Review Zotac GE9300-D-E

Introduction

Long awaited – now finally here!

The manufacturer Zotac, who is generally known from the graphic sector, enters the market of high performance Mini ITX mainboards and presents his first model **„GeForce 9300-ITX WiFi"** which will be available shortly.

The appeal of the debut feature of Zotac on first sight is the high performance onboard graphic which will be enjoyed by the HTPC, CarPC user as well as the gaming enthusiasts. Furthermore, the Zotac mainboard scores thanks to a high degree of connectivity. For example, it provides 12 USB 2.0 (6x internal, 6x external) ports, VGA, DVI, HDMI and a WLAN modul which is part of the delivery content.

By his start in to the world of mainboards, Zotac bets on the well known high quality graphic and stable Celeron, Pentium and Core2 CPU architecture.

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Specification

Model	Zotac GeForce 9300-ITX WiFi (GF9300-D-E)
Type	Mini-ITX mainboard
CPU	Intel Core 2 Duo , up to 1333 FSB (socket 775)
Graphic	NVIDIA GeForce 9300 GPU GPU: 450Mhz overclockable, Shader: 1200Mhz overclockable 16 stream processors DirectX 10
RAM	2x DDR2 667/800 RAM (8GB max) Dual channel DDR2
Power supply	24 Pin ATX, P4-connector
External ports	- 1x VGA (DSUB-15) - 1x DVI - 1x HDMI - 6x USB 2.0 - 1x eSATA - Audio - 1x LAN 10/100/1000 MBit - SPDIF (optical + coaxial) - WLAN Antenna - 1x PS/2 (Keyboard)
SATA	2x SATA-II (RAID), 1x eSATA
Internal ports	- 1x PCIe 2.0 x16 - Audio - 6x USB 2.0 - 2x SATA - 1x Serial
Delivery content	- GF9300-D-E mainboard with WLAN-Add-on-card (802.11b/g) - I/O ATX rear plate - 2x SATA cable - Quickstart-Guide - Drivers CD
Software	- Treiber CDs für Mainboard und WLAN Steckkarte
Dimensions	- 17cm x 17cm

Mainboard and ports

The base of the new Zotac GeForce 9300-ITX WiFi consists of a NVIDIA MCP7A chip set, in connection with a socket 775 CPU. Here you have the choice between a Celeron, Pentium 4, Pentium D or a Core2Duo option which are utilized with up to a 1333 MHz FSB (in our test E8500 with 2 x 3,16Ghz).

The product convinces the consumer by its onboard graphic, which allows the user to enjoy HD blue-ray and DVD movies pin sharp and without annoying stalling as well as the use of high resolution PC games.

Another feature - comes in very handy when you use it at home – is the WLAN module (included in delivery content) which can be mounted right on the mainboard. Therefore when it comes to picking a case, it is possible to pick one with a very small form factor and the user has the advantage over other mainboards that he can surf the net wireless without any extra accessories.

The Zotac mainboard convinces by the high number of possible ports. The well equipped I/O panel offers the following possible ports: 1x VGA (DSUB-15), 1x DVI, 1x HDMI, 6x USB 2.0, 1x eSATA, Audio, 1x LAN 10/100/1000 MBit, SPDIF (optical + coaxial), WLAN antenna, 1x PS/2 (Keyboard).
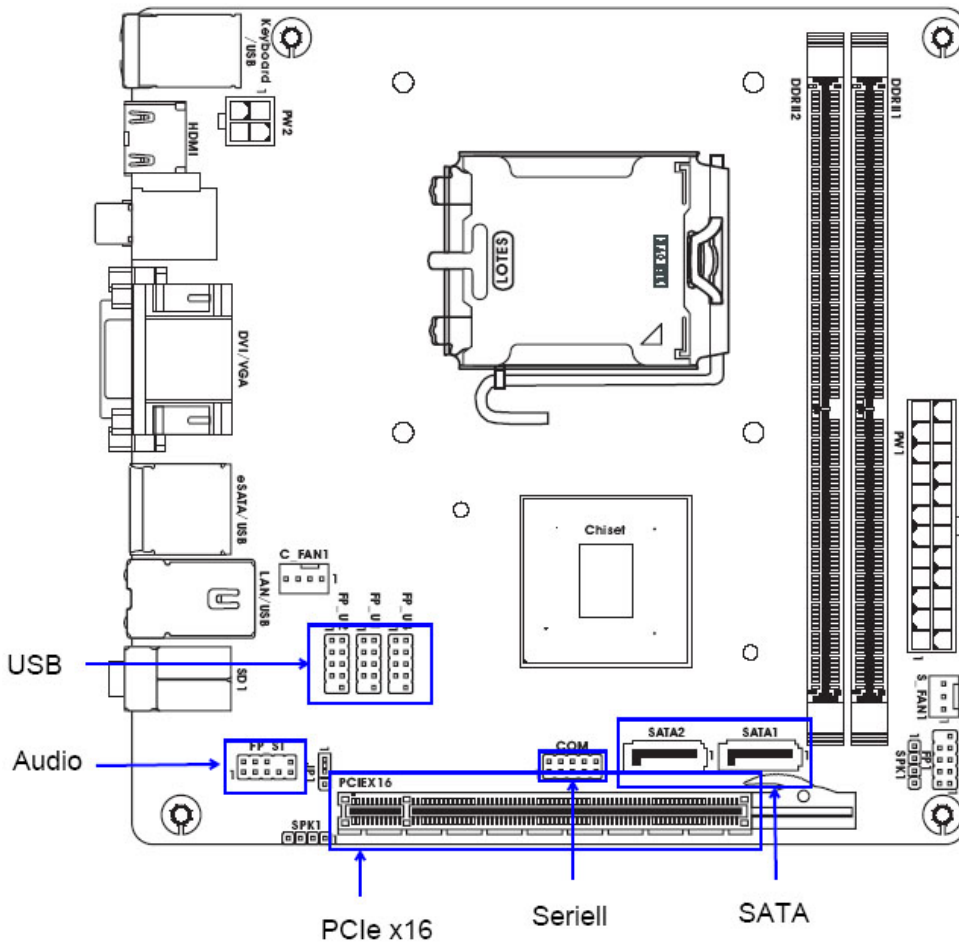
Internally the mainboard is also equipped with 1x PCIe 2.0 x16, Audio, 6x USB 2.0, 2x SATA, 1x serial interface.

The Zotac GF9300-D-E has two slots, each with one DDR2 DIMM with up to 4GB RAM per slot. The consumer has the possibility to operate in dual channel (fort his you should only use the same type of memory).
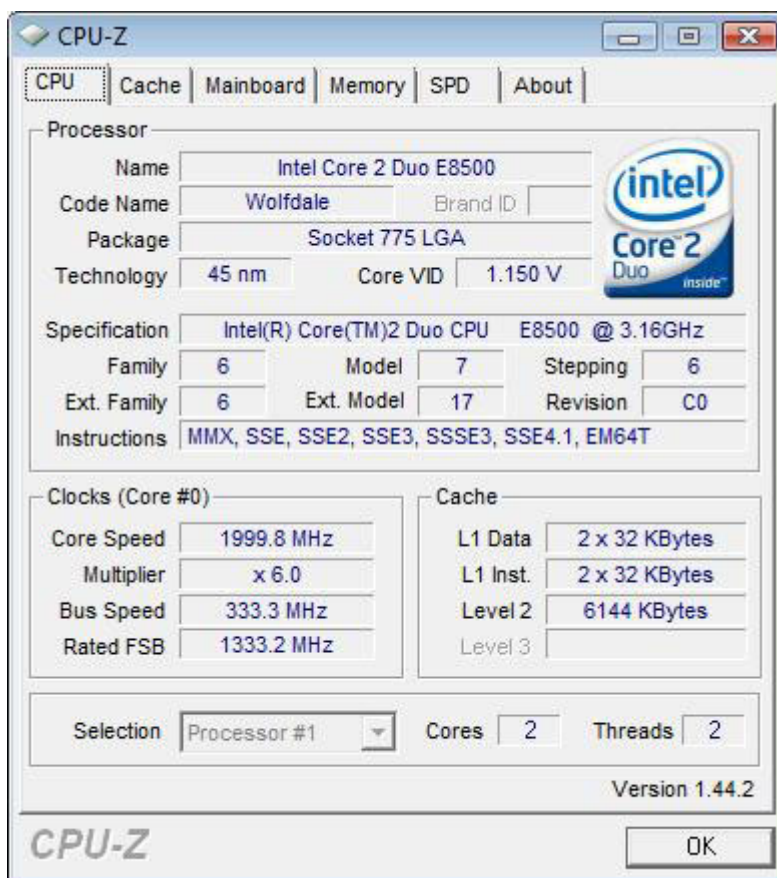
The slots are accessible and therefore you do not have to modify any cables.
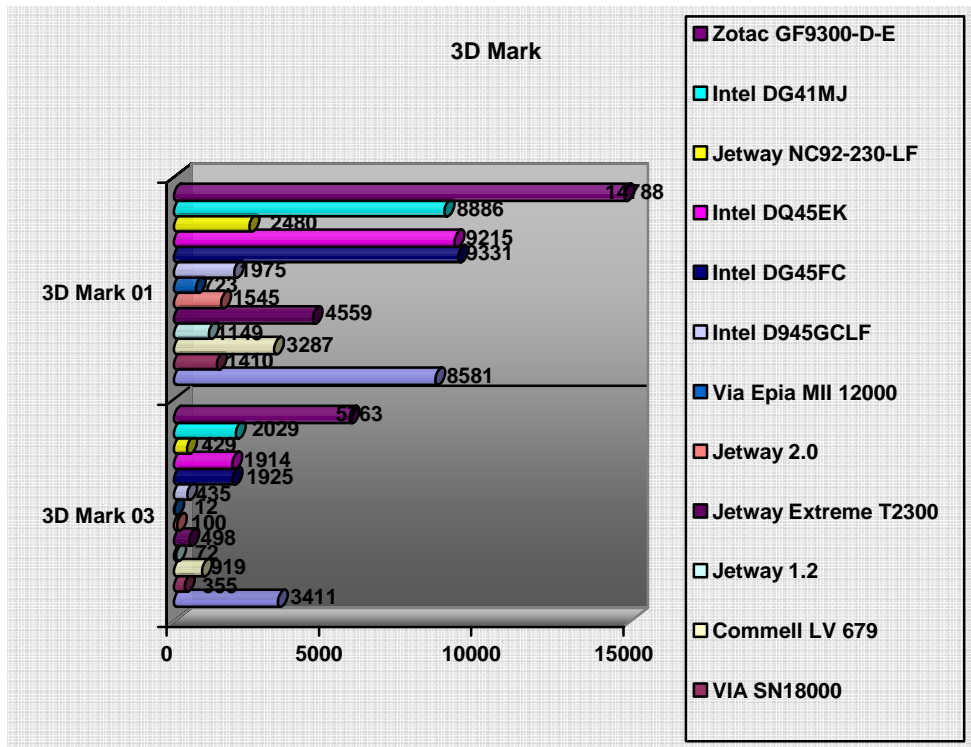
Installation, used hardware and use

The following hardware has been tested::

  - Zotac GF9300-D-E
  - Intel Core2Duo E8500 2 x 3,16 Ghz.
  - 2 x DDR2 DIMM 1GB 800Mhz
  - 2,5" SATA HDD 80GB (MHV2080BH)
  - M2 ATX power supply with 120 Watt & adapter cable 20pin to 24 pin
  - Windows XP Pro english

3D Mark

Legend:
- Zotac GF9300-D-E
- Intel DG41MJ
- Jetway NC92-230-LF
- Intel DQ45EK
- Intel DG45FC
- Intel D945GCLF
- Via Epia MII 12000
- Jetway 2.0
- Jetway Extreme T2300
- Jetway 1.2
- Commell LV 679
- VIA SN18000

3D Mark 01
- 14788
- 8886
- 2480
- 9215
- 9331
- 1975
- 723
- 1545
- 4559
- 1149
- 3287
- 1410
- 8581

3D Mark 03
- 5763
- 2029
- 429
- 1914
- 1925
- 435
- 12
- 100
- 498
- 72
- 919
- 355
- 3411

In the 3D Mark comparison the Zotac had outstanding results. Therefore it is number 1.

PC Mark 05

Legend:
- Zotac GF9300-D-E
- Intel DG41MJ
- Jetway NC92-230-LF
- Intel DQ45EK
- Intel DG45FC
- Futjitsu D2703S Semprom 2100+
- Intel D945GCLF
- Jetway Extreme T2300
- Commell LV 679
- Jetway NC62K Phenom 9550

PC Mark 05
- 5655
- 5157
- 1628
- 5405
- 5420
- 1358
- 1635
- 2661
- 3104
- 4588
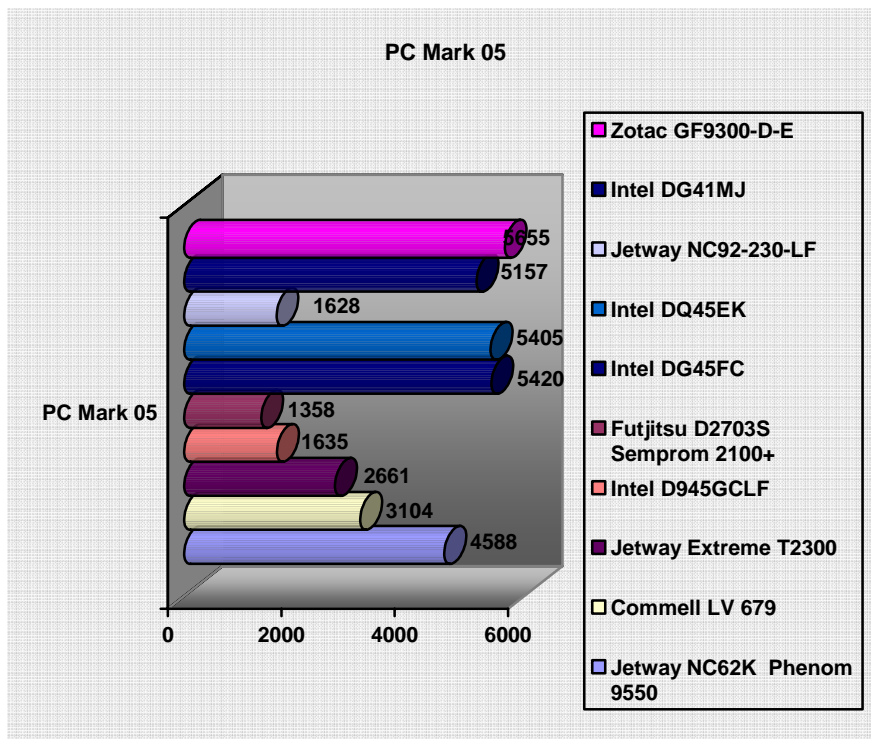
Based on the results in PC Mark 05 you can place the GF9300-D-E on one level with the Intel boards.

Cinebench R10

□	Zotac GF9300-D-E
■	Intel DG41MJ
■	Jetway NC92-230-LF
■	Intel DQ45EK
■	Intel DG45FC
□	Intel D945GCLF
■	Jetway Extreme T2300
□	Jetway 1.2
□	Commell LV 679
■	VIA SN18000
□	Jetway NC62K Phenom 9550

Rendering CPU
- 3462
- 3488
- 557
- 3477
- 3497
- 655
- 320
- 1507
- 1816
- 481
- 1769

OpenGL
- 3605
- 1498
- 279
- 1368
- 1369
- 277
- 575
- 29
- 665
- 215
- 2419

(axis: 0, 1000, 2000, 3000, 4000)
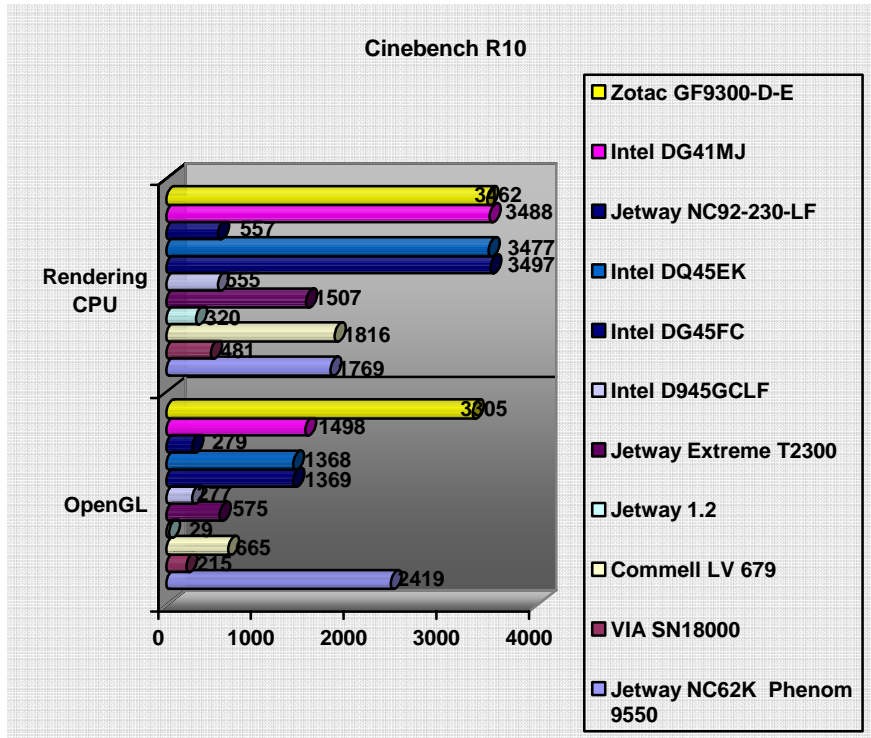
The Cinebench R10 test showed, the Zotac can keep up well with the competition, such as DG41MJ, DQ45EK and DG45FC. It is head to head with the Intel boards on spot 1.

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SiSoft Sandra CPU Arithmetik

■ Zotac GF9300-D-E	
■ Intel DG41MJ	
■ Jetway NC92-230-LF	
■ Intel DQ45EK	
■ Intel DG45FC	
□ Intel D945GCLF	
■ Via Epia MII 12000	
□ Jetway 2.0	

Whetstone ALU (MFLPOS)

- 25095
- 32415
- 3350
- 23030
- 23086
- 3329
- 390
- 2392
- 8362
- 1192
- 11448
- 2147
- 28109

Dhrystone ALU (MIPS)

- 26828
- 27186
- 3900
- 27053
- 27073
- 3856
- 1567
- 2756
- 9866
- 1374
- 15292
- 2474
- 24094

Axis: 0 10000 20000 30000 40000

In the SiSoft Sandra CPU arithmetic test the Zotac mainboard scored a spot in the top third of the field of competitors.

SiSoft Sandra CPU Multimedia

Legend:
- Zotac GF9300-D-E
- Jetway NC92-230-LF
- Intel DQ45EK
- Intel DG45FC
- Intel D945GCLF
- Via Epia MII 12000
- Jetway 2.0
- Jetway Extreme T2300
- Jetway 1.2
- Commell LV 679
- VIA SN18000
- Jetway NC62K Phenom 9550

Fließkomma (fit/s):
- 94577
- 19944
- 95376
- 95137
- 1980
- 4382
- 9728
- 85499
- 4849
- 53908
- 8731
- 109155

Integer (iit/s):
- 203383
- 29591
- 205274
- 205409
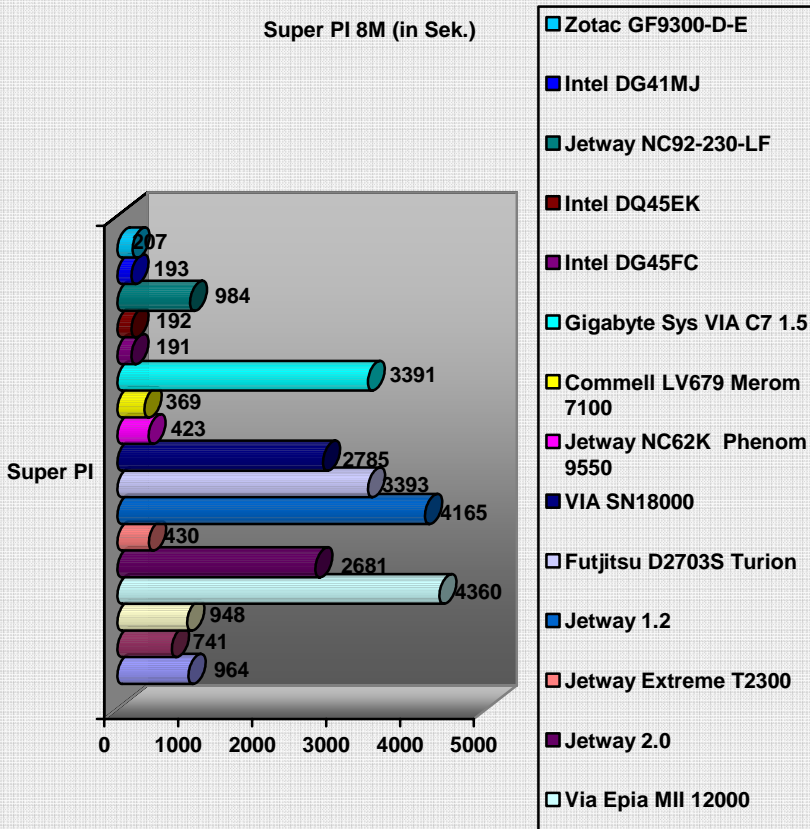- 29266
- 6162
- 8624
- 26039
- 4306
- 99065
- 7741
- 82960

The Multimedia test showed that the Zotac can also deliver a constant good performance and therefore is again leading the pack together with Intel.

SiSoft Sandra Speicherbandbreite

- Zotac GF9300-D-E
- Jetway NC92-230-LF
- Intel DQ45EK
- Intel DG45FC
- Intel D945GCLF
- Via Epia MII 12000
- Jetway 2.0
- Jetway Extreme T2300
- Jetway 1.2
- Commell LV 679
- VIA SN18000
- Jetway NC62K Phenom 9550
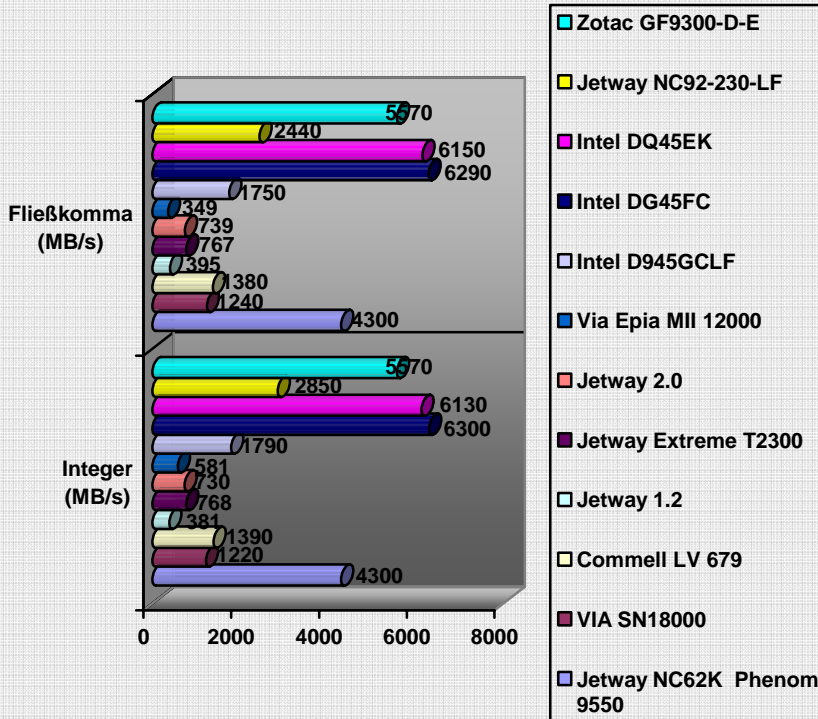
In this test the Zotac board performed well and took the third place right after the two Intel mainboards.

Super PI 8M (in Sek.)

- Zotac GF9300-D-E
- Intel DG41MJ
- Jetway NC92-230-LF
- Intel DQ45EK
- Intel DG45FC
- Gigabyte Sys VIA C7 1.5
- Commell LV679 Merom 7100
- Jetway NC62K Phenom 9550
- VIA SN18000
- Futjitsu D2703S Turion
- Jetway 1.2
- Jetway Extreme T2300
- Jetway 2.0
- Via Epia MII 12000

Also, in the Super PI test the mainboard did well and took the fourth place.

Power consumption

Bootphase	80W
Idle	46W
Last	79W
CD/DVD Load	74W
DVD	74W

Acoustic level

The mainboard operates with the original CPU heatsink/fan (E8500) very quiet and at a comfortable sound level. Only if you listen very closely you will be able to hear the noise of the heatsink/fan of the mainboard.

Conclusion

The Zotac GeForce 9300-ITX WiFi has passed all of our test very good and impresses us with ist graphic. This makes it a very desireable mainboard not only for HTPC fans but also for ambitious PC.

The price is a little bit lower than the price of the Intel mainboards, nevertheless, the WLAN module is already included in the delivery content.

If you take a close look in direct comparison to its market companions, the Zotac mainboard can keep up in all areas.

The only not so positive thing about the mainboard is it has only two SATA ports. Therefore you only have the possibility to connect one HDD and one drive. The "raid" function of the mainboard is usable but to the cost of one of the drives.

Zotac GE9300-D-E

21.04.2009, written by Marcel Idler (translated by Corinna Horn)