	Dettagli	Specifiche	soket	over	clock
Cpu	Intel Core i5 9600K	Intel(R) Core(TM) i5-9600K CPU @ 3.70GHz	Socket 1151 LGA	4297.7 MHz	3700 MHz
	Tipologia	qt	modello	Frequanze	
Ram	DDR4 32gb	4 dim da 8gb	CMK16GX4M2B3000C15	3200mhz	
	Tipolgia	qt			
Hardisk	ssd slot m2	256gb			
	GPU 1	GPU 1	GPU 2	GPU 2	
Altro	NVIDIA GeForce GTX 1660 Ti	6gb ram ddr6	Intel UHD 630	ram sistema	

CPU-Z TXT Report

Binaries

CPU-Z version   2.08.0.x64

Processors

CPU Groups   1
CPU Group 0   6 threads, mask=0x3F

Number of sockets   1
Number of threads   6

APICs

Socket 0
        -- Core 0 (ID 0)
                        -- Thread 0   0
        -- Core 1 (ID 1)
                        -- Thread 1   2
        -- Core 2 (ID 2)
                        -- Thread 2   4
        -- Core 3 (ID 3)
                        -- Thread 3   6
        -- Core 4 (ID 4)
                        -- Thread 4   8
        -- Core 5 (ID 5)
                        -- Thread 5   10

Timers

        ACPI timer   3.580 MHz
        Perf timer   10.000 MHz
        Sys timer   1.000 KHz

Processors Information

Socket 1   ID = 0
        Number of cores   6 (max 6)
        Number of threads   6 (max 6)
        Manufacturer   GenuineIntel
        Name   Intel Core i5 9600K
        Codename   Coffee Lake
        Specification   Intel(R) Core(TM) i5-9600K CPU @ 3.70GHz
        Package (platform ID)   Socket 1151 LGA (0x1)
        CPUID   6.E.D
        Extended CPUID   6.9E
        Core Stepping   R0
        Technology   14 nm
        TDP Limit   95.0 Watts
        Tjmax   100.0 C
        Core Speed   4297.7 MHz
        Multiplier x Bus Speed   43.0 x 99.9 MHz
        Base frequency (cores)   99.9 MHz
        Base frequency (mem.)   99.9 MHz
        Stock frequency   3700 MHz
        Max frequency   0 MHz
        Instructions sets   MMX, SSE, SSE2, SSE3, SSSE3, SSE4.1, SSE4.2, EM64T, AES, AVX, AVX2, FMA3
        Microcode Revision   0xDE
        L1 Data cache   6 x 32 KB (8-way, 64-byte line)
        L1 Instruction cache   6 x 32 KB (8-way, 64-byte line)
        L2 cache   6 x 256 KB (4-way, 64-byte line)
        L3 cache   9 MB (12-way, 64-byte line)
        Max CPUID level   00000016h
        Max CPUID ext. level   80000008h
        FID/VID Control   yes

        Turbo Mode   supported, enabled
        Max non-turbo ratio   37x
        Max turbo ratio   46x
        Max efficiency ratio   8x
        Min operating ratio   8x
        Speedshift   Autonomous
        O/C bins   unlimited
        Ratio 1 core   46x
        Ratio 2 cores   45x
        Ratio 3 cores   45x
        Ratio 4 cores   44x
        Ratio 5 cores   44x
        Ratio 6 cores   43x
        Ratio 7 cores   43x
        Ratio 8 cores   43x
        TDP Level   95.0 W @ 37x

        Temperature 0   48 degC (118 degF) (Package)
        Temperature 1   49 degC (120 degF) (Cores (Max))
        Temperature 2   46 degC (114 degF) (Core #0)
        Temperature 3   52 degC (125 degF) (Core #1)
        Temperature 4   47 degC (116 degF) (Core #2)
        Temperature 5   46 degC (114 degF) (Core #3)
        Temperature 6   49 degC (120 degF) (Core #4)
        Temperature 7   51 degC (123 degF) (Core #5)
        Voltage 0   1.34 Volts (VID)
        Power 00   27.61 W (Package)
        Power 01   24.65 W (IA Cores)
        Power 02   0.59 W (GT)
        Power 03   2.42 W (DRAM)
        Clock Speed 0   4297.74 MHz (Core #0)
        Clock Speed 1   4297.74 MHz (Core #1)
        Clock Speed 2   4297.74 MHz (Core #2)
        Clock Speed 3   4297.74 MHz (Core #3)
        Clock Speed 4   4297.74 MHz (Core #4)
        Clock Speed 5   4297.74 MHz (Core #5)
        Core 0 max ratio   46.00 (effective 44.00)
        Core 1 max ratio   46.00 (effective 43.00)
        Core 2 max ratio   46.00 (effective 44.00)
        Core 3 max ratio   46.00 (effective 43.00)
        Core 4 max ratio   46.00 (effective 43.00)
        Core 5 max ratio   46.00 (effective 45.00)

Thread dumps

CPU Thread 0
        APIC ID   0
        Topology   Processor ID 0, Core ID 0, Thread ID 0
        Cache descriptor   Level 1, D, 32 KB, 2 thread(s)

Cache descriptor   Level 1, I, 32 KB, 2 thread(s)
Cache descriptor   Level 2, U, 256 KB, 2 thread(s)
Cache descriptor   Level 3, U, 9 MB, 16 thread(s)

CPUID

Leaf				
0x00000000	0x00000016	0x756E6547	0x6C65746E	0x49656E69
0x00000001	0x000906ED	0x00100800	0xFFFFAF38F	0xBFEBFBFF
0x00000002	0x76036301	0x00F0B6FF	0x00000000	0x00C30000
0x00000003	0x00000000	0x00000000	0x00000000	0x00000000
0x00000004	0x1C004121	0x01C0003F	0x0000003F	0x00000000
0x00000004	0x1C004122	0x01C0003F	0x0000003F	0x00000000
0x00000004	0x1C004143	0x00C0003F	0x000003FF	0x00000000
0x00000004	0x1C03C163	0x02C0003F	0x00002FFF	0x00000006
0x00000005	0x00000040	0x00000040	0x00000003	0x00042120
0x00000006	0x000007F3	0x00000002	0x00000001	0x00000000
0x00000007	0x00000000	0x009C67A9	0x00000000	0xBC000400
0x00000008	0x00000000	0x00000000	0x00000000	0x00000000
0x00000009	0x00000000	0x00000000	0x00000000	0x00000000
0x0000000A	0x07300804	0x00000000	0x00000000	0x00000603
0x0000000B	0x00000001	0x00000001	0x00000100	0x00000000
0x0000000B	0x00000004	0x00000006	0x00000201	0x00000000
0x0000000C	0x00000000	0x00000000	0x00000000	0x00000000
0x0000000D	0x0000001F	0x00000440	0x00000440	0x00000000
0x0000000D	0x0000000F	0x000003C0	0x00000000	0x00000000
0x0000000D	0x00000100	0x00000240	0x00000000	0x00000000
0x0000000D	0x00000040	0x000003C0	0x00000000	0x00000000
0x0000000D	0x00000040	0x00000400	0x00000000	0x00000000
0x0000000E	0x00000000	0x00000000	0x00000000	0x00000000
0x0000000F	0x00000000	0x00000000	0x00000000	0x00000000
0x00000010	0x00000000	0x00000000	0x00000000	0x00000000
0x00000011	0x00000000	0x00000000	0x00000000	0x00000000
0x00000012	0x00000000	0x00000000	0x00000000	0x00000000
0x00000013	0x00000000	0x00000000	0x00000000	0x00000000
0x00000014	0x00000001	0x0000000F	0x00000003	0x00000000
0x00000015	0x00000002	0x00000134	0x00000000	0x00000000
0x00000016	0x00000000	0x00000000	0x00000000	0x00000000
0x40000000	0x4000000C	0x7263694D	0x666F7366	0x76482074
0x40000001	0x31237648	0x00000000	0x00000000	0x00000000
0x40000002	0x0000585D	0x000A0000	0x00000002	0x0000097C
0x40000003	0x00003FFF	0x002BB9FF	0x00000022	0x7DFEFBF6
0x40000004	0x00060D1C	0x00000000	0x0000002E	0x00000000
0x40000005	0x00000400	0x00000400	0x0000045C	0x00000000
0x40000006	0x007200AF	0x00000027	0x00000000	0x00000000
0x40000007	0x80000007	0x0000000B	0x00000000	0x00000000
0x40000008	0x00000000	0x00000000	0x00000000	0x00000000
0x40000009	0x00000000	0x00000000	0x00000000	0x00000000
0x4000000A	0x00000000	0x00000000	0x00000000	0x00000000
0x4000000B	0x001FF002	0x00000000	0x00000000	0x00000000
0x4000000C	0x00000000	0x00000000	0x00000000	0x00000000
0x80000000	0x80000008	0x00000000	0x00000000	0x00000000
0x80000001	0x00000000	0x00000000	0x00000121	0x2C100800
0x80000002	0x65746E49	0x2952286C	0x726F4320	0x4D542865
0x80000003	0x35692029	0x3036392D	0x43204830	0x40205550
0x80000004	0x372E3320	0x7A484730	0x00000000	0x00000000
0x80000005	0x00000000	0x00000000	0x00000000	0x00000000
0x80000006	0x00000000	0x00000000	0x01006040	0x00000000
0x80000007	0x00000000	0x00000000	0x00000000	0x00000100
0x80000008	0x00003027	0x00000000	0x00000000	0x00000000

MSR		
MSR 0x0000001B	0x00000000	0xFEE00D00
MSR 0x00000035	0x00000000	0x00060006
MSR 0x000001A0	0x00000000	0x00850889
MSR 0x00000770	0x00000000	0x00000001
MSR 0x00000774	0x0000019E	0x0000FF25
MSR 0x000000CE	0x08080838	0xF1012500
MSR 0x00000017	0x00040000	0x00000000
MSR 0x000000C1	0x0000FFFF	0xFFFC3A73
MSR 0x000000C2	0x0000004C	0x366F1D3A
MSR 0x000000C3	0x000000B5	0x7EB09519
MSR 0x000000C4	0x00000168	0xE204A1C2
MSR 0x00000186	0x00000000	0x0051003C
MSR 0x00000187	0x00000000	0x0041FF88
MSR 0x000001AD	0x2B2B2B2C	0x2C2D2D2E
MSR 0x00000194	0x00000000	0x000F0000
MSR 0x0000019A	0x00000000	0x00000000
MSR 0x0000019C	0x00000000	0x882C0008
MSR 0x000001A2	0x00000000	0x00641000
MSR 0x000001A4	0x00000000	0x00000000
MSR 0x000001B1	0x00000000	0x882C0008
MSR 0x000001FC	0x00000000	0x0038005D
MSR 0x00000606	0x00000000	0x000A0E03
MSR 0x00000601	0x00000000	0x80000000
MSR 0x00000610	0x004287F8	0x001D87F8
MSR 0x00000611	0x00000000	0xB796185D
MSR 0x00000639	0x00000000	0xA1BF4BFD
MSR 0x00000641	0x00000000	0x026DF6A9
MSR 0x00000619	0x00000000	0x1082D6BD
MSR 0x00000614	0x00000000	0x000002F8
MSR 0x00000648	0x00000000	0x00000025
MSR 0x00000649	0x00000000	0x00000000
MSR 0x0000064A	0x00000000	0x00000000
MSR 0x00000198	0x0000281F	0x00002B00
MSR 0x00000199	0x00000000	0x0000FF00

CPU Thread 1

APIC ID		2
Topology	Processor ID 0, Core ID 1, Thread ID 0	
Cache descriptor	Level 1, D, 32 KB, 2 thread(s)	
Cache descriptor	Level 1, I, 32 KB, 2 thread(s)	
Cache descriptor	Level 2, U, 256 KB, 2 thread(s)	
Cache descriptor	Level 3, U, 9 MB, 16 thread(s)	

CPUID

Leaf				
0x00000000	0x00000016	0x756E6547	0x6C65746E	0x49656E69
0x00000001	0x000906ED	0x02100800	0xFFFFAF38F	0xBFEBFBFF
0x00000002	0x76036301	0x00F0B6FF	0x00000000	0x00C30000
0x00000003	0x00000000	0x00000000	0x00000000	0x00000000
0x00000004	0x1C004121	0x01C0003F	0x0000003F	0x00000000
0x00000004	0x1C004122	0x01C0003F	0x0000003F	0x00000000
0x00000004	0x1C004143	0x00C0003F	0x000003FF	0x00000000
0x00000004	0x1C03C163	0x02C0003F	0x00002FFF	0x00000006
0x00000005	0x00000040	0x00000040	0x00000003	0x00042120
0x00000006	0x000007F3	0x00000002	0x00000001	0x00000000
0x00000007	0x00000000	0x009C67A9	0x00000000	0xBC000400
0x00000008	0x00000000	0x00000000	0x00000000	0x00000000
0x00000009	0x00000000	0x00000000	0x00000000	0x00000000
0x0000000A	0x07300804	0x00000000	0x00000000	0x00000603
0x0000000B	0x00000001	0x00000001	0x00000100	0x00000002
0x0000000B	0x00000004	0x00000006	0x00000201	0x00000002
0x0000000C	0x00000000	0x00000000	0x00000000	0x00000000
0x0000000D	0x0000001F	0x00000440	0x00000440	0x00000000
0x0000000D	0x0000000F	0x000003C0	0x00000000	0x00000000
0x0000000D	0x00000100	0x00000240	0x00000000	0x00000000
0x0000000D	0x00000040	0x000003C0	0x00000000	0x00000000
0x0000000D	0x00000040	0x00000400	0x00000000	0x00000000
0x0000000E	0x00000000	0x00000000	0x00000000	0x00000000
0x0000000F	0x00000000	0x00000000	0x00000000	0x00000000
0x00000010	0x00000000	0x00000000	0x00000000	0x00000000
0x00000011	0x00000000	0x00000000	0x00000000	0x00000000
0x00000012	0x00000000	0x00000000	0x00000000	0x00000000
0x00000013	0x00000000	0x00000000	0x00000000	0x00000000
0x00000014	0x00000001	0x0000000F	0x00000003	0x00000000
0x00000015	0x00000002	0x00000134	0x00000000	0x00000000
0x00000016	0x00000000	0x00000000	0x00000000	0x00000000
0x40000000	0x4000000C	0x7263694D	0x666F7366	0x76482074
0x40000001	0x31237648	0x00000000	0x00000000	0x00000000
0x40000002	0x0000585D	0x000A0000	0x00000002	0x0000097C
0x40000003	0x00003FFF	0x002BB9FF	0x00000022	0x7DFEFBF6

0x40000004	0x00060D1C	0x00000000	0x0000002E	0x00000000
0x40000005	0x00000400	0x00000400	0x0000045C	0x00000000
0x40000006	0x007200AF	0x00000027	0x00000000	0x00000000
0x40000007	0x80000007	0x0000000B	0x00000000	0x00000000
0x40000008	0x00000000	0x00000000	0x00000000	0x00000000
0x40000009	0x00000000	0x00000000	0x00000000	0x00000000
0x4000000A	0x00000000	0x00000000	0x00000000	0x00000000
0x4000000B	0x001FF002	0x00000000	0x00000000	0x00000000
0x4000000C	0x00000000	0x00000000	0x00000000	0x00000000
0x80000000	0x80000008	0x00000000	0x00000000	0x00000000
0x80000001	0x00000000	0x00000000	0x00000121	0x2C100800
0x80000002	0x65746E49	0x2952286C	0x726F4320	0x4D542865
0x80000003	0x35692029	0x3036392D	0x43204B30	0x40205550
0x80000004	0x372E3320	0x7A484730	0x00000000	0x00000000
0x80000005	0x00000000	0x00000000	0x00000000	0x00000000
0x80000006	0x00000000	0x00000000	0x01006040	0x00000000
0x80000007	0x00000000	0x00000000	0x00000000	0x00000100
0x80000008	0x00003027	0x00000000	0x00000000	0x00000000
MSR 0x0000001B	0x00000000	0xFEE00C00		
MSR 0x00000035	0x00000000	0x00060006		
MSR 0x000001A0	0x00000000	0x00850889		
MSR 0x00000770	0x00000000	0x00000001		
MSR 0x00000774	0x0000019E	0x0000FF25		
MSR 0x000000CE	0x08080838	0xF1012500		
MSR 0x00000017	0x00040000	0x00000000		
MSR 0x000000C1	0x0000FFFF	0xFFFEFD0C7		
MSR 0x000000C2	0x00000068	0x87749DF2		
MSR 0x000000C3	0x0000013C	0xD5D09BE1		
MSR 0x000000C4	0x000001D7	0xBBC74218		
MSR 0x00000186	0x00000000	0x0051003C		
MSR 0x00000187	0x00000000	0x0041FF88		
MSR 0x000001AD	0x2B2B2B2C	0x2C2C2D2D2E		
MSR 0x00000194	0x00000000	0x000F0000		
MSR 0x0000019A	0x00000000	0x00000000		
MSR 0x0000019C	0x00000000	0x882B0008		
MSR 0x000001A2	0x00000000	0x00641000		
MSR 0x000001A4	0x00000000	0x00000000		
MSR 0x000001B1	0x00000000	0x882B0008		
MSR 0x000001FC	0x00000000	0x0038005D		
MSR 0x00000606	0x00000000	0x000A0E03		
MSR 0x00000601	0x00000000	0x80000000		
MSR 0x00000610	0x004287F8	0x001D87F8		
MSR 0x00000611	0x00000000	0xB796357A		
MSR 0x00000639	0x00000000	0xA1BF6842		
MSR 0x00000641	0x00000000	0x026DF6A9		
MSR 0x00000619	0x00000000	0x1082D888		
MSR 0x00000614	0x00000000	0x000002F8		
MSR 0x00000648	0x00000000	0x00000025		
MSR 0x00000649	0x00000000	0x00000000		
MSR 0x0000064A	0x00000000	0x00000000		
MSR 0x00000198	0x00002776	0x00002B00		
MSR 0x00000199	0x00000000	0x00002500		

CPU Thread 2

APIC ID		4	
Topology	Processor ID 0, Core ID 2, Thread ID 0		
Cache descriptor	Level 1, D, 32 KB, 2 thread(s)		
Cache descriptor	Level 1, I, 32 KB, 2 thread(s)		
Cache descriptor	Level 2, U, 256 KB, 2 thread(s)		
Cache descriptor	Level 3, U, 9 MB, 16 thread(s)		

CPUID

0x00000000	0x00000016	0x756E6547	0x6C65746E	0x49656E69
0x00000001	0x000906ED	0x04100800	0xFFFFAF38F	0xBFEBFBFF
0x00000002	0x76036301	0x00F0B6FF	0x00000000	0x00C30000
0x00000003	0x00000000	0x00000000	0x00000000	0x00000000
0x00000004	0x1C004121	0x01C0003F	0x0000003F	0x00000000
0x00000004	0x1C004122	0x01C0003F	0x0000003F	0x00000000
0x00000004	0x1C004143	0x00C0003F	0x000003FF	0x00000000
0x00000004	0x1C03C163	0x02C0003F	0x00002FFF	0x00000006
0x00000005	0x00000040	0x00000040	0x00000003	0x00042120
0x00000006	0x000007F3	0x00000002	0x00000001	0x00000000
0x00000007	0x00000000	0x009C67A9	0x00000000	0x8C000400
0x00000008	0x00000000	0x00000000	0x00000000	0x00000000
0x00000009	0x00000000	0x00000000	0x00000000	0x00000000
0x0000000A	0x07300804	0x00000000	0x00000000	0x00000603
0x0000000B	0x00000001	0x00000001	0x00000100	0x00000004
0x0000000B	0x00000004	0x00000006	0x00000201	0x00000004
0x0000000C	0x00000000	0x00000000	0x00000000	0x00000000
0x0000000D	0x0000001F	0x00000440	0x00000440	0x00000000
0x0000000D	0x0000000F	0x000003C0	0x00000000	0x00000000
0x0000000D	0x00000100	0x00000240	0x00000000	0x00000000
0x0000000D	0x00000040	0x000003C0	0x00000000	0x00000000
0x0000000D	0x00000040	0x00000400	0x00000000	0x00000000
0x0000000E	0x00000000	0x00000000	0x00000000	0x00000000
0x0000000F	0x00000000	0x00000000	0x00000000	0x00000000
0x00000010	0x00000000	0x00000000	0x00000000	0x00000000
0x00000011	0x00000000	0x00000000	0x00000000	0x00000000
0x00000012	0x00000000	0x00000000	0x00000000	0x00000000
0x00000013	0x00000000	0x00000000	0x00000000	0x00000000
0x00000014	0x00000001	0x0000000F	0x00000003	0x00000000
0x00000015	0x00000002	0x00000134	0x00000000	0x00000000
0x00000016	0x00000000	0x00000000	0x00000000	0x00000000
0x40000000	0x4000000C	0x7263694D	0x666F7366	0x76482074
0x40000001	0x31237648	0x00000000	0x00000000	0x00000000
0x40000002	0x0000585D	0x000A0000	0x00000002	0x0000097C
0x40000003	0x00003FFF	0x002BB9FF	0x00000022	0x7DFEFBF6
0x40000004	0x00060D1C	0x00000000	0x0000002E	0x00000000
0x40000005	0x00000400	0x00000400	0x0000045C	0x00000000
0x40000006	0x007200AF	0x00000027	0x00000000	0x00000000
0x40000007	0x80000007	0x0000000B	0x00000000	0x00000000
0x40000008	0x00000000	0x00000000	0x00000000	0x00000000
0x40000009	0x00000000	0x00000000	0x00000000	0x00000000
0x4000000A	0x00000000	0x00000000	0x00000000	0x00000000
0x4000000B	0x001FF002	0x00000000	0x00000000	0x00000000
0x4000000C	0x00000000	0x00000000	0x00000000	0x00000000
0x80000000	0x80000008	0x00000000	0x00000000	0x00000000
0x80000001	0x00000000	0x00000000	0x00000121	0x2C100800
0x80000002	0x65746E49	0x2952286C	0x726F4320	0x4D542865
0x80000003	0x35692029	0x3036392D	0x43204B30	0x40205550
0x80000004	0x372E3320	0x7A484730	0x00000000	0x00000000
0x80000005	0x00000000	0x00000000	0x00000000	0x00000000
0x80000006	0x00000000	0x00000000	0x01006040	0x00000000
0x80000007	0x00000000	0x00000000	0x00000000	0x00000100
0x80000008	0x00003027	0x00000000	0x00000000	0x00000000
MSR 0x0000001B	0x00000000	0xFEE00C00		
MSR 0x00000035	0x00000000	0x00060006		
MSR 0x000001A0	0x00000000	0x00850889		
MSR 0x00000770	0x00000000	0x00000001		
MSR 0x00000774	0x0000019E	0x0000FF25		
MSR 0x000000CE	0x08080838	0xF1012500		
MSR 0x00000017	0x00040000	0x00000000		
MSR 0x000000C1	0x0000FFFF	0xFFFEFF494		
MSR 0x000000C2	0x0000006B	0x1A854DE4		
MSR 0x000000C3	0x000000FF	0x77E5E8D4		
MSR 0x000000C4	0x000001C4	0x8355FED3		
MSR 0x00000186	0x00000000	0x0051003C		
MSR 0x00000187	0x00000000	0x0041FF88		
MSR 0x000001AD	0x2B2B2B2C	0x2C2C2D2D2E		
MSR 0x00000194	0x00000000	0x000F0000		
MSR 0x0000019A	0x00000000	0x00000000		
MSR 0x0000019C	0x00000000	0x882C0008		
MSR 0x000001A2	0x00000000	0x00641000		
MSR 0x000001A4	0x00000000	0x00000000		
MSR 0x000001B1	0x00000000	0x882A0008		
MSR 0x000001FC	0x00000000	0x0038005D		

MSR		
MSR 0x00000606	0x00000000	0x000A0E03
MSR 0x00000601	0x00000000	0x80000000
MSR 0x00000610	0x004287F8	0x001D87F8
MSR 0x00000611	0x00000000	0xB7965911
MSR 0x00000639	0x00000000	0xA1BF8AF0
MSR 0x00000641	0x00000000	0x026DF6A9
MSR 0x00000619	0x00000000	0x1082DA8E
MSR 0x00000614	0x00000000	0x000002F8
MSR 0x00000648	0x00000000	0x00000025
MSR 0x00000649	0x00000000	0x00000000
MSR 0x0000064A	0x00000000	0x00000000
MSR 0x00000198	0x00002819	0x00002B00
MSR 0x00000199	0x00000000	0x00002500

CPU Thread 3

APIC ID   6
Topology   Processor ID 0, Core ID 3, Thread ID 0
Cache descriptor   Level 1, D, 32 KB, 2 thread(s)
Cache descriptor   Level 1, I, 32 KB, 2 thread(s)
Cache descriptor   Level 2, U, 256 KB, 2 thread(s)
Cache descriptor   Level 3, U, 9 MB, 16 thread(s)

CPUID

Function	EAX	EBX	ECX	EDX
0x00000000	0x00000016	0x756E6547	0x6C65746E	0x49656E69
0x00000001	0x000906ED	0x06100800	0xFFFAF38F	0xBFEBFBFF
0x00000002	0x76036301	0x00F0B6FF	0x00000000	0x00C30000
0x00000003	0x00000000	0x00000000	0x00000000	0x00000000
0x00000004	0x1C004121	0x01C0003F	0x0000003F	0x00000000
0x00000004	0x1C004122	0x01C0003F	0x0000003F	0x00000000
0x00000004	0x1C004143	0x00C0003F	0x000003FF	0x00000000
0x00000004	0x1C03C163	0x02C0003F	0x00002FFF	0x00000006
0x00000005	0x00000040	0x00000040	0x00000003	0x00042120
0x00000006	0x000007F3	0x00000002	0x00000001	0x00000000
0x00000007	0x00000000	0x009C67A9	0x00000000	0xBC000400
0x00000008	0x00000000	0x00000000	0x00000000	0x00000000
0x00000009	0x00000000	0x00000000	0x00000000	0x00000000
0x0000000A	0x07300804	0x00000000	0x00000000	0x00000603
0x0000000B	0x00000001	0x00000001	0x00000100	0x00000006
0x0000000B	0x00000004	0x00000006	0x00000201	0x00000006
0x0000000C	0x00000000	0x00000000	0x00000000	0x00000000
0x0000000D	0x0000001F	0x00000440	0x00000440	0x00000000
0x0000000D	0x0000000F	0x000003C0	0x00000000	0x00000000
0x0000000D	0x00000100	0x00000240	0x00000000	0x00000000
0x0000000D	0x00000040	0x000003C0	0x00000000	0x00000000
0x0000000D	0x00000040	0x00000400	0x00000000	0x00000000
0x0000000E	0x00000000	0x00000000	0x00000000	0x00000000
0x0000000F	0x00000000	0x00000000	0x00000000	0x00000000
0x00000010	0x00000000	0x00000000	0x00000000	0x00000000
0x00000011	0x00000000	0x00000000	0x00000000	0x00000000
0x00000012	0x00000000	0x00000000	0x00000000	0x00000000
0x00000013	0x00000000	0x00000000	0x00000000	0x00000000
0x00000014	0x00000001	0x0000000F	0x00000003	0x00000000
0x00000015	0x00000002	0x00000134	0x00000000	0x00000000
0x00000016	0x00000000	0x00000000	0x00000000	0x00000000
0x40000000	0x4000000C	0x7263694D	0x666F7366	0x76482074
0x40000001	0x31237648	0x00000000	0x00000000	0x00000000
0x40000002	0x0000585D	0x000A0000	0x00000002	0x0000097C
0x40000003	0x0003FFF	0x002BB9FF	0x00000022	0x7DFEFBF6
0x40000004	0x00060D1C	0x00000000	0x0000002E	0x00000000
0x40000005	0x00000400	0x00000400	0x0000045C	0x00000000
0x40000006	0x007200AF	0x00000027	0x00000000	0x00000000
0x40000007	0x80000007	0x0000000B	0x00000000	0x00000000
0x40000008	0x00000000	0x00000000	0x00000000	0x00000000
0x40000009	0x00000000	0x00000000	0x00000000	0x00000000
0x4000000A	0x00000000	0x00000000	0x00000000	0x00000000
0x4000000B	0x001FF002	0x00000000	0x00000000	0x00000000
0x4000000C	0x00000000	0x00000000	0x00000000	0x00000000
0x80000000	0x80000008	0x00000000	0x00000000	0x00000000
0x80000001	0x00000000	0x00000000	0x00000121	0x2C100800
0x80000002	0x65746E49	0x2952286C	0x726F4320	0x4D542865
0x80000003	0x35692029	0x3036392D	0x43204830	0x40205550
0x80000004	0x372E3320	0x7A484730	0x00000000	0x00000000
0x80000005	0x00000000	0x00000000	0x00000000	0x00000000
0x80000006	0x00000000	0x00000000	0x01006040	0x00000000
0x80000007	0x00000000	0x00000000	0x00000000	0x00000100
0x80000008	0x00003027	0x00000000	0x00000000	0x00000000

MSR		
MSR 0x0000001B	0x00000000	0xFEE00C00
MSR 0x00000035	0x00000000	0x00060006
MSR 0x000001A0	0x00000000	0x00850889
MSR 0x00000770	0x00000000	0x00000001
MSR 0x00000774	0x0000019E	0x0000FF25
MSR 0x000000CE	0x08080838	0xF1012500
MSR 0x00000017	0x00040000	0x00000000
MSR 0x000000C1	0x0000FFFF	0xFFF1F67D
MSR 0x000000C2	0x00000055	0xC705A802
MSR 0x000000C3	0x000000C8	0x23038AFC
MSR 0x000000C4	0x0000016F	0xAB1F874F
MSR 0x00000186	0x00000000	0x0051003C
MSR 0x00000187	0x00000000	0x0041FF88
MSR 0x000001AD	0x2B2B2B2C	0x2C2D2D2E
MSR 0x00000194	0x00000000	0x000F0000
MSR 0x0000019A	0x00000000	0x00000000
MSR 0x0000019C	0x00000000	0x882B0008
MSR 0x000001A2	0x00000000	0x00641000
MSR 0x000001A4	0x00000000	0x00000000
MSR 0x000001B1	0x00000000	0x882A0008
MSR 0x000001FC	0x00000000	0x0038005D
MSR 0x00000606	0x00000000	0x000A0E03
MSR 0x00000601	0x00000000	0x80000000
MSR 0x00000610	0x004287F8	0x001D87F8
MSR 0x00000611	0x00000000	0xB79682F5
MSR 0x00000639	0x00000000	0xA1BFB2ED
MSR 0x00000641	0x00000000	0x026DF6A9
MSR 0x00000619	0x00000000	0x1082DCF5
MSR 0x00000614	0x00000000	0x000002F8
MSR 0x00000648	0x00000000	0x00000025
MSR 0x00000649	0x00000000	0x00000000
MSR 0x0000064A	0x00000000	0x00000000
MSR 0x00000198	0x0000282F	0x00002B00
MSR 0x00000199	0x00000000	0x00002500

CPU Thread 4

APIC ID   8
Topology   Processor ID 0, Core ID 4, Thread ID 0
Cache descriptor   Level 1, D, 32 KB, 2 thread(s)
Cache descriptor   Level 1, I, 32 KB, 2 thread(s)
Cache descriptor   Level 2, U, 256 KB, 2 thread(s)
Cache descriptor   Level 3, U, 9 MB, 16 thread(s)

CPUID

Function	EAX	EBX	ECX	EDX
0x00000000	0x00000016	0x756E6547	0x6C65746E	0x49656E69
0x00000001	0x000906ED	0x08100800	0xFFFAF38F	0xBFEBFBFF
0x00000002	0x76036301	0x00F0B6FF	0x00000000	0x00C30000
0x00000003	0x00000000	0x00000000	0x00000000	0x00000000
0x00000004	0x1C004121	0x01C0003F	0x0000003F	0x00000000
0x00000004	0x1C004122	0x01C0003F	0x0000003F	0x00000000
0x00000004	0x1C004143	0x00C0003F	0x000003FF	0x00000000
0x00000004	0x1C03C163	0x02C0003F	0x00002FFF	0x00000006
0x00000005	0x00000040	0x00000040	0x00000003	0x00042120
0x00000006	0x000007F3	0x00000002	0x00000001	0x00000000
0x00000007	0x00000000	0x009C67A9	0x00000000	0xBC000400
0x00000008	0x00000000	0x00000000	0x00000000	0x00000000
0x00000009	0x00000000	0x00000000	0x00000000	0x00000000
0x0000000A	0x07300804	0x00000000	0x00000000	0x00000603
0x0000000B	0x00000001	0x00000001	0x00000100	0x00000008
0x0000000B	0x00000004	0x00000006	0x00000201	0x00000008
0x0000000C	0x00000000	0x00000000	0x00000000	0x00000000

0x0000000D	0x0000001F	0x00000440	0x00000440	0x00000000
0x0000000D	0x0000000F	0x000003C0	0x00000000	0x00000000
0x0000000D	0x00000100	0x00000240	0x00000000	0x00000000
0x0000000D	0x00000040	0x000003C0	0x00000000	0x00000000
0x0000000D	0x00000040	0x00000400	0x00000000	0x00000000
0x0000000E	0x00000000	0x00000000	0x00000000	0x00000000
0x0000000F	0x00000000	0x00000000	0x00000000	0x00000000
0x00000010	0x00000000	0x00000000	0x00000000	0x00000000
0x00000011	0x00000000	0x00000000	0x00000000	0x00000000
0x00000012	0x00000000	0x00000000	0x00000000	0x00000000
0x00000013	0x00000000	0x00000000	0x00000000	0x00000000
0x00000014	0x00000001	0x0000000F	0x00000003	0x00000000
0x00000015	0x00000002	0x00000134	0x00000000	0x00000000
0x00000016	0x00000000	0x00000000	0x00000000	0x00000000
0x40000000	0x4000000C	0x7263694D	0x666F736F	0x76482074
0x40000001	0x31237648	0x00000000	0x00000000	0x00000000
0x40000002	0x0000585D	0x000A0000	0x00000002	0x0000097C
0x40000003	0x00003FFF	0x002BB9FF	0x00000022	0x7DFEFBF6
0x40000004	0x00060D1C	0x00000000	0x0000002E	0x00000000
0x40000005	0x00000400	0x00000400	0x0000045C	0x00000000
0x40000006	0x007200AF	0x00000027	0x00000000	0x00000000
0x40000007	0x80000007	0x0000000B	0x00000000	0x00000000
0x40000008	0x00000000	0x00000000	0x00000000	0x00000000
0x40000009	0x00000000	0x00000000	0x00000000	0x00000000
0x4000000A	0x00000000	0x00000000	0x00000000	0x00000000
0x4000000B	0x001FF002	0x00000000	0x00000000	0x00000000
0x4000000C	0x00000000	0x00000000	0x00000000	0x00000000
0x80000000	0x80000008	0x00000000	0x00000000	0x00000000
0x80000001	0x00000000	0x00000000	0x00000121	0x2C100800
0x80000002	0x65746E49	0x2952286C	0x726F4320	0x4D542865
0x80000003	0x35693029	0x3036392D	0x43204B30	0x40205550
0x80000004	0x372E3320	0x7A484730	0x00000000	0x00000000
0x80000005	0x00000000	0x00000000	0x00000000	0x00000000
0x80000006	0x00000000	0x00000000	0x01006040	0x00000000
0x80000007	0x00000000	0x00000000	0x00000000	0x00000100
0x80000008	0x00003027	0x00000000	0x00000000	0x00000000
MSR 0x0000001B	0x00000000	0xFEE00C00		
MSR 0x00000035	0x00000000	0x00060006		
MSR 0x000001A0	0x00000000	0x00850889		
MSR 0x00000770	0x00000000	0x00000001		
MSR 0x00000774	0x0000019E	0x0000FF25		
MSR 0x000000CE	0x08080838	0xF1012500		
MSR 0x00000017	0x00040000	0x00000000		
MSR 0x000000C1	0x0000FFFF	0xFFFB1FC9		
MSR 0x000000C2	0x00000050	0xB76D7B05		
MSR 0x000000C3	0x000000C9	0x7F9C600D		
MSR 0x000000C4	0x00000159	0x305B84F8		
MSR 0x00000186	0x00000000	0x0051003C		
MSR 0x00000187	0x00000000	0x0041FF88		
MSR 0x000001AD	0x2B2B2B2C	0x2C2D2D2E		
MSR 0x00000194	0x00000000	0x000F0000		
MSR 0x0000019A	0x00000000	0x00000000		
MSR 0x0000019C	0x00000000	0x882C0008		
MSR 0x000001A2	0x00000000	0x00641000		
MSR 0x000001A4	0x00000000	0x00000000		
MSR 0x000001B1	0x00000000	0x88260008		
MSR 0x000001FC	0x00000000	0x0038005D		
MSR 0x00000606	0x00000000	0x000A0E03		
MSR 0x00000601	0x00000000	0x80000000		
MSR 0x00000610	0x004287F8	0x001D87F8		
MSR 0x00000611	0x00000000	0xB796A5D8		
MSR 0x00000639	0x00000000	0xA1BFD329		
MSR 0x00000641	0x00000000	0x026DF6A9		
MSR 0x00000619	0x00000000	0x1082DF08		
MSR 0x00000614	0x00000000	0x000002F8		
MSR 0x00000648	0x00000000	0x00000025		
MSR 0x00000649	0x00000000	0x00000000		
MSR 0x0000064A	0x00000000	0x00000000		
MSR 0x00000198	0x00002793	0x00002B00		
MSR 0x00000199	0x00000000	0x00002500		

CPU Thread 5

APIC ID		10	
Topology	Processor ID 0, Core ID 5, Thread ID 0		
Cache descriptor	Level 1, D, 32 KB, 2 thread(s)		
Cache descriptor	Level 1, I, 32 KB, 2 thread(s)		
Cache descriptor	Level 2, U, 256 KB, 2 thread(s)		
Cache descriptor	Level 3, U, 9 MB, 16 thread(s)		

CPUID

0x00000000	0x00000016	0x756E6547	0x6C65746E	0x49656E69
0x00000001	0x000906ED	0x0A100800	0xFFFAFA38F	0xBFEBFBFF
0x00000002	0x76036301	0x00F0B6FF	0x00000000	0x00C30000
0x00000003	0x00000000	0x00000000	0x00000000	0x00000000
0x00000004	0x1C004121	0x01C0003F	0x0000003F	0x00000000
0x00000004	0x1C004122	0x01C0003F	0x0000003F	0x00000000
0x00000004	0x1C004143	0x00C0003F	0x000003FF	0x00000000
0x00000004	0x1C03C163	0x02C0003F	0x00002FFF	0x00000006
0x00000005	0x00000040	0x00000040	0x00000003	0x00042120
0x00000006	0x000007F3	0x00000002	0x00000001	0x00000000
0x00000007	0x00000000	0x009C67A9	0x00000000	0xBC000400
0x00000008	0x00000000	0x00000000	0x00000000	0x00000000
0x00000009	0x00000000	0x00000000	0x00000000	0x00000000
0x0000000A	0x07300804	0x00000000	0x00000000	0x00000603
0x0000000B	0x00000001	0x00000001	0x00000100	0x0000000A
0x0000000B	0x00000004	0x00000006	0x00000201	0x0000000A
0x0000000C	0x00000000	0x00000000	0x00000000	0x00000000
0x0000000D	0x0000001F	0x00000440	0x00000440	0x00000000
0x0000000D	0x0000000F	0x000003C0	0x00000000	0x00000000
0x0000000D	0x00000100	0x00000240	0x00000000	0x00000000
0x0000000D	0x00000040	0x000003C0	0x00000000	0x00000000
0x0000000D	0x00000040	0x00000400	0x00000000	0x00000000
0x0000000E	0x00000000	0x00000000	0x00000000	0x00000000
0x0000000F	0x00000000	0x00000000	0x00000000	0x00000000
0x00000010	0x00000000	0x00000000	0x00000000	0x00000000
0x00000011	0x00000000	0x00000000	0x00000000	0x00000000
0x00000012	0x00000000	0x00000000	0x00000000	0x00000000
0x00000013	0x00000000	0x00000000	0x00000000	0x00000000
0x00000014	0x00000001	0x0000000F	0x00000003	0x00000000
0x00000015	0x00000002	0x00000134	0x00000000	0x00000000
0x00000016	0x00000000	0x00000000	0x00000000	0x00000000
0x40000000	0x4000000C	0x7263694D	0x666F736F	0x76482074
0x40000001	0x31237648	0x00000000	0x00000000	0x00000000
0x40000002	0x0000585D	0x000A0000	0x00000002	0x0000097C
0x40000003	0x00003FFF	0x002BB9FF	0x00000022	0x7DFEFBF6
0x40000004	0x00060D1C	0x00000000	0x0000002E	0x00000000
0x40000005	0x00000400	0x00000400	0x0000045C	0x00000000
0x40000006	0x007200AF	0x00000027	0x00000000	0x00000000
0x40000007	0x80000007	0x0000000B	0x00000000	0x00000000
0x40000008	0x00000000	0x00000000	0x00000000	0x00000000
0x40000009	0x00000000	0x00000000	0x00000000	0x00000000
0x4000000A	0x00000000	0x00000000	0x00000000	0x00000000
0x4000000B	0x001FF002	0x00000000	0x00000000	0x00000000
0x4000000C	0x00000000	0x00000000	0x00000000	0x00000000
0x80000000	0x80000008	0x00000000	0x00000000	0x00000000
0x80000001	0x00000000	0x00000000	0x00000121	0x2C100800
0x80000002	0x65746E49	0x2952286C	0x726F4320	0x4D542865
0x80000003	0x35693029	0x3036392D	0x43204B30	0x40205550
0x80000004	0x372E3320	0x7A484730	0x00000000	0x00000000
0x80000005	0x00000000	0x00000000	0x00000000	0x00000000
0x80000006	0x00000000	0x00000000	0x01006040	0x00000000
0x80000007	0x00000000	0x00000000	0x00000000	0x00000100
0x80000008	0x00003027	0x00000000	0x00000000	0x00000000
MSR 0x0000001B	0x00000000	0xFEE00C00		
MSR 0x00000035	0x00000000	0x00060006		
MSR 0x000001A0	0x00000000	0x00850889		

MSR 0x00000770	0x00000000	0x00000001
MSR 0x00000774	0x0000019E	0x0000FF25
MSR 0x000000CE	0x08080838	0xF1012500
MSR 0x00000017	0x00040000	0x00000000
MSR 0x000000C1	0x0000FFFF	0xFFF7475A
MSR 0x000000C2	0x0000006B	0x3077C2D8
MSR 0x000000C3	0x000000E6	0x62D0B483
MSR 0x000000C4	0x0000022A	0x81E63214
MSR 0x00000186	0x00000000	0x0051003C
MSR 0x00000187	0x00000000	0x0041FF88
MSR 0x000001AD	0x2B2B2B2C	0x2C2D2D2E
MSR 0x00000194	0x00000000	0x000F0000
MSR 0x0000019A	0x00000000	0x00000000
MSR 0x0000019C	0x00000000	0x882C0008
MSR 0x000001A2	0x00000000	0x00641000
MSR 0x000001A4	0x00000000	0x00000000
MSR 0x000001B1	0x00000000	0x882A0008
MSR 0x000001FC	0x00000000	0x0038005D
MSR 0x00000606	0x00000000	0x000A0E03
MSR 0x00000601	0x00000000	0x80000000
MSR 0x00000610	0x004287F8	0x001D87F8
MSR 0x00000611	0x00000000	0xB796C3E9
MSR 0x00000639	0x00000000	0xA1BFEFF8E
MSR 0x00000641	0x00000000	0x026DF6A9
MSR 0x00000619	0x00000000	0x1082E0D0
MSR 0x00000614	0x00000000	0x000002F8
MSR 0x00000648	0x00000000	0x00000025
MSR 0x00000649	0x00000000	0x00000000
MSR 0x0000064A	0x00000000	0x00000000
MSR 0x00000198	0x000027CC	0x00002B00
MSR 0x00000199	0x00000000	0x00002500

BIOS

UEFI		Yes
BIOS Vendor	American Megatrends Inc.	
BIOS MSG	63-0100-000001-00101111-090216-Chipset	
BIOS Date		09/02/2016
Mainboard Vendor	1	

Chipset

Northbridge		Intel Coffee Lake rev. 0D
Southbridge		Intel Z370 rev. 00
Bus Specification	PCI-Express 3.0 (8.0 GT/s)	
Graphic Interface	PCI-Express 3.0	
PCI-E Link Width	x16 (max 16x)	
PCI-E Link Speed	8.0 GT/s (max 8.0 GT/s)	
Memory Type		DDR4
Memory Size		32 GBytes
Channels		Dual
Memory Frequency	1599.0 MHz (3:48)	
CAS# latency (CL)	17.0	
RAS# to CAS# delay (tRCD)	18	
RAS# Precharge (tRP)		18
Cycle Time (tRAS)		38
Row Refresh Cycle Time (tRFC)	560	
Command Rate (CR)	2T	
Uncore Frequency	3997.9 MHz	
Host Bridge		0x3EC2

Memory SPD

DIMM #			1
	SMBus address	0x50	
	Memory type	DDR4	
	Module format	UDIMM	
	Module Manufacturer(ID)	Corsair (7F7F9E0000000000000000000000)	
	SDRAM Manufacturer (ID)	Nanya Technology (7F7F7F0B00000000000000000000)	
	Size		8192 MBytes
	Max bandwidth	DDR4-3002 (1501 MHz)	
	Max JEDEC	DDR4-2133 (1066 MHz)	
	Part number	CMK16GX4M2B3000C15	
	Nominal Voltage	1.20 Volts	
	EPP		no
	XMP		yes, rev. 2.0
	AMP		no
	EXPO		no
JEDEC timings table	CL-tRCD-tRP-tRAS-tRC @ frequency		
	JEDEC #1	7.0-8-8-18-25 @ 533 MHz	
	JEDEC #2	8.0-9-9-20-28 @ 600 MHz	
	JEDEC #3	9.0-9-9-22-31 @ 666 MHz	
	JEDEC #4	10.0-10-10-25-35 @ 733 MHz	
	JEDEC #5	11.0-11-11-27-38 @ 800 MHz	
	JEDEC #6	12.0-13-13-30-42 @ 900 MHz	
	JEDEC #7	13.0-14-14-32-45 @ 966 MHz	
	JEDEC #8	14.0-14-14-35-49 @ 1033 MHz	
	JEDEC #9	15.0-15-15-36-50 @ 1066 MHz	
	JEDEC #10	16.0-15-15-36-50 @ 1066 MHz	
	JEDEC #11	17.0-15-15-36-50 @ 1066 MHz	
	JEDEC #12	18.0-15-15-36-50 @ 1066 MHz	
	JEDEC #13	19.0-15-15-36-50 @ 1066 MHz	
	JEDEC #14	20.0-15-15-36-50 @ 1066 MHz	
	JEDEC #15	21.0-15-15-36-50 @ 1066 MHz	
	JEDEC #16	22.0-15-15-36-50 @ 1066 MHz	
	JEDEC #17	23.0-15-15-36-50 @ 1066 MHz	
	JEDEC #18	24.0-15-15-36-50 @ 1066 MHz	
XMP profile		XMP-3002	
	Specification	DDR4-3002	
	VDD Voltage	1.350 Volts	
	Min Cycle time	0.666 ns (1501 MHz)	
	Max CL		15.0
	Min tRP		11.32 ns
	Min tRCD	11.32 ns	
	Min tRAS	23.13 ns	
	Min tRC		34.63 ns
	Min tRRD	4.00 ns	
XMP timings table	CL-tRCD-tRP-tRAS-tRC-CR @ frequency (voltage)		
	XMP #1		7.0-8-8-17-25-n.a @ 700 MHz (1.350 Volts)
	XMP #2		8.0-10-10-19-28-n.a @ 800 MHz (1.350 Volts)
	XMP #3		9.0-11-11-21-32-n.a @ 900 MHz (1.350 Volts)
	XMP #4		10.0-12-12-24-35-n.a @ 1001 MHz (1.350 Volts)
	XMP #5		11.0-13-13-26-39-n.a @ 1101 MHz (1.350 Volts)
	XMP #6		12.0-14-14-28-42-n.a @ 1201 MHz (1.350 Volts)
	XMP #7		13.0-15-15-31-46-n.a @ 1301 MHz (1.350 Volts)
	XMP #8		14.0-16-16-33-49-n.a @ 1401 MHz (1.350 Volts)
	XMP #9		15.0-17-17-35-52-n.a @ 1501 MHz (1.350 Volts)
	XMP #10		16.0-17-17-35-52-n.a @ 1501 MHz (1.350 Volts)
	XMP #11		17.0-17-17-35-52-n.a @ 1501 MHz (1.350 Volts)
	XMP #12		18.0-17-17-35-52-n.a @ 1501 MHz (1.350 Volts)
	XMP #13		19.0-17-17-35-52-n.a @ 1501 MHz (1.350 Volts)
	XMP #14		20.0-17-17-35-52-n.a @ 1501 MHz (1.350 Volts)
	XMP #15		21.0-17-17-35-52-n.a @ 1501 MHz (1.350 Volts)
	XMP #16		22.0-17-17-35-52-n.a @ 1501 MHz (1.350 Volts)
	XMP #17		23.0-17-17-35-52-n.a @ 1501 MHz (1.350 Volts)
	XMP #18		24.0-17-17-35-52-n.a @ 1501 MHz (1.350 Volts)
DIMM #			2
	SMBus address	0x51	
	Memory type	DDR4	
	Module format	UDIMM	
	Module Manufacturer(ID)	Corsair (7F7F9E0000000000000000000000)	

SDRAM Manufacturer (ID)	SK Hynix (AD00000000000000000000000000)		
Size		8192 MBytes	
Max bandwidth	DDR4-2998 (1499 MHz)		
Max JEDEC	DDR4-2133 (1066 MHz)		
Part number	CMK16GX4M2B3000C15		
Nominal Voltage	1.20 Volts		
EPP		no	
XMP		yes, rev. 2.0	
AMP		no	
EXPO		no	

JEDEC timings table — CL-tRCD-tRP-tRAS-tRC @ frequency

JEDEC #1	9.0-9-9-10-22-31 @ 666 MHz
JEDEC #2	10.0-10-11-25-35 @ 733 MHz
JEDEC #3	11.0-11-12-27-38 @ 800 MHz
JEDEC #4	12.0-13-13-30-42 @ 900 MHz
JEDEC #5	13.0-14-14-32-45 @ 966 MHz
JEDEC #6	14.0-14-15-35-49 @ 1033 MHz
JEDEC #7	15.0-15-15-36-50 @ 1066 MHz
JEDEC #8	16.0-15-15-36-50 @ 1066 MHz

XMP profile

	XMP-2998	
Specification	DDR4-2998	
VDD Voltage	1.350 Volts	
Min Cycle time	0.667 ns (1499 MHz)	
Max CL		15.0
Min tRP		11.33 ns
Min tRCD	11.33 ns	
Min tRAS	23.18 ns	
Min tRC		34.68 ns
Min tRRD	4.00 ns	

XMP timings table — CL-tRCD-tRP-tRAS-tRC-CR @ frequency (voltage)

XMP #1	9.0-11-11-21-32-n.a @ 899 MHz (1.350 Volts)
XMP #2	10.0-12-12-24-35-n.a @ 1000 MHz (1.350 Volts)
XMP #3	11.0-13-13-26-39-n.a @ 1100 MHz (1.350 Volts)
XMP #4	12.0-14-14-28-42-n.a @ 1200 MHz (1.350 Volts)
XMP #5	13.0-15-15-31-46-n.a @ 1300 MHz (1.350 Volts)
XMP #6	14.0-16-16-33-49-n.a @ 1400 MHz (1.350 Volts)
XMP #7	15.0-17-17-35-52-n.a @ 1499 MHz (1.350 Volts)
XMP #8	16.0-17-17-35-52-n.a @ 1499 MHz (1.350 Volts)
XMP #9	17.0-17-17-35-52-n.a @ 1499 MHz (1.350 Volts)
XMP #10	18.0-17-17-35-52-n.a @ 1499 MHz (1.350 Volts)
XMP #11	19.0-17-17-35-52-n.a @ 1499 MHz (1.350 Volts)
XMP #12	20.0-17-17-35-52-n.a @ 1499 MHz (1.350 Volts)

DIMM # 3

SMBus address		0x52	
Memory type		DDR4	
Module format		UDIMM	
Module Manufacturer(ID)	Corsair (7F7F9E0000000000000000000000)		
SDRAM Manufacturer (ID)	Nanya Technology (7F7F7F0B00000000000000000000)		
Size		8192 MBytes	
Max bandwidth	DDR4-3002 (1501 MHz)		
Max JEDEC	DDR4-2133 (1066 MHz)		
Part number	CMK16GX4M2B3000C15		
Nominal Voltage	1.20 Volts		
EPP		no	
XMP		yes, rev. 2.0	
AMP		no	
EXPO		no	

JEDEC timings table — CL-tRCD-tRP-tRAS-tRC @ frequency

JEDEC #1	7.0-8-8-18-25 @ 533 MHz
JEDEC #2	8.0-9-9-20-28 @ 600 MHz
JEDEC #3	9.0-9-9-22-31 @ 666 MHz
JEDEC #4	10.0-10-10-25-35 @ 733 MHz
JEDEC #5	11.0-11-11-27-38 @ 800 MHz
JEDEC #6	12.0-13-13-30-42 @ 900 MHz
JEDEC #7	13.0-14-14-32-45 @ 966 MHz
JEDEC #8	14.0-14-14-35-49 @ 1033 MHz
JEDEC #9	15.0-15-15-36-50 @ 1066 MHz
JEDEC #10	16.0-15-15-36-50 @ 1066 MHz
JEDEC #11	17.0-15-15-36-50 @ 1066 MHz
JEDEC #12	18.0-15-15-36-50 @ 1066 MHz
JEDEC #13	19.0-15-15-36-50 @ 1066 MHz
JEDEC #14	20.0-15-15-36-50 @ 1066 MHz
JEDEC #15	21.0-15-15-36-50 @ 1066 MHz
JEDEC #16	22.0-15-15-36-50 @ 1066 MHz
JEDEC #17	23.0-15-15-36-50 @ 1066 MHz
JEDEC #18	24.0-15-15-36-50 @ 1066 MHz

XMP profile

	XMP-3002	
Specification	DDR4-3002	
VDD Voltage	1.350 Volts	
Min Cycle time	0.666 ns (1501 MHz)	
Max CL		15.0
Min tRP		11.32 ns
Min tRCD	11.32 ns	
Min tRAS	23.13 ns	
Min tRC		34.63 ns
Min tRRD	4.00 ns	

XMP timings table — CL-tRCD-tRP-tRAS-tRC-CR @ frequency (voltage)

XMP #1	7.0-8-8-17-25-n.a @ 700 MHz (1.350 Volts)
XMP #2	8.0-10-10-19-28-n.a @ 800 MHz (1.350 Volts)
XMP #3	9.0-11-11-21-32-n.a @ 900 MHz (1.350 Volts)
XMP #4	10.0-12-12-24-35-n.a @ 1001 MHz (1.350 Volts)
XMP #5	11.0-13-13-26-39-n.a @ 1101 MHz (1.350 Volts)
XMP #6	12.0-14-14-28-42-n.a @ 1201 MHz (1.350 Volts)
XMP #7	13.0-15-15-31-46-n.a @ 1301 MHz (1.350 Volts)
XMP #8	14.0-16-16-33-49-n.a @ 1401 MHz (1.350 Volts)
XMP #9	15.0-17-17-35-52-n.a @ 1501 MHz (1.350 Volts)
XMP #10	16.0-17-17-35-52-n.a @ 1501 MHz (1.350 Volts)
XMP #11	17.0-17-17-35-52-n.a @ 1501 MHz (1.350 Volts)
XMP #12	18.0-17-17-35-52-n.a @ 1501 MHz (1.350 Volts)
XMP #13	19.0-17-17-35-52-n.a @ 1501 MHz (1.350 Volts)
XMP #14	20.0-17-17-35-52-n.a @ 1501 MHz (1.350 Volts)
XMP #15	21.0-17-17-35-52-n.a @ 1501 MHz (1.350 Volts)
XMP #16	22.0-17-17-35-52-n.a @ 1501 MHz (1.350 Volts)
XMP #17	23.0-17-17-35-52-n.a @ 1501 MHz (1.350 Volts)
XMP #18	24.0-17-17-35-52-n.a @ 1501 MHz (1.350 Volts)

DIMM # 4

SMBus address		0x53	
Memory type		DDR4	
Module format		UDIMM	
Module Manufacturer(ID)	Corsair (7F7F9E0000000000000000000000)		
SDRAM Manufacturer (ID)	SK Hynix (AD00000000000000000000000000)		
Size		8192 MBytes	
Max bandwidth	DDR4-2998 (1499 MHz)		
Max JEDEC	DDR4-2133 (1066 MHz)		
Part number	CMK16GX4M2B3000C15		
Nominal Voltage	1.20 Volts		
EPP		no	
XMP		yes, rev. 2.0	
AMP		no	
EXPO		no	

JEDEC timings table — CL-tRCD-tRP-tRAS-tRC @ frequency

JEDEC #1	9.0-9-9-10-22-31 @ 666 MHz
JEDEC #2	10.0-10-11-25-35 @ 733 MHz
JEDEC #3	11.0-11-12-27-38 @ 800 MHz
JEDEC #4	12.0-13-13-30-42 @ 900 MHz
JEDEC #5	13.0-14-14-32-45 @ 966 MHz
JEDEC #6	14.0-14-15-35-49 @ 1033 MHz
JEDEC #7	15.0-15-15-36-50 @ 1066 MHz
JEDEC #8	16.0-15-15-36-50 @ 1066 MHz

XMP profile

	XMP-2998	
Specification	DDR4-2998	
VDD Voltage	1.350 Volts	
Min Cycle time	0.667 ns (1499 MHz)	
Max CL		15.0
Min tRP		11.33 ns
Min tRCD	11.33 ns	

	Min tRAS		23.18 ns	
	Min tRC			34.68 ns
	Min tRRD		4.00 ns	
XMP timings table		CL-tRCD-tRP-tRAS-tRC-CR @ frequency (voltage)		
	XMP #1			9.0-11-11-21-32-n.a @ 899 MHz (1.350 Volts)
	XMP #2			10.0-12-12-24-35-n.a @ 1000 MHz (1.350 Volts)
	XMP #3			11.0-13-13-26-39-n.a @ 1100 MHz (1.350 Volts)
	XMP #4			12.0-14-14-28-42-n.a @ 1200 MHz (1.350 Volts)
	XMP #5			13.0-15-15-31-46-n.a @ 1300 MHz (1.350 Volts)
	XMP #6			14.0-16-16-33-49-n.a @ 1400 MHz (1.350 Volts)
	XMP #7			15.0-17-17-35-52-n.a @ 1499 MHz (1.350 Volts)
	XMP #8			16.0-17-17-35-52-n.a @ 1499 MHz (1.350 Volts)
	XMP #9			17.0-17-17-35-52-n.a @ 1499 MHz (1.350 Volts)
	XMP #10			18.0-17-17-35-52-n.a @ 1499 MHz (1.350 Volts)
	XMP #11			19.0-17-17-35-52-n.a @ 1499 MHz (1.350 Volts)
	XMP #12			20.0-17-17-35-52-n.a @ 1499 MHz (1.350 Volts)

DIMM #   1
SPD registers

```
      00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F
  0   23 10 0C 02 85 21 00 08 00 00 00 03 01 03 00 00
 10   00 00 08 0C FF FF 03 00 6C 6C 6C 11 08 74 F0 0A
 20   20 08 00 05 00 A8 1E 2B 2B 00 00 00 00 00 00 00
 30   00 00 00 00 00 00 00 00 00 00 00 16 36 16 36
 40   16 36 16 36 00 00 2B 0C 2B 0C 2B 0C 2B 0C 00 00
 50   00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 60   00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 70   00 00 00 00 00 ED B5 CE 00 00 00 00 00 C2 B6 0D
 80   11 11 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 90   00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 A0   00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 B0   00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 C0   00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 D0   00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 E0   00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 F0   00 00 00 00 00 00 00 00 00 00 00 00 00 00 B6 58
100   00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
110   00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
120   00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
130   00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
140   02 9E 00 00 00 00 00 00 00 43 4D 4B 31 36 47 58
150   34 4D 32 42 33 30 30 43 31 35 20 20 00 83 0B
160   00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
170   00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
180   0C 4A 01 20 00 00 00 00 00 A3 00 00 06 FF FF 03
190   00 50 5B 5B 10 BA 16 F0 0A 20 08 00 05 00 B0 20
1A0   2B 00 00 00 00 00 00 00 00 D1 FC 8A CB CB F6 AC
1B0   00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
1C0   00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
1D0   00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
1,00E+00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
1F0   00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
```

DIMM #   2
SPD registers

```
      00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F
  0   23 10 0C 02 85 21 00 08 00 00 00 03 01 03 00 00
 10   00 00 08 0C FC 03 00 6C 6C 71 11 08 74 F0 0A
 20   20 08 00 05 00 A8 1E 2B 2B 00 00 00 00 00 00 00
 30   00 00 00 00 00 00 00 00 00 00 00 16 36 16 36
 40   16 36 16 36 00 00 2B 0C 2B 0C 2B 0C 2B 0C 00 00
 50   00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 60   00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 70   00 00 00 00 00 ED B5 CF 00 C0 00 00 00 C2 ED 51
 80   11 11 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 90   00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 A0   00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 B0   00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 C0   00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 D0   00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 E0   00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 F0   00 00 00 00 00 00 00 00 00 00 00 00 00 00 B6 58
100   00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
110   00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
120   00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
130   00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
140   02 9E 00 00 00 00 00 00 00 43 4D 4B 31 36 47 58
150   34 4D 32 42 33 30 30 43 31 35 20 20 00 80 AD
160   00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
170   00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
180   0C 4A 01 20 00 00 00 00 00 A3 00 00 06 FC 3F 04
190   00 50 5B 5B 10 BA 16 F0 0A 20 08 00 05 00 B0 20
1A0   2B 00 00 00 00 00 00 00 00 D3 00 BA D3 D3 00 AD
1B0   00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
1C0   00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
1D0   00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
1,00E+00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
1F0   00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
```

DIMM #   3
SPD registers

```
      00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F
  0   23 10 0C 02 85 21 00 08 00 00 00 03 01 03 00 00
 10   00 00 08 0C FF FF 03 00 6C 6C 6C 11 08 74 F0 0A
 20   20 08 00 05 00 A8 1E 2B 2B 00 00 00 00 00 00 00
 30   00 00 00 00 00 00 00 00 00 00 00 16 36 16 36
 40   16 36 16 36 00 00 2B 0C 2B 0C 2B 0C 2B 0C 00 00
 50   00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 60   00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 70   00 00 00 00 00 ED B5 CE 00 00 00 00 00 C2 B6 0D
 80   11 11 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 90   00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 A0   00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 B0   00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 C0   00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 D0   00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 E0   00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 F0   00 00 00 00 00 00 00 00 00 00 00 00 00 00 B6 58
100   00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
110   00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
120   00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
130   00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
140   02 9E 00 00 00 00 00 00 00 43 4D 4B 31 36 47 58
150   34 4D 32 42 33 30 30 43 31 35 20 20 00 83 0B
160   00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
170   00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
180   0C 4A 01 20 00 00 00 00 00 A3 00 00 06 FF FF 03
190   00 50 5B 5B 10 BA 16 F0 0A 20 08 00 05 00 B0 20
1A0   2B 00 00 00 00 00 00 00 00 D1 FC 8A CB CB F6 AC
1B0   00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
1C0   00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
1D0   00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
1,00E+00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
1F0   00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
```

DIMM #   4
SPD registers

```
      00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F
  0   23 10 0C 02 85 21 00 08 00 00 00 03 01 03 00 00
 10   00 00 08 0C FC 03 00 6C 6C 71 11 08 74 F0 0A
 20   20 08 00 05 00 A8 1E 2B 2B 11 00 00 00 00 00 00
 30   00 00 00 00 00 00 00 00 00 00 00 16 36 16 36
 40   16 36 16 36 00 00 2B 0C 2B 0C 2B 0C 2B 0C 00 00
 50   00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 60   00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 70   00 00 00 00 00 ED B5 CF 00 C0 00 00 00 C2 ED 51
 80   11 11 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 90   00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
```

```
                    A0      00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
                    B0      00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
                    C0      00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
                    D0      00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
                    E0      00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
                    F0      00 00 00 00 00 00 00 00 00 00 00 00 00 00 B6 58
                    100     00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
                    110     00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
                    120     00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
                    130     00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
                    140     02 9E 00 00 00 00 00 00 43 4D 4B 31 36 47 58
                    150     34 4D 32 42 33 30 30 30 43 31 35 20 20 00 80 AD
                    160     00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
                    170     00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
                    180     0C 4A 01 20 00 00 00 00 A3 00 00 06 FC 3F 04
                    190     00 50 5B 5B 10 BA 16 F0 0A 20 08 00 05 00 B0 20
            1A0             2B 00 00 00 00 00 00 00 00 D3 00 BA D3 D3 00 AD
            1B0             00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
            1C0             00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
            1D0             00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
        1,00E+00            00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
            1F0             00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
```

Monitoring

Mainboard Model   Z370 KRAIT GAMING (MS-7B46) (0x00000683 - 0xCA9435F4)

LPCIO

LPCIO Vendor   Nuvoton
LPCIO Model   NCT6795
LPCIO Vendor ID   0x5CA3
LPCIO Chip ID   0xD3
LPCIO Revision ID   0x52
Config Mode I/O address   0x4E
Config Mode LDN   0xB
Config Mode registers

```
                    00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F
            0       FF FF 00 FF FF FF FF FF 0B FF FF FF FF FF FF FF
            10      FF FF FF FF FF FF FF FF FF FF 30 C6 10 00 FF FF
            20      D3 52 FF 00 00 00 40 03 00 FF 58 00 00 00 00 18
            30      01 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
            40      FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
            50      FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
            60      0A 20 0A 30 00 00 FF FF FF FF FF FF FF FF FF FF
            70      00 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
```
Register space   LPC, base address = 0x0A20

Hardware Monitors

Hardware monitor   Nuvoton NCT6795
        Voltage 2   3.34 Volts [0xD1] (AVCC)
        Voltage 3   3.36 Volts [0xD2] (3VCC)
        Voltage 7   1.33 Volts [0xA6] (System Agent)
        Voltage 8   1.27 Volts [0x9F] (CPU VCORE)
        Voltage 9   1.41 Volts [0x58] (DRAM)
        Voltage 10   11.90 Volts [0x7C] (+12V)
        Voltage 11   5.08 Volts [0x7F] (+5V)
        Voltage 12   1.27 Volts [0x9F] (IO Voltage)
        Voltage 13   1.00 Volts [0x7D] (PCH Voltage)
        Voltage 14   0.11 Volts [0xE] (GT Voltage)
        Temperature 0   31 degC (87 degF) [0x1F] (SYSTIN)
        Temperature 1   42 degC (106 degF) [0x53] (CPUTIN)
        Temperature 3   49 degC (120 degF) [0x31] (TMPIN3)
        Temperature 5   41 degC (105 degF) [0x29] (TMPIN5)
        Temperature 6   31 degC (87 degF) [0x1F] (System)
        Fan 1   2191 RPM [0x88F] (CPU)
        Fan 2   1247 RPM [0x4DF] (System #1)
        Fan 3   1299 RPM [0x513] (System #2)
        Fan 4   1272 RPM [0x4F8] (System #3)
        Fan 5   1268 RPM [0x4F4] (System #4)
Hardware registers
Register space   LPC, base address = 0x0A20
bank 0

```
                    00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F
            0       03 4A 03 D2 00 FF FF FF FF FF FF FF FF FF FF FF
            10      03 F4 03 F4 03 F4 03 F4 40 84 A6 0A 7D 58 BE 00
            20      A1 7F D1 D3 7C 12 9F 1F FF FF FF DA 00 00 00 00
            30      00 00 00 00 00 00 00 00 00 00 00 FF FF FF FF FF
            40      23 00 07 DF DF 00 2F FF 2D FF FF 10 00 55 00 A3
            50      05 FF FF FF FF FF FF FF C1 FF FF FF FF 02 02 00
            60      53 F0 FF FF FF 01 00 FF FF FF FF FF FF FF FF FF
            70      00 0A 00 35 00 35 00 35 00 35 00 35 00 35 00 FF
            80      FF 7F 3F BF FF 05 05 05 00 00 00 00 00 00 00 00
            90      0A 00 00 00 00 FD FD 0A 95 EF 80 FF 40 46 C4
            A0      0E FF 00 00 FF 00 00 FF 00 00 80 66 06 06 01 00
            B0      00 00 00 00 00 00 29 04 00 00 08 34 80 04 00
            C0      FF FF FF FF FF FF FF FF FF 08 01 05 FF FF FF FF
            D0      05 05 05 00 00 00 00 00 00 00 00 00 FD FD FD
            E0      55 80 00 00 00 FF FF FF FF FF 00 00 00 00 00 00
            F0      00 00 00 00 00 00 00 FF 1C 00 4A 00 B7 FF FF FF
```
bank 4

```
                    00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F
            0       00 00 00 00 00 00 00 00 00 00 00 00 00 00 FF FF FF
            10      FF FF FF FF FF FF FF FF FF 00 00 FF FF FF FF FF
            20      FF FF FF 96 64 96 64 E1 96 00 FF FF FF FF FF FF
            30      FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
            40      FF FF 00 00 FF FF FF FF FF 00 00 00 00 04 FF
            50      01 F3 FF 00 00 00 FF FF 1E 13 31 09 00 FF FF
            60      FF 01 00 00 00 00 00 FF FF FF FF FF FF FF FF
            70      FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
            80      A1 7F D1 D3 7C 12 9F D1 00 84 A6 01 7D 58 BE 00
            90      1F 29 0C 09 7F FF 00 2A 00 36 36 36 36 00 36
            A0      FF 1F FF FF FF FF 5B E7 F4 F4 F4 00 00 00 00 00
            B0      FF 1F 13 10 22 19 21 14 21 05 21 02 00 F4 FF FF
            C0      00 00 00 73 04 BC 04 E6 04 F8 04 FB FF FF FF FF
            D0      00 00 00 00 00 FF FF FF FF FF FF FF FF FF FF FF
            E0      50 D8 F4 F4 F4 F4 FF FF FF FF FF FF FF FF FF FF
            F0      36 80 00 00 36 00 00 00 00 00 00 00 00 00 00 FF
```

Hardware monitor   Intel I/O
        Clock Speed 0   0.00 MHz [0x0] (Graphics)
        Clock Speed 1   n.a. (Memory)
        Clock Speed 2   n.a. (Processor)

Hardware monitor   NVIDIA NVML
        Power 01   24.73 W (GPU)

Hardware monitor   NVIDIA NVAPI
        Power 01   24.73 W (GPU)
        Clock Speed 0   1320.00 MHz [0x528] (Graphics)
        Clock Speed 1   6120.98 MHz [0x17E8] (Memory)
        Clock Speed 2   n.a. (Processor)

PCI Devices

Register space   PCI Express, base address = 0x0E0000000

Description   Host Bridge
Location   bus 0 (0x00), device 0 (0x00), function 0 (0x00)
Common header

	Vendor ID	0x8086 (Intel)	
	Model ID	0x3EC2	
	Revision ID	0x0D	
	PI		0x00
	SubClass	0x00	
	BaseClass	0x06	
	Cache Line	0x00	
	Latency		0x00
	Header		0x00
PCI header			
	Subvendor ID	0x1462 (MSI)	
	Subsystem ID	0x7B46	
	Int. Line	0x00	
	Int. Pin	0x00	
PCI capability			
	Caps class	Vendor Dependant	
	Caps offset	0xE0	
PCI registers			

```
      00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F
  0   86 80 C2 3E 06 00 90 20 0D 00 00 06 00 00 00 00
  10  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  20  00 00 00 00 00 00 00 00 00 00 00 00 62 14 46 7B
  30  00 00 00 00 E0 00 00 00 00 00 00 00 00 00 00 00
  40  01 90 D1 FE 00 00 00 00 01 00 D1 FE 00 00 00 00
  50  C3 02 00 00 39 80 00 00 47 00 F0 7F 01 00 00 7B
  60  01 00 00 E0 00 00 00 00 01 80 D1 FE 00 00 00 00
  70  00 00 00 FF 07 00 00 00 00 00 0C 00 FF 7F 00 00 00
  80  11 11 11 11 11 11 11 00 1A 00 00 00 00 00 00 00
  90  01 00 00 FF 07 00 00 00 01 00 F0 7E 08 00 00 00
  A0  01 00 00 00 08 00 00 00 01 00 00 7F 08 00 00 00
  B0  01 00 00 7C 01 00 80 7B 01 00 00 7B 01 00 00 80
  C0  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  D0  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  E0  09 00 10 01 DD 20 01 62 C8 00 E4 A4 00 C0 02 00
  F0  00 00 00 00 C8 0F 0D 00 00 00 00 00 00 00 00 00
```

Description		PCI to PCI Bridge		
Location		bus 0 (0x00), device 1 (0x01), function 0 (0x00)		
Common header				
	Vendor ID	0x8086 (Intel)		
	Model ID	0x1901		
	Revision ID	0x0D		
	PI		0x00	
	SubClass	0x04		
	BaseClass	0x06		
	Cache Line	0x10		
	Latency		0x00	
	Header		0x81	
PCI header				
	Primary bus	0x00		
	Secondary bus	0x01		
	Int. Line	0x0B		
	Int. Pin	0x01		
PCI capability				
	Caps class	Subsystem Vendor		
	Caps offset	0x88		
	SubVendor ID	0x1462 (MSI)		
	SubSystem ID	0x7B46		
PCI capability				
	Caps class	Power Management		
	Caps offset	0x80		
	Caps version	1.2		
PCI capability				
	Caps class	Message Signalled Interrupts		
	Caps offset	0x90		
PCI capability				
	Caps class	PCI Express		
	Caps offset	0xA0		
	Device type	Root Port of PCI-E Root Complex		
	Port			2
	Caps version	2.0		
	Physical slot	#0		
	Presence detect	yes		
	Link width	16x (max 16x)		
	Link speed	8.0 GT/s (max 8.0 GT/s)		
PCI extended capability				
	Caps class	Virtual Channel		
	Caps offset	0x100		
PCI extended capability				
	Caps class	Root Complex Link Declaration		
	Caps offset	0x140		
	Link Entries #		1	
	Port Number		2	
PCI extended capability				
	Caps class	Secondary PCI Express		
	Caps offset	0xD94		
PCI registers				

```
         00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F
  0      86 80 01 19 07 04 10 00 0D 00 04 06 10 00 81 00
  10     00 00 00 00 00 00 00 00 01 01 00 E0 E0 00 20
  20     00 DE 00 DF 01 C0 01 D2 00 00 00 00 00 00 00 00
  30     00 00 00 00 88 00 00 00 00 00 00 0B 01 18 00
  40     00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  50     00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  60     00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  70     00 00 00 00 00 00 00 00 62 17 00 00 00 00 0A
  80     01 90 03 C8 08 00 00 00 0D 80 00 00 62 14 46 7B
  90     05 A0 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  A0     10 00 42 01 01 80 00 00 00 00 00 00 03 AD 61 02
  B0     40 00 03 D1 80 25 0C 00 00 00 48 00 00 00 00 00
  C0     00 00 00 00 80 0B 08 00 00 64 00 00 0E 00 00 00
  D0     43 00 1E 00 00 00 00 00 00 00 00 00 00 00 00 00
  E0     00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  F0     00 60 01 C0 4E 01 01 20 00 00 00 00 E0 00 10 00
  100    02 00 01 14 00 00 00 00 00 00 00 00 00 00 00 00
  110    01 00 00 00 FF 00 00 80 00 00 00 00 00 00 00 00
  120    00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  130    00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  140    05 00 41 D9 00 01 01 02 00 00 00 00 00 00 00 00
  150    01 00 01 00 00 00 00 00 00 90 D1 FE 00 00 00 00
  160    00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  170    00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  180    00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  190    00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  1A0    00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  1B0    00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  1C0    01 00 41 D9 00 00 00 00 00 00 00 00 10 40 06 00
  1D0    00 00 00 00 20 00 00 00 00 00 00 00 00 00 00 00
  1,00E+00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  1F0    00 00 00 00 00 00 00 00 00 08 01 04 00 00 00 7C
```

Description		Display Controller	
Location		bus 0 (0x00), device 2 (0x02), function 0 (0x00)	
Common header			
	Vendor ID	0x8086 (Intel)	
	Model ID	0x3E98	
	Revision ID	0x02	
	PI		0x00
	SubClass	0x80	
	BaseClass	0x03	
	Cache Line	0x10	
	Latency		0x00
	Header		0x00
PCI header			
	Address 0 (memory)	0x00000000DD000004	
	Address 2 (memory)	0x00000000B000000C	
	Address 4 (port)	0x0000FEC0	
	Subvendor ID	0x1462 (MSI)	

	Subsystem ID	0x7B46	
	Int. Line	0x00	
	Int. Pin	0x01	
PCI capability			
	Caps class	Vendor Dependant	
	Caps offset	0x40	
PCI capability			
	Caps class	PCI Express	
	Caps offset	0x70	
	Device type	Root Complex Integrated Endpoint Device	
	Port		0
	Caps version	2.0	
PCI capability			
	Caps class	Message Signalled Interrupts	
	Caps offset	0xAC	
PCI capability			
	Caps class	Power Management	
	Caps offset	0xD0	
	Caps version	1.1	
PCI extended capability			
	Caps class	0x1B	
	Caps offset	0x100	
PCI extended capability			
	Caps class	0xF	
	Caps offset	0x200	
PCI extended capability			
	Caps class	0x13	
	Caps offset	0x300	
PCI registers			

```
         00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F
     0   86 80 98 3E 07 04 10 00 02 00 80 03 10 00 00 00
     10  04 00 00 DD 00 00 00 00 0C 00 00 00 00 00 00 00
     20  C1 FE 00 00 00 00 00 00 00 00 00 00 62 14 46 7B
     30  00 00 00 00 40 00 00 00 00 00 00 00 00 01 00 00
     40  09 70 0C 01 DD 20 01 62 C8 00 E4 A4 00 00 00 00
     50  C3 02 00 00 39 80 00 00 00 00 00 00 01 00 00 7C
     60  00 00 01 01 00 00 00 00 00 00 00 00 00 00 00 00
     70  10 AC 92 00 00 80 00 10 00 00 00 00 00 00 00 00
     80  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
     90  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
     A0              00 00 00 00 00 00 00 00 00 00 05 D0 01 00
     B0              80 02 E0 FE 00 00 00 00 00 00 00 00 00 00
     C0              00 00 00 00 00 00 00 00 00 00 00 00 00 00
     D0              01 00 22 00 00 00 00 00 00 00 00 00 00 00
     E0              00 00 00 00 00 00 00 80 00 00 00 00 00 00
     F0              00 00 00 00 00 00 00 00 00 00 18 90 AF 79
     100 1B 00 01 20 00 14 00 00 00 00 00 00 00 00 00 00
     110 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
     120 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
     130 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
     140 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
     150 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
     160 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
     170 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
     180 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
     190 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
     1A0             00 00 00 00 00 00 00 00 00 00 00 00 00 00
     1B0             00 00 00 00 00 00 00 00 00 00 00 00 00 00
     1C0             00 00 00 00 00 00 00 00 00 00 00 00 00 00
     1D0             00 00 00 00 00 00 00 00 00 00 00 00 00 00
     1,00E+00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
     1F0             00 00 00 00 00 00 00 00 00 00 00 00 00 00
```

Description		System Device		
Location		bus 0 (0x00), device 8 (0x08), function 0 (0x00)		
Common header				
	Vendor ID	0x8086 (Intel)		
	Model ID	0x1911		
	Revision ID	0x00		
	PI		0x00	
	SubClass	0x80		
	BaseClass	0x08		
	Cache Line	0x10		
	Latency		0x00	
	Header		0x00	
PCI header				
	Address 0 (memory)	0x00000000DF44F004		
	Subvendor ID	0x1462 (MSI)		
	Subsystem ID	0x7B46		
	Int. Line	0x0B		
	Int. Pin	0x01		
PCI capability				
	Caps class	Message Signalled Interrupts		
	Caps offset	0x90		
PCI capability				
	Caps class	Power Management		
	Caps offset	0xDC		
	Caps version	1.1		
PCI capability				
	Caps class	0x13		
	Caps offset	0xF0		
PCI registers				

```
         00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F
     0   86 80 11 19 00 00 10 00 00 00 80 08 10 00 00 00
     10  04 F0 44 DF 00 00 00 00 00 00 00 00 00 00 00 00
     20  00 00 00 00 00 00 00 00 00 00 00 00 62 14 46 7B
     30  00 00 00 00 90 00 00 00 00 00 00 00 0B 01 00 00
     40  FF 01 00 00 00 00 00 00 00 00 00 00 00 00 00 00
     50  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
     60  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
     70  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
     80  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
     90  05 DC 00 00 00 00 00 00 00 00 00 00 00 00 00 00
     A0              00 00 00 00 00 00 00 00 00 00 00 00 00 00
     B0              00 00 00 00 00 00 00 00 00 00 00 00 00 00
     C0              00 00 00 00 00 00 00 00 00 00 00 00 00 00
     D0              00 00 00 00 00 00 00 00 00 00 01 F0 02 00
     E0              00 00 00 00 00 00 00 00 00 00 00 00 00 00
     F0              13 00 06 03 00 00 00 00 00 00 00 00 00 00
```

Description		USB Controller (xHCI)		
Location		bus 0 (0x00), device 20 (0x14), function 0 (0x00)		
Common header				
	Vendor ID	0x8086 (Intel)		
	Model ID	0xA2AF		
	Revision ID	0x00		
	PI		0x30	
	SubClass	0x03		
	BaseClass	0x0C		
	Cache Line	0x00		
	Latency		0x00	
	Header		0x80	
PCI header				
	Address 0 (memory)	0x00000000DF430004		
	Subvendor ID	0x1462 (MSI)		
	Subsystem ID	0x7B46		
	Int. Line	0x00		
	Int. Pin	0x01		
PCI capability				
	Caps class	Power Management		
	Caps offset	0x70		
	Caps version	1.1		
PCI capability				
	Caps class	Message Signalled Interrupts		
	Caps offset	0x80		
PCI registers				

```
         00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F
     0   86 80 AF A2 06 04 90 02 00 30 03 0C 00 00 80 00
```

```
10  04 00 43 DF 00 00 00 00 00 00 00 00 00 00 00 00
20  00 00 00 00 70 00 00 00 00 00 00 00 62 14 46 7B
30  00 00 00 00 70 00 00 00 00 00 00 00 01 00 00 00
40  FD 01 34 80 88 C6 0F 80 00 00 00 00 00 00 00 00
50  5B 6E CE 0F 00 00 00 00 00 00 00 00 00 00 00 00
60  30 60 00 00 00 00 00 00 00 00 00 00 00 00 00 00
70  01 80 C2 C1 08 00 00 00 00 00 00 00 00 00 00 00
80  05 00 87 00 90 01 E0 FE 00 00 00 00 00 00 00 00
90  09 00 14 F0 10 00 40 01 00 00 00 00 C1 0A 08 00
A0  00 08 00 00 00 18 00 00 8F 40 02 00 00 01 04 00
B0  03 C0 00 00 0C 00 00 00 30 00 00 00 C0 00 00 00
C0  00 03 00 00 0C 00 00 00 10 00 00 00 00 00 00 00
D0  03 00 00 00 0C 00 00 00 30 00 00 00 00 00 00 00
E0  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
F0  00 00 00 00 00 00 00 00 B3 0F 00 08 00 00 00 00
```

Description			Data Aquisition and Signal Processing Device
Location			bus 0 (0x00), device 20 (0x14), function 2 (0x02)
Common header			
	Vendor ID		0x8086 (Intel)
	Model ID		0xA2B1
	Revision ID		0x00
	PI			0x00
	SubClass		0x80
	BaseClass		0x11
	Cache Line		0x00
	Latency			0x00
	Header			0x00
PCI header			
	Address 0 (memory)	0x00000000DF44E004	
	Subvendor ID		0x1462 (MSI)
	Subsystem ID		0x7B46
	Int. Line		0x0B
	Int. Pin		0x03
PCI capability			
	Caps class		Power Management
	Caps offset		0x50
	Caps version		1.2
PCI capability			
	Caps class		Message Signalled Interrupts
	Caps offset		0x80
PCI registers			

```
    00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F
0   86 80 B1 A2 02 00 10 00 00 80 11 00 00 00 00 00
10  04 E0 44 DF 00 00 00 00 00 00 00 00 00 00 00 00
20  00 00 00 00 00 00 00 00 00 00 00 00 62 14 46 7B
30  00 00 00 00 50 00 00 00 00 00 00 00 0B 03 00 00
40  04 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
50  01 80 23 00 08 00 00 00 00 00 00 00 00 00 00 00
60  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
70  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
80  05 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
90  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
A0  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
B0  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
C0  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
D0  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
E0  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
F0  00 00 00 00 00 00 00 00 B3 0F 00 08 00 00 00 00
```

Description			Communication Device
Location			bus 0 (0x00), device 22 (0x16), function 0 (0x00)
Common header			
	Vendor ID		0x8086 (Intel)
	Model ID		0xA2BA
	Revision ID		0x00
	PI			0x00
	SubClass		0x80
	BaseClass		0x07
	Cache Line		0x00
	Latency			0x00
	Header			0x80
PCI header			
	Address 0 (memory)	0x00000000FE7FF004	
	Subvendor ID		0x1462 (MSI)
	Subsystem ID		0x7B46
	Int. Line		0x00
	Int. Pin		0x01
PCI capability			
	Caps class		Power Management
	Caps offset		0x50
	Caps version		1.2
PCI capability			
	Caps class		Message Signalled Interrupts
	Caps offset		0x8C
PCI registers			

```
    00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F
0   86 80 BA A2 06 04 10 00 00 80 07 00 00 80 00 00
10  04 F0 7F FE 00 00 00 00 00 00 00 00 00 00 00 00
20  00 00 00 00 00 00 00 00 00 00 00 00 62 14 46 7B
30  00 00 00 00 50 00 00 00 00 00 00 00 01 00 00 00
40  55 02 00 90 10 00 01 80 06 05 F1 00 00 00 00 00
50  01 8C 03 40 08 00 00 00 00 00 00 00 00 00 00 00
60  20 00 00 00 04 40 08 00 00 00 00 00 02 00 00 00
70  00 00 00 00 00 00 00 E0 00 00 00 00 00 00 00 00
80  00 00 00 00 00 00 00 00 00 00 00 00 05 00 81 00
90  D0 02 E0 FE 00 00 00 00 00 00 00 00 00 00 00 00
A0  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
B0  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 40
C0  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
D0  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
E0  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
F0  00 00 00 00 00 00 00 00 B3 0F 00 08 00 00 00 00
```

Description			Serial ATA Controller - AHCI
Location			bus 0 (0x00), device 23 (0x17), function 0 (0x00)
Common header			
	Vendor ID		0x8086 (Intel)
	Model ID		0xA282
	Revision ID		0x00
	PI			0x01
	SubClass		0x06
	BaseClass		0x01
	Cache Line		0x00
	Latency			0x00
	Header			0x00
PCI header			
	Address 0 (memory)	0xDF448000	
	Address 1 (memory)	0xDF44C000	
	Address 2 (port)	0x0000F090	
	Address 3 (port)	0x0000F080	
	Address 4 (port)	0x0000F060	
	Address 5 (memory)	0xDF44B000	
	Subvendor ID		0x1462 (MSI)
	Subsystem ID		0x7B46
	Int. Line		0x00
	Int. Pin		0x01
PCI capability			
	Caps class		Message Signalled Interrupts
	Caps offset		0x80
PCI capability			
	Caps class		Power Management
	Caps offset		0x70
	Caps version		1.2
PCI capability			
	Caps class		Serial ATA Configuration
	Caps offset		0xA8
PCI registers			

PCI registers

	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F
0	86	80	82	A2	07	04	B0	02	00	01	06	01	00	00	00	00
10	00	80	44	DF	00	C0	44	DF	91	F0	00	00	81	F0	00	00
20	61	F0	00	00	00	B0	44	DF	00	00	00	00	62	14	46	7B
30	00	00	00	00	80	00	00	00	00	00	00	00	00	01	00	00
40	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
50	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
60	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
70	01	A8	03	40	08	00	00	00	00	00	00	00	00	00	00	00
80	05	70	01	00	30	00	E0	FE	00	00	00	00	00	00	00	00
90	00	00	FE	00	01	00	01	00	00	00	00	00	30	00	00	80
A0	3C	00	00	00	00	00	00	00	12	00	10	00	48	00	00	00
B0	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
C0	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
D0	11	00	00	00	00	00	00	00	01	00	00	00	00	00	00	00
E0	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
F0	00	00	00	00	00	00	00	00	B3	0F	00	08	00	00	00	00

Field	Value
Description	PCI to PCI Bridge
Location	bus 0 (0x00), device 28 (0x1C), function 0 (0x00)

Common header

Field	Value	
Vendor ID	0x8086 (Intel)	
Model ID	0xA290	
Revision ID	0xF0	
PI		0x00
SubClass	0x04	
BaseClass	0x06	
Cache Line	0x10	
Latency		0x00
Header		0x81

PCI header

Field	Value
Primary bus	0x00
Secondary bus	0x02
Int. Line	0x0B
Int. Pin	0x01

PCI capability

Field	Value	
Caps class	PCI Express	
Caps offset	0x40	
Device type	Root Port of PCI-E Root Complex	
Port		1
Caps version	2.0	
Physical slot	Integrated device	
Link width	0x (max 1x)	
Link speed	2.5 GT/s (max 8.0 GT/s)	

PCI capability

Field	Value
Caps class	Message Signalled Interrupts
Caps offset	0x80

PCI capability

Field	Value
Caps class	Subsystem Vendor
Caps offset	0x90
SubVendor ID	0x1462 (MSI)
SubSystem ID	0x7B46

PCI capability

Field	Value
Caps class	Power Management
Caps offset	0xA0
Caps version	1.2

PCI registers

	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F
0	86	80	90	A2	04	04	10	00	F0	00	04	06	10	00	81	00
10	00	00	00	00	00	00	00	00	02	02	00	F0	00	00	00	20
20	F0	FF	00	00	F1	FF	01	00	00	00	00	00	00	00	00	00
30	00	00	00	00	40	00	00	00	00	00	00	00	0B	01	00	00
40	10	80	42	00	01	80	00	00	00	00	10	00	13	7C	71	01
50	00	00	01	10	60	04	00	00	00	40	00	00	00	00	00	00
60	00	00	00	00	37	08	08	00	00	00	00	00	0E	00	00	00
70	01	00	01	00	00	00	00	00	00	00	00	00	00	00	00	00
80	05	90	00	00	00	00	00	00	00	00	00	00	00	00	00	00
90	0D	A0	00	00	62	14	46	7B	00	00	00	00	00	00	00	00
A0	01	00	03	C8	00	00	00	00	00	00	00	00	00	00	00	00
B0	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
C0	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
D0	11	00	00	07	00	08	00	00	02	00	9E	09	00	00	00	00
E0	00	F7	91	00	00	00	00	00	04	80	02	00	00	00	00	00
F0	50	01	00	00	00	F3	00	40	B3	0F	00	08	00	00	00	01
100	00	00	00	00	00	00	00	00	00	00	11	00	06	00		
110	00	00	00	00	00	20	00	00	00	00	00	00	00	00	00	00
120	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
130	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
140	00	00	00	00	0F	00	00	00	00	00	00	00	00	00	00	00
150	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
160	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
170	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
180	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
190	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
1A0	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
1B0	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
1C0	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
1D0	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
1,00E+00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
1F0	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00

Field	Value
Description	PCI to PCI Bridge
Location	bus 0 (0x00), device 28 (0x1C), function 4 (0x04)

Common header

Field	Value	
Vendor ID	0x8086 (Intel)	
Model ID	0xA294	
Revision ID	0xF0	
PI		0x00
SubClass	0x04	
BaseClass	0x06	
Cache Line	0x10	
Latency		0x00
Header		0x81

PCI header

Field	Value
Primary bus	0x00
Secondary bus	0x03
Int. Line	0x0B
Int. Pin	0x01

PCI capability

Field	Value	
Caps class	PCI Express	
Caps offset	0x40	
Device type	Root Port of PCI-E Root Complex	
Port		5
Caps version	2.0	
Physical slot	#1	
Presence detect	yes	
Link width	2x (max 2x)	
Link speed	8.0 GT/s (max 8.0 GT/s)	

PCI capability

Field	Value
Caps class	Message Signalled Interrupts
Caps offset	0x80

PCI capability

Field	Value
Caps class	Subsystem Vendor
Caps offset	0x90
SubVendor ID	0x1462 (MSI)
SubSystem ID	0x7B46

PCI capability

Field	Value
Caps class	Power Management
Caps offset	0xA0
Caps version	1.2

PCI extended capability

Field	Value
Caps class	Advanced Error Reporting
Caps offset	0x100

PCI extended capability

Field	Value
Caps class	0xD
Caps offset	0x140

PCI extended capability

Field	Value
Caps class	Secondary PCI Express

PCI registers

Caps offset 0x220

```
      00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F
   0  86 80 94 A2 06 04 10 00 F0 00 04 06 10 00 81 00
  10  00 00 00 00 00 00 00 00 00 00 03 03 00 F0 00 00 20
  20  30 DF 30 DF F1 FF 01 00 00 00 00 00 00 00 00 00
  30  00 00 00 00 40 00 00 00 00 00 00 00 08 01 00 00
  40  10 80 42 01 01 80 00 00 20 00 10 00 23 40 72 05
  50  40 00 23 70 00 FD 44 00 00 00 48 01 00 00 00 00
  60  00 00 00 00 37 08 00 00 00 04 00 00 0E 00 00 00
  70  03 00 1F 00 00 00 00 00 00 00 00 00 00 00 00 00
  80  05 90 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  90  0D A0 00 00 62 14 46 7B 00 00 00 00 00 00 00 00
  A0  01 00 03 C8 00 00 00 00 00 00 00 00 00 00 00 00
  B0  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  C0  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  D0  11 10 00 07 42 18 00 00 08 00 9E 89 00 00 00 00
  E0  00 87 F3 00 50 88 50 88 16 80 12 00 00 00 00 00
  F0  50 01 00 00 00 03 00 40 B3 0F 00 08 00 40 00 01
 100  01 00 01 14 00 00 00 00 00 00 01 00 11 00 06 00
 110  00 00 00 00 00 00 20 00 00 00 00 00 00 00 00 00
 120  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 130  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 140  0D 00 01 22 0F 00 00 00 00 00 00 00 00 00 00 00
 150  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 160  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 170  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 180  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 190  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 1A0  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 1B0  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 1C0  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 1D0  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
1,00E+00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 1F0  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
```

Description		PCI to PCI Bridge
Location		bus 0 (0x00), device 28 (0x1C), function 6 (0x06)
Common header		
	Vendor ID	0x8086 (Intel)
	Model ID	0xA296
	Revision ID	0xF0
	PI	0x00
	SubClass	0x04
	BaseClass	0x06
	Cache Line	0x10
	Latency	0x00
	Header	0x81
PCI header		
	Primary bus	0x00
	Secondary bus	0x04
	Int. Line	0x0B
	Int. Pin	0x03
PCI capability		
	Caps class	PCI Express
	Caps offset	0x40
	Device type	Root Port of PCI-E Root Complex
	Port	7
	Caps version	2.0
	Physical slot	#1
	Presence detect	yes
	Link width	1x (max 1x)
	Link speed	2.5 GT/s (max 8.0 GT/s)
PCI capability		
	Caps class	Message Signalled Interrupts
	Caps offset	0x80
PCI capability		
	Caps class	Subsystem Vendor
	Caps offset	0x90
	SubVendor ID	0x1462 (MSI)
	SubSystem ID	0x7B46
PCI capability		
	Caps class	Power Management
	Caps offset	0xA0
	Caps version	1.2
PCI extended capability		
	Caps class	Advanced Error Reporting
	Caps offset	0x100
PCI extended capability		
	Caps class	0xD
	Caps offset	0x140
PCI extended capability		
	Caps class	Secondary PCI Express
	Caps offset	0x220

PCI registers

```
      00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F
   0  86 80 96 A2 06 04 10 00 F0 00 04 06 10 00 81 00
  10  00 00 00 00 00 00 00 00 00 00 04 04 00 F0 00 00 20
  20  20 DF 20 DF F1 FF 01 00 00 00 00 00 00 00 00 00
  30  00 00 00 00 40 00 00 00 00 00 00 00 0B 03 00 00
  40  10 80 42 01 01 80 00 00 00 00 10 00 13 40 72 07
  50  40 00 11 70 00 B2 54 00 00 00 40 01 00 00 00 00
  60  00 00 00 00 37 08 00 00 00 04 00 00 0E 00 00 00
  70  03 00 01 00 00 00 00 00 00 00 00 00 00 00 00 00
  80  05 90 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  90  0D A0 00 00 62 14 46 7B 00 00 00 00 00 00 00 00
  A0  01 00 03 C8 00 00 00 00 00 00 00 00 00 00 00 00
  B0  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  C0  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  D0  01 10 00 07 42 18 00 00 08 00 9E 89 00 00 00 00
  E0  00 03 E3 00 00 00 00 00 06 00 10 00 00 00 00 00
  F0  50 01 00 00 00 00 4C B3 0F 00 08 00 00 00 00 03
 100  01 00 01 14 00 00 00 00 00 00 01 00 11 00 06 00
 110  00 00 00 00 00 00 20 00 00 00 00 00 00 00 00 00
 120  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 130  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 140  0D 00 01 22 0F 00 00 00 00 00 00 00 00 00 00 00
 150  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 160  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 170  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 180  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 190  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 1A0  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 1B0  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 1C0  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 1D0  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
1,00E+00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 1F0  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
```

Description		PCI to PCI Bridge
Location		bus 0 (0x00), device 29 (0x1D), function 0 (0x00)
Common header		
	Vendor ID	0x8086 (Intel)
	Model ID	0xA298
	Revision ID	0xF0
	PI	0x00
	SubClass	0x04
	BaseClass	0x06
	Cache Line	0x10
	Latency	0x00
	Header	0x81
PCI header		
	Primary bus	0x00
	Secondary bus	0x05
	Int. Line	0x0B
	Int. Pin	0x01
PCI capability		
	Caps class	PCI Express

Caps offset		0x40
Device type		Root Port of PCI-E Root Complex
Port		9
Caps version		2.0
Physical slot		#1
Presence detect		yes
Link width		4x (max 4x)
Link speed		8.0 GT/s (max 8.0 GT/s)
PCI capability		
Caps class		Message Signalled Interrupts
Caps offset		0x80
PCI capability		
Caps class		Subsystem Vendor
Caps offset		0x90
SubVendor ID		0x1462 (MSI)
SubSystem ID		0x7B46
PCI capability		
Caps class		Power Management
Caps offset		0xA0
Caps version		1.2
PCI extended capability		
Caps class		Advanced Error Reporting
Caps offset		0x100
PCI extended capability		
Caps class		0xD
Caps offset		0x140
PCI extended capability		
Caps class		Secondary PCI Express
Caps offset		0x220

PCI registers

```
      00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F
   0  86 80 98 A2 06 04 10 00 F0 00 04 06 10 00 81 00
  10  00 00 00 00 00 00 00 00 00 05 05 00 F0 00 00 20
  20  10 DF 10 DF F1 FF 01 00 00 00 00 00 00 00 00 00
  30  00 00 00 00 40 00 00 00 00 00 00 00 0B 01 00 00
  40  10 80 42 01 01 80 00 00 20 00 10 00 43 40 72 09
  50  40 00 43 70 00 FD 64 00 00 40 01 00 00 00 00 00
  60  00 00 00 00 37 08 00 00 04 00 00 0E 00 00 00 00
  70  03 00 1F 00 00 00 00 00 00 00 00 00 00 00 00 00
  80  05 90 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  90  0D A0 00 00 62 14 46 7B 00 00 00 00 00 00 00 00
  A0  01 00 03 C8 00 00 00 00 00 00 00 00 00 00 00 00
  B0  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  C0  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  D0  11 10 00 07 42 18 00 00 08 00 9E 89 00 00 00 00
  E0  00 B7 F3 00 F4 09 F4 09 16 80 12 00 00 00 00 00
  F0  50 01 00 00 00 03 00 40 B3 0F 00 08 00 C0 00 01
 100  01 00 01 14 00 00 00 00 00 00 01 00 11 00 06 00
 110  00 00 00 00 00 20 00 00 00 00 00 00 00 00 00 00
 120  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 130  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 140  0D 00 00 01 22 0F 00 00 00 00 00 00 00 00 00 00
 150  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 160  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 170  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 180  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 190  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 1A0  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 1B0  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 1C0  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 1D0  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
1,00E+00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 1F0  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
```

Description		PCI to ISA Bridge
Location		bus 0 (0x00), device 31 (0x1F), function 0 (0x00)
Common header		
Vendor ID		0x8086 (Intel)
Model ID		0xA2C9
Revision ID		0x00
PI		0x00
SubClass		0x01
BaseClass		0x06
Cache Line		0x00
Latency		0x00
Header		0x80
PCI header		
Subvendor ID		0x1462 (MSI)
Subsystem ID		0x7B46
Int. Line		0x00
Int. Pin		0x00

PCI registers

```
      00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F
   0  86 80 C9 A2 07 00 00 02 00 00 01 06 00 00 80 00
  10  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  20  00 00 00 00 00 00 00 00 00 00 00 00 62 14 46 7B
  30  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  40  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  50  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  60  00 00 00 00 D0 00 00 00 00 00 00 00 00 00 00 00
  70  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  80  70 00 0E 3F 01 02 FC 00 01 0A 3C 00 E1 03 0C 00
  90  E1 02 1C 00 00 00 00 00 00 00 00 00 00 00 00 00
  A0  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  B0  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  C0  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  D0  33 22 11 00 67 45 00 00 CF FF 00 00 80 00 00 00
  E0  C0 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  F0  00 00 00 00 00 00 00 00 B3 0F 00 08 00 00 00 00
```

Description		Memory Controller
Location		bus 0 (0x00), device 31 (0x1F), function 2 (0x02)
Common header		
Vendor ID		0x8086 (Intel)
Model ID		0xA2A1
Revision ID		0x00
PI		0x00
SubClass		0x80
BaseClass		0x05
Cache Line		0x00
Latency		0x00
Header		0x80
PCI header		
Address 0 (memory)	0xDF444000	
Subvendor ID		0x1462 (MSI)
Subsystem ID		0x7B46
Int. Line		0x00
Int. Pin		0x00

PCI registers

```
      00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F
   0  86 80 A1 A2 06 00 00 00 00 80 05 00 00 80 00 00
  10  00 40 44 DF 00 00 00 00 00 00 00 00 00 00 00 00
  20  00 00 00 00 00 00 00 00 00 00 00 00 62 14 46 7B
  30  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  40  01 18 00 00 80 01 00 00 00 00 00 FE 00 00 00 00
  50  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  60  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  70  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  80  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  90  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  A0  F0 36 80 D8 48 38 06 00 00 46 00 00 00 00 00 01
  B0  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  C0  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  D0  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  E0  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  F0  00 00 00 00 00 00 00 00 B3 0F 00 08 00 00 00 00
```

Description		High Definition Audio (HDA)

Location		bus 0 (0x00), device 31 (0x1F), function 3 (0x03)
Common header		
	Vendor ID	0x8086 (Intel)
	Model ID	0xA2F0
	Revision ID	0x00
	PI	0x00
	SubClass	0x03
	BaseClass	0x04
	Cache Line	0x10
	Latency	0x20
	Header	0x00
PCI header		
	Address 0 (memory)	0x00000000DF440004
	Address 4 (memory)	0x00000000DF420004
	Subvendor ID	0x1462 (MSI)
	Subsystem ID	0xCB46
	Int. Line	0x10
	Int. Pin	0x01
PCI capability		
	Caps class	Power Management
	Caps offset	0x50
	Caps version	1.2
PCI capability		
	Caps class	Message Signalled Interrupts
	Caps offset	0x60
PCI registers		

```
   00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F
 0 86 80 F0 A2 06 00 10 00 00 00 03 04 10 20 00 00
10 04 00 44 DF 00 00 00 00 00 00 00 00 00 00 00 00
20 04 00 42 DF 00 00 00 00 00 00 00 00 62 14 46 CB
30 00 00 00 00 50 00 00 00 00 00 00 00 10 01 00 00
40 00 00 00 00 00 00 00 00 FF 0D 3B 80 00 00 00 00
50 01 60 43 C0 08 00 00 00 00 00 00 00 00 00 00 00
60 05 00 80 00 00 00 00 00 00 00 00 00 00 00 00 00
70 10 00 91 00 00 00 00 10 00 28 10 00 00 00 00 00
80 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
90 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
A0 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
B0 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
C0 08 06 02 00 00 70 80 04 00 0C A5 82 10 00 03 00
D0 00 0C B5 02 10 00 03 00 00 00 00 00 00 00 00 00
E0 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
F0 00 00 00 00 00 00 00 00 B3 0F 00 08 00 00 00 00
```

Description		SMBus Controller
Location		bus 0 (0x00), device 31 (0x1F), function 4 (0x04)
Common header		
	Vendor ID	0x8086 (Intel)
	Model ID	0xA2A3
	Revision ID	0x00
	PI	0x00
	SubClass	0x05
	BaseClass	0x0C
	Cache Line	0x00
	Latency	0x00
	Header	0x00
PCI header		
	Address 0 (memory)	0x00000000DF44A004
	Address 4 (port)	0x0000F040
	Subvendor ID	0x1462 (MSI)
	Subsystem ID	0x7B46
	Int. Line	0x0B
	Int. Pin	0x01
PCI registers		

```
   00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F
 0 86 80 A3 A2 03 00 80 02 00 00 05 0C 00 00 00 00
10 04 A0 44 DF 00 00 00 00 00 00 00 00 00 00 00 00
20 41 F0 00 00 00 00 00 00 00 00 00 00 62 14 46 7B
30 00 00 00 00 00 00 00 00 00 00 00 00 08 01 00 00
40 01 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
50 01 04 00 00 01 01 00 00 00 00 00 00 00 00 00 00
60 04 05 05 00 00 00 0A 0A 00 00 00 00 00 00 00 00
70 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
80 24 00 04 00 00 00 00 00 00 00 00 00 00 00 00 00
90 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
A0 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
B0 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
C0 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
D0 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
E0 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
F0 00 00 00 00 00 00 00 00 B3 0F 00 08 00 00 00 00
```

Description		Ethernet Controller
Location		bus 0 (0x00), device 31 (0x1F), function 6 (0x06)
Common header		
	Vendor ID	0x8086 (Intel)
	Model ID	0x15B8
	Revision ID	0x00
	PI	0x00
	SubClass	0x00
	BaseClass	0x02
	Cache Line	0x00
	Latency	0x00
	Header	0x00
PCI header		
	Address 0 (memory)	0xDF400000
	Subvendor ID	0x1462 (MSI)
	Subsystem ID	0x7B46
	Int. Line	0x00
	Int. Pin	0x01
PCI capability		
	Caps class	Power Management
	Caps offset	0xC8
	Caps version	1.2
PCI capability		
	Caps class	Message Signalled Interrupts
	Caps offset	0xD0
PCI capability		
	Caps class	0x13
	Caps offset	0xE0
PCI registers		

```
   00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F
 0 86 80 B8 15 06 04 10 00 00 00 00 02 00 00 00 00
10 00 00 40 DF 00 00 00 00 00 00 00 00 00 00 00 00
20 00 00 00 00 00 00 00 00 00 00 00 00 62 14 46 7B
30 00 00 00 00 C8 00 00 00 00 00 00 00 01 00 00 00
40 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
50 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
60 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
70 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
80 28 00 00 00 08 00 00 00 00 00 00 00 00 00 00 00
90 00 00 00 00 1F 00 00 00 00 00 00 00 40 02 18 58
A0 00 00 00 00 01 00 00 00 03 10 03 10 00 00 00 00
B0 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
C0 00 00 00 00 00 00 00 00 01 D0 23 C8 08 20 00 00
D0 05 E0 81 00 30 01 E0 FE 00 00 00 00 00 00 00 00
E0 13 00 06 03 00 00 00 00 00 00 00 00 00 00 00 00
F0 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
```

Description		VGA Controller
Location		bus 1 (0x01), device 0 (0x00), function 0 (0x00)
Common header		
	Vendor ID	0x10DE (NVIDIA)
	Model ID	0x2182
	Revision ID	0xA1
	PI	0x00
	SubClass	0x00
	BaseClass	0x03

	Cache Line		0x10
	Latency		0x00
	Header		0x80
PCI header			
	Address 0 (memory)	0xDE000000	
	Address 1 (memory)	0x00000000C000000C	
	Address 3 (memory)	0x00000000D000000C	
	Address 5 (port)	0x0000E000	
	Subvendor ID		0x1462 (MSI)
	Subsystem ID		0x375A
	Int. Line		0x10
	Int. Pin		0x01
PCI capability			
	Caps class		Power Management
	Caps offset		0x60
	Caps version		1.2
PCI capability			
	Caps class		Message Signalled Interrupts
	Caps offset		0x68
PCI capability			
	Caps class		PCI Express
	Caps offset		0x78
	Device type		Legacy PCI-E Endpoint Device
	Port		0
	Caps version		2.0
	Link width		16x (max 16x)
	Link speed		8.0 GT/s (max 8.0 GT/s)
PCI extended capability			
	Caps class		Virtual Channel
	Caps offset		0x100
PCI extended capability			
	Caps class		0x18
	Caps offset		0x250
PCI extended capability			
	Caps class		0x1E
	Caps offset		0x258
PCI extended capability			
	Caps class		Power Budgeting
	Caps offset		0x128
PCI extended capability			
	Caps class		Advanced Error Reporting
	Caps offset		0x420
PCI extended capability			
	Caps class		Vendor Specific
	Caps offset		0x600
	Vendor		1
	Size		36
PCI extended capability			
	Caps class		Secondary PCI Express
	Caps offset		0x900
PCI extended capability			
	Caps class		Resizable BAR
	Caps offset		0xBB0
	Resizable BARs		3
	BAR 0 size		16 MB
	BAR 1 size		256 MB
	BAR 2 size		32 MB
PCI registers			

```
      00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F
 0    DE 10 82 21 07 00 10 00 A1 00 00 03 10 00 80 00
10    00 00 00 DE 0C 00 00 C0 00 00 00 00 0C 00 00 D0
20    00 00 00 00 01 E0 00 00 00 00 00 00 62 14 5A 37
30    00 00 00 00 60 00 00 00 00 00 00 00 10 01 00 00
40    62 14 5A 37 00 00 00 00 00 00 00 00 00 00 00 00
50    00 00 00 00 01 00 00 00 CE D6 23 00 00 00 00 00
60    01 68 C3 49 08 00 00 00 05 78 80 00 00 00 00 00
70    00 00 00 00 00 00 00 00 10 00 12 00 E1 8D 2C 11
80    10 29 09 00 03 4D 45 40 01 03 11 00 00 00 00 00
90    00 00 00 00 00 00 00 00 00 00 00 00 13 08 04 00
A0    00 04 00 00 0E 00 00 03 00 1F 00 00 00 00 00 00
B0    00 00 00 00 09 00 14 01 00 00 00 00 00 00 00 00
C0    00 00 00 00 00 00 00 00 11 00 05 00 00 00 B9 00
D0    00 00 BA 00 00 00 00 00 00 00 00 00 62 14 5A 37
E0    62 14 5A 37 03 00 00 00 00 00 00 00 00 00 00 00
F0    00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
100   02 00 01 25 00 00 00 00 00 00 00 00 00 00 00 00
110   00 00 00 00 FF 00 00 80 00 00 00 00 00 00 00 00
120   00 00 00 00 00 00 00 00 04 00 01 42 00 00 00 00
130   21 81 07 00 00 00 00 00 00 00 00 00 00 00 00 00
140   00 00 00 00 30 00 00 01 00 00 00 00 1B 00 00 BB
150   95 01 00 E0 20 71 50 06 00 00 00 00 21 81 07 00
160   21 81 05 00 02 80 03 00 02 80 01 00 06 80 1F 00
170   06 80 1D 00 00 00 00 00 00 00 00 00 00 00 00 00
180   00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
190   00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
1A0   00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
1B0   00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
1C0   00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
1D0   00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
1,00E+00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
1F0   00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
```

Description			High Definition Audio (HDA)
Location			bus 1 (0x01), device 0 (0x00), function 1 (0x01)
Common header			
	Vendor ID		0x10DE (NVIDIA)
	Model ID		0x1AEB
	Revision ID		0xA1
	PI		0x00
	SubClass		0x03
	BaseClass		0x04
	Cache Line		0x10
	Latency		0x00
	Header		0x80
PCI header			
	Address 0 (memory)	0xDF080000	
	Subvendor ID		0x1462 (MSI)
	Subsystem ID		0x375A
	Int. Line		0x11
	Int. Pin		0x02
PCI capability			
	Caps class		Power Management
	Caps offset		0x60
	Caps version		1.2
PCI capability			
	Caps class		Message Signalled Interrupts
	Caps offset		0x68
PCI capability			
	Caps class		PCI Express
	Caps offset		0x78
	Device type		PCI-E Endpoint Device
	Port		0
	Caps version		2.0
	Link width		16x (max 16x)
	Link speed		8.0 GT/s (max 8.0 GT/s)
PCI extended capability			
	Caps class		Advanced Error Reporting
	Caps offset		0x100
PCI registers			

```
      00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F
 0    DE 10 EB 1A 06 00 10 00 A1 00 03 04 10 00 80 00
10    00 00 08 DF 00 00 00 00 00 00 00 00 00 00 00 00
20    00 00 00 00 00 00 00 00 00 00 00 00 62 14 5A 37
30    00 00 00 00 60 00 00 00 00 00 00 00 11 02 00 00
40    62 14 5A 37 00 00 00 00 00 00 00 00 00 00 00 00
50    00 00 00 00 00 00 00 00 CE D6 23 00 00 00 00 00
60    01 68 03 00 08 00 00 00 05 78 80 00 00 00 00 00
70    00 00 00 00 00 00 00 00 10 00 02 00 E1 8D 2C 01
```

	80	10 29 09 00 03 4D 45 00 43 01 03 11 00 00 00 00
	90	00 00 00 00 00 00 00 00 00 00 00 00 13 08 04 00
A0		00 00 00 00 0E 00 00 00 00 00 01 00 00 00 00 00
B0		00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
C0		00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
D0		00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
E0		00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
F0		00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
	100	01 00 02 00 00 00 00 00 00 00 00 00 30 20 46 00
	110	00 20 00 00 00 A0 00 00 00 00 00 00 00 00 00 00
	120	00 00 00 00 00 00 00 00 00 00 00 0E 00 01 00
	130	00 02 00 00 00 00 00 00 00 00 00 00 00 00 00 00
	140	00 00 00 00 00 00 00 00 10 00 00 00 00 00 00 0B
	150	00 00 00 E0 20 71 10 00 00 00 00 00 0F 00 00 00
	160	25 00 01 00 01 00 80 00 00 00 00 00 00 00 00 00
	170	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
	180	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
	190	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
1A0		00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
1B0		00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
1C0		00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
1D0		00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
1,00E+00		00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
1F0		00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

Description	USB Controller (xHCI)
Location	bus 1 (0x01), device 0 (0x00), function 2 (0x02)

Common header

Vendor ID	0x10DE (NVIDIA)	
Model ID	0x1AEC	
Revision ID	0xA1	
PI		0x30
SubClass	0x03	
BaseClass	0x0C	
Cache Line	0x10	
Latency		0x00
Header		0x80

PCI header

Address 0 (memory)	0x00000000D200000C
Address 3 (memory)	0x00000000D204000C
Subvendor ID	0x1462 (MSI)
Subsystem ID	0x375A
Int. Line	0x00
Int. Pin	0x03

PCI capability

Caps class	Message Signalled Interrupts
Caps offset	0x68

PCI capability

Caps class	PCI Express
Caps offset	0x78
Device type	PCI-E Endpoint Device
Port	0
Caps version	2.0
Link width	16x (max 16x)
Link speed	8.0 GT/s (max 8.0 GT/s)

PCI capability

Caps class	Power Management
Caps offset	0xB4
Caps version	1.2

PCI extended capability

Caps class	Advanced Error Reporting
Caps offset	0x100

PCI registers

		00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F
	0	DE 10 EC 1A 06 04 10 00 A1 30 03 0C 10 00 80 00
	10	0C 00 00 D2 00 00 00 00 00 00 00 00 0C 00 04 D2
	20	00 00 00 00 00 00 00 00 00 00 00 00 62 14 5A 37
	30	00 00 00 00 68 00 00 00 00 00 00 00 00 03 00 00
	40	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
	50	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
	60	31 60 00 00 00 00 00 00 05 78 81 00 F0 01 E0 FE
	70	00 00 00 00 00 00 00 10 B4 02 00 E0 8D 2C 01
	80	10 29 09 00 03 4D 45 00 40 00 03 11 00 00 00 00
	90	00 00 00 00 00 00 00 00 00 00 00 00 13 08 04 00
A0		00 00 00 00 0E 00 00 00 00 00 01 00 00 00 00 00
B0		00 00 00 00 01 00 43 48 08 00 00 00 00 00 00 00
C0		00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
D0		00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
E0		00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
F0		00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
	100	01 00 02 00 00 00 00 00 00 00 40 00 30 20 46 00
	110	00 20 00 00 00 A0 00 00 00 00 00 00 00 00 00 00
	120	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
	130	00 00 00 00 00 00 00 00 00 0E 00 01 00 00 03 00
	140	25 00 01 00 01 00 80 00 00 00 00 00 00 00 00 00
	150	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
	160	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
	170	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
	180	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
	190	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
1A0		00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
1B0		00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
1C0		00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
1D0		00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
1,00E+00		00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
1F0		00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

Description	Serial Bus Controller
Location	bus 1 (0x01), device 0 (0x00), function 3 (0x03)

Common header

Vendor ID	0x10DE (NVIDIA)	
Model ID	0x1AED	
Revision ID	0xA1	
PI		0x00
SubClass	0x80	
BaseClass	0x0C	
Cache Line	0x10	
Latency		0x00
Header		0x80

PCI header

Address 0 (memory)	0xDF084000
Subvendor ID	0x1462 (MSI)
Subsystem ID	0x375A
Int. Line	0x00
Int. Pin	0x04

PCI capability

Caps class	Message Signalled Interrupts
Caps offset	0x68

PCI capability

Caps class	PCI Express
Caps offset	0x78
Device type	PCI-E Endpoint Device
Port	0
Caps version	2.0
Link width	16x (max 16x)
Link speed	8.0 GT/s (max 8.0 GT/s)

PCI capability

Caps class	Power Management
Caps offset	0xB4
Caps version	1.2

PCI extended capability

Caps class	Advanced Error Reporting
Caps offset	0x100

PCI registers

		00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F
	0	DE 10 ED 1A 06 04 10 00 A1 00 80 0C 10 00 80 00
	10	00 40 08 DF 00 00 00 00 00 00 00 00 00 00 00 00
	20	00 00 00 00 00 00 00 00 00 00 00 00 62 14 5A 37

30	00 00 00 00 68 00 00 00 00 00 00 00 00 04 00 00	
40	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00	
50	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00	
60	00 00 00 00 00 00 00 00 05 78 81 00 B0 01 E0 FE	
70	00 00 00 00 00 00 00 10 84 02 00 E0 8D 2C 01	
80	10 29 09 00 03 4D 45 00 40 00 03 11 00 00 00 00	
90	00 00 00 00 00 00 00 00 00 00 00 13 08 04 00	
A0	00 00 00 00 0E 00 00 00 00 01 00 00 00 00 00	
B0	00 00 00 00 01 00 43 48 08 00 00 00 00 00 00 00	
C0	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00	
D0	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00	
E0	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00	
F0	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00	
100	01 00 02 00 00 00 00 00 00 00 00 00 30 20 46 00	
110	00 20 00 00 00 A0 00 00 00 00 00 00 00 00 00 00	
120	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00	
130	00 00 00 00 00 00 00 00 0E 00 01 00 00 00 00 00	
140	25 00 01 00 01 00 00 80 00 00 00 00 00 00 00 00	
150	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00	
160	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00	
170	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00	
180	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00	
190	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00	
1A0	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00	
1B0	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00	
1C0	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00	
1D0	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00	
1,00E+00	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00	
1F0	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00	

Description		USB Controller (xHCI)
Location		bus 3 (0x03), device 0 (0x00), function 0 (0x00)
Common header		
	Vendor ID	0x1B21 (ASMedia)
	Model ID	0x2142
	Revision ID	0x00
	PI	0x30
	SubClass	0x03
	BaseClass	0x0C
	Cache Line	0x10
	Latency	0x00
	Header	0x00
PCI header		
	Address 0 (memory) 0x00000000DF300004	
	Subvendor ID	0x1462 (MSI)
	Subsystem ID	0x7B46
	Int. Line	0x00
	Int. Pin	0x01
PCI capability		
	Caps class	Message Signalled Interrupts
	Caps offset	0x50
PCI capability		
	Caps class	MSI-X
	Caps offset	0x68
PCI capability		
	Caps class	Power Management
	Caps offset	0x78
	Caps version	1.2
PCI capability		
	Caps class	PCI Express
	Caps offset	0x80
	Device type	Legacy PCI-E Endpoint Device
	Port	0
	Caps version	2.0
	Link width	2x (max 2x)
	Link speed	8.0 GT/s (max 8.0 GT/s)
PCI extended capability		
	Caps class	Advanced Error Reporting
	Caps offset	0x100
PCI extended capability		
	Caps class	Secondary PCI Express
	Caps offset	0x200
PCI extended capability		
	Caps class	0x18
	Caps offset	0x300
PCI registers		

	00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F
0	21 1B 42 21 06 04 10 00 00 30 03 0C 10 00 00 00
10	04 00 30 DF 00 00 00 00 00 00 00 00 00 00 00 00
20	00 00 00 00 00 00 00 00 00 00 00 00 62 14 46 7B
30	00 00 00 00 50 00 00 00 00 00 00 00 00 01 00 00
40	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
50	05 68 86 00 00 00 00 00 00 00 00 00 00 00 00 00
60	30 40 00 00 00 00 00 00 11 78 07 80 00 20 00 00
70	80 20 00 00 00 00 00 00 01 80 43 C8 08 00 00 00
80	10 00 12 00 22 82 E8 07 30 28 10 00 23 DC 43 00
90	40 00 23 10 00 00 00 00 00 00 40 00 00 00 00 00
A0	00 00 00 00 00 08 00 00 00 04 00 00 0E 00 00 00
B0	03 00 1E 00 00 00 00 00 00 00 00 00 00 00 00 00
C0	00 00 00 00 21 1B 01 02 00 00 00 00 00 00 00 00
D0	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
E0	00 00 00 00 00 00 01 40 00 00 00 00 00 00 00 00
F0	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
100	01 00 01 20 00 00 00 00 00 00 00 00 31 20 06 00
110	01 00 00 00 00 20 00 00 20 00 00 00 00 00 00 00
120	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
130	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
140	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
150	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
160	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
170	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
180	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
190	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
1A0	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
1B0	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
1C0	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
1D0	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
1,00E+00	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
1F0	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

Description		Network Controller
Location		bus 4 (0x04), device 0 (0x00), function 0 (0x00)
Common header		
	Vendor ID	0x168C (Qualcomm Atheros)
	Model ID	0x0030
	Revision ID	0x01
	PI	0x00
	SubClass	0x80
	BaseClass	0x02
	Cache Line	0x10
	Latency	0x00
	Header	0x00
PCI header		
	Address 0 (memory) 0x00000000DF2E0004	
	Subvendor ID	0x168C (Qualcomm Atheros)
	Subsystem ID	0x3112
	Int. Line	0x00
	Int. Pin	0x01
PCI capability		
	Caps class	Power Management
	Caps offset	0x40
	Caps version	1.2
PCI capability		
	Caps class	Message Signalled Interrupts
	Caps offset	0x50
PCI capability		
	Caps class	PCI Express
	Caps offset	0x70

Device type	PCI-E Endpoint Device	
Port		0
Caps version	2.0	
Link width	1x (max 1x)	
Link speed	2.5 GT/s (max 2.5 GT/s)	

PCI extended capability

Caps class	Advanced Error Reporting	
Caps offset	0x100	

PCI extended capability

Caps class	Virtual Channel	
Caps offset	0x140	

PCI extended capability

Caps class	Device Serial Number	
Caps offset	0x300	
Serial (EUI-64)	0-0	

PCI registers

```
     00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F
  0  8C 16 30 00 46 05 10 00 01 00 80 02 10 00 00 00
 10  04 00 2E DF 00 00 00 00 00 00 00 00 00 00 00 00
 20  00 00 00 00 00 00 00 00 00 00 00 00 8C 16 12 31
 30  00 00 00 00 40 00 00 00 00 00 00 00 00 01 00 00
 40  01 50 C3 5B 00 00 00 00 00 00 00 00 00 00 00 00
 50  05 70 A5 01 38 02 E0 FE 00 00 00 00 00 00 00 00
 60  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 70  10 00 02 00 00 87 90 05 10 20 00 00 11 5C 03 00
 80  40 00 11 10 00 00 00 00 00 00 00 00 00 00 00 00
 90  00 00 00 00 10 00 00 00 00 00 00 00 00 00 00 00
 A0  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 B0  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 C0  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 D0  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 E0  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 F0  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
100  01 00 01 14 00 00 00 00 00 00 00 00 30 20 06 00
110  00 00 00 00 20 00 00 00 00 00 00 00 00 00 00 00
120  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
130  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
140  02 00 01 30 00 00 00 00 00 00 00 00 00 00 00 00
150  00 00 00 00 FF 00 00 80 00 00 00 00 00 00 00 00
160  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
170  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
180  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
190  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
1A0  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
1B0  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
1C0  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
1D0  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
1,00E+00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
1F0  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
```

Description	NVM Express (NVMe) Controller	
Location	bus 5 (0x05), device 0 (0x00), function 0 (0x00)	

Common header

Vendor ID	0x144D (Samsung)	
Model ID	0xA804	
Revision ID	0x00	
PI		0x02
SubClass	0x08	
BaseClass	0x01	
Cache Line	0x10	
Latency		0x00
Header		0x00

PCI header

Address 0 (memory)	0x00000000DF100004	
Subvendor ID	0x144D (Samsung)	
Subsystem ID	0xA801	
Int. Line	0x00	
Int. Pin	0x01	

PCI capability

Caps class	Power Management	
Caps offset	0x40	
Caps version	1.2	

PCI capability

Caps class	Message Signalled Interrupts	
Caps offset	0x50	

PCI capability

Caps class	PCI Express	
Caps offset	0x70	
Device type	PCI-E Endpoint Device	
Port		0
Caps version	2.0	
Link width	4x (max 4x)	
Link speed	8.0 GT/s (max 8.0 GT/s)	

PCI capability

Caps class	MSI-X	
Caps offset	0xB0	

PCI extended capability

Caps class	Advanced Error Reporting	
Caps offset	0x100	

PCI extended capability

Caps class	Device Serial Number	
Caps offset	0x148	
Serial (EUI-64)	0-0	

PCI extended capability

Caps class	Power Budgeting	
Caps offset	0x158	

PCI extended capability

Caps class	Secondary PCI Express	
Caps offset	0x168	

PCI extended capability

Caps class	0x18	
Caps offset	0x188	

PCI extended capability

Caps class	0x1E	
Caps offset	0x190	

PCI registers

```
     00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F
  0  4D 14 04 A8 06 04 10 00 00 02 08 01 10 00 00 00
 10  04 00 10 DF 00 00 00 00 00 00 00 00 00 00 00 00
 20  00 00 00 00 00 00 00 00 00 00 00 00 4D 14 01 A8
 30  00 00 00 00 40 00 00 00 00 00 00 00 00 01 00 00
 40  01 50 03 00 08 00 00 00 00 00 00 00 00 00 00 00
 50  05 70 8A 00 00 00 00 00 00 00 00 00 00 00 00 00
 60  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 70  10 B0 02 00 C1 8F E8 17 30 28 10 00 43 78 47 00
 80  40 01 43 10 00 00 00 00 00 00 00 00 00 00 00 00
 90  00 00 00 00 1F 08 00 00 00 04 00 00 0E 00 00 00
 A0  03 00 1E 00 00 00 00 00 00 00 00 00 00 00 00 00
 B0  11 00 07 80 00 30 00 00 20 00 00 00 00 00 00 00
 C0  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 D0  03 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 E0  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 F0  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
100  01 00 82 14 00 00 00 00 00 00 40 00 30 20 46 00
110  00 00 00 00 60 00 00 A0 00 00 00 00 00 00 00 00
120  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
130  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
140  00 00 00 00 00 00 00 00 03 00 81 15 00 00 00 00
150  00 00 00 00 00 00 04 00 81 16 00 00 00 00 00 00
160  00 00 00 00 01 00 00 00 19 00 81 18 00 00 00 00
170  00 00 00 00 00 75 00 75 00 75 00 75 00 00 00 00
180  00 00 00 00 00 00 00 00 18 00 01 19 03 10 03 10
190  1E 00 01 00 1F 0A 28 00 00 00 00 00 B0 00 00 00
1A0  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
1B0  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
1C0  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
1D0  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
1,00E+00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
```

1F0   00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

DMI

SMBIOS Version   2.8

DMI BIOS
          vendor   American Megatrends Inc.
          version   1.B0
          date   06/09/2020
          ROM size   16384 KB

DMI System Information
          manufacturer   Micro-Star International Co. Ltd.
          product   MS-7B46
          version   1.0
          serial   Default string
          UUID   {00000000-0000-0000-0000-309C238074B8}
          SKU   Default string
          family   Default string

DMI Baseboard
          vendor   Micro-Star International Co. Ltd.
          model   Z370 KRAIT GAMING (MS-7B46)
          revision   1.0
          serial   HC16091811

DMI System Enclosure
          manufacturer   Micro-Star International Co. Ltd.
          chassis type   Desktop
          chassis serial   Default string

DMI Port Connector
          designation   J1A1 (internal)
          designation   PS2Mouse (external)
          port type   Mouse Port
          connector   PS/2

DMI Port Connector
          designation   J1A1 (internal)
          designation   Keyboard (external)
          port type   Keyboard Port
          connector   PS/2

DMI Port Connector
          designation   J2A1 (internal)
          designation   TV Out (external)
          connector   Mini Centronics Type-14

DMI Port Connector
          designation   J2A2A (internal)
          designation   COM A (external)
          port type   Serial Port 16550A
          connector   DB-9 male

DMI Port Connector
          designation   J2A2B (internal)
          designation   Video (external)
          port type   Video Port
          connector   DB-15 female

DMI Port Connector
          designation   J3A1 (internal)
          designation   USB1 (external)
          port type   USB
          connector   Access Bus (USB)

DMI Port Connector
          designation   J9A1 - TPM HDR (internal)

DMI Port Connector
          designation   J9C1 - PCIE DOCKING CONN (internal)

DMI Port Connector
          designation   J2B3 - CPU FAN (internal)

DMI Port Connector
          designation   J6C2 - EXT HDMI (internal)

DMI Port Connector
          designation   J3C1 - GMCH FAN (internal)

DMI Port Connector
          designation   J1D1 - ITP (internal)

DMI Port Connector
          designation   J9E2 - MDC INTPSR (internal)

DMI Port Connector
          designation   J9E4 - MDC INTPSR (internal)

DMI Port Connector
          designation   J9E3 - LPC HOT DOCKING (internal)

DMI Port Connector
          designation   J9E1 - SCAN MATRIX (internal)

DMI Port Connector
          designation   J9G1 - LPC SIDE BAND (internal)

DMI Port Connector
          designation   J8F1 - UNIFIED (internal)

DMI Port Connector
          designation   J6F1 - LVDS (internal)

DMI Port Connector
          designation   J2F1 - LAI FAN (internal)

DMI Port Connector
          designation   J2G1 - GFX VID (internal)

DMI Port Connector
          designation   J1G6 - AC JACK (internal)

DMI Extension Slot
          designation   J6B2
          type   PCI Express
          populated   yes

DMI Extension Slot
          designation   J6B1
          type   PCI Express
          populated   yes

DMI Extension Slot
          designation   J6D1
          type   PCI Express
          populated   yes

DMI Extension Slot
          designation   J7B1
          type   PCI Express
          populated   yes

DMI Extension Slot

	designation	J8B4	
	type		PCI Express
	populated	yes	

DMI Extension Slot

	designation	J8D1	
	type		PCI Express
	populated	yes	

DMI Extension Slot

	designation	J8B3	
	type		PCI
	width		32 bits
	populated	yes	

DMI OEM Strings

| | string[0] | Default string | |

DMI Physical Memory Array

	location	Motherboard	
	usage		System Memory
	correction	None	
	max capacity	64 GB	
	max# of devices		4

DMI Memory Device

	designation	ChannelA-DIMM0	
	format		DIMM
	type		DDR4
	total width	64 bits	
	data width	64 bits	
	size		8 GB
	speed		3200 MHz
	manufacturer	029E	
	part number	CMK16GX4M2B3000C15	
	serial number		0
	voltage		1.350.000

DMI data

```
 0  0x11 0x28 0x3A 0x00 0x39 0x00 0xFE 0xFF 0x40 0x00
10  0x40 0x00 0x00 0x20 0x09 0x00 0x01 0x02 0x1A 0x80
20  0x40 0x80 0x0C 0x03 0x04 0x05 0x06 0x01 0x00 0x00
30  0x00 0x00 0x80 0x0C 0x00 0x00 0x00 0x00 0x00 0x46 0x05
40  0x43 0x68 0x61 0x6E 0x6E 0x65 0x6C 0x41 0x2D 0x44
50  0x49 0x4D 0x4D 0x30 0x00 0x42 0x41 0x4E 0x4B 0x20
60  0x30 0x00 0x30 0x32
```

DMI Memory Device

	designation	ChannelA-DIMM1	
	format		DIMM
	type		DDR4
	total width	64 bits	
	data width	64 bits	
	size		8 GB
	speed		3200 MHz
	manufacturer	029E	
	part number	CMK16GX4M2B3000C15	
	serial number		0
	voltage		1.350.000

DMI data

```
 0  0x11 0x28 0x3B 0x00 0x39 0x00 0xFE 0xFF 0x40 0x00
10  0x40 0x00 0x00 0x20 0x09 0x00 0x01 0x02 0x1A 0x80
20  0x40 0x80 0x0C 0x03 0x04 0x05 0x06 0x01 0x00 0x00
30  0x00 0x00 0x80 0x0C 0x00 0x00 0x00 0x00 0x00 0x46 0x05
40  0x43 0x68 0x61 0x6E 0x6E 0x65 0x6C 0x41 0x2D 0x44
50  0x49 0x4D 0x4D 0x31 0x00 0x42 0x41 0x4E 0x4B 0x20
60  0x31 0x00 0x30 0x32
```

DMI Memory Device

	designation	ChannelB-DIMM0	
	format		DIMM
	type		DDR4
	total width	64 bits	
	data width	64 bits	
	size		8 GB
	speed		3200 MHz
	manufacturer	029E	
	part number	CMK16GX4M2B3000C15	
	serial number		0
	voltage		1.350.000

DMI data

```
 0  0x11 0x28 0x3C 0x00 0x39 0x00 0xFE 0xFF 0x40 0x00
10  0x40 0x00 0x00 0x20 0x09 0x00 0x01 0x02 0x1A 0x80
20  0x40 0x80 0x0C 0x03 0x04 0x05 0x06 0x01 0x00 0x00
30  0x00 0x00 0x80 0x0C 0x00 0x00 0x00 0x00 0x00 0x46 0x05
40  0x43 0x68 0x61 0x6E 0x6E 0x65 0x6C 0x42 0x2D 0x44
50  0x49 0x4D 0x4D 0x30 0x00 0x42 0x41 0x4E 0x4B 0x20
60  0x32 0x00 0x30 0x32
```

DMI Memory Device

	designation	ChannelB-DIMM1	
	format		DIMM
	type		DDR4
	total width	64 bits	
	data width	64 bits	
	size		8 GB
	speed		3200 MHz
	manufacturer	029E	
	part number	CMK16GX4M2B3000C15	
	serial number		0
	voltage		1.350.000

DMI data

```
 0  0x11 0x28 0x3D 0x00 0x39 0x00 0xFE 0xFF 0x40 0x00
10  0x40 0x00 0x00 0x20 0x09 0x00 0x01 0x02 0x1A 0x80
20  0x40 0x80 0x0C 0x03 0x04 0x05 0x06 0x01 0x00 0x00
30  0x00 0x00 0x80 0x0C 0x00 0x00 0x00 0x00 0x00 0x46 0x05
40  0x43 0x68 0x61 0x6E 0x6E 0x65 0x6C 0x42 0x2D 0x44
50  0x49 0x4D 0x4D 0x31 0x00 0x42 0x41 0x4E 0x4B 0x20
60  0x33 0x00 0x30 0x32
```

DMI Processor

	manufacturer	Intel(R) Corporation	
	model		Intel(R) Core(TM) i5-9600K CPU @ 3.70GHz
	clock speed	3700.0 MHz	
	FSB speed	100.0 MHz	
	multiplier	37.0x	
	max clock speed	8300.0 MHz	

DMI data

```
 0  0x04 0x30 0x43 0x00 0x01 0x03 0xCD 0x02 0xED 0x06
10  0x09 0x00 0xFF 0xFB 0xEB 0xBF 0x03 0x8A 0x64 0x00
20  0x6C 0x20 0x74 0x0E 0x41 0x32 0x40 0x00 0x41 0x00
30  0x42 0x00 0x04 0x05 0x06 0x06
```

DMI Extension Slot

	designation	PCI-Express	
	type		PCI Express
	populated	yes	

DMI Extension Slot

	designation	PCI-Express 6	
	type		PCI Express
	populated	yes	

DMI Extension Slot

	designation	PCI-Express 7	
	type		PCI Express
	populated	no	

DMI Extension Slot

designation		PCI-Express 8	
type			PCI Express
populated		yes	

Storage

Drive	0/0/-1/-1		
	Device Path	\\?\scsi#disk&ven_&prod_ct480bx500ssd1#4&88d9d98&0&000000#{53f56307-b6bf-11d0-94f2-00a0c91efb8b}	
	Name		CT480BX500SSD1
	Revision	M6CR041	
	Serial		2110E5828803
	Capacity	447.1 GB	
	Type		Fixed, SSD
	Bus Type	SATA (11)	
	Features	SMART, TRIM	
	Controller	Serial ATA Controller - AHCI at bus 0, device 23, function 0	
	Volume		d:\, 447.1 GBytes (17.4 percent available)

Drive	1/1/-1/-1		
	Device Path	\\?\scsi#disk&ven_nvme&prod_samsung_ssd_960#5&2b9413c&0&000000#{53f56307-b6bf-11d0-94f2-00a0c91efb8b}	
	Name		Samsung SSD 960 EVO 250GB
	Revision	3B7QCXE7	
	Serial		S3ESNX1K100478Z
	Capacity	232.9 GB	
	Type		Fixed, SSD
	Bus Type	NVMe (17)	
	Features		
	Controller	NVM Express (NVMe) Controller at bus 5, device 0, function 0	
	Link Speed	PCI-E 4x @ 8.0 GT/s	
	Volume		c:\, 232.2 GBytes (38.8 percent available)

USB Devices

USB Device		Dispositivo USB composito, class=0x00, subclass=0x00, vendor=0x1038, product=0x12AA
USB Device		Dispositivo USB composito, class=0x00, subclass=0x00, vendor=0x2516, product=0x0157
USB Device		Dispositivo USB composito, class=0xEF, subclass=0x02, vendor=0x045E, product=0x074A
USB Device		Generic Bluetooth Adapter, class=0xE0, subclass=0x01, vendor=0x0A5C, product=0x2101
USB Device		Hub USB generico, class=0x09, subclass=0x00, vendor=0x0BDA, product=0x5411
USB Device		Dispositivo di input USB, class=0x00, subclass=0x00, vendor=0x0B05, product=0x186E
USB Device		Dispositivo USB composito, class=0x00, subclass=0x00, vendor=0x046D, product=0xC083
USB Device		Dispositivo di archiviazione di massa USB, class=0x00, subclass=0x00, vendor=0x1058, product=0x0827

Graphics

| Number of adapters | | 2 |

Graphic APIs

API			D3D
API			NVIDIA I/O
API			NVIDIA NVML
API			NVIDIA NVAPI
	pwrMask		0x000C0B1F
	pwrTable		[DF E2 E9 FF FA 00 00 00 E8 F5 00 F6 00 00 00 00 00 00 01 01 00 00 00 00 00 00 00 00 00 00 00 00]
API			Intel I/O
API			Intel oneAPI

Display Adapters

Display adapter 0

	ID		0x4000000
	Name		Intel(R) UHD Graphics 630
	Board Manufacturer	Micro-Star International Co., Ltd. (MSI)	
	Codename	Coffee Lake GT2	
	Execution Units		24
	Technology	14 nm	
	PCI device	bus 0 (0x0), device 2 (0x2), function 0 (0x0)	
	Vendor ID	0x8086 (0x1462)	
	Model ID	0x3E98 (0x7B46)	
	Revision ID	0x2	
	Driver version	31.0.101.2121	
	WDDM Model	3.1	

Display adapter 1 (primary)

	ID		0x10A0116
	Name		NVIDIA GeForce GTX 1660 Ti
	Board Manufacturer	Micro-Star International Co., Ltd. (MSI)	
	Revision	A1	
	Codename	TU116-400	
	Core family	0x168 (TU116-A)	
	Power Limit	130.0 W (current), 130.0 W (default), 140.0 W (max)	
	Thermal Limit	90.0 C (max), 92.0 C (slowdown), 95.0 C (shutdown)	
	Cores		1536
	ROP Units		48
	TM Units		96
	Technology	12 nm	
	Memory type	GDDR6 (Micron)	
	Memory size	6 GB	
	Memory bus width	192 bits	
	Current Link Width	x16	
	Current Link Speed	8.0 GT/s	
	PCI device	bus 1 (0x1), device 0 (0x0), function 0 (0x0)	
	Vendor ID	0x10DE (0x1462)	
	Model ID	0x2182 (0x375A)	
	Revision ID	0xA1	
	Root device	bus 0 (0x0), device 1 (0x1), function 0 (0x0)	
	Performance Level	Base	
	Core clock	1500.0 MHz	
	Memory clock	6001.0 MHz	
	Performance Level	Boost	
	Core clock	1875.0 MHz	
	Memory clock	6001.0 MHz	
	Performance Level	Current	
	Core clock	1320.0 MHz	
	Memory clock	6121.0 MHz	
	Driver version	31.0.15.3699	
	WDDM Model	3.1	

Win32_VideoController		AdapterRAM = 0x40000000 (1073741824)
Win32_VideoController		AdapterRAM = 0xFFF00000 (4293918720)
Win32_VideoController		DriverVersion = 31.0.101.2121
Win32_VideoController		DriverVersion = 31.0.15.3699
Win32_VideoController		DriverDate = 03/03/2023
Win32_VideoController		DriverDate = 08/04/2023

Monitor 0

	Model		XG248Q ()
	ID		AUS24B3
	Serial		L8LMRS060911
	Manufacturing Date	Week 35, Year 2020	
	Size		24.0 inches
	Max Resolution	1920 x 1080 @ 60 Hz	
	Horizontal Freq. Range	255-255 kHz	
	Vertical Freq. Range	48-240 Hz	
	Max Pixel Clock	590 MHz	
	Gamma Factor	2.2	

Monitor 1

	Model		HP 24o ()
	ID		HPN337C
	Serial		CNK7241K5V

Manufacturing Date	Week 24, Year 2017	
Size		24.0 inches
Max Resolution		1920 x 1080 @ 60 Hz
Horizontal Freq. Range	24-80 kHz	
Vertical Freq. Range	50-76 Hz	
Max Pixel Clock		170 MHz
Gamma Factor		2.2

Software

| Windows Version | Microsoft Windows 11 (10.0) Professional 64-bit (Build 22621) |
| DirectX Version | 12.0 |

Register Spaces

Register space	PCI
Register space	PCI #2
Register space	PCI Express, base address = 0x0E0000000
Register space	SMBus, base address = 0x0F040
Register space	LPC, base address = 0x0A20
Register space	LPC, base address = 0x04E