

Data Sheet

FUJITSU Mainboard D3402-B µATX

Extended Lifecycle Series

Available from
10/2015



Powered by the Intel® Q170 Express Chipset supporting DDR4 2133 SDRAM Memory and 6th generation Intel® Core™ i3 / i5 / i7 Processors (Socket LGA1151)

Designed for 24/7 continuous operation

Chipset:

Intel® Q170 Express Chipset

Processors:

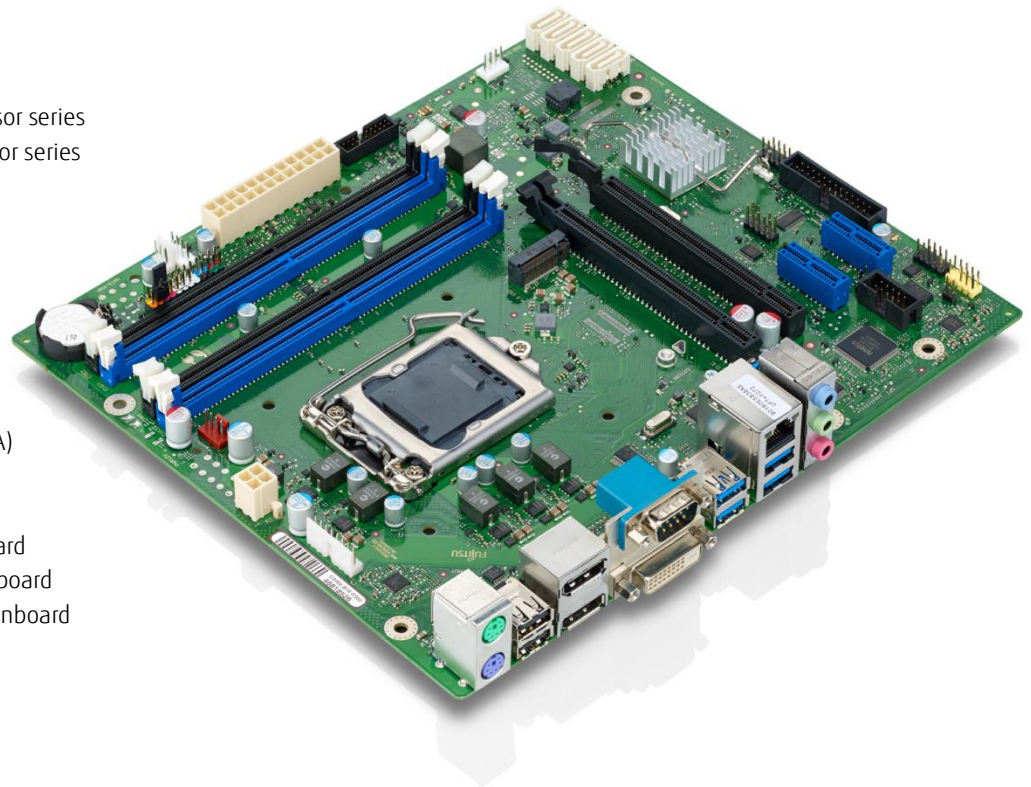
Intel® Core™ i7 / i5 / i3 – (6th gen.) processor series
Future Intel® Pentium® / Celeron® processor series
Socket LGA1151 – up to 65W TDP

Memory:

DDR4 2133 SDRAM (UDIMM)

Product Features:

Intel® iAMT 11.0 / vPro 2015
Onboard Support for M.2 SSD (PCIe or SATA)
Intel® HD Graphics
PCI Express Gen3
Multichannel Audio & Intel GbE LAN onboard
USB 2.0/3.0 and USB 3.0 Socket (Stick) onboard
Trusted Platform Module V2.0 (Infineon) onboard
HW Watchdog onboard



(planned)



Features and benefits

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

Chipset Intel® Q170 Express Chipset

Memory

4 DIMM Sockets DDR4, max. 64GB, Dual Channel, 2133MHz (CL15), UDIMM, 1.2V/2.5V, 288-pin, non-ECC.

Effective memory speed depends on installed processor

Processor

Intel® Core™ i7 / i5 / i3 – (6th generation) processor series

Future Intel® Pentium® / Celeron® processor series

Socket LGA1151, max. 65W TDP

(For details on supported processors please refer to OEM FTP Server)

Power Specification

ATX- 24 Pin or ATX- 20 Pin + 4 Pin (12V) Power Connector required

Support for Soft-Off Power Supplies

12V and 3.3V Supply Voltage on PCIe Slots

3.3V Auxiliary Supply Voltage on PCIe Slots (Wake-Up Function)

On board CPU Voltage Regulator, 5V / 2A Auxiliary Power required for USB Wake-Up from Save-to-RAM, Save-to-Disk

Power Supply Requirements

for onboard components (worst case incl. processor & memory; w/o USB devices; w/o PCIe cards, w/o M.2 / SATA drives)

Source	Voltage	Min. PS Load	Max. Voltage Tolerance	Mainboard Capacitive Load	Max. Mainboard Current
Main Power Supply	+ 12V	0.05A	± 5 %	5.000µF	8A/12A ¹⁾
	- 12V	0A	± 10 %	470µF	0.3A
	+ 5V	0.2A	± 5 %	3.000µF	6.0A
	+ 3.3V	0A	± 5 %	3.000µF	0.5A
Aux. Power	+ 5Vaux	0A	+5 % / -3%	3.000µF	2.5A

1) Max. Cont. Current = 8A; max. Surge Current = 10A (< 100sec) / 12A (< 10ms)

BIOS

AMI Aptio 5.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. Boot support for M.2 SSD (PCIe-based or SATA-based modules, AHCI)

Security Features

Recovery BIOS, System and BIOS Password, Boot Sequence Control, Serial-/ Parallel-/ USB- Port Access, Boot Sector Virus Warning, Write Protection for Flash BIOS, EraseDisk (optional BIOS Feature)

Trusted Platform Module (Infineon SLB 9665; TPM V2.0; TCG compliant).

Special Features

Silent Fan	Independent temperature related processor fan and system fan supervision and control
System Guard	View and adjust Silent Fan 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
CSA / UL certified	CSA 60950-1-07 SE / UL 60950-1 SE (planned)

Supported / Released Operating Systems

OS	"Runnable"	"Tested/Released by Fujitsu"
MS Windows XP	--	--
MS Windows 7-32	X	X
MS Windows 7-64	X	X
MS Windows 8.1-64	X	X
MS Windows 10-64	X	X
Linux-32	X	tbd
Linux-64	X	tbd

Designed for 24 / 7 use

Longlife components for 24 / 7 continuous operation @ 50°C

Revision control & Extended Lifecycle (up to 3 years)

Graphics

Intel® HD Graphics (depends on installed processor), DX12

Audio

Realtek ALC671, 5.1-channel, High Definition Audio Codec

LAN

Intel Jacksonville i219LM with 10/100/1000 MBit/s, iAMT 11 / vPro Support, Wake-on-LAN (WoL) by interesting Packets, Link Status Change and Magic Packet™, PXE Support, BIOS MAC Address Display

Drives

5 x Serial ATA III 600 Interface (up to 6GBit/s, NCQ, AHCI, RAID 0/1/5/10)

1 x M.2 Socket (2260/2280) for PCIe (4 lanes) or SATA based M.2 modules, AHCI Boot support

Features

Features	D3402-B
Chipset	iQ170
Board Size	reduced µATX
VGA ¹⁾ / DVI-I / DVI-D / DP V1.2 / 2 nd DP V1.2 / LVDS	- / - / ✓ / ✓ / ✓ / -
Stereo Audio / 5.1 Multichannel Audio	- / ✓
Buzzer / int. Speaker Support	- / ✓
LAN Gbit / 100 Mbit / 10 Mbit / WoL / LAN Boot	✓ / ✓ / ✓ / ✓ / ✓
iAMT 11.0 vPro / iAMT Standard / DASH V1.0	✓ / - / ✓
SATA / ATA / RAID / eSATA-support / M.2 (PCIe x4 or SATA)	✓ / - / ✓ / ✓ / ✓ / ✓
FireWire™ / USB 2.0 / USB 3.0	- / ✓ / ✓
FAN monitored & controlled PSU ²⁾ / CPU / AUX1 / AUX2	✓ / ✓ / ✓ / ✓
TEMP monitored CPU / onboard sensors / external sensor	✓ / ✓ / -

Special Features

Silent Fan / Silent Fan LT / System Guard / Silent Drives	✓ / - / ✓ / ✓
Recovery BIOS / Desk Update / Multi Boot	✓ / ✓ / ✓
HDD Password / HDD Encryption / EraseDisk ³⁾ / 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 – 50°C

Internal Connectors

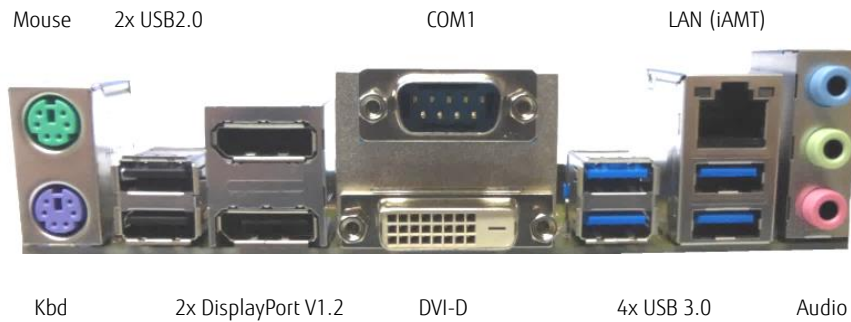
DIMM Sockets (DDR4-2133)	4
PCI Express x16 Slot (Gen3)	1
PCI Express x16 Slot (4 Lanes, Gen3) / x1 Slot (Gen3)	1 / 2
PCI Slots (32Bit, 33 MHz, Rev. 2.3)	-
SATA-600 / SATA-300 / ATA / Floppy / M.2 SSD	5 / - / - / - / 1
S/PDIF (digital Audio) OUT / IN	- / -
Frontpanel Audio (9-Pin, HD Audio)	1
USB 2.0 channels / USB 3.0 channels / USB Stick (3.0)	4 / 2 / 1
Serial (COM2, RS232, FIFO, 16550 compatible)	1
FAN PSU ²⁾ / CPU / AUX1 / AUX2	1 / 1 / 1 / 1
SMBus (Case Temperature)	-
Intrusion (Case Open)	1
Parallel Port Pin Connector ⁴⁾	1
ATX Power Supply (24 pin + 4 pin) / 12V-only Power Supply	✓ / -

External Connectors

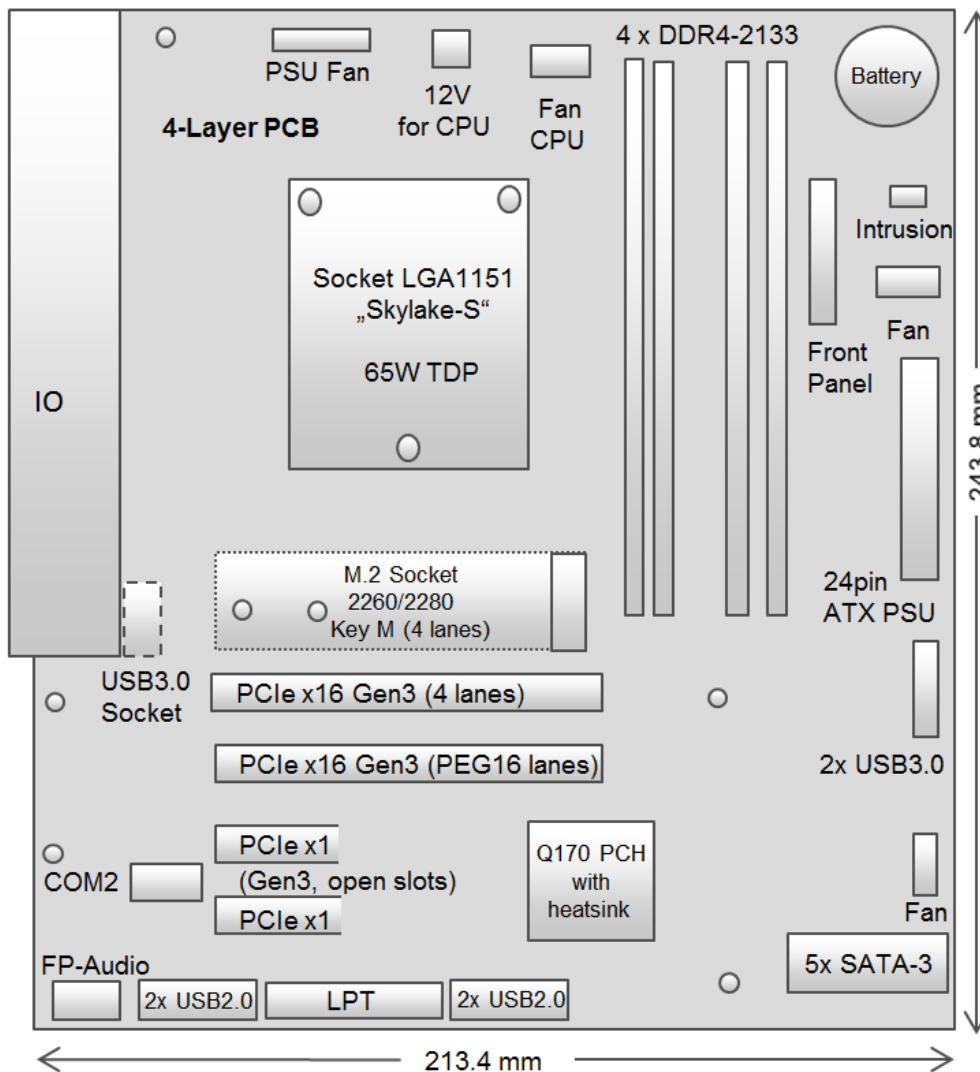
VGA Sub D ¹⁾ / DVI-I / DVI-D / DisplayPort V1.2	- / - / 1 / 2
Audio Mic. In / Line in / Line out (or driver configuration)	1 / 1 / 1
LAN (RJ-45)	1
PS/2 Mouse / Keyboard	1 / 1
USB 2.0 / USB 3.0	2 / 4
Serial (COM1, RS232, FIFO, 16550 compatible)	1
Parallel (EPP/ECP) ⁴⁾	-

- VGA possible via optional converter board D3453 or DP-VGA-converter (dongle)
- Not supported by standard Power Supplies
- Optional BIOS Feature, License required
- External parallel port possible via optional connector cable
Note: Intel limitation → LPC-DMA-Mode no longer supported

External Connectors



Connector / Socket Diagram



Further industrial products offered by Fujitsu

- Connectors
- KVM Switches
- Relays
- Touch Panels
- Thermal Printers
- Wireless Modules



24 Volt Kiosk Printers



Multi-Input Touch Panels

Contact:

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 2132 WV Hoofddorp
 Netherlands

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Application Services support the development, integration, testing, deployment and on-going management of both custom developed and packaged applications. The services focus on delivering business and productivity improvements for organizations.

Business Services respond to the challenge of planning, delivering and operating IT in a complex and changing IT environment.

Managed Infrastructure Services enable customers to deliver the optimal IT environment to meet their needs – achieving high levels of IT service quality and performance for data center and end user environments.

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www.fujitsu.com/global/about/environment/
Fujitsu Green Policy Innovation is our worldwide project for reducing burdens on the environment. Using our global know-how, we aim to resolve issues of environmental energy efficiency through IT. Please find further information at:



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