

Data Sheet

FUJITSU Mainboard D3433-S Mini-ITX

Industrial Series

Available from
04/2016



Powered by the Intel® Q170 Express Chipset supporting DDR4 2133 SDRAM Memory and 6th generation Intel® Core™ i3 / i5 / i7 Processors (Socket LGA1151)
Designed & approved for enhanced operating temperature range from 0°C to 60°C
Designed & approved for 24/7 continuous operation

Chipset:

Intel® Q170 Express Chipset

Processors:

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

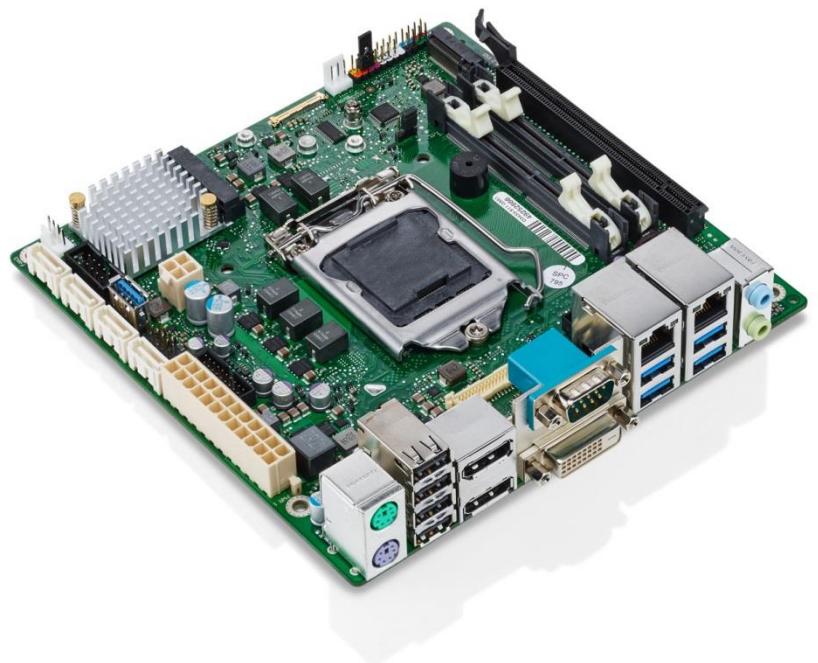


Memory:

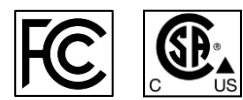
DDR4 2133 SDRAM (SO-UDIMM)

Product Features:

- Intel® iAMT 11.0 / vPro 2015
- Intel® HD Graphics (integrated in processor e.g. HD510/530)
- DVI-D, Dual DP V1.2, eDP and Dual Channel LVDS support
- PCI Express x16 Gen3 and Mini-PCI Express onboard
- 8 Bit GPIO & multichannel Audio onboard
- mSATA (SATA III) socket support (for Embedded OS)
- Onboard support for M.2 SSD (PCIe or SATA modules)
- USB 2.0/3.0 and USB socket (stick/dongle USB3.0) onboard
- 2 x Intel GbE LAN onboard (incl. teaming support)
- Infineon TPM V2.0 onboard



Dual Power Supply (ATX compliant & 12V only)
BIOS-POST/-Boot & OS – HW Watchdog onboard



(planned)



Features and benefits

| | |
|-------------------|---|
| Board Size | Mini-ITX: 6.7" x 6.7" (170 x 170 mm) |
| Chipset | Intel® Q170 Express Chipset |
| Memory | 2 x SO DIMM Socket (1.2V), max. 32GB, Dual Channel, DDR4 - 2133 (CL15) SDRAM, unbuffered, non-ECC Effective memory speed depends on installed processor |
| Processor | Intel® Core™ i7 / i5 / i3 – (6th 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
ATX- 24 Pin / ATX- 20 Pin or 12V only Power Supply required; Support for Soft-Off Power Supplies; 3.3V Auxiliary Supply Voltage on PCIe Slot (Wake-Up Function)

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

| Source ¹⁾ | Voltage | Min. PS Load | Max.Voltage Tolerance | Mainboard Capacitive Load | Max. Mainboard Current |
|----------------------|---------|--------------|-----------------------|---------------------------|------------------------|
| ATX Power Supply | + 12V | 0.05A | ± 5 % | 1.300µF | 8A/12A ²⁾ |
| | - 12V | 0A | | -- | not used |
| | + 5V | 0.2A | ± 5 % | 900µF | 3A |
| | + 3.3V | 0A | ± 5 % | 350µF | 0.5A |
| | + 5Vaux | 0A | +5 % / -3% | 330µF | 0.5A |
| 12V only PSU | +12V | 0A | ± 5 % | 1.300µF | 8A/12A ²⁾ |

1) ATX PSU or 12V only DC Supply

2) 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)
BIOS integrated HW Diagnostic Tool, Watchdog Support

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), Infineon TPM V2.0

| 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 |
| Always On | Reliable power-on whenever voltage is connected |
| Never Off | Option to prevent the system from being shut down |
| CSA / UL / FCC certified | cCSAus 60950-1/ FCC-B (planned) |

Supported / Released Operating Systems

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

Designed for Industrial Applications

Longlife components Designed for 24/7 use in industrial applications
Revision control Strict control and pre-announcement
Extended lifecycle Mainboard available for more than four years
Industrial grade EMI immunity
Enhanced operating temperature range (0°C-60°C) ¹⁾

Graphics

Intel® HD Graphics, DX12, Embedded Display Port (2 lanes supported)
DVI-D, 2 x DisplayPort V1.2, Dual-Channel 24bit LVDS (max. 3 indep. displays)

Audio

Realtek ALC671, 5.1-channel, High Definition Audio Codec

LAN

Intel i219LM & i210AT 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, Teaming Support

Drives

4 Serial ATA III 600 Interface (up to 6GBit/s), NCQ, AHCI, RAID 0/1/5/10
1 mSATA (halfsize / fullsize, SATA III 600); 1 x M.2 Socket (2242/2260) for PCIe (2 lanes) or SATA based M.2 modules, AHCI / NVME Boot support

| Features | D3433-S |
|--|-------------------------------|
| Chipset | iQ170 |
| Board Size | Mini-ITX |
| VGA / DVI-I / DVI-D / DP V1.2 / 2 nd DP V1.2 / LVDS / eDP | - / - / ✓ / ✓ / ✓ / ✓ / ✓ / ✓ |
| Buzzer / int. Speaker Support / 5.1 Multichannel Audio | ✓ / ✓ / ✓ |
| Dual LAN Gbit / 100 Mbit / 10 Mbit / WoL / LAN Boot | ✓ / ✓ / ✓ / ✓ / ✓ |
| iAMT 11.0 vPro / Intel Standard Manageability / DASH V1.1 | ✓ / ✓ / ✓ / ✓ |
| SATA / ATA / RAID / eSATA-Support / mSATA / M.2 SSD | ✓ / ✓ / ✓ / ✓ / ✓ / ✓ |
| FireWire™ / USB 2.0 / USB 3.0 | - / ✓ / ✓ / ✓ |
| FAN monitored & controlled PSU / CPU / AUX1 ²⁾ / 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 / TPM | ✓ / ✓ / ✓ / ✓ / ✓ |
| 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) ²⁾ | 0°C - 60°C |
| Internal Connectors | |
| SO DIMM Sockets (DDR4 2133) | 2 |
| PCI Express x16 (Gen3) / Support for lane split (8+8 or 8+4+4) | 1 / ✓ |
| Shared mSATA / Mini PCI Express Slot (half/fullsize, incl.USB 2.0) | 1 |
| SATA-600 / SATA-300 / mSATA ⁴⁾ / M.2 SSD ⁴⁾ | 4 / - / 1 / 1 |
| S/PDIF (digital Audio) OUT / IN | 1 / 0 |
| Frontpanel Audio (9-Pin, HD Audio & Legacy Audio AC97) | 1 |
| USB 2.0 channels / USB 3.0 channels / USB Stick (3.0) | 2 / 2 / 1 |
| Serial (COM2, RS232) / Parallel Port Connector | 1 / - |
| LVDS / LVDS Backlight / Embedded DisplayPort | 1 / 1 / 1 |
| FAN PSU / CPU / AUX1 ²⁾ / AUX2 | 0 / 1 / 1 / 0 |
| Intrusion (Case Open) / GPIOI(8Bit) / SMBus (Case Temp.) | 1 / 1 / - |
| ATX Power Supply (24 pin + 4 pin) / 12V-only PSU ³⁾ | 1 / 1 |
| External Connectors | |
| VGA Sub D / DVI-I / DVI-D / DisplayPort V1.2 | - / - / 1 / 2 |
| Audio Mic. In / Line in / Line out (or driver configuration) | - / 1 / 1 |
| LAN (RJ-45) | 2 |
| PS/2 Mouse / Keyboard | 1 / 1 |
| USB 2.0 / USB 3.0 | 4 / 4 |
| Serial (COM1, RS232) | 1 |

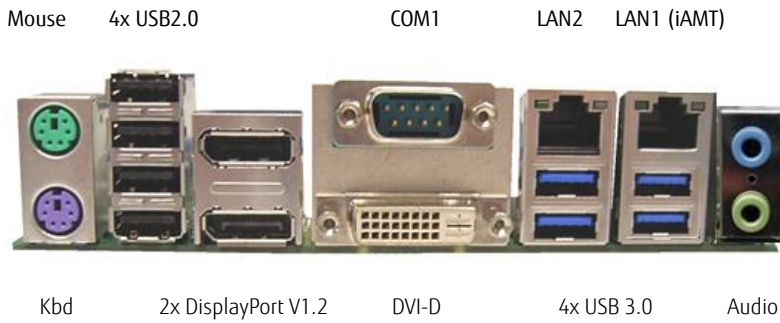
1) Forced cooling required, see technical documentation for detailed requirements

2) Fan AUX1 = 3Pin & PWM support

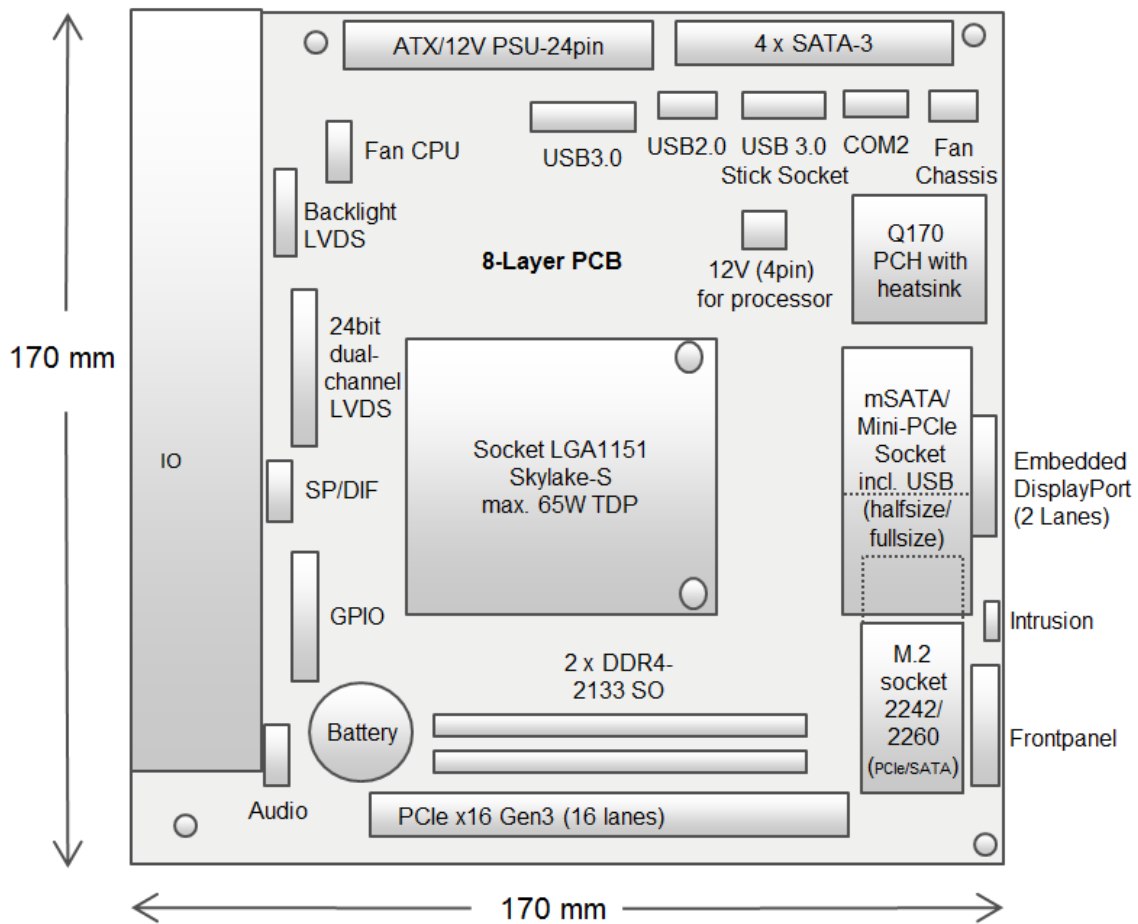
3) Alternative: Powered by 12V DC only. See TechNotes document for further details

4) mSATA slot can be configured as Mini-PCIe slot via BIOS Setup
If a M.2 module @60mm is installed, only halfsize mSATA/Mini-PCIe module can be installed!

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

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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.

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

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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/
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2016-02-03