFS	iSCSI, NFS	iSCSI, NFS	iSCSI, FCoE, NFS	iSCSI, FCoE, NFS	iSCSI, FCoE, NFS	iSCSI, NFS
iWARP/RDMA	NA	NA	NA	Yes	Yes	NA	NA	NA	NA	Yes

Ethernet
Everywhere.
It Just Works.

For additional product information, please visit:
intel.com/go/ethernet

Speed/Port	Gigabit for Servers and Workstations											10 Gigabit for Desktops
												
	Copper						Fiber					Copper
Brand Name	**Intel® Ethernet Server Adapter I350-T4**	**Intel® Ethernet Server Adapter I350-T2**	**Intel® Ethernet Server Adapter I340-T4**	**Intel® Ethernet Server Adapter Gigabit ET Dual Port**	**Intel® Ethernet Server Adapter Gigabit ET2 Quad Port**	**Intel® Ethernet Server Adapter PRO/1000 PT**	**Intel® Ethernet Server Adapter I350-F2**	**Intel® Ethernet Server Adapter I350-F4**	**Intel® Ethernet Server Adapter I340-F4**	**Intel® Ethernet Server Adapter Gigabit EF Dual Port**	**Intel® Ethernet Server Adapter PRO/1000 PF**	**Intel® Ethernet Desktop Adapter Gigabit CT**
Product Code	**I350T4 I350T4BLK**	**I350T2 I350T2BLK**	**E1G44HT E1G44HTBLK**	**E1G42ET E1G42ETBLK**	**E1G44ET2 E1G44ET2BLK**	**EXPI9400PT EXPI9400PTBLK**	**I350F2 I350F2BLK**	**I350F4 I350F4BLK**	**E1G44HF E1G44HFBLK**	**E1G42EF E1G42EFBLK**	**EXPI9400PF EXPI9400PFBLK**	**EXPI9301CT EXPI9301CTBLK**
Ethernet Controller(s)	Intel® I350	Intel® I350	Intel® 82580	Intel® 82576	Intel® 82576	Intel® 82572	Intel® I350	Intel® I350	Intel® 82580	Intel® 82576	Intel® 82572	Intel® 82574
Connector & Cable Medium	RJ-45 Copper	RJ-45 Copper	RJ-45 Copper	RJ-45 Copper	RJ-45 Copper	RJ-45 Copper	LC Fiber Optic	LC Fiber Optic	Fiber Optic	Fiber Optic	Fiber Optic	RJ-45 Copper
Cabling Type	Cat 5e up to 100 m	Cat 5e up to 100 m	Cat 5e up to 100 m	Cat 5e up to 100 m	Cat 5e up to 100 m	Cat 5e up to 100 m	MMF 62.5 µm up to 275 m MMF 50 µm up to 550 m	MMF 62.5 µm up to 275 m MMF 50 µm up to 550 m	MMF 62.5 µm up to 275 m MMF 50 µm up to 550 m	MMF 62.5 µm up to 275 m MMF 50 µm up to 550 m	MMF 62.5/50 µm up to 275 m	Cat 5e up to 100 m
Slot Type, Maximum Bus Speed & Slot Width	PCI Express* 2.1 5 GT/s Lane x 4 Lane	PCI Express* 2.1 5 GT/s Lane x 4 Lane	PCI Express* 2.0 5 GT/s Lane x 4 Lane	PCI Express* 2.0 2.5 GT/s Lane x 4 Lane	PCI Express* 2.0 2.5 GT/s Lane x 4 Lane	PCI Express* 2.0 2.5 GT/s Lane x 1 Lane	PCI Express* 2.1 5 GT/s Lane x 4 Lane	PCI Express* 2.1 5 GT/s Lane x 4 Lane	PCI Express* 2.0 5 GT/s Lane x 4 Lane	PCI Express* 2.0 2.5 GT/s Lane x 4 Lane	PCI Express* 2.0 2.5 GT/s Lane x 4 Lane	PCI Express* 2.0 2.5 GT/s Lane x 1 Lane
Ports	Quad Port	Dual Port	Quad Port	Dual Port	Quad Port	Single Port	Dual Port	Quad Port	Quad Port	Dual Port	Single Port	Single Port
Supported Slot Height(s)	Low Profile and Full Height	Low Profile and Full Height	Low Profile and Full Height	Low Profile and Full Height	Low Profile and Full Height	Low Profile and Full Height	Low Profile and Full Height	Full Height	Full Height	Low Profile and Full Height	Low Profile and Full Height	Low Profile and Full Height
Halogen Free	Yes	Yes	Yes	NA	NA	NA	NA	NA	NA	NA	NA	NA
Intelligent Offloads	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	NA
Intel® VT for Connectivity	On-chip QoS and Traffic Management, Flexible Port Partitioning, Virtual Machine Device Queues (VMDq), PCI-SIG* SR-IOV capable	On-chip QoS and Traffic Management, Flexible Port Partitioning, Virtual Machine Device Queues (VMDq), PCI-SIG* SR-IOV capable	On-chip QoS and Traffic Management, Flexible Port Partitioning, Virtual Machine Device Queues (VMDq), PCI-SIG* SR-IOV capable	On-chip QoS and Traffic Management, Flexible Port Partitioning, Virtual Machine Device Queues (VMDq), PCI-SIG* SR-IOV capable	On-chip QoS and Traffic Management, Flexible Port Partitioning, Virtual Machine Device Queues (VMDq), PCI-SIG* SR-IOV capable	NA	On-chip QoS and Traffic Management, Flexible Port Partitioning, Virtual Machine Device Queues (VMDq), PCI-SIG* SR-IOV capable	On-chip QoS and Traffic Management, Flexible Port Partitioning, Virtual Machine Device Queues (VMDq), PCI-SIG* SR-IOV capable	On-chip QoS and Traffic Management, Flexible Port Partitioning, Virtual Machine Device Queues (VMDq), PCI-SIG* SR-IOV capable	On-chip QoS and Traffic Management, Flexible Port Partitioning, Virtual Machine Device Queues (VMDq), PCI-SIG* SR-IOV capable	NA	NA
Storage over Ethernet	iSCSI, NFS	iSCSI, NFS	iSCSI, NFS	iSCSI, NFS	iSCSI, NFS	iSCSI, NFS	iSCSI, NFS	iSCSI, NFS	iSCSI, NFS	iSCSI, NFS	iSCSI, NFS	iSCSI, NFS
Intel® Ethernet Power Management[1]	Yes	Yes	NA	NA	NA	NA	Yes	Yes	NA	NA	NA	NA

[1] Intel® Ethernet Power Management includes Energy Efficient Ethernet (EEE) and DMA Coalescing