

# Data Sheet FUJITSU LAN Adapter D3045 Server

D3045 quad port 1 Gbit PCIe x4 card

#### LAN Adapter D3045

Trust the network communication of the new Fujitsu Ethernet LAN adapter. The new Fujitsu D3045 Ethernet LAN Adapter, based on the Intel® 1GbE LAN Powerville I350-AM4 chip, offers four Gigabit Ethernet ports for 10/100/1000BaseT. Virtualization support and Wake-on LAN with selectable port are just some of the features from which you will benefit. Optimal support for your virtualization is provided by the support for Virtual Machine Device Queues (VMDg), Single Root I/O virtualization and sharing specification (SR-IOV). SR-IOV requires corresponding support in the system BIOS and in the operating system. PCI-SIG SR-IOV defines extensions of the PCI Express (PCIe) specification and enables PCI hardware resources to be shared with several system images or Virtual Machines.

The new functions for Energy Efficient Ethernet (EEE) are also supported; this helps to decrease the power consumption of the server itself.



### Features & Benefits

Main Features	Benefits	

- Based on the Intel® 1 GbE LAN Powerville I350 -AM4 chip
- Power Management and Savings with EEE support
- 10/100/1000 Mbps
- Virtualization support via VMDq and SR-IOV

- Industry-leading, energy-efficient design for next-generation 1 Gigabit performance and multi-core processors
- This helps to decrease the power consumption of the server itself.
- Automatically compatible with Ethernet, Fast Ethernet, and Gigabit Ethernet networks
- Multi-port cards provide the platform with the port density required for virtualized environments

## **Technical details**

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Controller type     Etherner Ctfl.       Controller vendor     Fujtsu       Controller vendor     Fujtsu       Network protocol and standards     IEEE 802.31 UDASE-T       IEEE 802.34 UD0ASE-TX     IEEE 802.34 UD0ASE-TX       IEEE 802.34 DU0BASE-TX     IEEE 802.34 DU0BASE-TX       IEEE 802.34 DU0ASE-TX     IEEE 802.34 DU0ASE-TX       IEEE 802.34 DU0ASE-TX     IEEE 802.34 DU0ASE-TX       IEEE 802.34 DU0ASE-TX     IEEE 802.34 DU0ASE-TX       Dutto of ports     4       Dutto of ports     4       Dutto and ster rate up to     1 Obly'S       Auto Negotation support     Yes       Bus interface     SGT/S       INTR     INTR       INTR     INTR       INTC     INTR       INTR     INTR       INTR     INTR       INTR     INTR       INTR     INTR		
Controller vendor   Fujitsu     Network protocol and standards   IEEE 802.31 108ASE-T     compatibility   IEEE 802.31 1008ASE-T     IEEE 802.34 1008ASE-T   IEEE 802.34 1008ASE-T     IEEE 802.34 1008ASE-T   IEEE 802.34 1008ASE-T     IEEE 802.34 I008ASE-T   IEEE 802.34 I008ASE-T     IEEE 802.34 Introduction   IEEE 802.34 Introduction     IEEE 802.34 Introduction   Yes     Bus Interface   PCIe 2.1 x4     Bus Interface   PCI	Controller type	Ethernet Ctrl.
Network protocol and standards   IEEE 802.3 i 108ASE.T     compatibility   IEEE 802.3 i 108ASE.T     IEEE 802.3 i 108ASE.T   IEEE 802.3 i 108ASE.T     IEEE 802.3 i 1008ASE.T   IEEE 802.3 i 1008ASE.T     IEEE 802.3 al 1000P   IEEE 802.3 al 1000P     IEEE 802.3 al 000P   IEEE 802.3 al 000P     IEEE 802.3 az Energy Efficient Ethernet (IEE)   IEEE 802.3 az Energy Efficient Ethernet (IEE)     IEEE 802.8 Revision Time Protocol   IPV4. IPv6 and mixed IPv4/IPv6 network protocols     DMA Coalescing (DMAC)   Yes     Sus interface   PCIe 2.1 x4     Bus intrafer rate up to   1 Gbit/s     Sus interface   PCIe 2.1 x4     Bus interface   SGT/s     HW Virtualization   SR-IOV     Interrupt Levels   INTA     INTC   INTC     INTC   INTO     MSI-X   MSI-X     Wolc   Ves     LEDS   Link/Activity. Speed     Virtualization   VMD q and SR-IOV support     Teaming   With other Fujitsu and Intel LAN Adapters released for PRIMERCY servers     Svitch fault tolerance (SFT)   Yes     Adapter fault tolerance (AFT)   Yes	Controller Silicon	Intel® I350-AM4 Gigabit Ethernet Controller
compatibility   IEEE 802.3 i 1008AS-T X     IEEE 802.3 a 1008AS-T X   IEEE 802.3 a 1008AS-T X     IEEE 802.3 a 1008AS-T X   IEEE 802.3 a 1008AS-T X     IEEE 802.3 a 1008AS-T X   IEEE 802.3 a 1008AS-T X     IEEE 802.3 a 1008AS-T X   IEEE 802.3 a 1008AS-T X     IEEE 802.3 a 1008AS-T X   IEEE 802.3 a 1008AS-T X     IEEE 802.3 a 1008AS-T X   IEEE 802.3 a 1008AS-T X     IEEE 802.3 a 1008AS-T X   IEEE 802.3 a 1008AS-T X     IEEE 802.3 a 1008AS-T X   IEEE 802.3 a 1008AS-T X     IEEE 802.3 a 1008AS-T X   IEEE 802.3 a 1008AS-T X     IEEE 802.3 a 1008AS-T X   IEEE 802.3 a 1008AS-T X     INTA   INTA     Interrupt Levels   INTA     INTE   INTA     INTC   INTA     INTS   INTA     INTA   INTA     IN	Controller vendor	Fujitsu
Data transfer rate up to1 Gbit/sAuto Negotiation supportYesBus interfacePCle 2.1 x4Bus transfer rate5G7/sHW VirtualizationSR-IOVInterrupt LevelsINTA INTB INTC INTD MSI MSIS MSISWol.YesLEDsLink/Activity, SpeedVirtualizationWhother Fujitsu and Intel LAN Adapters released for PRIMERGY serversSwitch fault tolerance (SFT)YesAdaptive load balancing (ALB)YesEERos UpportIEEE 802.3xAdaptive load balancing (ALB)YesComplianceJumbo FramesOffloadingTx/Rx IP, SCTP, TCP, and UDP checksum (IPv4, IPv6), Tx TCP segmentation (IPv4, IPv6)Sics SupportYesEnvironment	•	IEEE 802.3u 100BASE-TX IEEE 802.3ab 1000BASE-T IEEE 802.1q VLAN IEEE 802.3x Flow Control IEEE 802.3ad LACP IEEE 802.3az Energy Efficient Ethernet (EEE) IEEE 802.1as Timing and Synchronization IEEE 1588 Precision Time Protocol IPv4, IPv6 and mixed IPv4/IPv6 network protocols
Auto Negotiation supportYesBus interfacePCle 2.1 x4Bus tansfer rateSGT/sHW VirtualizationSR-IOVInterrupt LevelsINTA INTB INTC INTD MSI MSI.XWol.YesLEDsLink/Activity, SpeedVirtualizationVMDq and SR-IOV supportTeamingWith other Fujitsu and Intel LAN Adapters released for PRIMERGY serversSwitch fault tolerance (SFT)YesAdaptife load colorance (AFT)YesFlow ControlIEEE 802.3xRemote boot supportYz 2.0Additional featuresJumbo FramesOffloadingTx/Rx IP, SCTP, TCP, and UDP checksum (IPV4, IPv6), Tx TCP segmentation (IPV4, IPv6)Sorage temperature-20 - 70 °CCompliance notesAccording to the corresponding system	Number of ports	4
Bus interface   PCle 2.1 x4     Bus transfer rate   SGT/s     HW Virtualization   SR-IOV     Interrupt Levels   INTA     INTE   INTE     INTD   INTO     MSI   MSI-x     Wol.   Yes     LEDs   Link/Activity, Speed     Virtualization   WMD qand SR-IOV support     Teaming   With other Fujitsu and Intel LAN Adapters released for PRIMERGY servers     Switch fault tolerance (SFT)   Yes     Adapter fault tolerance (AFT)   Yes     Adaptive load balancing (ALB)   Yes     Flow Control   IEEE 802.3x     Remote boot support   Jumbo Frames     Offloading   Tx/Rx IP, SCTP, TCP, and UDP checksum (IPv4, IPv6), Tx TCP segmentation (IPv4, IPv6)     ISCSI support   Yes     Environment   Temperature (operating)     Environment   Units Constant Co	Data transfer rate up to	1 Gbit/s
Bus transfer rate   SGT/s     HW Virtualization   SR-IOV     Interrupt Levels   INTA INTB INTC INTD MSI     UNC   INTA     WOL   Yes     LEDs   Link/Activity, Speed     Virtualization   VMDq and SR-IOV support     Teaming   With other Fujitsu and Intel LAN Adapters released for PRIMERGY servers     Switch fault tolerance (SFT)   Yes     Adapter fault tolerance (AFT)   Yes     Adaptive load balancing (ALB)   Yes     Flow Control   IEEE 802.3x     Remote boot support   PXE 2.0     Additional features   Jumbo Frames     Offloading   Tx/Rx IP, SCTP, TCP, and UDP checksum (IPv4, IPv6), Tx TCP segmentation (IPv4, IPv6)     ISCSI support   Yes     Environment   Temperature (operating)     Environment   -20 - 70 °C     Compliance notes   According to the corresponding system	Auto Negotiation support	Yes
HW Virtualization   SR-IOV     Interrupt Levels   INTA     INTB   INTB     INTC   INTD     INTD   MSI-X     WoL   Yes     LEDS   Link/Activity, Speed     Virtualization   VMDq and SR-IOV support     Teaming   With other Fujitsu and Intel LAN Adapters released for PRIMERGY servers     Switch fault tolerance (SFT)   Yes     Adapter fault tolerance (AFT)   Yes     Adaptive load balancing (ALB)   Yes     Flow Control   IEEE 802.3x     Remote boot support   PXE 2.0     Additional features   Jumbo Frames     Offloading   Tx/Rx IP, SCTP, TCP, and UDP checksum (IPv4, IPv6), Tx TCP segmentation (IPv4, IPv6)     ISCSI support   Yes     Environment   Temperature (operating)     Temperature (operating)   0 - 60 °C     Storage temperature   -20 - 70 °C     Compliance notes   According to the corresponding system	Bus interface	PCIe 2.1 x4
Interrupt LevelsINTA INTB INTC INTD MSI MSI-XWoLYesLEDsLink/Activity, SpeedUtrulalizationVMDq and SR-IOV supportTeamingWith other Fujitsu and Intel LAN Adapters released for PRIMERGY serversSwitch fault tolerance (SFT)YesAdapter fault tolerance (AFT)YesAdapter fault tolerance (AFT)YesRemote boot supportPKE 2.0Additional featuresJumbo FramesOffloadingTx/Rx IP, SCTP, TCP, and UDP checksum (IPv4, IPv6), Tx TCP segmentation (IPv4, IPv6)ISCSI supportYesEnvironment-20 - 70 °CComplianceCompliance notesKording to the corresponding systemAccording to the corresponding system	Bus transfer rate	5GT/s
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LEDsLink/Activity, SpeedVirtualizationVMDq and SR-IOV supportTeamingWith other Fujitsu and Intel LAN Adapters released for PRIMERGY serversSwitch fault tolerance (SFT)YesAdapter fault tolerance (AFT)YesAdaptive load balancing (ALB)YesFlow ControlIEEE 802.3xRemote boot supportPXE 2.0Additional featuresJumbo FramesOffloadingTx/Rx IP, SCTP, TCP, and UDP checksum (IPv4, IPv6), Tx TCP segmentation (IPv4, IPv6)ISCSI supportYesEnvironment-20 - 70 °CComplianceAccording to the corresponding system	interrupt Leveis	INTB INTC INTD MSI
VirtualizationVMDq and SR-IOV supportTeamingWith other Fujitsu and Intel LAN Adapters released for PRIMERGY serversSwitch fault tolerance (SFT)YesAdapter fault tolerance (AFT)YesAdaptive load balancing (ALB)YesFlow ControlIEEE 802.3xRemote boot supportPXE 2.0Additional featuresJumbo FramesOffloadingTx/Rx IP, SCTP, TCP, and UDP checksum (IPv4, IPv6), Tx TCP segmentation (IPv4, IPv6)ISCSI supportYesEnvironment-Temperature (operating)0 - 60 °CStorage temperature-20 - 70 °CComplianceAccording to the corresponding system	WoL	
VirtualizationVMDq and SR-IOV supportTeamingWith other Fujitsu and Intel LAN Adapters released for PRIMERGY serversSwitch fault tolerance (SFT)YesAdapter fault tolerance (AFT)YesAdaptive load balancing (ALB)YesFlow ControlIEEE 802.3xRemote boot supportPXE 2.0Additional featuresJumbo FramesOffloadingTx/Rx IP, SCTP, TCP, and UDP checksum (IPv4, IPv6), Tx TCP segmentation (IPv4, IPv6)iSCSI supportYesEnvironment-Temperature (operating)0 - 60 °CStorage temperature-20 - 70 °CComplianceAccording to the corresponding system	LEDs	Link/Activity, Speed
Switch fault tolerance (SFT)YesAdapter fault tolerance (AFT)YesAdaptive load balancing (ALB)YesFlow ControlIEEE 802.3xRemote boot supportPXE 2.0Additional featuresJumbo FramesOffloadingTx/Rx IP, SCTP, TCP, and UDP checksum (IPv4, IPv6), Tx TCP segmentation (IPv4, IPv6)iSCSI supportYesEnvironment-0 - 60 °CStorage temperature-20 - 70 °CComplianceAccording to the corresponding system	Virtualization	
Switch fault tolerance (SFT)YesAdapter fault tolerance (AFT)YesAdaptive load balancing (ALB)YesFlow ControlIEEE 802.3xRemote boot supportPXE 2.0Additional featuresJumbo FramesOffloadingTx/Rx IP, SCTP, TCP, and UDP checksum (IPv4, IPv6), Tx TCP segmentation (IPv4, IPv6)iSCSI supportYesEnvironment-0 - 60 °CStorage temperature-20 - 70 °CComplianceAccording to the corresponding system	Teaming	With other Fujitsu and Intel LAN Adapters released for PRIMERGY servers
Adaptive load balancing (ALB)YesFlow ControlIEEE 802.3xRemote boot supportPXE 2.0Additional featuresJumbo FramesOffloadingTx/Rx IP, SCTP, TCP, and UDP checksum (IPv4, IPv6), Tx TCP segmentation (IPv4, IPv6)iSCSI supportYesEnvironment-Temperature (operating)0 - 60 °CStorage temperature-20 - 70 °CCompliance-Compliance notesAccording to the corresponding system	Switch fault tolerance (SFT)	
Flow ControlIEEE 802.3xRemote boot supportPXE 2.0Additional featuresJumbo FramesOffloadingTx/Rx IP, SCTP, TCP, and UDP checksum (IPv4, IPv6), Tx TCP segmentation (IPv4, IPv6)iSCSI supportYesEnvironmentTTemperature (operating)0 - 60 °CStorage temperature-20 - 70 °CComplianceCorresponding system	Adapter fault tolerance (AFT)	Yes
Remote boot supportPXE 2.0Additional featuresJumbo FramesOffloadingTx/Rx IP, SCTP, TCP, and UDP checksum (IPv4, IPv6), Tx TCP segmentation (IPv4, IPv6)iSCSI supportYesEnvironmentTemperature (operating)0 - 60 °CStorage temperature-20 - 70 °CComplianceAccording to the corresponding system	Adaptive load balancing (ALB)	Yes
Additional features   Jumbo Frames     Offloading   Tx/Rx IP, SCTP, TCP, and UDP checksum (IPv4, IPv6), Tx TCP segmentation (IPv4, IPv6)     iSCSI support   Yes     Environment   -     Temperature (operating)   0 - 60 °C     Storage temperature   -20 - 70 °C     Compliance   According to the corresponding system		IEEE 802.3x
Offloading   Tx/Rx IP, SCTP, TCP, and UDP checksum (IPv4, IPv6), Tx TCP segmentation (IPv4, IPv6)     iSCSI support   Yes     Environment   -     Temperature (operating)   0 - 60 °C     Storage temperature   -20 - 70 °C     Compliance   -     Compliance notes   According to the corresponding system	Remote boot support	PXE 2.0
iSCSI support Yes   Environment   Temperature (operating) 0 - 60 °C   Storage temperature -20 - 70 °C   Compliance -20 - 70 °C   Compliance notes According to the corresponding system	Additional features	Jumbo Frames
Environment     Temperature (operating)   0 - 60 °C     Storage temperature   -20 - 70 °C     Compliance   -20 - 70 °C     Compliance notes   According to the corresponding system	Offloading	Tx/Rx IP, SCTP, TCP, and UDP checksum (IPv4, IPv6), Tx TCP segmentation (IPv4, IPv6)
Temperature (operating)   0 - 60 °C     Storage temperature   -20 - 70 °C     Compliance   -20 - 70 °C     Compliance notes   According to the corresponding system	iSCSI support	Yes
Storage temperature -20 - 70 °C   Compliance -20 - 70 °C   Compliance notes According to the corresponding system	Environment	
Compliance notes According to the corresponding system	Temperature (operating)	0 - 60 °C
Compliance notes According to the corresponding system	Storage temperature	-20 - 70 °C
	Compliance	
Compliance link https://sp.ts.fujitsu.com/sites/certificates	Compliance notes	According to the corresponding system
	Compliance link	https://sp.ts.fujitsu.com/sites/certificates

### More information

#### Fujitsu platform solutions

In addition to Fujitsu with LAN Adapter D3045, Fujitsu provides a range of platform solutions. They combine reliable Fujitsu products with the best in services, know-how and worldwide partnerships.

#### **Dynamic Infrastructures**

With the Fujitsu Dynamic Infrastructures approach, Fujitsu offers a full portfolio of IT products, solutions and services, ranging from clients to datacenter solutions, Managed Infrastructure and Infrastructure as-a-Service. How much you benefit from Fujitsu technologies and services depends on the level of cooperation you choose. This takes IT flexibility and efficiency to the next level.

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#### Fujitsu green policy innovation

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