

Data Sheet

FUJITSU Mainboard D3664-B Mini-STX

Extended Lifecycle Series

Powered by the Intel® Q370 Express Chipset supporting DDR4-2666 SDRAM Memory and Intel® 8th & 9th generation Core™ i3 / i5 / i7 / i9 Processors



Designed and approved for 24/7 continuous operation @ 50°C

Chipset:

Intel® Q370 Express Chipset

Processors:

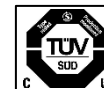
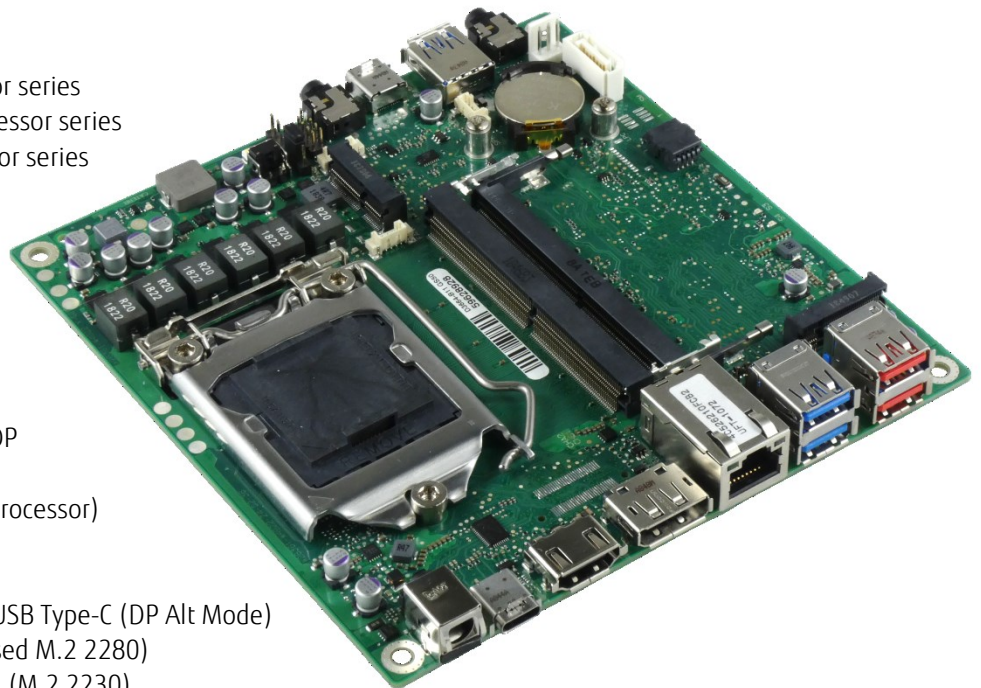
Intel® Core™ i7 / i5 / i3 (8th gen.) processor series
Intel® Core™ i9 / i7 / i5 / i3 (9th gen.) processor series
Intel® Pentium® / Intel® Celeron® processor series
Socket LGA1151 – up to 65W TDP

Memory:

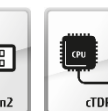
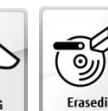
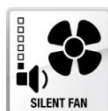
DDR4-2666, Dual Channel
2 SO-DIMM sockets, up to 32GB memory

Product Features:

cTPD – Easy & flexible reduction of CPU TDP
Supporting Intel AMT 12
Intel® HD Graphics (DX12, integrated in processor)
HDMI V1.4 and DP V1.2
Stereo Audio onboard
USB 2.0, USB3.1 Gen1 / Gen2 onboard & USB Type-C (DP Alt Mode)
Onboard support for M.2 SSD (PCIe x4 based M.2 2280)
Onboard support for M.2 WLAN/Bluetooth (M.2 2230)
Intel® GbE LAN onboard
Intel integrated TPM V2.0 onboard
DC Power Supply 19V
HW Watchdog onboard



(upon request)



Features and benefits

Board Size	Mini-STX: 5.5" x 5.8" (140 x 148 mm)										
Chipset	Intel® Q370 Express Chipset										
Memory	2 x SO DIMM Socket (1.2V), max. 32GB, Dual Channel, DDR4 - 2666 (CL19) / DDR4 - 2400 (CL17) SDRAM, unbuffered, non-ECC Effective memory speed depends on installed processor										
Processor	Intel® Core™ i7 / i5 / i3 (8 th generation) processor series Intel® Core™ i9 / i7 / i5 / i3 (9 th generation) processor series Intel® Pentium® / Intel Celeron® processor series Socket LGA1151, max. 65W TDP (For details on supported processors please refer to OEM FTP Server)										
Power Specification	External DC Input 19V Onboard high-efficiency CPU Core Voltage Regulator										
Power Supply Requirements	For onboard components (worst case incl. processor, memory and any attached internal and external devices like M.2 devices, SATA devices, USB devices).										
	<table border="1"> <thead> <tr> <th>Source</th> <th>Voltage</th> <th>Min. PS Load</th> <th>Max.Voltage Tolerance</th> <th>Max. Mainboard Input Power</th> </tr> </thead> <tbody> <tr> <td>External DC-In connector</td> <td>19V</td> <td>0A</td> <td>+10% / -15%</td> <td>max. 5A max. 95W ¹⁾</td> </tr> </tbody> </table>	Source	Voltage	Min. PS Load	Max.Voltage Tolerance	Max. Mainboard Input Power	External DC-In connector	19V	0A	+10% / -15%	max. 5A max. 95W ¹⁾
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External DC-In connector	19V	0A	+10% / -15%	max. 5A max. 95W ¹⁾							
	1) See TechNotes document for details										
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 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 x4-based M.2, NVME) BIOS integrated HW Diagnostic Tool, Watchdog Support No legacy OS support, no MBR installation (UEFI only due to Intel restrictions)										
Security Features	Recovery BIOS, System and BIOS Password, Boot Sequence Control, USB- Port Access Protection, Boot Sector Virus Warning, Write Protection for Flash BIOS, EraseDisk (BIOS Feature), Intel integrated TPM V2.0										

Special Features	cTPD	Easy & flexible reduction of CPU TDP (BIOS Setup) down to 10W TDP	
	Silent Fan	Independent temperature related processor fan and system fan supervision	
	System Guard	View Silent Fan features	
	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	
	Always On	Reliable power-on whenever voltage is connected	
	Never Off	Option to prevent the system from being shut down	
CSA / UL Compliance	Upon request: cTÜVus acc. IEC62368-1		
FCC Compliance	FCC-B verified		
Operating Systems	OS	"Runnable"	"Tested/Released by Fujitsu"
	MS Windows 7	--	--
	MS Windows 10-64 RS3	X	
	MS Windows 10-64 RS4	X	
	MS Windows 10-64 RS5	X	X
	Linux-64	X	
Important Note: Legacy OS / MBR installation (DOS, MS Windows 7, ...) is not supported due to Intel restrictions			
Graphics	Intel® HD Graphics (depends on installed processor), DX12 1 x DisplayPort V1.2 1x HDMI V1.4 1 x USB Type-C supporting DisplayPort (DP V1.2) Alternate Mode		
Audio	Realtek ALC671, stereo, High Definition Audio Codec, 2W@40hm mono speaker support, Front Audio: Headphones/Microphone acc. CTIA-Standard + Stereo Microphone Input		
LAN	Intel i219LM with 10/100/1000 MBit/s, iAMT12 Wake-on-LAN (WoL) by interesting Packets, Link Status Change and Magic Packet™, PXE support, BIOS MAC Address Display		
SATA Ports	1 x Serial ATA III 600 Interface (up to 6Gbit/s), NCQ, AHCI		
M.2 Sockets	M.2 2280 Key-M for PCIe-based SSD NVME modules; 4 x PCIe Gen2 lanes M.2 2230 Key-E for PCIe/USB-based WLAN/Bluetooth modules; 1 x PCIe Gen2, 1 x USB2.0		
Designed for 24 / 7 use	Longlife components for 24 / 7 continuous operation @ 50°C Revision control & Extended Lifecycle (min. 3 years)		

Features D3664-B	Chipset	iQ370	
	Board Size	Mini-STX	
	DP V1.2 / 2 nd DP V1.2 / LVDS / HDMI 1.4 / eDP / USB-C (DP V1.2)	✓ / - / - / ✓ / ✓ / - / ✓	
	Buzzer / int. Speaker Support (mono) / Stereo Audio	- / ✓ / ✓	
	LAN Gbit / 100 Mbit / 10 Mbit / WoL / LAN Boot	✓ / ✓ / ✓ / ✓ / ✓ / ✓	
	iAMT 12.0 / vPro / Intel Standard Manageability / DASH V1.1	✓ / (✓) ¹ / - / -	
	SATA / RAID / eSATA-Support / mSATA / M.2 SSD (PCIe)	✓ / - / ✓ / - / ✓	
	USB 2.0 / USB 3.1 gen1 / USB 3.1 gen2	✓ / ✓ / ✓	
	FAN monitored & controlled PSU / CPU / AUX1 / AUX2	- / ✓ / ✓ / -	
	TEMP monitored CPU / onboard sensors / external sensor	✓ / ✓ / -	
Special Features D3664-B	Silent Fan / System Guard / cTDP	✓ / ✓ / ✓	
	Recovery BIOS / Desk Update / Multi Boot	✓ / ✓ / ✓	
	HDD Password / EraseDisk / TPM V2.0	✓ / ✓ / ✓	
	Logo Boot Option	✓	
	High Efficiency Core Voltage Regulator Design	✓	
	BIOS POST- / BIOS Boot- / OS- HW Watchdog	✓ / ✓ / ✓	
	Operating Mode 24-7 / 8-5 (hrs per day - days per week)	✓ / -	
	Mainboard operating temperature range (chassis inside) ²	10°C – 50°C	
	Internal Connectors D3664-B	SO DIMM Sockets (DDR4-2666)	2
SATA-600 / mSATA / M.2 SSD 2280 (Key-M, PCIe/NVME)		1 / - / 1	
M.2 2230 (Key-E, PCIe & USB2.0 for WLAN/Bluetooth)		1	
Front Panel Audio (9-Pin, HD Audio)		-	
USB 2.0 channels / USB 3.1 Gen1 / USB 3.1 Gen2 / USB Stick		2 / - / - / -	
Serial (COM1, RS232) / Parallel Port Connector		- / -	
LVDS / LVDS Backlight / Embedded DisplayPort		- / - / -	
FAN PSU / CPU (PWM) / AUX1 (PWM) / AUX2 ³		0 / 1 / 1 / 0	
Intrusion (Case Open) / GPIO (8Bit) / SMBus (Case Temp.)		- / - / -	
Internal Mono Speaker header / DMIC header (digital microphone)		1 / -	
Front Panel (Power, LEDs, Intel 10 pin header, 2mm pitch) ⁴		1	
Onboard 3-pin SATA Drive Power Connector (5V)		1	
Onboard (internal) DC-In Connector		-	
External Connectors D3664-B		DVI-I / DVI-D / DisplayPort V1.2 / HDMI V1.4 ⁵	- / - / 1 / 1
		Audio Stereo Mic. In / Headphones (Headset) [Front Connectors]	1 / 1
	LAN (RJ-45)	1	
	PS/2 Mouse / Keyboard	- / -	
	USB 2.0 / USB 3.1 Gen1 / USB 3.1 Gen2 / USB 3.1 Gen1-Type C (DP) ⁶	0 / 2 / 2 / 1	
	USB 3.1 Gen1 / USB 3.1 Gen1-Type C [Front Connectors]	1 / 1	
	DC-In connector (external input) 19V @ 5A max.	1	

1 TXT (Trusted Execution Technology) not supported!

2 Forced cooling required, see technical documentation for details

3 PWM Fans; specific fan connector required; 5V operating voltage!

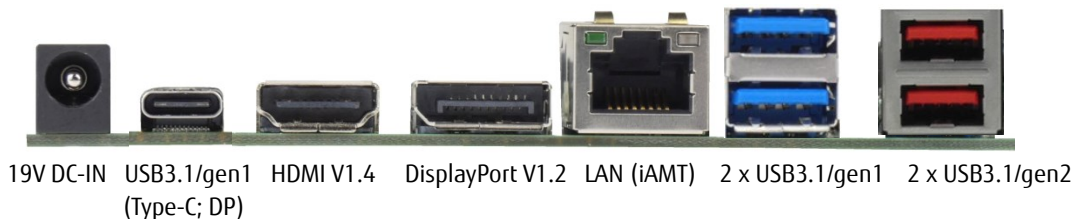
4 RESET feature not supported!

5 Mainboard is prepared to support HDMI-CEC via 3rd party CEC module (appropriate cabling required)

6 Supports DisplayPort - Alternate Mode

External Connectors

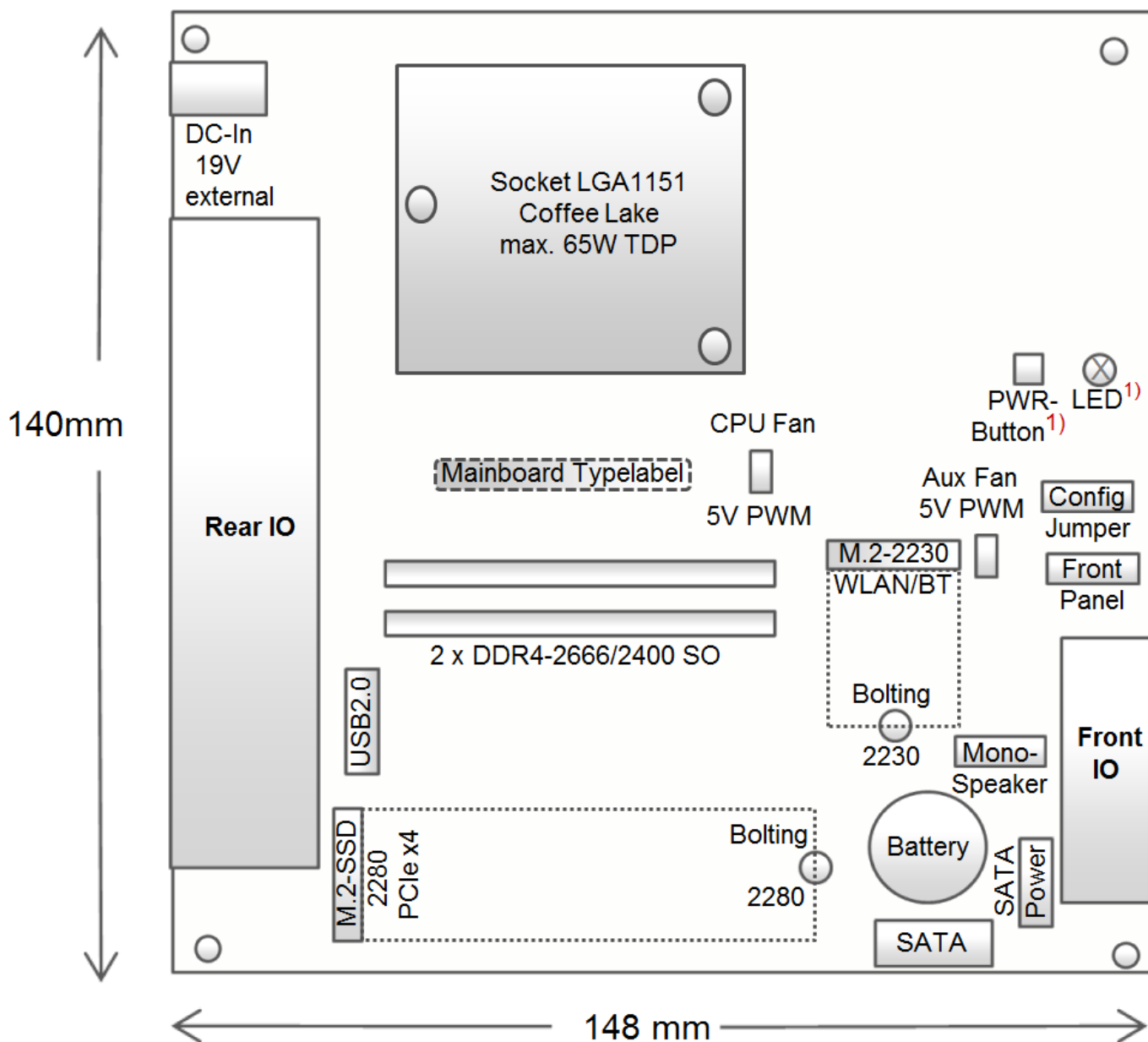
Rear I/O:



Front I/O:



Connector / Socket Diagram



1) Onboard power button (push button) and power LED are designed for usage in Fujitsu SMARTCASE S520 chassis kit

Accessories

	OEM Order Code	
SMARTCASE S520 Chassis Kit incl. Cooling Solution (Requires additional rear IO!)	S26361-F5000-B2 (tbd)	
AC Adapter 19V / 65W (E623)	S26361-F5000-P3	
VESA Mount Kit	S26361-F5000-X2	
Mono Speaker Kit (for chassis kit)	S26361-F5000-K9	
Wall Mount Brackets	S26361-F5000-X1	
DC-In Connector Lock	S26361-F5000-X3	
Dual WLAN Antenna Kit (incl. M.2 WLAN Module)	S26361-F5000-W2	
SATA data/power cable for optional 2.5" drive (Y4033-H103)	S26361-F5000-K12	

Further industrial products offered by Fujitsu

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- Relays
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- Wireless Modules



24 Volt Kiosk Printers



Multi-Input Touch Panels

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