

# Data Sheet

## FUJITSU Mainboard D3402-A µATX

### Classic Desktop Series

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

Designed for 24/7 continuous operation

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**Chipset:**

Intel® Q170 Express Chipset

**Processors:**

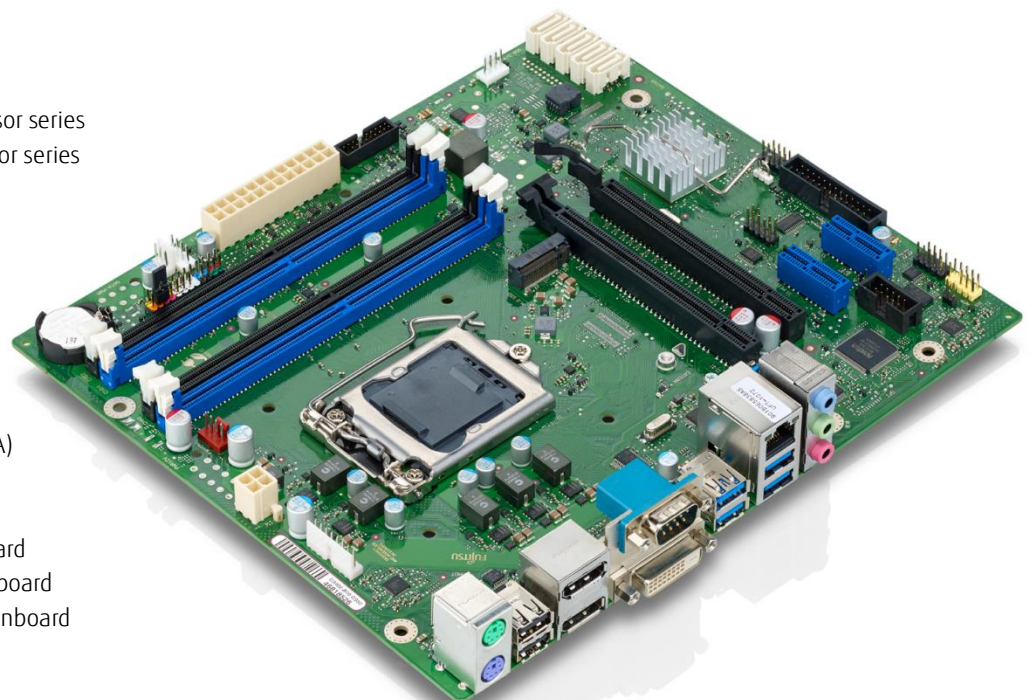
Intel® Core™ i7 / i5 / i3 – (6<sup>th</sup> gen.) processor series  
Intel® Pentium® / Future Celeron® processor series  
Socket LGA1151 – up to 65W TDP

**Memory:**

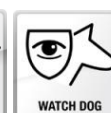
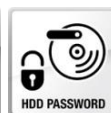
DDR4 2133 SDRAM (UDIMM)

**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  
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® 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

Intel® Pentium® / Future Celeron® processor series

Socket LGA1151, max. 65W TDP

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

**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 <sub>Rail1</sub> | 0.1 A        | ± 5 %                 | 15 A / 18 A                   |
| Main Power Supply | + 12 V <sub>Rail2</sub> | 0.1 A        | ± 5 %                 | 15 A / 18 A                   |
| Aux. Power Supply | + 11 V <sub>aux</sub>   | 0 A          | 10.2 V-11.8 V         | 1 A                           |

18A = Surge Current for 20 sec!

**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  |

**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

**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)

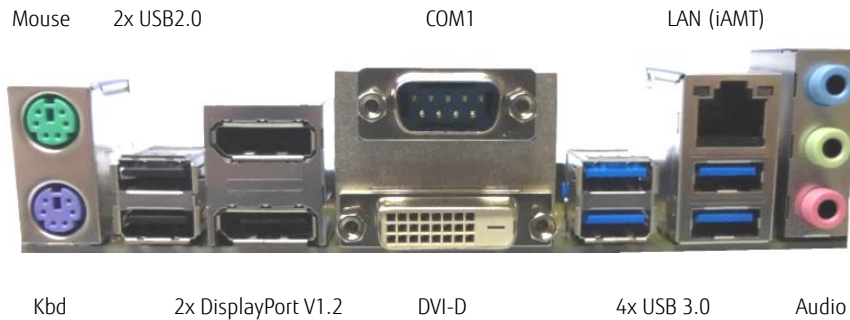
1 x M.2 Socket (2280) for PCIe (4 lanes) or SATA based M.2 modules,

AHCI Boot support

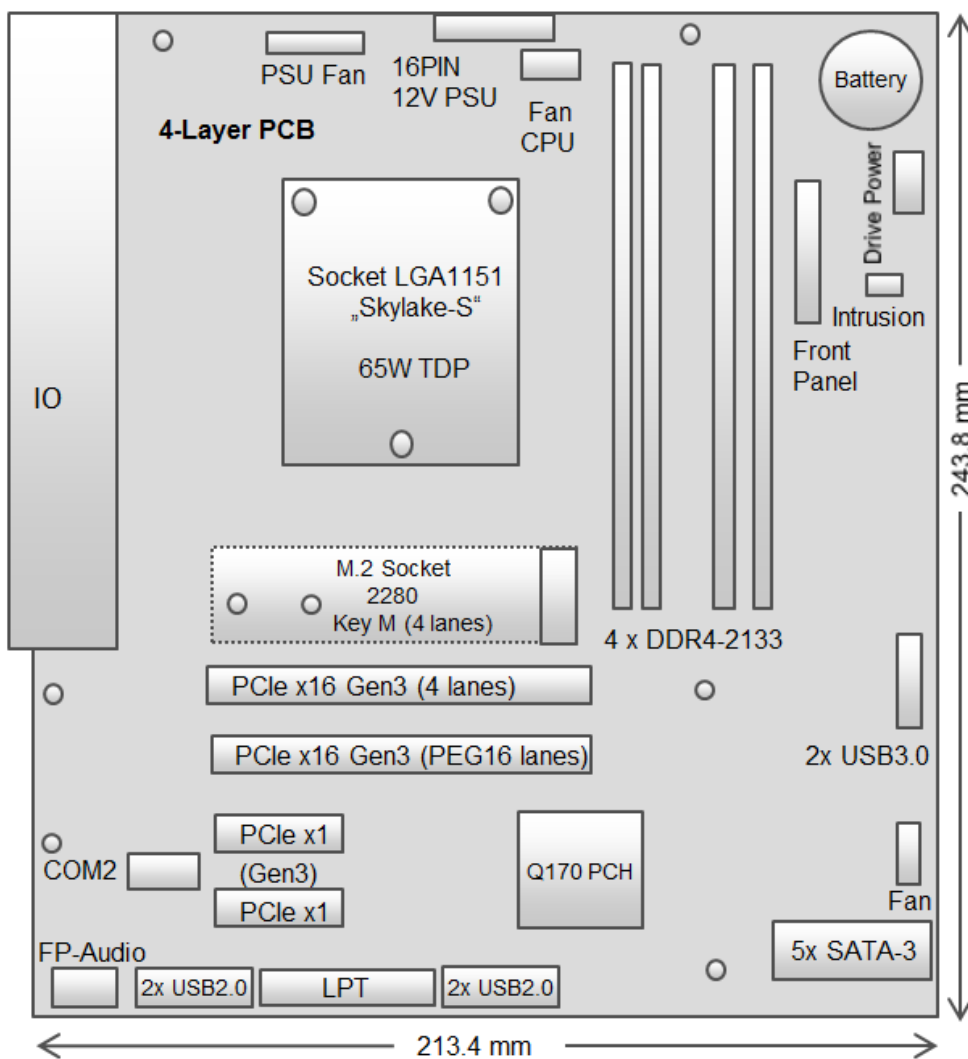
| Features   | D3402-A               |
|--|-----------------------|
| Chipset  | iQ170                 |
| Board Size   | reduced µATX          |
| VGA <sup>1)</sup> / DVI-I / DVI-D / DP V1.2 / 2 <sup>nd</sup> DP V1.2 / LVDS | - / - / ✓ / ✓ / ✓ / - |
| Stereo Audio / 5.1 Multichannel Audio  | - / ✓                 |
| 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 <sup>2)</sup> / CPU / AUX1 / AUX2             | ✓ / ✓ / ✓ / -         |
| TEMP monitored CPU / onboard sensors / external sensor                       | ✓ / ✓ / -             |
| <b>Special Features</b>  |                       |
| Silent Fan / Silent Fan LT / System Guard / Silent Drives                    | ✓ / - / ✓ / ✓         |
| Recovery BIOS / Desk Update / Multi Boot                                     | ✓ / ✓ / ✓             |
| HDD Password / HDD Encryption / EraseDisk <sup>3)</sup> / 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           |
| ILM - Backplate / ILM + Heatsink combined <sup>6)</sup>                      | - / ✓                 |
| <b>Internal Connectors</b>   |                       |
| 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)   | 1                     |
| FAN PSU <sup>2)</sup> / CPU / AUX1 / AUX2                                    | 1 / 1 / 1 / -         |
| SMBus (Case Temperature)   | -                     |
| Intrusion (Case Open)  | 1                     |
| Parallel Port Pin Connector <sup>4)</sup>                                    | 1                     |
| ATX Power Supply (24 pin + 4 pin) / 12V-only Power Supply <sup>5)</sup>      | - / ✓                 |
| <b>External Connectors</b>   |                       |
| VGA Sub D <sup>1)</sup> / 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)   | 1                     |
| Parallel (EPP/ECP) <sup>4)</sup>   | -                     |

- 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  
Plus additional onboard drive power connector
- Combined Backplate: Can not be used for pushpin Heatsink

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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 Fax: +31 (0)23 556 0950  
 Website: [emea.fujitsu.com/components](http://emea.fujitsu.com/components)  
 Address: Diamantlaan 25  
 2132 WV Hoofddorp  
 Netherlands

# More information

## Fujitsu products, solutions & services

### Products

[www.fujitsu.com/global/products/](http://www.fujitsu.com/global/products/)  
In addition to the Fujitsu [Product name], Fujitsu offers a full portfolio of other computing products.

### Computing products

- Storage systems: ETERNUS
- Server: PRIMERGY, PRIMEQUEST, Fujitsu SPARC M10, BS2000/OSD Mainframe
- Client Computing Devices: LIFEBOOK, STYLISTIC, ESPRIMO, FUTRO, CELSIUS
- Peripherals: Fujitsu Displays, Accessories
- Software
- Network

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

### Solutions

<http://www.fujitsu.com/global/solutions>  
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.

**Infrastructure Solutions** are customer offerings created by bringing Fujitsu's best products, services and technologies together with those from partners to deliver benefit to our customers' businesses.

**Industry Solutions** are tailored to meet the needs of specific verticals.

**Business and Technology Solutions** provide a variety of technologies developed to tackle specific business issues such as security and sustainability, across many verticals.

### Services

[www.fujitsu.com/global/services/](http://www.fujitsu.com/global/services/)  
Several customizable Fujitsu Service offerings ensure that IT makes a real difference and delivers true business value. We do this by leveraging our extensive experience in managing large, complex, transformational IT programs to help clients in planning, delivering and operating IT services in a challenging and changing business environment.

**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.

## Fujitsu green policy innovation

[www.fujitsu.com/global/about/environment/](http://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:



## More information

Learn more about Fujitsu, please contact your Fujitsu sales representative, Fujitsu business partner, or visit our website.  
[www.fujitsu.com/fts/mainboards/](http://www.fujitsu.com/fts/mainboards/)

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