

Data Sheet

Intel® Dual port 10 Gbit/s Ethernet Mezzanine Card

High performance Intel® 82599 based 10 GbE dual port mezzanine card for PRIMERGY server blades

To connect your PRIMERGY Blade Server to outside networks and storage, Fujitsu offers a variety of options to support your familiar standards such as Ethernet, Fibre Channel, SAS and InfiniBand. They connect directly to the high performance midplane and guarantees lossless, highly efficient data transfer to and from the Connection Blades. In order to optimally meet your needs, Fujitsu provides a wide range of various Mezzanine Cards starting from 1 and 10 Gbit/s Ethernet, 8 and 16 Gbit/s Fibre Channel, 40 and 56 Gbit/s InfiniBand to 6 Gbit/s SAS with RAID functionality. Even Converged Network Adapters (CNAs) that provide multiple network connections and Fibre Channel over Ethernet (FCoE) as well as iSCSI are part of the portfolio.

Dual port 10 Gbit/s Ethernet Mezzanine Card

Most flexible and scalable Ethernet Mezzanine card for today's demanding datacenter environment - accelerating PRIMERGY BX900 server blades' LAN traffic and the herein running mission-critical applications. Just in virtualized environments with a growing number of VMs per physical server, this controller combines provision of unmatched features and reliable performance. With up to 4 physical 10 Gb ports (via two Mezzanine cards) in one dual socket server blade the overall performance boost is dramatic. Operating in emulation mode in conjunction with the Virtual Switch of a Virtual Machine Manager, the integrated VMDq technology offloads data sorting and copying from the Virtual Switch to the LAN controller; this is the optimal

solution for a large number of VMs running standard applications with limited bandwidth and latency requirements. Larger, mission-critical applications on the other hand require dedicated I/O for maximum network performance; they optimally operate using the VMDc feature, allowing data to bypass the Virtual Switch for near native performance.



Main Features	Benefits
Top LAN performance for Local Area Networks <ul style="list-style-type: none"> Intel® 82599 10 Gigabit Ethernet controller 	<ul style="list-style-type: none"> Industry-leading, energy-efficient design for next-generation 10 Gigabit performance and multi-core processors saves cost, power and complexity 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 Enhanced data throughput of virtual machines and eased migration of VMs
Multi-core CPU acceleration <ul style="list-style-type: none"> Load balancing on multi-core processors through Intelligent Queue Support 	
Virtualization at its best <ul style="list-style-type: none"> Intel® VT-c with VMDq and VMDc (SR-IOV + VM Mobility) greatly disburdens the Hypervisors of supporting virtualization operating systems from CPU intensive workloads; SR-IOV provides up to 64 direct connections (Virtual Functions) between one LAN port and the Virtual Machines of a server blade 	

Technical details

Technical details

Controller Silicon	Intel® 82599 10 Gigabit Ethernet Controller	
Controller type	Ethernet Mezzanine Card	
Supported system units	PRIMERGY BX400 S1 PRIMERGY BX900 S1 PRIMERGY BX900 S2	
Supported Server Blades	all PRIMERGY BX9xx Server Blades	
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	
Auto Negotiation support	Yes	
Bus interface	PCIe 2.0 x8	
Bus transfer rate	5GT/s	
Network protocol and standards compatibility	IEEE 802.1q VLAN IEEE 802.3x Flow Control IEEE 802.1p Class of Service IEEE 802.3ad LACP	
HW Virtualization	VMDq and VMDc PCI-SIG SR-IOV	
Interrupt Levels	MSI-X; INTA; MSI	
WoL	No	
Teaming	With other 10GbE Adapters	
Switch fault tolerance (SFT)	Yes	
Adapter fault tolerance (AFT)	Yes	
Adaptive load balancing (ALB)	Yes	
Flow Control	IEEE 802.3	
Remote boot support	PXE	
iSCSI support	Yes	
Offloading	IPv4 and IPv6 offloading - checksum and segmentation capability extended to new standard packet type	
Order code	Product Name	Formfactor
S26361-F3997-E1	PY Eth Mezz Card 10Gb 2 Port	BX900 Mezzanine
S26361-F3997-L1	PY Eth Mezz Card 10Gb 2 Port V2	BX900 Mezzanine

Environment

Power consumption	10 W
Temperature (operating)	0 - 55 °C
Storage temperature	-40 - 70 °C

Electrical values

Compliance

Product	The Mezz Card fulfills the same certifications as the Server Blade where it will be installed
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 Dual port 10 Gbit/s Ethernet Mezzanine Card, 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 Dual port 10 Gbit/s Ethernet Mezzanine Card, please contact your Fujitsu sales representative or Fujitsu Business partner, or visit our website. 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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