Data Sheet
FUJITSU PLAN EP MCX4-LX 25GbE SFP28 OCP

Dual-port Dual-rate 10/25Gbit/s PCIe 3.0 Network Interface Card in OCP V2 Type 1 Form Factor

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 MCX4-LX 25GbE SFP28 OCP

The FUJITSU PLAN EP MCX4-LX 25GbE is based on Mellanox's ConnectX®-4 Lx EN (Dual port) Network Interface Card. ConnectX-4 Lx EN Network Controller with 10/25Gb/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. 25Gb Ethernet (25GbE) 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. The 25GbE results in a single switch lane connection similar to existing 10GbE technology—but it delivers 2.5 times greater bandwidth.

Compared to 40GbE solutions, 25GbE technology provides superior switch port density by requiring just a single switch lane compared to the 40GbE with four lanes. FUJITSU PLAN EP MCX4-LX 25GbE Dual-Port 10/25GbE Network Interface Cards in OCP V2 Type 1 form factor deliver advanced Ethernet solutions designed for FUJITSU Server PRIMERGYsystems with use cases such as SAP HANA® or Microsoft Storage Spaces Direct (S2D).

Features & Benefits

Main Features	Benefits
Scalability across environments	
■ Designed for FUJITSU Server PRIMERGY systems with OCP V2 Type 1 PCIe Gen3 slot in genral purpose environments	■ Delivering highest performance and true hardware-based I/O isolation with unmatched scalability and efficiency for general purpose, SAP HANA®, and Microsoft S2D (Storage Spaces Direct) environments
Flexible OS support	
■ Microsoft Windows Server 2016 and 2012 R2, Red Hat Enterprise Linux 7, SuSE Linux Enterprise Server 12, VMware ESXi 6.5 Support	■ Designed and released for qualifying PRIMERGY and PRIMEQUEST servers with multiple OS support
Efficient networking	
■ RDMA over Converged Ethernet (RoCE)	■ 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
Connectivity	
■ Connectivity options	■ Interoperable with 1/10/25/40/50/100Gb Ethernet switches; powered connectors for optical and active cable support
Simplified Management	
■ ServerView Management and MCTP/PLDMNC-SI Support	■ 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 ConnectX4-Lx EN MCX4421A-ACQN Dual-Port 25 Gigabit Ethernet Controller
Released drivers list link	http://support.ts.fujitsu.com/Download/Index.asp
Number of Connectors	2
Number of external ports	2
Auto Negotiation support	Yes
Bus type	PCIe 3.0
Bus transfer rate	8GT/s
Bus width	x8
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 802.3x Flow Control IEEE 1588 Precision Time Protocol IPv4, IPv6 and mixed IPv4/IPv6 network protocols IEEE DCBX Data Center Bridging Exchange protocol proposal for 802.1 Qaz
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	25 Gbit/s

Supported Interface Modules / Cables

Order code	Application	Type / mode	Connector / cable Length
S26361-F4054-E701	Ethernet 25 Gbit/s	MMF (SWL)	LC-style / up to 100m
S26361-F4054-L701	Ethernet 25 Gbit/s	MMF (SWL)	LC-style / up to 100m

Environment	
Power consumption	Dual-Port SFP28 with passive DAC 25G cables: 10.05W Dual-Port SFP28 with active AOC 25G cables: 11.55W Dual-Port SFP28 with SFP28 optical transceivers: 11.55 W
Temperature (operating)	0 - 55 °C
Storage temperature	-40 - 65 °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 MCX4-LX 25GbE SFP28 OCP, 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 MCX4-LX 25GbE SFP28 OCP, 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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Contact
Fujitsu Limited
Website: www.fujitsu.com/primergy
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