Data Sheet
FUJITSU Mainboard D3221-A µATX
Classic Desktop Series

Powered by the Intel® Q85 Express Chipset supporting DDR3 1600 SDRAM Memory and 4th generation Intel® Core™ i3 / i5 / i7 Processors (Socket LGA1150)

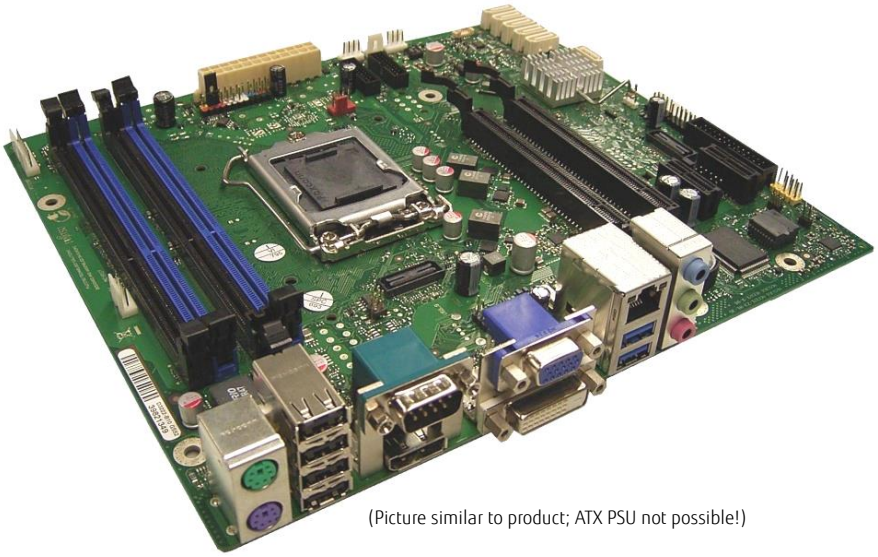
Designed for 24/7 continuous operation

Chipset:
Intel® Q85 Express Chipset

Processors:
Intel® Core™ i7 / i5 / i3 – 4xxx processor series
Intel® "TE" Haswell-based embedded series
Intel® Pentium®– G3xxx processor series
Intel® Celeron® – G18xx processor series
Ready for "Haswell Refresh" processor series

Memory:
DDR3 1333/1600 SDRAM

Product Features:
Intel® iAMT (Standard Manageability)
Intel® HD Graphics (e.g. HD4600)
PCI Express Gen3
Multichannel Audio & Intel GbE LAN onboard
USB 2.0 and USB 3.0 onboard
Trusted Platform Modul V1.2 (Infineon) onboard
Second Display Port optional
Specific 12V-only Powersupply required



(Picture similar to product; ATX PSU not possible!)

Features and benefits

Board Size reduced µATX: 9.6" x 8.4" (243.8 x 213.4 mm)

Chipset Intel® Q85 Express Chipset

Memory
4 DIMM Sockets (1.5V), 1GB - 32GB, Single Channel / Dual Channel DDR3-1333 (CL9) / DDR3-1600 (CL11) SDRAM, unbuffered, no ECC

Processor
Intel® Core™ i7 / i5 / i3 – 4xxx processor series
Intel® "TE" Haswell-based embedded processor series
Intel® Pentium® - G3xxx processor series
Intel® Celeron® - G18xx processor series
Socket LGA1150, max. 95W TDP
(For details on supported processors please refer to our website)

Power Specification
Fujitsu 12V only concept adopted Power Supply required
Support for Soft-Off Power Supplies
3.3V Auxiliary Supply Voltage on PCIe Slots (Wake-Up Function)
On board CPU Core Voltage Regulator

Power Supply Requirements
for onboard components (worst case)

Source	Voltage	Min. PS Load	Max.Voltage Tolerance	Cont./ Peak Mainboard Current
Main Power Supply	+ 12 V_{Rail1}	0.1 A	± 5 %	15 A / 18 A
Main Power Supply	+ 12 V_{Rail2}	0.1 A	± 5 %	15 A / 18 A
Aux. Power Supply	+ 11 V_{aux}	0 A	10.2 V-11.8 V	1 A

[1] 18A = Surge Current for 20 sec!

BIOS
AMI Aptio 4.x (UEFI) BIOS
modified and adapted by Fujitsu Technology Solutions; Recovery BIOS, SM-BIOS (DMI), BIOS and CPU Microcode Update, Quick Boot, Logo Boot, Quiet Boot, Plug & Play, Automatic DRAM and PCIe Configuration, BIOS Support for S.M.A.R.T., Advanced Power Management, ACPI S3/S4, Wake on time from S5

Security Features
Recovery BIOS, System and BIOS Password, Boot Sequence Control, Serial/Parallel/USB- Port Access Protection, Boot Sector Virus Warning, Write Protection for Flash BIOS, EraseDisk (BIOS Feature), Trusted Platform Module.

Special Features

Silent Fan LT	Independent temperature related processor fan and system fan supervision
System Guard	View Silent Fan LT features
Silent Drives	Noise reduction for optical and hard disk drives
Recovery BIOS	Restores a corrupted BIOS
Desk Update	Simple driver update with Driver&Utilities DVD
Multi Boot	Comfortable boot from any boot device
HDD Password	Access protection for disk drives

Designed for 24 / 7 use
Longlife components for 24 / 7 continuous operation

Graphics
Intel® HD Graphics 4600 (depends on installed processor), DX11.1

Audio
Realtek ALC671, 5.1-channel, High Definition Audio Codec

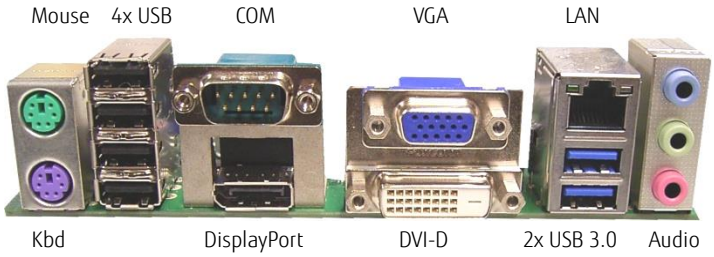
LAN
Intel Clarkville I217V with 10/100/1000 MBit/s, iAMT Manageability, Wake-on-LAN (WoL) by interesting Packets, Link Status Change and Magic Packet™, PXE Support, BIOS MAC Address Display

Drives
4 Serial ATA III 600 Interface (up to 6GBit/s), 1 Serial ATA II 300 Interface
NCQ, AHCI

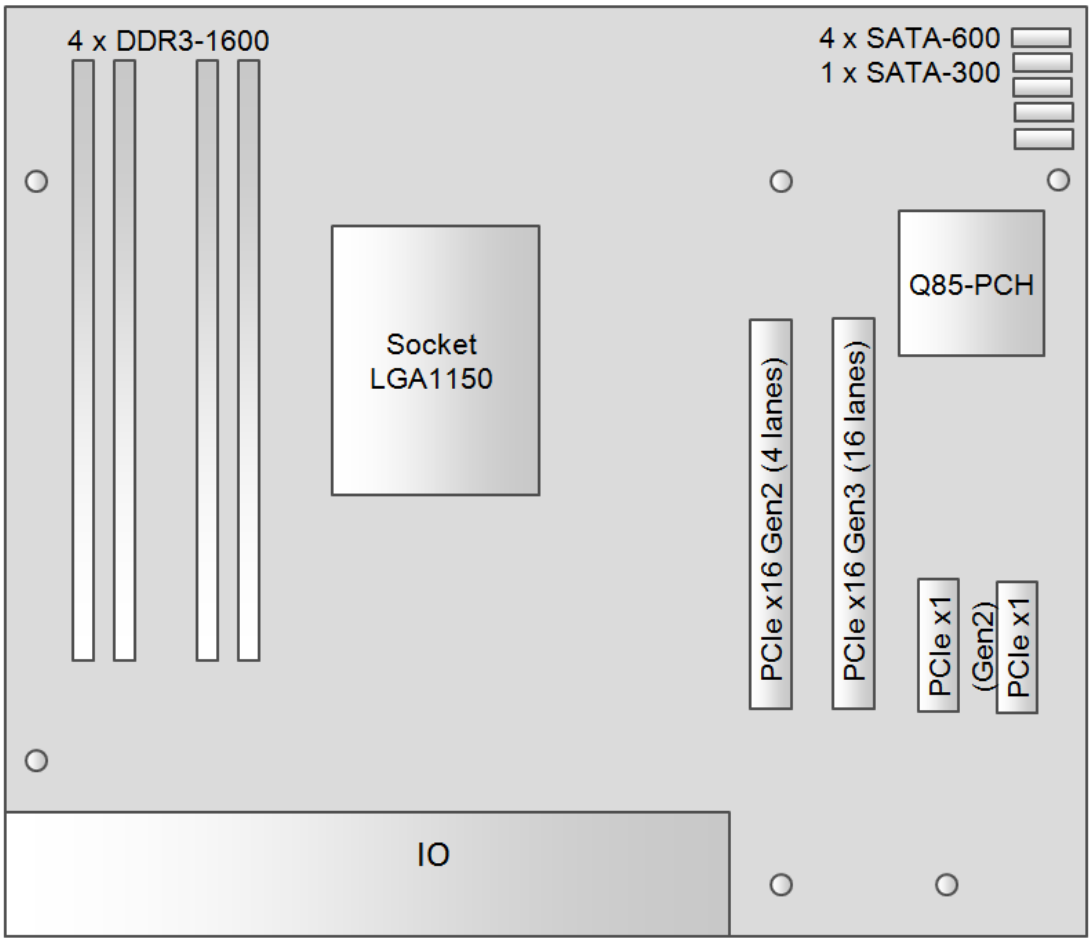
Features	D3221-A
Chipset	iQ85
Board Size	reduced µATX
Stereo Audio / 5.1 Multichannel Audio	- / ✓
Buzzer / int. Speaker Support	- / ✓
LAN Gbit / 100 Mbit / 10 Mbit	✓ / ✓ / ✓
LAN ASF / DASH V1.0 / WoL / Boot / iAMT Standard	- / ✓ / ✓ / ✓/ ✓
SATA / ATA / RAID / eSATA-support	✓ / - / - / ✓
FireWire™ / USB 2.0 / USB 3.0	- / ✓ / ✓
FAN monitored PSU [1] / CPU / AUX1 / AUX2	- / ✓ / ✓ / -
FAN controlled PSU [1] / CPU / AUX1 / AUX2	- / ✓ / ✓ / -
TEMP monitored CPU / ONB / OFFB	✓ / ✓ / -
Special Features	
Silent Fan / Silent Fan LT / System Guard / Silent Drives	✓ / - / ✓ / ✓
Recovery BIOS / Desk Update / Multi Boot	✓ / ✓ / ✓
HDD Password / HDD Encryption / EraseDisk / TPM	✓ / - / ✓ / ✓
BIOS POST Watchdog / BIOS Boot Watchdog / OS HW Watchdog	- / - / -
Logo Boot Option / Intel On Screen Branding	✓ / ✓
High Efficiency Core Voltage Regulator Design	✓
Operating Mode 24-7 / 8-5 (hrs per day - days per week)	✓ / -
Mainboard operating temperature range (chassis inside)	10°C – 45°C
Internal Connectors	
DIMM Sockets (DDR3-1600)	4
PCI Express x16 Slot (Gen3)	1
PCI Express x16 Slot (4 Lanes, Gen2) / x1 Slot (Gen2)	1 / 2
PCI Slots (32Bit, 33 MHz, Rev. 2.3)	-
SATA-600 / SATA-300 / ATA / Floppy	4 / 1 / 0 / 0
S/PDIF (digital Audio) OUT / IN	- / -
Frontpanel Audio (9-Pin, HD Audio)	1
FireWire™ (9-Pin, Intel standard header)	-
USB 2.0 channels / USB 3.0 channels	4 / 2
Serial (FIFO, 16550 compatible)	-
FAN PSU [1] / CPU / AUX1 / AUX2	- / 1 / 1 / -
SMBus (Case Temperature)	-
Intrusion (Case Open)	1
Parallel (EPP/ECP) Pin Connector [2]	1
ATX Power Supply (24 pin + 4 pin) / 12V-only PowerSupply	- / ✓
External Connectors	
VGA Sub D / DVI-D / DisplayPort [3]	1 / 1 / 1
Audio Mic. In / Line in / Line out (or driver configuration)	1 / 1 / 1
S/PDIF (digital Audio, cinch) OUT / IN	- / -
S/PDIF (digital Audio, optical) OUT	-
LAN (RJ-45)	1
PS/2 Mouse / Keyboard	1 / 1
LAN (RJ-45)	1
PS/2 Mouse / Keyboard	1 / 1
FireWire™ (6-Pin, IEEE 1394)	-
USB 2.0 / USB 3.0	4 / 2
Serial (RS232, FIFO, 16550 compatible)	1
Parallel (EPP/ECP) [2]	-

1) Not supported by standard Power Supplies
2) External parallel port possible via optional connector cable
3) Second Display Port possible via PCIe x4-Adapter D3213

External Connectors



Connector / Socket Diagram



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- Thermal Printers
- Wireless Modules

24 Volt Kiosk Printers

Multi-Input Touch Panels

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Netherlands

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Product Support Services with different service levels agreements are recommended to safeguard each product and ensure smooth IT operation.

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The Fujitsu solutions combine reliable Fujitsu products with the best in services, know-how and worldwide partnerships.
Fujitsu's Solutions include parts of one or more activity groups (e.g., planning, implementation, support, management, and training services) and are designed to solve a specific business need.
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Fujitsu green policy innovation

www.fujitsu.com/global/about/environment/
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Green Policy Innovation

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