FUJITSU

Data Sheet
Fujitsu Mainboard D3236-S ATX
Industrial Series

Available from Q4/2013

INDUSTRIAL SERIES

Powered by the Intel® Q87 Express Chipset supporting DDR3 1600 SDRAM Memory and 4th 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:
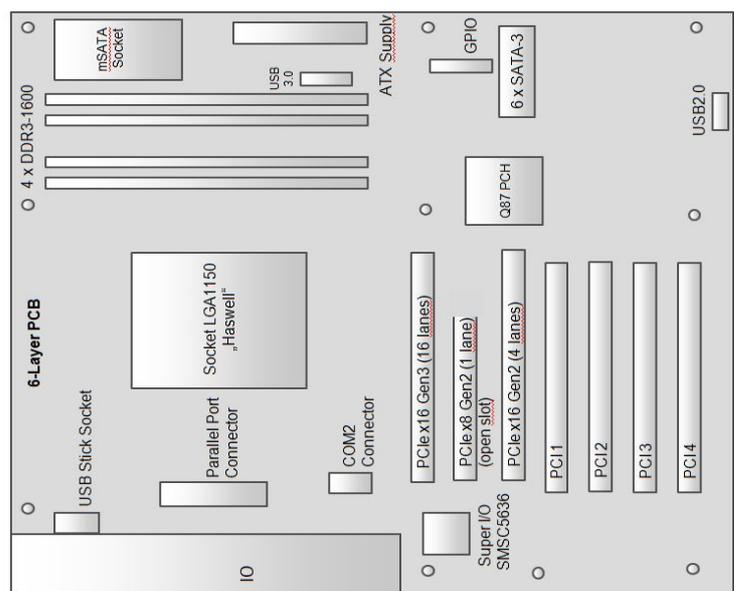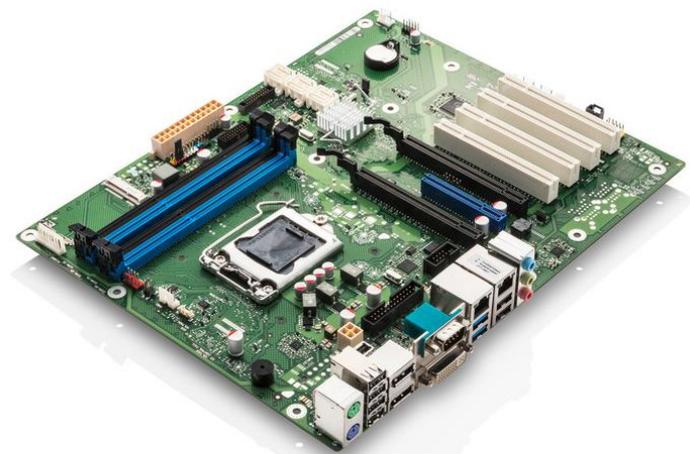Intel® Q87 Express Chipset

Processors:
Intel® Core™ i7 – 4xxx processor series
Intel® Core™ i5 – 4xxx processor series
Intel® Core™ i3 – future gen4 processor series
Intel® Pentium® – future *Haswell* processor series
Intel® Celeron® – future *Haswell* processor series

Memory:
DDR3 1333/1600 SDRAM

Product Features:
Intel® vPro 2013 = Intel® iAMT 9 (CPU support required)
Intel® HD Graphics (integrated in processor, e.g. HD4600)
PCI Express Gen3
8 Bit GPIO & multichannel Audio onboard
USB 2.0 / 3.0 and USB socket (stick/dongle) onboard
2 x Intel GbE LAN onboard (incl. teaming support)
Infineon TPM V1.2 onboard
BIOS-POST/-Boot & OS – HW Watchdog onboard

(intel) vPro™   SERIAL ATA   PCI EXPRESS®

(intel) inside™ CHIPSET Q87   Compatible with Windows®7   Windows 8 Compatible

24/7 OPERATION   EXTENDED TEMPERATURE   SILENT FAN   SYSTEM GUARD   MULTI BOOT   HDD PASSWORD   RECOVERY BIOS   DESK UPDATE   WATCH DOG   Erasedisk   USB 3.0

Features and benefits

Board Size	ATX: 9.6" x 12" (243.8 x 304.8 mm)

Chipset	Intel® Q87 Express Chipset

Memory
4 DIMM Sockets (1.5V), 1GB - 32GB, Single Channel / Dual Channel DDR3-1333 (CL9) and DDR3-1600 (CL11) SDRAM, unbuffered, no ECC

Processor
Intel® Core™ i5 / i7 – 4xxx processor series
Intel® Core™ i3 – future gen4 processor series
Intel® Pentium® - future *Haswell* processor series
Intel® Celeron® - future *Haswell* processor series
Socket LGA1150, max. 95W TDP
(For details on supported processors please refer to our website)

Power Specification
ATX- 24 Pin or ATX- 20 Pin Power Supply required; Support for Soft-Off Power Supplies; 3.3V Auxiliary Supply Voltage on PCIe Slots (Wake-Up Function)
On board CPU Core Voltage Regulator

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

Source	Voltage	Min. PS Load	Max.Voltage Tolerance	Mainboard Capacitive Load	Max. Mainboard Current
Main Power Supply	+ 12V	0.05A	± 5 %	10.000µF	14A/18A 1)
	- 12V	0A	± 10 %	500µF	0.3A
	+ 5V	0.2A	± 5 %	10.000µF	10A
	+ 3.3V	0A	± 5 %	6.000µF	2A
Aux. Power	+ 5Vaux	0A	+5 % / -3%	7.000µF	2.5A

1) 18A = 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 PCI 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

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

External Connectors

PS/2   4 x USB2.0   2 x DP1.2   DVI-I   2 x USB3.0   2 x USB2.0   Audio

Designed for Industrial Applications
Longlife components	Designed for 24/7 use in industrial applications
Tin-plated PCB	Improved durability of PCB surface
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) 4)	

Graphics
Intel® HD Graphics (e.g. HD4600, depends on installed processor), DX11.1

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
6 Serial ATA III 600 Interface (up to 6GBit/s), NCQ, AHCI, RAID 0/1/5/10
1 mSATA (fullsize), ATA III 600 (shared with one SATA port), incl. USB2.0

Features	D3236-S
Chipset	iQ87
Board Size	ATX
VGA / DVI-I / DVI-D / DisplayPort V1.2 / LVDS	- 3) / ✔ / - / 2x / -
Stereo Audio / 5.1 Multichannel Audio	- / ✔
Buzzer / int. Speaker Support	✔ / ✔
Dual LAN Gbit / 100 Mbit / 10 Mbit	✔ / ✔ / ✔
LAN ASF / DASH / WoL / Boot / vPro 2013 (iAMT 9)	- / - / ✔ / ✔ / ✔
SATA / ATA / RAID / eSATA-support / mSATA	✔ / - / ✔ / ✔ / ✔
FireWire™ / USB 2.0 / USB 3.0	- / ✔ / ✔
FAN monitored PSU 1) / CPU / AUX1 / AUX2 / AUX3 1)	✔ / ✔ / ✔ / ✔/ ✔
FAN controlled PSU 1) / CPU / AUX1 / AUX2 / AUX3 1)	✔ / ✔ / ✔ / ✔/ ✔
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)	0°C – 60°C
Internal Connectors	
DIMM Sockets (DDR3 1600)	4
PCI Express x16 Slot (Gen3)	1
PCI Express x16 Slot (4 Lanes, Gen2) / x8 Slot (1 Lane, Gen2)	1 / 1
PCI Slots (32Bit, 33 MHz, Rev. 2.3)	4
SATA-600 / SATA-300 / ATA / Floppy / mSATA	6 / 0 / 0 / 0 / 1
S/PDIF (digital Audio) OUT / IN	- / 1
Frontpanel Audio (9-Pin, HD Audio)	1
USB 2.0 channels / USB 3.0 channels / USB Stick (2.0)	2 / 2 / 1
Serial (FIFO, 16550 compatible)	1
FAN PSU 1) / CPU / AUX1 / AUX2 / AUX3 1)	1 / 1 / 1 / 1 / 1
SMBus (Case Temperature)	-
Intrusion (Case Open) / GPIO (8Bit)	1 / 1
Parallel (EPP/ECP) Pin Connector 2)	1
Power 24 pin (BTX) / 4 pin (12V processor supply)	1 / 1
External Connectors	
VGA Sub D 3) / DVI-I / DVI-D / DisplayPort V1.2	- / 1 / - / 2
Audio Mic. In / Line in / Line out (or driver configuration)	1 / 1 / 1
S/PDIF (digital Audio) OUT / IN	- / -
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) 2)	-

1) Not supported by standard Power Supplies; FAN PSU and FAN AUX3 cannot be used simultaneously (Selectable in BIOS Setup)
2) External parallel port possible via optional connector cable
3) Via optional DVI-I / VGA interface connector
4) Forced cooling required, see technical documentation for detailed requirements

More information

Fujitsu platform solutions

In addition to Fujitsu Mainboards Fujitsu provides a range of platform solutions. They combine reliable Fujitsu products with the best in services, know-how and worldwide partnerships.

Dynamic Infrastructures

With the Fujitsu Dynamic Infrastructures approach, Fujitsu offers a full portfolio of IT products, solutions and services, ranging from clients to datacenter solutions, Managed Infrastructure and Infrastructure-as-a-Service. How much you benefit from Fujitsu technologies and services depends on the level of cooperation you choose. This takes IT flexibility and efficiency to the next level.

Computing products

www.fujitsu.com/global/services/computing
- PRIMERGY: Industrial standard server
- SPARC Enterprise: UNIX server
- PRIMEQUEST: Mission-critical IA server
- ETERNUS: Storage system

Software

www.fujitsu.com/software/
- Interstage: Application infrastructure software
- Systemwalker: System management software

More information

Learn more about Fujitsu Mainboards, please contact your Fujitsu sales representative, Fujitsu business partner, or visit our website.
http://ts.fujitsu.com/

Fujitsu green policy innovation

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:
www.fujitsu.com/global/about/environment

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