

Data Sheet

FUJITSU DynamicLoM for PRIMERGY Server

1Gbit/10Gbit LAN-on-Motherboard solution with CNA functionality

Servers are usually provided with network adapters aligned to the current infrastructure, offer less flexibility and scalability opportunities for future requirements. The Fujitsu DynamicLoM technology delivers a perfect solution against these limitation barriers. Through seamless configuration and integration in existing infrastructures, the solution represents the direct opposite to inflexible LAN-on-motherboard architectures.

DynamicLoM for PRIMERGY Server

Powered by an Emulex XE104 Controller, its engine offers a field-proven technology including excellent reliability for enterprise and scale-out data centers.

The Emulex Engine XE104 supports a single full-duplex up to 2 ports with 10GbE or 4 ports with 1GbE in a single chip solution for DynamicLoM. Thus the solution provides perfect space efficiency without the need of extra PCIe slot allocation like architectures with usual Network Interface Cards (NIC). Moreover, the XE100 series is designed to deliver driving scalability and flexibility for converged infrastructures, while it offers a greater bandwidth with the PCI Express 3.0 standard (PCIe 3.0).

Through hardware-based isolation full control of bandwidth allocation, protocol offload configuration and other management features are available. Hence efficiency in contrast to Virtual Local Area

Networks (VLANs) is granted at no dependency on specialized operating system support. In combination with VMware's "Virtual Extensible Local Area Network (VXLAN)" and Microsoft's "Network Virtualization using Generic Routing Encapsulation (NVGRE)", it delivers a tailored platform for next generation overlay networking solutions.

DynamicLoM with Emulex Universal Multi-Channel (UMC) support offers accelerated application performance and increased efficiency at less power consumption. It allows the use of multiple PCI functions on each different port. Moreover configurations with up to sixteen NIC functions are supplied with granular bandwidth provisioning.



Main Features	Benefits
<ul style="list-style-type: none"> ■ Consolidation of multiple 1GbE adapters with compatibility for any 10GbE switch and predefined form factor of interface cards ■ Single chip solution for LAN on Motherboard (LoM) in the fourth generation ■ Flexible usage of LAN on Motherboard (LoM) which reach the demand of the existing infrastructure ■ With 10GbE interface cards multiple physical functions are supported, which appear as physical ports for the operating system workload ■ Connectivity with FCoE, iSCSI offloads and optimized host virtualization density with SR-IOV support 	<ul style="list-style-type: none"> ■ Reduced replacement, energy and management costs at less complexity ■ Perfect space saving efficiency without PCIe slot occupancy and field-proven technology ■ High flexibility and scalability to meet future requirements ■ Optimized for virtualized machines with the effect of lower CPU utilization ■ Market-leading feature-set and rich functionality combined in one chip

Technical details

Technical details

Controller Silicon	Emulex Engine XE104
Controller type	Interface modul for Dynamic LoM
Number of ports	2 4
Data transfer rate(s)	1 Gbit/s 10 Gbit/s
Auto Negotiation support	Optional
Interrupt Levels	MSI-X
WoL	Yes
WoL comment	with 1Gb interface cards on all port, with 10Gb interface cards on port 0
LEDs	2 LED per port Green: Blink = Activity Off = No activity Amber: On = Link up Off = Link down
Virtualization	UMC (Universal Multi Channel) with up to 8 physical functions per port SR-IOV (Single Root IO Virtualization) Overlay Network Virtualization (NVGRE & VXLAN) these features require a 10Gb mode
Teaming	all teaming functions provided by the OS
Remote boot support	PXE 2.1 iSCSI FCoE
Remote boot support notes	just one boot function can be enabled at the same time SAN boot (FCoE boot) requires a CNA configuration
Additional features	RoCE (RDMA over Converged Ethernet)
Offloading	Stateless TCP Storage protocols: iSCSI and FCoE Virtual Network Fabrics (NVGRE & VXLAN)
Standards	Ethernet: - IEEE 802.3-2008 10Gb/s Ethernet ports - IEEE 802.1Q virtual LANs (VLAN) - IEEE 802.3x Flow control with Pause frames - IEEE 802.3ad Link Aggregation / LACP - IEEE 802.1AB Link Layer Discovery Protocol (LLDP) - IEEE 802.1Qbg Edge Virtual Bridging DCE/CEE Support: - IEEE 802.1Qaz Enhanced Transmission Selection (ETS) Data Center Bridging Capability Exchange (DCBX) - IEEE 802.1Qbb Priority-based Flow Control (PFC) Fibre Channel over Ethernet: FC-BB-5 by INCITS Technical Committee T11

Order code	Number of ports	Port types	Speed
S26361-F5302-E201	2	RJ45	10 MBit/s; 100 MBit/s; 1 Gbit/s
S26361-F5302-L201	2	RJ45	10 MBit/s; 100 MBit/s; 1 Gbit/s
S26361-F5302-E401	4	RJ45	10 MBit/s; 100 MBit/s; 1 Gbit/s
S26361-F5302-L401	4	RJ45	10 MBit/s; 100 MBit/s; 1 Gbit/s
S26361-F5302-E210	2	RJ45	1 Gbit/s; 10 Gbit/s
S26361-F5302-L210	2	RJ45	1 Gbit/s; 10 Gbit/s
S26361-F5302-E211	2	SFP+	10 Gbit/s
S26361-F5302-L211	2	SFP+	10 Gbit/s

Supported Interface Modules / Cables

Order code	Application	Type / mode	Connector / cable Length
S26361-F3986-E3	Ethernet 10 Gbit/s	SFP+ / MMF (SWL)	LC-style / up to 400m
S26361-F3986-L3	Ethernet 10 Gbit/s	SFP+ / MMF (SWL)	LC-style / up to 400m
S26361-F3986-E4	Ethernet 10 Gbit/s	SFP+ / SMF (LWL)	LC-style / up to 10km
S26361-F3986-L4	Ethernet 10 Gbit/s	SFP+ / SMF (LWL)	LC-style / up to 10Km
S26361-F3989-E600	Ethernet 10 Gbit/s	SFP+ Twinax Cable / active	SFP+ / 2m or 5m
S26361-F3989-L102	Ethernet 10 Gbit/s	SFP+ Twinax Cable / active	SFP+ / 2m
S26361-F3989-L105	Ethernet 10 Gbit/s	SFP+ Twinax Cable / active	SFP+ / 5m
S26361-F3989-L110	Ethernet 10 Gbit/s	SFP+ Twinax Cable / active	SFP+ / 10m
S26361-F3873-E500	Ethernet 10 Gbit/s	SFP+ Twinax Cable / active	SFP+ / 3m or 5m
S26361-F3873-L501	Ethernet 10 Gbit/s	SFP+ Twinax Cable / active	SFP+ / 1m
S26361-F3873-L503	Ethernet 10 Gbit/s	SFP+ Twinax Cable / active	SFP+ / 3m
S26361-F3873-L505	Ethernet 10 Gbit/s	SFP+ Twinax Cable / active	SFP+ / 5m

Interface Module notes
 Only Fujitsu certified modules are supported
 Order codes starting with "S26361-F3873" are Brocade branded cables, required for connections to Brocade switches
 Order codes starting with "S26361-F4571" are Cisco branded cables, required for connections to Cisco switches

Description optional cable
 10Gbit/s transceiver module for MMF (S26361-F3986-E3 / -L3):
 - OM1 (Multi Mode Fiber 62.5/125µm, 200 MHz*km) up to 33m
 - OM2 (Multi Mode Fiber 50.0/125µm, 500 MHz*km) up to 82m
 - OM3 (Multi Mode Fiber 50.0/125µm, 2000 MHz*km) up to 300m
 - OM4 (Multi Mode Fiber 50.0/125µm, 4700 MHz*km) up to 400m
 10Gbit/s transceiver module for SMF (S26361-F3986-E4 / -L4):
 - OS1 (Single Mode Fiber 9µm) up to 10km
 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	D3245	max. 5 W	(Depending on SFP+ Module)
	D3255	max. 7 W	
	D3265	max. 7 W	
	D3275	max. 20 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 DynamicLoM for PRIMERGY Server, 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 Server DynamicLoM for PRIMERGY Server, 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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Fujitsu Limited
Website: www.fujitsu.com/primergy
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