

Data Sheet

FUJITSU PLAN EP MCX6-DX 100GbE QSFP28

Dual-port 100Gbit/s PCIe 4.0 Network Interface 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.



PLAN EP MCX6-DX 100GbE QSFP28

The FUJITSU PLAN EP MCX6-DX 100GbE is based on Mellanox's ConnectX®-6 DX (Dual port) Network Interface Card. ConnectX-6 DX Network Controller with 100Gb/s Ethernet connectivity addresses virtualized infrastructure challenges, delivering best-in-class and highest performance to various demanding markets and applications. Providing true hardware-based I/O isolation with unmatched scalability and efficiency, achieving the most cost-effective and flexible solution for Web 2.0, Cloud, data analytics, database, and storage platforms. 100Gb Ethernet (100GbE) enables network bandwidth to be cost-effectively scaled in support of next-generation server and storage solutions residing in Cloud and Web-scale data center environments.

FUJITSU PLAN EP MCX6-DX 100GbE Network Interface Cards deliver advanced Ethernet solutions designed for FUJITSU Server PRIMERGY and PRIMEQUEST systems with use cases such as SAP HANA® or Microsoft Storage Spaces Direct (S2D).

Features & Benefits

| Main Features | Benefits |
|--|--|
| <p>Scalability across environments</p> <ul style="list-style-type: none"> ■ Designed for FUJITSU Server PRIMEQUEST and PRIMERGY systems in SAP and all general purpose environments | <ul style="list-style-type: none"> ■ Delivering best-in-class and highest performance to various demanding markets and applications. Providing true hardware-based I/O isolation with unmatched scalability and efficiency, achieving the most cost-effective and flexible solution for Web 2.0, Cloud, data analytics, database, and storage platforms for general purpose, SAP HANA, and Microsoft S2D (Storage Spaces Direct) environments |
| <p>Flexible OS support</p> <ul style="list-style-type: none"> ■ Microsoft Windows Server 2019 and 2016, Red Hat Enterprise Linux 8 and 7, SuSE Linux Enterprise Server 15 and 12, VMware ESXi 7 and 6 Support | <ul style="list-style-type: none"> ■ Designed and released for qualifying PRIMERGY and PRIMEQUEST servers |
| <p>Efficient networking</p> <ul style="list-style-type: none"> ■ RDMA over Converged Ethernet (RoCE) | <ul style="list-style-type: none"> ■ Delivering low-latency and high-performance Remote Direct Memory Access (RDMA) over Ethernet networks. RoCE provides efficient low-latency RDMA services over Layer 2 and Layer 3 networks |
| <p>Connectivity</p> <ul style="list-style-type: none"> ■ Connectivity options | <ul style="list-style-type: none"> ■ Interoperable with 1/10/25/40/50/100Gb Ethernet switches. Powered connectors for optical and active cable support. Tested with Mellanox and Cisco DAC 100G, AOC 100G. Mellanox QSFP28 optical transceivers are available from Fujitsu, 850nm SR4 up to 100m as well as 1310nm PSM4 up to 500m |
| <p>Simplified Management</p> <ul style="list-style-type: none"> ■ ServerView Management and MCTP/PLDMNC-SI Support | <ul style="list-style-type: none"> ■ ServerView Update Tools and CLP for iRMC Network Inventory are supported for UEFI and in legacy boot. CLP for eIOV is supported for UEFI only. MCTP Base/Control, MCTP over PCIe/VDM, PLDM Monitoring/Control, PLDM FRU, NC-SI over MCTP |

Technical details

Technical details

| | |
|--|---|
| Controller Silicon | Mellanox ConnectX6-DX MCX623106AN-CDAT Dual-Port 100 Gigabit Ethernet Controller |
| Controller type | Ethernet Ctrl. |
| Connector type | QSFP28 |
| Released drivers list link | http://support.ts.fujitsu.com/Download/Index.asp |
| Number of ports | 2 |
| Number of Connectors | 2 |
| Number of external ports | 2 |
| Data transfer rate(s) | 100 Gbit/s |
| Auto Negotiation support | Yes |
| Bus type | PCIe 4.0 |
| Bus transfer rate | 16GT/s |
| Bus width | x16 |
| Network protocol and standards compatibility | IEEE 802.1p Class of Service IEEE 802.1q VLAN IEEE 802.1Qau Congestion Notification IEEE 802.1Qaz Enhanced Transmission Selection (ETS) IEEE 802.1Qbb Priority Flow Control (PFC) IEEE 802.3ad LACP IEEE 802.3ae 10Gbit Ethernet IEEE 802.ap based auto-negotiation and KR startup IEEE 802.3az Energy Efficient Ethernet (EEE) IEEE 802.3ba 40Gbit Ethernet IEEE 802.3bj, 802.3bm 100 Gigabit Ethernet IEEE 802.3x Flow Control IEEE 1588 Precision Time Protocol IPv4, IPv6 and mixed IPv4/IPv6 network protocols |
| HW Virtualization | SR-IOV: Up to 256 Virtual Functions |
| Interrupt Levels | MSI-X |
| WoL | No |
| Virtualization | Hardware-based I/O Server Virtualization - SR-IOV - Multi-function per port - Address translation and protection - Multiple queues per virtual machine - Enhanced QoS for vNICs - VMware NetQueue support Overlay Networks - Stateless offloads for overlay networks and tunneling protocols - Hardware offload encapsulation and decapsulation of overlay networks Network Virtualization Offload - NVGRE - VXLAN"CPU Offloads - RDMA over Converged Ethernet (RoCE) - TCP/UDP/IP stateless offload - LSO, LRO, checksum offload - RSS (can be done on encapsulated packet), TSS, HDS, VLAN insertion / stripping, Receive flow steering - Intelligent interrupt coalescence" |
| Offloading | CPU Offloads - RDMA over Converged Ethernet (RoCE) - TCP/UDP/IP stateless offload - LSO, LRO, checksum offload - RSS (can be done on encapsulated packet), TSS, HDS, VLAN insertion / stripping, Receive flow steering - Intelligent interrupt coalescence |
| Data transfer rate up to | 100 Gbit/s |

| Order code | Product Name | Height of bracket | Number of ports | Related product |
|------------|--|---------------------------|-----------------|-----------------|
| PYBLA412L | PLAN EP MCX6-DX 2X 100G QSFP28 PCIE LP | Low Profile (LP) | 2 | PRIMERGY Server |
| PYBLA412 | PLAN EP MCX6-DX 2X 100G QSFP28 PCIE | Full Height (FH) | 2 | PRIMERGY Server |
| PY-LA412 | PLAN EP MCX6-DX 2X 100G QSFP28 PCIE | Full Height / Low Profile | 2 | PRIMERGY Server |

Supported Interface Modules / Cables

| Order code | Application | Type / mode | Connector / cable Length |
|-------------------|---------------------|--------------------|--------------------------|
| S26361-F4052-E701 | Ethernet 100 Gbit/s | QSFP28 / MMF (SWL) | up to 100m |
| S26361-F4052-L701 | Ethernet 100 Gbit/s | QSFP28 / MMF (SWL) | up to 100m |
| S26361-F4052-L801 | Ethernet 100 Gbit/s | QSFP28 / SMF (LWL) | up to 500m |

Environment

| | |
|-------------------------|---|
| Power consumption | Typical Power 18.96W Maximum Power 26.64 W |
| 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 products, solutions & services

In addition to Fujitsu with PLAN EP MCX6-DX 100GbE QSFP28, 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 PLAN EP MCX6-DX 100GbE QSFP28, 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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