

Data Sheet

FUJITSU Network Adapter EmulexOCe14102-NT

Dual-port with 10GbE Network Adapter

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 offer 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.

Network Adapter EmulexOCe14102-NT

As a member of the OCe14000 network adapter family the "Fujitsu OCe14102-NT" offers a high performance networking solution, which perfectly fits for virtualization, enterprise cloud and datacenter tasks. The difference - in contrast to the Emulex OCe14102 adapter - is the use of the RJ45 connector type. This connector is compatible with CAT6/6A/7/7A twisted pair cabling standards for a maximum 10Gb strong Ethernet connectivity at very low costs. The NIC only adapter OCe14102-NT focusses on cloud functions; it can thus not handle the storage off-load functions (iSCSI and FCoE) of a Converged Network Adapter.

The OCe14102-NT from Emulex is a high availability dual-port adapter combined with many scalability options as well as massive bandwidth speeds in

long-established and field-proven networking technology. This includes a rich set of features, for example enhanced Single-Root I/O Virtualization (SR-IOV) for cost-effective virtualization, RDMA over Converged Ethernet v2 (RoCE) which guarantees a direct memory movement of server data over the internet in a way that is more performant than normal application communication. SMB Direct (SMB over RDMA) provides an improvement of the SMB protocol for remote storage and ensures better performance values like RoCE. Moreover, NIC port partitioning for dividing physical ports into multiple virtual ports and other next generation overlay technologies acts as a flexible platform to overachieve virtual machines requirements in public or hybrid enterprise cloud environments.



| Main Features | Benefits |
|---|---|
| <ul style="list-style-type: none"> ■ Superior network scalability - 10GbE bandwidth on common software platform ■ RDMA over Converged Ethernet v2 (Routable RoCE) Support | <ul style="list-style-type: none"> ■ Maximizes server hardware ROI with high virtual machine density |
| <ul style="list-style-type: none"> ■ Powerful Overlay Networking offloads (NVGRE and VXLAN) | <ul style="list-style-type: none"> ■ Extends the RoCE network protocol with internet routing functionality. Lays on previous benefits as higher throughput at lower latency and a low utilization of the system processor through memory level processing. |
| <ul style="list-style-type: none"> ■ Stateless TCP/IP offloads | <ul style="list-style-type: none"> ■ Address the requirements of virtual machine (VM) mobility and massive scaling of Layer 2 subnets inside private or hybrid cloud infrastructures |
| <ul style="list-style-type: none"> ■ Common technology with Dynamic LOM | <ul style="list-style-type: none"> ■ Provides the bandwidth needed for slot constrained server platforms ■ Same driver and management support as for LOM on new dual socket M1 server generation |

Technical details

Technical details

| | |
|---------------------------------------|---|
| Controller Silicon | Emulex Engine XE100 |
| Controller type | Ethernet Ctrl. |
| Connector type | 10Gbit/s Eth (RJ45) |
| Operating system pre-installed | 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/Index.asp |
| Number of ports | 2 |
| Data transfer rate(s) | 10 Gbit/s |
| Bus interface | PCIe 3.0 x8 |
| Bus transfer rate | 8GT/s |
| LEDs | 2 LED per port Green: Blink = Activity Off = No activity Amber: On = Link up Off = Link down |
| HW Virtualization | SR-IOV support (up to 64 virtual functions per port for NIC) Overlay Network Virtualization (NVGRE & VXLAN) Universal Multi-Channel for Port Partitioning |
| Interrupt Levels | MSI-X |
| Teaming | all teaming functions provided by the OS |
| Remote boot support | PXE 2.1 |
| Additional features | RoCE and RoCE v2 (RDMA over Converged Ethernet) observe OS dependencies |
| Offloading | Powerful hardware offload for: - Overlay networks (NVGRE and VXLAN) - Stateless TCP |
| Standards | <p>Ethernet:</p> <ul style="list-style-type: none"> - IEEE 802.3an 10GBASE-T - IEEE 802-3ab 1000BASE-T - IEEE 802.1Q virtual LANs (VLAN) - IEEE 802.3x Flow control with Pause frames - IEEE 802.1Qbg Edge Virtual Bridging - IEEE 802.1Qaz Enhanced Transmission Selection (ETS); Data Center Bridging Capability Exchange (DCBX) - IEEE 802.1Qbb Priority Flow Control (PFC) - IEEE 802-1AX Link Aggregation/LACP - IEEE 802.1AB Link Layer Discovery Protocol (LLDP) - IEEE 802.1Qau Congestion Notification <p>DCE/CEE Support:</p> <ul style="list-style-type: none"> - IEEE 802.1Qbb Priority Flow Control (PFC) - IEEE 802.1Qaz Enhanced Transmission Selection (ETS) Data Center Bridging Capability Exchange (DCBX) - IEEE 802.1Qau Congestion Notification (QCN) |

Technology

| Order code | Height of bracket | Number of ports | Related product |
|-------------------|---------------------------|-----------------|-------------------|
| MC-0JXE71 | Low Profile (LP) | 2 | PRIMEQUEST Server |
| MC-0JXE72 | Full Height (FH) | 2 | PRIMEQUEST Server |
| MCX0JXE71 | Full Height / Low Profile | 2 | PRIMEQUEST Server |
| S26361-F5557-E1 | Full Height (FH) | 2 | PRIMERGY Server |
| S26361-F5557-E201 | Low Profile (LP) | 2 | PRIMERGY Server |
| S26361-F5557-L501 | Full Height / Low Profile | 2 | PRIMERGY 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

| | |
|-------------------------|----------------------------|
| Power consumption | 16.4W (typical at 10 Gbps) |
| | 11.6W (typical at 1 Gbps) |
| Temperature (operating) | 0 - 55 °C |
| Storage temperature | -40 - 70 °C |

Compliance

| | |
|------------------|---|
| Compliance notes | According to the corresponding system |
| Compliance link | https://sp.ts.fujitsu.com/sites/certificates |

More information

Fujitsu OPTIMIZATION Services

In addition to Fujitsu with Network Adapter Emulex0Ce14102-NT, 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 Network Adapter Emulex0Ce14102-NT, 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/global/about/environment>



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