

Data Sheet

FUJITSU Mainboard D3402-B µATX

Extended Lifecycle Series



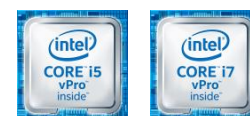
Powered by the Intel® Q170 Express Chipset supporting DDR4 2133/2400 SDRAM Memory and 6th & 7th generation Intel® Core™ i3 / i5 / i7 Processors (Socket LGA1151)



Designed for 24/7 continuous operation @ 50°C

Chipset:

Intel® Q170 Express Chipset



Processors:

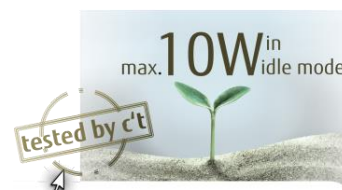
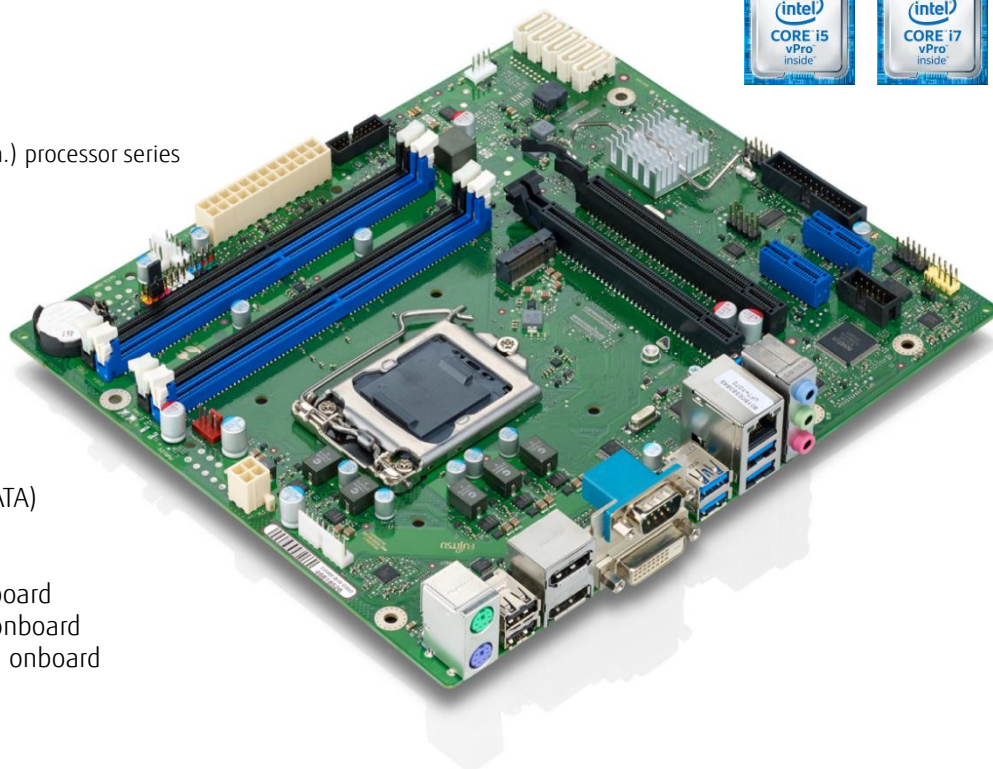
Intel® Core™ i7 / i5 / i3 – (6th gen. & 7th gen.) processor series
Intel® Pentium® / Celeron® processor series
Socket LGA1151 – up to 65W TDP

Memory:

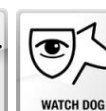
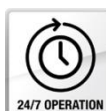
DDR4 2133 SDRAM (UDIMM)
DDR4 2400 SDRAM (UDIMM)

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) / 2400MHz (CL17), 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® Core™ i7 / i5 / i3 – (7th generation) processor series (D3402-B2 only) 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 / NVME)
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 / FCC certified	cCSAus 60950-1/ FCC-B	

Operating Systems	OS	"Runnable"	"Tested/Released by Fujitsu"
	MS Windows XP	--	--
	MS Windows 7-32 ¹⁾	X	X ²⁾
	MS Windows 7-64 ¹⁾	X	X ²⁾
	MS Windows 8.1-64 ¹⁾	X	X
	MS Windows 10-64	X	X
	Linux-32	X	--
	Linux-64	X	--

1) Requires Skylake (= 6th gen.) processor! 2) MS Windows 7 release for D34xx-B2 scheduled for Q2/2017

Further Features

Feature	Mainboard Versions	
	D3402-B1x	D3402-B2x
UDIMM DDR4-2133 / DDR4-2400	x / -	x / x
Intel® Core™ i processor series – 6 th gen. / 7 th gen.	x / -	x / x
Intel® Pentium® / Celeron® processor series – 6 th gen. / 7 th gen.	x / -	x / x
Skylake Drivers / Kabylake Drivers (MS Windows)	x / x	- / x

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, Jumbo Frames (up to 9KB)
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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 / NVME Boot support
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Designed for 24 / 4 use	Longlife components for 24 / 7 continuous operation @ 50°C Revision control & Extended Lifecycle (up to 3 years)
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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 / Intel Standard Manageability / DASH V1.1	✓ / ✓ / ✓
	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 D3402-B	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
ILM - Backplate / ILM + Heatsink combined ⁴		✓ / -
Internal Connectors D3402-B		DIMM Sockets (DDR4-2133/2400)
	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 ² / CPU / AUX1 / AUX2	1 / 1 / 1 / 1
	SMBus (Case Temperature)	-
	Intrusion (Case Open)	1
	Parallel Port Pin Connector ⁵	1
	ATX Power Supply (24 pin + 4 pin) / 12V-only Power Supply	✓ / -
	LPC Connector	✓
External Connectors D3402-B	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)	1
	Parallel (EPP/ECP) ⁵	-

¹ VGA possible via optional converter board D3453 or DP-VGA-converter (dongle)

² Not supported by standard Power Supplies

³ Optional BIOS Feature, License required

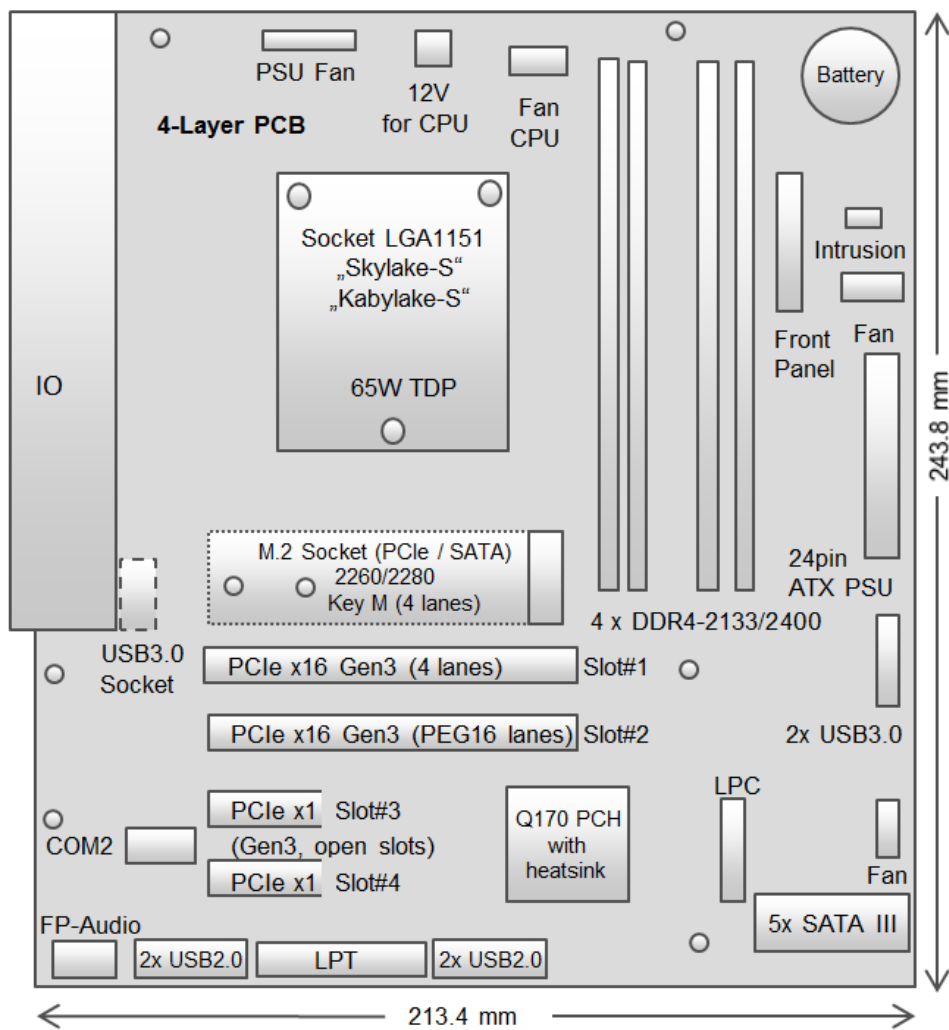
⁴ Combined backplate: Can't be used for pushpin heatsink

⁵ External parallel port possible via optional connector cable - Note: Intel limitation → ECP-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

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