

# Data Sheet

## FUJITSU Mainboard D3243-S Mini-ITX

### Industrial Series

Powered by the Intel® Q87 Express Chipset supporting DDR3 1600 SDRAM Memory and 4<sup>th</sup> generation Intel® Core™ i3 / i5 / i7 Processors (Socket LGA1150)  
Designed & approved for enhanced operating temperature range from 0°C to 60°C  
Designed & approved for 24/7 continuous operation

**Chipset:**

Intel® Q87 Express Chipset

**Processors:**

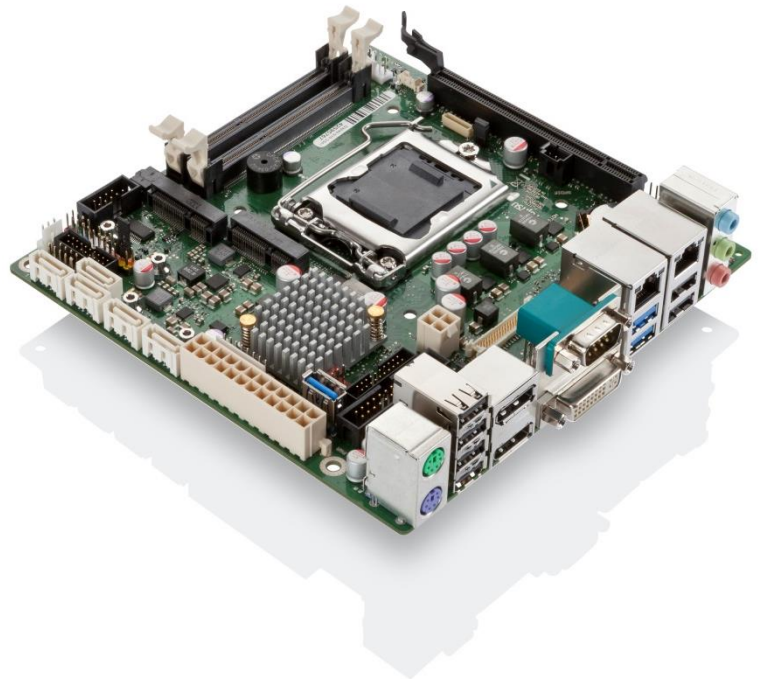
Intel® Core™ i7 / i5 / i3 – 4xxx processor series  
Intel® "TE" Haswell-based embedded series  
Intel® Pentium® – G3xxx processor series  
Intel® Celeron® – G18xx processor series  
Ready for "Haswell Refresh" processor series

**Memory:**

DDR3 1333/1600 SDRAM

**Product Features:**

Intel® vPro 2014 = Intel® iAMT 9.1 (CPU support required)  
Intel® HD Graphics (integrated in processor, e.g. HD4600)  
DVI-I, Dual DP V1.2 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)  
USB 2.0/3.0 and USB socket (stick/dongle USB3.0) onboard  
2 x Intel GbE LAN onboard (incl. teaming support)  
Infineon TPM V1.2 onboard  
Dual Power Supply (ATX compliant & 12V only)  
BIOS-POST/-Boot & OS – HW Watchdog onboard



# Features and benefits

<b>Board Size</b>	Mini-ITX: 6.7" x 6.7" (170 x 170 mm)
<b>Chipset</b>	Intel® Q87 Express Chipset
<b>Memory</b>	2 x SO DIMM Socket (1.5V / 1.35V), max. 16GB, Dual Channel DDR3-1600 (CL11) / DDR3-1333 (CL9) SDRAM, unbuffered, no ECC
<b>Processor</b>	Intel® Core™ i7 / i5 / i3 – 4xxx processor series Intel® "TE" Haswell-based embedded processor series Intel® Pentium® - G3xxx processor series Intel® Celeron® - G18xx processor series Socket LGA1150, max. 95W TDP (For details on supported processors please refer to our website)

**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, USB devices; w/o PCIe cards, w/o SATA drives)

Source <sup>1)</sup>	Voltage	Min. PS Load	Max.Voltage Tolerance	Mainboard Capacitive Load	Max. Mainboard Current
ATX Power Supply	+ 12V	0.05A	± 5 %	3.000µF	14A/18A <sup>2)</sup>
	- 12V	0A	± 10 %	470µF	0.3A
	+ 5V	0.2A	± 5 %	3.000µF	10A
	+ 3.3V	0A	± 5 %	3.000µF	2A
	+ 5Vaux	0A	+ 5 % / -3%	3.000µF	2.5A
12V only PSU	+12V	0A	± 5 %	3mF/rail	19A/23A <sup>2)</sup>

1) ATX PSU or 12V only DC Supply    2) 18A (23A) = Surge Current for 20 sec!

**BIOS**  
AMI Aptio 4.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, BIOS integrated HW Diagnostic Tool, Watchdog Support

**Security Features**  
Recovery BIOS, System and BIOS Password, Boot Sequence Control, Serial-/ Parallel-/ USB- Port Access Protection, Boot Sector Virus Warning, Write Protection for Flash BIOS, EraseDisk (BIOS Feature), Infineon TPM V1.2.

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 supply voltage is connected
Never Off	Option to prevent the mainboard from being shut down

**Designed for Industrial Applications**  
Longlife components    Designed for 24/7 use in industrial applications  
Revision control    Strict revision 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) <sup>4)</sup>

**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	planned
Linux-32/64	X	--

**Graphics**  
Intel® HD Graphics (e.g. HD4600, depends on installed processor), DX11.1  
DVI-I, 2 x DisplayPort V1.2, Dual-Channel 24bit LVDS (max. 3 indep. displays)

**Audio**  
Realtek ALC671, 5.1-channel, High Definition Audio Codec

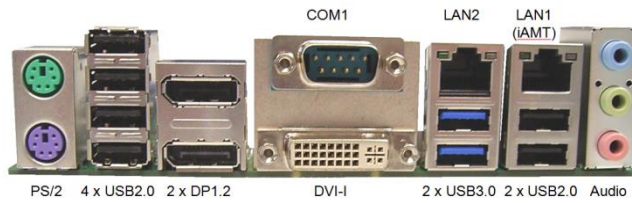
**LAN**  
Intel i217LM / Intel i210AT Ethernet Controller with 10/100/1000 Mbit/s, iAMT, Wake-on-LAN (WoL) by interesting Packets, Link Status Change and Magic Packet™, PXE Support, BIOS MAC Address Display, Teaming Support

**Drives**  
5 Serial ATA III 600 Interface (up to 6Gbit/s), NCQ, AHCI, RAID 0/1/5/10  
1 mSATA (fullsize, SATA III 600)

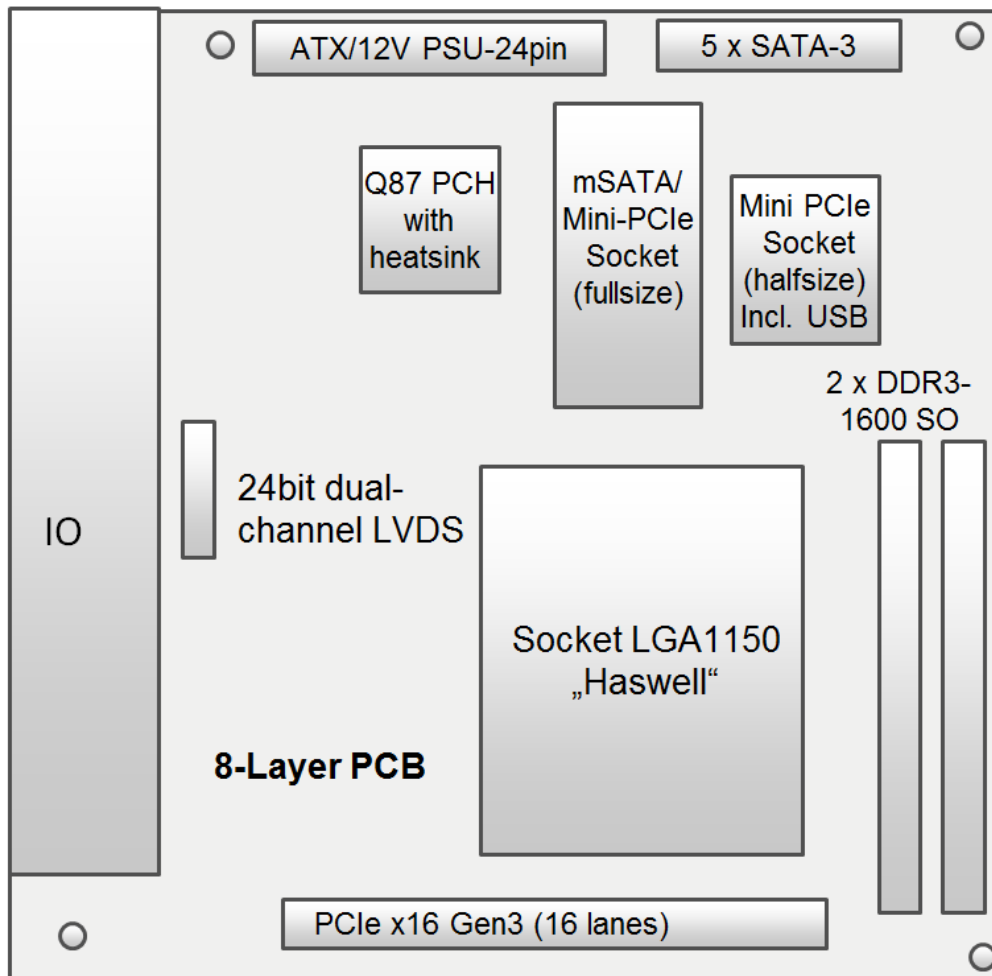
Features	D3243-S
Chipset	iQ87
Board Size	Mini-ITX
VGA / DVI-I / DVI-D / DisplayPort V1.2 / LVDS	- <sup>3)</sup> / ✓ / - / ✓ / ✓ / ✓
Stereo Audio / 5.1 Multichannel Audio	- / ✓
Buzzer / int. Speaker Support	✓ / ✓
Dual LAN Gbit / 100 Mbit / 10 Mbit	✓ / ✓ / ✓
LAN ASF / DASH 1.0 / WoL / Boot / VPro 2014 (iAMT 9.1)	- / ✓ / ✓ / ✓ / ✓ / ✓
SATA / ATA / RAID / eSATA-support / mSATA	✓ / - / ✓ / ✓ / ✓ / ✓
FireWire™ / USB 2.0 / USB 3.0	- / ✓ / ✓
FAN monitored PSU <sup>1)</sup> / CPU / AUX1 / AUX2 / AUX3	✓ / ✓ / - / - / ✓
FAN controlled PSU <sup>1)</sup> / CPU / AUX1 / AUX2 / AUX3	✓ / ✓ / - / - / ✓
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 / 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)	0°C - 60°C
<b>Internal Connectors</b>	
SO DIMM Sockets (DDR3 1600)	2
PCI Express x16 Slot (Gen3)	1
Mini PCI Express Slot (halfsize, incl.USB 2.0)	1
PCI Slots (32Bit, 33 MHz, Rev. 2.3)	---
SATA-600 / SATA-300 / ATA / Floppy / mSATA (fullsize) <sup>6)</sup>	5 / 0 / 0 / 0 / 1
S/PDIF (digital Audio) OUT / IN	1 / 0
Frontpanel Audio (9-Pin, HD Audio)	1
USB 2.0 channels / USB 3.0 channels / USB Stick (3.0)	2 / 2 / 1
Serial (FIFO, 16550 compatible)	1
FAN PSU <sup>1)</sup> / CPU / AUX1 / AUX2 / AUX3	1 / 1 / 0 / 0 / 1
SMBus (Case Temperature)	-
Intrusion (Case Open) / GPIO!(8Bit)	1 / 1
Parallel (EPP/ECP) Pin Connector <sup>2)</sup>	1
Power 24 pin (BTX) / 4 pin (12V processor supply) <sup>5)</sup>	1 / 1
<b>External Connectors</b>	
VGA Sub D <sup>3)</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)	2
PS/2 Mouse / Keyboard	1 / 1
USB 2.0 / USB 3.0	6 / 2
Serial (RS232, FIFO, 16550 compatible)	1
Parallel (EPP/ECP) <sup>2)</sup>	-

- Not supported by standard Power Supplies;
- External parallel port possible via optional connector cable
- Via optional DVI-I / VGA interface connector
- Forced cooling required, see technical documentation for detailed requirements
- Alternative: Powered by 12V DC only. See TechNotes document for further details
- mSATA slot (fullsize) can be configured as Mini-PCIe slot via BIOS Setup

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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