

## Data Sheet Intel® X540-T2 2x 10GBase-T LAN Adapter

X540-T2 2x 10GBase-T PCle x8 card

Ethernet cards enable data exchange between all the devices connected in a local network (LAN). A networked IT infrastructure that functions well is of great significance when managing and controlling critical business processes in a company. The wide range of complex information transported across the network relies on fast and reliable data processing by the network cards. The cards offers at least one Ethernet interface which is designed for the respective network types and network architectures. The bus interface links the network card with the server.



The X540-T2 adapter hosts Intel's latest Ethernet silicon, which uses a single chip solution for "LAN on Motherboard" (LOM) to deliver 10 Gigabit Ethernet (10 GbE) on the latest server platforms. 10GBase-T simplifies the transition to 10 GbE and it can be deployed anywhere in your data center. Its flexible range - from 1 to 100 meters - supports the latest network architectures. With lower cost and power, 10GBase-T is ready for broad deployment. 10GBase-T is an option for every rack and tower server in the data center. Waiting for a low-cost 10 GbE copper solution to deploy 10 GbE to all the corners of a data center is now over. The adapter provides bandwidth-intensive applications with highly affordable 10 GbE network performance and cost-effective RJ-45 connectivity.

■ DCB (Data Center Bridging) enhancements



# Main Features Benefits Intel® Ethernet adapter X540-T2 Industry's first integrated MAC+PHY reducing cost and power Low-profile Enables higher bandwidth and throughput from standard and low-profile PCle slots and servers Load balancing on multiple CPUs Increases performance on multi-processor systems by efficiently balancing network loads across CPU cores when used with Receive-Side Scaling (RSS) from Microsoft or Scalable I/O on Linux Support for most Network Operating Systems (NOS) Enables widespread deployment

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Guaranties lossless delivery, congestion notification, priority-based

flow control and priority groups

## Technical details

| Technical | details |
|-----------|---------|
|           |         |

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|--|--|-----------------------------------|------------------------|--|
| Controller Silicon   | Intel® Ethernet Controller X540  |                                   |                        |  |
| Controller type  | Ethernet Ctrl.   |                                   |                        |  |
| Connector type   | RJ45   |                                   |                        |  |
| Operating system   | Information to released operating systems can be found in the server datasheets. Details can be found in the released drivers list on the support portal.  |                                   |                        |  |
| Released drivers list link                                     | http://support.ts.fujitsu.com/Download/Ir  | dex.asp                           |                        |  |
| Number of ports  | 2  |                                   |                        |  |
| Data transfer rate(s)  | 10 Gbit/s; 1 Gbit/s; 100 MBit/s  |                                   |                        |  |
| Auto Negotiation support                                       | Yes  |                                   |                        |  |
| Bus interface  | PCIe 2.1 x8  |                                   |                        |  |
| Bus transfer rate  | 5GT/s  |                                   |                        |  |
| Network protocol and standards<br>compatibility                | IEEE 802.1p<br>IEEE 802.1q VLAN<br>IEEE 802.3ad LACP<br>IEEE 802.3 2005 flow control support   |                                   |                        |  |
| HW Virtualization  | PCI-SIG SR-IOV with up to 64 virtual functi  | ons per port for Linux, VMwa      | re, Windows (for Windo | ows Server 2012 only)                  |
| nterrupt Levels  | INTA; MSI; MSI-X   |                                   |                        |  |
| VoL  | No   |                                   |                        |  |
| Virtualization   | VMDQ (Virtual Machine Device Queues) up to 64 pueues per port<br>VMLB (Virtual Maschine Load Balancing)<br>VIOM (Fujitsu Virtual IO Manager)   |                                   |                        |  |
| reaming Teaming  | all teaming functions provided by the OS   |                                   |                        |  |
| Remote boot support  | iSCSI ; PXE  |                                   |                        |  |
| SCSI support   | Yes  |                                   |                        |  |
| Offloading   | Tx/Rx IP, SCTP, TCP and UDP checksum offloading (IPv4 & IPv6) TX TCP segmentation offload (IPv4 & IPv6) Receive/Transmit Side Scaling for Windows and Scalable I/O for Linux (IPv4, IPV6, TCP/UDP) |                                   |                        |  |
| Order code   | Product Name   | Height of bracket                 | Number of ports        | Related product                        |
| MC-0JXE31  | Eth Ctrl 2x10GBase-T PCIe x8 X540-T2   | Low Profile (LP)                  | 2                      | PRIMEQUEST Server                      |
| MC-0JXE32  | FIL CLID 10CD T DCL 0 VE (0 TD   | Full Height (FH)                  | 2                      | PRIMEQUEST Server                      |
|  | Eth Ctrl 2x10GBase-T PCle x8 X540-T2   | run rieignic (rri)                |                        | I KIIVIL QULUT DEI VEI                 |
| MCX0JXE31  | Eth Ctrl 2x10GBase-T PCle x8 X540-T2   | Low Profile (LP)                  | 2                      |  |
| •  |  |                                   | 2                      | PRIMEQUEST Serve                       |
| MCX0JXE32  | Eth Ctrl 2x10GBase-T PCIe x8 X540-T2   | Low Profile (LP)                  |                        | PRIMEQUEST Serve                       |
| MCX0JXE31<br>MCX0JXE32<br>526361-F3752-E202<br>526361-F3752-E2 | Eth Ctrl 2x10GBase-T PCle x8 X540-T2<br>Eth Ctrl 2x10GBase-T PCle x8 X540-T2   | Low Profile (LP) Full Height (FH) | 2                      | PRIMEQUEST Server<br>PRIMEQUEST Server |

#### Supported Interface Modules / Cables

Description optional cable

10GBASE-T

- 100m on Cat 6A or Cat 7

- 55m on Cat 6 (compliant to TSB-155)

1000BASE-T

- 100m on Cat 5e, Cat 6, Cat 6A or CAT 7

100BASE-T

- 100m on Cat 5e, Cat 6, Cat 6A or CAT 7

#### Environment

| LIMIOIIIIEIIC     |   |  |
|-------------------|---|--|
| Power consumption | 6.6 W / 100Mbps<br>9.5 W / 1Gbps<br>17.4 W / 10Gbps |  |
| Compliance        |   |  |
| _                 | 65  |  |

#### Europe

| Compliance            |   |
|-----------------------|---|
| USA/Canada            | FCC Class B                                       |
|                       | UL  |
| Japan                 | VCCI  |
| South Korea           | KCC   |
| Australia/New Zealand | C-Tick  |
| Taiwan                | BSMI  |
| Compliance notes      | According to the corresponding system             |
| Compliance link       | http://globalsp.ts.fujitsu.com/sites/certificates |

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### More information

#### Fujitsu OPTIMIZATION Services

In addition to Fujitsu with X540-T2 2x 10GBase-T LAN Adapter, Fujitsu provides a range of platform solutions. They combine reliable Fujitsu products with the best in services, know-how and worldwide partnerships.

#### Fujitsu Portfolio

Build on industry standards, Fujitsu offers a full portfolio of IT hardware and software products, services, solutions and cloud offering, ranging from clients to datacenter solutions and includes the broad stack of Business Solutions, as well as the full stack of Cloud offering. This allows customers to leverage from alternative sourcing and delivery models to increase their business agility and to improve their IT operation's reliability.

#### **Computing Products**

www.fujitsu.com/global/products/computing/

#### Software

www.fujitsu.com/software/

#### More information

Learn more about Fujitsu X540-T2 2x 10GBase-T LAN Adapter, please contact your Fujitsu sales representative or Fujitsu Business partner, or visit our website. http://www.fujitsu.com/primergy

#### Fujitsu green policy innovation

Fujitsu Green Policy Innovation is our worldwide project for reducing burdens on the environment.

Using our global know-how, we aim to contribute to the creation of a sustainable environment for future generations through IT. Please find further information at http://www.fujitsu.com/qlobal/about/environment



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