NIC/PCiE up to 10Gb RJ45 x 2 Retail (X550T2)

NIC/PCiE up to 10Gb RJ45 x 2 Retail

With 10GBASE-T, migration to 10 GbE is dramatically simplified with backward compatibility for your existing GbE network infrastructure. Install an X550 adapter into a server and the auto-negotiation between 1 GbE and 10 GbE provides the necessary backwards compatibility that most customers require for a smooth transition and easy migration to 10 GbE. When time and budget allows, 10GBASE-T switches can be added any time to experience the full benefits of 10 GbE.10GBASE-T uses the copper twisted-pair c you know and love about 1000BASE-T. The knowledge, training, and investment in BASE-T are preserved. 10GBASE-T is the easiest and most versatile 10 GbE interface that can be deployed anywhere in your data center. Its flexible reach from 1 meter to 100 meters supports the latest network architectures including Top of Rack (ToR), Middle of Row (MoR), and End of Row (EoR).

Key Selling Points

Low-cost, low-power, 10-GbE performance for the entire datacenter
Intel's 10GBASE-T controller with integrated MAC and PHY
Standard CAT 6a cabling with RJ-45 connectors
Backward compatibility with existing 1000BASE-T networks simplifies the transition to 10 GbE
Unified networking delivering LAN, iSCSI and FCoE in one low-cost CNA
Flexible I/O virtualization for port partitioning and Quality of Service

Product Features

Simplify the transition to 10 GbE
With 10GBASE-T, migration to 10 GbE is dramatically simplified with backward compatibility for your existing GbE network infrastructure. Install an X550 adapter into a server and the autonegotiation between 1 GbE and 10 GbE provides the necessary backwards compatibility that most customers require for a smooth transition and easy migration to 10 GbE. When time and budget allows, 10GBASE-T switches can be added any time to experience the full benefits of 10 GbE. 10GBASE-T uses the copper twisted-pair cables. It is all you know and love about 1000BASE-T. 10GBASE-T is an easy and versatile 10 GbE interface that can be deployed anywhere in your data center. Its flexible reach supports the advanced network architectures including Top of Rack (ToR), Middle of Row (MoR), and End of Row (EoR).

10 GbE performance at low cost and low power
The Intel Ethernet Converged Network Adapter X550 is low-cost way to deploy 10 GbE in your data center. The Intel X550 uses low-cost Cat6 and Cat6a cabling. Chances are this cabling already exists in the data center. A way for Intel to reduce cost and power is to integrate components into a single-chip solution. Why is integration important? First, integration translates to lower power. This means no active heat sink and reduces the per-port power consumption. Second, integration also means a lower cost per port, because two separate components are not needed. When cabling is accounted for, cost efficiencies realized from a single part mean 10GBASE-T is low-cost media to deploy. With lower cost and power, 10GBASE-T is ideal for broad deployment. 10GBASE-T is a solution for every rack and tower server in the data center.

A complete unified network solution
Converging data and storage onto one fabric eliminates the need for multiple adapters and cables per server. Furthermore, 10 GbE provides the bandwidth to converge these multiple fabrics into a single wire. A key capability that makes all this possible is traffic class separation provided by Data Center Bridging (DCB). DCB provides a collection of standards for additional QoS functionality such as lossless delivery, congestion notification, priority-based flow control, and priority groups. This enables the CNA X550 family to provide a one-wire solution with virtual pipes for the different classes of traffic.

Great choice for server virtualization
Virtualization changes server resource deployment and management by running multiple applications and operating systems on a single physical server. With Intel Virtualization Technology for connectivity, the CNA X550 family delivers outstanding I/O performance and QoS in virtualized data centers and cloud environments. I/O virtualization advances network connectivity used in servers to more efficient models by providing FPP, multiple Tx/Rx queues, Tx queue rate-limiting, and on-controller QoS functionality that is useful for both virtual and non-virtual server deployments.

Main specifications

Product Description	*Intel Ethernet Converged Network Adapter X550-T2 - network adapter - PCIe 3.0 - 10Gb Ethernet x 2*
Device Type	*Network adapter*
Form Factor	*Plug-in card - low profile*
Interface (Bus) Type	*PCI Express 3.0*
PCI Specification Revision	*PCIe 3.0*
Ports	*10Gb Ethernet x 2*
Cabling Type	*Ethernet 10GBase-T*
Data Link Protocol	*10GbE, FCoE, iSCSI*
Data Transfer Rate	*10 Gbps*
Capacity	*QoS virtual ports: up to 64 ¦ VLAN tags: up to 4096*
Network / Transport Protocol	*TCP/IP, UDP/IP, IPSec, iSCSI, SMB, NFS, SCTP*

Compliant Standards	*IEEE 802.1Q, IEEE 802.1Qbg*
System Requirements	*Linux Kernel 2.6 or later, Microsoft Windows Server 2008 R2 x64 Edition, Microsoft Windows 7 64-bit Edition SP1, Microsoft Windows Server 2012 x64 Edition, Microsoft Windows Server 2012 R2 x64 Edition, VMware ESXi 5.5, Red Hat Enterprise Linux 7.1, SuSE Linux Enterprise Server 12, Red Hat Enterprise Linux 6.7, SuSE Linux Enterprise Server 11 SP4, Windows 8 / 8.1 / 10 (64 bits), FreeBSD 10.2, VMware ESXi 6.0*
Manufacturer Warranty	*Limited lifetime warranty*

Extended specification

General

Device Type	*Network adapter*
Form Factor	*Plug-in card - low profile*
Interface (Bus) Type	*PCI Express 3.0*
PCI Specification Revision	*PCIe 3.0*

Expansion / Connectivity

Interfaces	*2 x 10GBase-T - RJ-45*

Manufacturer Warranty

Service & Support	*Limited warranty - lifetime*

Networking

Ports	*10Gb Ethernet x 2*
Connectivity Technology	*Wired*
Cabling Type	*Ethernet 10GBase-T*
Data Link Protocol	*10 Gigabit Ethernet, Fibre Channel over Ethernet (FCoE), iSCSI*
Data Transfer Rate	*10 Gbps*
Capacity	*QoS virtual ports: up to 64 ¦ VLAN tags: up to 4096*
Network / Transport Protocol	*TCP/IP, UDP/IP, IPSec, iSCSI, SMB, NFS, SCTP*
Remote Management Protocol	*SNMP, DMI 2.0*
Features	*MAC address filtering, IPv6 support, QoS, VMDq, IPv4 support, SR-IOV, TSO, PXE 2.0 support, MSI-X, VXLAN, NVGRE, Intel Flow Director, FPP, multi-mode I/O virtualisation operations, VLAN filtering, intelligent offloads*
Compliant Standards	*IEEE 802.1Q, IEEE 802.1Qbg*

Miscellaneous

Included Accessories	*Low-profile bracket*
Compliant Standards	*Plug and Play, RoHS*

Software / System Requirements

OS Required	*Linux Kernel 2.6 or later, Microsoft Windows Server 2008 R2 x64 Edition, Microsoft Windows 7 64-bit Edition SP1, Microsoft Windows Server 2012 x64 Edition, Microsoft Windows Server 2012 R2 x64 Edition, VMware ESXi 5.5, Red Hat Enterprise Linux 7.1, SuSE Linux Enterprise Server 12, Red Hat Enterprise Linux 6.7, SuSE Linux Enterprise Server 11 SP4, Windows 8 / 8.1 / 10 (64 bits), FreeBSD 10.2, VMware ESXi 6.0*

What's in the box

Intel Ethernet Converged Network Adapter X550-T2

Low-profile bracket