

Review ZOTAC ION ITX B-E

Introduction

Zotac extended its product portfolio in the MiniITX mainboard area further, and managed the split between power saving Atom CPU and good graphics.

Zotac just released another high end MiniITX mainboard – the GE9300.

The new mainboard is on the basis of the current N230 Atom CPU architecture and therefore they entered the competition of the well known Intel and Jetway interfaces.



Noticeable, as with all Zotac products, is the graphic performance. Other than its colleagues on the market, the Zotac doesn't bet on the GMA950 from Intel, they are going their own way with the NVIDIA ION Graphic. It is supposed to have 10 times the performance than the Intel version. We are looking forward to the graphic benches.



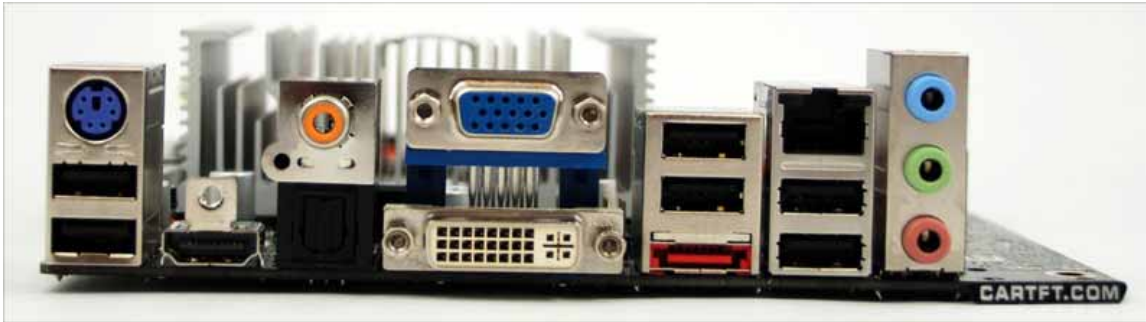


Spezifikationen

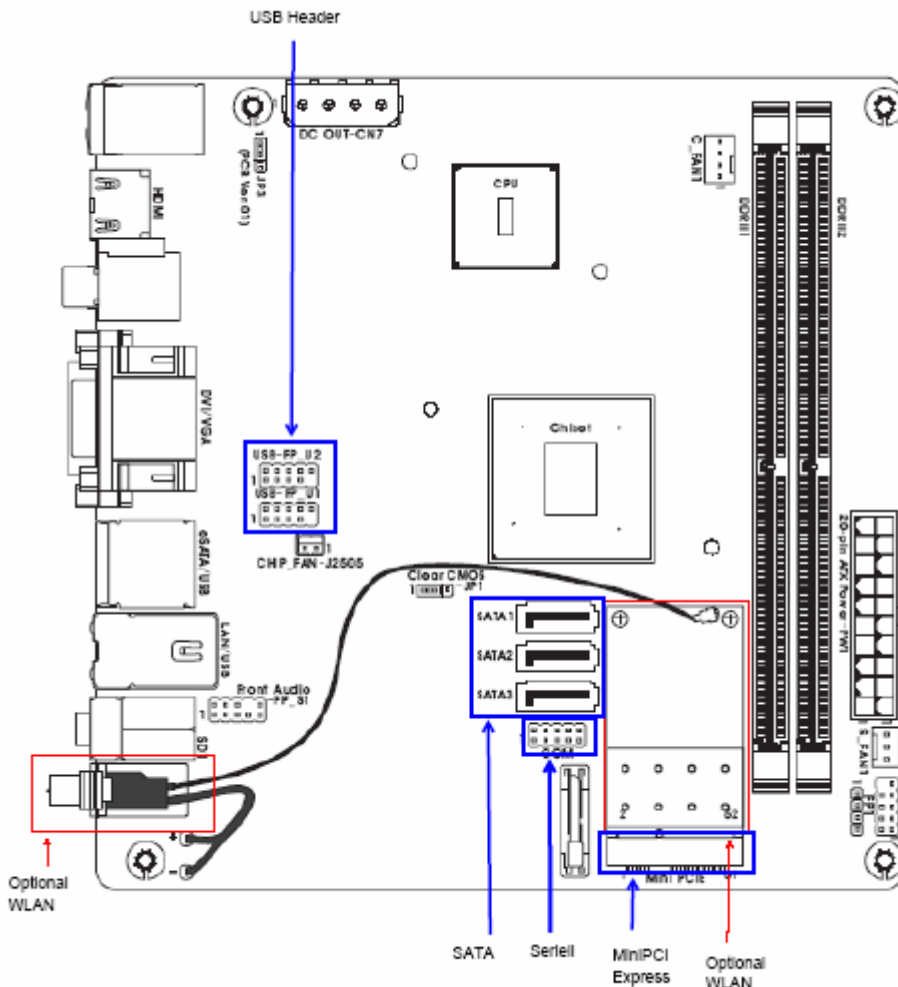
Model	Zotac IONITX-B-E
Type	Mini-ITX mainboard
CPU	Intel Atom N230 (Single Core), FSB 533Mhz / NVIDIA MCP7A-ION chip set
Graphic	NVIDIA ION Graphic processor GPU : 450Mhz, Shader : 1100Mhz16 stream processors DirectX 10 / Open GL 2.1
RAM	2x DDR2 667/800 RAM (4GB max) Dual Channel DDR2
Power supply	20 Pin ATX
External connectors	<ul style="list-style-type: none">- 6x USB 2.0- 1x PS/2 (Keyboard)- 1x HDMI- 1x SPDIF out (Coaxial/Optical)- 1x DVI- 1x eSATA- Audio- 1x LAN 10/100/1000 MBit- 1x VGA
SATA	3x SATA (RAID 0, 1 und 0+1)
Internal connectors	<ul style="list-style-type: none">- 1x MiniPCle- 4x USB 2.0- 3x SATA- 1x Serial
Delivery content	<ul style="list-style-type: none">- Zotac IONITX-B-E- I/O ATX rear plate- 3x SATA cable- 1x SATA Power cable- Quickstart-Guide- Drivers CD
Software	<ul style="list-style-type: none">- Driver CDs for mainboard
Dimensions	<ul style="list-style-type: none">- 17cm x 17cm

Mainboard and connectors

The new Zotac IONITX-B-E will be powered by a Intel Atom N230 interface in connection with the NVIDIA MCP7A-ION chip set. With this package, Zotac unites constant Atom performance and comfortable graphic.



Just like the GE9300 the Atom mainboard offers plenty of possible connections. On the slot panel are already 6x USB 2.0, 1x PS/2 (keyboard), 1x HDMI, 1x SPDIF out (Coaxial/Optical), 1x DVI, 1x eSATA, Audio, 1x LAN 10/100/1000 MBit and 1x VGA.
 Available connectors...



Which are completed internal by 1x MiniPCIe, 4x USB 2.0, 3x SATA and 1x serial.

On both RAM sockets of the IONITX-B-E it is possible to place up to 4GB DDR2 RAM (max. 2GB per socket), which optional can be used in DualChannel.
(Only use the same type of RAM)

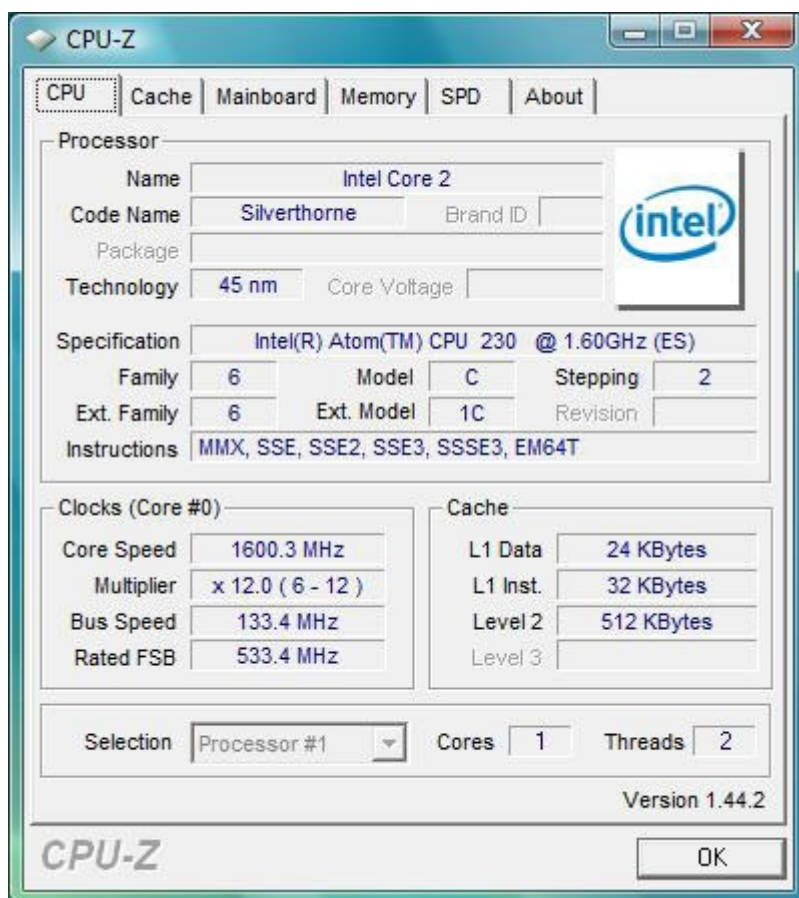
A very organized design makes it easy to build in and integrate the mainbord.

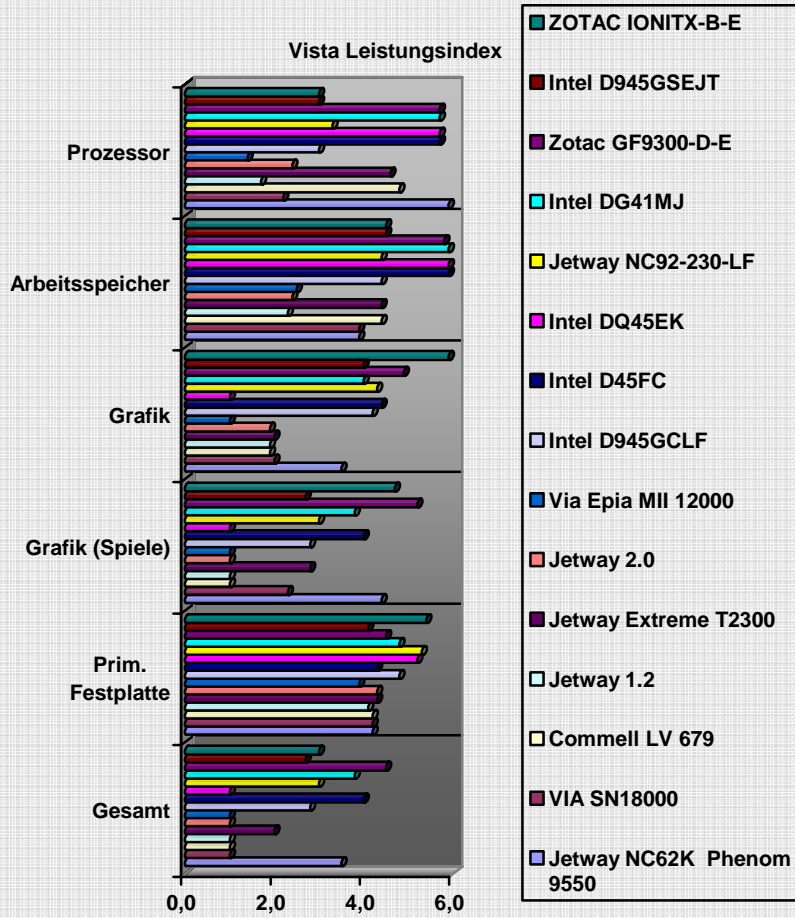


Installation, used hardware and operation

The following hardware has been used for our tests:

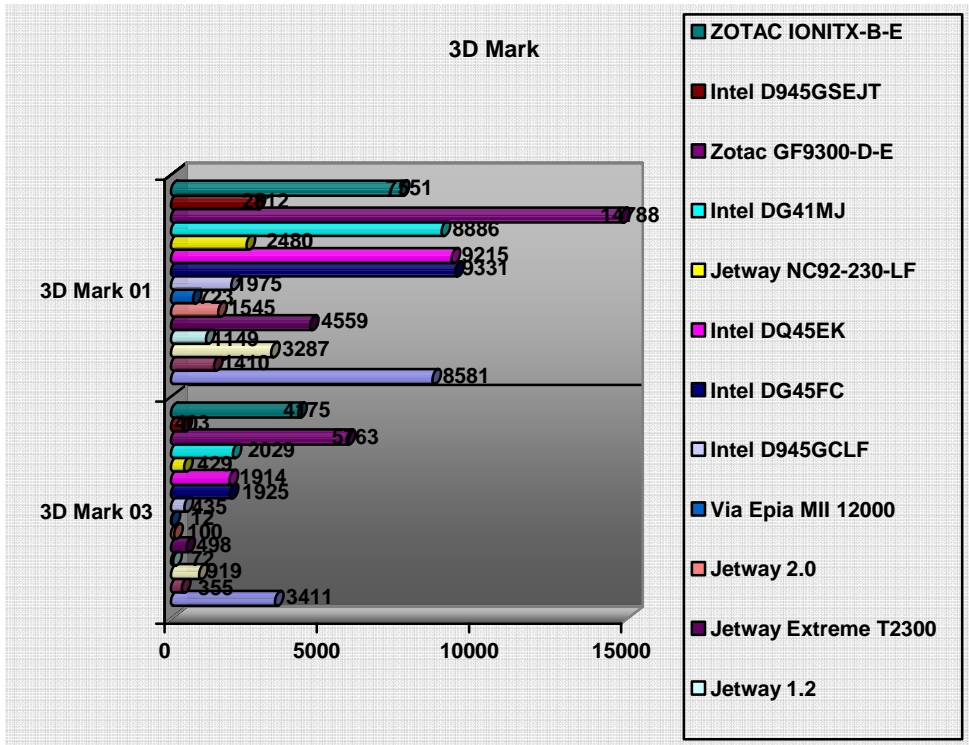
- Zotac IONITX-B-E
- Intel Atom N230 onboard
- 2 x DDR2 DIMM 1GB 800Mhz
- 2,5" SATA HDD 160GB (HM160HI)
- M2 ATX power supply with 120 Watt
- AC/DC 84 Watt
- Windows XP Pro German / VISTA



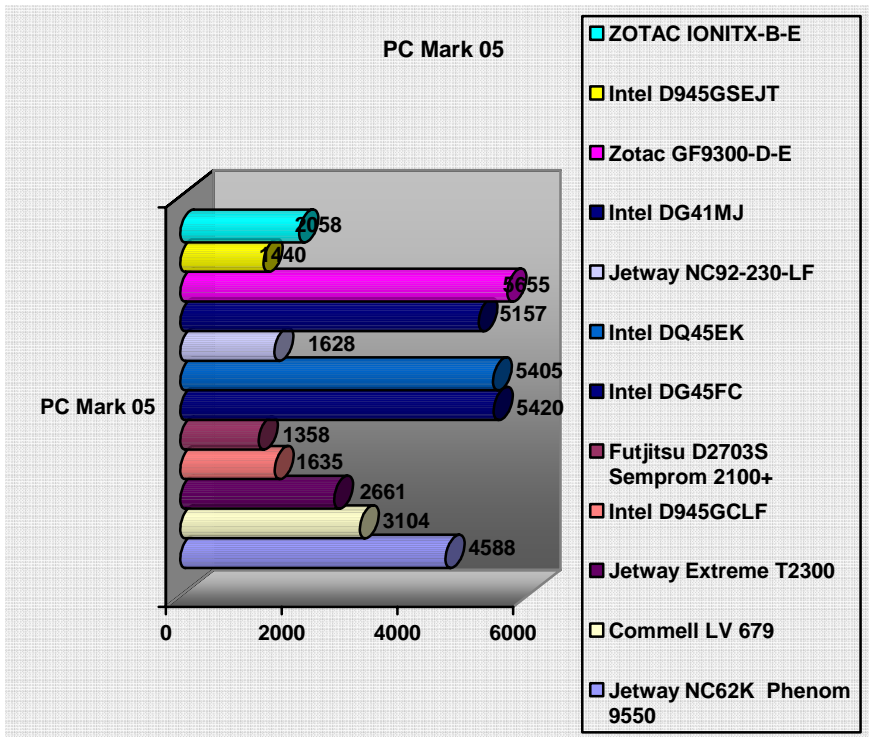


	Gesamt	Prim. Fest	Grafik (Spiele)	Grafik	Arbeitsspeicher	Prozessor
ZOTAC IONITX-B-E	3	5,4	4,7	5,9	4,5	3
Intel D945GSEJT	2,7	4,1	2,7	4	4,5	3
Zotac GF9300-D-E	4,5	4,5	5,2	4,9	5,8	5,7
Intel DG41MJ	3,8	4,8	3,8	4	5,9	5,7
Jetway NC92-230-LF	3	5,3	3	4,3	4,4	3,3
Intel DQ45EK	1	5,2	1	1	5,9	5,7
Intel D45FC	4,0	4,3	4,0	4,4	5,9	5,7
Intel D945GCLF	2,8	4,8	2,8	4,2	4,4	3,0
Via Epia MII 12000	1,0	3,9	1,0	1,0	2,5	1,4
Jetway 2.0	1,0	4,3	1,0	1,9	2,4	2,4
Jetway Extreme T2300	2,0	4,3	2,8	2,0	4,4	4,6
Jetway 1.2	1,0	4,1	1,0	1,9	2,3	1,7

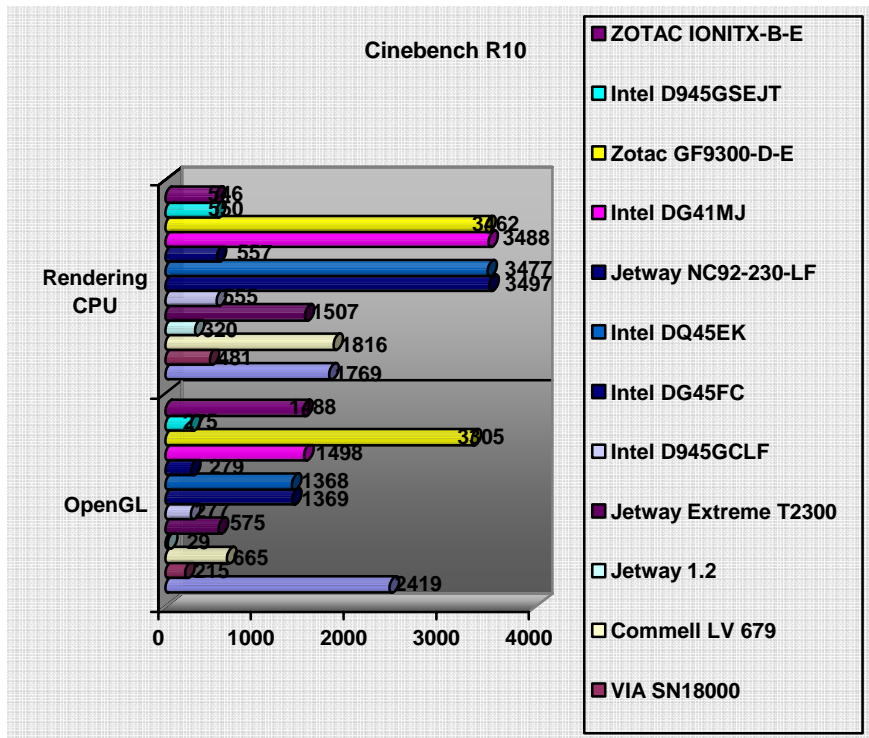
The Zotac IONITX-B-E was able to win the first spot in our Vista performance index test in comparison to its market colleagues (Atom based). In the general comparison it placed 5th.



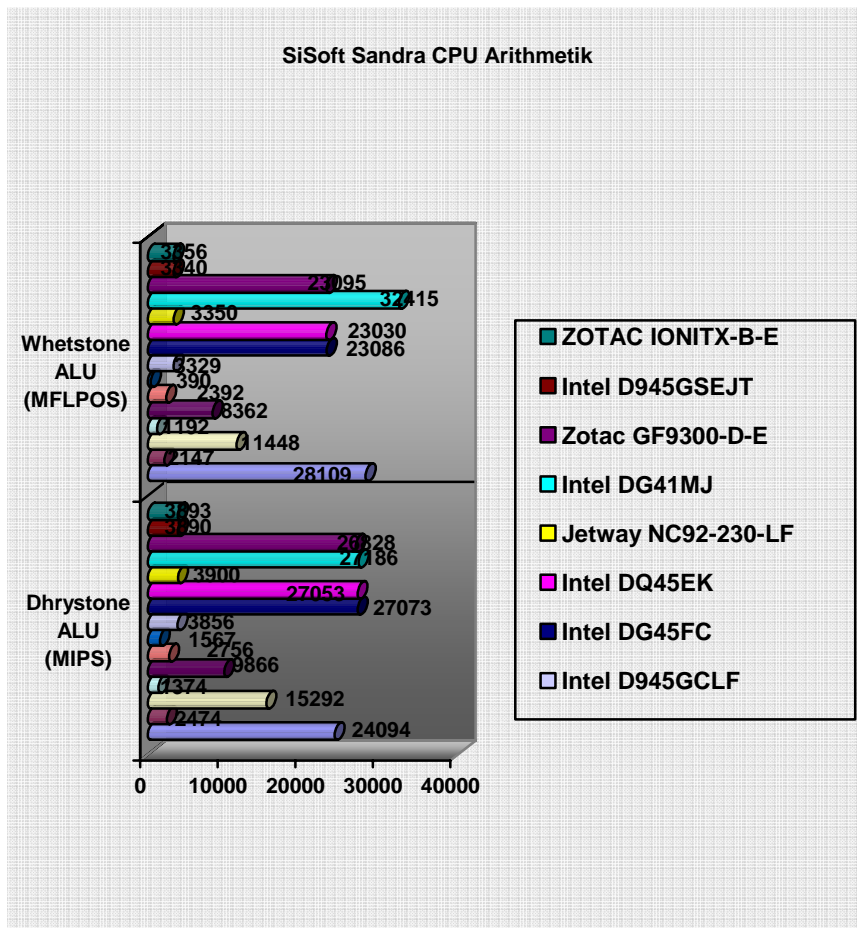
In the 3D Mark test we had to distinguish a bit. While it „only“ placed as number 6 in the 3DMark 01, in the 3D Mark 03 it moved up to a good 3rd spot. In direct comparison to its competition it was clearly able to defend its first spot.



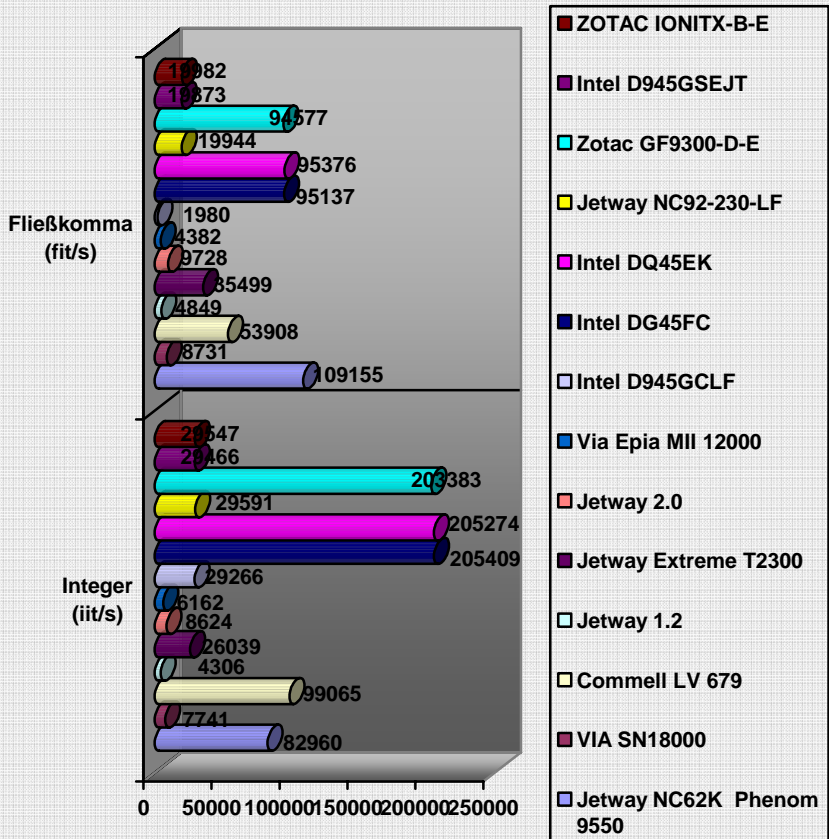
The PC Mark 05 test showed that it was able to win a spot in the middle field in the general comparison. But it was able to further extend its leadership in comparison to his market colleagues.



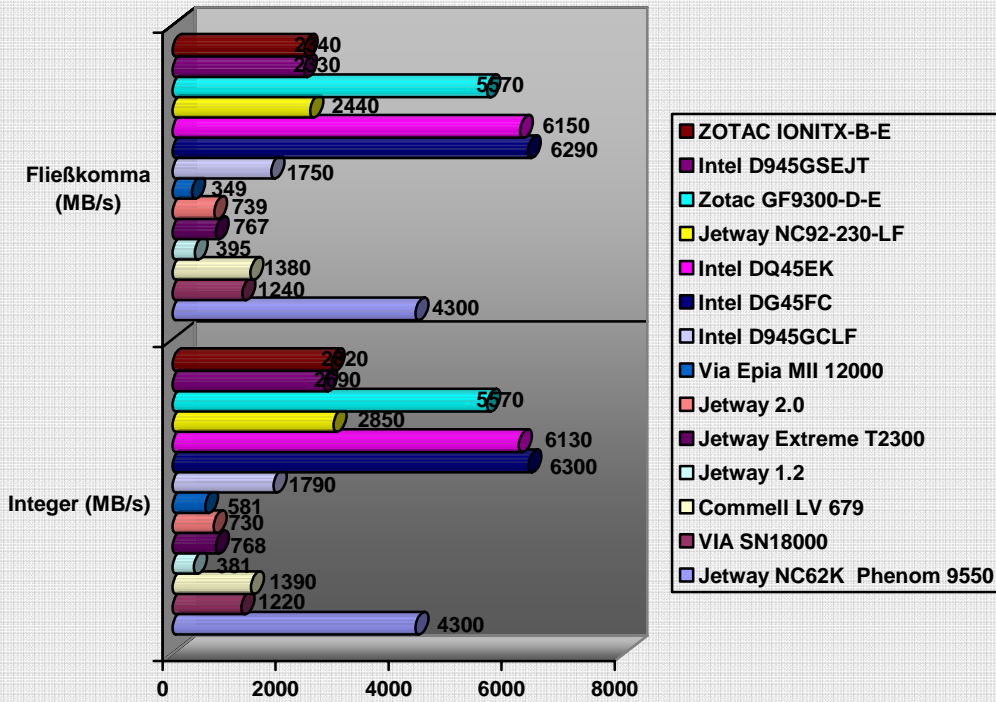
While the IONITX-B-E was able to further extend its leadership in the Cinebench R10 test in the area of OpenGL and scored the number 1 spot in the Atom comparison. Nevertheless, in the area of rendering CPU it has to take the spot behind the Jetway and Intel mainboards.



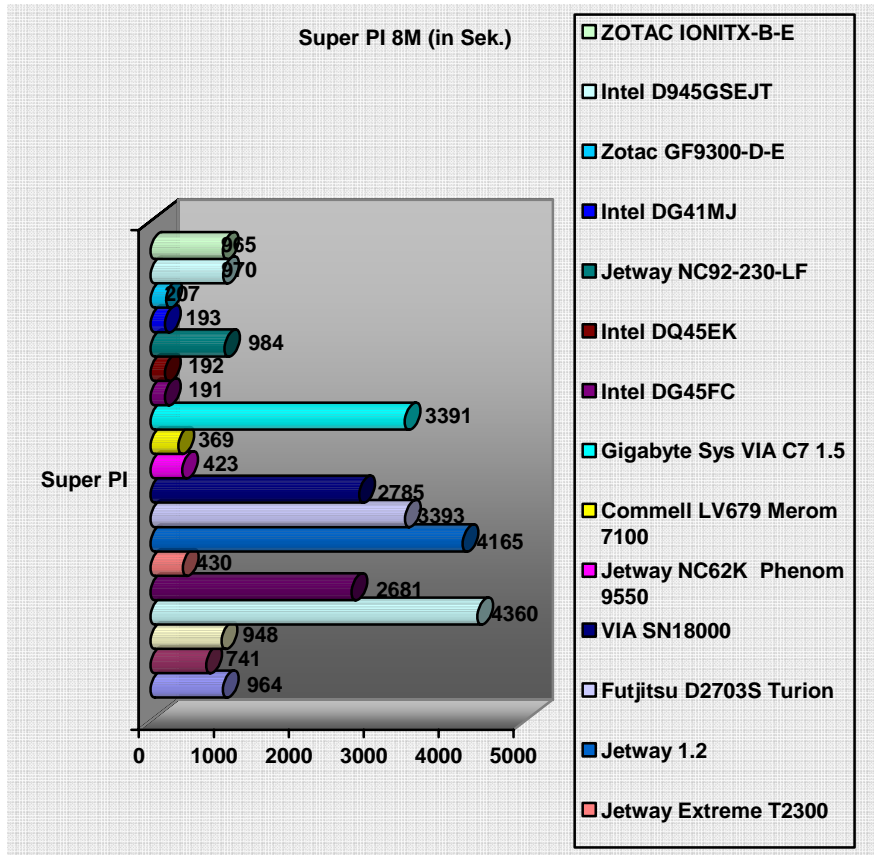
SiSoft Sandra CPU Multimedia



SiSoft Sandra Speicherbandbreite



The Zotac managed to get placed in the middle field in the SiSoft tests as well. When comparing the Atom mainboards with each other the Jetway NC92-230-LF and the IONITX-B-E are leading head to head.



If you take a look at the Super PI 8M test, the Zotac mainboard is in the middle field in comparison to its direct competitors as well as in the general comparison.

Power consumption

Bootphase	35W
Idle	26W
Last	35W
CD/DVD Load	33W
DVD	33W

Acoustic level

As the previously tested D945GSEJT the Zotac mainboard runs fanless, therefore the acoustic level is not even worth mentioning.

Conclusion

Summarizing, the IONITX-B-E comes off well. As we assumed already it convinces with its results in the graphics area and beats its market colleagues by far. In all the other areas it is placed in the middle field and will probably be more successful here with the Dual Atom version. This mainboard is perfect for a user who would like to pair constant CPU performance of the well known Intel Atom mainboards with superior graphic. It is also possible to use the board as HTPC due to its variable available connectors