10 GIGABIT FOR SERVERS AND WORKSTATIONS

NEW!
NEW! Open Compute Project

	COPPER					FIBER		
Brand Name	Intel® Ethernet Converged Network Adapter X540-T2	Intel® Ethernet Converged Network Adapter X540-T1	Intel® Ethernet Converged Network Adapter X520-QDA1	Intel® Ethernet Converged Network Adapter X520-DA2	Intel® Ethernet Server Adapter X520-DA1 & X520-DA2 for Open Compute Project	Intel® Ethernet Converged Network Adapter X520-SR1	Intel® Ethernet Converged Network Adapter X520-SR2	Intel® Ethernet Converged Network Adapter X520-LR1
Product Code	X540T2 X540T2BLK	X540T1 X540T1BLK	X520QDA1	E10G42BTDA E10G42BTDABLK	X520DA1OCP X520DA2OCP	E10G41BFSR E10G41BFSRBLK	E10G42BFSR E10G42BFSRBLK	E10G41BFLR E10G41BFLRBLK
Intel® Ethernet Controller	Intel® X540	Intel® X540	Intel® 82599ES	Intel® 82599ES	Intel® 82599ES	Intel® 82599ES	Intel® 82599ES	Intel® 82599ES
Connector & Cable Medium	RJ-45 Copper Twisted Pair	RJ-45 Copper Twisted Pair	QSFP+ Direct Attach Copper	SFP+ Direct Attach Copper	SFP+ Direct Attach Copper	LC Fiber Optic	LC Fiber Optic	LC Fiber Optic
Cabling Type	Category-6 up to 55 m Category-6A up to 100 m	Category-6 up to 55 m Category-6A up to 100 m	QSFP+ Direct Attached Twin Axial Cabling up to 10 m	SFP+ Direct Attached Twin Axial Cabling up to 10 m	SFP+ Direct Attached Twin Axial Cabling up to 10 m	MMF 62.5/50 µm up to 300 m	MMF 62.5/50 µm up to 300 m	SMF up to 10 km
Slot Type, Maximum Bus Speed & Slot Width	PCI Express* 2.1 5.0 GT/s, x8 Lane	PCI Express* 2.1 5.0 GT/s, x8 Lane	PCI Express* 3.0 5.0 GT/s Lane x8 Lane	PCI Express* 2.0 5.0 GT/s, x8 Lane	PCI Express* 2.0 5.0 GT/s Lane x8 Lane	PCI Express* 2.0 5.0 GT/s, x8 Lane	PCI Express* 2.0 5.0 GT/s, x8 Lane	PCI Express* 2.0 5.0 GT/s, x8 Lane
Ports	Dual Port	Single Port	Single Port	Dual Port	Single & Dual Port	Single Port	Dual 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	OCP Form Factor - no bracket	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
Intel® Virtualization Technology 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, 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
Storage over Ethernet	iSCSI, FCoE, NFS	iSCSI, FCoE, NFS	iSCSI, FCoE, NFS	iSCSI, FCoE, NFS	iSCSI, NFS	iSCSI, FCoE, NFS	iSCSI, FCoE, NFS	iSCSI, FCoE, NFS
Accessory Options	NA	NA	Intel® Ethernet QSFP+ Twin Axial Cables Intel® Ethernet QSFP+ Optics	Intel® Ethernet SFP+ Twin Axial Cables Intel® Ethernet SFP+ Optics	Intel® Ethernet SFP+ Twin Axial Cables Intel® Ethernet SFP+ Optics	Intel® Ethernet SFP+ Twin Axial Cables Intel® Ethernet SFP+ Optics Ships with Qty 1 E10GSFPSR	Intel® Ethernet SFP+ Twin Axial Cables Intel® Ethernet SFP+ Optics Ships with Qty 2 E10GSFPSR	Intel® Ethernet SFP+ Twin Axial Cables Intel® Ethernet SFP+ Optics Ships with Qty 1 E10GSFPLR

INTEL® ETHERNET 10GBE ACCESSORIES

Intel® Ethernet SFP+ Twin Axial Cables
(SFP+ to SFP+ copper direct attach cable)
XDACBL1M = 1 Meter
XDACBL3M = 3 Meter
XDACBL5M = 5 Meter

Intel® Ethernet SFP+ Optics
E10GSFPSR = SFP+ SR Optic
E10GSFPLR = SFP+ LR Optic

Intel® Ethernet QSFP+ Optics
E40GQSFPSR = QSFP+ SR Optic

Intel® Ethernet QSFP+ Twin Axial Cables
(QSFP+ to QSFP+ copper direct attach cable)
XLDACBL1 = 1 Meter
XLDACBL3 = 3 Meter
XLDACBL5 = 5 Meter

Intel® Ethernet QSFP+ Breakout Cables
(QSFP+ to (4) SFP+ copper direct attach breakout cable)
X4DACBL1 = 1 Meter
X4DACBL3 = 3 Meter
X4DACBL5 = 5 Meter

*Customer may remove optics as needed.

GIGABIT FOR SERVERS AND WORKSTATIONS / GIGABIT FOR DESKTOPS

|	COPPER						FIBER				COPPER
Brand Name	Intel® Ethernet Server Adapter I210-T1	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 I350-F2	Intel® Ethernet Server Adapter I350-F4	Intel® Ethernet Server Adapter I340-F4	Intel® Ethernet Server Adapter Gigabit EF Dual Port	Intel® Ethernet Desktop Adapter Gigabit CT
Product Code	I210T1 I210T1BLK	I350T4 I350T4BLK	I350T2 I350T2BLK	E1G44HT E1G44HTBLK	E1G42ET E1G42ETBLK	E1G44ET2 E1G44ET2BLK	I350F2 I350F2BLK	I350F4 I350F4BLK	E1G44HF E1G44HFBLK	E1G42EF E1G42EFBLK	EXPI9301CT EXPI9301CTBLK
Intel® Ethernet Controller	Intel® I210	Intel® I350	Intel® I350	Intel® 82580	Intel® 82576	Intel® 82576	Intel® I350	Intel® I350	Intel® 82580	Intel® 82576	Intel® 82574
Connector & Cable Medium	RJ-45 Copper Twisted Pair	RJ-45 Copper Twisted Pair	RJ-45 Copper Twisted Pair	RJ-45 Copper Twisted Pair	RJ-45 Copper Twisted Pair	RJ-45 Copper Twisted Pair	LC Fiber Optic	LC Fiber Optic	LC Fiber Optic	LC Fiber Optic	RJ-45 Copper Twisted Pair
Cabling Type	Category-5 up to 100 m	Category-5e up to 100 m	Category-5e up to 100 m	Category-5e up to 100 m	Category-5e up to 100 m	Category-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	Cat 5e up to 100 m
Slot Type, Maximum Bus Speed & Slot Width	PCI Express* 2.1 2.5 GT/s, x1 Lane	PCI Express* 2.1 5 GT/s, x4 Lane	PCI Express* 2.1 5 GT/s, x4 Lane	PCI Express* 2.0 5 GT/s, x4 Lane	PCI Express* 2.0 2.5 GT/s, x4 Lane	PCI Express* 2.0 2.5 GT/s, x4 Lane	PCI Express* 2.1 5 GT/s, x4 Lane	PCI Express* 2.1 5 GT/s, x4 Lane	PCI Express* 2.0 5 GT/s, x4 Lane	PCI Express* 2.0 2.5 GT/s, x4 Lane	PCI Express* 2.0 2.5 GT/s, x1 Lane
Ports	Single Port	Quad Port	Dual Port	Quad Port	Dual Port	Quad Port	Dual Port	Quad Port	Quad Port	Dual 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
Halogen Free	Yes	Yes	Yes	Yes	NA	NA	NA	NA	NA	NA	NA
Intelligent Offloads	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	NA
Intel® Virtualization Technology for Connectivity	Includes Audio-Video Bridging (AVB) Support (802.1Qav)	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)	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, Virtual Machine Device Queues (VMDq)	On-chip QoS and Traffic Management, Flexible Port Partitioning, Virtual Machine Device Queues (VMDq), PCI-SIG* SR-IOV capable	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
Intel® Ethernet Power Management[1]	Yes	Yes	Yes	NA	NA	NA	Yes	Yes	NA	NA	NA

[1]Intel® Ethernet Power Management includes Energy Efficient Ethernet (EEE) and DMA Coalescing.
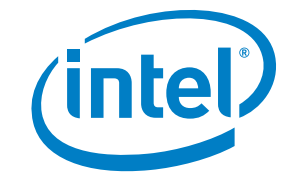
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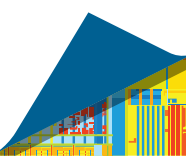
Intel® Ethernet Converged Network and Server Adapters
Connectivity you can count on

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 Hypervisor 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 Broad selection from 1GbE to 10GbE, 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.

NEW! Intel now offers Intel® Ethernet Server Adapters designed for the Open Compute Project (OCP) form factor. OCP delivers the most efficient server, storage and data center hardware design for scalable computing. Hardware designed for OCP openly shares custom datacenter designs to improve both cost and energy efficiency across the industry. For more information on this initiative visit: **www.opencompute.org**

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, DCB, 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.
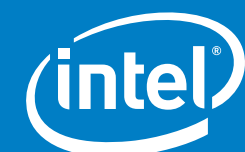- **Supports multi-vendor teaming** for adapter compatibility with most on-board connections.
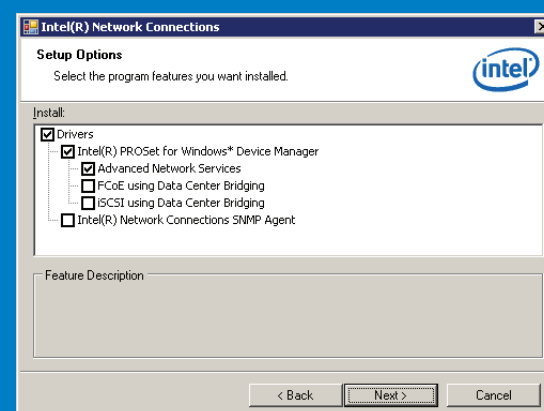
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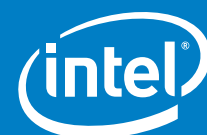
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Look Inside.™

Intel® Ethernet Converged Network and Server Adapters

Product Selection Guide

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