

# AIDA64 Extreme

Navigation

Version	AIDA64 v6.25.5400/de
Benchmark Modul	4.5.816.8-x64
Homepage	<a href="http://www.aida64.com/">http://www.aida64.com/</a>
Berichtsart	Berichts-Assistent [ TRIAL VERSION ]
Computer	DESKTOP-6SBJOCG
Ersteller	Maxke
Betriebssystem	Microsoft Windows 10 Pro 10.0.18362.778 (Win10 RS6 [1903] May 2019 Update)
Datum	2020-04-17
Zeit	16:59

## Übersicht

### Computer:

Computertyp	ACPI x64-basierter PC
Betriebssystem	<a href="#">Microsoft Windows 10 Pro</a>
OS Service Pack	[ TRIAL VERSION ]
Internet Explorer	<a href="#">11.778.18362.0</a>
Edge	<a href="#">44.18362.449.0</a>
DirectX	<a href="#">DirectX 12.0</a>
Computername	DESKTOP-6SBJOCG
Benutzername	Maxke
Domainanmeldung	[ TRIAL VERSION ]
Datum / Uhrzeit	2020-04-17 / 16:59

### Motherboard:

CPU Typ	<a href="#">OctalCore AMD Ryzen 7 2700X, 4100 MHz (41 x 100)</a>
Motherboard Name	<a href="#">ASRock B450 Pro4 (4 PCI-E x1, 2 PCI-E x16, 2 M.2, 4 DDR4 DIMM, Audio, Video, Gigabit LAN)</a>
Motherboard Chipsatz	<a href="#">AMD B450, AMD Taishan, AMD K17 IMC</a>
Arbeitsspeicher	[ TRIAL VERSION ]
DIMM1: G Skill RipjawsV F4-3200C16-8GVKB	<a href="#">8 GB DDR4-3200 DDR4 SDRAM (16-18-18-38 @ 1600 MHz)</a>
DIMM3: G Skill RipjawsV F4-3200C16-8GVKB	[ TRIAL VERSION ]
BIOS Typ	<a href="#">AMI (12/12/2019)</a>
Anschlüsse (COM und LPT)	Kommunikationsanschluss (COM1)

### Anzeige:

Grafikkarte	<a href="#">GeForce GTX 1070 (8 GB)</a>
Grafikkarte	<a href="#">GeForce GTX 1070 (8 GB)</a>
Grafikkarte	<a href="#">GeForce GTX 1070 (8 GB)</a>

Grafikkarte  
3D-Beschleuniger  
Monitor  
Monitor

GeForce GTX 1070 (8 GB)  
nVIDIA GeForce GTX 1070  
HP EliteDisplay E243 (DP) [23.8" IPS LCD]  
(CNK8221JJJ)  
PnP-Monitor (Standard) [NoDB] (29522502031815)

**Multimedia:**

Soundkarte  
Soundkarte

nVIDIA GP104 HDMI/DP @ nVIDIA GP104 - High  
Definition Audio Controller  
Realtek ALC892 @ AMD K17 - High Definition Audio  
Controller

**Datenträger:**

IDE Controller  
IDE Controller  
IDE Controller  
Massenspeicher Controller  
Festplatte  
S.M.A.R.T. Festplatten-Status

Standardmäßiger SATA AHCI- Controller  
Standardmäßiger SATA AHCI- Controller  
Standardmäßiger SATA AHCI- Controller  
Microsoft-Controller für Speicherplätze  
ST1000DM010-2EP102 (1 TB, 7200 RPM, SATA-III)  
OK

**Partitionen:**

C: (NTFS)  
Speicherkapazität

[ TRIAL VERSION ]  
[ TRIAL VERSION ]

**Eingabegeräte:**

Tastatur  
Maus  
Maus

HID-Tastatur  
HID-konforme Maus  
HID-konforme Maus

**Netzwerk:**

Primäre IP-Adresse  
Primäre MAC-Adresse  
Netzwerkkarte

[ TRIAL VERSION ]  
A8-A1-59-1A-A6-5E  
Realtek PCIe GBE Family Controller (192. [ TRIAL  
VERSION ])

**Peripheriegeräte:**

Drucker  
Drucker  
Drucker  
Drucker  
USB3 Controller  
USB-Geräte  
USB-Geräte  
USB-Geräte  
USB-Geräte  
USB-Geräte  
USB-Geräte  
USB-Geräte

Fax  
Microsoft Print to PDF  
Microsoft XPS Document Writer  
OneNote  
AMD Low-Power Promontory F Chipset - USB xHCI  
Controller  
1080P Webcam  
1080P Webcam  
HID-compliant device  
USB-Eingabegerät  
USB-Eingabegerät  
USB-Verbundgerät  
USB-Verbundgerät

**DMI:**

DMI BIOS Anbieter	American Megatrends Inc.
DMI BIOS Version	P3.90
DMI Systemhersteller	To Be Filled By O.E.M.
DMI Systemprodukt	To Be Filled By O.E.M.
DMI Systemversion	To Be Filled By O.E.M.
DMI Systemseriennummer	[ TRIAL VERSION ]
DMI System UUID	[ TRIAL VERSION ]
DMI Motherboardhersteller	ASRock
DMI Motherboardprodukt	B450 Pro4
DMI Motherboardversion	
DMI Motherboardseriennummer	[ TRIAL VERSION ]
DMI Gehäusehersteller	To Be Filled By O.E.M.
DMI Gehäuseversion	To Be Filled By O.E.M.
DMI Gehäuseseriennummer	[ TRIAL VERSION ]
DMI Gehäusekennzeichnung	[ TRIAL VERSION ]
DMI Gehäusotyp	Desktop Case

## Speicher Lesedurchsatz

	CPU	CPU Takt	Motherboard	Chipsatz	Speicher	CL- RCD -RP - RAS
111245 MB/s	20x Xeon E5 -2660 v3 HT	2600 MHz	Supermicro X10DRi	C612	Octal DDR4- 1866	13- 13- 13- 31 CR1
85715 MB/s	32x Ryzen Threadripper 3970X HT	3800 MHz	Gigabyte TRX40 Aorus Xtreme	TRX40	Quad DDR4- 3200	16- 18- 18- 36 CR1
77068 MB/s	16x Xeon E5 -2670 HT	2600 MHz	Supermicro X9DR6-F	C600	Octal DDR3- 1333	9-9- 9-24 CR1
68474 MB/s	32x Ryzen Threadripper 2990WX HT	3000 MHz	MSI MEG X399 Creation	X399	Quad DDR4- 2933	16- 18- 18- 38 CR1
68050 MB/s	32x Opteron 6274	2200 MHz	Supermicro H8DGI-F	SR5690	Octal DDR3- 1600R	11- 11- 11- 28 CR1
59309 MB/s	6x Core i7- 7800X HT	3500 MHz	Gigabyte X299 UD4	X299	Quad DDR4- 2667	15- 17- 17- 35 CR2

54885 MB/s	16x Ryzen 9 3950X HT	3500 MHz	Gigabyte X570 Aorus Pro WiFi	X570	Dual DDR4 -3600	16-16-16-36 CR1
52263 MB/s	6x Core i7-4930K HT	3400 MHz	Gigabyte GA-X79-UD3	X79	Quad DDR3-1866	9-10-9-27 CR2
47090 MB/s	6x Core i7-6850K HT	3600 MHz	Asus Strix X99 Gaming	X99	Quad DDR4-2400	16-16-16-39 CR2
45280 MB/s	6x Core i7-3960X Extreme HT	3300 MHz	Intel DX79SI	X79	Quad DDR3-1600	9-9-9-24 CR2
45200 MB/s	8x Ryzen 7 2700X HT	3700 MHz	Asus Crosshair VII Hero	X470	Dual DDR4 -2933	16-20-21-49 CR1
44459 MB/s	6x Core i7-5820K HT	3300 MHz	Gigabyte GA-X99-UD4	X99	Quad DDR4-2133	15-15-15-36 CR2
42764 MB/s	4x Ryzen 5 2400G HT	3600 MHz	ASRock A320M Pro4	A320	Dual DDR4 -2933	16-15-15-35 CR1
41312 MB/s	8x Ryzen 7 1800X HT	3600 MHz	Asus Crosshair VI Hero	X370	Dual DDR4 -2667	16-17-17-35 CR1
39542 MB/s	6x Core i7-8700K HT	3700 MHz	Gigabyte Z370 Aorus Gaming 7	Z370 Int.	Dual DDR4 -2667	16-18-18-38 CR2
38265 MB/s	8x Xeon X5550 HT	2666 MHz	Supermicro X8DTN+	i5520	Hexa DDR3-1333	9-9-9-24 CR1
35611 MB/s	16x Atom C3958	2000 MHz	Supermicro A2SDi-H-TP4F	Denverton	Dual DDR4 -2400	17-17-17-39
31589 MB/s	4x Core i7-7700K HT	4200 MHz	ASRock Z270 Extreme4	Z270 Ext.	Dual DDR4 -2133	15-15-15-36 CR2
30690 MB/s	4x Core i7-6700K HT	4000 MHz	Gigabyte GA-Z170X-UD3	Z170 Int.	Dual DDR4 -2133	14-14-14-35 CR2

27404 MB/s	8x FX-8350	4000 MHz	Asus M5A99X Evo R2.0	Navigation	AMD990X	Dual DDR3 -1866	9-10-9-27 CR2
27235 MB/s	8x FX-8150	3600 MHz	Asus M5A97		AMD970	Dual DDR3 -1866	9-10-9-27 CR2
26279 MB/s	6x FX-6100	3300 MHz	Asus Sabertooth 990FX		AMD990FX	Dual DDR3 -1866	9-10-9-27 CR2
24854 MB/s	4x Core i7-5775C HT	3300 MHz	Gigabyte GA-Z97MX-Gaming 5		Z97 Int.	Dual DDR3 -1600	11-11-11-28 CR1
23639 MB/s	4x Core i7-3770K HT	3500 MHz	MSI Z77A-GD55		Z77 Int.	Dual DDR3 -1600	9-9-9-24 CR2
23246 MB/s	4x Core i7-4770 HT	3400 MHz	Intel DZ87KLT-75K		Z87 Int.	Dual DDR3 -1600	9-9-9-27 CR2
21557 MB/s	4x A10-5800K	3800 MHz	Asus F2A55-M		A55 Int.	Dual DDR3 -1866	9-10-9-27 CR2
21290 MB/s	4x Core i7-965 Extreme HT	3200 MHz	Asus P6T Deluxe		X58	Triple DDR3-1333	9-9-9-24 CR1
21240 MB/s	4x A10-6800K	4100 MHz	Gigabyte GA-F2A85X-UP4		A85X Int.	Dual DDR3 -2133	9-11-10-27 CR2
21238 MB/s	6x Core i7-990X Extreme HT	3466 MHz	Intel DX58SO2		X58	Triple DDR3-1333	9-9-9-24 CR1
21178 MB/s	8x Atom C2750	2400 MHz	Supermicro A1SAi-2750F		Avoton	Dual DDR3 -1600	11-11-11-28 CR1
21007 MB/s	4x A10-7850K	3700 MHz	Gigabyte GA-F2A88XM-D3H		A88X Int.	Dual DDR3 -2133	9-11-10-31 CR2
20056 MB/s	12x Opteron 2431	2400 MHz	Supermicro H8DI3+-F		SR5690	Unganged Quad DDR2-800R	6-6-6-18 CR1
19189 MB/s	4x Core i7-2600 HT	3400 MHz	Asus P8P67		P67	Dual DDR3 -1333	9-9-9-24 CR1
18848 MB/s	8x Opteron 2378	2400 MHz	Tyan Thunder n3600R		nForcePro-3600	Unganged Quad DDR2-800R	6-6-6-18 CR1
17754 MB/s	4x Xeon X3430	2400 MHz	Supermicro X8SIL-F		i3420	Dual DDR3 -1333	

Navigation						9-9- 9-24 CR1
16602 MB/s	4x A8-3850	2900 MHz	Gigabyte GA-A75M-UD2H	A75 Int.	Dual DDR3 -1333	9-9- 9-24 CR1
16436 MB/s	4x A12-9800	3800 MHz	Gigabyte GA-AB350M-Gaming 3	B350 Int.	Dual DDR4 -2400	14- 16- 16- 31 CR1
15717 MB/s	4x Celeron J3455	1500 MHz	ASRock J3455B -ITX	ApolloLakeD Int.	Dual DDR3 -1866	11- 11- 11- 32 CR1
14716 MB/s	6x Phenom II X6 Black 1100T	3300 MHz	Gigabyte GA-890GPA-UD3H v2	AMD890GX Int.	Unganged Dual DDR3 -1333	9-9- 9-24 CR2
14408 MB/s	<b>8x Ryzen 7 2700X HT</b>	<b>3942 MHz</b>	<b>[ TRIAL VERSION ]</b>	<b>B450</b>	<b>DDR4-1866 SDRAM</b>	<b>13- 13- 13- 31 CR2</b>
14070 MB/s	4x Celeron J4105	1500 MHz	ASRock J4105-ITX	GeminiLakeD Int.	Dual DDR4 -2400	17- 17- 17- 39
13509 MB/s	4x Celeron J1900	2000 MHz	Gigabyte GA-J1900N-D3V	BayTrailD Int.	Dual DDR3 -1333	9-9- 9-24 CR1
13158 MB/s	8x Opteron 2344 HE	1700 MHz	Supermicro H8DME-2	nForcePro-3600	Unganged Quad DDR2-667R	5-5- 5-15 CR1
11433 MB/s	4x Opteron 2210 HE	1800 MHz	Tyan Thunder h2000M	BCM5785	Quad DDR2-600R	5-5- 5-15 CR1
11214 MB/s	2x Core i5-650 HT	3200 MHz	Supermicro C7SIM-Q	Q57 Int.	Dual DDR3 -1333	9-9- 9-24 CR1
10581 MB/s	4x Celeron N3150	1600 MHz	ASRock N3150B-ITX	Braswell Int.	Dual DDR3 -1600	11- 11- 11- 28 CR2
10204 MB/s	4x Phenom II X4 Black 940	3000 MHz	Asus M3N78-EM	GeForce8300 Int.	Ganged Dual DDR2 -800	5-5- 5-18 CR2
9660 MB/s	2x Athlon64 X2 Black 6400+	3200 MHz	MSI K9N SLI Platinum	nForce570SLI	Dual DDR2 -800	4-4- 4-11 CR1
9021 MB/s	4x Core 2 Extreme QX9650	3000 MHz	Gigabyte GA-EP35C-DS3R	P35	Dual DDR3 -1066	8-8- 8-20 CR2
8734 MB/s	4x Athlon 5350	2050 MHz	ASRock AM1B-ITX	Yangtze Int.	DDR3-1600 SDRAM	11- 11- 11-

Navigation					28 CR2
8543 MB/s	4x Phenom X4 9500	2200 MHz	Asus M3A	AMD770	Ganged Dual DDR2 -800 5-5-18 CR2
8160 MB/s	2x Pentium EE 955 HT	3466 MHz	Intel D955XBK	i955X	Dual DDR2 -667 4-4-11
7992 MB/s	P4EE HT	3733 MHz	Intel SE7230NH1LX	iE7230	Dual DDR2 -667 5-5-15
7620 MB/s	2x Core 2 Extreme X6800	2933 MHz	Abit AB9	P965	Dual DDR2 -800 5-5-18 CR2
7540 MB/s	8x Xeon E5462	2800 MHz	Intel S5400SF	i5400	Quad DDR2-640FB 5-5-15
6560 MB/s	4x Core 2 Extreme QX6700	2666 MHz	Intel D975XBX2	i975X	Dual DDR2 -667 5-5-15
6431 MB/s	Nano X2 L4350	1600 MHz	VIA EPIA-M900	VX900H Int.	DDR3-1066 SDRAM 7-7-20 CR2
6238 MB/s	2x Pentium D 820	2800 MHz	Abit Fatal1ty F-I90HD	RS600 Int.	Dual DDR2 -800 5-5-18 CR2
6013 MB/s	Athlon64 3200+	2000 MHz	ASRock 939S56-M	SiS756	Dual DDR400 2.5-3-3-8 CR2
6000 MB/s	2x Atom D2500	1866 MHz	Intel D2500CC	NM10 Int.	DDR3-1066 SDRAM 7-7-20 CR2
5833 MB/s	2x E-350	1600 MHz	ASRock E350M1	A50M Int.	DDR3-1066 SDRAM 8-8-20 CR1
5392 MB/s	2x Atom D525 HT	1800 MHz	Gigabyte GA-D525TUD	NM10 Int.	DDR3-800 SDRAM 6-6-15 CR2
5334 MB/s	Celeron 420	1600 MHz	Intel DQ965GF	Q965 Int.	Dual DDR2 -667 5-5-15
4591 MB/s	2x Xeon HT	3400 MHz	Intel SE7320SP2	iE7320	Dual DDR333R 2.5-3-3-7
3971 MB/s	Celeron D 326	2533 MHz	ASRock 775Twins-HDTV	RC410 Ext.	DDR2-533 SDRAM 4-4-11 CR2
3938 MB/s	Opteron 248	2200 MHz	MSI K8T Master1-FAR	K8T800	Dual DDR266R 2-3-3-6 CR1
3672 MB/s	8x Xeon L5320	1866 MHz	Intel S5000VCL	i5000V	Dual DDR2 -533FB 4-4-12
3569 MB/s	Atom 230 HT	1600 MHz	Intel D945GCLF	i945GC Int.	DDR2-533 SDRAM 4-4-12
3364 MB/s	Nano L2200	1600 MHz	VIA VB8001	CN896 Int.	DDR2-667 SDRAM 5-5-15 CR2
3323 MB/s	4x Xeon 5140	2333 MHz	Intel S5000VSA	i5000V	Dual DDR2 -667FB 5-5-15

2919 MB/s	Sempron 2600+	1600 MHz	ASRock K8NF4G-SATA2	GeForce6100 Int.	DDR400 SDRAM	2.5- 3-3- 8 CR2
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## Speicher Schreibdurchsatz

	CPU	CPU Takt	Motherboard	Chipsatz	Speicher	CL- RCD -RP -RAS
93960 MB/s	20x Xeon E5-2660 v3 HT	2600 MHz	Supermicro X10DRi	C612	Octal DDR4-1866	13-13-13-31 CR1
87145 MB/s	32x Ryzen Threadripper 3970X HT	3800 MHz	Gigabyte TRX40 Aorus Xtreme	TRX40	Quad DDR4-3200	16-18-18-36 CR1
73605 MB/s	32x Ryzen Threadripper 2990WX HT	3000 MHz	MSI MEG X399 Creation	X399	Quad DDR4-2933	16-18-18-38 CR1
73328 MB/s	16x Xeon E5-2670 HT	2600 MHz	Supermicro X9DR6-F	C600	Octal DDR3-1333	9-9-9-24 CR1
65654 MB/s	6x Core i7-7800X HT	3500 MHz	Gigabyte X299 UD4	X299	Quad DDR4-2667	15-17-17-35 CR2
60036 MB/s	32x Opteron 6274	2200 MHz	Supermicro H8DGI-F	SR5690	Octal DDR3-1600R	11-11-11-28 CR1
57968 MB/s	6x Core i7-6850K HT	3600 MHz	Asus Strix X99 Gaming	X99	Quad DDR4-2400	16-16-16-39 CR2
53174 MB/s	6x Core i7-4930K HT	3400 MHz	Gigabyte GA-X79-UD3	X79	Quad DDR3-1866	9-10-9-27 CR2
53051 MB/s	16x Ryzen 9 3950X HT	3500 MHz	Gigabyte X570 Aorus Pro WiFi	X570	Dual DDR4-3600	16-16-16-36 CR1
46700 MB/s				X99		



	6x Core i7-5820K HT	3300 MHz	Gigabyte GA-X99-UD4	Navigation	Quad DDR4-2133	15-15-15-36 CR2
45695 MB/s	6x Core i7-3960X Extreme HT	3300 MHz	Intel DX79SI	X79	Quad DDR3-1600	9-9-9-24 CR2
44521 MB/s	4x Ryzen 5 2400G HT	3600 MHz	ASRock A320M Pro4	A320	Dual DDR4-2933	16-15-15-35 CR1
43931 MB/s	8x Ryzen 7 2700X HT	3700 MHz	Asus Crosshair VII Hero	X470	Dual DDR4-2933	16-20-21-49 CR1
40821 MB/s	8x Ryzen 7 1800X HT	3600 MHz	Asus Crosshair VI Hero	X370	Dual DDR4-2667	16-17-17-35 CR1
40019 MB/s	6x Core i7-8700K HT	3700 MHz	Gigabyte Z370 Aorus Gaming 7	Z370 Int.	Dual DDR4-2667	16-18-18-38 CR2
33260 MB/s	4x Core i7-6700K HT	4000 MHz	Gigabyte GA-Z170X-UD3	Z170 Int.	Dual DDR4-2133	14-14-14-35 CR2
33252 MB/s	16x Atom C3958	2000 MHz	Supermicro A2SDi-H-TP4F	Denverton	Dual DDR4-2400	17-17-17-39
32976 MB/s	4x Core i7-7700K HT	4200 MHz	ASRock Z270 Extreme4	Z270 Ext.	Dual DDR4-2133	15-15-15-36 CR2
27387 MB/s	8x Xeon X5550 HT	2666 MHz	Supermicro X8DTN+	i5520	Hexa DDR3-1333	9-9-9-24 CR1
23902 MB/s	4x Core i7-3770K HT	3500 MHz	MSI Z77A-GD55	Z77 Int.	Dual DDR3-1600	9-9-9-24 CR2
23664 MB/s	4x Core i7-4770 HT	3400 MHz	Intel DZ87KLT-75K	Z87 Int.	Dual DDR3-1600	9-9-9-27 CR2
23651 MB/s	4x Core i7-5775C HT	3300 MHz	Gigabyte GA-Z97MX-Gaming 5	Z97 Int.	Dual DDR3-1600	11-11-11-28 CR1
19577 MB/s	4x Core i7-2600 HT	3400 MHz	Asus P8P67	P67	Dual DDR3-1333	9-9-9-24 CR1

17670 MB/s	8x FX-8350	4000 MHz	Asus M5A99X Evo R2.0	Navigation	AMD990X	Dual DDR3 -1866	9-10-9-27 CR2
17365 MB/s	8x FX-8150	3600 MHz	Asus M5A97		AMD970	Dual DDR3 -1866	9-10-9-27 CR2
17092 MB/s	4x Core i7-965 Extreme HT	3200 MHz	Asus P6T Deluxe		X58	Triple DDR3-1333	9-9-9-24 CR1
16992 MB/s	6x FX-6100	3300 MHz	Asus Sabertooth 990FX		AMD990FX	Dual DDR3 -1866	9-10-9-27 CR2
16893 MB/s	4x Celeron J3455	1500 MHz	ASRock J3455B -ITX		ApolloLakeD Int.	Dual DDR3 -1866	11-11-11-32 CR1
16676 MB/s	6x Core i7-990X Extreme HT	3466 MHz	Intel DX58SO2		X58	Triple DDR3-1333	9-9-9-24 CR1
14837 MB/s	4x A8-3850	2900 MHz	Gigabyte GA-A75M-UD2H		A75 Int.	Dual DDR3 -1333	9-9-9-24 CR1
14260 MB/s	<b>8x Ryzen 7 2700X HT</b>	<b>3917 MHz</b>	<b>[ TRIAL VERSION ]</b>		<b>B450</b>	<b>DDR4-1866 SDRAM</b>	<b>13-13-13-31 CR2</b>
14246 MB/s	12x Opteron 2431	2400 MHz	Supermicro H8DI3+-F		SR5690	Unganged Quad DDR2-800R	6-6-6-18 CR1
13065 MB/s	4x Xeon X3430	2400 MHz	Supermicro X8SIL-F		i3420	Dual DDR3 -1333	9-9-9-24 CR1
12775 MB/s	8x Opteron 2378	2400 MHz	Tyan Thunder n3600R		nForcePro-3600	Unganged Quad DDR2-800R	6-6-6-18 CR1
12475 MB/s	8x Atom C2750	2400 MHz	Supermicro A1SAi-2750F		Avoton	Dual DDR3 -1600	11-11-11-28 CR1
11929 MB/s	4x A10-7850K	3700 MHz	Gigabyte GA-F2A88XM-D3H		A88X Int.	Dual DDR3 -2133	9-11-10-31 CR2
10653 MB/s	4x Celeron J4105	1500 MHz	ASRock J4105-ITX		GeminiLakeD Int.	Dual DDR4 -2400	17-17-17-39
10227 MB/s	4x Celeron N3150	1600 MHz	ASRock N3150B-ITX		Braswell Int.	Dual DDR3 -1600	11-11-11-

Navigation						28 CR2
10159 MB/s	4x Celeron J1900	2000 MHz	Gigabyte GA-J1900N-D3V	BayTrailD Int.	Dual DDR3 -1333	9-9-9-24 CR1
9953 MB/s	4x A10-6800K	4100 MHz	Gigabyte GA-F2A85X-UP4	A85X Int.	Dual DDR3 -2133	9-11-10-27 CR2
9949 MB/s	2x Core i5-650 HT	3200 MHz	Supermicro C7SIM-Q	Q57 Int.	Dual DDR3 -1333	9-9-9-24 CR1
9814 MB/s	4x A10-5800K	3800 MHz	Asus F2A55-M	A55 Int.	Dual DDR3 -1866	9-10-9-27 CR2
9323 MB/s	4x A12-9800	3800 MHz	Gigabyte GA-AB350M-Gaming 3	B350 Int.	Dual DDR4 -2400	14-16-16-31 CR1
8864 MB/s	2x Athlon64 X2 Black 6400+	3200 MHz	MSI K9N SLI Platinum	nForce570SLI	Dual DDR2 -800	4-4-4-11 CR1
8646 MB/s	8x Opteron 2344 HE	1700 MHz	Supermicro H8DME-2	nForcePro-3600	Unganged Quad DDR2-667R	5-5-5-15 CR1
7921 MB/s	Nano X2 L4350	1600 MHz	VIA EPIA-M900	VX900H Int.	DDR3-1066 SDRAM	7-7-7-20 CR2
7706 MB/s	4x Opteron 2210 HE	1800 MHz	Tyan Thunder h2000M	BCM5785	Quad DDR2-600R	5-5-5-15 CR1
7114 MB/s	4x Phenom II X4 Black 940	3000 MHz	Asus M3N78-EM	GeForce8300 Int.	Ganged Dual DDR2 -800	5-5-5-18 CR2
7091 MB/s	6x Phenom II X6 Black 1100T	3300 MHz	Gigabyte GA-890GPA-UD3H v2	AMD890GX Int.	Unganged Dual DDR3 -1333	9-9-9-24 CR2
7083 MB/s	4x Core 2 Extreme QX9650	3000 MHz	Gigabyte GA-EP35C-DS3R	P35	Dual DDR3 -1066	8-8-8-20 CR2
6734 MB/s	8x Xeon E5462	2800 MHz	Intel S5400SF	i5400	Quad DDR2-640FB	5-5-5-15
5654 MB/s	2x Pentium EE 955 HT	3466 MHz	Intel D955XBK	i955X	Dual DDR2 -667	4-4-4-11
5638 MB/s	P4EE HT	3733 MHz	Intel SE7230NH1LX	iE7230	Dual DDR2 -667	5-5-5-15
5518 MB/s	4x Phenom X4 9500	2200 MHz	Asus M3A	AMD770	Ganged Dual DDR2 -800	5-5-5-18 CR2
4868 MB/s	2x Core 2 Extreme X6800	2933 MHz	Abit AB9	P965	Dual DDR2 -800	5-5-5-18 CR2
4829 MB/s		2666 MHz	Intel D975XBX2	i975X	Dual DDR2 -667	5-5-5-15

4x Core 2 Extreme QX6700		Navigation			
4696 MB/s	4x Athlon 5350	2050 ASRock AM1B- MHz ITX	Yangtze Int.	DDR3- 1600 SDRAM	11- 11- 11- 28 CR2
4592 MB/s	2x Atom D2500	1866 Intel MHz D2500CC	NM10 Int.	DDR3- 1066 SDRAM	7-7- 7-20 CR2
4260 MB/s	2x Pentium D 820	2800 Abit Fatal1ty F- MHz I90HD	RS600 Int.	Dual DDR2 -800	5-5- 5-18 CR2
4219 MB/s	2x Xeon HT	3400 Intel MHz SE7320SP2	iE7320	Dual DDR333R	2.5- 3-3- 7
4094 MB/s	Athlon64 3200+	2000 ASRock 939S56 MHz -M	SiS756	Dual DDR400	2.5- 3-3- 8 CR2
4074 MB/s	2x E-350	1600 ASRock MHz E350M1	A50M Int.	DDR3- 1066 SDRAM	8-8- 8-20 CR1
3803 MB/s	Opteron 248	2200 MSI K8T MHz Master1-FAR	K8T800	Dual DDR266R	2-3- 3-6 CR1
3652 MB/s	2x Atom D525 HT	1800 Gigabyte GA- MHz D525TUD	NM10 Int.	DDR3-800 SDRAM	6-6- 6-15 CR2
3561 MB/s	Celeron 420	1600 Intel MHz DQ965GF	Q965 Int.	Dual DDR2 -667	5-5- 5-15
3154 MB/s	Nano L2200	1600 MHz VIA VB8001	CN896 Int.	DDR2-667 SDRAM	5-5- 5-15 CR2
2831 MB/s	Atom 230 HT	1600 Intel MHz D945GCLF	i945GC Int.	DDR2-533 SDRAM	4-4- 4-12
2797 MB/s	Celeron D 326	2533 ASRock MHz 775Twins- HDTV	RC410 Ext.	DDR2-533 SDRAM	4-4- 4-11 CR2
2472 MB/s	4x Xeon 5140	2333 Intel MHz S5000VSA	i5000V	Dual DDR2 -667FB	5-5- 5-15
2335 MB/s	Sempron 2600+	1600 ASRock MHz K8NF4G- SATA2	GeForce6100 Int.	DDR400 SDRAM	2.5- 3-3- 8 CR2
2327 MB/s	8x Xeon L5320	1866 Intel MHz S5000VCL	i5000V	Dual DDR2 -533FB	4-4- 4-12

## Speicher Kopierdurchsatz

CPU	CPU Motherboard Takt	Chipsatz	Speicher	CL- RCD -RP
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Navigation						- RAS
103987 MB/s	20x Xeon E5-2660 v3 HT	2600 MHz	Supermicro X10DRi	C612	Octal DDR4-1866	13-13-13-31 CR1
95761 MB/s	32x Ryzen Threadripper 3970X HT	3800 MHz	Gigabyte TRX40 Aorus Xtreme	TRX40	Quad DDR4-3200	16-18-18-36 CR1
67171 MB/s	32x Ryzen Threadripper 2990WX HT	3000 MHz	MSI MEG X399 Creation	X399	Quad DDR4-2933	16-18-18-38 CR1
67051 MB/s	32x Opteron 6274	2200 MHz	Supermicro H8DGI-F	SR5690	Octal DDR3-1600R	11-11-11-28 CR1
66492 MB/s	16x Xeon E5-2670 HT	2600 MHz	Supermicro X9DR6-F	C600	Octal DDR3-1333	9-9-9-24 CR1
55043 MB/s	16x Ryzen 9 3950X HT	3500 MHz	Gigabyte X570 Aorus Pro WiFi	X570	Dual DDR4-3600	16-16-16-36 CR1
54396 MB/s	6x Core i7-7800X HT	3500 MHz	Gigabyte X299 UD4	X299	Quad DDR4-2667	15-17-17-35 CR2
51658 MB/s	6x Core i7-6850K HT	3600 MHz	Asus Strix X99 Gaming	X99	Quad DDR4-2400	16-16-16-39 CR2
50972 MB/s	6x Core i7-4930K HT	3400 MHz	Gigabyte GA-X79-UD3	X79	Quad DDR3-1866	9-10-9-27 CR2
47965 MB/s	6x Core i7-5820K HT	3300 MHz	Gigabyte GA-X99-UD4	X99	Quad DDR4-2133	15-15-15-36 CR2
42705 MB/s	6x Core i7-3960X Extreme HT	3300 MHz	Intel DX79SI	X79	Quad DDR3-1600	9-9-9-24 CR2
40993 MB/s	8x Ryzen 7 2700X HT	3700 MHz	Asus Crosshair VII Hero	X470	Dual DDR4-2933	16-20-21-49 CR1
40461 MB/s	8x Ryzen 7 1800X HT	3600 MHz	Asus Crosshair VI Hero	X370	Dual DDR4-2667	16-17-

Navigation						17-35 CR1
38295 MB/s	4x Ryzen 5 2400G HT	3600 MHz	ASRock A320M Pro4	A320	Dual DDR4 -2933	16-15-15-35 CR1
37901 MB/s	6x Core i7-8700K HT	3700 MHz	Gigabyte Z370 Aorus Gaming 7	Z370 Int.	Dual DDR4 -2667	16-18-18-38 CR2
34718 MB/s	8x Xeon X5550 HT	2666 MHz	Supermicro X8DTN+	i5520	Hexa DDR3-1333	9-9-9-24 CR1
31262 MB/s	4x Core i7-6700K HT	4000 MHz	Gigabyte GA-Z170X-UD3	Z170 Int.	Dual DDR4 -2133	14-14-14-35 CR2
30678 MB/s	4x Core i7-7700K HT	4200 MHz	ASRock Z270 Extreme4	Z270 Ext.	Dual DDR4 -2133	15-15-15-36 CR2
26791 MB/s	16x Atom C3958	2000 MHz	Supermicro A2SDi-H-TP4F	Denverton	Dual DDR4 -2400	17-17-17-39
24893 MB/s	8x FX-8150	3600 MHz	Asus M5A97	AMD970	Dual DDR3 -1866	9-10-9-27 CR2
24569 MB/s	6x Core i7-990X Extreme HT	3466 MHz	Intel DX58SO2	X58	Triple DDR3-1333	9-9-9-24 CR1
24464 MB/s	4x Core i7-5775C HT	3300 MHz	Gigabyte GA-Z97MX-Gaming 5	Z97 Int.	Dual DDR3 -1600	11-11-11-28 CR1
24331 MB/s	8x FX-8350	4000 MHz	Asus M5A99X Evo R2.0	AMD990X	Dual DDR3 -1866	9-10-9-27 CR2
23704 MB/s	6x FX-6100	3300 MHz	Asus Sabertooth 990FX	AMD990FX	Dual DDR3 -1866	9-10-9-27 CR2
22688 MB/s	4x Core i7-3770K HT	3500 MHz	MSI Z77A-GD55	Z77 Int.	Dual DDR3 -1600	9-9-9-24 CR2
22048 MB/s	4x Core i7-4770 HT	3400 MHz	Intel DZ87KLT-75K	Z87 Int.	Dual DDR3 -1600	9-9-9-27 CR2
21684 MB/s	4x Core i7-965 Extreme HT	3200 MHz	Asus P6T Deluxe	X58	Triple DDR3-1333	9-9-9-24 CR1

19590 MB/s	4x A10-7850K	3700 MHz	Gigabyte GA-F2A88XM-D3H	A88X Int.	Dual DDR3 -2133	9-11-10-31 CR2
17604 MB/s	4x A10-6800K	4100 MHz	Gigabyte GA-F2A85X-UP4	A85X Int.	Dual DDR3 -2133	9-11-10-27 CR2
17551 MB/s	4x Core i7-2600 HT	3400 MHz	Asus P8P67	P67	Dual DDR3 -1333	9-9-9-24 CR1
17365 MB/s	8x Atom C2750	2400 MHz	Supermicro A1SAi-2750F	Avoton	Dual DDR3 -1600	11-11-11-28 CR1
17343 MB/s	8x Opteron 2378	2400 MHz	Tyan Thunder n3600R	nForcePro-3600	Unganged Quad DDR2-800R	6-6-6-18 CR1
17256 MB/s	12x Opteron 2431	2400 MHz	Supermicro H8DI3+-F	SR5690	Unganged Quad DDR2-800R	6-6-6-18 CR1
16691 MB/s	4x A10-5800K	3800 MHz	Asus F2A55-M	A55 Int.	Dual DDR3 -1866	9-10-9-27 CR2
15854 MB/s	4x Celeron J3455	1500 MHz	ASRock J3455B -ITX	ApolloLakeD Int.	Dual DDR3 -1866	11-11-11-32 CR1
15829 MB/s	4x Celeron J4105	1500 MHz	ASRock J4105-ITX	GeminiLakeD Int.	Dual DDR4 -2400	17-17-17-39
15257 MB/s	4x Xeon X3430	2400 MHz	Supermicro X8SIL-F	i3420	Dual DDR3 -1333	9-9-9-24 CR1
14927 MB/s	4x A12-9800	3800 MHz	Gigabyte GA-AB350M-Gaming 3	B350 Int.	Dual DDR4 -2400	14-16-16-31 CR1
14078 MB/s	4x A8-3850	2900 MHz	Gigabyte GA-A75M-UD2H	A75 Int.	Dual DDR3 -1333	9-9-9-24 CR1
14015 MB/s	2x Core i5-650 HT	3200 MHz	Supermicro C7SIM-Q	Q57 Int.	Dual DDR3 -1333	9-9-9-24 CR1
13831 MB/s	<b>8x Ryzen 7 2700X HT</b>	<b>3917 MHz</b>	<b>[ TRIAL VERSION ]</b>	<b>B450</b>	<b>DDR4-1866 SDRAM</b>	<b>13-13-13-31 CR2</b>
12460 MB/s	6x Phenom II X6 Black 1100T	3300 MHz	Gigabyte GA-890GPA-UD3H v2	AMD890GX Int.	Unganged Dual DDR3 -1333	9-9-9-24 CR2

12113 MB/s	8x Opteron 2344 HE	1700 Supermicro MHz H8DME-2	nForcePro- 3600	Unganged Quad DDR2- 667R	5-5- 5-15 CR1
11321 MB/s	4x Celeron J1900	2000 Gigabyte GA- MHz J1900N-D3V	BayTrailD Int.	Dual DDR3 -1333	9-9- 9-24 CR1
11246 MB/s	4x Celeron N3150	1600 ASRock MHz N3150B-ITX	Braswell Int.	Dual DDR3 -1600	11- 11- 11- 28 CR2
9653 MB/s	4x Phenom II X4 Black 940	3000 Asus M3N78- MHz EM	GeForce8300 Int.	Ganged Dual DDR2 -800	5-5- 5-18 CR2
9482 MB/s	4x Opteron 2210 HE	1800 Tyan Thunder MHz h2000M	BCM5785	Quad DDR2- 600R	5-5- 5-15 CR1
8936 MB/s	2x Athlon64 X2 Black 6400+	3200 MSI K9N SLI MHz Platinum	nForce570SLI	Dual DDR2 -800	4-4- 4-11 CR1
8217 MB/s	8x Xeon E5462	2800 Intel S5400SF MHz	i5400	Quad DDR2- 640FB	5-5- 5-15
7656 MB/s	4x Phenom X4 9500	2200 Asus M3A MHz	AMD770	Ganged Dual DDR2 -800	5-5- 5-18 CR2
7609 MB/s	4x Athlon 5350	2050 ASRock AM1B- MHz ITX	Yangtze Int.	DDR3- 1600 SDRAM	11- 11- 11- 28 CR2
7389 MB/s	4x Core 2 Extreme QX9650	3000 Gigabyte GA- MHz EP35C-DS3R	P35	Dual DDR3 -1066	8-8- 8-20 CR2
6278 MB/s	2x Pentium EE 955 HT	3466 Intel MHz D955XBK	i955X	Dual DDR2 -667	4-4- 4-11
6127 MB/s	P4EE HT	3733 Intel MHz SE7230NH1LX	iE7230	Dual DDR2 -667	5-5- 5-15
5911 MB/s	Nano X2 L4350	1600 VIA EPIA- MHz M900	VX900H Int.	DDR3- 1066 SDRAM	7-7- 7-20 CR2
5510 MB/s	2x Core 2 Extreme X6800	2933 Abit AB9 MHz	P965	Dual DDR2 -800	5-5- 5-18 CR2
5287 MB/s	4x Core 2 Extreme QX6700	2666 Intel MHz D975XBX2	i975X	Dual DDR2 -667	5-5- 5-15
4893 MB/s	2x Pentium D 820	2800 Abit Fatal1ty F- MHz I90HD	RS600 Int.	Dual DDR2 -800	5-5- 5-18 CR2
4777 MB/s	2x E-350	1600 ASRock MHz E350M1	A50M Int.	DDR3- 1066 SDRAM	8-8- 8-20 CR1
4690 MB/s	2x Atom D2500	1866 Intel MHz D2500CC	NM10 Int.	DDR3- 1066 SDRAM	7-7- 7-20 CR2
4551 MB/s			SiS756		



	Athlon64 3200+	2000 MHz	ASRock 939S56 Navigation -M		Dual DDR400	2.5- 3-3- 8 CR2
4237 MB/s	2x Atom D525 HT	1800 MHz	Gigabyte GA- D525TUD	NM10 Int.	DDR3-800 SDRAM	6-6- 6-15 CR2
4194 MB/s	Celeron 420	1600 MHz	Intel DQ965GF	Q965 Int.	Dual DDR2 -667	5-5- 5-15
4174 MB/s	2x Xeon HT	3400 MHz	Intel SE7320SP2	iE7320	Dual DDR333R	2.5- 3-3- 7
3681 MB/s	Opteron 248	2200 MHz	MSI K8T Master1-FAR	K8T800	Dual DDR266R	2-3- 3-6 CR1
3269 MB/s	Nano L2200	1600 MHz	VIA VB8001	CN896 Int.	DDR2-667 SDRAM	5-5- 5-15 CR2
3145 MB/s	Celeron D 326	2533 MHz	ASRock 775Twins- HDTV	RC410 Ext.	DDR2-533 SDRAM	4-4- 4-11 CR2
3051 MB/s	Atom 230 HT	1600 MHz	Intel D945GCLF	i945GC Int.	DDR2-533 SDRAM	4-4- 4-12
3000 MB/s	4x Xeon 5140	2333 MHz	Intel S5000VSA	i5000V	Dual DDR2 -667FB	5-5- 5-15
2987 MB/s	8x Xeon L5320	1866 MHz	Intel S5000VCL	i5000V	Dual DDR2 -533FB	4-4- 4-12
2576 MB/s	Sempron 2600+	1600 MHz	ASRock K8NF4G- SATA2	GeForce6100 Int.	DDR400 SDRAM	2.5- 3-3- 8 CR2

## Speicherverzögerung

	CPU	CPU Takt	Motherboard	Chipsatz	Speicher	CL- RCD -RP - RAS
55.2 ns	Athlon64 X2 Black 6400+	3200 MHz	MSI K9N SLI Platinum	nForce570SLI	Dual DDR2 -800	4-4- 4-11 CR1
57.1 ns	Core i7- 3770K	3500 MHz	MSI Z77A- GD55	Z77 Int.	Dual DDR3 -1600	9-9- 9-24 CR2
58.3 ns	Core i7- 4770	3400 MHz	Intel DZ87KLT- 75K	Z87 Int.	Dual DDR3 -1600	9-9- 9-27 CR2
59.5 ns	Core i7- 8700K	3700 MHz	Gigabyte Z370 Aorus Gaming 7	Z370 Int.	Dual DDR4 -2667	16- 18- 18- 38 CR2
59.9 ns	A10-6800K			A85X Int.		

		4100 MHz	Gigabyte GA-F2A85X-UP4		Dual DDR3 -2133	9-11-10-27 CR2
60.1 ns	Core i7-7700K	4200 MHz	ASRock Z270 Extreme4	Z270 Ext.	Dual DDR4 -2133	15-15-36 CR2
60.5 ns	Core i7-6700K	4000 MHz	Gigabyte GA-Z170X-UD3	Z170 Int.	Dual DDR4 -2133	14-14-35 CR2
60.9 ns	FX-8150	3600 MHz	Asus M5A97	AMD970	Dual DDR3 -1866	9-10-9-27 CR2
61.0 ns	Core i7-4930K	3400 MHz	Gigabyte GA-X79-UD3	X79	Quad DDR3-1866	9-10-9-27 CR2
61.2 ns	FX-8350	4000 MHz	Asus M5A99X Evo R2.0	AMD990X	Dual DDR3 -1866	9-10-9-27 CR2
62.5 ns	FX-6100	3300 MHz	Asus Sabertooth 990FX	AMD990FX	Dual DDR3 -1866	9-10-9-27 CR2
62.9 ns	A10-5800K	3800 MHz	Asus F2A55-M	A55 Int.	Dual DDR3 -1866	9-10-9-27 CR2
63.1 ns	Core i7-965 Extreme	3200 MHz	Asus P6T Deluxe	X58	Triple DDR3-1333	9-9-9-24 CR1
66.4 ns	Core i7-2600	3400 MHz	Asus P8P67	P67	Dual DDR3 -1333	9-9-9-24 CR1
66.8 ns	Core i7-990X Extreme	3466 MHz	Intel DX58SO2	X58	Triple DDR3-1333	9-9-9-24 CR1
67.3 ns	Core i7-5775C	3300 MHz	Gigabyte GA-Z97MX-Gaming 5	Z97 Int.	Dual DDR3 -1600	11-11-28 CR1
67.5 ns	Core i7-3960X Extreme	3300 MHz	Intel DX79SI	X79	Quad DDR3-1600	9-9-9-24 CR2
67.9 ns	Ryzen 9 3950X	3500 MHz	Gigabyte X570 Aorus Pro WiFi	X570	Dual DDR4 -3600	16-16-36 CR1
69.6 ns	Xeon X3430	2400 MHz	Supermicro X8SIL-F	i3420	Dual DDR3 -1333	9-9-9-24 CR1

70.4 ns	Xeon X5550	2666 MHz	Supermicro X8DTN+ i5520 Navigation	Hexa DDR3-1333	9-9-9-24 CR1
70.5 ns	Core i7-6850K	3600 MHz	Asus Strix X99 Gaming X99	Quad DDR4-2400	16-16-16-39 CR2
71.2 ns	Ryzen Threadripper 2990WX	3000 MHz	MSI MEG X399 Creation X399	Quad DDR4-2933	16-18-18-38 CR1
72.0 ns	Core i7-5820K	3300 MHz	Gigabyte GA-X99-UD4 X99	Quad DDR4-2133	15-15-15-36 CR2
72.5 ns	Athlon64 3200+	2000 MHz	ASRock 939S56 -M SiS756	Dual DDR400	2.5-3-3-8 CR2
73.1 ns	Ryzen 7 2700X	3700 MHz	Asus Crosshair VII Hero X470	Dual DDR4-2933	16-20-21-49 CR1
73.8 ns	Ryzen 5 2400G	3600 MHz	ASRock A320M Pro4 A320	Dual DDR4-2933	16-15-15-35 CR1
74.0 ns	Phenom II X6 Black 1100T	3300 MHz	Gigabyte GA-890GPA-UD3H v2 AMD890GX Int.	Unganged Dual DDR3-1333	9-9-9-24 CR2
74.2 ns	Phenom II X4 Black 940	3000 MHz	Asus M3N78-EM GeForce8300 Int.	Ganged Dual DDR2-800	5-5-5-18 CR2
76.0 ns	A8-3850	2900 MHz	Gigabyte GA-A75M-UD2H A75 Int.	Dual DDR3-1333	9-9-9-24 CR1
77.0 ns	Sempron 2600+	1600 MHz	ASRock K8NF4G-SATA2 GeForce6100 Int.	DDR400 SDRAM	2.5-3-3-8 CR2
77.1 ns	Core i7-7800X	3500 MHz	Gigabyte X299 UD4 X299	Quad DDR4-2667	15-17-17-35 CR2
78.5 ns	Pentium EE 955	3466 MHz	Intel D955XBK i955X	Dual DDR2-667	4-4-4-11
79.5 ns	Xeon E5-2670	2600 MHz	Supermicro X9DR6-F C600	Octal DDR3-1333	9-9-9-24 CR1
79.8 ns	Core 2 Extreme X6800	2933 MHz	Abit AB9 P965	Dual DDR2-800	5-5-5-18 CR2
			i975X		

81.4 ns	Core 2 Extreme QX6700	2666 MHz	Intel D975XB2	Navigation	Dual DDR2 -667	5-5-5-15
82.4 ns	Atom C3958	2000 MHz	Supermicro A2SDi-H-TP4F	Denver	Dual DDR4 -2400	17-17-17-39
82.4 ns	A10-7850K	3700 MHz	Gigabyte GA-F2A88XM-D3H	A88X Int.	Dual DDR3 -2133	9-11-10-31 CR2
82.5 ns	Opteron 6274	2200 MHz	Supermicro H8DGI-F	SR5690	Octal DDR3-1600R	11-11-11-28 CR1
82.6 ns	P4EE	3733 MHz	Intel SE7230NH1LX	iE7230	Dual DDR2 -667	5-5-5-15
83.5 ns	Ryzen 7 1800X	3600 MHz	Asus Crosshair VI Hero	X370	Dual DDR4 -2667	16-17-17-35 CR1
84.6 ns	Xeon E5-2660 v3	2600 MHz	Supermicro X10DRi	C612	Octal DDR4-1866	13-13-13-31 CR1
85.8 ns	Celeron J4105	1500 MHz	ASRock J4105-ITX	GeminiLakeD Int.	Dual DDR4 -2400	17-17-17-39
86.7 ns	Ryzen Threadripper 3970X	3800 MHz	Gigabyte TRX40 Aorus Xtreme	TRX40	Quad DDR4-3200	16-18-18-36 CR1
88.1 ns	Opteron 248	2200 MHz	MSI K8T Master1-FAR	K8T800	Dual DDR266R	2-3-3-6 CR1
90.0 ns	Atom D2500	1866 MHz	Intel D2500CC	NM10 Int.	DDR3-1066 SDRAM	7-7-7-20 CR2
91.3 ns	Core 2 Extreme QX9650	3000 MHz	Gigabyte GA-EP35C-DS3R	P35	Dual DDR3 -1066	8-8-8-20 CR2
93.1 ns	Celeron J1900	2000 MHz	Gigabyte GA-J1900N-D3V	BayTrailD Int.	Dual DDR3 -1333	9-9-9-24 CR1
94.7 ns	Atom C2750	2400 MHz	Supermicro A1SAi-2750F	Avoton	Dual DDR3 -1600	11-11-11-28 CR1
95.3 ns	Atom D525	1800 MHz	Gigabyte GA-D525TUD	NM10 Int.	DDR3-800 SDRAM	6-6-6-15 CR2
96.9 ns	A12-9800	3800 MHz		B350 Int.	Dual DDR4 -2400	14-16-

		Gigabyte GA-AB350M-Navigation Gaming 3		16-31 CR1
99.5 ns	Opteron 2378	2400 MHz Tyan Thunder n3600R	nForcePro-3600	Unganged Quad DDR2-800R 6-6-6-18 CR1
100.4 ns	Core i5-650	3200 MHz Supermicro C7SIM-Q	Q57 Int.	Dual DDR3 -1333 9-9-9-24 CR1
101.1 ns	<b>Ryzen 7 2700X</b>	<b>4141 [ TRIAL MHZ VERSION ]</b>	<b>B450</b>	<b>DDR4-1866 SDRAM</b> 13-13-13-31 CR2
101.2 ns	Celeron 420	1600 MHz Intel DQ965GF	Q965 Int.	Dual DDR2 -667 5-5-5-15
101.6 ns	Celeron J3455	1500 MHz ASRock J3455B -ITX	ApolloLakeD Int.	Dual DDR3 -1866 11-11-11-32 CR1
104.1 ns	Pentium D 820	2800 MHz Abit Fatal1ty F-I90HD	RS600 Int.	Dual DDR2 -800 5-5-5-18 CR2
106.5 ns	Atom 230	1600 MHz Intel D945GCLF	i945GC Int.	DDR2-533 SDRAM 4-4-4-12
108.3 ns	E-350	1600 MHz ASRock E350M1	A50M Int.	DDR3-1066 SDRAM 8-8-8-20 CR1
112.5 ns	Opteron 2210 HE	1800 MHz Tyan Thunder h2000M	BCM5785	Quad DDR2-600R 5-5-5-15 CR1
113.4 ns	Xeon 5140	2333 MHz Intel S5000VSA	i5000V	Dual DDR2 -667FB 5-5-5-15
114.5 ns	Xeon E5462	2800 MHz Intel S5400SF	i5400	Quad DDR2-640FB 5-5-5-15
119.9 ns	Nano X2 L4350	1600 MHz VIA EPIA-M900	VX900H Int.	DDR3-1066 SDRAM 7-7-7-20 CR2
123.5 ns	Opteron 2431	2400 MHz Supermicro H8DI3+-F	SR5690	Unganged Quad DDR2-800R 6-6-6-18 CR1
123.9 ns	Celeron N3150	1600 MHz ASRock N3150B-ITX	Braswell Int.	Dual DDR3 -1600 11-11-11-28 CR2
124.7 ns	Xeon	3400 MHz Intel SE7320SP2	iE7320	Dual DDR333R 2.5-3-3-7
127.7 ns	Xeon L5320	1866 MHz Intel S5000VCL	i5000V	Dual DDR2 -533FB 4-4-4-12
128.2 ns	Athlon 5350	2050 MHz ASRock AM1B-ITX	Yangtze Int.	DDR3-1600 SDRAM 11-11-11

Navigation						28 CR2
129.0 ns	Phenom X4 9500	2200 MHz	Asus M3A	AMD770	Ganged Dual DDR2 -800	5-5- 5-18 CR2
138.7 ns	Nano L2200	1600 MHz	VIA VB8001	CN896 Int.	DDR2-667 SDRAM	5-5- 5-15 CR2
153.6 ns	Celeron D 326	2533 MHz	ASRock 775Twins- HDTV	RC410 Ext.	DDR2-533 SDRAM	4-4- 4-11 CR2
159.8 ns	Opteron 2344 HE	1700 MHz	Supermicro H8DME-2	nForcePro- 3600	Unganged Quad DDR2- 667R	5-5- 5-15 CR1

## CPU Queen

	CPU	CPU Takt	Motherboard	Chipsatz	Speicher	CL- RCD -RP - RAS
276199	32x Ryzen Threadripper 3970X HT	3800 MHz	Gigabyte TRX40 Aorus Xtreme	TRX40	Quad DDR4- 3200	16- 18- 18- 36 CR1
216826	32x Ryzen Threadripper 2990WX HT	3000 MHz	MSI MEG X399 Creation	X399	Quad DDR4- 2933	16- 18- 18- 38 CR1
149985	16x Ryzen 9 3950X HT	3500 MHz	Gigabyte X570 Aorus Pro WiFi	X570	Dual DDR4 -3600	16- 16- 16- 36 CR1
146744	20x Xeon E5 -2660 v3 HT	2600 MHz	Supermicro X10DRi	C612	Octal DDR4- 1866	13- 13- 13- 31 CR1
99682	16x Xeon E5 -2670 HT	2600 MHz	Supermicro X9DR6-F	C600	Octal DDR3- 1333	9-9- 9-24 CR1
93183	8x Ryzen 7 2700X HT	3700 MHz	Asus Crosshair VII Hero	X470	Dual DDR4 -2933	16- 20- 21- 49 CR1
90133	<b>8x Ryzen 7 2700X HT</b>	<b>3917 [ TRIAL MHz VERSION ]</b>		<b>B450</b>	<b>DDR4- 1866 SDRAM</b>	<b>13- 13- 13-</b>

Navigation						<b>31 CR2</b>
85483	8x Ryzen 7 1800X HT	3600 MHz	Asus Crosshair VI Hero	X370	Dual DDR4 -2667	16- 17- 17- 35 CR1
72443	6x Core i7- 8700K HT	3700 MHz	Gigabyte Z370 Aorus Gaming 7	Z370 Int.	Dual DDR4 -2667	16- 18- 18- 38 CR2
67341	6x Core i7- 7800X HT	3500 MHz	Gigabyte X299 UD4	X299	Quad DDR4- 2667	15- 17- 17- 35 CR2
64839	6x Core i7- 6850K HT	3600 MHz	Asus Strix X99 Gaming	X99	Quad DDR4- 2400	16- 16- 16- 39 CR2
62693	6x Core i7- 4930K HT	3400 MHz	Gigabyte GA- X79-UD3	X79	Quad DDR3- 1866	9-10 -9- 27 CR2
62382	6x Core i7- 3960X Extreme HT	3300 MHz	Intel DX79SI	X79	Quad DDR3- 1600	9-9- 9-24 CR2
59950	6x Core i7- 5820K HT	3300 MHz	Gigabyte GA- X99-UD4	X99	Quad DDR4- 2133	15- 15- 15- 36 CR2
56864	6x Core i7- 990X Extreme HT	3466 MHz	Intel DX58SO2	X58	Triple DDR3- 1333	9-9- 9-24 CR1
55275	4x Core i7- 7700K HT	4200 MHz	ASRock Z270 Extreme4	Z270 Ext.	Dual DDR4 -2133	15- 15- 15- 36 CR2
54386	32x Opteron 6274	2200 MHz	Supermicro H8DGI-F	SR5690	Octal DDR3- 1600R	11- 11- 11- 28 CR1
53521	8x Xeon X5550 HT	2666 MHz	Supermicro X8DTN+	i5520	Hexa DDR3- 1333	9-9- 9-24 CR1
48880	4x Core i7- 6700K HT	4000 MHz	Gigabyte GA- Z170X-UD3	Z170 Int.	Dual DDR4 -2133	14- 14- 14- 35 CR2
47712	16x Atom C3958	2000 MHz	Supermicro A2SDi-H-TP4F	Denver	Dual DDR4 -2400	17- 17- 17- 39

47204	4x Core i7-4770 HT	3400 MHz	Intel DZ87KLT-75K Navigation	Z87 Int.	Dual DDR3 -1600	9-9-9-27 CR2
46792	4x Core i7-3770K HT	3500 MHz	MSI Z77A-GD55	Z77 Int.	Dual DDR3 -1600	9-9-9-24 CR2
45875	4x Core i7-5775C HT	3300 MHz	Gigabyte GA-Z97MX-Gaming 5	Z97 Int.	Dual DDR3 -1600	11-11-11-28 CR1
43962	4x Core i7-2600 HT	3400 MHz	Asus P8P67	P67	Dual DDR3 -1333	9-9-9-24 CR1
42538	12x Opteron 2431	2400 MHz	Supermicro H8DI3+-F	SR5690	Unganged Quad DDR2-800R	6-6-6-18 CR1
42193	4x Ryzen 5 2400G HT	3600 MHz	ASRock A320M Pro4	A320	Dual DDR4 -2933	16-15-15-35 CR1
41733	8x Xeon E5462	2800 MHz	Intel S5400SF	i5400	Quad DDR2-640FB	5-5-5-15
37779	4x Core i7-965 Extreme HT	3200 MHz	Asus P6T Deluxe	X58	Triple DDR3-1333	9-9-9-24 CR1
36105	8x FX-8350	4000 MHz	Asus M5A99X Evo R2.0	AMD990X	Dual DDR3 -1866	9-10-9-27 CR2
34010	8x Atom C2750	2400 MHz	Supermicro A1SAi-2750F	Avoton	Dual DDR3 -1600	11-11-11-28 CR1
32362	6x Phenom II X6 Black 1100T	3300 MHz	Gigabyte GA-890GPA-UD3H v2	AMD890GX Int.	Unganged Dual DDR3 -1333	9-9-9-24 CR2
31729	8x FX-8150	3600 MHz	Asus M5A97	AMD970	Dual DDR3 -1866	9-10-9-27 CR2
30788	8x Opteron 2378	2400 MHz	Tyan Thunder n3600R	nForcePro-3600	Unganged Quad DDR2-800R	6-6-6-18 CR1
26992	8x Xeon L5320	1866 MHz	Intel S5000VCL	i5000V	Dual DDR2 -533FB	4-4-4-12
25503	4x Core 2 Extreme QX9650	3000 MHz	Gigabyte GA-EP35C-DS3R	P35	Dual DDR3 -1066	8-8-8-20 CR2
22146	4x A8-3850	2900 MHz	Gigabyte GA-A75M-UD2H	A75 Int.	Dual DDR3 -1333	9-9-9-24 CR1
22010				i975X		



	4x Core 2 Extreme QX6700	2666 MHz	Intel D975XB2	Navigation	Dual DDR2 -667	5-5- 5-15
21993	8x Opteron 2344 HE	1700 MHz	Supermicro H8DME-2	nForcePro- 3600	Unganged Quad DDR2- 667R	5-5- 5-15 CR1
21796	4x Phenom II X4 Black 940	3000 MHz	Asus M3N78- EM	GeForce8300 Int.	Ganged Dual DDR2 -800	5-5- 5-18 CR2
21669	4x A10- 6800K	4100 MHz	Gigabyte GA- F2A85X-UP4	A85X Int.	Dual DDR3 -2133	9-11 -10- 27 CR2
21454	6x FX-6100	3300 MHz	Asus Sabertooth 990FX	AMD990FX	Dual DDR3 -1866	9-10 -9- 27 CR2
21431	2x Core i5- 650 HT	3200 MHz	Supermicro C7SIM-Q	Q57 Int.	Dual DDR3 -1333	9-9- 9-24 CR1
21226	4x Xeon X3430	2400 MHz	Supermicro X8SIL-F	i3420	Dual DDR3 -1333	9-9- 9-24 CR1
20130	4x A10- 5800K	3800 MHz	Asus F2A55-M	A55 Int.	Dual DDR3 -1866	9-10 -9- 27 CR2
19490	4x A10- 7850K	3700 MHz	Gigabyte GA- F2A88XM-D3H	A88X Int.	Dual DDR3 -2133	9-11 -10- 31 CR2
19484	4x A12- 9800	3800 MHz	Gigabyte GA- AB350M- Gaming 3	B350 Int.	Dual DDR4 -2400	14- 16- 16- 31 CR1
19232	4x Xeon 5140	2333 MHz	Intel S5000VSA	i5000V	Dual DDR2 -667FB	5-5- 5-15
18844	4x Celeron J4105	1500 MHz	ASRock J4105- ITX	GeminiLakeD Int.	Dual DDR4 -2400	17- 17- 17- 39
18011	4x Celeron J1900	2000 MHz	Gigabyte GA- J1900N-D3V	BayTrailD Int.	Dual DDR3 -1333	9-9- 9-24 CR1
16868	4x Celeron J3455	1500 MHz	ASRock J3455B -ITX	ApolloLakeD Int.	Dual DDR3 -1866	11- 11- 11- 32 CR1
16100	4x Phenom X4 9500	2200 MHz	Asus M3A	AMD770	Ganged Dual DDR2 -800	5-5- 5-18 CR2
15584	4x Celeron N3150	1600 MHz	ASRock N3150B-ITX	Braswell Int.	Dual DDR3 -1600	11- 11- 11- 28 CR2

Navigation						
14761	4x Athlon 5350	2050 MHz	ASRock AM1B-ITX	Yangtze Int.	DDR3-1600 SDRAM	11-11-11-28 CR2
12584	4x Opteron 2210 HE	1800 MHz	Tyan Thunder h2000M	BCM5785	Quad DDR2-600R	5-5-5-15 CR1
12147	2x Core 2 Extreme X6800	2933 MHz	Abit AB9	P965	Dual DDR2-800	5-5-5-18 CR2
11234	2x Athlon64 X2 Black 6400+	3200 MHz	MSI K9N SLI Platinum	nForce570SLI	Dual DDR2-800	4-4-4-11 CR1
8547	2x Atom D525 HT	1800 MHz	Gigabyte GA-D525TUD	NM10 Int.	DDR3-800 SDRAM	6-6-6-15 CR2
7464	2x Pentium EE 955 HT	3466 MHz	Intel D955XBK	i955X	Dual DDR2-667	4-4-4-11
7287	2x Xeon HT	3400 MHz	Intel SE7320SP2	iE7320	Dual DDR333R	2.5-3-3-7
5916	2x Atom D2500	1866 MHz	Intel D2500CC	NM10 Int.	DDR3-1066 SDRAM	7-7-7-20 CR2
5444	Nano X2 L4350	1600 MHz	VIA EPIA-M900	VX900H Int.	DDR3-1066 SDRAM	7-7-7-20 CR2
5165	2x E-350	1600 MHz	ASRock E350M1	A50M Int.	DDR3-1066 SDRAM	8-8-8-20 CR1
4078	2x Pentium D 820	2800 MHz	Abit Fatal1ty F-I90HD	RS600 Int.	Dual DDR2-800	5-5-5-18 CR2
4025	P4EE HT	3733 MHz	Intel SE7230NH1LX	iE7230	Dual DDR2-667	5-5-5-15
3855	Opteron 248	2200 MHz	MSI K8T Master1-FAR	K8T800	Dual DDR266R	2-3-3-6 CR1
3791	Atom 230 HT	1600 MHz	Intel D945GCLF	i945GC Int.	DDR2-533 SDRAM	4-4-4-12
3514	Athlon64 3200+	2000 MHz	ASRock 939S56-M	SiS756	Dual DDR400	2.5-3-3-8 CR2
3301	Celeron 420	1600 MHz	Intel DQ965GF	Q965 Int.	Dual DDR2-667	5-5-5-15
2815	Sempron 2600+	1600 MHz	ASRock K8NF4G-SATA2	GeForce6100 Int.	DDR400 SDRAM	2.5-3-3-8 CR2
2586	Nano L2200	1600 MHz	VIA VB8001	CN896 Int.	DDR2-667 SDRAM	5-5-5-15 CR2
1839	Celeron D 326	2533 MHz	ASRock 775Twins-HDTV	RC410 Ext.	DDR2-533 SDRAM	4-4-4-11 CR2

Navigation

## CPU PhotoWorxx

	CPU	CPU Takt	Motherboard	Chipsatz	Speicher	CL- RCD -RP - RAS
61896 MPixel/s	20x Xeon E5-2660 v3 HT	2600 MHz	Supermicro X10DRi	C612	Octal DDR4-1866	13-13-13-31 CR1
56098 MPixel/s	32x Ryzen Threadripper 3970X HT	3800 MHz	Gigabyte TRX40 Aorus Xtreme	TRX40	Quad DDR4-3200	16-18-18-36 CR1
38828 MPixel/s	16x Xeon E5-2670 HT	2600 MHz	Supermicro X9DR6-F	C600	Octal DDR3-1333	9-9-9-24 CR1
38788 MPixel/s	6x Core i7-7800X HT	3500 MHz	Gigabyte X299 UD4	X299	Quad DDR4-2667	15-17-17-35 CR2
38361 MPixel/s	32x Ryzen Threadripper 2990WX HT	3000 MHz	MSI MEG X399 Creation	X399	Quad DDR4-2933	16-18-18-38 CR1
35548 MPixel/s	32x Opteron 6274	2200 MHz	Supermicro H8DGI-F	SR5690	Octal DDR3-1600R	11-11-11-28 CR1
30449 MPixel/s	6x Core i7-6850K HT	3600 MHz	Asus Strix X99 Gaming	X99	Quad DDR4-2400	16-16-16-39 CR2
26642 MPixel/s	6x Core i7-5820K HT	3300 MHz	Gigabyte GA-X99-UD4	X99	Quad DDR4-2133	15-15-15-36 CR2
24221 MPixel/s	8x Ryzen 7 1800X HT	3600 MHz	Asus Crosshair VI Hero	X370	Dual DDR4-2667	16-17-17-35 CR1
23753 MPixel/s	8x Ryzen 7 2700X HT	3700 MHz	Asus Crosshair VII Hero	X470	Dual DDR4-2933	16-20-21-49 CR1

23510 MPixel/s	6x Core i7-4930K HT	3400 MHz	Gigabyte GA-X79-UD3	X79	Quad DDR3-1866	9-10-9-27 CR2
23412 MPixel/s	6x Core i7-8700K HT	3700 MHz	Gigabyte Z370 Aorus Gaming 7	Z370 Int.	Dual DDR4-2667	16-18-18-38 CR2
22800 MPixel/s	6x Core i7-3960X Extreme HT	3300 MHz	Intel DX79SI	X79	Quad DDR3-1600	9-9-9-24 CR2
20497 MPixel/s	8x Xeon X5550 HT	2666 MHz	Supermicro X8DTN+	i5520	Hexa DDR3-1333	9-9-9-24 CR1
20422 MPixel/s	4x Core i7-6700K HT	4000 MHz	Gigabyte GA-Z170X-UD3	Z170 Int.	Dual DDR4-2133	14-14-14-35 CR2
19743 MPixel/s	4x Ryzen 5 2400G HT	3600 MHz	ASRock A320M Pro4	A320	Dual DDR4-2933	16-15-15-35 CR1
19369 MPixel/s	4x Core i7-7700K HT	4200 MHz	ASRock Z270 Extreme4	Z270 Ext.	Dual DDR4-2133	15-15-15-36 CR2
19250 MPixel/s	16x Ryzen 9 3950X HT	3500 MHz	Gigabyte X570 Aorus Pro WiFi	X570	Dual DDR4-3600	16-16-16-36 CR1
17044 MPixel/s	16x Atom C3958	2000 MHz	Supermicro A2SDi-H-TP4F	Denverton	Dual DDR4-2400	17-17-17-39
15634 MPixel/s	4x Core i7-5775C HT	3300 MHz	Gigabyte GA-Z97MX-Gaming 5	Z97 Int.	Dual DDR3-1600	11-11-11-28 CR1
14159 MPixel/s	4x Core i7-3770K HT	3500 MHz	MSI Z77A-GD55	Z77 Int.	Dual DDR3-1600	9-9-9-24 CR2
14009 MPixel/s	4x Core i7-4770 HT	3400 MHz	Intel DZ87KLT-75K	Z87 Int.	Dual DDR3-1600	9-9-9-27 CR2
12969 MPixel/s	6x Core i7-990X Extreme HT	3466 MHz	Intel DX58SO2	X58	Triple DDR3-1333	9-9-9-24 CR1
12359 MPixel/s	8x FX-8350	4000 MHz	Asus M5A99X Evo R2.0	AMD990X	Dual DDR3-1866	9-10-9-27 CR2
12350 MPixel/s	8x FX-8150	3600 MHz	Asus M5A97	AMD970	Dual DDR3-1866	9-10-9-

Navigation							27
							CR2
11904 MPixel/s	6x FX-6100	3300 MHz	Asus Sabertooth 990FX	AMD990FX	Dual DDR3 -1866	9-10-9-27	CR2
11889 MPixel/s	4x Core i7-965 Extreme HT	3200 MHz	Asus P6T Deluxe	X58	Triple DDR3-1333	9-9-9-24	CR1
11589 MPixel/s	12x Opteron 2431	2400 MHz	Supermicro H8DI3+-F	SR5690	Unganged Quad DDR2-800R	6-6-6-18	CR1
11089 MPixel/s	4x Core i7-2600 HT	3400 MHz	Asus P8P67	P67	Dual DDR3 -1333	9-9-9-24	CR1
10676 MPixel/s	8x Opteron 2378	2400 MHz	Tyan Thunder n3600R	nForcePro-3600	Unganged Quad DDR2-800R	6-6-6-18	CR1
9568 MPixel/s	4x A10-6800K	4100 MHz	Gigabyte GA-F2A85X-UP4	A85X Int.	Dual DDR3 -2133	9-11-10-27	CR2
9091 MPixel/s	4x A10-5800K	3800 MHz	Asus F2A55-M	A55 Int.	Dual DDR3 -1866	9-10-9-27	CR2
8902 MPixel/s	4x A10-7850K	3700 MHz	Gigabyte GA-F2A88XM-D3H	A88X Int.	Dual DDR3 -2133	9-11-10-31	CR2
8800 MPixel/s	8x Atom C2750	2400 MHz	Supermicro A1SAi-2750F	Avoton	Dual DDR3 -1600	11-11-11-28	CR1
8593 MPixel/s	4x A12-9800	3800 MHz	Gigabyte GA-AB350M-Gaming 3	B350 Int.	Dual DDR4 -2400	14-16-16-31	CR1
8546 MPixel/s	4x Xeon X3430	2400 MHz	Supermicro X8SIL-F	i3420	Dual DDR3 -1333	9-9-9-24	CR1
8109 MPixel/s	<b>8x Ryzen 7 2700X HT</b>	<b>3942 MHz</b>	<b>[ TRIAL VERSION ]</b>	<b>B450</b>	<b>DDR4-1866 SDRAM</b>	<b>13-13-13-31</b>	<b>CR2</b>
8073 MPixel/s	4x A8-3850	2900 MHz	Gigabyte GA-A75M-UD2H	A75 Int.	Dual DDR3 -1333	9-9-9-24	CR1
7926 MPixel/s	4x Celeron J4105	1500 MHz	ASRock J4105-ITX	GeminiLakeD Int.	Dual DDR4 -2400	17-17-17-39	
7765 MPixel/s	4x Celeron J3455	1500 MHz	ASRock J3455B-ITX	ApolloLakeD Int.	Dual DDR3 -1866	11-11-	

Navigation						11-32 CR1
6976 MPixel/s	6x Phenom II X6 Black 1100T	3300 MHz	Gigabyte GA-890GPA-UD3H v2	AMD890GX Int.	Unganged Dual DDR3 -1333	9-9-9-24 CR2
6876 MPixel/s	2x Core i5-650 HT	3200 MHz	Supermicro C7SIM-Q	Q57 Int.	Dual DDR3 -1333	9-9-9-24 CR1
6111 MPixel/s	8x Opteron 2344 HE	1700 MHz	Supermicro H8DME-2	nForcePro-3600	Unganged Quad DDR2-667R	5-5-5-15 CR1
5627 MPixel/s	4x Phenom II X4 Black 940	3000 MHz	Asus M3N78-EM	GeForce8300 Int.	Ganged Dual DDR2 -800	5-5-5-18 CR2
5276 MPixel/s	4x Celeron J1900	2000 MHz	Gigabyte GA-J1900N-D3V	BayTrailD Int.	Dual DDR3 -1333	9-9-9-24 CR1
4792 MPixel/s	4x Celeron N3150	1600 MHz	ASRock N3150B-ITX	Braswell Int.	Dual DDR3 -1600	11-11-11-28 CR2
4726 MPixel/s	8x Xeon E5462	2800 MHz	Intel S5400SF	i5400	Quad DDR2-640FB	5-5-5-15
4243 MPixel/s	4x Athlon 5350	2050 MHz	ASRock AM1B-ITX	Yangtze Int.	DDR3-1600 SDRAM	11-11-11-28 CR2
4214 MPixel/s	4x Core 2 Extreme QX9650	3000 MHz	Gigabyte GA-EP35C-DS3R	P35	Dual DDR3 -1066	8-8-8-20 CR2
3847 MPixel/s	4x Phenom X4 9500	2200 MHz	Asus M3A	AMD770	Ganged Dual DDR2 -800	5-5-5-18 CR2
3701 MPixel/s	4x Opteron 2210 HE	1800 MHz	Tyan Thunder h2000M	BCM5785	Quad DDR2-600R	5-5-5-15 CR1
3459 MPixel/s	2x Core 2 Extreme X6800	2933 MHz	Abit AB9	P965	Dual DDR2 -800	5-5-5-18 CR2
3004 MPixel/s	2x Athlon64 X2 Black 6400+	3200 MHz	MSI K9N SLI Platinum	nForce570SLI	Dual DDR2 -800	4-4-4-11 CR1
2927 MPixel/s	2x Pentium EE 955 HT	3466 MHz	Intel D955XBK	i955X	Dual DDR2 -667	4-4-4-11
2790 MPixel/s	4x Core 2 Extreme QX6700	2666 MHz	Intel D975XBX2	i975X	Dual DDR2 -667	5-5-5-15
2536 MPixel/s	Nano X2 L4350	1600 MHz	VIA EPIA-M900	VX900H Int.	DDR3-1066 SDRAM	7-7-7-20 CR2
2146 MPixel/s	P4EE HT	3733 MHz	Intel SE7230NH1LX	iE7230	Dual DDR2 -667	5-5-5-15
1998 MPixel/s				NM10 Int.		

	2x Atom D525 HT	1800 MHz	Gigabyte GA-D525TUD		DDR3-800 SDRAM	6-6-6-15 CR2
1901 MPixel/s	8x Xeon L5320	1866 MHz	Intel S5000VCL	i5000V	Dual DDR2-533FB	4-4-4-12
1895 MPixel/s	2x E-350	1600 MHz	ASRock E350M1	A50M Int.	DDR3-1066 SDRAM	8-8-8-20 CR1
1869 MPixel/s	2x Pentium D 820	2800 MHz	Abit Fatal1ty F-I90HD	RS600 Int.	Dual DDR2-800	5-5-5-18 CR2
1864 MPixel/s	4x Xeon 5140	2333 MHz	Intel S5000VSA	i5000V	Dual DDR2-667FB	5-5-5-15
1852 MPixel/s	Celeron 420	1600 MHz	Intel DQ965GF	Q965 Int.	Dual DDR2-667	5-5-5-15
1788 MPixel/s	2x Atom D2500	1866 MHz	Intel D2500CC	NM10 Int.	DDR3-1066 SDRAM	7-7-7-20 CR2
1676 MPixel/s	2x Xeon HT	3400 MHz	Intel SE7320SP2	iE7320	Dual DDR333R	2.5-3-3-7
1253 MPixel/s	Nano L2200	1600 MHz	VIA VB8001	CN896 Int.	DDR2-667 SDRAM	5-5-5-15 CR2
1220 MPixel/s	Athlon64 3200+	2000 MHz	ASRock 939S56-M	SiS756	Dual DDR400	2.5-3-3-8 CR2
1102 MPixel/s	Atom 230 HT	1600 MHz	Intel D945GCLF	i945GC Int.	DDR2-533 SDRAM	4-4-4-12
1096 MPixel/s	Opteron 248	2200 MHz	MSI K8T Master1-FAR	K8T800	Dual DDR266R	2-3-3-6 CR1
878 MPixel/s	Celeron D 326	2533 MHz	ASRock 775Twins-HDTV	RC410 Ext.	DDR2-533 SDRAM	4-4-4-11 CR2
831 MPixel/s	Sempron 2600+	1600 MHz	ASRock K8NF4G-SATA2	GeForce6100 Int.	DDR400 SDRAM	2.5-3-3-8 CR2

## CPU ZLib

	CPU	CPU Takt	Motherboard	Chipsatz	Speicher	CL- RCD -RP - RAS
3233.9 MB/s	32x Ryzen Threadripper 3970X HT	3800 MHz	Gigabyte TRX40 Aorus Xtreme	TRX40	Quad DDR4- 3200	16- 18- 18- 36 CR1
2475.9 MB/s				X399		

	32x Ryzen Threadripper 2990WX HT	3000 MHz	MSI MEG X399 Creation		Quad DDR4-2933	16-18-18-38 CR1
1642.9 MB/s	16x Ryzen 9 3950X HT	3500 MHz	Gigabyte Aorus Pro WiFi X570		Dual DDR4-3600	16-16-36 CR1
1216.8 MB/s	20x Xeon E5-2660 v3 HT	2600 MHz	Supermicro X10DRi	C612	Octal DDR4-1866	13-13-13-31 CR1
977.6 MB/s	16x Xeon E5-2670 HT	2600 MHz	Supermicro X9DR6-F	C600	Octal DDR3-1333	9-9-9-24 CR1
751.8 MB/s	8x Ryzen 7 2700X HT	3700 MHz	Asus Crosshair VII Hero	X470	Dual DDR4-2933	16-20-21-49 CR1
719.7 MB/s	<b>8x Ryzen 7 2700X HT</b>	<b>3917 MHz</b>	<b>[ TRIAL VERSION ]</b>	<b>B450</b>	<b>DDR4-1866 SDRAM</b>	<b>13-13-13-31 CR2</b>
685.5 MB/s	8x Ryzen 7 1800X HT	3600 MHz	Asus Crosshair VI Hero	X370	Dual DDR4-2667	16-17-17-35 CR1
672.5 MB/s	32x Opteron 6274	2200 MHz	Supermicro H8DGI-F	SR5690	Octal DDR3-1600R	11-11-11-28 CR1
575.1 MB/s	6x Core i7-8700K HT	3700 MHz	Gigabyte Aorus Gaming 7 Z370	Z370 Int.	Dual DDR4-2667	16-18-18-38 CR2
544.1 MB/s	6x Core i7-7800X HT	3500 MHz	Gigabyte UD4 X299	X299	Quad DDR4-2667	15-17-17-35 CR2
493.8 MB/s	6x Core i7-6850K HT	3600 MHz	Asus Strix X99 Gaming	X99	Quad DDR4-2400	16-16-16-39 CR2
453.8 MB/s	6x Core i7-4930K HT	3400 MHz	Gigabyte GA-X79-UD3	X79	Quad DDR3-1866	9-10-9-27 CR2
437.7 MB/s		3300 MHz	Intel DX79SI	X79		



	6x Core i7-3960X Extreme HT		Navigation		Quad DDR3-1600	9-9-9-24 CR2
432.5 MB/s	6x Core i7-5820K HT	3300 MHz	Gigabyte GA-X99-UD4	X99	Quad DDR4-2133	15-15-15-36 CR2
415.0 MB/s	16x Atom C3958	2000 MHz	Supermicro A2SDi-H-TP4F	Denver	Dual DDR4-2400	17-17-17-39
407.1 MB/s	4x Core i7-7700K HT	4200 MHz	ASRock Z270 Extreme4	Z270 Ext.	Dual DDR4-2133	15-15-15-36 CR2
365.9 MB/s	12x Opteron 2431	2400 MHz	Supermicro H8DI3+-F	SR5690	Unganged Quad DDR2-800R	6-6-6-18 CR1
359.9 MB/s	4x Core i7-6700K HT	4000 MHz	Gigabyte GA-Z170X-UD3	Z170 Int.	Dual DDR4-2133	14-14-14-35 CR2
357.7 MB/s	8x Xeon X5550 HT	2666 MHz	Supermicro X8DTN+	i5520	Hexa DDR3-1333	9-9-9-24 CR1
356.9 MB/s	6x Core i7-990X Extreme HT	3466 MHz	Intel DX58SO2	X58	Triple DDR3-1333	9-9-9-24 CR1
347.3 MB/s	4x Ryzen 5 2400G HT	3600 MHz	ASRock A320M Pro4	A320	Dual DDR4-2933	16-15-15-35 CR1
345.2 MB/s	8x FX-8350	4000 MHz	Asus M5A99X Evo R2.0	AMD990X	Dual DDR3-1866	9-10-9-27 CR2
326.0 MB/s	4x Core i7-5775C HT	3300 MHz	Gigabyte GA-Z97MX-Gaming 5	Z97 Int.	Dual DDR3-1600	11-11-11-28 CR1
317.0 MB/s	4x Core i7-4770 HT	3400 MHz	Intel DZ87KLT-75K	Z87 Int.	Dual DDR3-1600	9-9-9-27 CR2
313.7 MB/s	4x Core i7-3770K HT	3500 MHz	MSI Z77A-GD55	Z77 Int.	Dual DDR3-1600	9-9-9-24 CR2
286.5 MB/s	4x Core i7-2600 HT	3400 MHz	Asus P8P67	P67	Dual DDR3-1333	9-9-9-24 CR1
281.2 MB/s	8x Xeon E5462	2800 MHz	Intel S5400SF	i5400	Quad DDR2-640FB	5-5-5-15
	8x FX-8150		Asus M5A97	AMD970		

275.1 MB/s		3600 MHz	Navigation		Dual DDR3 -1866	9-10-9-27 CR2
256.3 MB/s	6x Phenom II X6 Black 1100T	3300 MHz	Gigabyte GA-890GPA-UD3H v2	AMD890GX Int.	Unganged Dual DDR3 -1333	9-9-9-24 CR2
243.7 MB/s	8x Opteron 2378	2400 MHz	Tyan Thunder n3600R	nForcePro-3600	Unganged Quad DDR2-800R	6-6-6-18 CR1
224.6 MB/s	4x Core i7-965 Extreme HT	3200 MHz	Asus P6T Deluxe	X58	Triple DDR3-1333	9-9-9-24 CR1
209.5 MB/s	8x Atom C2750	2400 MHz	Supermicro A1SAi-2750F	Avoton	Dual DDR3 -1600	11-11-11-28 CR1
189.0 MB/s	4x A12-9800	3800 MHz	Gigabyte GA-AB350M-Gaming 3	B350 Int.	Dual DDR4 -2400	14-16-16-31 CR1
188.7 MB/s	8x Xeon L5320	1866 MHz	Intel S5000VCL	i5000V	Dual DDR2 -533FB	4-4-4-12
186.0 MB/s	6x FX-6100	3300 MHz	Asus Sabertooth 990FX	AMD990FX	Dual DDR3 -1866	9-10-9-27 CR2
183.3 MB/s	4x A10-6800K	4100 MHz	Gigabyte GA-F2A85X-UP4	A85X Int.	Dual DDR3 -2133	9-11-10-27 CR2
174.9 MB/s	4x A10-7850K	3700 MHz	Gigabyte GA-F2A88XM-D3H	A88X Int.	Dual DDR3 -2133	9-11-10-31 CR2
173.8 MB/s	8x Opteron 2344 HE	1700 MHz	Supermicro H8DME-2	nForcePro-3600	Unganged Quad DDR2-667R	5-5-5-15 CR1
169.8 MB/s	4x A10-5800K	3800 MHz	Asus F2A55-M	A55 Int.	Dual DDR3 -1866	9-10-9-27 CR2
153.9 MB/s	4x Phenom II X4 Black 940	3000 MHz	Asus M3N78-EM	GeForce8300 Int.	Ganged Dual DDR2 -800	5-5-5-18 CR2
151.9 MB/s	4x Core 2 Extreme QX9650	3000 MHz	Gigabyte GA-EP35C-DS3R	P35	Dual DDR3 -1066	8-8-8-20 CR2
151.4 MB/s	4x A8-3850	2900 MHz	Gigabyte GA-A75M-UD2H	A75 Int.	Dual DDR3 -1333	9-9-9-24 CR1
136.0 MB/s	4x Celeron J4105	1500 MHz	ASRock J4105-ITX	GeminiLakeD Int.	Dual DDR4 -2400	17-17-17-39

135.1 MB/s	4x Core 2 Extreme QX6700	2666 MHz	Intel Navigation D975XBX2	i975X	Dual DDR2 -667	5-5-5-15
116.8 MB/s	4x Xeon 5140	2333 MHz	Intel S5000VSA	i5000V	Dual DDR2 -667FB	5-5-5-15
112.0 MB/s	4x Phenom X4 9500	2200 MHz	Asus M3A	AMD770	Ganged Dual DDR2 -800	5-5-5-18 CR2
107.9 MB/s	4x Xeon X3430	2400 MHz	Supermicro X8SIL-F	i3420	Dual DDR3 -1333	9-9-9-24 CR1
105.3 MB/s	2x Core i5-650 HT	3200 MHz	Supermicro C7SIM-Q	Q57 Int.	Dual DDR3 -1333	9-9-9-24 CR1
99.1 MB/s	4x Celeron J3455	1500 MHz	ASRock J3455B -ITX	ApolloLakeD Int.	Dual DDR3 -1866	11-11-11-32 CR1
97.2 MB/s	4x Celeron J1900	2000 MHz	Gigabyte GA-J1900N-D3V	BayTrailD Int.	Dual DDR3 -1333	9-9-9-24 CR1
95.3 MB/s	4x Athlon 5350	2050 MHz	ASRock AM1B-ITX	Yangtze Int.	DDR3-1600 SDRAM	11-11-11-28 CR2
84.0 MB/s	4x Celeron N3150	1600 MHz	ASRock N3150B-ITX	Braswell Int.	Dual DDR3 -1600	11-11-11-28 CR2
82.8 MB/s	4x Opteron 2210 HE	1800 MHz	Tyan Thunder h2000M	BCM5785	Quad DDR2-600R	5-5-5-15 CR1
73.7 MB/s	2x Core 2 Extreme X6800	2933 MHz	Abit AB9	P965	Dual DDR2 -800	5-5-5-18 CR2
73.2 MB/s	2x Athlon64 X2 Black 6400+	3200 MHz	MSI K9N SLI Platinum	nForce570SLI	Dual DDR2 -800	4-4-4-11 CR1
60.0 MB/s	2x Pentium EE 955 HT	3466 MHz	Intel D955XBK	i955X	Dual DDR2 -667	4-4-4-11
58.4 MB/s	2x Xeon HT	3400 MHz	Intel SE7320SP2	iE7320	Dual DDR333R	2.5-3-3-7
41.7 MB/s	2x Atom D525 HT	1800 MHz	Gigabyte GA-D525TUD	NM10 Int.	DDR3-800 SDRAM	6-6-6-15 CR2
41.5 MB/s	2x Pentium D 820	2800 MHz	Abit Fatal1ty F-I90HD	RS600 Int.	Dual DDR2 -800	5-5-5-18 CR2
33.3 MB/s	Nano X2 L4350	1600 MHz	VIA EPIA-M900	VX900H Int.	DDR3-1066 SDRAM	7-7-7-20 CR2
32.8 MB/s	2x E-350	1600 MHz	ASRock E350M1	A50M Int.	DDR3-1066 SDRAM	8-8-8-20 CR1

32.2 MB/s	P4EE HT	3733 MHz	Intel SE7230NH1EX	iE7230	Dual DDR2 -667	5-5-5-15
31.7 MB/s	2x Atom D2500	1866 MHz	Intel D2500CC	NM10 Int.	DDR3-1066 SDRAM	7-7-7-20 CR2
24.0 MB/s	Opteron 248	2200 MHz	MSI K8T Master1-FAR	K8T800	Dual DDR266R	2-3-3-6 CR1
22.6 MB/s	Athlon64 3200+	2000 MHz	ASRock 939S56 -M	SiS756	Dual DDR400	2.5-3-3-8 CR2
19.6 MB/s	Celeron 420	1600 MHz	Intel DQ965GF	Q965 Int.	Dual DDR2 -667	5-5-5-15
18.6 MB/s	Atom 230 HT	1600 MHz	Intel D945GCLF	i945GC Int.	DDR2-533 SDRAM	4-4-4-12
17.4 MB/s	Celeron D 326	2533 MHz	ASRock 775Twins-HDTV	RC410 Ext.	DDR2-533 SDRAM	4-4-4-11 CR2
16.1 MB/s	Sempron 2600+	1600 MHz	ASRock K8NF4G-SATA2	GeForce6100 Int.	DDR400 SDRAM	2.5-3-3-8 CR2
15.3 MB/s	Nano L2200	1600 MHz	VIA VB8001	CN896 Int.	DDR2-667 SDRAM	5-5-5-15 CR2

## CPU AES

	CPU	CPU Takt	Motherboard	Chipsatz	Speicher	CL-RCD-RP-RAS
285585 MB/s	32x Ryzen Threadripper 3970X HT	3800 MHz	Gigabyte TRX40 Aorus Xtreme	TRX40	Quad DDR4-3200	16-18-18-36 CR1
224070 MB/s	32x Ryzen Threadripper 2990WX HT	3000 MHz	MSI MEG X399 Creation	X399	Quad DDR4-2933	16-18-18-38 CR1
147445 MB/s	16x Ryzen 9 3950X HT	3500 MHz	Gigabyte X570 Aorus Pro WiFi	X570	Dual DDR4 -3600	16-16-16-36 CR1
70290 MB/s	8x Ryzen 7 2700X HT	3700 MHz	Asus Crosshair VII Hero	X470	Dual DDR4 -2933	16-20-21-49 CR1
68219 MB/s				<b>B450</b>		

	8x Ryzen 7 2700X HT	3900 [ TRIAL MHz VERSION ]	Navigation	DDR4- 1866 SDRAM	13- 13- 13- 31 CR2
65838 MB/s	20x Xeon E5 -2660 v3 HT	2600 Supermicro MHz X10DRi	C612	Octal DDR4- 1866	13- 13- 13- 31 CR1
63242 MB/s	8x Ryzen 7 1800X HT	3600 Asus Crosshair MHz VI Hero	X370	Dual DDR4 -2667	16- 17- 17- 35 CR1
46884 MB/s	16x Xeon E5 -2670 HT	2600 Supermicro MHz X9DR6-F	C600	Octal DDR3- 1333	9-9- 9-24 CR1
38015 MB/s	32x Opteron 6274	2200 Supermicro MHz H8DGI-F	SR5690	Octal DDR3- 1600R	11- 11- 11- 28 CR1
32074 MB/s	4x Ryzen 5 2400G HT	3600 ASRock A320M MHz Pro4	A320	Dual DDR4 -2933	16- 15- 15- 35 CR1
29420 MB/s	6x Core i7- 8700K HT	3700 Gigabyte Z370 MHz Aorus Gaming 7	Z370 Int.	Dual DDR4 -2667	16- 18- 18- 38 CR2
27374 MB/s	6x Core i7- 7800X HT	3500 Gigabyte X299 MHz UD4	X299	Quad DDR4- 2667	15- 17- 17- 35 CR2
25198 MB/s	6x Core i7- 6850K HT	3600 Asus Strix X99 MHz Gaming	X99	Quad DDR4- 2400	16- 16- 16- 39 CR2
23206 MB/s	6x Core i7- 5820K HT	3300 Gigabyte GA- MHz X99-UD4	X99	Quad DDR4- 2133	15- 15- 15- 36 CR2
21097 MB/s	6x Core i7- 3960X Extreme HT	3300 Intel DX79SI MHz	X79	Quad DDR3- 1600	9-9- 9-24 CR2
21096 MB/s	6x Core i7- 4930K HT	3400 Gigabyte GA- MHz X79-UD3	X79	Quad DDR3- 1866	9-10 -9- 27 CR2
20645 MB/s	4x Core i7- 7700K HT	4200 ASRock Z270 MHz Extreme4	Z270 Ext.	Dual DDR4 -2133	15- 15- 15-

Navigation						36
						CR2
18234 MB/s	4x Core i7-6700K HT	4000 MHz	Gigabyte GA-Z170X-UD3	Z170 Int.	Dual DDR4 -2133	14-14-14-35
						CR2
17940 MB/s	16x Atom C3958	2000 MHz	Supermicro A2SDi-H-TP4F	Denverton	Dual DDR4 -2400	17-17-17-39
						9-10
17292 MB/s	8x FX-8350	4000 MHz	Asus M5A99X Evo R2.0	AMD990X	Dual DDR3 -1866	-9-27
						CR2
16801 MB/s	4x Core i7-4770 HT	3400 MHz	Intel DZ87KLT-75K	Z87 Int.	Dual DDR3 -1600	9-9-9-27
						CR2
16358 MB/s	4x Core i7-5775C HT	3300 MHz	Gigabyte GA-Z97MX-Gaming 5	Z97 Int.	Dual DDR3 -1600	11-11-11-28
						CR1
15377 MB/s	8x FX-8150	3600 MHz	Asus M5A97	AMD970	Dual DDR3 -1866	9-10-9-27
						CR2
14455 MB/s	4x Core i7-3770K HT	3500 MHz	MSI Z77A-GD55	Z77 Int.	Dual DDR3 -1600	9-9-9-24
						CR2
13667 MB/s	4x Core i7-2600 HT	3400 MHz	Asus P8P67	P67	Dual DDR3 -1333	9-9-9-24
						CR1
12246 MB/s	6x Core i7-990X Extreme HT	3466 MHz	Intel DX58SO2	X58	Triple DDR3-1333	9-9-9-24
						CR1
10337 MB/s	6x FX-6100	3300 MHz	Asus Sabertooth 990FX	AMD990FX	Dual DDR3 -1866	9-10-9-27
						CR2
9791 MB/s	4x Celeron J4105	1500 MHz	ASRock J4105-ITX	GeminiLakeD Int.	Dual DDR4 -2400	17-17-17-39
						9-11
9136 MB/s	4x A10-6800K	4100 MHz	Gigabyte GA-F2A85X-UP4	A85X Int.	Dual DDR3 -2133	-10-27
						CR2
9011 MB/s	4x A12-9800	3800 MHz	Gigabyte GA-AB350M-Gaming 3	B350 Int.	Dual DDR4 -2400	14-16-16-31
						CR1
8503 MB/s	4x A10-5800K	3800 MHz	Asus F2A55-M	A55 Int.	Dual DDR3 -1866	9-10-9-27
						CR2
8500 MB/s	4x A10-7850K	3700 MHz	Gigabyte GA-F2A88XM-D3H	A88X Int.	Dual DDR3 -2133	9-11-10-

Navigation					31
					CR2
6557 MB/s	4x Athlon 5350	2050 ASRock AM1B-MHz ITX	Yangtze Int.	DDR3-1600 SDRAM	11-11-11-28 CR2
4924 MB/s	4x Celeron J3455	1500 ASRock J3455B MHz -ITX	ApolloLakeD Int.	Dual DDR3 -1866	11-11-11-32 CR1
4052 MB/s	8x Atom C2750	2400 Supermicro MHz A1SAi-2750F	Avoton	Dual DDR3 -1600	11-11-11-28 CR1
3781 MB/s	2x Core i5-650 HT	3200 Supermicro MHz C7SIM-Q	Q57 Int.	Dual DDR3 -1333	9-9-9-24 CR1
2908 MB/s	Nano X2 L4350	1600 VIA EPIA-MHz M900	VX900H Int.	DDR3-1066 SDRAM	7-7-7-20 CR2
1930 MB/s	12x Opteron 2431	2400 Supermicro MHz H8DI3+-F	SR5690	Unganged Quad DDR2-800R	6-6-6-18 CR1
1619 MB/s	4x Celeron N3150	1600 ASRock MHz N3150B-ITX	Braswell Int.	Dual DDR3 -1600	11-11-11-28 CR2
1452 MB/s	Nano L2200	1600 MHz VIA VB8001	CN896 Int.	DDR2-667 SDRAM	5-5-5-15 CR2
1332 MB/s	6x Phenom II X6 Black 1100T	3300 MHz Gigabyte GA-890GPA-UD3H v2	AMD890GX Int.	Unganged Dual DDR3 -1333	9-9-9-24 CR2
1286 MB/s	8x Opteron 2378	2400 Tyan Thunder MHz n3600R	nForcePro-3600	Unganged Quad DDR2-800R	6-6-6-18 CR1
1233 MB/s	8x Xeon E5462	2800 MHz Intel S5400SF	i5400	Quad DDR2-640FB	5-5-5-15
1152 MB/s	8x Xeon X5550 HT	2666 Supermicro MHz X8DTN+	i5520	Hexa DDR3-1333	9-9-9-24 CR1
914 MB/s	8x Opteron 2344 HE	1700 Supermicro MHz H8DME-2	nForcePro-3600	Unganged Quad DDR2-667R	5-5-5-15 CR1
802 MB/s	4x Phenom II X4 Black 940	3000 Asus M3N78-MHz EM	GeForce8300 Int.	Ganged Dual DDR2 -800	5-5-5-18 CR2
791 MB/s	8x Xeon L5320	1866 Intel MHz S5000VCL	i5000V	Dual DDR2 -533FB	4-4-4-12
790 MB/s	4x A8-3850		A75 Int.		

		2900 MHz	Gigabyte GA-A75M-UD2H	Navigation	Dual DDR3 -1333	9-9-9-24 CR1
721 MB/s	4x Core i7-965 Extreme HT	3200 MHz	Asus P6T Deluxe	X58	Triple DDR3-1333	9-9-9-24 CR1
663 MB/s	4x Core 2 Extreme QX9650	3000 MHz	Gigabyte GA-EP35C-DS3R	P35	Dual DDR3 -1066	8-8-8-20 CR2
587 MB/s	4x Phenom X4 9500	2200 MHz	Asus M3A	AMD770	Ganged Dual DDR2 -800	5-5-5-18 CR2
567 MB/s	4x Core 2 Extreme QX6700	2666 MHz	Intel D975XBX2	i975X	Dual DDR2 -667	5-5-5-15
524 MB/s	4x Xeon X3430	2400 MHz	Supermicro X8SIL-F	i3420	Dual DDR3 -1333	9-9-9-24 CR1
494 MB/s	4x Xeon 5140	2333 MHz	Intel S5000VSA	i5000V	Dual DDR2 -667FB	5-5-5-15
473 MB/s	4x Opteron 2210 HE	1800 MHz	Tyan Thunder h2000M	BCM5785	Quad DDR2-600R	5-5-5-15 CR1
421 MB/s	2x Athlon64 X2 Black 6400+	3200 MHz	MSI K9N SLI Platinum	nForce570SLI	Dual DDR2 -800	4-4-4-11 CR1
387 MB/s	4x Celeron J1900	2000 MHz	Gigabyte GA-J1900N-D3V	BayTrailD Int.	Dual DDR3 -1333	9-9-9-24 CR1
312 MB/s	2x Core 2 Extreme X6800	2933 MHz	Abit AB9	P965	Dual DDR2 -800	5-5-5-18 CR2
277 MB/s	2x Pentium EE 955 HT	3466 MHz	Intel D955XBK	i955X	Dual DDR2 -667	4-4-4-11
269 MB/s	2x Xeon HT	3400 MHz	Intel SE7320SP2	iE7320	Dual DDR333R	2.5-3-3-7
242 MB/s	2x Pentium D 820	2800 MHz	Abit Fatal1ty F-I90HD	RS600 Int.	Dual DDR2 -800	5-5-5-18 CR2
153 MB/s	2x E-350	1600 MHz	ASRock E350M1	A50M Int.	DDR3-1066 SDRAM	8-8-8-20 CR1
148 MB/s	P4EE HT	3733 MHz	Intel SE7230NH1LX	iE7230	Dual DDR2 -667	5-5-5-15
144 MB/s	Opteron 248	2200 MHz	MSI K8T Master1-FAR	K8T800	Dual DDR266R	2-3-3-6 CR1
131 MB/s	Athlon64 3200+	2000 MHz	ASRock 939S56-M	SiS756	Dual DDR400	2.5-3-3-8 CR2
108 MB/s	Celeron D 326	2533 MHz	ASRock 775Twins-HDTV	RC410 Ext.	DDR2-533 SDRAM	4-4-4-11 CR2
105 MB/s	Sempron 2600+	1600 MHz	ASRock K8NF4G-SATA2	GeForce6100 Int.	DDR400 SDRAM	2.5-3-3-



Navigation					8 CR2	
99 MB/s	2x Atom D525 HT	1800 MHz	Gigabyte GA- D525TUD	NM10 Int.	DDR3-800 SDRAM	6-6- 6-15 CR2
98 MB/s	2x Atom D2500	1866 MHz	Intel D2500CC	NM10 Int.	DDR3- 1066 SDRAM	7-7- 7-20 CR2
85 MB/s	Celeron 420	1600 MHz	Intel DQ965GF	Q965 Int.	Dual DDR2 -667	5-5- 5-15
44 MB/s	Atom 230 HT	1600 MHz	Intel D945GCLF	i945GC Int.	DDR2-533 SDRAM	4-4- 4-12

## CPU SHA3

	CPU	CPU Takt	Motherboard	Chipsatz	Speicher	CL- RCD -RP - RAS
9774 MB/s	32x Ryzen Threadripper 3970X HT	3800 MHz	Gigabyte TRX40 Aorus Xtreme	TRX40	Quad DDR4- 3200	16- 18- 18- 36 CR1
7396 MB/s	32x Ryzen Threadripper 2990WX HT	3000 MHz	MSI MEG X399 Creation	X399	Quad DDR4- 2933	16- 18- 18- 38 CR1
4950 MB/s	16x Ryzen 9 3950X HT	3500 MHz	Gigabyte X570 Aorus Pro WiFi	X570	Dual DDR4 -3600	16- 16- 16- 36 CR1
4941 MB/s	20x Xeon E5 -2660 v3 HT	2600 MHz	Supermicro X10DRi	C612	Octal DDR4- 1866	13- 13- 13- 31 CR1
3419 MB/s	6x Core i7- 7800X HT	3500 MHz	Gigabyte X299 UD4	X299	Quad DDR4- 2667	15- 17- 17- 35 CR2
2668 MB/s	32x Opteron 6274	2200 MHz	Supermicro H8DGI-F	SR5690	Octal DDR3- 1600R	11- 11- 11- 28 CR1
2531 MB/s	6x Core i7- 8700K HT	3700 MHz	Gigabyte Z370 Aorus Gaming 7	Z370 Int.	Dual DDR4 -2667	16- 18- 18- 38 CR2

2524 MB/s	16x Xeon E5-2670 HT	2600 MHz	Supermicro X9DR6-F	C600 Navigation	Octal DDR3-1333	9-9-9-24 CR1
2237 MB/s	8x Ryzen 7 2700X HT	3700 MHz	Asus Crosshair VII Hero	X470	Dual DDR4-2933	16-20-21-49 CR1
2176 MB/s	<b>8x Ryzen 7 2700X HT</b>	<b>3900 [ TRIAL MHz VERSION ]</b>		<b>B450</b>	<b>DDR4-1866 SDRAM</b>	<b>13-13-13-31 CR2</b>
2018 MB/s	8x Ryzen 7 1800X HT	3600 MHz	Asus Crosshair VI Hero	X370	Dual DDR4-2667	16-17-17-35 CR1
1986 MB/s	6x Core i7-6850K HT	3600 MHz	Asus Strix X99 Gaming	X99	Quad DDR4-2400	16-16-16-39 CR2
1804 MB/s	6x Core i7-5820K HT	3300 MHz	Gigabyte GA-X99-UD4	X99	Quad DDR4-2133	15-15-15-36 CR2
1775 MB/s	4x Core i7-7700K HT	4200 MHz	ASRock Z270 Extreme4	Z270 Ext.	Dual DDR4-2133	15-15-15-36 CR2
1569 MB/s	4x Core i7-6700K HT	4000 MHz	Gigabyte GA-Z170X-UD3	Z170 Int.	Dual DDR4-2133	14-14-14-35 CR2
1314 MB/s	12x Opteron 2431	2400 MHz	Supermicro H8DI3+-F	SR5690	Unganged Quad DDR2-800R	6-6-6-18 CR1
1306 MB/s	4x Core i7-4770 HT	3400 MHz	Intel DZ87KLT-75K	Z87 Int.	Dual DDR3-1600	9-9-9-27 CR2
1283 MB/s	4x Core i7-5775C HT	3300 MHz	Gigabyte GA-Z97MX-Gaming 5	Z97 Int.	Dual DDR3-1600	11-11-11-28 CR1
1180 MB/s	8x FX-8350	4000 MHz	Asus M5A99X Evo R2.0	AMD990X	Dual DDR3-1866	9-10-9-27 CR2
1178 MB/s	6x Core i7-4930K HT	3400 MHz	Gigabyte GA-X79-UD3	X79	Quad DDR3-1866	9-10-9-27 CR2
1136 MB/s			Intel DX79SI	X79		

	6x Core i7-3960X Extreme HT	3300 MHz	Navigation		Quad DDR3-1600	9-9-9-24 CR2
1076 MB/s	8x FX-8150	3600 MHz	Asus M5A97	AMD970	Dual DDR3-1866	9-10-9-27 CR2
1037 MB/s	8x Xeon E5462	2800 MHz	Intel S5400SF	i5400	Quad DDR2-640FB	5-5-5-15
1031 MB/s	16x Atom C3958	2000 MHz	Supermicro A2SDi-H-TP4F	Denverton	Dual DDR4-2400	17-17-17-39
979 MB/s	4x Ryzen 5 2400G HT	3600 MHz	ASRock A320M Pro4	A320	Dual DDR4-2933	16-15-15-35 CR1
912 MB/s	6x Phenom II X6 Black 1100T	3300 MHz	Gigabyte GA-890GPA-UD3H v2	AMD890GX Int.	Unganged Dual DDR3-1333	9-9-9-24 CR2
876 MB/s	8x Opteron 2378	2400 MHz	Tyan Thunder n3600R	nForcePro-3600	Unganged Quad DDR2-800R	6-6-6-18 CR1
845 MB/s	6x Core i7-990X Extreme HT	3466 MHz	Intel DX58SO2	X58	Triple DDR3-1333	9-9-9-24 CR1
834 MB/s	8x Xeon X5550 HT	2666 MHz	Supermicro X8DTN+	i5520	Hexa DDR3-1333	9-9-9-24 CR1
796 MB/s	4x Core i7-3770K HT	3500 MHz	MSI Z77A-GD55	Z77 Int.	Dual DDR3-1600	9-9-9-24 CR2
758 MB/s	4x A12-9800	3800 MHz	Gigabyte GA-AB350M-Gaming 3	B350 Int.	Dual DDR4-2400	14-16-16-31 CR1
736 MB/s	4x Core i7-2600 HT	3400 MHz	Asus P8P67	P67	Dual DDR3-1333	9-9-9-24 CR1
726 MB/s	6x FX-6100	3300 MHz	Asus Sabertooth 990FX	AMD990FX	Dual DDR3-1866	9-10-9-27 CR2
684 MB/s	8x Xeon L5320	1866 MHz	Intel S5000VCL	i5000V	Dual DDR2-533FB	4-4-4-12
625 MB/s	8x Opteron 2344 HE	1700 MHz	Supermicro H8DME-2	nForcePro-3600	Unganged Quad DDR2-667R	5-5-5-15 CR1
625 MB/s	4x A10-6800K	4100 MHz	Gigabyte GA-F2A85X-UP4	A85X Int.	Dual DDR3-2133	9-11-10-27 CR2
581 MB/s			Asus F2A55-M	A55 Int.		

	4x A10-5800K	3800 MHz	Navigation		Dual DDR3 -1866	9-10-9-27 CR2
577 MB/s	4x A10-7850K	3700 MHz	Gigabyte GA-F2A88XM-D3H	A88X Int.	Dual DDR3 -2133	9-11-10-31 CR2
555 MB/s	4x Core 2 Extreme QX9650	3000 MHz	Gigabyte GA-EP35C-DS3R	P35	Dual DDR3 -1066	8-8-8-20 CR2
547 MB/s	4x Phenom II X4 Black 940	3000 MHz	Asus M3N78-EM	GeForce8300 Int.	Ganged Dual DDR2 -800	5-5-5-18 CR2
532 MB/s	4x A8-3850	2900 MHz	Gigabyte GA-A75M-UD2H	A75 Int.	Dual DDR3 -1333	9-9-9-24 CR1
525 MB/s	8x Atom C2750	2400 MHz	Supermicro A1SAi-2750F	Avoton	Dual DDR3 -1600	11-11-11-28 CR1
523 MB/s	4x Core i7-965 Extreme HT	3200 MHz	Asus P6T Deluxe	X58	Triple DDR3-1333	9-9-9-24 CR1
489 MB/s	4x Core 2 Extreme QX6700	2666 MHz	Intel D975XBX2	i975X	Dual DDR2 -667	5-5-5-15
427 MB/s	4x Xeon 5140	2333 MHz	Intel S5000VSA	i5000V	Dual DDR2 -667FB	5-5-5-15
418 MB/s	4x Xeon X3430	2400 MHz	Supermicro X8SIL-F	i3420	Dual DDR3 -1333	9-9-9-24 CR1
401 MB/s	4x Phenom X4 9500	2200 MHz	Asus M3A	AMD770	Ganged Dual DDR2 -800	5-5-5-18 CR2
385 MB/s	4x Celeron J4105	1500 MHz	ASRock J4105-ITX	GeminiLakeD Int.	Dual DDR4 -2400	17-17-17-39
329 MB/s	4x Celeron J3455	1500 MHz	ASRock J3455B -ITX	ApolloLakeD Int.	Dual DDR3 -1866	11-11-11-32 CR1
327 MB/s	4x Opteron 2210 HE	1800 MHz	Tyan Thunder h2000M	BCM5785	Quad DDR2-600R	5-5-5-15 CR1
291 MB/s	2x Athlon64 X2 Black 6400+	3200 MHz	MSI K9N SLI Platinum	nForce570SLI	Dual DDR2 -800	4-4-4-11 CR1
272 MB/s	4x Athlon 5350	2050 MHz	ASRock AM1B-ITX	Yangtze Int.	DDR3-1600 SDRAM	11-11-11-28 CR2
269 MB/s		2933 MHz	Abit AB9	P965	Dual DDR2 -800	

	2x Core 2 Extreme X6800		Navigation			5-5-5-18 CR2
260 MB/s	2x Core i5-650 HT	3200 MHz	Supermicro C7SIM-Q	Q57 Int.	Dual DDR3 -1333	9-9-9-24 CR1
243 MB/s	4x Celeron J1900	2000 MHz	Gigabyte GA-J1900N-D3V	BayTrailD Int.	Dual DDR3 -1333	9-9-9-24 CR1
213 MB/s	4x Celeron N3150	1600 MHz	ASRock N3150B-ITX	Braswell Int.	Dual DDR3 -1600	11-11-11-28 CR2
205 MB/s	2x Pentium EE 955 HT	3466 MHz	Intel D955XBK	i955X	Dual DDR2 -667	4-4-4-11
200 MB/s	2x Xeon HT	3400 MHz	Intel SE7320SP2	iE7320	Dual DDR333R	2.5-3-3-7
146 MB/s	2x Pentium D 820	2800 MHz	Abit Fatal1ty F-I90HD	RS600 Int.	Dual DDR2 -800	5-5-5-18 CR2
110 MB/s	P4EE HT	3733 MHz	Intel SE7230NH1LX	iE7230	Dual DDR2 -667	5-5-5-15
107 MB/s	2x Atom D2500	1866 MHz	Intel D2500CC	NM10 Int.	DDR3-1066 SDRAM	7-7-7-20 CR2
106 MB/s	Nano X2 L4350	1600 MHz	VIA EPiA-M900	VX900H Int.	DDR3-1066 SDRAM	7-7-7-20 CR2
105 MB/s	2x Atom D525 HT	1800 MHz	Gigabyte GA-D525TUD	NM10 Int.	DDR3-800 SDRAM	6-6-6-15 CR2
99 MB/s	Opteron 248	2200 MHz	MSI K8T Master1-FAR	K8T800	Dual DDR266R	2-3-3-6 CR1
96 MB/s	2x E-350	1600 MHz	ASRock E350M1	A50M Int.	DDR3-1066 SDRAM	8-8-8-20 CR1
90 MB/s	Athlon64 3200+	2000 MHz	ASRock 939S56-M	SiS756	Dual DDR400	2.5-3-3-8 CR2
73 MB/s	Celeron 420	1600 MHz	Intel DQ965GF	Q965 Int.	Dual DDR2 -667	5-5-5-15
72 MB/s	Sempron 2600+	1600 MHz	ASRock K8NF4G-SATA2	GeForce6100 Int.	DDR400 SDRAM	2.5-3-3-8 CR2
65 MB/s	Celeron D 326	2533 MHz	ASRock 775Twins-HDTV	RC410 Ext.	DDR2-533 SDRAM	4-4-4-11 CR2
51 MB/s	Nano L2200	1600 MHz	VIA VB8001	CN896 Int.	DDR2-667 SDRAM	5-5-5-15 CR2
47 MB/s	Atom 230 HT	1600 MHz	Intel D945GCLF	i945GC Int.	DDR2-533 SDRAM	4-4-4-12

## Navigation

## FPU Julia

	CPU	CPU Takt	Motherboard	Chipsatz	Speicher	CL- RCD -RP - RAS
302606	32x Ryzen Threadripper 3970X HT	3800 MHz	Gigabyte TRX40 Aorus Xtreme	TRX40	Quad DDR4-3200	16-18-18-36 CR1
149854	16x Ryzen 9 3950X HT	3500 MHz	Gigabyte X570 Aorus Pro WiFi	X570	Dual DDR4-3600	16-16-16-36 CR1
141102	32x Ryzen Threadripper 2990WX HT	3000 MHz	MSI MEG X399 Creation	X399	Quad DDR4-2933	16-18-18-38 CR1
111086	20x Xeon E5-2660 v3 HT	2600 MHz	Supermicro X10DRi	C612	Octal DDR4-1866	13-13-13-31 CR1
66364	6x Core i7-7800X HT	3500 MHz	Gigabyte X299 UD4	X299	Quad DDR4-2667	15-17-17-35 CR2
62489	16x Xeon E5-2670 HT	2600 MHz	Supermicro X9DR6-F	C600	Octal DDR3-1333	9-9-9-24 CR1
54927	6x Core i7-8700K HT	3700 MHz	Gigabyte Z370 Aorus Gaming 7	Z370 Int.	Dual DDR4-2667	16-18-18-38 CR2
40860	8x Ryzen 7 2700X HT	3700 MHz	Asus Crosshair VII Hero	X470	Dual DDR4-2933	16-20-21-49 CR1
40283	6x Core i7-5820K HT	3300 MHz	Gigabyte GA-X99-UD4	X99	Quad DDR4-2133	15-15-15-36 CR2
39603	<b>8x Ryzen 7 2700X HT</b>	<b>3900 [ TRIAL MHz VERSION ]</b>		<b>B450</b>	<b>DDR4-1866 SDRAM</b>	<b>13-13-13-31 CR2</b>

Navigation						
38481	8x Ryzen 7 1800X HT	3600 MHz	Asus Crosshair VI Hero	X370	Dual DDR4 -2667	16- 17- 17- 35 CR1
38472	4x Core i7- 7700K HT	4200 MHz	ASRock Z270 Extreme4	Z270 Ext.	Dual DDR4 -2133	15- 15- 15- 36 CR2
36094	6x Core i7- 6850K HT	3600 MHz	Asus Strix X99 Gaming	X99	Quad DDR4- 2400	16- 16- 16- 39 CR2
34017	4x Core i7- 6700K HT	4000 MHz	Gigabyte GA- Z170X-UD3	Z170 Int.	Dual DDR4 -2133	14- 14- 14- 35 CR2
30190	32x Opteron 6274	2200 MHz	Supermicro H8DGI-F	SR5690	Octal DDR3- 1600R	11- 11- 11- 28 CR1
28482	6x Core i7- 4930K HT	3400 MHz	Gigabyte GA- X79-UD3	X79	Quad DDR3- 1866	9-10 -9- 27 CR2
27646	4x Core i7- 4770 HT	3400 MHz	Intel DZ87KLT- 75K	Z87 Int.	Dual DDR3 -1600	9-9- 9-27 CR2
26893	6x Core i7- 3960X Extreme HT	3300 MHz	Intel DX79SI	X79	Quad DDR3- 1600	9-9- 9-24 CR2
24755	4x Core i7- 5775C HT	3300 MHz	Gigabyte GA- Z97MX-Gaming 5	Z97 Int.	Dual DDR3 -1600	11- 11- 11- 28 CR1
19514	4x Core i7- 3770K HT	3500 MHz	MSI Z77A- GD55	Z77 Int.	Dual DDR3 -1600	9-9- 9-24 CR2
18966	4x Ryzen 5 2400G HT	3600 MHz	ASRock A320M Pro4	A320	Dual DDR4 -2933	16- 15- 15- 35 CR1
18453	4x Core i7- 2600 HT	3400 MHz	Asus P8P67	P67	Dual DDR3 -1333	9-9- 9-24 CR1
18309	12x Opteron 2431	2400 MHz	Supermicro H8DI3+-F	SR5690	Unganged Quad DDR2- 800R	6-6- 6-18 CR1
18009	6x Core i7- 990X Extreme HT	3466 MHz	Intel DX58SO2	X58	Triple DDR3- 1333	9-9- 9-24 CR1
17672				i5520		

	8x Xeon X5550 HT	2666 MHz	Supermicro X8DTN+ Navigation		Hexa DDR3-1333	9-9-9-24 CR1
15941	16x Atom C3958	2000 MHz	Supermicro A2SDi-H-TP4F	Denver	Dual DDR4-2400	17-17-17-39
15291	8x Xeon E5462	2800 MHz	Intel S5400SF	i5400	Quad DDR2-640FB	5-5-5-15
13498	8x FX-8350	4000 MHz	Asus M5A99X Evo R2.0	AMD990X	Dual DDR3-1866	9-10-9-27 CR2
12633	6x Phenom II X6 Black 1100T	3300 MHz	Gigabyte GA-890GPA-UD3H v2	AMD890GX Int.	Unganged Dual DDR3-1333	9-9-9-24 CR2
12205	8x Opteron 2378	2400 MHz	Tyan Thunder n3600R	nForcePro-3600	Unganged Quad DDR2-800R	6-6-6-18 CR1
11912	8x FX-8150	3600 MHz	Asus M5A97	AMD970	Dual DDR3-1866	9-10-9-27 CR2
11127	4x Core i7-965 Extreme HT	3200 MHz	Asus P6T Deluxe	X58	Triple DDR3-1333	9-9-9-24 CR1
8958	8x Xeon L5320	1866 MHz	Intel S5000VCL	i5000V	Dual DDR2-533FB	4-4-4-12
8746	8x Atom C2750	2400 MHz	Supermicro A1SAi-2750F	Avoton	Dual DDR3-1600	11-11-11-28 CR1
8686	8x Opteron 2344 HE	1700 MHz	Supermicro H8DME-2	nForcePro-3600	Unganged Quad DDR2-667R	5-5-5-15 CR1
8203	4x Core 2 Extreme QX9650	3000 MHz	Gigabyte GA-EP35C-DS3R	P35	Dual DDR3-1066	8-8-8-20 CR2
8070	4x Xeon X3430	2400 MHz	Supermicro X8SIL-F	i3420	Dual DDR3-1333	9-9-9-24 CR1
7958	6x FX-6100	3300 MHz	Asus Sabertooth 990FX	AMD990FX	Dual DDR3-1866	9-10-9-27 CR2
7598	4x Phenom II X4 Black 940	3000 MHz	Asus M3N78-EM	GeForce8300 Int.	Ganged Dual DDR2-800	5-5-5-18 CR2
7432	4x A8-3850	2900 MHz	Gigabyte GA-A75M-UD2H	A75 Int.	Dual DDR3-1333	9-9-9-24 CR1
7019	4x A10-6800K	4100 MHz	Gigabyte GA-F2A85X-UP4	A85X Int.	Dual DDR3-2133	9-11-10-



Navigation						27
						CR2
6987	4x A12-9800	3800 MHz	Gigabyte GA-AB350M-Gaming 3	B350 Int.	Dual DDR4 -2400	14-16-16-31
						CR1
						9-10
6526	4x A10-5800K	3800 MHz	Asus F2A55-M	A55 Int.	Dual DDR3 -1866	-9-27
						CR2
6416	4x Core 2 Extreme QX6700	2666 MHz	Intel D975XBX2	i975X	Dual DDR2 -667	5-5-5-15
						9-11
6228	4x A10-7850K	3700 MHz	Gigabyte GA-F2A88XM-D3H	A88X Int.	Dual DDR3 -2133	-10-31
						CR2
						17-
6169	4x Celeron J4105	1500 MHz	ASRock J4105-ITX	GeminiLakeD Int.	Dual DDR4 -2400	17-17-39
						11-
						11-
5655	4x Celeron J3455	1500 MHz	ASRock J3455B -ITX	ApolloLakeD Int.	Dual DDR3 -1866	11-32
						CR1
5600	4x Xeon 5140	2333 MHz	Intel S5000VSA	i5000V	Dual DDR2 -667FB	5-5-5-15
5580	4x Phenom X4 9500	2200 MHz	Asus M3A	AMD770	Ganged Dual DDR2 -800	5-5-5-18
						CR2
5577	2x Core i5-650 HT	3200 MHz	Supermicro C7SIM-Q	Q57 Int.	Dual DDR3 -1333	9-9-9-24
						CR1
						11-
5235	4x Athlon 5350	2050 MHz	ASRock AM1B-ITX	Yangtze Int.	DDR3-1600 SDRAM	11-11-28
						CR2
4053	4x Celeron J1900	2000 MHz	Gigabyte GA-J1900N-D3V	BayTrailD Int.	Dual DDR3 -1333	9-9-9-24
						CR1
3534	2x Core 2 Extreme X6800	2933 MHz	Abit AB9	P965	Dual DDR2 -800	5-5-5-18
						CR2
						11-
3487	4x Celeron N3150	1600 MHz	ASRock N3150B-ITX	Braswell Int.	Dual DDR3 -1600	11-11-28
						CR2
2443	2x Pentium EE 955 HT	3466 MHz	Intel D955XBK	i955X	Dual DDR2 -667	4-4-4-11
2388	2x Xeon HT	3400 MHz	Intel SE7320SP2	iE7320	Dual DDR333R	2.5-3-3-7
2308	4x Opteron 2210 HE	1800 MHz	Tyan Thunder h2000M	BCM5785		

Navigation				Quad DDR2- 600R	5-5- 5-15 CR1
2053	2x Athlon64 X2 Black 6400+	3200 MHz MSI K9N SLI Platinum	nForce570SLI	Dual DDR2 -800	4-4- 4-11 CR1
1988	2x Pentium D 820	2800 MHz Abit Fatal1ty F- I90HD	RS600 Int.	Dual DDR2 -800	5-5- 5-18 CR2
1865	Nano X2 L4350	1600 MHz VIA EPiA- M900	VX900H Int.	DDR3- 1066 SDRAM	7-7- 7-20 CR2
1332	2x Atom D525 HT	1800 MHz Gigabyte GA- D525TUD	NM10 Int.	DDR3-800 SDRAM	6-6- 6-15 CR2
1307	P4EE HT	3733 MHz Intel SE7230NH1LX	iE7230	Dual DDR2 -667	5-5- 5-15
1112	2x Atom D2500	1866 MHz Intel D2500CC	NM10 Int.	DDR3- 1066 SDRAM	7-7- 7-20 CR2
958	Celeron 420	1600 MHz Intel DQ965GF	Q965 Int.	Dual DDR2 -667	5-5- 5-15
911	2x E-350	1600 MHz ASRock E350M1	A50M Int.	DDR3- 1066 SDRAM	8-8- 8-20 CR1
892	Celeron D 326	2533 MHz ASRock 775Twins- HDTV	RC410 Ext.	DDR2-533 SDRAM	4-4- 4-11 CR2
794	Nano L2200	1600 MHz VIA VB8001	CN896 Int.	DDR2-667 SDRAM	5-5- 5-15 CR2
701	Opteron 248	2200 MHz MSI K8T Master1-FAR	K8T800	Dual DDR266R	2-3- 3-6 CR1
640	Athlon64 3200+	2000 MHz ASRock 939S56 -M	SiS756	Dual DDR400	2.5- 3-3- 8 CR2
589	Atom 230 HT	1600 MHz Intel D945GCLF	i945GC Int.	DDR2-533 SDRAM	4-4- 4-12
513	Sempron 2600+	1600 MHz ASRock K8NF4G- SATA2	GeForce6100 Int.	DDR400 SDRAM	2.5- 3-3- 8 CR2

## FPU Mandel

CPU	CPU Takt	Motherboard	Chipsatz	Speicher	CL- RCD -RP - RAS
160860	3800 MHz		TRX40		16- 18-

	32x Ryzen Threadripper 3970X HT		Gigabyte TRX40 Aorus Xtreme			Quad DDR4-3200	18-36 CR1
79245	16x Ryzen 9 3950X HT	3500 MHz	Gigabyte X570 Aorus Pro WiFi	X570		Dual DDR4-3600	16-16-16-36 CR1
72961	32x Ryzen Threadripper 2990WX HT	3000 MHz	MSI MEG X399 Creation	X399		Quad DDR4-2933	16-18-18-38 CR1
54582	20x Xeon E5-2660 v3 HT	2600 MHz	Supermicro X10DRi	C612		Octal DDR4-1866	13-13-13-31 CR1
36624	6x Core i7-7800X HT	3500 MHz	Gigabyte X299 UD4	X299		Quad DDR4-2667	15-17-17-35 CR2
32939	16x Xeon E5-2670 HT	2600 MHz	Supermicro X9DR6-F	C600		Octal DDR3-1333	9-9-9-24 CR1
29556	6x Core i7-8700K HT	3700 MHz	Gigabyte Z370 Aorus Gaming 7	Z370 Int.		Dual DDR4-2667	16-18-18-38 CR2
21692	6x Core i7-5820K HT	3300 MHz	Gigabyte GA-X99-UD4	X99		Quad DDR4-2133	15-15-15-36 CR2
21329	8x Ryzen 7 2700X HT	3700 MHz	Asus Crosshair VII Hero	X470		Dual DDR4-2933	16-20-21-49 CR1
20702	4x Core i7-7700K HT	4200 MHz	ASRock Z270 Extreme4	Z270 Ext.		Dual DDR4-2133	15-15-15-36 CR2
20662	<b>8x Ryzen 7 2700X HT</b>	<b>3900 MHz</b>	<b>[ TRIAL VERSION ]</b>	<b>B450</b>		<b>DDR4-1866 SDRAM</b>	<b>13-13-13-31 CR2</b>
20171	8x Ryzen 7 1800X HT	3600 MHz	Asus Crosshair VI Hero	X370		Dual DDR4-2667	16-17-17-35 CR1
19160	6x Core i7-6850K HT	3600 MHz	Asus Strix X99 Gaming	X99		Quad DDR4-2400	16-16-16-

Navigation					39
					CR2
18312	4x Core i7-6700K HT	4000 MHz	Gigabyte GA-Z170X-UD3	Z170 Int.	Dual DDR4-2133
					14-14-14-35
					CR2
15402	32x Opteron 6274	2200 MHz	Supermicro H8DGI-F	SR5690	Octal DDR3-1600R
					11-11-11-28
					CR1
15100	6x Core i7-4930K HT	3400 MHz	Gigabyte GA-X79-UD3	X79	Quad DDR3-1866
					9-10-9-27
					CR2
14851	4x Core i7-4770 HT	3400 MHz	Intel DZ87KLT-75K	Z87 Int.	Dual DDR3-1600
					9-9-9-27
					CR2
14256	6x Core i7-3960X Extreme HT	3300 MHz	Intel DX79SI	X79	Quad DDR3-1600
					9-9-9-24
					CR2
12503	4x Core i7-5775C HT	3300 MHz	Gigabyte GA-Z97MX-Gaming 5	Z97 Int.	Dual DDR3-1600
					11-11-11-28
					CR1
10344	4x Core i7-3770K HT	3500 MHz	MSI Z77A-GD55	Z77 Int.	Dual DDR3-1600
					9-9-9-24
					CR2
9890	4x Ryzen 5 2400G HT	3600 MHz	ASRock A320M Pro4	A320	Dual DDR4-2933
					16-15-15-35
					CR1
9781	4x Core i7-2600 HT	3400 MHz	Asus P8P67	P67	Dual DDR3-1333
					9-9-9-24
					CR1
9318	12x Opteron 2431	2400 MHz	Supermicro H8DI3+-F	SR5690	Unganged Quad DDR2-800R
					6-6-6-18
					CR1
8675	6x Core i7-990X Extreme HT	3466 MHz	Intel DX58SO2	X58	Triple DDR3-1333
					9-9-9-24
					CR1
8614	8x Xeon X5550 HT	2666 MHz	Supermicro X8DTN+	i5520	Hexa DDR3-1333
					9-9-9-24
					CR1
8068	8x Xeon E5462	2800 MHz	Intel S5400SF	i5400	Quad DDR2-640FB
					5-5-5-15
7273	16x Atom C3958	2000 MHz	Supermicro A2SDi-H-TP4F	Denverton	Dual DDR4-2400
					17-17-17-39
6913	8x FX-8350	4000 MHz	Asus M5A99X Evo R2.0	AMD990X	Dual DDR3-1866
					9-10-9-27
					CR2

6434	6x Phenom II X6 Black 1100T	3300 MHz	Gigabyte GA-890GPA-UD3H v2	AMD890GX Int.	Unganged Dual DDR3 -1333	9-9-24 CR2
6212	8x Opteron 2378	2400 MHz	Tyan Thunder n3600R	nForcePro-3600	Unganged Quad DDR2-800R	6-6-18 CR1
6096	8x FX-8150	3600 MHz	Asus M5A97	AMD970	Dual DDR3 -1866	9-10-27 CR2
5394	4x Core i7-965 Extreme HT	3200 MHz	Asus P6T Deluxe	X58	Triple DDR3-1333	9-9-24 CR1
4625	8x Xeon L5320	1866 MHz	Intel S5000VCL	i5000V	Dual DDR2 -533FB	4-4-12
4421	8x Opteron 2344 HE	1700 MHz	Supermicro H8DME-2	nForcePro-3600	Unganged Quad DDR2-667R	5-5-15 CR1
4333	4x Core 2 Extreme QX9650	3000 MHz	Gigabyte GA-EP35C-DS3R	P35	Dual DDR3 -1066	8-8-20 CR2
4180	4x Xeon X3430	2400 MHz	Supermicro X8SIL-F	i3420	Dual DDR3 -1333	9-9-24 CR1
4040	6x FX-6100	3300 MHz	Asus Sabertooth 990FX	AMD990FX	Dual DDR3 -1866	9-10-27 CR2
3970	4x A8-3850	2900 MHz	Gigabyte GA-A75M-UD2H	A75 Int.	Dual DDR3 -1333	9-9-24 CR1
3874	4x Phenom II X4 Black 940	3000 MHz	Asus M3N78-EM	GeForce8300 Int.	Ganged Dual DDR2 -800	5-5-18 CR2
3646	4x A12-9800	3800 MHz	Gigabyte GA-AB350M-Gaming 3	B350 Int.	Dual DDR4 -2400	14-16-31 CR1
3454	4x A10-6800K	4100 MHz	Gigabyte GA-F2A85X-UP4	A85X Int.	Dual DDR3 -2133	9-11-27 CR2
3349	4x Celeron J4105	1500 MHz	ASRock J4105-ITX	GeminiLakeD Int.	Dual DDR4 -2400	17-17-39
3311	4x Core 2 Extreme QX6700	2666 MHz	Intel D975XBX2	i975X	Dual DDR2 -667	5-5-15
3174	4x A10-7850K	3700 MHz	Gigabyte GA-F2A88XM-D3H	A88X Int.	Dual DDR3 -2133	9-11-31 CR2
3149	4x A10-5800K	3800 MHz	Asus F2A55-M	A55 Int.	Dual DDR3 -1866	9-10-9

Navigation					27
					CR2
3068	4x Celeron J3455	1500 MHz	ASRock J3455B -ITX	ApolloLakeD Int.	Dual DDR3 -1866
					11-11-11-32
					CR1
2981	8x Atom C2750	2400 MHz	Supermicro A1SAi-2750F	Avoton	Dual DDR3 -1600
					11-11-28
					CR1
2890	4x Xeon 5140	2333 MHz	Intel S5000VSA	i5000V	Dual DDR2 -667FB
					5-5-5-15
2840	4x Phenom X4 9500	2200 MHz	Asus M3A	AMD770	Ganged Dual DDR2 -800
					5-5-5-18
					CR2
2675	2x Core i5-650 HT	3200 MHz	Supermicro C7SIM-Q	Q57 Int.	Dual DDR3 -1333
					9-9-9-24
					CR1
2335	4x Athlon 5350	2050 MHz	ASRock AM1B-ITX	Yangtze Int.	DDR3-1600 SDRAM
					11-11-28
					CR2
1823	2x Core 2 Extreme X6800	2933 MHz	Abit AB9	P965	Dual DDR2 -800
					5-5-5-18
					CR2
1482	2x Pentium EE 955 HT	3466 MHz	Intel D955XBK	i955X	Dual DDR2 -667
					4-4-4-11
1449	2x Xeon HT	3400 MHz	Intel SE7320SP2	iE7320	Dual DDR333R
					2.5-3-3-7
1383	4x Celeron J1900	2000 MHz	Gigabyte GA-J1900N-D3V	BayTrailD Int.	Dual DDR3 -1333
					9-9-9-24
					CR1
1189	4x Celeron N3150	1600 MHz	ASRock N3150B-ITX	Braswell Int.	Dual DDR3 -1600
					11-11-28
					CR2
1182	4x Opteron 2210 HE	1800 MHz	Tyan Thunder h2000M	BCM5785	Quad DDR2-600R
					5-5-5-15
					CR1
1062	2x Pentium D 820	2800 MHz	Abit Fatal1ty F-I90HD	RS600 Int.	Dual DDR2 -800
					5-5-5-18
					CR2
1051	2x Athlon64 X2 Black 6400+	3200 MHz	MSI K9N SLI Platinum	nForce570SLI	Dual DDR2 -800
					4-4-4-11
					CR1
856	Nano X2 L4350	1600 MHz	VIA EPIA-M900	VX900H Int.	DDR3-1066 SDRAM
					7-7-7-20
					CR2
794	P4EE HT	3733 MHz	Intel SE7230NH1LX	iE7230	Dual DDR2 -667
					5-5-5-15
494	Celeron 420	1600 MHz	Intel DQ965GF	Q965 Int.	Dual DDR2 -667
					5-5-5-15
476				RC410 Ext.	

	Celeron D 326	2533 MHz	ASRock 775Twin HDTV	Navigation	DDR2-533 SDRAM	4-4-4-11 CR2
438	2x Atom D525 HT	1800 MHz	Gigabyte GA-D525TUD	NM10 Int.	DDR3-800 SDRAM	6-6-6-15 CR2
427	2x E-350	1600 MHz	ASRock E350M1	A50M Int.	DDR3-1066 SDRAM	8-8-8-20 CR1
406	Nano L2200	1600 MHz	VIA VB8001	CN896 Int.	DDR2-667 SDRAM	5-5-5-15 CR2
401	2x Atom D2500	1866 MHz	Intel D2500CC	NM10 Int.	DDR3-1066 SDRAM	7-7-7-20 CR2
359	Opteron 248	2200 MHz	MSI K8T Master1-FAR	K8T800	Dual DDR266R	2-3-3-6 CR1
328	Athlon64 3200+	2000 MHz	ASRock 939S56 -M	SiS756	Dual DDR400	2.5-3-3-8 CR2
263	Sempron 2600+	1600 MHz	ASRock K8NF4G-SATA2	GeForce6100 Int.	DDR400 SDRAM	2.5-3-3-8 CR2
193	Atom 230 HT	1600 MHz	Intel D945GCLF	i945GC Int.	DDR2-533 SDRAM	4-4-4-12

## FPU SinJulia

	CPU	CPU Takt	Motherboard	Chipsatz	Speicher	CL-RCD-RP-RAS
55908	32x Ryzen Threadripper 3970X HT	3800 MHz	Gigabyte TRX40 Aorus Xtreme	TRX40	Quad DDR4-3200	16-18-18-36 CR1
46562	32x Ryzen Threadripper 2990WX HT	3000 MHz	MSI MEG X399 Creation	X399	Quad DDR4-2933	16-18-18-38 CR1
28541	16x Ryzen 9 3950X HT	3500 MHz	Gigabyte X570 Aorus Pro WiFi	X570	Dual DDR4-3600	16-16-16-36 CR1
18481	20x Xeon E5 -2660 v3 HT	2600 MHz	Supermicro X10DRi	C612	Octal DDR4-1866	13-13-13-

Navigation							31
16033	16x Xeon E5-2670 HT	2600 MHz	Supermicro X9DR6-F	C600	Octal DDR3-1333	9-9-9-24	CR1
13534	8x Ryzen 7 2700X HT	3700 MHz	Asus Crosshair VII Hero	X470	Dual DDR4-2933	16-20-21-49	CR1
13120	<b>8x Ryzen 7 2700X HT</b>	<b>3917 MHz</b>	<b>[ TRIAL VERSION ]</b>	<b>B450</b>	<b>DDR4-1866 SDRAM</b>	<b>13-13-13-31</b>	<b>CR2</b>
12654	8x Ryzen 7 1800X HT	3600 MHz	Asus Crosshair VI Hero	X370	Dual DDR4-2667	16-17-17-35	CR1
7786	6x Core i7-8700K HT	3700 MHz	Gigabyte Z370 Aorus Gaming 7	Z370 Int.	Dual DDR4-2667	16-18-18-38	CR2
7470	6x Core i7-990X Extreme HT	3466 MHz	Intel DX58SO2	X58	Triple DDR3-1333	9-9-9-24	CR1
7272	6x Core i7-4930K HT	3400 MHz	Gigabyte GA-X79-UD3	X79	Quad DDR3-1866	9-10-9-27	CR2
7240	6x Core i7-7800X HT	3500 MHz	Gigabyte X299 UD4	X299	Quad DDR4-2667	15-17-17-35	CR2
7218	6x Core i7-3960X Extreme HT	3300 MHz	Intel DX79SI	X79	Quad DDR3-1600	9-9-9-24	CR2
7116	6x Core i7-6850K HT	3600 MHz	Asus Strix X99 Gaming	X99	Quad DDR4-2400	16-16-16-39	CR2
6993	8x Xeon X5550 HT	2666 MHz	Supermicro X8DTN+	i5520	Hexa DDR3-1333	9-9-9-24	CR1
6821	32x Opteron 6274	2200 MHz	Supermicro H8DGI-F	SR5690	Octal DDR3-1600R	11-11-11-28	CR1
6511	6x Core i7-5820K HT	3300 MHz	Gigabyte GA-X99-UD4	X99	Quad DDR4-2133	15-15-15-36	CR2
6131				A320			



	4x Ryzen 5 2400G HT	3600 ASRock A320M MHz Pro4 Navigation		Dual DDR4 -2933	16- 15- 15- 35 CR1
5460	4x Core i7- 7700K HT	4200 ASRock Z270 MHz Extreme4	Z270 Ext.	Dual DDR4 -2133	15- 15- 36 CR2
4978	4x Core i7- 3770K HT	3500 MSI Z77A- MHz GD55	Z77 Int.	Dual DDR3 -1600	9-9- 9-24 CR2
4826	4x Core i7- 6700K HT	4000 Gigabyte GA- MHz Z170X-UD3	Z170 Int.	Dual DDR4 -2133	14- 14- 14- 35 CR2
4714	4x Core i7- 4770 HT	3400 Intel DZ87KLT- MHz 75K	Z87 Int.	Dual DDR3 -1600	9-9- 9-27 CR2
4675	4x Core i7- 2600 HT	3400 Asus P8P67 MHz	P67	Dual DDR3 -1333	9-9- 9-24 CR1
4658	12x Opteron 2431	2400 Supermicro MHz H8DI3+-F	SR5690	Unganged Quad DDR2- 800R	6-6- 6-18 CR1
4615	4x Core i7- 5775C HT	3300 Gigabyte GA- MHz Z97MX-Gaming 5	Z97 Int.	Dual DDR3 -1600	11- 11- 11- 28 CR1
4586	4x Core i7- 965 Extreme HT	3200 Asus P6T MHz Deluxe	X58	Triple DDR3- 1333	9-9- 9-24 CR1
4137	8x Xeon E5462	2800 Intel S5400SF MHz	i5400	Quad DDR2- 640FB	5-5- 5-15
3540	16x Atom C3958	2000 Supermicro MHz A2SDi-H-TP4F	Denverton	Dual DDR4 -2400	17- 17- 17- 39
3212	6x Phenom II X6 Black 1100T	3300 Gigabyte GA- MHz 890GPA-UD3H v2	AMD890GX Int.	Unganged Dual DDR3 -1333	9-9- 9-24 CR2
3100	8x Opteron 2378	2400 Tyan Thunder MHz n3600R	nForcePro- 3600	Unganged Quad DDR2- 800R	6-6- 6-18 CR1
2831	8x FX-8350	4000 Asus M5A99X MHz Evo R2.0	AMD990X	Dual DDR3 -1866	9-10 -9- 27 CR2
2642	8x FX-8150	3600 Asus M5A97 MHz	AMD970	Dual DDR3 -1866	9-10 -9- 27 CR2
			i5000V		

2589	8x Xeon L5320	1866 MHz	Intel S5000VCE	Navigation	Dual DDR2 -533FB	4-4-4-12
2304	2x Core i5-650 HT	3200 MHz	Supermicro C7SIM-Q	Q57 Int.	Dual DDR3 -1333	9-9-9-24 CR1
2266	4x Xeon X3430	2400 MHz	Supermicro X8SIL-F	i3420	Dual DDR3 -1333	9-9-9-24 CR1
2221	4x Core 2 Extreme QX9650	3000 MHz	Gigabyte GA-EP35C-DS3R	P35	Dual DDR3 -1066	8-8-8-20 CR2
2210	8x Opteron 2344 HE	1700 MHz	Supermicro H8DME-2	nForcePro-3600	Unganged Quad DDR2-667R	5-5-5-15 CR1
2042	8x Atom C2750	2400 MHz	Supermicro A1SAi-2750F	Avoton	Dual DDR3 -1600	11-11-11-28 CR1
1934	4x Phenom II X4 Black 940	3000 MHz	Asus M3N78-EM	GeForce8300 Int.	Ganged Dual DDR2 -800	5-5-5-18 CR2
1872	4x A8-3850	2900 MHz	Gigabyte GA-A75M-UD2H	A75 Int.	Dual DDR3 -1333	9-9-9-24 CR1
1855	4x Core 2 Extreme QX6700	2666 MHz	Intel D975XBX2	i975X	Dual DDR2 -667	5-5-5-15
1738	6x FX-6100	3300 MHz	Asus Sabertooth 990FX	AMD990FX	Dual DDR3 -1866	9-10-9-27 CR2
1618	4x Xeon 5140	2333 MHz	Intel S5000VSA	i5000V	Dual DDR2 -667FB	5-5-5-15
1575	4x A12-9800	3800 MHz	Gigabyte GA-AB350M-Gaming 3	B350 Int.	Dual DDR4 -2400	14-16-16-31 CR1
1480	4x A10-7850K	3700 MHz	Gigabyte GA-F2A88XM-D3H	A88X Int.	Dual DDR3 -2133	9-11-10-31 CR2
1478	4x A10-6800K	4100 MHz	Gigabyte GA-F2A85X-UP4	A85X Int.	Dual DDR3 -2133	9-11-10-27 CR2
1420	4x Phenom X4 9500	2200 MHz	Asus M3A	AMD770	Ganged Dual DDR2 -800	5-5-5-18 CR2
1377	4x A10-5800K	3800 MHz	Asus F2A55-M	A55 Int.	Dual DDR3 -1866	9-10-9-27 CR2
1260	4x Athlon 5350	2050 MHz	ASRock AM1B-ITX	Yangtze Int.	DDR3-1600 SDRAM	11-11-11-

Navigation						28 CR2
1178	4x Opteron 2210 HE	1800 MHz	Tyan Thunder h2000M	BCM5785	Quad DDR2- 600R	5-5- 5-15 CR1
1167	4x Celeron J4105	1500 MHz	ASRock J4105- ITX	GeminiLakeD Int.	Dual DDR4 -2400	17- 17- 17- 39
1049	2x Athlon64 X2 Black 6400+	3200 MHz	MSI K9N SLI Platinum	nForce570SLI	Dual DDR2 -800	4-4- 4-11 CR1
1021	2x Core 2 Extreme X6800	2933 MHz	Abit AB9	P965	Dual DDR2 -800	5-5- 5-18 CR2
974	4x Celeron J3455	1500 MHz	ASRock J3455B -ITX	ApolloLakeD Int.	Dual DDR3 -1866	11- 11- 11- 32 CR1
959	2x Pentium EE 955 HT	3466 MHz	Intel D955XBK	i955X	Dual DDR2 -667	4-4- 4-11
945	4x Celeron J1900	2000 MHz	Gigabyte GA- J1900N-D3V	BayTrailD Int.	Dual DDR3 -1333	9-9- 9-24 CR1
942	2x Xeon HT	3400 MHz	Intel SE7320SP2	iE7320	Dual DDR333R	2.5- 3-3- 7
810	4x Celeron N3150	1600 MHz	ASRock N3150B-ITX	Braswell Int.	Dual DDR3 -1600	11- 11- 11- 28 CR2
516	P4EE HT	3733 MHz	Intel SE7230NH1LX	iE7230	Dual DDR2 -667	5-5- 5-15
503	2x E-350	1600 MHz	ASRock E350M1	A50M Int.	DDR3- 1066 SDRAM	8-8- 8-20 CR1
463	2x Atom D525 HT	1800 MHz	Gigabyte GA- D525TUD	NM10 Int.	DDR3-800 SDRAM	6-6- 6-15 CR2
452	2x Pentium D 820	2800 MHz	Abit Fatal1ty F- I90HD	RS600 Int.	Dual DDR2 -800	5-5- 5-18 CR2
359	Opteron 248	2200 MHz	MSI K8T Master1-FAR	K8T800	Dual DDR266R	2-3- 3-6 CR1
327	Athlon64 3200+	2000 MHz	ASRock 939S56 -M	SiS756	Dual DDR400	2.5- 3-3- 8 CR2
284	Nano X2 L4350	1600 MHz	VIA EPIA- M900	VX900H Int.	DDR3- 1066 SDRAM	7-7- 7-20 CR2
277	Celeron 420	1600 MHz	Intel DQ965GF	Q965 Int.	Dual DDR2 -667	5-5- 5-15
262	Sempron 2600+	1600 MHz		GeForce6100 Int.	DDR400 SDRAM	2.5- 3-3-

			ASRock K8NF4G SATA2	Navigation		8 CR2
261	2x Atom D2500	1866 MHz	Intel D2500CC	NM10 Int.	DDR3- 1066 SDRAM	7-7- 7-20 CR2
205	Atom 230 HT	1600 MHz	Intel D945GCLF	i945GC Int.	DDR2-533 SDRAM	4-4- 4-12
202	Celeron D 326	2533 MHz	ASRock 775Twins- HDTV	RC410 Ext.	DDR2-533 SDRAM	4-4- 4-11 CR2
131	Nano L2200	1600 MHz	VIA VB8001	CN896 Int.	DDR2-667 SDRAM	5-5- 5-15 CR2

## FP32 Ray-Trace

	CPU	CPU Takt	Motherboard	Chipsatz	Speicher	CL- RCD -RP - RAS
57482 KRay/s	32x Ryzen Threadripper 3970X HT	3800 MHz	Gigabyte TRX40 Aorus Xtreme	TRX40	Quad DDR4- 3200	16- 18- 18- 36 CR1
27881 KRay/s	16x Ryzen 9 3950X HT	3500 MHz	Gigabyte X570 Aorus Pro WiFi	X570	Dual DDR4 -3600	16- 16- 16- 36 CR1
27293 KRay/s	32x Ryzen Threadripper 2990WX HT	3000 MHz	MSI MEG X399 Creation	X399	Quad DDR4- 2933	16- 18- 18- 38 CR1
18503 KRay/s	20x Xeon E5 -2660 v3 HT	2600 MHz	Supermicro X10DRi	C612	Octal DDR4- 1866	13- 13- 13- 31 CR1
15902 KRay/s	6x Core i7- 7800X HT	3500 MHz	Gigabyte X299 UD4	X299	Quad DDR4- 2667	15- 17- 17- 35 CR2
11818 KRay/s	6x Core i7- 8700K HT	3700 MHz	Gigabyte Z370 Aorus Gaming 7	Z370 Int.	Dual DDR4 -2667	16- 18- 18- 38 CR2
11356 KRay/s	16x Xeon E5 -2670 HT	2600 MHz	Supermicro X9DR6-F	C600	Octal DDR3- 1333	9-9- 9-24 CR1

8389 KRay/s	8x Ryzen 7 2700X HT	3700 MHz	Asus Crosshair VII Hero	X470	Dual DDR4 -2933	16- 20- 21- 49 CR1
8264 KRay/s	4x Core i7- 7700K HT	4200 MHz	ASRock Z270 Extreme4	Z270 Ext.	Dual DDR4 -2133	15- 15- 36 CR2
8208 KRay/s	<b>8x Ryzen 7 2700X HT</b>	<b>3900 [ TRIAL MHz VERSION ]</b>	<b>B450</b>		<b>DDR4- 1866 SDRAM</b>	<b>13- 13- 13- 31 CR2</b>
7481 KRay/s	6x Core i7- 6850K HT	3600 MHz	Asus Strix X99 Gaming	X99	Quad DDR4- 2400	16- 16- 16- 39 CR2
7408 KRay/s	8x Ryzen 7 1800X HT	3600 MHz	Asus Crosshair VI Hero	X370	Dual DDR4 -2667	16- 17- 17- 35 CR1
7282 KRay/s	6x Core i7- 5820K HT	3300 MHz	Gigabyte GA- X99-UD4	X99	Quad DDR4- 2133	15- 15- 15- 36 CR2
7266 KRay/s	4x Core i7- 6700K HT	4000 MHz	Gigabyte GA- Z170X-UD3	Z170 Int.	Dual DDR4 -2133	14- 14- 14- 35 CR2
5988 KRay/s	32x Opteron 6274	2200 MHz	Supermicro H8DGI-F	SR5690	Octal DDR3- 1600R	11- 11- 11- 28 CR1
5195 KRay/s	6x Core i7- 4930K HT	3400 MHz	Gigabyte GA- X79-UD3	X79	Quad DDR3- 1866	9-10 -9- 27 CR2
5054 KRay/s	4x Core i7- 4770 HT	3400 MHz	Intel DZ87KLT- 75K	Z87 Int.	Dual DDR3 -1600	9-9- 9-27 CR2
4853 KRay/s	6x Core i7- 3960X Extreme HT	3300 MHz	Intel DX79SI	X79	Quad DDR3- 1600	9-9- 9-24 CR2
4789 KRay/s	4x Core i7- 5775C HT	3300 MHz	Gigabyte GA- Z97MX-Gaming 5	Z97 Int.	Dual DDR3 -1600	11- 11- 11- 28 CR1
3691 KRay/s	4x Ryzen 5 2400G HT	3600 MHz	ASRock A320M Pro4	A320	Dual DDR4 -2933	16- 15- 15-

Navigation						35
						CR1
3562 KRay/s	4x Core i7-3770K HT	3500 MHz	MSI Z77A-GD55	Z77 Int.	Dual DDR3-1600	9-9-9-24 CR2
3360 KRay/s	4x Core i7-2600 HT	3400 MHz	Asus P8P67	P67	Dual DDR3-1333	9-9-9-24 CR1
2868 KRay/s	12x Opteron 2431	2400 MHz	Supermicro H8DI3+-F	SR5690	Unganged Quad DDR2-800R	6-6-6-18 CR1
2653 KRay/s	6x Core i7-990X Extreme HT	3466 MHz	Intel DX58SO2	X58	Triple DDR3-1333	9-9-9-24 CR1
2599 KRay/s	8x FX-8350	4000 MHz	Asus M5A99X Evo R2.0	AMD990X	Dual DDR3-1866	9-10-9-27 CR2
2559 KRay/s	8x Xeon X5550 HT	2666 MHz	Supermicro X8DTN+	i5520	Hexa DDR3-1333	9-9-9-24 CR1
2556 KRay/s	16x Atom C3958	2000 MHz	Supermicro A2SDi-H-TP4F	Denverton	Dual DDR4-2400	17-17-17-39
2541 KRay/s	8x FX-8150	3600 MHz	Asus M5A97	AMD970	Dual DDR3-1866	9-10-9-27 CR2
2182 KRay/s	8x Xeon E5462	2800 MHz	Intel S5400SF	i5400	Quad DDR2-640FB	5-5-5-15
1982 KRay/s	6x Phenom II X6 Black 1100T	3300 MHz	Gigabyte GA-890GPA-UD3H v2	AMD890GX Int.	Unganged Dual DDR3-1333	9-9-9-24 CR2
1911 KRay/s	8x Opteron 2378	2400 MHz	Tyan Thunder n3600R	nForcePro-3600	Unganged Quad DDR2-800R	6-6-6-18 CR1
1642 KRay/s	6x FX-6100	3300 MHz	Asus Sabertooth 990FX	AMD990FX	Dual DDR3-1866	9-10-9-27 CR2
1629 KRay/s	4x Core i7-965 Extreme HT	3200 MHz	Asus P6T Deluxe	X58	Triple DDR3-1333	9-9-9-24 CR1
1546 KRay/s	4x A12-9800	3800 MHz	Gigabyte GA-AB350M-Gaming 3	B350 Int.	Dual DDR4-2400	14-16-16-31 CR1
1379 KRay/s	4x A10-7850K	3700 MHz	Gigabyte GA-F2A88XM-D3H	A88X Int.	Dual DDR3-2133	9-11-10-31 CR2
1369 KRay/s	4x A10-6800K	4100 MHz	Gigabyte GA-F2A85X-UP4	A85X Int.	Dual DDR3-2133	9-11-10-

Navigation						27 CR2
1313 KRay/s	8x Xeon L5320	1866 MHz	Intel S5000VCL	i5000V	Dual DDR2 -533FB	4-4-4-12
1252 KRay/s	4x A10-5800K	3800 MHz	Asus F2A55-M	A55 Int.	Dual DDR3 -1866	9-10-9-27 CR2
1215 KRay/s	8x Opteron 2344 HE	1700 MHz	Supermicro H8DME-2	nForcePro-3600	Unganged Quad DDR2-667R	5-5-5-15 CR1
1212 KRay/s	8x Atom C2750	2400 MHz	Supermicro A1SAi-2750F	Avoton	Dual DDR3 -1600	11-11-11-28 CR1
1175 KRay/s	4x Core 2 Extreme QX9650	3000 MHz	Gigabyte GA-EP35C-DS3R	P35	Dual DDR3 -1066	8-8-8-20 CR2
1161 KRay/s	4x Phenom II X4 Black 940	3000 MHz	Asus M3N78-EM	GeForce8300 Int.	Ganged Dual DDR2 -800	5-5-5-18 CR2
1129 KRay/s	4x Xeon X3430	2400 MHz	Supermicro X8SIL-F	i3420	Dual DDR3 -1333	9-9-9-24 CR1
1104 KRay/s	4x A8-3850	2900 MHz	Gigabyte GA-A75M-UD2H	A75 Int.	Dual DDR3 -1333	9-9-9-24 CR1
978 KRay/s	4x Celeron J4105	1500 MHz	ASRock J4105-ITX	GeminiLakeD Int.	Dual DDR4 -2400	17-17-17-39
976 KRay/s	4x Core 2 Extreme QX6700	2666 MHz	Intel D975XBX2	i975X	Dual DDR2 -667	5-5-5-15
850 KRay/s	4x Xeon 5140	2333 MHz	Intel S5000VSA	i5000V	Dual DDR2 -667FB	5-5-5-15
801 KRay/s	2x Core i5-650 HT	3200 MHz	Supermicro C7SIM-Q	Q57 Int.	Dual DDR3 -1333	9-9-9-24 CR1
788 KRay/s	4x Phenom X4 9500	2200 MHz	Asus M3A	AMD770	Ganged Dual DDR2 -800	5-5-5-18 CR2
782 KRay/s	4x Celeron J3455	1500 MHz	ASRock J3455B-ITX	ApolloLakeD Int.	Dual DDR3 -1866	11-11-11-32 CR1
774 KRay/s	4x Athlon 5350	2050 MHz	ASRock AM1B-ITX	Yangtze Int.	DDR3-1600 SDRAM	11-11-11-28 CR2
570 KRay/s	4x Celeron J1900	2000 MHz	Gigabyte GA-J1900N-D3V	BayTrailD Int.	Dual DDR3 -1333	9-9-9-24 CR1
526 KRay/s			Abit AB9	P965		

	2x Core 2 Extreme X6800	2933 MHz	Navigation		Dual DDR2 -800	5-5- 5-18 CR2
523 KRay/s	4x Celeron N3150	1600 ASRock MHz N3150B-ITX	Braswell Int.		Dual DDR3 -1600	11- 11- 11- 28 CR2
370 KRay/s	2x Pentium EE 955 HT	3466 Intel MHz D955XBK	i955X		Dual DDR2 -667	4-4- 4-11
354 KRay/s	2x Xeon HT	3400 Intel MHz SE7320SP2	iE7320		Dual DDR333R	2.5- 3-3- 7
319 KRay/s	4x Opteron 2210 HE	1800 Tyan Thunder MHz h2000M	BCM5785		Quad DDR2- 600R	5-5- 5-15 CR1
299 KRay/s	2x Athlon64 X2 Black 6400+	3200 MSI K9N SLI MHz Platinum	nForce570SLI		Dual DDR2 -800	4-4- 4-11 CR1
272 KRay/s	2x Pentium D 820	2800 Abit Fatal1ty F- MHz I90HD	RS600 Int.		Dual DDR2 -800	5-5- 5-18 CR2
268 KRay/s	Nano X2 L4350	1600 VIA EPIA- MHz M900	VX900H Int.		DDR3- 1066 SDRAM	7-7- 7-20 CR2
213 KRay/s	2x Atom D525 HT	1800 Gigabyte GA- MHz D525TUD	NM10 Int.		DDR3-800 SDRAM	6-6- 6-15 CR2
203 KRay/s	P4EE HT	3733 Intel MHz SE7230NH1LX	iE7230		Dual DDR2 -667	5-5- 5-15
165 KRay/s	2x Atom D2500	1866 Intel MHz D2500CC	NM10 Int.		DDR3- 1066 SDRAM	7-7- 7-20 CR2
145 KRay/s	Celeron 420	1600 Intel MHz DQ965GF	Q965 Int.		Dual DDR2 -667	5-5- 5-15
130 KRay/s	2x E-350	1600 ASRock MHz E350M1	A50M Int.		DDR3- 1066 SDRAM	8-8- 8-20 CR1
123 KRay/s	Celeron D 326	2533 ASRock MHz 775Twins- HDTV	RC410 Ext.		DDR2-533 SDRAM	4-4- 4-11 CR2
117 KRay/s	Nano L2200	1600 MHz VIA VB8001	CN896 Int.		DDR2-667 SDRAM	5-5- 5-15 CR2
105 KRay/s	Opteron 248	2200 MSI K8T MHz Master1-FAR	K8T800		Dual DDR266R	2-3- 3-6 CR1
95 KRay/s	Atom 230 HT	1600 Intel MHz D945GCLF	i945GC Int.		DDR2-533 SDRAM	4-4- 4-12
92 KRay/s	Athlon64 3200+	2000 ASRock 939S56 MHz -M	SiS756		Dual DDR400	2.5- 3-3- 8 CR2
70 KRay/s	Sempron 2600+	1600 ASRock MHz K8NF4G- SATA2	GeForce6100 Int.		DDR400 SDRAM	2.5- 3-3- 8 CR2



Navigation

## FP64 Ray-Trace

	CPU	CPU Takt	Motherboard	Chipsatz	Speicher	CL- RCD -RP - RAS
31857 KRay/s	32x Ryzen Threadripper 3970X HT	3800 MHz	Gigabyte TRX40 Aorus Xtreme	TRX40	Quad DDR4-3200	16-18-18-36 CR1
15318 KRay/s	16x Ryzen 9 3950X HT	3500 MHz	Gigabyte X570 Aorus Pro WiFi	X570	Dual DDR4-3600	16-16-16-36 CR1
13887 KRay/s	32x Ryzen Threadripper 2990WX HT	3000 MHz	MSI MEG X399 Creation	X399	Quad DDR4-2933	16-18-18-38 CR1
10033 KRay/s	20x Xeon E5-2660 v3 HT	2600 MHz	Supermicro X10DRi	C612	Octal DDR4-1866	13-13-13-31 CR1
8839 KRay/s	6x Core i7-7800X HT	3500 MHz	Gigabyte X299 UD4	X299	Quad DDR4-2667	15-17-17-35 CR2
6425 KRay/s	6x Core i7-8700K HT	3700 MHz	Gigabyte Z370 Aorus Gaming 7	Z370 Int.	Dual DDR4-2667	16-18-18-38 CR2
5969 KRay/s	16x Xeon E5-2670 HT	2600 MHz	Supermicro X9DR6-F	C600	Octal DDR3-1333	9-9-9-24 CR1
4564 KRay/s	4x Core i7-7700K HT	4200 MHz	ASRock Z270 Extreme4	Z270 Ext.	Dual DDR4-2133	15-15-15-36 CR2
4187 KRay/s	8x Ryzen 7 2700X HT	3700 MHz	Asus Crosshair VII Hero	X470	Dual DDR4-2933	16-20-21-49 CR1
4132 KRay/s	6x Core i7-6850K HT	3600 MHz	Asus Strix X99 Gaming	X99	Quad DDR4-2400	16-16-16-39 CR2

Navigation	DDR4- 1866 SDRAM	13- 13- 13- 31 CR2
4079 KRay/s	8x Ryzen 7 2700X HT	3900 [ TRIAL MHz VERSION ] B450
4057 KRay/s	6x Core i7- 5820K HT	3300 Gigabyte GA- MHz X99-UD4 X99
4011 KRay/s	4x Core i7- 6700K HT	4000 Gigabyte GA- MHz Z170X-UD3 Z170 Int.
4000 KRay/s	8x Ryzen 7 1800X HT	3600 Asus Crosshair MHz VI Hero X370
3256 KRay/s	32x Opteron 6274	2200 Supermicro MHz H8DGI-F SR5690
2807 KRay/s	6x Core i7- 4930K HT	3400 Gigabyte GA- MHz X79-UD3 X79
2772 KRay/s	4x Core i7- 4770 HT	3400 Intel DZ87KLT- MHz 75K Z87 Int.
2638 KRay/s	6x Core i7- 3960X Extreme HT	3300 Intel DX79SI X79
2595 KRay/s	4x Core i7- 5775C HT	3300 Gigabyte GA- MHz Z97MX-Gaming 5 Z97 Int.
1963 KRay/s	4x Ryzen 5 2400G HT	3600 ASRock A320M MHz Pro4 A320
1918 KRay/s	4x Core i7- 3770K HT	3500 MSI Z77A- MHz GD55 Z77 Int.
1817 KRay/s	4x Core i7- 2600 HT	3400 Asus P8P67 P67
1559 KRay/s	12x Opteron 2431	2400 Supermicro MHz H8DI3+ -F SR5690
1457 KRay/s	6x Core i7- 990X Extreme HT	3466 Intel MHz DX58SO2 X58
1388 KRay/s	8x FX-8350	AMD990X

		4000 MHz	Asus M5A99X Evo R2.0	Navigation	Dual DDR3 -1866	9-10-9-27 CR2
1379 KRay/s	8x Xeon X5550 HT	2666 MHz	Supermicro X8DTN+	i5520	Hexa DDR3-1333	9-9-9-24 CR1
1367 KRay/s	16x Atom C3958	2000 MHz	Supermicro A2SDi-H-TP4F	Denver	Dual DDR4 -2400	17-17-17-39
1313 KRay/s	8x FX-8150	3600 MHz	Asus M5A97	AMD970	Dual DDR3 -1866	9-10-9-27 CR2
1159 KRay/s	8x Xeon E5462	2800 MHz	Intel S5400SF	i5400	Quad DDR2-640FB	5-5-5-15
1039 KRay/s	8x Opteron 2378	2400 MHz	Tyan Thunder n3600R	nForcePro-3600	Unganged Quad DDR2-800R	6-6-6-18 CR1
1037 KRay/s	6x Phenom II X6 Black 1100T	3300 MHz	Gigabyte GA-890GPA-UD3H v2	AMD890GX Int.	Unganged Dual DDR3 -1333	9-9-9-24 CR2
900 KRay/s	4x Core i7-965 Extreme HT	3200 MHz	Asus P6T Deluxe	X58	Triple DDR3-1333	9-9-9-24 CR1
874 KRay/s	6x FX-6100	3300 MHz	Asus Sabertooth 990FX	AMD990FX	Dual DDR3 -1866	9-10-9-27 CR2
852 KRay/s	4x A12-9800	3800 MHz	Gigabyte GA-AB350M-Gaming 3	B350 Int.	Dual DDR4 -2400	14-16-16-31 CR1
737 KRay/s	4x A10-6800K	4100 MHz	Gigabyte GA-F2A85X-UP4	A85X Int.	Dual DDR3 -2133	9-11-10-27 CR2
724 KRay/s	8x Xeon L5320	1866 MHz	Intel S5000VCL	i5000V	Dual DDR2 -533FB	4-4-4-12
717 KRay/s	4x A10-7850K	3700 MHz	Gigabyte GA-F2A88XM-D3H	A88X Int.	Dual DDR3 -2133	9-11-10-31 CR2
671 KRay/s	4x A10-5800K	3800 MHz	Asus F2A55-M	A55 Int.	Dual DDR3 -1866	9-10-9-27 CR2
669 KRay/s	8x Opteron 2344 HE	1700 MHz	Supermicro H8DME-2	nForcePro-3600	Unganged Quad DDR2-667R	5-5-5-15 CR1
626 KRay/s	4x Phenom II X4 Black 940	3000 MHz	Asus M3N78-EM	GeForce8300 Int.	Ganged Dual DDR2 -800	5-5-5-18 CR2

623 KRay/s	4x A8-3850	2900 MHz	Gigabyte GA-A75M-UD2H	A75 Int.	Dual DDR3 -1333	9-9-9-24 CR1
623 KRay/s	4x Xeon X3430	2400 MHz	Supermicro X8SIL-F	i3420	Dual DDR3 -1333	9-9-9-24 CR1
616 KRay/s	4x Core 2 Extreme QX9650	3000 MHz	Gigabyte GA-EP35C-DS3R	P35	Dual DDR3 -1066	8-8-8-20 CR2
539 KRay/s	4x Celeron J4105	1500 MHz	ASRock J4105-ITX	GeminiLakeD Int.	Dual DDR4 -2400	17-17-17-39
534 KRay/s	4x Core 2 Extreme QX6700	2666 MHz	Intel D975XBX2	i975X	Dual DDR2 -667	5-5-5-15
466 KRay/s	4x Xeon 5140	2333 MHz	Intel S5000VSA	i5000V	Dual DDR2 -667FB	5-5-5-15
459 KRay/s	8x Atom C2750	2400 MHz	Supermicro A1SAi-2750F	Avoton	Dual DDR3 -1600	11-11-11-28 CR1
452 KRay/s	4x Phenom X4 9500	2200 MHz	Asus M3A	AMD770	Ganged Dual DDR2 -800	5-5-5-18 CR2
443 KRay/s	2x Core i5-650 HT	3200 MHz	Supermicro C7SIM-Q	Q57 Int.	Dual DDR3 -1333	9-9-9-24 CR1
435 KRay/s	4x Athlon 5350	2050 MHz	ASRock AM1B-ITX	Yangtze Int.	DDR3-1600 SDRAM	11-11-11-28 CR2
428 KRay/s	4x Celeron J3455	1500 MHz	ASRock J3455B-ITX	ApolloLakeD Int.	Dual DDR3 -1866	11-11-11-32 CR1
285 KRay/s	2x Core 2 Extreme X6800	2933 MHz	Abit AB9	P965	Dual DDR2 -800	5-5-5-18 CR2
210 KRay/s	4x Celeron J1900	2000 MHz	Gigabyte GA-J1900N-D3V	BayTrailD Int.	Dual DDR3 -1333	9-9-9-24 CR1
205 KRay/s	2x Pentium EE 955 HT	3466 MHz	Intel D955XBK	i955X	Dual DDR2 -667	4-4-4-11
197 KRay/s	2x Xeon HT	3400 MHz	Intel SE7320SP2	iE7320	Dual DDR333R	2.5-3-3-7
193 KRay/s	4x Opteron 2210 HE	1800 MHz	Tyan Thunder h2000M	BCM5785	Quad DDR2-600R	5-5-5-15 CR1
185 KRay/s	4x Celeron N3150	1600 MHz	ASRock N3150B-ITX	Braswell Int.	Dual DDR3 -1600	11-11-11-28 CR2

176 KRay/s	2x Athlon64 X2 Black 6400+	3200 MHz	MSI K9N SLI Platinum	nForce570SLI	Dual DDR2 -800	4-4-4-11 CR1
138 KRay/s	2x Pentium D 820	2800 MHz	Abit Fatal1ty F-I90HD	RS600 Int.	Dual DDR2 -800	5-5-5-18 CR2
120 KRay/s	Nano X2 L4350	1600 MHz	VIA EPIA-M900	VX900H Int.	DDR3-1066 SDRAM	7-7-7-20 CR2
109 KRay/s	P4EE HT	3733 MHz	Intel SE7230NH1LX	iE7230	Dual DDR2 -667	5-5-5-15
79 KRay/s	2x E-350	1600 MHz	ASRock E350M1	A50M Int.	DDR3-1066 SDRAM	8-8-8-20 CR1
71 KRay/s	Celeron 420	1600 MHz	Intel DQ965GF	Q965 Int.	Dual DDR2 -667	5-5-5-15
64 KRay/s	2x Atom D525 HT	1800 MHz	Gigabyte GA-D525TUD	NM10 Int.	DDR3-800 SDRAM	6-6-6-15 CR2
62 KRay/s	Celeron D 326	2533 MHz	ASRock 775Twins-HDTV	RC410 Ext.	DDR2-533 SDRAM	4-4-4-11 CR2
59 KRay/s	Opteron 248	2200 MHz	MSI K8T Master1-FAR	K8T800	Dual DDR266R	2-3-3-6 CR1
56 KRay/s	Nano L2200	1600 MHz	VIA VB8001	CN896 Int.	DDR2-667 SDRAM	5-5-5-15 CR2
54 KRay/s	Athlon64 3200+	2000 MHz	ASRock 939S56-M	SiS756	Dual DDR400	2.5-3-3-8 CR2
46 KRay/s	2x Atom D2500	1866 MHz	Intel D2500CC	NM10 Int.	DDR3-1066 SDRAM	7-7-7-20 CR2
43 KRay/s	Sempron 2600+	1600 MHz	ASRock K8NF4G-SATA2	GeForce6100 Int.	DDR400 SDRAM	2.5-3-3-8 CR2
28 KRay/s	Atom 230 HT	1600 MHz	Intel D945GCLF	i945GC Int.	DDR2-533 SDRAM	4-4-4-12

## Debug - PCI

B00 D00 F00: AMD K17 - Root Complex

```

Offset 000: 22 10 50 14 00 00 00 00 00 00 00 06 00 00 80 00
Offset 010: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 020: 00 00 00 00 00 00 00 00 00 00 00 00 49 18 50 14
Offset 030: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 040: 00 00 00 00 00 00 00 00 80 00 00 00 10 00 80 00
Offset 050: 49 18 50 14 00 00 00 00 00 00 00 00 00 00 00 00
Offset 060: 00 98 05 00 EF 0F C8 67 00 00 00 00 00 00 00 00

```

Offset 070: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 080: 00 00 00 00 08 01 00 00 00 00 00 00 00 00 00 00  
 Offset 090: 00 00 00 E0 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0A0: 00 00 00 00 FF FF FF FF 00 00 00 00 00 00 00 00  
 Offset 0B0: 00 00 00 00 00 00 00 00 00 00 30 14 04 02 00 00  
 Offset 0C0: 00 00 00 00 00 00 00 00 FF FF FF FF 00 00 00 00  
 Offset 0D0: 00 00 00 00 FF FF FF FF 00 00 00 00 00 00 00 00  
 Offset 0E0: 46 00 30 01 FF FF FF FF 00 00 00 00 00 00 00 00  
 Offset 0F0: 00 00 00 00 00 80 80 00 00 00 00 00 FF FF FF FF

B00 D01 F00: AMD K17 - PCIe Dummy Host Bridge

Offset 000: 22 10 52 14 00 00 00 00 00 00 00 06 00 00 80 00  
 Offset 010: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 020: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 030: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 040: 80 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 050: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 060: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 070: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 080: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 090: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0A0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0B0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0C0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0D0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0E0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0F0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

B00 D01 F03: AMD K17 - PCIe GPP Bridge [7:0]

Offset 000: 22 10 53 14 07 04 10 00 00 00 04 06 10 00 81 00  
 Offset 010: 00 00 00 00 00 00 00 00 00 01 08 00 D1 E1 00 20  
 Offset 020: 50 F7 70 F7 F1 FF 01 00 00 00 00 00 00 00 00 00  
 Offset 030: 00 00 00 00 50 00 00 00 00 00 00 00 00 00 00 00  
 Offset 040: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 050: 01 58 03 C8 00 00 00 00 10 A0 42 01 22 80 00 00  
 Offset 060: 17 21 00 00 43 F8 72 02 40 00 43 70 00 00 04 00  
 Offset 070: 00 00 40 01 08 00 01 00 00 00 00 00 BF 01 70 00  
 Offset 080: 06 00 00 00 0E 00 00 00 03 00 1F 00 00 00 00 00  
 Offset 090: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0A0: 05 C0 81 00 0C F0 E3 FE 00 00 00 00 60 49 00 00  
 Offset 0B0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0C0: 0D C8 00 00 22 10 53 14 08 00 03 A8 00 00 00 00  
 Offset 0D0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0E0: 00 00 00 00 FF FF FF FF 00 00 00 00 00 00 00 00  
 Offset 0F0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

B00 D02 F00: AMD K17 - PCIe Dummy Host Bridge

Offset 000: 22 10 52 14 00 00 00 00 00 00 00 06 00 00 80 00  
Offset 010: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 020: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 030: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 040: 80 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 050: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 060: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 070: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 080: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 090: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0A0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0B0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0C0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0D0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0E0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0F0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

B00 D03 F00: AMD K17 - PCIe Dummy Host Bridge

Offset 000: 22 10 52 14 00 00 00 00 00 00 00 06 00 00 80 00  
Offset 010: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 020: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 030: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 040: 80 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 050: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 060: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 070: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 080: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 090: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0A0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0B0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0C0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0D0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0E0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0F0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

B00 D03 F01: AMD K17 - PCIe GPP Bridge [7:0]

Offset 000: 22 10 53 14 07 04 10 00 00 00 04 06 10 00 81 00  
Offset 010: 00 00 00 00 00 00 00 00 00 09 09 00 F1 F1 00 20  
Offset 020: 00 F6 00 F7 01 E0 F1 F1 00 00 00 00 00 00 00  
Offset 030: 00 00 00 00 50 00 00 00 00 00 00 00 00 00 18 00  
Offset 040: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 050: 01 58 03 C8 00 00 00 00 10 A0 42 01 22 80 00 00  
Offset 060: 37 29 00 00 03 79 73 00 40 00 03 F1 00 00 04 00  
Offset 070: 00 00 40 01 08 00 01 00 00 00 00 00 BF 01 70 00  
Offset 080: 06 00 00 00 0E 00 00 00 03 00 1F 00 00 00 00 00  
Offset 090: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0A0: 05 C0 81 00 0C F0 E3 FE 00 00 00 00 50 49 00 00  
Offset 0B0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

Offset 0C0: 0D C8 00 00 22 10 53 14 08 00 03 A8 00 00 00 00  
Offset 0D0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0E0: 00 00 00 00 FF FF FF FF 00 00 00 00 00 00 00 00  
Offset 0F0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

B00 D04 F00: AMD K17 - PCIe Dummy Host Bridge

Offset 000: 22 10 52 14 00 00 00 00 00 00 00 06 00 00 80 00  
Offset 010: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 020: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 030: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 040: 80 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 050: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 060: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 070: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 080: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 090: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0A0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0B0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0C0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0D0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0E0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0F0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

B00 D07 F00: AMD K17 - PCIe Dummy Host Bridge

Offset 000: 22 10 52 14 00 00 00 00 00 00 00 06 00 00 80 00  
Offset 010: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 020: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 030: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 040: 80 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 050: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 060: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 070: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 080: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 090: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0A0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0B0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0C0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0D0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0E0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0F0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

B00 D07 F01: AMD K17 - Internal PCIe GPP Bridge 0 to Bus B/C

Offset 000: 22 10 54 14 06 04 10 00 00 00 04 06 10 00 81 00  
Offset 010: 00 00 00 00 00 00 00 00 00 0A 0A 00 F1 01 00 00  
Offset 020: 20 F7 40 F7 F1 FF 01 00 00 00 00 00 00 00 00 00  
Offset 030: 00 00 00 00 50 00 00 00 00 00 00 00 00 01 00 00  
Offset 040: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00



Offset 050: 01 58 03 C8 00 00 00 00 10 A0 42 00 22 80 00 00  
Offset 060: 37 21 00 00 03 0D 70 00 40 00 03 71 00 00 00 00  
Offset 070: 00 00 40 00 08 00 01 00 00 00 00 00 00 00 00 00  
Offset 080: 00 00 00 00 0E 00 00 00 43 00 1F 00 00 00 00 00  
Offset 090: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0A0: 05 C0 81 00 0C F0 E3 FE 00 00 00 00 B1 49 00 00  
Offset 0B0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0C0: 0D C8 00 00 22 10 54 14 08 00 03 A8 00 00 00 00  
Offset 0D0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0E0: 00 00 00 00 FF FF FF FF 00 00 00 00 00 00 00 00  
Offset 0F0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

B00 D08 F00: AMD K17 - PCIe Dummy Host Bridge

Offset 000: 22 10 52 14 00 00 00 00 00 00 00 00 06 00 00 80 00  
Offset 010: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 020: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 030: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 040: 80 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 050: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 060: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 070: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 080: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 090: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0A0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0B0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0C0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0D0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0E0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0F0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

B00 D08 F01: AMD K17 - Internal PCIe GPP Bridge 0 to Bus B/C

Offset 000: 22 10 54 14 06 04 10 00 00 00 04 06 10 00 81 00  
Offset 010: 00 00 00 00 00 00 00 00 00 00 0B 0B 00 F1 01 00 00  
Offset 020: 80 F7 80 F7 F1 FF 01 00 00 00 00 00 00 00 00 00  
Offset 030: 00 00 00 00 50 00 00 00 00 00 00 00 00 01 00 00  
Offset 040: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 050: 01 58 03 C8 00 00 00 00 10 A0 42 00 22 80 00 00  
Offset 060: 37 21 00 00 03 0D 70 00 40 00 03 71 00 00 00 00  
Offset 070: 00 00 40 00 08 00 01 00 00 00 00 00 00 00 00 00  
Offset 080: 00 00 00 00 0E 00 00 00 43 00 1F 00 00 00 00 00  
Offset 090: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0A0: 05 C0 81 00 0C F0 E3 FE 00 00 00 00 A1 49 00 00  
Offset 0B0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0C0: 0D C8 00 00 22 10 54 14 08 00 03 A8 00 00 00 00  
Offset 0D0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0E0: 00 00 00 00 FF FF FF FF 00 00 00 00 00 00 00 00  
Offset 0F0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

B00 D14 F00: AMD K17 SCH - SMBus Controller  
Navigation

Offset 000: 22 10 0B 79 03 04 20 02 59 00 05 0C 00 00 80 00  
Offset 010: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 020: 00 00 00 00 00 00 00 00 00 00 00 00 49 18 0B 79  
Offset 030: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 040: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 050: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 060: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 070: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 080: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 090: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0A0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0B0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0C0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0D0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0E0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0F0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

## B00 D14 F03: AMD K17 SCH - LPC Bridge

Offset 000: 22 10 0E 79 0F 00 20 02 51 00 01 06 00 00 80 00  
Offset 010: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 020: 00 00 00 00 00 00 00 00 00 00 00 00 49 18 0E 79  
Offset 030: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 040: 04 00 00 00 D5 FF 03 FF 07 FF 20 01 00 00 00 00  
Offset 050: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 060: 00 00 00 00 40 16 80 02 00 00 0F 00 00 FF FF FF  
Offset 070: 67 45 23 00 00 00 00 00 90 02 00 00 07 0A 00 00  
Offset 080: 08 00 03 A8 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 090: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0A0: 02 00 C1 FE 2F 01 00 00 00 00 00 00 00 00 00 00  
Offset 0B0: 00 00 00 00 00 00 00 00 04 00 E9 3F 00 00 00 00  
Offset 0C0: 00 00 00 00 00 00 00 00 00 00 00 00 80 00 00 F7 FF  
Offset 0D0: 86 FF FD 08 42 00 00 00 00 00 00 00 00 00 00 00  
Offset 0E0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0F0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

## B00 D18 F00: AMD K17 - Data Fabric: Device 18h; Function 0

Offset 000: 22 10 60 14 00 00 00 00 00 00 00 06 00 00 80 00  
Offset 010: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 020: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 030: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 040: 13 00 00 00 2F 12 97 00 1F 1F 1F 0F 11 00 00 00  
Offset 050: 1F 07 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 060: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 070: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 080: 41 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 090: 01 00 00 00 00 00 00 00 05 04 04 04 04 04 04 04

Offset 0A0: 43 00 00 0B 40 00 00 00 40 00 00 00 40 00 00 00  
Offset 0B0: 40 00 00 00 40 00 00 00 40 00 00 00 40 00 00 00  
Offset 0C0: 13 D0 00 00 04 F0 00 00 00 00 00 00 04 00 00 00  
Offset 0D0: 00 00 00 00 04 00 00 00 00 00 00 00 04 00 00 00  
Offset 0E0: 00 00 00 00 04 00 00 00 00 00 00 00 04 00 00 00  
Offset 0F0: 00 00 00 00 04 00 00 00 00 00 00 00 04 00 00 00

B00 D18 F01: AMD K17 - Data Fabric: Device 18h; Function 1

Offset 000: 22 10 61 14 00 00 00 00 00 00 00 06 00 00 80 00  
Offset 010: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 020: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 030: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 040: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 050: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 060: 05 05 04 04 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 070: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 080: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 090: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0A0: 00 42 42 42 FF 01 FF 01 E0 00 00 00 00 00 00 00 00  
Offset 0B0: 01 00 00 00 00 00 00 00 08 00 00 00 00 00 00 00  
Offset 0C0: 01 00 00 00 81 FC 06 00 00 00 00 00 00 00 00 00  
Offset 0D0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0E0: 00 00 00 00 00 00 00 00 00 00 00 00 1F BF 1F 0B  
Offset 0F0: 0F 5D 1D 05 1F 7F BF 05 1F BF FF 03 0F 57 F7 01

B00 D18 F02: AMD K17 - Data Fabric: Device 18h; Function 2

Offset 000: 22 10 62 14 00 00 00 00 00 00 00 06 00 00 80 00  
Offset 010: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 020: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 030: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 040: 80 10 1F 00 08 09 40 09 80 00 00 00 11 00 00 00  
Offset 050: 04 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 060: 00 00 00 00 00 00 00 00 19 50 06 00 11 06 04 10  
Offset 070: 00 01 00 02 00 04 00 08 00 10 00 20 00 40 00 80  
Offset 080: 0F DF 00 00 FF DF 00 00 07 00 00 06 00 00 00 00  
Offset 090: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0A0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0B0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0C0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0D0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0E0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0F0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

B00 D18 F03: AMD K17 - Data Fabric: Device 18h; Function 3

Offset 000: 22 10 63 14 00 00 00 00 00 00 00 06 00 00 80 00  
Offset 010: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 020: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

Offset 030: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 040: 04 00 00 00 00 00 00 00 01 00 00 00 27 01 00 00  
Offset 050: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 060: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 070: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 080: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 090: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0A0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0B0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0C0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0D0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0E0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0F0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

B00 D18 F04: AMD K17 - Data Fabric: Device 18h; Function 4

Offset 000: 22 10 64 14 00 00 00 00 00 00 00 06 00 00 80 00  
Offset 010: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 020: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 030: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 040: 02 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 050: 51 10 01 00 41 18 03 00 00 00 00 00 89 01 04 00  
Offset 060: 08 02 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 070: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 080: 04 00 00 00 04 00 00 00 04 00 00 00 04 00 00 00  
Offset 090: 22 10 60 14 22 10 60 14 00 00 00 00 00 00 00 00  
Offset 0A0: 43 00 00 00 43 00 00 00 22 10 60 14 22 10 60 14  
Offset 0B0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0C0: 01 00 00 00 01 00 02 00 00 00 02 01 03 0B 0E 00  
Offset 0D0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0E0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0F0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

B00 D18 F05: AMD K17 - Data Fabric: Device 18h; Function 5

Offset 000: 22 10 65 14 00 00 00 00 00 00 00 06 00 00 80 00  
Offset 010: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 020: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 030: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 040: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 050: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 060: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 070: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 080: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 090: 00 00 D7 01 01 00 00 00 01 00 00 00 00 00 00 00  
Offset 0A0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0B0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0C0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0D0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0E0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

Offset 0F0: 00 00 00 00 00 00 00 00 00 00 00 00 80 00 00 00  
 Navigation

B00 D18 F06: AMD K17 - Data Fabric: Device 18h; Function 6

Offset 000: 22 10 66 14 00 00 00 00 00 00 00 00 06 00 00 80 00  
 Offset 010: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 020: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 030: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 040: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 050: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 060: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 070: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 080: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 090: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0A0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0B0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0C0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0D0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 0F 00  
 Offset 0E0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0F0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

B00 D18 F07: AMD K17 - Data Fabric: Device 18h; Function 7

Offset 000: 22 10 67 14 00 00 00 00 00 00 00 00 06 00 00 80 00  
 Offset 010: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 020: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 030: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 040: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 050: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 060: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 070: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 080: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 090: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0A0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0B0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0C0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0D0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0E0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0F0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

B01 D00 F00: AMD Low-Power Promontory F Chipset - USB xHCI Controller

Offset 000: 22 10 D5 43 06 04 10 00 01 30 03 0C 10 00 80 00  
 Offset 010: 04 00 7A F7 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 020: 00 00 00 00 00 00 00 00 00 00 00 00 49 18 D0 43  
 Offset 030: 00 00 00 00 50 00 00 00 00 00 00 00 00 00 01 00 00  
 Offset 040: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 050: 05 68 86 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 060: 31 40 00 00 00 00 00 00 11 78 07 80 00 20 00 00 00  
 Offset 070: 80 20 00 00 00 00 00 00 01 80 43 C0 08 80 00 00 00

Offset 080: 10 00 12 00 22 8C 00 00 17 21 19 00 43 DC 42 00  
Offset 090: 40 00 43 10 00 00 00 00 00 00 40 00 00 00 00 00  
Offset 0A0: 00 00 00 00 00 08 00 00 00 00 00 00 0E 00 00 00  
Offset 0B0: 03 00 06 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0C0: 00 00 00 00 49 18 C6 43 00 00 00 00 00 00 00 00  
Offset 0D0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0E0: 00 00 00 00 00 00 01 60 00 00 00 00 00 00 00 00  
Offset 0F0: AA 55 AA 55 00 00 00 00 00 00 00 00 00 00 00 00

B01 D00 F01: AMD Low-Power Promontory Chipset - SATA AHCI Controller

Offset 000: 22 10 C8 43 00 04 10 00 01 01 06 01 10 00 80 00  
Offset 010: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 020: 00 00 00 00 00 00 78 F7 00 00 00 00 49 18 C8 43  
Offset 030: 00 00 00 00 50 00 00 00 00 00 00 00 00 02 00 00  
Offset 040: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 050: 05 78 80 00 0C F0 E3 FE 00 00 00 00 91 49 00 00  
Offset 060: 00 00 00 00 00 00 00 00 11 78 07 00 00 20 00 00  
Offset 070: 80 20 00 00 00 00 00 00 01 80 43 C0 0B 01 00 00  
Offset 080: 10 00 12 00 22 8C 00 00 17 21 19 00 43 DC 42 00  
Offset 090: 40 00 43 10 00 00 00 00 00 00 40 00 00 00 00 00  
Offset 0A0: 00 00 00 00 00 00 00 00 00 00 00 00 0E 00 00 00  
Offset 0B0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0C0: 00 00 00 00 49 18 C6 43 00 00 00 00 00 00 00 00  
Offset 0D0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0E0: CC 0D 00 00 09 09 09 09 00 00 00 00 00 00 00 00  
Offset 0F0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

B01 D00 F02: AMD Low-Power Promontory Chipset - Switch Upstream Port

Offset 000: 22 10 C6 43 07 04 10 00 01 00 04 06 10 00 81 00  
Offset 010: 00 00 00 00 00 00 00 00 01 02 08 00 D1 E1 00 00  
Offset 020: 50 F7 60 F7 F1 FF 01 00 00 00 00 00 00 00 00 00  
Offset 030: 00 00 00 00 50 00 00 00 00 00 00 00 05 03 00 00  
Offset 040: 04 00 C3 FE 00 00 00 00 01 00 00 00 00 00 00 00  
Offset 050: 05 78 80 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 060: 00 00 00 00 00 00 00 00 11 78 07 00 00 20 00 00  
Offset 070: 80 20 00 00 00 00 00 00 01 80 43 C0 08 00 00 00  
Offset 080: 10 C0 52 00 22 80 00 00 17 21 19 00 43 DC 42 00  
Offset 090: 40 00 43 10 00 00 00 00 00 00 40 00 00 00 00 00  
Offset 0A0: 00 00 00 00 00 00 00 00 00 00 00 00 0E 00 00 00  
Offset 0B0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0C0: 0D 00 00 00 49 18 C6 43 00 00 00 00 00 00 00 00  
Offset 0D0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0E0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0F0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

B02 D00 F00: AMD Low-Power Promontory Chipset - GPP-Switch Downstream Port /  
SATA Express Controller

Offset 000: 22 10 C7 43 04 04 10 00 01 00 04 06 10 00 01 00  
Offset 010: 00 00 00 00 00 00 00 00 02 03 03 00 F1 01 00 00  
Offset 020: F0 FF 00 00 F1 FF 01 00 00 00 00 00 00 00 00 00  
Offset 030: 00 00 00 00 50 00 00 00 00 00 00 00 0B 01 00 00  
Offset 040: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 050: 05 78 80 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 060: 00 00 00 00 00 00 00 00 11 78 07 00 00 20 00 00  
Offset 070: 80 20 00 00 00 00 00 00 01 80 43 C0 08 00 00 00  
Offset 080: 10 C0 62 01 22 80 00 00 17 21 10 00 12 7C 73 00  
Offset 090: 00 00 01 10 00 0D 08 00 00 00 00 00 00 00 00 00  
Offset 0A0: 00 00 00 00 00 08 00 00 00 00 00 00 06 00 00 00  
Offset 0B0: 02 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0C0: 0D 00 00 00 49 18 C7 43 00 00 00 00 00 00 00 00  
Offset 0D0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0E0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0F0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

B02 D01 F00: AMD Low-Power Promontory Chipset - GPP-Switch Downstream Port /  
SATA Express Controller

Offset 000: 22 10 C7 43 04 04 10 00 01 00 04 06 10 00 01 00  
Offset 010: 00 00 00 00 00 00 00 00 02 04 04 00 F1 01 00 00  
Offset 020: F0 FF 00 00 F1 FF 01 00 00 00 00 00 00 00 00 00  
Offset 030: 00 00 00 00 50 00 00 00 00 00 00 00 0A 01 00 00  
Offset 040: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 050: 05 78 80 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 060: 00 00 00 00 00 00 00 00 11 78 07 00 00 20 00 00  
Offset 070: 80 20 00 00 00 00 00 00 01 80 43 C0 08 00 00 00  
Offset 080: 10 C0 62 01 22 80 00 00 17 21 10 00 12 7C 73 01  
Offset 090: 00 00 11 10 00 0D 08 00 00 00 00 00 00 00 00 00  
Offset 0A0: 00 00 00 00 00 08 00 00 00 00 00 00 06 00 00 00  
Offset 0B0: 02 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0C0: 0D 00 00 00 49 18 C7 43 00 00 00 00 00 00 00 00  
Offset 0D0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0E0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0F0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

B02 D04 F00: AMD Low-Power Promontory Chipset - GPP-Switch Downstream Port /  
SATA Express Controller

Offset 000: 22 10 C7 43 04 04 10 00 01 00 04 06 10 00 01 00  
Offset 010: 00 00 00 00 00 00 00 00 02 05 05 00 F1 01 00 00  
Offset 020: F0 FF 00 00 F1 FF 01 00 00 00 00 00 00 00 00 00  
Offset 030: 00 00 00 00 50 00 00 00 00 00 00 00 0B 01 00 00  
Offset 040: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 050: 05 78 80 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 060: 00 00 00 00 00 00 00 00 11 78 07 00 00 20 00 00  
Offset 070: 80 20 00 00 00 00 00 00 01 80 43 C0 08 00 00 00  
Offset 080: 10 C0 62 01 22 80 00 00 17 21 10 00 12 7C 73 04  
Offset 090: 00 00 01 10 00 0D 08 00 00 00 00 00 00 00 00 00

Offset 0A0: 00 00 00 00 00 08 00 00 00 00 00 00 06 00 00 00  
Offset 0B0: 02 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0C0: 0D 00 00 00 49 18 C7 43 00 00 00 00 00 00 00 00  
Offset 0D0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0E0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0F0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

B02 D05 F00: AMD Low-Power Promontory Chipset - GPP-Switch Downstream Port /  
SATA Express Controller

Offset 000: 22 10 C7 43 04 04 10 00 01 00 04 06 10 00 01 00  
Offset 010: 00 00 00 00 00 00 00 00 02 06 06 00 F1 01 00 00  
Offset 020: F0 FF 00 00 F1 FF 01 00 00 00 00 00 00 00 00 00  
Offset 030: 00 00 00 00 50 00 00 00 00 00 00 00 0A 01 00 00  
Offset 040: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 050: 05 78 80 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 060: 00 00 00 00 00 00 00 00 11 78 07 00 00 20 00 00  
Offset 070: 80 20 00 00 00 00 00 00 01 80 43 C0 08 00 00 00  
Offset 080: 10 C0 62 01 22 80 00 00 17 21 10 00 12 7C 73 05  
Offset 090: 00 00 11 10 00 0D 08 00 00 00 00 00 00 00 00 00  
Offset 0A0: 00 00 00 00 00 08 00 00 00 00 00 00 06 00 00 00  
Offset 0B0: 02 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0C0: 0D 00 00 00 21 1B 06 33 00 00 00 00 00 00 00 00  
Offset 0D0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0E0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0F0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

B02 D06 F00: AMD Low-Power Promontory Chipset - GPP-Switch Downstream Port /  
SATA Express Controller

Offset 000: 22 10 C7 43 07 04 10 00 01 00 04 06 10 00 01 00  
Offset 010: 00 00 00 00 00 00 00 00 02 07 07 00 E1 E1 00 00  
Offset 020: 60 F7 60 F7 F1 FF 01 00 00 00 00 00 00 00 00 00  
Offset 030: 00 00 00 00 50 00 00 00 00 00 00 00 05 01 00 00  
Offset 040: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 050: 05 78 80 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 060: 00 00 00 00 00 00 00 00 11 78 07 00 00 20 00 00  
Offset 070: 80 20 00 00 00 00 00 00 01 80 43 C0 08 00 00 00  
Offset 080: 10 C0 62 01 22 80 00 00 17 21 10 00 12 7C 73 06  
Offset 090: 40 00 12 70 00 0D 08 00 00 00 48 01 00 00 00 00  
Offset 0A0: 00 00 00 00 00 08 00 00 00 00 00 00 06 00 00 00  
Offset 0B0: 02 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0C0: 0D 00 00 00 21 1B 06 33 00 00 00 00 00 00 00 00  
Offset 0D0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0E0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0F0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

B02 D07 F00: AMD Low-Power Promontory Chipset - GPP-Switch Downstream Port /  
SATA Express Controller



Offset 000: 22 10 C7 43 07 04 10 00 01 00 04 06 10 00 01 00  
 Offset 010: 00 00 00 00 00 00 00 00 02 08 08 00 D1 D1 00 00  
 Offset 020: 50 F7 50 F7 F1 FF 01 00 00 00 00 00 00 00 00 00  
 Offset 030: 00 00 00 00 50 00 00 00 00 00 00 00 0B 01 00 00  
 Offset 040: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 050: 05 78 80 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 060: 00 00 00 00 00 00 00 00 11 78 07 00 00 20 00 00  
 Offset 070: 80 20 00 00 00 00 00 00 01 80 43 C0 08 00 00 00  
 Offset 080: 10 C0 62 01 22 80 00 00 17 21 10 00 12 7C 73 07  
 Offset 090: 40 00 11 70 00 0D 08 00 00 00 48 01 00 00 00 00  
 Offset 0A0: 00 00 00 00 00 08 00 00 00 00 00 00 06 00 00 00  
 Offset 0B0: 02 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0C0: 0D 00 00 00 21 1B 06 33 00 00 00 00 00 00 00 00  
 Offset 0D0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0E0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0F0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

B07 D00 F00: ASMedia ASM1061 PCI-E x1 SATA-III Controller

Offset 000: 21 1B 12 06 07 04 10 00 02 01 06 01 10 00 00 00  
 Offset 010: 51 E0 00 00 41 E0 00 00 31 E0 00 00 21 E0 00 00  
 Offset 020: 01 E0 00 00 00 00 60 F7 00 00 00 00 49 18 12 06  
 Offset 030: 00 00 00 00 50 00 00 00 00 00 00 00 00 01 00 00  
 Offset 040: 00 00 00 00 60 61 11 02 00 00 00 00 00 00 00 00  
 Offset 050: 05 78 01 00 0C F0 E3 FE 81 49 00 00 00 00 00 00  
 Offset 060: 00 00 00 00 00 00 00 00 11 78 01 00 00 00 00 00  
 Offset 070: 00 00 00 00 00 00 00 00 01 80 03 00 00 00 00 00  
 Offset 080: 10 00 12 00 02 87 68 00 10 20 01 00 12 F4 00 01  
 Offset 090: 40 00 12 10 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0A0: 00 00 00 00 17 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0B0: 02 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0C0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0D0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0E0: 00 00 00 00 00 00 00 00 33 01 00 00 63 00 00 00  
 Offset 0F0: FF FF 00 00 10 00 00 00 00 00 00 00 00 01 30 00

B08 D00 F00: Realtek RTL8168/8111 PCI-E Gigabit Ethernet Adapter

Offset 000: EC 10 68 81 07 04 10 00 15 00 00 02 10 00 00 00  
 Offset 010: 01 D0 00 00 00 00 00 00 04 40 50 F7 00 00 00 00  
 Offset 020: 04 00 50 F7 00 00 00 00 00 00 00 00 49 18 68 81  
 Offset 030: 00 00 00 00 40 00 00 00 00 00 00 00 00 01 00 00  
 Offset 040: 01 50 C3 FF 08 01 00 00 00 00 00 00 00 00 00 00  
 Offset 050: 05 70 80 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 060: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 070: 10 B0 02 02 C0 8C 68 00 17 50 10 00 11 7C 47 00  
 Offset 080: 40 00 11 10 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 090: 00 00 00 00 1F 08 0C 00 10 00 00 00 02 00 00 00  
 Offset 0A0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0B0: 11 00 03 80 04 00 00 00 04 08 00 00 00 00 00 00

Offset 0C0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0D0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0E0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0F0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

B09 D00 F00: MSI GTX 1070 Armor OC/Aero OC (MS-V330) Video Adapter

Offset 000: DE 10 81 1B 07 00 10 00 A1 00 00 03 10 00 80 00  
Offset 010: 00 00 00 F6 0C 00 00 E0 00 00 00 00 0C 00 00 F0  
Offset 020: 00 00 00 00 01 F0 00 00 00 00 00 00 62 14 01 33  
Offset 030: 00 00 00 00 60 00 00 00 00 00 00 00 36 01 00 00  
Offset 040: 62 14 01 33 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 050: 01 00 00 00 01 00 00 00 CE D6 23 00 00 00 00 00  
Offset 060: 01 68 03 00 08 00 00 00 05 78 80 00 00 00 00 00  
Offset 070: 00 00 00 00 00 00 00 00 10 00 12 00 E1 8D 00 00  
Offset 080: 37 29 09 00 03 4D 45 00 40 00 03 11 00 00 00 00  
Offset 090: 00 00 00 00 00 00 00 00 00 00 00 00 13 00 04 00  
Offset 0A0: 00 00 00 00 0E 00 00 00 03 00 1F 00 00 00 00 00  
Offset 0B0: 00 00 00 00 09 00 14 01 00 00 00 00 00 00 00 00  
Offset 0C0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0D0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0E0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0F0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

B09 D00 F01: nVIDIA GP104 - High Definition Audio Controller

Offset 000: DE 10 F0 10 06 00 10 00 A1 00 03 04 10 00 80 00  
Offset 010: 00 00 08 F7 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 020: 00 00 00 00 00 00 00 00 00 00 00 00 62 14 01 33  
Offset 030: 00 00 00 00 60 00 00 00 00 00 00 00 37 02 00 00  
Offset 040: 62 14 01 33 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 050: 00 00 00 00 00 00 00 00 CE D6 23 00 00 00 00 00  
Offset 060: 01 68 03 00 08 00 00 00 05 78 80 00 00 00 00 00  
Offset 070: 00 00 00 00 00 00 00 00 10 00 02 00 E1 8D 00 00  
Offset 080: 37 21 09 00 03 4D 45 00 40 00 03 11 00 00 00 00  
Offset 090: 00 00 00 00 00 00 00 00 00 00 00 00 13 00 04 00  
Offset 0A0: 00 00 00 00 0E 00 00 00 00 00 01 00 00 00 00 00  
Offset 0B0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0C0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0D0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0E0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0F0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

B0A D00 F00: AMD K17 - PCIe Dummy Function

Offset 000: 22 10 5A 14 04 04 10 00 00 00 00 13 10 00 80 00  
Offset 010: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 020: 00 00 00 00 00 00 00 00 00 00 00 00 22 10 5A 14  
Offset 030: 00 00 00 00 48 00 00 00 00 00 00 00 FF 00 00 00  
Offset 040: 00 00 00 00 00 00 00 00 09 50 08 00 22 10 5A 14

Offset 050: 01 64 03 00 08 00 00 00 00 00 00 00 00 00 00 00  
Offset 060: 00 00 00 00 10 00 02 00 A1 8F 00 00 37 21 09 00  
Offset 070: 03 0D 40 00 40 00 03 11 00 00 00 00 00 00 00 00  
Offset 080: 00 00 00 00 00 00 00 00 1F 00 00 00 00 00 00 00  
Offset 090: 0E 00 00 00 03 00 1F 00 00 00 00 00 00 00 00 00  
Offset 0A0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0B0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0C0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0D0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0E0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0F0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

B0A D00 F02: AMD K17 - Cryptographic Coprocessor PSPCPP

Offset 000: 22 10 56 14 00 04 10 00 00 00 80 10 10 00 80 00  
Offset 010: 00 00 00 00 00 00 00 00 00 00 40 F7 00 00 00 00  
Offset 020: 00 00 00 00 00 E0 3F F7 00 00 00 00 22 10 56 14  
Offset 030: 00 00 00 00 48 00 00 00 00 00 00 00 00 02 00 00  
Offset 040: 00 00 00 00 00 00 00 00 09 50 08 00 22 10 56 14  
Offset 050: 01 64 03 00 0B 00 00 00 00 00 00 00 00 00 00 00  
Offset 060: 00 00 00 00 10 A0 02 00 A1 8F 00 00 37 21 09 00  
Offset 070: 03 0D 40 00 40 00 03 11 00 00 00 00 00 00 00 00  
Offset 080: 00 00 00 00 00 00 00 00 1F 00 00 00 00 00 00 00  
Offset 090: 0E 00 00 00 00 00 01 00 00 00 00 00 00 00 00 00  
Offset 0A0: 05 C0 82 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0B0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0C0: 11 00 01 00 05 00 00 00 05 10 00 00 00 00 00 00  
Offset 0D0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0E0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0F0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

B0A D00 F03: AMD K17 - Reserved

Offset 000: 22 10 5F 14 06 04 10 00 00 30 03 0C 10 00 80 00  
Offset 010: 04 00 20 F7 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 020: 00 00 00 00 00 00 00 00 00 00 00 00 49 18 14 79  
Offset 030: 00 00 00 00 48 00 00 00 00 00 00 00 00 03 00 00  
Offset 040: 00 00 00 00 00 00 00 00 09 50 08 00 49 18 14 79  
Offset 050: 01 64 03 C8 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 060: 30 20 00 00 10 A0 02 00 A1 8F 00 00 37 21 19 00  
Offset 070: 03 0D 40 00 40 00 03 11 00 00 00 00 00 00 00 00  
Offset 080: 00 00 00 00 00 00 00 00 1F 00 00 00 00 00 00 00  
Offset 090: 0E 00 00 00 00 00 01 00 00 00 00 00 00 00 00 00  
Offset 0A0: 05 C0 86 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0B0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0C0: 11 00 07 80 00 E0 0F 00 00 F0 0F 00 00 00 00 00 00  
Offset 0D0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0E0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0F0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

# B0B D00 F00: AMD K17 - PCIe Dummy Function

Navigation

```

Offset 000: 22 10 55 14 04 04 10 00 00 00 00 13 10 00 80 00
Offset 010: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 020: 00 00 00 00 00 00 00 00 00 00 00 00 22 10 55 14
Offset 030: 00 00 00 00 48 00 00 00 00 00 00 00 FF 00 00 00
Offset 040: 00 00 00 00 00 00 00 00 09 50 08 00 22 10 55 14
Offset 050: 01 64 03 00 08 00 00 00 00 00 00 00 00 00 00 00
Offset 060: 00 00 00 00 10 00 02 00 A1 8F 00 00 37 21 09 00
Offset 070: 03 0D 40 00 40 00 03 11 00 00 00 00 00 00 00 00
Offset 080: 00 00 00 00 00 00 00 00 1F 00 00 00 00 00 00 00
Offset 090: 0E 00 00 00 03 00 1F 00 00 00 00 00 00 00 00 00
Offset 0A0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 0B0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 0C0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 0D0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 0E0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 0F0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

```

## B0B D00 F02: AMD K17 SCH - SATA AHCI Controller

```

Offset 000: 22 10 01 79 00 04 10 00 51 01 06 01 10 00 80 00
Offset 010: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 020: 00 00 00 00 00 80 80 F7 00 00 00 00 49 18 01 79
Offset 030: 00 00 00 00 48 00 00 00 00 00 00 00 00 02 00 00
Offset 040: 00 00 00 00 00 00 00 00 09 50 08 00 49 18 01 79
Offset 050: 01 64 23 C0 0B 01 00 00 00 00 00 00 00 00 00 00
Offset 060: 00 00 00 00 10 A0 02 00 A1 8F 00 00 37 21 09 00
Offset 070: 03 0D 40 00 40 00 03 11 00 00 00 00 00 00 00 00
Offset 080: 00 00 00 00 00 00 00 00 1F 00 00 00 00 00 00 00
Offset 090: 0E 00 00 00 00 00 01 00 00 00 00 00 00 00 00 00
Offset 0A0: 05 D0 B8 00 0C F0 E3 FE 00 00 00 00 B8 49 00 00
Offset 0B0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 0C0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 0D0: 12 00 10 00 0F 00 00 00 00 00 00 00 00 FF 37 F7
Offset 0E0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 0F0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

```

## B0B D00 F03: AMD K17 - High Definition Audio Controller

```

Offset 000: 22 10 57 14 06 00 10 00 00 00 03 04 10 00 80 00
Offset 010: 00 80 8F F7 00 00 00 00 00 00 00 00 00 00 00 00
Offset 020: 00 00 00 00 00 00 00 00 00 00 00 00 49 18 93 68
Offset 030: 00 00 00 00 48 00 00 00 00 00 00 00 2B 03 00 00
Offset 040: 00 00 00 00 00 00 00 00 09 50 08 00 49 18 93 68
Offset 050: 01 64 03 C8 08 00 00 00 00 00 00 00 00 00 00 00
Offset 060: 00 00 00 00 10 A0 02 00 A1 8F 00 00 37 21 09 00
Offset 070: 03 0D 40 00 40 00 03 11 00 00 00 00 00 00 00 00
Offset 080: 00 00 00 00 00 00 00 00 1F 00 00 00 00 00 00 00
Offset 090: 0E 00 00 00 00 00 01 00 00 00 00 00 00 00 00 00

```

Offset 0A0: 05 00 80 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0B0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0C0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0D0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0E0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Offset 0F0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

PCI-1022-1450: AMD K17/K17.1/K17.3/K17.5/K17.6/K17.7/K18 SMUTHM NBSMNIND

Offset 00059800: EF 0F C8 85 01 10 FF 00 21 29 00 00 00 00 00 00

PCI-1022-1450: AMD K17/K17.1/K17.3/K17.5/K17.6/K17.7/K18 SMUSVI NBSMNIND

Offset 0005A000: 06 00 00 00 26 00 00 00 02 00 00 00 1F 00 2A 01

Offset 0005A010: 1C 00 76 01 00 00 00 00 0E 00 00 00 00 00 00 00

Offset 0005A020: 00 00 00 00 00 00 80 DB 00 00 00 00 00 00 26 00

PCI-1022-1450: AMD K17/K17.1/K17.3/K17.5/K17.6/K17.7/K18 SMUFUSE NBSMNIND

Offset 0005D200: 20 04 40 00 09 39 7A 02 39 7A 42 0E E8 09 39 3A

Offset 0005D210: 48 24 12 09 48 24 12 09 48 24 12 09 48 00 00 00

Offset 0005D220: 00 00 00 80 02 0D 00 00 81 1E 40 24 00 00 00 18

Offset 0005D230: 1B 9D 8D 44 00 80 01 00 00 00 00 00 00 00 00 00

Offset 0005D240: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

Offset 0005D250: 00 00 00 00 00 00 00 00 21 01 00 00 00 01 00 00

Offset 0005D260: 00 00 00 00 76 01 00 00 39 C0 6C 04 06 3B 04 82

Offset 0005D270: 30 0F CB E1 10 25 20 A1 08 85 58 00 8E 4D 96 1D

Offset 0005D280: C0 70 70 30 C0 01 00 D0 16 8D 8C 8D 8E 8C 8D 8E

Offset 0005D290: CC 42 43 E3 E3 03 40 44 44 04 0B 6C 93 C2 48 8B

Offset 0005D2A0: C0 E8 93 D4 A8 8F 86 C8 87 0E 89 8B E8 A8 7C FC

Offset 0005D2B0: 68 7E 36 69 88 7C 88 81 E8 E8 8E 9A E7 83 26 A8

Offset 0005D2C0: A8 73 98 7B 3F D8 AA AF B8 98 C3 A6 7B AE F9 70

Offset 0005D2D0: B5 58 A4 26 F9 A1 4A 1A 69 66 47 9C B4 38 92 65

Offset 0005D2E0:	CA 92 92 29 D2 C4 EC CA C4 CC D2 C4 2C CF 8C 8C Navigation
Offset 0005D2F0:	C7 EA CC C9 C4 CC C0 C6 2C C2 0A 6D C8 82 0C C3
Offset 0005D300:	C0 EC CC F4 6B C5 3E 0C D2 61 4E E9 4B 72 2A E7
Offset 0005D310:	93 44 4F 94 46 DF 10 05 83 A0 16 10 21 15 14 2E
Offset 0005D320:	DF DA CD D8 C2 CD DA 04 39 C4 8F 7E FE 01 14 0F
Offset 0005D330:	4A EA A6 8E 0A B9 9F FB BB 15 6C C1 2A 8C BF E7
Offset 0005D340:	0A 32 90 FB 4B 7C 12 F5 CB D6 9B 9E 84 2C CF 9A
Offset 0005D350:	3B C8 0C 3C AD 7C 35 83 26 F7 73 DC 2F E6 71 CC
Offset 0005D360:	D1 14 F5 71 A6 0C AA 60 76 77 00 00 00 00 00 00
Offset 0005D370:	EA 01 0A 00 00 00 BE D2 D2 D2 18 19 BF 00 00 08
Offset 0005D380:	80 AB 05 40 9B 21 62 69 16 25 00 00 00 00 A8 02
Offset 0005D390:	63 30 FC FF 3C AC 72 A8 B1 08 00 00 00 00 00 00
Offset 0005D3A0:	00 80 8A 42 8B 62 8B C2 8A 82 8B 02 00 00 00 E0
Offset 0005D3B0:	B5 28 B6 28 AC 28 B8 28 9E 08 84 08 84 08 84 08
Offset 0005D3C0:	04 00 00 00 C0 00 00 00 00 54 14 55 14 68 14 01
Offset 0005D3D0:	79 57 14 58 14 58 14 59 14 59 14 00 05 00 00 00
Offset 0005D3E0:	01 00 00 FF 55 14 68 14 01 79 57 14 58 14 58 14
Offset 0005D3F0:	59 14 59 14 FF 40 04 42 04 42 04 42 04 42 04 42
Offset 0005D400:	04 42 04 42 04 02 00 00 00 00 00 00 00 00 00 5E
Offset 0005D410:	14 5A 14 5B 14 00 00 6B 51 6C 51 2C 02 21 02 01
Offset 0005D420:	C1 26 11 24 CD EB CB 6E D0 0D 24 BB C1 60 58 50
Offset 0005D430:	31 7D 46 D3 5B C3 B7 BC 0C 82 CA DF E3 F2 7C FE
Offset 0005D440:	96 83 40 20 10 08 04 02 81 20 08 00 4C 90 00 00
Offset 0005D450:	00 00 00 20 00 00 00 00 04 00 00 00 00 00 00 00
Offset 0005D460:	00 00 00 00 00 00 00 00 04 00 00 00 00 00 00 00
Offset 0005D470:	00 00 00 00 D6 D9 E7 F4 E9 E9 E9 E9 15 59 94 11
Offset 0005D480:	AB B0 72 11 16 51 34 11 00 00 00 00 00 00 00 00 F5 0F 00 D0 0C CC 0C 00 00 00 00 00 00 00 00 00

Offset	Navigation
0005D490:	
Offset	84 7F 52 E4 1F E0 FF 01 00 00 00 00 00 00 00
0005D4A0:	
Offset	00 00 00 60 CD 5A 00 1B 6F 54 2D F6 DF 04 58 00
0005D4B0:	
Offset	00 00 00 00 00 00 00 00 CF 02 00 E0 0F 00 00 00
0005D4C0:	
Offset	00 00 00 00 00 00 00 00 CF 02 00 E0 0F 00 00 00
0005D4D0:	
Offset	00 00 00 00 00 00 00 00 01 00 00 00 00 00 00 00
0005D4E0:	
Offset	C1 01 00 00 00 00 00 00 82 00 00 00 00 00 00 00
0005D4F0:	
Offset	8B 01 00 00 00 00 00 00 00 00 00 00 00 00 00 00
0005D500:	
Offset	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
0005D510:	
Offset	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
0005D520:	
Offset	00 00 00 00 00 00 00 00 81 00 00 00 00 00 00 00
0005D530:	
Offset	00 00 00 00 81 00 00 00 00 00 00 00 00 00 00 00
0005D540:	
Offset	A7 00 00 00 00 00 00 00 00 00 00 00 82 00 00 00
0005D550:	
Offset	00 00 00 00 08 01 00 00 00 00 00 00 82 00 00 00
0005D560:	
Offset	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
0005D570:	
Offset	81 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
0005D580:	
Offset	00 00 00 00 00 00 00 00 00 00 00 00 8B 01 00 00
0005D590:	
Offset	00 00 00 00 00 00 00 00 8B 01 00 00 00 00 00 00
0005D5A0:	
Offset	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
0005D5B0:	
Offset	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
0005D5C0:	
Offset	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
0005D5D0:	
Offset	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
0005D5E0:	
Offset	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
0005D5F0:	
PCI-1022-1450:	AMD K17/K17.1/K17.3/K17.5/K17.6/K17.7/K18 CH0 NBSMNIND
Offset	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00050000:	
Offset	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00050010:	
	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

Offset	Navigation
00050020:	
Offset	08 05 15 00 08 05 15 00 00 00 00 00 00 00 00
00050030:	
Offset	98 BA 0C 07 98 BA 0C 07 00 00 00 00 00 00 00
00050040:	
Offset	21 43 65 87 43 65 87 A9 21 43 65 87 43 65 87 A9
00050050:	
Offset	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00050060:	
Offset	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00050070:	
Offset	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00050080:	
Offset	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00050090:	
Offset	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
000500A0:	
Offset	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
000500B0:	
Offset	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
000500C0:	
Offset	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
000500D0:	
Offset	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
000500E0:	
Offset	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
000500F0:	
Offset	00 02 00 00 88 80 40 30 66 00 40 4C 20 10 10 00
00050100:	
Offset	20 18 10 00 18 20 18 18 47 00 00 00 00 00 00 40
00050110:	
Offset	00 00 00 00 0B 40 00 00 00 00 00 00 69 04 10 01
00050120:	
Offset	00 00 00 00 00 00 00 00 60 40 20 03 00 00 00 00
00050130:	
Offset	00 00 00 00 01 01 FF FF 11 5C 7A DA 00 00 00 00
00050140:	
Offset	00 0F 00 00 81 00 00 00 00 82 10 60 00 00 00 00
00050150:	
Offset	00 00 0A C0 00 00 00 00 00 00 00 00 00 00 00 00
00050160:	
Offset	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00050170:	
Offset	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00050180:	
Offset	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00050190:	
Offset	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
000501A0:	
Offset	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
000501B0:	
Offset	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
000501C0:	
Offset	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00



Offset	Navigation
000501D0:	
Offset	
000501E0:	12 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset	
000501F0:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset	
00050200:	00 03 00 00 12 27 12 12 39 00 12 00 04 06 00 09
Offset	
00050210:	1A 00 00 00 0C 03 09 00 12 00 00 00 00 00 00 00
Offset	
00050220:	03 03 01 03 03 03 01 03 01 05 00 00 80 00 02 00
Offset	
00050230:	90 24 00 00 08 18 20 20 44 01 00 03 24 20 00 00
Offset	
00050240:	00 00 00 00 06 00 FF 3F 00 00 00 00 00 00 00 00
Offset	
00050250:	00 00 07 00 08 00 04 06 20 04 04 00 2A 2A 00 22
Offset	
00050260:	38 01 06 21 38 01 06 21 00 00 00 00 00 00 00 00
Offset	
00050270:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset	
00050280:	00 00 00 00 00 00 00 00 02 00 00 00 80 29 00 18
PCI-1022-1450:	AMD K17/K17.1/K17.3/K17.5/K17.6/K17.7/K18 CH0 NBSMNIND
Offset	
00050D00:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset	
00050D10:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset	
00050D20:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset	
00050D30:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset	
00050D40:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset	
00050D50:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset	
00050D60:	00 00 00 00 00 00 00 00 00 00 00 00 00 C0 00 00 00
Offset	
00050D70:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset	
00050D80:	00 00 00 00 00 00 00 00 FF FF FF FF 00 00 00 00
Offset	
00050D90:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset	
00050DA0:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset	
00050DB0:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset	
00050DC0:	FF FF FF FF FF FF FF 00 00 00 00 00 00 00 00 00
	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

Offset	Navigation
00050DD0:	
Offset	
00050DE0:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset	
00050DF0:	2C FE 01 00 00 00 00 00 00 00 00 00 00 00 00 00
PCI-1022-1450:	AMD K17/K17.1/K17.3/K17.5/K17.6/K17.7/K18 CH1 NBSMNIND
Offset	
00150000:	01 00 00 00 00 00 00 00 01 02 00 00 00 00 00 00
Offset	
00150010:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset	
00150020:	FE FD FF 03 FE FD FF 03 00 00 00 00 00 00 00 00
Offset	
00150030:	08 06 15 00 08 06 15 00 00 00 00 00 00 00 00 00
Offset	
00150040:	BA 98 0C 06 BA 98 0C 06 00 00 00 00 00 00 00 00
Offset	
00150050:	21 43 65 87 43 65 87 A9 21 43 65 87 43 65 87 A9
Offset	
00150060:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset	
00150070:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset	
00150080:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset	
00150090:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset	
001500A0:	16 36 16 36 16 36 16 36 16 36 16 36 16 36 16 36
Offset	
001500B0:	16 36 00 00 16 36 16 36 16 36 16 36 16 36 16 36
Offset	
001500C0:	00 00 00 00 00 00 00 00 01 40 44 04 01 80 88 08
Offset	
001500D0:	F1 07 11 11 01 00 22 22 00 00 00 00 00 00 00 00
Offset	
001500E0:	00 00 00 00 00 00 00 00 00 FC FF 03 01 FC FF 03
Offset	
001500F0:	05 00 00 00 01 00 04 00 00 00 00 00 00 00 00 00
Offset	
00150100:	00 02 00 80 82 80 40 B0 91 00 40 48 90 00 00 00
Offset	
00150110:	30 B0 B0 00 28 30 20 20 47 00 00 00 00 00 00 00
Offset	
00150120:	00 00 00 00 0A 48 00 A1 00 00 00 00 68 04 10 21
Offset	
00150130:	00 00 00 10 00 00 00 00 C0 C0 40 07 00 00 00 00
Offset	
00150140:	00 00 00 00 01 01 FF FF 11 5C 7A DA 00 00 00 00
Offset	
00150150:	00 0F 00 00 81 00 00 00 00 82 10 60 00 00 00 00
	00 00 0A C0 00 00 00 00 00 00 00 00 00 00 00 00

Offset	Navigation
00150160:	
Offset	
00150170:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset	
00150180:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset	
00150190:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset	
001501A0:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset	
001501B0:	02 02 00 00 00 00 00 00 01 01 00 00 00 00 00 00
Offset	
001501C0:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset	
001501D0:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset	
001501E0:	1B 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset	
001501F0:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset	
00150200:	1C 05 00 00 0D 1F 0D 0D 2C 00 0D 00 04 05 00 07
Offset	
00150210:	14 00 00 00 0A 03 07 00 0E 00 00 00 00 00 00 00
Offset	
00150220:	04 04 01 03 06 06 01 03 00 08 00 00 80 00 22 07
Offset	
00150230:	73 1C 00 00 08 18 10 18 51 01 55 02 24 20 00 00
Offset	
00150240:	00 00 00 00 05 00 FF 3F 00 00 00 00 00 00 00 00
Offset	
00150250:	00 00 05 00 06 00 04 05 08 05 14 02 2A 2A 00 22
Offset	
00150260:	47 99 87 25 47 99 87 25 00 00 00 00 00 00 00 00
Offset	
00150270:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset	
00150280:	65 62 00 00 10 00 00 00 02 00 00 00 80 29 00 18
PCI-1022-1450:	AMD K17/K17.1/K17.3/K17.5/K17.6/K17.7/K18 CH1 NBSMNIND
Offset	
00150D00:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset	
00150D10:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset	
00150D20:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset	
00150D30:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset	
00150D40:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset	
00150D50:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
	00 00 00 00 00 00 00 00 00 00 00 00 00 F8 00 00 00

Offset	Navigation
00150D60:	
Offset	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00150D70:	
Offset	00 00 00 00 00 00 00 00 FF FF FF FF 00 00 00 00
00150D80:	
Offset	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00150D90:	
Offset	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00150DA0:	
Offset	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00150DB0:	
Offset	FF FF FF FF FF FF FF 00 00 00 00 00 00 00 00
00150DC0:	
Offset	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00150DD0:	
Offset	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00150DE0:	
Offset	2C FE 01 00 00 00 00 00 00 00 00 00 00 00 00 00
00150DF0:	

## Debug - Video BIOS

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```

C000:0000 U.s.K7400.L.w.VIDEO .....<...IBM VGA Compatible.....FT10/24/16
C000:0040 .....P.....)\B.cBPMIDu
C000:0080 .x.....!GP104 PG411 SKU 20 VGA BIOS ..MSINV330MH.1Z1.....
C000:00C0 .....Version 86.04.50.00.2C ...Copyri
C000:0100 ght (C) 1996-2016 NVIDIA Corp.....GP104 Board.....
C000:0140 .....Chip Rev .....
C000:0180 .....PCIR.....s.....
C000:01C0 NPDE...x.....b..3.....BIT.....F2...b.B.%n.C.....D.
C000:0200 ....I..."...M.....N.....P.....S.....T.....U.....V.....x.....d.....
C000:0240 p.....u.....i.\.....(,pI.f.q.....P.,.....
C000:0280 ...\\R...f....WH...P.....v..;w...t...u...u...Q...I....I..$L.
C000:02C0 I..$L..pI....L...u..6L.L.q...q...Q.....U.....
C000:0300 .....E.....=...+.....C.....'.....?.
C000:0340 .....h...WN...M..gN...../...p.....6.
C000:0380 .....q.....P.....(.O..O#+.#N...O(.R.O.mzyP.P.....e.....
C000:03C0 .....P.,...D....10/07/16.....>.....2000

```

## Debug - Unknown

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Monitor ID      ACR075A: PnP-Monitor (Standard) [NoDB]
Monitor Model   VG240Y V

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Navigation