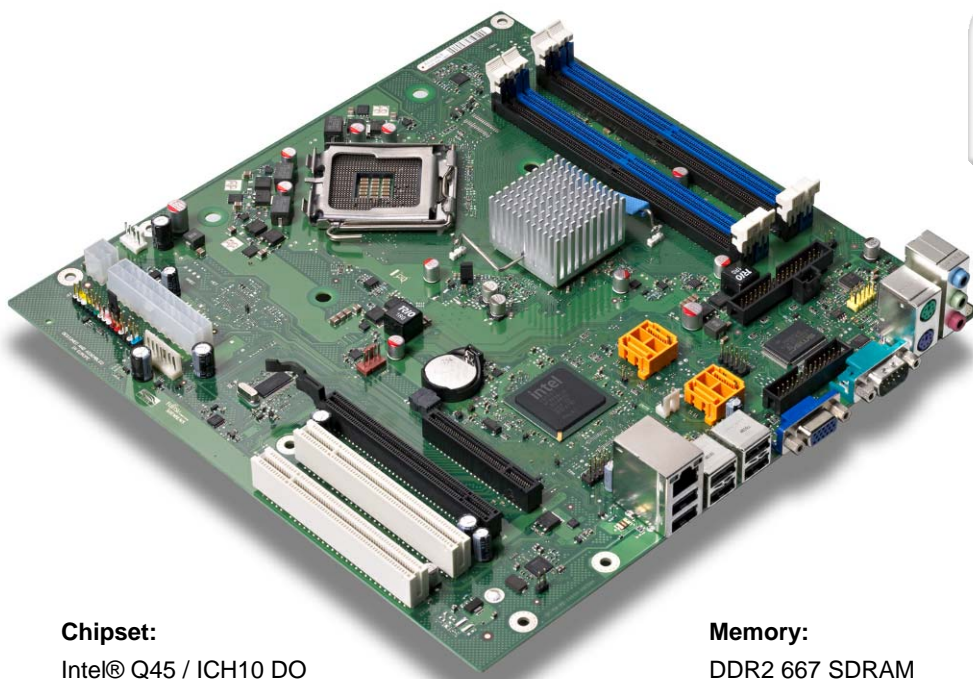


Premium Mainboard D2812-A µBTX

Issue October 2008

Pages 2

Intel® Q45 Chipset (iAMT 5.0) for DDR2 800 SDRAM Memory and
Intel® Core™2 Duo Processors and Core™2 Quad Processors (up to 1333 MHz FSB)



Chipset:

Intel® Q45 / ICH10 DO

Processors:

Intel® Core™ 2 Quad Q9xxx / Q8xxx Processors,
LGA775 with 1333/1066 MHz FSB

Intel® Core™ 2 DUO E8xxx / E6xxx Processors,
LGA775 with 1333/1066/800 MHz FSB

Intel® Core™ 2 DUO E7xxx / E4xxx Processors,
LGA775 with 1333/1066/800 MHz FSB

Intel® Pentium® Dual Core E2xxx Processors,
LGA775 with 800 MHz FSB

Intel® Celeron® Dual Core E1xxx Processors,
LGA775 with 800 MHz FSB

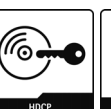
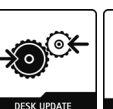
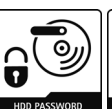
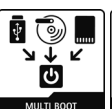
Intel® Celeron® 4xx Processors,
LGA775 with 800 MHz FSB

Memory:

DDR2 667 SDRAM
DDR2 800 SDRAM

Product Features:

Intel AMT 5.0 technology
Intel vPRO ready
Graphics onboard
PCI Express Gen2
Multichannel Audio onboard
USB 2.0 onboard
Intel GbE LAN onboard supporting ASF 2.0 and DASH
Serial ATA II RAID onboard
Trusted Platform Modul V1.2 onboard



Board Size	µBTX: 10.5" x 9.95" (266.7 x 264.2 mm)
Chipset	Intel® Q45 / ICH10 DO

Memory
 4 DIMM Sockets (1.8V), 512MB - 16GB, Single Channel or Dual Channel DDR2 800/667 SDRAM, unbuffered, no ECC (For details on recommended RAM, please refer to our website)

Processors
 Intel® Core™ 2 Quad Q9xxx / Q8xxx, 1333/1066 MHz FSB,
 Intel® Core™ 2 Duo E8xxx / E6xxx, 1333/1066 MHz FSB,
 Intel® Core™ 2 Duo E7xxx / E4xxx, 1066/800 MHz FSB,
 Intel® Pentium® Dual Core E2xxx, 800 MHz FSB,
 Intel® Celeron® Dual Core E1xxx, 800 MHz FSB
 Intel® Celeron® 4xx, 800 MHz FSB
 Compatible with Intel® 06 and 05A processors, max. 95W (LGA775)
 (For details on supported processors please refer to our website)

Power Specification
 BTX12V (24 Pin) or ATX12V (20 Pin) Power Supply required
 Support for Soft-Off Power Supplies
 5V and 3.3V Supply Voltage on PCI Slots (PCI Rev. 2.3)
 3.3V Auxiliary Supply Voltage on PCI Slots (Wake-Up Function)
 On board CPU Voltage Regulator, 5V / 2A Auxiliary Power required for USB Wake-Up from Save-to-RAM, Save-to-Disk

Power Supply (PS) Requirements
 for onboard components (worst case)

Source	Voltage	PS Load (min.) ¹	Voltage Tolerance (max)	Mainboard Current (max.)
Main Power Supply	+ 12 V	0.3 A	± 5 %	12 A
	- 12 V	0 A	± 10 %	0.05 A
	+ 5 V	0.6A	± 5 %	6 A
	+ 3.3 V	0A	± 5 %	0.5 A
Aux. Power Supply	+ 5 V	0 A	+5 % / -3%	2 A

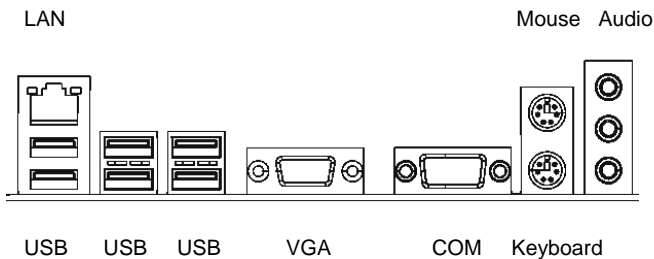
1) PS must support these load conditions if low power processors (e.g. Celeron 4xx) are used.

BIOS
 Phoenix Secure Core BIOS Version 6.00
 modified and adapted by Fujitsu Siemens Computers; Recovery BIOS, SM-BIOS (DMI), BIOS and CPU Microcode Update via disk (stable user settings), 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

Security Features
 Recovery BIOS, System and BIOS Password, Write Protection for Floppy Disk Drive, Boot Sequence Control, Serial/Parallel/USB- Port Access Protection, Boot Sector Virus Warning, Write Protection for Flash BIOS. Trusted Platform Module (TPM) V1.2 (Infineon)

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 DU DVD
 Multi Boot Comfortable boot from any boot device
 HDD Password Access protection for up to two disk drives

External Connectors



Graphics
 Intel® GMA4500 integrated graphics controller, shared memory (up to 256MB), DirectX 10 compliant, upgradeable with PCI Express x16 graphics card or ADD2+ cards

Audio
 Realtek ALC 663, 5.1-channel, High Definition audio

LAN
 Intel 82567LM Ethernet Controller with 10/100/1000 MBit/s, Wake-on-LAN (WoL) by interesting Packets, Link Status Change and Magic Packet™, bootix® PXE Support, BIOS MAC Address Display, ASF 2.0; DASH 1.0

Drives
 - 4 Serial ATA II 300 Interfaces (up to 3GBit/s, NCQ); RAID 0, 1, 10, 5
 - Floppy

Version D2812-A

Features	
Chipset	iQ45, ICH10DO
Board Size	µBTX
VGA	✓
Stereo Audio / 5.1 Multichannel Audio	- / ✓
Buzzer / int. Speaker Support	- / ✓
LAN Gbit / 100 Mbit / 10 Mbit	✓ / ✓ / ✓
LAN ASF / DASH / WoL / Boot / iAMT	✓ / ✓ / ✓ / ✓ / ✓
SATA / ATA / RAID / eSATA-support	✓ / - / ✓ / ✓
FireWire™ / USB 2.0	- / ✓
FAN monitored PSU ¹⁾ / CPU / AUX1 / AUX2	✓ / ✓ / ✓ / -
FAN controlled PSU ¹⁾ / CPU / AUX1 / AUX2	✓ / ✓ / ✓ / -
TEMP monitored CPU / ONB1 / ONB2 / OFFB	✓ / ✓ / ✓ / -

Special Features	
Silent Fan / Silent Fan LT / System Guard / Silent Drives	✓ / - / ✓ / ✓
Recovery BIOS / Desk Update / Multi Boot	✓ / ✓ / ✓
HDD Password / HDD Encryption	✓ / -
Logo Boot Option / Intel On Screen Branding	✓ / ✓
High Efficient Core regulator design (85% @ 65W)	✓

Internal Connectors	
DIMM Sockets (DDR2 800)	4
PCI Express x16 Slot (Gen. 2)	1
PCI Express x8 Slot (4 Lanes)	1
PCI Slots (32Bit, 33 MHz, Rev. 2.3)	2
SATA (300) / ATA (100) / Floppy	4 / 0 / 1
S/PDIF (digital Audio) OUT / IN	1 / -
Audio Input	-
Frontpanel Audio (9-Pin) AC'97 / Azalia	- / 1
FireWire™ (9-Pin, Intel standard header)	-
USB (2.0, ~480 MB/s, 2 channels per connector)	3
Serial (FIFO, 16550 compatible)	-
FAN PSU ¹⁾ / CPU / AUX1 / AUX2	1 / 1 / 1 / -
SMBus (Case Temperature)	-
Intrusion (Case Open)	1
Parallel (EPP/ECP) Pin Connector ²⁾	1
Power 24 pin (BTX) / 4 pin (12V processor supply)	1 / 1

External Connectors	
VGA Sub D / DVI ³⁾	1 / -
Audio Mic. In / Line in / Line out (or driver configuration)	1 / 1 / 1
Audio Surround / RearSurround / CenterLFE	- / - / -
S/PDIF (digital Audio, cinch) OUT / IN	- / -
S/PDIF (digital Audio, optical) OUT	-
LAN (RJ-45)	1
PS/2 Mouse / Keyboard	1 / 1
FireWire™ (6-Pin, IEEE 1394)	-
USB (2.0, ~480MB/s)	6
Serial (RS232, FIFO, 16550 compatible)	1
Parallel (EPP/ECP) ²⁾	-

1) Not supported by standard Power Supplies
 2) External parallel port possible via optional connector cable
 3) DVI connector possible via DVI extension card D2823