

Data Sheet

FUJITSU Mainboard D3674-B Thin Mini-ITX

Extended Lifecycle Series

Powered by the Intel® H310 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® H310 Express Chipset

Processors:

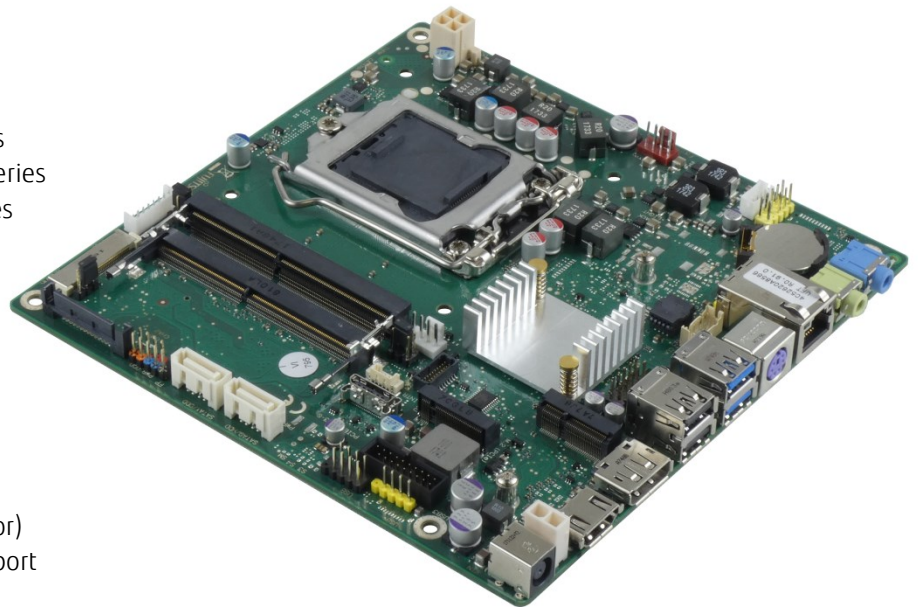
Intel® Core™ i7 / i5 / i3 (8th gen.) processor series
Intel® Core™ i9 / i7 / i5 / i3 (9th gen.) processor series
Intel® Pentium® / Intel® Celeron® processor series
Socket LGA1151 – up to 65W TDP

Memory:

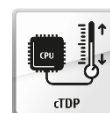
DDR4-2666, Dual Channel
2 SO-DIMM sockets, up to 32GB memory

Product Features:

cTPD – Easy & flexible reduction of CPU TDP
Intel® HD Graphics (DX12, integrated in processor)
HDMI V1.4, DP V1.2 and Dual Channel LVDS support
8 Bit GPIO & multichannel Audio onboard
USB 2.0 and USB3.1 Gen1 onboard
Onboard support for M.2 SSD (PCIe x4 based M.2 2280)
Onboard support for M.2 WLAN/Bluetooth (M.2 2230)
Realtek GbE LAN onboard
Intel integrated TPM V2.0 onboard
Dual-Range DC Power Supply 12V / 19-24V
HW Watchdog onboard



(upon request)



Features and benefits

| | |
|----------------------------------|---|
| Board Size | Thin Mini-ITX: 6.7" x 6.7" (170 x 170 mm) |
| Chipset | Intel® H310 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 ¹ 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 19-24V Internal DC Input 12V or 19-24V 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, LVDS panels, USB devices. |

| Source ¹⁾ | Voltage | Min. PS Load | Max.Voltage Tolerance | Mainboard Capacitive Load | Max. Mainboard Input Power |
|----------------------------|---------|--------------|-----------------------|---------------------------|-------------------------------------|
| External connector | 19-24V | 0A | +10% / -15% | 200µF | max. 10A max. 130W ¹⁾ |
| Internal (2 pin) connector | 19-24V | 0A | +10% / -15% | 200µF | max. 8A max. 130W ¹⁾ |
| Internal (4 pin) connector | +12V | 0A | ± 5 % | 1.500µF | max. 12A max. 144W |

¹⁾ LVDS backlight (19/24V) not included in 130W limit. See TechNotes document for further details.
Possible surge current (CPU Turbo mode) must be considered for system design!

| | |
|--------------------------|--|
| 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, Serial- / USB- Port Access Protection, Boot Sector Virus Warning, Write Protection for Flash BIOS, EraseDisk (BIOS Feature), Intel integrated TPM V2.0, optional Infineon TPM module (TCG compliant, socket prepared) |

¹ Appropriate BIOS version supporting CoffeeLake-Refresh processors required

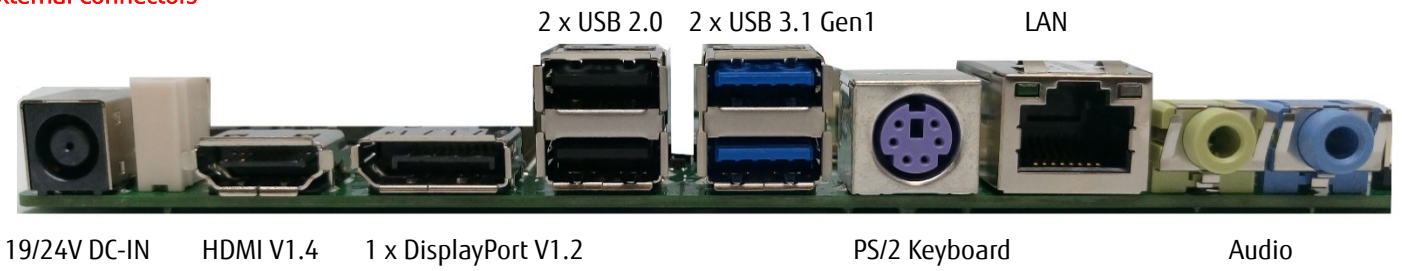
| | | | |
|--|--|--|-------------------------------------|
| Special Features | cTDP | Easy & flexible reduction of CPU TDP (BIOS Setup) down to 10W TDP | |
| | Silent Fan | Independent temperature related processor fan and system fan supervision | |
| | System Guard | View Silent Fan features | |
| | 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 RS3 | X | X |
| | MS Windows 10 RS4 | X | X |
| | MS Windows 10 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, Dual-Channel 24bit LVDS Max. 2 independent displays | | |
| Audio | Realtek ALC255, 5.1-channel, High Definition Audio Codec, 2W@40hm stereo speaker support | | |
| LVDS | LVDS Controller Realtek RTD2136R (DisplayPort to LVDS converter) | | |
| LAN | Realtek RTL8111E with 10/100/1000 MBit/s, Wake-on-LAN (WoL) by interesting Packets, Link Status Change and Magic Packet™, PXE support, BIOS MAC Address Display | | |
| SATA Ports | 2 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 D3674-B | Chipset | iH310 |
| | Board Size | Thin Mini-ITX |
| | DP V1.2 / 2 nd DP V1.2 / LVDS / HDMI 1.4 / eDP | ✓ / - / ✓ / ✓ / ✓ / - |
| | Buzzer / int. Speaker Support (stereo) / 5.1 Multichannel Audio | - / ✓ / ✓ |
| | LAN Gbit / 100 Mbit / 10 Mbit / WoL / LAN Boot | ✓ / ✓ / ✓ / ✓ / ✓ / ✓ |
| | iAMT 12.0 vPro / Intel Standard Manageability / DASH V1.1 | - / - / - |
| | 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 D3674-B | Silent Fan / System Guard / cTDP | ✓ / ✓ / ✓ |
| | Recovery BIOS / Desk Update / Multi Boot | ✓ / ✓ / ✓ |
| | HDD Password / EraseDisk ² / TPM V2.0 | ✓ / ✓ / ✓ |
| | Logo Boot Option / Intel On Screen Branding | ✓ / ✓ |
| | 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) ³ | 10°C – 50°C |
| | Internal Connectors D3674-B | SO DIMM Sockets (DDR4-2666) |
| SATA-600 / mSATA / M.2 SSD 2280 (Key-M, PCIe/NVME) | | 2 / - / 1 |
| M.2 2230 (Key-E, PCIe & USB2.0 for WLAN/Bluetooth) | | 1 |
| Frontpanel Audio (9-Pin, HD Audio) | | 1 |
| USB 2.0 channels / USB 3.1 Gen1 channels / USB 3.1 Gen2 / USB Stick | | 3 / 2 / - / - |
| Serial (COM1, RS232) / Parallel Port Connector | | 1 / - |
| LVDS / LVDS Backlight / Embedded DisplayPort | | 1 / 1 / - |
| FAN PSU / CPU (PWM) / AUX1 (PWM) / AUX2 | | 0 / 1 / 1 / 0 |
| Intrusion (Case Open) / GPIO (8Bit) / SMBus (Case Temp.) | | 1 / 1 / - |
| Internal Stereo Speakers header / DMIC header (digital microphone) | | 1 / 1 |
| Front Panel (Power Switch, Reset Switch, LEDs, Intel 10 pin header) | | 1 |
| Onboard SATA Drive Power Connector | | 1 |
| Onboard (internal) DC-In Connector 12V (4 pin) / 19-24V (2 pin) | | 1 / 1 |
| External Connectors D3674-B | | DVI-I / DVI-D / DisplayPort V1.2 / HDMI V1.4 |
| | Audio Mic. In / Line in / Line out (or driver configuration) | - / 1 / 1 |
| | LAN (RJ-45) | 1 |
| | PS/2 Mouse / Keyboard | - / ✓ |
| | USB 2.0 / USB 3.1 Gen1 / USB 3.1 Gen2 | 2 / 2 / 0 |
| | DC-In connector (external input) 19-24V @ 10A max. | 1 |

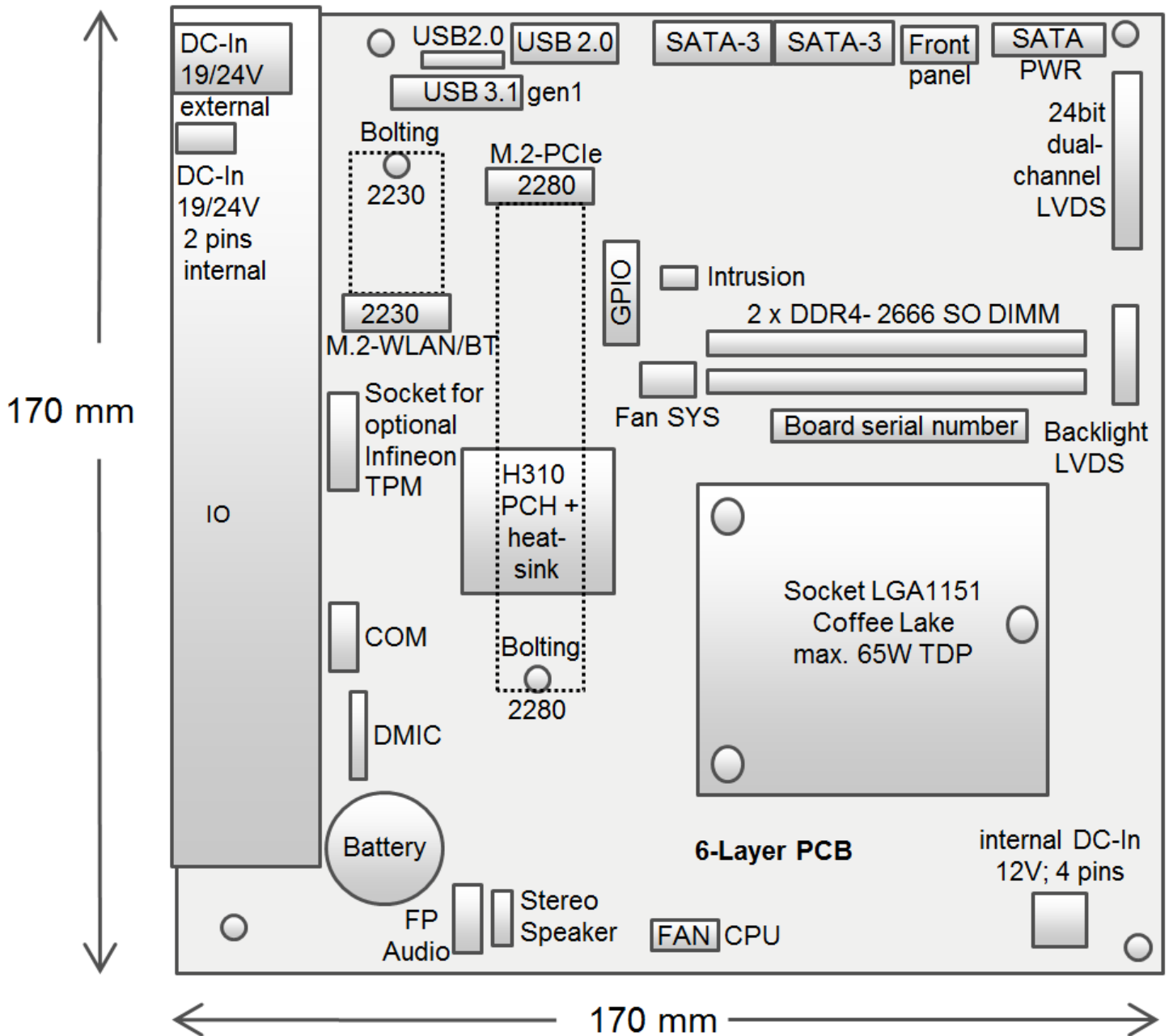
² Planned for factory shipments from 06/2019

³ Forced cooling required, see technical documentation for details

External Connectors



Connector / Socket Diagram



Accessories

| | OEM Order Code | |
|---|------------------|---|
| Active Heatsink + Backplate (35W TDP) | S26361-F5000-C11 |  |
| COM1 Extension Cable (120mm, w/o slot bracket) | S26361-F5000-K7 |  |
| COM1 Extension Cable (400mm, fullsize slot bracket) | S26361-F5000-K10 |  |

Further industrial products offered by Fujitsu

- Connectors
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- Touch Panels
- Thermal Printers
- Wireless Modules



24 Volt Kiosk Printers



Multi-Input Touch Panels

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