

DATA SHEET

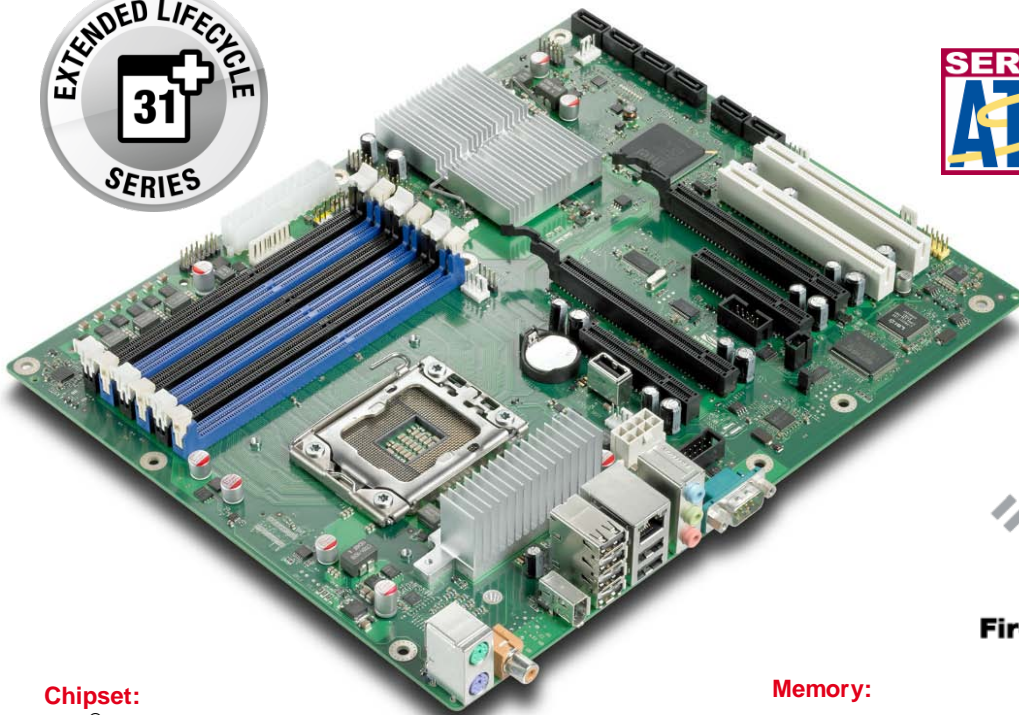
MAINBOARD D2778-D ATX

Extended Lifecycle Series

Issue April 2010

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Intel® X58 Express Chipset for DDR3 - 1333 SDRAM Memory (ECC Support)
and Intel® Xeon® (“Nehalem” and “Westmere”) and Core™ i7 Processors



Chipset:

Intel® X58 Express Chipset
(Tylersburg-36S / ICH10-R)

Processors:

Intel® Xeon® Processor 5500 / 5600 series
Intel® Xeon® Processor 3500 / 3600 series
Intel® Core™ i7 Processor series

Compatible with Intel® processors LGA1366 (up to 130W TDP) supporting Intel® QuickPath Interconnect

Memory:

DDR3 800 SDRAM
DDR3 1066 SDRAM
DDR3 1333 SDRAM
with ECC Support (depends on processor)

Product Features:

Dual PCIe x16 (Gen2) onboard
5.1 multichannel audio onboard
LSI FW322 FireWire™ onboard
USB 2.0 onboard
GbE LAN onboard supporting ASF 2.0
Serial ATA II RAID onboard
Trusted Platform Modul V1.2 onboard
Intel® QuickPath technology



Board Size	ATX: 12" x 9.6" (304.8 x 243.8 mm)
Chipset	Intel® "Tylersburg" X58 Express Chipset / ICH10-R
Memory	6 DIMM Sockets DDR3, max. 24GB, Single / Dual / Triple Channel 800/1066/1333MHz, single rank / dual rank unbuffered, ECC / non-ECC support (depends on processor)

Processors

Intel® Xeon® Processor 5500 / 5600 series (Nehalem-EP / Westmere)
Intel® Xeon® Processor 3500 / 3600 series (Nehalem-WS / Westmere)
Intel® Core™ i7 Processor series
Socket B (LGA1366), max. 130W TDP, integrated Memory Controller
(For details on supported processors please refer to our website)

Power Specification

24 Pin System Power Connector + 8 Pin Processor Power Connector 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 Requirements

Source	Voltage	Voltage Tolerance (max)	Supply Current (typ.)
Main Power	+ 12 V _{CPU}	± 5 %	8 A
	+ 12 V _{System}	± 5 %	6.5A
Supply	- 12 V	± 10 %	0.05 A
	+ 5 V	± 5 %	6.5 A
	+ 3.3 V	± 5 %	4.5A
Aux. Power Supply	+ 5 V	+5%; -3%	2 A

Configuration: Processor 130W (75% load); 6 x 2GB RAM; 1 x nVidia Quadro FX5800; 4 x SATA HDD; 2 x DVD Drive; Processor Fan + 3 x System Fan

BIOS

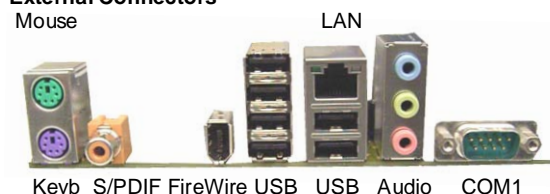
Phoenix Secure Core BIOS Version 6.00
modified and adapted by Fujitsu Technology Solutions; Recovery BIOS, SM-BIOS (DMI), BIOS and CPU Microcode Update via disk (stable user settings), Quick Boot, Logo Boot, Quiet Boot, Plug & Play, Automatic DRAM and PCI Configuration, BIOS Support for S.M.A.R.T., Advanced Power Management, ACPI S3 (Save-to-RAM), ACPI S4 (Save-to-Disk), Wake on time from S5

Security Features

Recovery BIOS, System and BIOS Password, Boot Sequence Control for each Boot Device, Serial Port Access Protection, USB Security, 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
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 disk drives
24/7 Operation	Mainboard is designed for continuous operation

External Connectors**Processor Heatsink**

D2778 is prepared for standard LGA 1366 heatsink with plastic push-pins.

Audio

Realtek ALC663, 5.1 Multichannel, High Definition Audio

LAN

Realtek 8111DP Ethernet Controller with 10/100/1000 Mbit/s, DASH 1.1, Wake-on-LAN (WoL) by interesting Packets, Link Status Change and Magic Packet™, PXE Support, BIOS MAC Address Display

Drives

- 6 Serial ATA II 300 Interfaces (up to 3Gbit/s, NCQ); RAID 0, 1, 10, 5

Features	D2778-D
Chipset	Intel X58 / ICH10R
Board Size	ATX
VGA	-
Stereo Audio / 5.1 Multichannel Audio	- / ✓
Buzzer / int. Speaker Support	- / ✓
LAN Gbit / 100 Mbit / 10 Mbit	✓ / ✓ / ✓
LAN ASF2.0 / DASH1.1 / AoL / WoL / Boot / iAMT	- / ✓ / - / - / ✓ / ✓ / -
SATA / ATA / RAID / eSATA-support	✓ / - / ✓ / ✓
FireWire™ / USB 2.0	✓ / ✓
FAN monitored PSU ¹⁾ / CPU/AUX1/AUX2/AUX3	✓ / ✓ / ✓ / ✓ / ✓ / ✓
FAN controlled PSU ¹⁾ / CPU/AUX1/AUX2/AUX3	✓ / ✓ / ✓ / ✓ / ✓ / ✓
TEMP monitored CPU / ONB1 / ONB2 / ONB3	✓ / ✓ / ✓ / ✓
Special Features	
Silent Fan / Silent Fan LT / System Guard / Silent Drives / 24-7 Operating Mode	✓ / - / ✓ / ✓ / ✓ / ✓
Recovery BIOS / Desk Update / Multi Boot	✓ / ✓ / ✓
HDD Password / USB Security	✓ / ✓
Logo Boot / Intel On Screen Branding	✓ / ✓
Internal Connectors	
DIMM Sockets (DDR3 1333)	6
PCI Express x16 (Gen. 2)	2
PCI Express x8 Slot (4 Lanes, Gen.2) ²⁾	1
PCI Express x8 Slot (4 Lanes, Gen.1)	1
PCI Slots (32Bit, 33 MHz, Rev. 2.3)	2
SATA (300) / ATA (100) / Floppy	6 / 0 / 0
S/PDIF (digital Audio) OUT / IN	1 / -
Audio Input	-
Frontpanel High Definition Audio (9-Pin)	1
FireWire™ (9-Pin, Intel standard header)	1
USB (2.0, ~480 MB/s, 2 channels per connector)	2
Specific socket for USB stick	1
Serial (FIFO, 16550 compatible)	1
FAN PSU ¹⁾ / CPU / AUX1 / AUX2 / Aux3	1 / 1 / 1 / 1 / 1
SMBus (Case Temperature)	-
Intrusion (Case Open)	1
LCD Status Display Support	1
Parallel (EPP/ECP) Pin Connector ³⁾	1
Power 24 pin (BTX) / 8 pin (12V processor supply) ⁴⁾	1 / 1
External Connectors	
VGA Sub D / DVI	- / -
Audio Mic. In / Line in / Line out (or driver configuration)	1 / 1 / 1
Audio Surround / Rear Surround / Center/LFE	- / - / -
S/PDIF (digital Audio, cinch) OUT / IN	1 / -
S/PDIF (digital Audio, optical) OUT	-
LAN (RJ-45)	1
PS/2 Mouse / Keyboard	1 / 1
FireWire™ (6-Pin, IEEE 1394)	1
USB (2.0, ~480MB/s)	6
Serial (RS232, FIFO, 16550 compatible)	1
Parallel (EPP/ECP) ³⁾	-

- 1) Not supported by standard Power Supplies
- 2) PCIe x16 card can be inserted (open connector)
- 3) External parallel port possible via optional connector cable
- 4) Standard 4 pin connector can **NOT** be used!

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