

# AIDA64 Extreme

Version	AIDA64 v5.92.4300
Benchmark Module	4.3.759-x64
Homepage	<a href="http://www.aida64.com/">http://www.aida64.com/</a>
Report Type	Report Wizard
Computer	HONGJUN-X1E
Generator	hongj
Operating System	Microsoft Windows 10 Pro 10.0.17134.407
Date	2018-11-21
Time	17:02

## Summary

**Computer:**

Computer Type	ACPI x64-based PC (Mobile)
Operating System	Microsoft Windows 10 Pro
OS Service Pack	-
Internet Explorer	11.407.17134.0
Edge	42.17134.1.0
DirectX	DirectX 12.0
Computer Name	HONGJUN-X1E
User Name	hongj
Logon Domain	HONGJUN-X1E
Date / Time	2018-11-21 / 17:02

**Motherboard:**

CPU Type	HexaCore Intel Core i7, 4000 MHz (40 x 100)
Motherboard Name	Lenovo ThinkPad X1 Extreme
Motherboard Chipset	Intel Cannon Lake PCH, Intel Coffee Lake-H
System Memory	32275 MB (DDR4 SDRAM)
DIMM1:	16 GB DDR4-2666 DDR4 SDRAM (20-19-19-43 @ 1333 MHz) (19-19-19-43 @ 1333 MHz) (18-18-18-42 @ 1309 MHz) (17-17-17-40 @ 1236 MHz) (16-16-16-38 @ 1163 MHz) (15-15-15-35 @ 1090 MHz) (14-14-14-33 @ 1018 MHz) (13-13-13-31 @ 945 MHz) (12-12-12-28 @ 872 MHz) (11-11-11-26 @ 800 MHz) (10-10-10-24 @ 727 MHz)
Samsung M471A2K43CB1- CTD	
DIMM3:	16 GB DDR4-2666 DDR4 SDRAM (20-19-19-43 @ 1333 MHz) (19-19-19-43 @ 1333 MHz) (18-18-18-42 @ 1309 MHz) (17-17-17-40 @ 1236 MHz) (16-16-16-38 @ 1163 MHz) (15-15-15-35 @ 1090 MHz) (14-14-14-33 @ 1018 MHz) (13-13-13-31 @ 945 MHz) (12-12-12-28 @ 872 MHz) (11-11-11-26 @ 800 MHz) (10-10-10-24 @ 727 MHz)
Samsung M471A2K43CB1- CTD	
BIOS Type	Phoenix (11/07/2018)

**Display:**

Video Adapter	GeForce GTX 1050 Ti with Max-Q Design (4 GB)
Video Adapter	GeForce GTX 1050 Ti with Max-Q Design (4 GB)
Video Adapter	GeForce GTX 1050 Ti with Max-Q Design (4 GB)
Video Adapter	GeForce GTX 1050 Ti with Max-Q Design (4 GB)
Video Adapter	Intel(R) UHD Graphics 630 (1 GB)
Video Adapter	Intel(R) UHD Graphics 630 (1 GB)
Video Adapter	Intel(R) UHD Graphics 630 (1 GB)
3D Accelerator	nVIDIA GeForce GTX 1050 Ti
Monitor	Dell P2715Q (DP4k60) [27" IPS LCD] (X24K1811460L)
Monitor	Wide viewing angle & High density FlexView Display 3840x2160 [NoDB]

**Multimedia:**

Audio Adapter	Intel Kaby Lake HDMI @ Intel Cannon Lake PCH - cAVS (Audio, Voice, Speech)
Audio Adapter	nVIDIA HDMI/DP @ nVIDIA GP107 - High Definition Audio Controller
Audio Adapter	Realtek ALC285 @ Intel Cannon Lake PCH - cAVS (Audio, Voice, Speech)

**Storage:**

Storage Controller	Microsoft Storage Spaces Controller	Navigation
Storage Controller	Standard NVM Express Controller	
Storage Controller	Standard NVM Express Controller	
Storage Controller	USB Attached SCSI (UAS) Mass Storage Device	
Disk Drive	<a href="#">SAMSUNG MZVLB1T0HALR-000L7 (953 GB)</a>	
Disk Drive	<a href="#">Samsung SSD 850 PRO SCSI Disk Device (953 GB)</a>	
Disk Drive	SDXC Card (119 GB, USB)	
Disk Drive	<a href="#">THNSN51T02DU7 NVMe TOSHIBA 1024GB (1024 GB, PCI-E 3.0 x4)</a>	
SMART Hard Disks Status	OK	

**Partitions:**

C: (NTFS)	952.6 GB (522.2 GB free)
F: (NTFS)	953.9 GB (491.2 GB free)
Total Size	1906.5 GB (1013.4 GB free)

**Input:**

Keyboard	HID Keyboard Device
Keyboard	Razer Basilisk
Keyboard	Standard PS/2 Keyboard
Mouse	HID-compliant mouse
Mouse	HID-compliant mouse
Mouse	HID-compliant mouse
Mouse	<a href="#">Razer Basilisk</a>
Mouse	Synaptics Pointing Device

**Network:**

Primary IP Address	192.168.71.1
Primary MAC Address	00-50-56-C0-00-08
Network Adapter	<a href="#">Dell Wireless 1830 802.11ac</a>
Network Adapter	<a href="#">Intel(R) Ethernet Connection (7) I219-LM (10.154.32.77)</a>
Network Adapter	Microsoft Wi-Fi Direct Virtual Adapter #3
Network Adapter	Microsoft Wi-Fi Direct Virtual Adapter #4
Network Adapter	<a href="#">VMware Virtual Ethernet Adapter for VMnet1 (192.168.16.1)</a>
Network Adapter	<a href="#">VMware Virtual Ethernet Adapter for VMnet8 (192.168.71.1)</a>

**Peripherals:**

Printer	Fax
Printer	Microsoft Print to PDF
Printer	Microsoft XPS Document Writer
USB1 Controller	<a href="#">Intel Cannon Lake PCH - USB 3.1 xHCI Host Controller</a>
USB Device	AK5371
USB Device	Dell AC511 USB SoundBar
USB Device	Generic SuperSpeed USB Hub
USB Device	Generic SuperSpeed USB Hub
USB Device	Generic SuperSpeed USB Hub
USB Device	Generic SuperSpeed USB Hub
USB Device	Generic USB Hub
USB Device	Generic USB Hub
USB Device	Generic USB Hub
USB Device	Generic USB Hub
USB Device	Integrated Camera
USB Device	Integrated IR Camera
USB Device	<a href="#">Intel(R) RealSense(TM) Camera SR300 Depth</a>
USB Device	<a href="#">Intel(R) RealSense(TM) Camera SR300 RGB</a>

USB Device	Intel(R) RealSense(TM) Camera SR300
USB Device	Lenovo Pen Device
USB Device	Razer Basilisk
USB Device	Razer Basilisk
USB Device	Razer Stargazer-Microphone
USB Device	Realtek USB 3.0 Card Reader
USB Device	Synaptics WBDI - SGX
USB Device	USB 2.0 BILLBOARD
USB Device	USB Attached SCSI (UAS) Mass Storage Device
USB Device	USB Composite Device
USB Device	USB Composite Device
USB Device	USB Composite Device
USB Device	USB Composite Device
USB Device	USB Composite Device
USB Device	USB Composite Device
USB Device	USB Composite Device
USB Device	USB Composite Device
USB Device	USB Composite Device
USB Device	USB Input Device
USB Device	USB Input Device
USB Device	USB Input Device
USB Device	USB Input Device
USB Device	USB Input Device
USB Device	USB Input Device
Battery	Microsoft AC Adapter
Battery	Microsoft ACPI-Compliant Control Method Battery

Navigation

**DMI:**

DMI BIOS Vendor	LENOVO
DMI BIOS Version	N2EET33W (1.15 )
DMI System Manufacturer	LENOVO
DMI System Product	20MF000DUS
DMI System Version	ThinkPad X1 Extreme
DMI System Serial Number	R90S3B1L
DMI System UUID	CC55851D-D534B211-A85CE1B9-563D5A0F
DMI Motherboard Manufacturer	LENOVO
DMI Motherboard Product	20MF000DUS
DMI Motherboard Version	SDK0J40697 WIN
DMI Motherboard Serial Number	W2KS8AT1021
DMI Chassis Manufacturer	LENOVO
DMI Chassis Version	None
DMI Chassis Serial Number	R90S3B1L
DMI Chassis Asset Tag	No Asset Information
DMI Chassis Type	Notebook

**DMI****[ BIOS ]****BIOS Properties:**

Vendor	LENOVO
Version	N2EET33W (1.15 )
Release Date	11/07/2018
Size	16 MB
System BIOS Version	1.15
Embedded Controller Firmware Version	1.8
Boot Devices	Floppy Disk, Hard Disk, CD-ROM
Capabilities	Flash BIOS, Shadow BIOS, Selectable Boot, EDD, BBS
Supported Standards	DMI, ACPI, PnP, UEFI
Expansion Capabilities	PCI, USB
Virtual Machine	No

Navigation

**BIOS Manufacturer:**

Company Name	Lenovo
Product Information	<a href="http://www.lenovo.com/products/us">http://www.lenovo.com/products/us</a>
BIOS Upgrades	<a href="http://www.aida64.com/bios-updates">http://www.aida64.com/bios-updates</a>

**[ System ]****System Properties:**

Manufacturer	LENOVO
Product	20MF000DUS
Version	ThinkPad X1 Extreme
Serial Number	R90S3B1L
SKU#	LENOVO_MT_20MF_BU_Think_FM_ThinkPad X1 Extreme
Family	ThinkPad X1 Extreme
Universal Unique ID	CC55851D-D534B211-A85CE1B9-563D5A0F
Wake-Up Type	Power Switch

**[ Motherboard ]****Motherboard Properties:**

Manufacturer	LENOVO
Product	20MF000DUS
Version	SDK0J40697 WIN
Serial Number	W2KS8AT1021
Asset Tag	Not Available

**Motherboard Manufacturer:**

Company Name	Lenovo
Product Information	<a href="http://www.lenovo.com/products/us">http://www.lenovo.com/products/us</a>
BIOS Download	<a href="http://support.lenovo.com/en_US">http://support.lenovo.com/en_US</a>
Driver Update	<a href="http://www.aida64.com/driver-updates">http://www.aida64.com/driver-updates</a>
BIOS Upgrades	<a href="http://www.aida64.com/bios-updates">http://www.aida64.com/bios-updates</a>

**[ Chassis ]****Chassis Properties:**

Manufacturer	LENOVO
Version	None
Serial Number	R90S3B1L
Asset Tag	No Asset Information
Chassis Type	Notebook

**[ Processors / Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz ]****Processor Properties:**

Manufacturer	Intel(R) Corporation
Version	Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz
Serial Number	None
Asset Tag	None
Part Number	None
External Clock	100 MHz
Maximum Clock	2600 MHz
Current Clock	2600 MHz
Type	Central Processor

Voltage	0.9 V	Navigation
Status	Enabled	
Upgrade	Socket BGA1440	
Socket Designation	U3E1	
HTT / CMP Units	2 / 6	
Capabilities	64-bit, Multi-Core, Multiple Hardware Threads, Execute Protection, Enhanced Virtualization, Power/Performance Control	

**CPU Manufacturer:**

Company Name	Intel Corporation
Product Information	<a href="http://ark.intel.com/search.aspx?q=Intel%20Core%20i7">http://ark.intel.com/search.aspx?q=Intel%20Core%20i7</a>
Driver Update	<a href="http://www.aida64.com/driver-updates">http://www.aida64.com/driver-updates</a>

**[ Caches / L1 Cache ]****Cache Properties:**

Type	Unified
Status	Enabled
Operational Mode	Write-Back
Associativity	8-way Set-Associative
Maximum Size	384 KB
Installed Size	384 KB
Supported SRAM Type	Synchronous
Current SRAM Type	Synchronous
Error Correction	Parity
Socket Designation	L1 Cache

**[ Caches / L2 Cache ]****Cache Properties:**

Type	Unified
Status	Enabled
Operational Mode	Write-Back
Associativity	4-way Set-Associative
Maximum Size	1536 KB
Installed Size	1536 KB
Supported SRAM Type	Synchronous
Current SRAM Type	Synchronous
Error Correction	Single-bit ECC
Socket Designation	L2 Cache

**[ Caches / L3 Cache ]****Cache Properties:**

Type	Unified
Status	Enabled
Operational Mode	Write-Back
Associativity	12-way Set-Associative
Maximum Size	9 MB
Installed Size	9 MB
Supported SRAM Type	Synchronous
Current SRAM Type	Synchronous
Error Correction	Multi-bit ECC
Socket Designation	L3 Cache

**[ Memory Arrays / System Memory ]****Memory Array Properties:**

Location	Motherboard
Memory Array Function	System Memory
Error Correction	None
Max. Memory Capacity	64 GB
Memory Devices	4

**[ Memory Devices / ChannelA-DIMM0 ]****Memory Device Properties:**

Form Factor	SODIMM
Type	DDR4
Type Detail	Synchronous
Size	16 GB
Max. Clock Speed	2667 MT/s
Current Clock Speed	2667 MT/s
Total Width	64-bit
Data Width	64-bit
Ranks	2
Current Voltage	1.200 V
Device Locator	ChannelA-DIMM0
Bank Locator	BANK 0
Manufacturer	Samsung
Serial Number	2385EC50
Asset Tag	None
Part Number	M471A2K43CB1-CTD

Navigation

## [ Memory Devices / ChannelB-DIMM0 ]

### Memory Device Properties:

Form Factor	SODIMM
Type	DDR4
Type Detail	Synchronous
Size	16 GB
Max. Clock Speed	2667 MT/s
Current Clock Speed	2667 MT/s
Total Width	64-bit
Data Width	64-bit
Ranks	2
Current Voltage	1.200 V
Device Locator	ChannelB-DIMM0
Bank Locator	BANK 2
Manufacturer	Samsung
Serial Number	2385ECF0
Asset Tag	None
Part Number	M471A2K43CB1-CTD

## [ System Slots / Media Card Slot ]

### System Slot Properties:

Slot Designation	Media Card Slot
Usage	Empty

## [ System Slots / SimCard Slot ]

### System Slot Properties:

Slot Designation	SimCard Slot
Usage	Empty

## [ Port Connectors / USB 1 ]

### Port Connector Properties:

Port Type	USB
Internal Reference Designator	Not Available
Internal Connector Type	None
External Reference Designator	USB 1
External Connector Type	USB

## [ Port Connectors / USB 2 ]

### Port Connector Properties:

Port Type	USB
Internal Reference Designator	Not Available
Internal Connector Type	None
External Reference Designator	USB 2
External Connector Type	USB

## [ Port Connectors / USB 3 ]

**Port Connector Properties:**

Port Type	USB
Internal Reference Designator	Not Available
Internal Connector Type	None
External Reference Designator	USB 3
External Connector Type	USB

## [ Port Connectors / USB 4 ]

**Port Connector Properties:**

Port Type	USB
Internal Reference Designator	Not Available
Internal Connector Type	None
External Reference Designator	USB 4
External Connector Type	USB

## [ Port Connectors / Ethernet ]

**Port Connector Properties:**

Port Type	Network Port
Internal Reference Designator	Not Available
Internal Connector Type	None
External Reference Designator	Ethernet
External Connector Type	RJ-45

## [ Port Connectors / Hdmi1 ]

**Port Connector Properties:**

Port Type	Video Port
Internal Reference Designator	Not Available
Internal Connector Type	None
External Reference Designator	Hdmi1

## [ Port Connectors / Headphone/Microphone Combo Jack1 ]

**Port Connector Properties:**

Port Type	Audio Port
Internal Reference Designator	Not Available
Internal Connector Type	None
External Reference Designator	Headphone/Microphone Combo Jack1
External Connector Type	Mini-jack (headphones)

## [ Pointing Devices / Track Point ]

**Device Properties:**

Device Type	Track Point
Interface	PS/2
Buttons	3

## [ Pointing Devices / Touch Pad ]

**Device Properties:**

Device Type	Touch Pad
Interface	PS/2
Buttons	2

## [ Batteries / 01AY969 ]

**Battery Properties:**

Device Name	01AY969
Manufacturer	Celxpert
Manufacture Date	8/31/2018

Serial Number	5904
Location	Front
Battery Type	LiP
Designed Capacity	14864 mWh
Designed Voltage	15.360 V
SDDS Version	03.01

## [ Intel AMT ]

### Intel AMT Properties:

Intel AMT	Not Supported
IDE Redirection	Disabled
SOL	Disabled
AMT Network Interface	Disabled

## [ Intel vPro ]

### Intel vPro Properties:

MEBX Version	12.0.0.10
ME Firmware Version	12.0.6.1120
PCH PCI Bus / Device / Function	0 / 31 / 0
PCH PCI Device ID	8086-A30E
Wired NIC PCI Bus / Device / Function	0 / 31 / 6
Wired NIC PCI Device ID	8086-15BB
AMT	Not Supported
Anti-Theft	Not Supported
Anti-Theft PBA for Recovery	Not Supported
Anti-Theft WWAN	Not Supported
BIOS TXT	Supported
BIOS VT-d	Supported
BIOS VT-x	Supported
CPU VT-x	Supported, Enabled
CPU TXT	Supported, Disabled
KVM	Not Supported
Local Wakeup Timer	Not Supported
Management Engine	Enabled
Small Business Advantage	Not Supported
Standard Manageability	Not Supported

## Overclock

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### CPU Properties:

CPU Type	HexaCore Intel Core i7
CPU Alias	Kaby Lake-H
CPU Stepping	U0/B0
Engineering Sample	No
CPUID CPU Name	Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz
CPUID Revision	000906EAh
CPU VID	1.2400 V

### CPU Speed:

CPU Clock	4090.0 MHz (original: 2600 MHz, overclock: 57%)
CPU Multiplier	41x
CPU FSB	99.8 MHz (original: 100 MHz)
North Bridge Clock	3790.7 MHz
Memory Bus	1330.1 MHz
DRAM:FSB Ratio	40:3

### CPU Cache:

L1 Code Cache	32 KB per core
L1 Data Cache	32 KB per core

L2 Cache	256 KB per core (On-Die, ECC, Full-Speed)
L3 Cache	9 MB (On-Die, ECC, Full-Speed)

Navigation

**Motherboard Properties:**

Motherboard ID	<DMI>
Motherboard Name	Lenovo ThinkPad X1 Extreme

**Chipset Properties:**

Motherboard Chipset	Intel Cannon Lake PCH, Intel Coffee Lake-H
Memory Timings	19-19-19-43 (CL-RCD-RP-RAS)
Command Rate (CR)	2T
DIMM1: Samsung M471A2K43CB1- CTD	16 GB DDR4-2666 DDR4 SDRAM (20-19-19-43 @ 1333 MHz) (19-19-19-43 @ 1333 MHz) (18-18-18-42 @ 1309 MHz) (17-17-17-40 @ 1236 MHz) (16-16-16-38 @ 1163 MHz) (15-15-15-35 @ 1090 MHz) (14-14-14-33 @ 1018 MHz) (13-13-13-31 @ 945 MHz) (12-12-12-28 @ 872 MHz) (11-11-11-26 @ 800 MHz) (10-10-10-24 @ 727 MHz)
DIMM3: Samsung M471A2K43CB1- CTD	16 GB DDR4-2666 DDR4 SDRAM (20-19-19-43 @ 1333 MHz) (19-19-19-43 @ 1333 MHz) (18-18-18-42 @ 1309 MHz) (17-17-17-40 @ 1236 MHz) (16-16-16-38 @ 1163 MHz) (15-15-15-35 @ 1090 MHz) (14-14-14-33 @ 1018 MHz) (13-13-13-31 @ 945 MHz) (12-12-12-28 @ 872 MHz) (11-11-11-26 @ 800 MHz) (10-10-10-24 @ 727 MHz)

**BIOS Properties:**

System BIOS Date	11/07/2018
Video BIOS Date	10/08/18
DMI BIOS Version	N2EET33W (1.15 )

**Graphics Processor Properties:**

Video Adapter	nVIDIA GeForce GTX 1050 Ti
GPU Code Name	GP107 (PCI Express 3.0 x16 10DE / 1C8C, Rev A1)
GPU Clock	772 MHz
Memory Clock	1252 MHz

## Power Management

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**Power Management Properties:**

Current Power Source	AC Line
Battery Status	94 % (High Level, Charging)
Full Battery Lifetime	Unknown
Remaining Battery Lifetime	Unknown

**Battery Properties:**

Device Name	01AY969
Manufacturer	Celxpert
Serial Number	5904
Unique ID	5904Celxpert01AY969
Battery Type	Rechargeable LiP
Designed Capacity	80400 mWh
Fully Charged Capacity	79090 mWh
Current Capacity	75490 mWh (95 %)
Battery Voltage	17.577 V
Charge-Discharge Cycle Count	3
Wear Level	1 %
Power State	AC Line, Charging
Charge Rate	18315 mW

## Portable Computer

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**Centrino (Carmel) Platform Compliancy:**

CPU: Intel Pentium M (Banias/Dothan)  
 Chipset: Intel i855GM/PM  
 WLAN: Intel PRO/Wireless  
 System: Centrino Compliant

No (Intel Core i7)  
 No (Intel Cannon Lake PCH, Navigation  
 No  
 No

**Centrino (Sonoma) Platform Compliancy:**

CPU: Intel Pentium M (Dothan)  
 Chipset: Intel i915GM/PM  
 WLAN: Intel PRO/Wireless 2200/2915  
 System: Centrino Compliant

No (Intel Core i7)  
 No (Intel Cannon Lake PCH, Intel Coffee Lake-H)  
 No  
 No

**Centrino (Napa) Platform Compliancy:**

CPU: Intel Core (Yonah) / Core 2 (Merom)  
 Chipset: Intel i945GM/PM  
 WLAN: Intel PRO/Wireless 3945/3965  
 System: Centrino Compliant

No (Intel Core i7)  
 No (Intel Cannon Lake PCH, Intel Coffee Lake-H)  
 No  
 No

**Centrino (Santa Rosa) Platform Compliancy:**

CPU: Intel Core 2 (Merom/Penryn)  
 Chipset: Intel GM965/PM965  
 WLAN: Intel Wireless WiFi Link 4965  
 System: Centrino Compliant

No (Intel Core i7)  
 No (Intel Cannon Lake PCH, Intel Coffee Lake-H)  
 No  
 No

**Centrino 2 (Montevina) Platform Compliancy:**

CPU: Intel Core 2 (Penryn)  
 Chipset: Mobile Intel 4 Series  
 WLAN: Intel WiFi Link 5000 Series  
 System: Centrino 2 Compliant

No (Intel Core i7)  
 No (Intel Cannon Lake PCH, Intel Coffee Lake-H)  
 No  
 No

**Centrino (Calpella) Platform Compliancy:**

CPU: Intel Core i3/i5/i7 (Arrandale/Clarkfield)  
 Chipset: Mobile Intel 5 Series  
 WLAN: Intel Centrino Advanced-N / Ultimate-N / Wireless-N  
 System: Centrino Compliant

No (Intel Core i7)  
 No (Intel Cannon Lake PCH, Intel Coffee Lake-H)  
 No  
 No

**Centrino (Huron River) Platform Compliancy:**

CPU: Intel Core i3/i5/i7 (Sandy Bridge-MB)  
 Chipset: Mobile Intel 6 Series  
 WLAN: Intel Centrino Advanced-N / Ultimate-N / Wireless-N  
 System: Centrino Compliant

No (Intel Core i7)  
 No (Intel Cannon Lake PCH, Intel Coffee Lake-H)  
 No  
 No

**Centrino (Chief River) Platform Compliancy:**

CPU: Intel Core i3/i5/i7 (Ivy Bridge-MB)  
 Chipset: Mobile Intel 7 Series  
 WLAN: Intel Centrino Advanced-N / Ultimate-N / Wireless-N  
 System: Centrino Compliant

No (Intel Core i7)  
 No (Intel Cannon Lake PCH, Intel Coffee Lake-H)  
 No  
 No

**Centrino (Shark Bay-MB) Platform Compliancy:**

CPU: Intel Core i3/i5/i7 (Haswell-MB)  
 Chipset: Mobile Intel 8/9 Series  
 WLAN: Intel Centrino Advanced-N / Ultimate-N / Wireless-N  
 System: Centrino Compliant

No (Intel Core i7)  
 No (Intel Cannon Lake PCH, Intel Coffee Lake-H)  
 No  
 No

## Sensor

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**Sensor Properties:**

Sensor Type ThinkPad EC (ACPI)  
 GPU Sensor Type Diode (NV-Diode)

**Temperatures:**

CPU	85 °C (185 °F)
CPU #1 / Core #1	71 °C (160 °F)
CPU #1 / Core #2	65 °C (149 °F)
CPU #1 / Core #3	90 °C (194 °F)
CPU #1 / Core #4	67 °C (153 °F)

CPU #1 / Core #5	67 °C (153 °F)
CPU #1 / Core #6	64 °C (147 °F)
PCH Diode	61 °C (142 °F)
GPU Diode	60 °C (140 °F)
Temperature #1 (ThinkPad EC)	60 °C (140 °F)
SAMSUNG MZVLB1T0HALR-000L7	46 °C (115 °F)
THNSN51T02DU7 NVMe TOSHIBA 1024GB	45 °C (113 °F)
Samsung SSD 850 PRO 1TB	25 °C (77 °F)

**Cooling Fans:**

CPU	4182 RPM
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**Voltage Values:**

CPU Core	1.288 V
CPU VID	1.288 V
Battery	17.577 V
GPU Core	0.669 V

**Power Values:**

CPU Package	18.91 W
CPU IA Cores	16.09 W
CPU GT Cores	0.02 W
CPU Uncore	1.49 W
DIMM	1.32 W
Battery Charge Rate	18.35 W
ITE SuperIO Port	00
ITE SuperIO HWMonitor Port	0000
ITE SuperIO Device ID	0000
ITE SuperIO Version	00
Winbond SuperIO Port	00
Winbond SuperIO HWMonitor Port/60	0000
Winbond SuperIO HWMonitor Port/64	0000
Winbond SuperIO Device ID	0000
Fintek SuperIO Port	00
Fintek SuperIO HWMonitor Port	0000
Fintek SuperIO Device ID	0000
SMSC SuperIO HWMonitor Port	0000
SMSC SuperIO Device ID	2901
ASpeed SuperIO Port	00

## CPU

**CPU Properties:**

CPU Type	HexaCore Intel Core i7, 4000 MHz (40 x 100)
CPU Alias	Kaby Lake-H
CPU Stepping	U0/B0
Instruction Set	x86, x86-64, MMX, SSE, SSE2, SSE3, SSSE3, SSE4.1, SSE4.2, AVX, AVX2, FMA, AES
Original Clock	2600 MHz
Min / Max CPU Multiplier	8x / 30x
Engineering Sample	No
L1 Code Cache	32 KB per core
L1 Data Cache	32 KB per core
L2 Cache	256 KB per core (On-Die, ECC, Full-Speed)
L3 Cache	9 MB (On-Die, ECC, Full-Speed)

**CPU Physical Info:**

Package Type	1440 Ball BGA
Package Size	42 mm x 28 mm
Process Technology	13MiM, 14 nm, CMOS, Cu, High-K + Metal Gate
Typical Power	45 W

**CPU Manufacturer:**

Company Name	Intel Corporation
Product Information	<a href="http://ark.intel.com/search.aspx?q=Intel%20Core%20i7">http://ark.intel.com/search.aspx?q=Intel%20Core%20i7</a>
Driver Update	<a href="http://www.aida64.com/driver-updates">http://www.aida64.com/driver-updates</a>

**Multi CPU:**

CPU #1	Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz, 2592 MHz
CPU #2	Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz, 2592 MHz
CPU #3	Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz, 2592 MHz
CPU #4	Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz, 2592 MHz
CPU #5	Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz, 2592 MHz
CPU #6	Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz, 2592 MHz
CPU #7	Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz, 2592 MHz
CPU #8	Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz, 2592 MHz
CPU #9	Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz, 2592 MHz
CPU #10	Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz, 2592 MHz
CPU #11	Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz, 2592 MHz
CPU #12	Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz, 2592 MHz

**CPU Utilization:**

CPU #1 / Core #1 / HTT Unit #1	0%
CPU #1 / Core #1 / HTT Unit #2	0%
CPU #1 / Core #2 / HTT Unit #1	0%
CPU #1 / Core #2 / HTT Unit #2	0%
CPU #1 / Core #3 / HTT Unit #1	0%
CPU #1 / Core #3 / HTT Unit #2	20%
CPU #1 / Core #4 / HTT Unit #1	0%
CPU #1 / Core #4 / HTT Unit #2	0%
CPU #1 / Core #5 / HTT Unit #1	0%
CPU #1 / Core #5 / HTT Unit #2	0%
CPU #1 / Core #6 / HTT Unit #1	33%
CPU #1 / Core #6 / HTT Unit #2	0%

## CPUID

**CPUID Properties:**

CPUID Manufacturer	GenuineIntel
CPUID CPU Name	Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz
CPUID Revision	000906EAh
IA Brand ID	00h (Unknown)
Platform ID	30h / MC 20h (BGA1440)
Microcode Update Revision	96h
HTT / CMP Units	2 / 6
Tjmax Temperature	100 °C (212 °F)
CPU Thermal Design Power	45 W
CPU Thermal Design Current	130 A
CPU Max Power Limit	Unlimited Power / Unlimited Time
CPU Power Limit 1 (Long Duration)	55 W / 28.00 sec (Unlocked)
CPU Power Limit 2 (Short Duration)	78 W / 2.44 ms (Unlocked)
Max Turbo Boost Multipliers	1C: 43x, 2C: 42x, 3C: 42x, 4C: 41x, 5C: 41x, 6C: 40x

**Instruction Set:**

64-bit x86 Extension (AMD64, Intel64)	Supported
AMD 3DNow!	Not Supported
AMD 3DNow! Professional	Not Supported
AMD 3DNowPrefetch	Supported
AMD Enhanced 3DNow!	Not Supported
AMD Extended MMX	Not Supported
AMD FMA4	Not Supported
AMD MisAligned SSE	Not Supported
AMD SSE4A	Not Supported
AMD XOP	Not Supported
Cyrix Extended MMX	Not Supported
Enhanced REP MOVSB/STOSB	Supported
Float-16 Conversion Instructions	Supported, Enabled
IA-64	Not Supported
IA AES Extensions	Supported
IA AVX	Supported, Enabled
IA AVX2	Supported, Enabled

IA AVX-512 (AVX512F)	Not Supported	Navigation
IA AVX-512 52-bit Integer Instructions (AVX512IFMA52)	Not Supported	
IA AVX-512 Byte and Word Instructions (AVX512BW)	Not Supported	
IA AVX-512 Conflict Detection Instructions (AVX512CD)	Not Supported	
IA AVX-512 Doubleword and Quadword Instructions (AVX512DQ)	Not Supported	
IA AVX-512 Exponential and Reciprocal Instructions (AVX512ER)	Not Supported	
IA AVX-512 FMAPS (AVX512_4FMAPS)	Not Supported	
IA AVX-512 Neural Network Instructions (AVX512_4VNNIW)	Not Supported	
IA AVX-512 Prefetch Instructions (AVX512PF)	Not Supported	
IA AVX-512 Vector Bit Manipulation Instructions (AVX512VBMI)	Not Supported	
IA AVX-512 Vector Length Extensions (AVX512VL)	Not Supported	
IA AVX-512 VPOPCNTDQ	Not Supported	
IA BMI1	Supported	
IA BMI2	Supported	
IA FMA	Supported, Enabled	
IA MMX	Supported	
IA SHA Extensions	Not Supported	
IA SSE	Supported	
IA SSE2	Supported	
IA SSE3	Supported	
IA Supplemental SSE3	Supported	
IA SSE4.1	Supported	
IA SSE4.2	Supported	
VIA Alternate Instruction Set	Not Supported	
ADCX / ADOX Instruction	Supported	
CLFLUSH Instruction	Supported	
CLFLUSHOPT Instruction	Supported	
CLWB Instruction	Not Supported	
CMPXCHG8B Instruction	Supported	
CMPXCHG16B Instruction	Supported	
Conditional Move Instruction	Supported	
INVPcid Instruction	Supported	
LAHF / SAHF Instruction	Supported	
LZCNT Instruction	Supported	
MONITOR / MWAIT Instruction	Supported	
MONITORX / MWAITX Instruction	Not Supported	
MOVBE Instruction	Supported	
PCLMULQDQ Instruction	Supported	
PCOMMIT Instruction	Not Supported	
POPCNT Instruction	Supported	
PREFETCHWT1 Instruction	Not Supported	
RDFSBASE / RDGSBASE / WRFSBASE / WRGSBASE Instruction	Supported	
RDRAND Instruction	Supported	
RDSEED Instruction	Supported	
RDTSCP Instruction	Supported	
SKINIT / STGI Instruction	Not Supported	
SYSCALL / SYSRET Instruction	Not Supported	
SYSENTER / SYSEXIT Instruction	Supported	
Trailing Bit Manipulation Instructions	Not Supported	
VIA FEMMS Instruction	Not Supported	

**Security Features:**

Advanced Cryptography Engine (ACE)	Not Supported
Advanced Cryptography Engine 2 (ACE2)	Not Supported
Control-flow Enforcement Technology (CET)	Not Supported
Data Execution Prevention (DEP, NX, EDB)	Supported
Hardware Random Number Generator (RNG)	Not Supported
Hardware Random Number Generator 2 (RNG2)	Not Supported
Memory Protection Extensions (MPX)	Supported
PadLock Hash Engine (PHE)	Not Supported
PadLock Hash Engine 2 (PHE2)	Not Supported
PadLock Montgomery Multiplier (PMM)	Not Supported
PadLock Montgomery Multiplier 2 (PMM2)	Not Supported
Processor Serial Number (PSN)	Not Supported
Protection Keys for User-Mode Pages (PKU)	Not Supported
Read Processor ID (RDPID)	Not Supported
Safer Mode Extensions (SMX)	Supported
Secure Memory Encryption (SME)	Not Supported

SGX Launch Configuration (SGX\_LC)  
 Software Guard Extensions (SGX)  
 Supervisor Mode Access Prevention (SMAP)  
 Supervisor Mode Execution Protection (SMEP)  
 User-Mode Instruction Prevention (UMIP)

Supported	Navigation
Supported	
Supported	
Supported	
Not Supported	

**Power Management Features:**

APM Power Reporting	Not Supported
Application Power Management (APM)	Not Supported
Automatic Clock Control	Supported
Configurable TDP (cTDP)	Not Supported
Connected Standby	Not Supported
Core C6 State (CC6)	Not Supported
Digital Thermometer	Supported
Dynamic FSB Frequency Switching	Not Supported
Enhanced Halt State (C1E)	Supported, Enabled
Enhanced SpeedStep Technology (EIST, ESS)	Supported, Enabled
Frequency ID Control	Not Supported
Hardware P-State Control	Not Supported
Hardware Thermal Control (HTC)	Not Supported
LongRun	Not Supported
LongRun Table Interface	Not Supported
Overstress	Not Supported
Package C6 State (PC6)	Not Supported
Parallax	Not Supported
PowerSaver 1.0	Not Supported
PowerSaver 2.0	Not Supported
PowerSaver 3.0	Not Supported
Processor Duty Cycle Control	Supported
Running Average Power Limit (RAPL)	Not Supported
Software Thermal Control	Not Supported
SpeedShift (SST, HWP)	Supported, Enabled (Autonomous Mode)
Temperature Sensing Diode	Not Supported
Thermal Monitor 1	Supported
Thermal Monitor 2	Supported
Thermal Monitor 3	Not Supported
Thermal Monitoring	Not Supported
Thermal Trip	Not Supported
Voltage ID Control	Not Supported

**Virtualization Features:**

Encrypted State (SEV-ES)	Not Supported
Extended Page Table (EPT)	Supported
Hypervisor	Not Present
INVEPT Instruction	Supported
INVVPID Instruction	Supported
Nested Paging (NPT, RVI)	Not Supported
Secure Encrypted Virtualization (SEV)	Not Supported
Secure Virtual Machine (SVM, Pacifica)	Not Supported
Virtual Machine Extensions (VMX, Vanderpool)	Supported
Virtual Processor ID (VPID)	Supported

**CPUID Features:**

1 GB Page Size	Supported
36-bit Page Size Extension	Supported
5-Level Paging	Not Supported
64-bit DS Area	Supported
Adaptive Overclocking	Not Supported
Address Region Registers (ARR)	Not Supported
Code and Data Prioritization Technology (CDP)	Not Supported
Core Performance Boost (CPB)	Not Supported
Core Performance Counters	Not Supported
CPL Qualified Debug Store	Supported
Data Breakpoint Extension	Not Supported
Debug Trace Store	Supported
Debugging Extension	Supported
Deprecated FPU CS and FPU DS	Supported
Direct Cache Access	Not Supported

Dynamic Acceleration Technology (IDA)	Not Supported	
Dynamic Configurable TDP (DcTDP)	Not Supported	Navigation
Extended APIC Register Space	Not Supported	
Fast Save & Restore	Supported	
Hardware Lock Elision (HLE)	Supported	
Hybrid Boost	Not Supported	
Hyper-Threading Technology (HTT)	Supported, Enabled	
Instruction Based Sampling	Not Supported	
Invariant Time Stamp Counter	Supported	
L1 Context ID	Not Supported	
L2I Performance Counters	Not Supported	
Lightweight Profiling	Not Supported	
Local APIC On Chip	Supported	
Machine Check Architecture (MCA)	Supported	
Machine Check Exception (MCE)	Supported	
Memory Configuration Registers (MCR)	Not Supported	
Memory Type Range Registers (MTTR)	Supported	
Model Specific Registers (MSR)	Supported	
NB Performance Counters	Not Supported	
Page Attribute Table (PAT)	Supported	
Page Global Extension	Supported	
Page Size Extension (PSE)	Supported	
Pending Break Event (PBE)	Supported	
Performance Time Stamp Counter (PTSC)	Not Supported	
Physical Address Extension (PAE)	Supported	
Platform Quality of Service Enforcement (PQE)	Not Supported	
Platform Quality of Service Monitoring (PQM)	Not Supported	
Process Context Identifiers (PCID)	Supported	
Processor Feedback Interface	Not Supported	
Processor Trace (PT)	Supported	
Restricted Transactional Memory (RTM)	Supported	
Self-Snoop	Supported	
Time Stamp Counter (TSC)	Supported	
Time Stamp Counter Adjust	Supported	
Turbo Boost	Supported, Enabled	
Virtual Mode Extension	Supported	
Watchdog Timer	Not Supported	
x2APIC	Supported, Enabled	
XGETBV / XSETBV OS Enabled	Supported	
XSAVE / XRSTOR / XSETBV / XGETBV Extended States	Supported	
XSAVEOPT	Supported	

**CPUID Registers (CPU #1):**

CPUID 00000000	00000016-756E6547-6C65746E-49656E69 [GenuineIntel]
CPUID 00000001	000906EA-00100800-7FFAFBFF-BFEBFBFF
CPUID 00000002	76036301-00F0B5FF-00000000-00C30000
CPUID 00000003	00000000-00000000-00000000-00000000
CPUID 00000004	1C004121-01C0003F-0000003F-00000000 [SL 00]
CPUID 00000004	1C004122-01C0003F-0000003F-00000000 [SL 01]
CPUID 00000004	1C004143-00C0003F-000003FF-00000000 [SL 02]
CPUID 00000004	1C03C163-02C0003F-00002FFF-00000006 [SL 03]
CPUID 00000005	00000040-00000040-00000003-11142120
CPUID 00000006	000027F7-00000002-00000009-00000000
CPUID 00000007	00000000-029C6FBF-40000000-9C000000
CPUID 00000008	00000000-00000000-00000000-00000000
CPUID 00000009	00000000-00000000-00000000-00000000
CPUID 0000000A	07300404-00000000-00000000-00000603
CPUID 0000000B	00000001-00000002-00000100-00000000 [SL 00]
CPUID 0000000B	00000004-0000000C-00000201-00000000 [SL 01]
CPUID 0000000C	00000000-00000000-00000000-00000000
CPUID 0000000D	0000001F-00000440-00000440-00000000 [SL 00]
CPUID 0000000D	0000000F-00000440-00000100-00000000 [SL 01]
CPUID 0000000D	00000100-00000240-00000000-00000000 [SL 02]
CPUID 0000000D	00000040-000003C0-00000000-00000000 [SL 03]
CPUID 0000000D	00000040-00000400-00000000-00000000 [SL 04]
CPUID 0000000E	00000000-00000000-00000000-00000000
CPUID 0000000F	00000000-00000000-00000000-00000000 [SL 00]
CPUID 0000000F	00000000-00000000-00000000-00000000 [SL 01]

CPUID 00000010	00000000-00000000-0~~~~~ Navigation ^0]
CPUID 00000010	00000000-00000000-C ~~~~~ 1]
CPUID 00000011	00000000-00000000-00000000-00000000
CPUID 00000012	00000001-00000000-00000000-0000241F [SL 00]
CPUID 00000012	00000036-00000000-0000001F-00000000 [SL 01]
CPUID 00000012	50200001-00000000-05D80001-00000000 [SL 02]
CPUID 00000013	00000000-00000000-00000000-00000000
CPUID 00000014	00000001-0000000F-00000007-00000000 [SL 00]
CPUID 00000014	02490002-003F3FFF-00000000-00000000 [SL 01]
CPUID 00000015	00000002-000000D8-00000000-00000000
CPUID 00000016	00000A28-000010CC-00000064-00000000
CPUID 80000000	80000008-00000000-00000000-00000000
CPUID 80000001	00000000-00000000-00000121-2C100000
CPUID 80000002	65746E49-2952286C-726F4320-4D542865 [Intel(R) Core(TM)]
CPUID 80000003	37692029-3538382D-43204830-40205550 [] i7-8850H CPU @]
CPUID 80000004	362E3220-7A484730-00000000-00000000 [ 2.60GHz]
CPUID 80000005	00000000-00000000-00000000-00000000
CPUID 80000006	00000000-00000000-01006040-00000000
CPUID 80000007	00000000-00000000-00000000-00000100
CPUID 80000008	00003027-00000000-00000000-00000000

**CPUID Registers (CPU #2 Virtual):**

CPUID 00000000	00000016-756E6547-6C65746E-49656E69 [GenuineIntel]
CPUID 00000001	000906EA-01100800-7FFAFBFF-BFEBFBFF
CPUID 00000002	76036301-00F0B5FF-00000000-00C30000
CPUID 00000003	00000000-00000000-00000000-00000000
CPUID 00000004	1C004121-01C0003F-0000003F-00000000 [SL 00]
CPUID 00000004	1C004122-01C0003F-0000003F-00000000 [SL 01]
CPUID 00000004	1C004143-00C0003F-000003FF-00000000 [SL 02]
CPUID 00000004	1C03C163-02C0003F-00002FFF-00000006 [SL 03]
CPUID 00000005	00000040-00000040-00000003-11142120
CPUID 00000006	000027F7-00000002-00000009-00000000
CPUID 00000007	00000000-029C6FBF-40000000-9C000000
CPUID 00000008	00000000-00000000-00000000-00000000
CPUID 00000009	00000000-00000000-00000000-00000000
CPUID 0000000A	07300404-00000000-00000000-00000603
CPUID 0000000B	00000001-00000002-00000100-00000001 [SL 00]
CPUID 0000000B	00000004-0000000C-00000201-00000001 [SL 01]
CPUID 0000000C	00000000-00000000-00000000-00000000
CPUID 0000000D	0000001F-00000440-00000440-00000000 [SL 00]
CPUID 0000000D	0000000F-00000440-00000100-00000000 [SL 01]
CPUID 0000000D	00000100-00000240-00000000-00000000 [SL 02]
CPUID 0000000D	00000040-000003C0-00000000-00000000 [SL 03]
CPUID 0000000D	00000040-00000400-00000000-00000000 [SL 04]
CPUID 0000000E	00000000-00000000-00000000-00000000
CPUID 0000000F	00000000-00000000-00000000-00000000 [SL 00]
CPUID 0000000F	00000000-00000000-00000000-00000000 [SL 01]
CPUID 00000010	00000000-00000000-00000000-00000000 [SL 00]
CPUID 00000010	00000000-00000000-00000000-00000000 [SL 01]
CPUID 00000011	00000000-00000000-00000000-00000000
CPUID 00000012	00000001-00000000-00000000-0000241F [SL 00]
CPUID 00000012	00000036-00000000-0000001F-00000000 [SL 01]
CPUID 00000012	50200001-00000000-05D80001-00000000 [SL 02]
CPUID 00000013	00000000-00000000-00000000-00000000
CPUID 00000014	00000001-0000000F-00000007-00000000 [SL 00]
CPUID 00000014	02490002-003F3FFF-00000000-00000000 [SL 01]
CPUID 00000015	00000002-000000D8-00000000-00000000
CPUID 00000016	00000A28-000010CC-00000064-00000000
CPUID 80000000	80000008-00000000-00000000-00000000
CPUID 80000001	00000000-00000000-00000121-2C100000
CPUID 80000002	65746E49-2952286C-726F4320-4D542865 [Intel(R) Core(TM)]
CPUID 80000003	37692029-3538382D-43204830-40205550 [] i7-8850H CPU @]
CPUID 80000004	362E3220-7A484730-00000000-00000000 [ 2.60GHz]
CPUID 80000005	00000000-00000000-00000000-00000000
CPUID 80000006	00000000-00000000-01006040-00000000
CPUID 80000007	00000000-00000000-00000000-00000100
CPUID 80000008	00003027-00000000-00000000-00000000

**CPUID Registers (CPU #3):**

CPUID 00000000	00000016-756E6547-6C65746E-49656E69 [GenuineIntel]
CPUID 00000001	000906EA-03100800-7FFAFBFF-BFEBFBFF
CPUID 00000002	76036301-00F0B5FF-00000000-00C30000
CPUID 00000003	00000000-00000000-00000000-00000000
CPUID 00000004	1C004121-01C0003F-0000003F-00000000 [SL 00]
CPUID 00000004	1C004122-01C0003F-0000003F-00000000 [SL 01]
CPUID 00000004	1C004143-00C0003F-000003FF-00000000 [SL 02]
CPUID 00000004	1C03C163-02C0003F-00002FFF-00000006 [SL 03]
CPUID 00000005	00000040-00000040-00000003-1142120
CPUID 00000006	000027F7-00000002-00000009-00000000
CPUID 00000007	00000000-029C6FBF-40000000-9C000000
CPUID 00000008	00000000-00000000-00000000-00000000
CPUID 00000009	00000000-00000000-00000000-00000000
CPUID 0000000A	07300404-00000000-00000000-00000603
CPUID 0000000B	00000001-00000002-00000100-00000002 [SL 00]
CPUID 0000000B	00000004-0000000C-00000201-00000002 [SL 01]
CPUID 0000000C	00000000-00000000-00000000-00000000
CPUID 0000000D	0000001F-00000440-00000440-00000000 [SL 00]
CPUID 0000000D	0000000F-00000440-00000100-00000000 [SL 01]
CPUID 0000000D	00000100-00000240-00000000-00000000 [SL 02]
CPUID 0000000D	00000040-000003C0-00000000-00000000 [SL 03]
CPUID 0000000D	00000040-00000400-00000000-00000000 [SL 04]
CPUID 0000000E	00000000-00000000-00000000-00000000
CPUID 0000000F	00000000-00000000-00000000-00000000 [SL 00]
CPUID 0000000F	00000000-00000000-00000000-00000000 [SL 01]
CPUID 00000010	00000000-00000000-00000000-00000000 [SL 00]
CPUID 00000010	00000000-00000000-00000000-00000000 [SL 01]
CPUID 00000011	00000000-00000000-00000000-00000000
CPUID 00000012	00000001-00000000-00000000-0000241F [SL 00]
CPUID 00000012	00000036-00000000-0000001F-00000000 [SL 01]
CPUID 00000012	50200001-00000000-05D80001-00000000 [SL 02]
CPUID 00000013	00000000-00000000-00000000-00000000
CPUID 00000014	00000001-0000000F-00000007-00000000 [SL 00]
CPUID 00000014	02490002-003F3FFF-00000000-00000000 [SL 01]
CPUID 00000015	00000002-000000D8-00000000-00000000
CPUID 00000016	00000A28-000010CC-00000064-00000000
CPUID 80000000	80000008-00000000-00000000-00000000
CPUID 80000001	00000000-00000000-00000121-2C100000
CPUID 80000002	65746E49-2952286C-726F4320-4D542865 [Intel(R) Core(TM)]
CPUID 80000003	37692029-3538382D-43204830-40205550 [] i7-8850H CPU @]
CPUID 80000004	362E3220-7A484730-00000000-00000000 [ 2.60GHz]
CPUID 80000005	00000000-00000000-00000000-00000000
CPUID 80000006	00000000-00000000-01006040-00000000
CPUID 80000007	00000000-00000000-00000000-00000100
CPUID 80000008	00003027-00000000-00000000-00000000

**CPUID Registers (CPU #4 Virtual):**

CPUID 00000000	00000016-756E6547-6C65746E-49656E69 [GenuineIntel]
CPUID 00000001	000906EA-03100800-7FFAFBFF-BFEBFBFF
CPUID 00000002	76036301-00F0B5FF-00000000-00C30000
CPUID 00000003	00000000-00000000-00000000-00000000
CPUID 00000004	1C004121-01C0003F-0000003F-00000000 [SL 00]
CPUID 00000004	1C004122-01C0003F-0000003F-00000000 [SL 01]
CPUID 00000004	1C004143-00C0003F-000003FF-00000000 [SL 02]
CPUID 00000004	1C03C163-02C0003F-00002FFF-00000006 [SL 03]
CPUID 00000005	00000040-00000040-00000003-1142120
CPUID 00000006	000027F7-00000002-00000009-00000000
CPUID 00000007	00000000-029C6FBF-40000000-9C000000
CPUID 00000008	00000000-00000000-00000000-00000000
CPUID 00000009	00000000-00000000-00000000-00000000
CPUID 0000000A	07300404-00000000-00000000-00000603
CPUID 0000000B	00000001-00000002-00000100-00000003 [SL 00]
CPUID 0000000B	00000004-0000000C-00000201-00000003 [SL 01]
CPUID 0000000C	00000000-00000000-00000000-00000000
CPUID 0000000D	0000001F-00000440-00000440-00000000 [SL 00]
CPUID 0000000D	0000000F-00000440-00000100-00000000 [SL 01]
CPUID 0000000D	00000100-00000240-00000000-00000000 [SL 02]

CPUID 0000000D	00000040-000003C0-C~~~~~ Navigation ^3]
CPUID 0000000D	00000040-00000400-C ~~~~~ 4]
CPUID 0000000E	00000000-00000000-00000000-00000000
CPUID 0000000F	00000000-00000000-00000000-00000000 [SL 00]
CPUID 0000000F	00000000-00000000-00000000-00000000 [SL 01]
CPUID 00000010	00000000-00000000-00000000-00000000 [SL 00]
CPUID 00000010	00000000-00000000-00000000-00000000 [SL 01]
CPUID 00000011	00000000-00000000-00000000-00000000
CPUID 00000012	00000001-00000000-00000000-0000241F [SL 00]
CPUID 00000012	00000036-00000000-0000001F-00000000 [SL 01]
CPUID 00000012	50200001-00000000-05D80001-00000000 [SL 02]
CPUID 00000013	00000000-00000000-00000000-00000000
CPUID 00000014	00000001-0000000F-00000007-00000000 [SL 00]
CPUID 00000014	02490002-003F3FFF-00000000-00000000 [SL 01]
CPUID 00000015	00000002-000000D8-00000000-00000000
CPUID 00000016	00000A28-000010CC-00000064-00000000
CPUID 80000000	80000008-00000000-00000000-00000000
CPUID 80000001	00000000-00000000-00000121-2C100000
CPUID 80000002	65746E49-2952286C-726F4320-4D542865 [Intel(R) Core(TM)]
CPUID 80000003	37692029-3538382D-43204830-40205550 [] i7-8850H CPU @]
CPUID 80000004	362E3220-7A484730-00000000-00000000 [ 2.60GHz]
CPUID 80000005	00000000-00000000-00000000-00000000
CPUID 80000006	00000000-00000000-01006040-00000000
CPUID 80000007	00000000-00000000-00000000-00000100
CPUID 80000008	00003027-00000000-00000000-00000000

**CPUID Registers (CPU #5):**

CPUID 00000000	00000016-756E6547-6C65746E-49656E69 [GenuineIntel]
CPUID 00000001	000906EA-04100800-7FFAFBFF-BFEBFBFF
CPUID 00000002	76036301-00F0B5FF-00000000-00C30000
CPUID 00000003	00000000-00000000-00000000-00000000
CPUID 00000004	1C004121-01C0003F-0000003F-00000000 [SL 00]
CPUID 00000004	1C004122-01C0003F-0000003F-00000000 [SL 01]
CPUID 00000004	1C004143-00C0003F-000003FF-00000000 [SL 02]
CPUID 00000004	1C03C163-02C0003F-00002FFF-00000006 [SL 03]
CPUID 00000005	00000040-00000040-00000003-11142120
CPUID 00000006	000027F7-00000002-00000009-00000000
CPUID 00000007	00000000-029C6FBF-40000000-9C000000
CPUID 00000008	00000000-00000000-00000000-00000000
CPUID 00000009	00000000-00000000-00000000-00000000
CPUID 0000000A	07300404-00000000-00000000-00000603
CPUID 0000000B	00000001-00000002-00000100-00000004 [SL 00]
CPUID 0000000B	00000004-0000000C-00000201-00000004 [SL 01]
CPUID 0000000C	00000000-00000000-00000000-00000000
CPUID 0000000D	0000001F-00000440-00000440-00000000 [SL 00]
CPUID 0000000D	0000000F-00000440-00000100-00000000 [SL 01]
CPUID 0000000D	00000100-00000240-00000000-00000000 [SL 02]
CPUID 0000000D	00000040-000003C0-00000000-00000000 [SL 03]
CPUID 0000000D	00000040-00000400-00000000-00000000 [SL 04]
CPUID 0000000E	00000000-00000000-00000000-00000000
CPUID 0000000F	00000000-00000000-00000000-00000000 [SL 00]
CPUID 0000000F	00000000-00000000-00000000-00000000 [SL 01]
CPUID 00000010	00000000-00000000-00000000-00000000 [SL 00]
CPUID 00000010	00000000-00000000-00000000-00000000 [SL 01]
CPUID 00000011	00000000-00000000-00000000-00000000
CPUID 00000012	00000001-00000000-00000000-0000241F [SL 00]
CPUID 00000012	00000036-00000000-0000001F-00000000 [SL 01]
CPUID 00000012	50200001-00000000-05D80001-00000000 [SL 02]
CPUID 00000013	00000000-00000000-00000000-00000000
CPUID 00000014	00000001-0000000F-00000007-00000000 [SL 00]
CPUID 00000014	02490002-003F3FFF-00000000-00000000 [SL 01]
CPUID 00000015	00000002-000000D8-00000000-00000000
CPUID 00000016	00000A28-000010CC-00000064-00000000
CPUID 80000000	80000008-00000000-00000000-00000000
CPUID 80000001	00000000-00000000-00000121-2C100000
CPUID 80000002	65746E49-2952286C-726F4320-4D542865 [Intel(R) Core(TM)]
CPUID 80000003	37692029-3538382D-43204830-40205550 [] i7-8850H CPU @]
CPUID 80000004	362E3220-7A484730-00000000-00000000 [ 2.60GHz]

CPUID 80000005  
CPUID 80000006  
CPUID 80000007  
CPUID 80000008

Navigation  
00000000-00000000-0~~~~~  
00000000-00000000-C  
00000000-00000000-00000000-00000100  
0003027-00000000-00000000-00000000

**CPUID Registers (CPU #6 Virtual):**

CPUID 00000000  
CPUID 00000001  
CPUID 00000002  
CPUID 00000003  
CPUID 00000004  
CPUID 00000004  
CPUID 00000004  
CPUID 00000004  
CPUID 00000004  
CPUID 00000005  
CPUID 00000006  
CPUID 00000007  
CPUID 00000008  
CPUID 00000009  
CPUID 0000000A  
CPUID 0000000B  
CPUID 0000000B  
CPUID 0000000C  
CPUID 0000000D  
CPUID 0000000D  
CPUID 0000000D  
CPUID 0000000D  
CPUID 0000000E  
CPUID 0000000F  
CPUID 0000000F  
CPUID 00000010  
CPUID 00000010  
CPUID 00000011  
CPUID 00000012  
CPUID 00000012  
CPUID 00000012  
CPUID 00000013  
CPUID 00000014  
CPUID 00000014  
CPUID 00000015  
CPUID 00000016  
CPUID 80000000  
CPUID 80000001  
CPUID 80000002  
CPUID 80000003  
CPUID 80000004  
CPUID 80000005  
CPUID 80000006  
CPUID 80000007  
CPUID 80000008

00000016-756E6547-6C65746E-49656E69 [GenuineIntel]  
000906EA-05100800-7FFAFBFF-BFEBFBFF  
76036301-00F0B5FF-00000000-00C30000  
00000000-00000000-00000000-00000000  
1C004121-01C0003F-0000003F-00000000 [SL 00]  
1C004122-01C0003F-0000003F-00000000 [SL 01]  
1C004143-00C0003F-000003FF-00000000 [SL 02]  
1C03C163-02C0003F-00002FFF-00000006 [SL 03]  
00000040-00000040-00000003-11142120  
000027F7-00000002-00000009-00000000  
00000000-029C6FBF-40000000-9C000000  
00000000-00000000-00000000-00000000  
00000000-00000000-00000000-00000000  
07300404-00000000-00000000-00000603  
00000001-00000002-00000100-00000005 [SL 00]  
00000004-0000000C-00000201-00000005 [SL 01]  
00000000-00000000-00000000-00000000  
0000001F-00000440-00000440-00000000 [SL 00]  
0000000F-00000440-00000100-00000000 [SL 01]  
00000100-00000240-00000000-00000000 [SL 02]  
00000040-000003C0-00000000-00000000 [SL 03]  
00000040-00000400-00000000-00000000 [SL 04]  
00000000-00000000-00000000-00000000  
00000000-00000000-00000000-00000000 [SL 00]  
00000000-00000000-00000000-00000000 [SL 01]  
00000000-00000000-00000000-00000000 [SL 00]  
00000000-00000000-00000000-00000000 [SL 01]  
00000000-00000000-00000000-00000000  
00000001-00000000-00000000-0000241F [SL 00]  
00000036-00000000-0000001F-00000000 [SL 01]  
50200001-00000000-05D80001-00000000 [SL 02]  
00000000-00000000-00000000-00000000  
00000001-0000000F-00000007-00000000 [SL 00]  
02490002-003F3FFF-00000000-00000000 [SL 01]  
00000002-000000D8-00000000-00000000  
00000A28-000010CC-00000064-00000000  
80000008-00000000-00000000-00000000  
00000000-00000000-00000121-2C100000  
65746E49-2952286C-726F4320-4D542865 [Intel(R) Core(TM)  
37692029-3538382D-43204830-40205550 () i7-8850H CPU @]  
362E3220-7A484730-00000000-00000000 [ 2.60GHz]  
00000000-00000000-00000000-00000000  
00000000-00000000-01006040-00000000  
00000000-00000000-00000000-00000100  
0003027-00000000-00000000-00000000

**CPUID Registers (CPU #7):**

CPUID 00000000  
CPUID 00000001  
CPUID 00000002  
CPUID 00000003  
CPUID 00000004  
CPUID 00000004  
CPUID 00000004  
CPUID 00000004  
CPUID 00000005  
CPUID 00000006  
CPUID 00000007  
CPUID 00000008  
CPUID 00000009  
CPUID 0000000A  
CPUID 0000000B

00000016-756E6547-6C65746E-49656E69 [GenuineIntel]  
000906EA-06100800-7FFAFBFF-BFEBFBFF  
76036301-00F0B5FF-00000000-00C30000  
00000000-00000000-00000000-00000000  
1C004121-01C0003F-0000003F-00000000 [SL 00]  
1C004122-01C0003F-0000003F-00000000 [SL 01]  
1C004143-00C0003F-000003FF-00000000 [SL 02]  
1C03C163-02C0003F-00002FFF-00000006 [SL 03]  
00000040-00000040-00000003-11142120  
000027F7-00000002-00000009-00000000  
00000000-029C6FBF-40000000-9C000000  
00000000-00000000-00000000-00000000  
00000000-00000000-00000000-00000000  
07300404-00000000-00000000-00000603  
00000001-00000002-00000100-00000006 [SL 00]

CPUID 0000000B	00000004-0000000C-C~~~~~ Navigation ^1]
CPUID 0000000C	00000000-00000000-0
CPUID 0000000D	0000001F-00000440-00000440-00000000 [SL 00]
CPUID 0000000D	0000000F-00000440-00000100-00000000 [SL 01]
CPUID 0000000D	00000100-00000240-00000000-00000000 [SL 02]
CPUID 0000000D	00000040-000003C0-00000000-00000000 [SL 03]
CPUID 0000000D	00000040-00000400-00000000-00000000 [SL 04]
CPUID 0000000E	00000000-00000000-00000000-00000000
CPUID 0000000F	00000000-00000000-00000000-00000000 [SL 00]
CPUID 0000000F	00000000-00000000-00000000-00000000 [SL 01]
CPUID 00000010	00000000-00000000-00000000-00000000 [SL 00]
CPUID 00000010	00000000-00000000-00000000-00000000 [SL 01]
CPUID 00000011	00000000-00000000-00000000-00000000
CPUID 00000012	00000001-00000000-00000000-0000241F [SL 00]
CPUID 00000012	00000036-00000000-0000001F-00000000 [SL 01]
CPUID 00000012	50200001-00000000-05D80001-00000000 [SL 02]
CPUID 00000013	00000000-00000000-00000000-00000000
CPUID 00000014	00000001-0000000F-00000007-00000000 [SL 00]
CPUID 00000014	02490002-003F3FFF-00000000-00000000 [SL 01]
CPUID 00000015	00000002-000000D8-00000000-00000000
CPUID 00000016	00000A28-000010CC-00000064-00000000
CPUID 80000000	80000008-00000000-00000000-00000000
CPUID 80000001	00000000-00000000-00000121-2C100000
CPUID 80000002	65746E49-2952286C-726F4320-4D542865 [Intel(R) Core(TM)
CPUID 80000003	37692029-3538382D-43204830-40205550 () i7-8850H CPU @]
CPUID 80000004	362E3220-7A484730-00000000-00000000 [ 2.60GHz]
CPUID 80000005	00000000-00000000-00000000-00000000
CPUID 80000006	00000000-00000000-01006040-00000000
CPUID 80000007	00000000-00000000-00000000-00000100
CPUID 80000008	00003027-00000000-00000000-00000000

**CPUID Registers (CPU #8 Virtual):**

CPUID 00000000	00000016-756E6547-6C65746E-49656E69 [GenuineIntel]
CPUID 00000001	000906EA-07100800-7FFAFBFF-BFEBFBFF
CPUID 00000002	76036301-00F0B5FF-00000000-00C30000
CPUID 00000003	00000000-00000000-00000000-00000000
CPUID 00000004	1C004121-01C0003F-0000003F-00000000 [SL 00]
CPUID 00000004	1C004122-01C0003F-0000003F-00000000 [SL 01]
CPUID 00000004	1C004143-00C0003F-000003FF-00000000 [SL 02]
CPUID 00000004	1C03C163-02C0003F-00002FFF-00000006 [SL 03]
CPUID 00000005	00000040-00000040-00000003-11142120
CPUID 00000006	000027F7-00000002-00000009-00000000
CPUID 00000007	00000000-029C6FBF-40000000-9C000000
CPUID 00000008	00000000-00000000-00000000-00000000
CPUID 00000009	00000000-00000000-00000000-00000000
CPUID 0000000A	07300404-00000000-00000000-00000603
CPUID 0000000B	00000001-00000002-00000100-00000007 [SL 00]
CPUID 0000000B	00000004-0000000C-00000201-00000007 [SL 01]
CPUID 0000000C	00000000-00000000-00000000-00000000
CPUID 0000000D	0000001F-00000440-00000440-00000000 [SL 00]
CPUID 0000000D	0000000F-00000440-00000100-00000000 [SL 01]
CPUID 0000000D	00000100-00000240-00000000-00000000 [SL 02]
CPUID 0000000D	00000040-000003C0-00000000-00000000 [SL 03]
CPUID 0000000D	00000040-00000400-00000000-00000000 [SL 04]
CPUID 0000000E	00000000-00000000-00000000-00000000
CPUID 0000000F	00000000-00000000-00000000-00000000 [SL 00]
CPUID 0000000F	00000000-00000000-00000000-00000000 [SL 01]
CPUID 00000010	00000000-00000000-00000000-00000000 [SL 00]
CPUID 00000010	00000000-00000000-00000000-00000000 [SL 01]
CPUID 00000011	00000000-00000000-00000000-00000000
CPUID 00000012	00000001-00000000-00000000-0000241F [SL 00]
CPUID 00000012	00000036-00000000-0000001F-00000000 [SL 01]
CPUID 00000012	50200001-00000000-05D80001-00000000 [SL 02]
CPUID 00000013	00000000-00000000-00000000-00000000
CPUID 00000014	00000001-0000000F-00000007-00000000 [SL 00]
CPUID 00000014	02490002-003F3FFF-00000000-00000000 [SL 01]
CPUID 00000015	00000002-000000D8-00000000-00000000
CPUID 00000016	00000A28-000010CC-00000064-00000000

CPUID 80000000	80000008-00000000-0~~~~~ Navigation
CPUID 80000001	00000000-00000000-C
CPUID 80000002	65746E49-2952286C-726F4320-4D542865 [Intel(R) Core(TM)
CPUID 80000003	37692029-3538382D-43204830-40205550 () i7-8850H CPU @]
CPUID 80000004	362E3220-7A484730-00000000-00000000 [ 2.60GHz]
CPUID 80000005	00000000-00000000-00000000-00000000
CPUID 80000006	00000000-00000000-01006040-00000000
CPUID 80000007	00000000-00000000-00000000-00000100
CPUID 80000008	00003027-00000000-00000000-00000000

**CPUID Registers (CPU #9):**

CPUID 00000000	00000016-756E6547-6C65746E-49656E69 [GenuineIntel]
CPUID 00000001	000906EA-08100800-7FFAFBFF-BFEBFBFF
CPUID 00000002	76036301-00F0B5FF-00000000-00C30000
CPUID 00000003	00000000-00000000-00000000-00000000
CPUID 00000004	1C004121-01C0003F-0000003F-00000000 [SL 00]
CPUID 00000004	1C004122-01C0003F-0000003F-00000000 [SL 01]
CPUID 00000004	1C004143-00C0003F-000003FF-00000000 [SL 02]
CPUID 00000004	1C03C163-02C0003F-00002FFF-00000006 [SL 03]
CPUID 00000005	00000040-00000040-00000003-11142120
CPUID 00000006	000027F7-00000002-00000009-00000000
CPUID 00000007	00000000-029C6FBF-40000000-9C000000
CPUID 00000008	00000000-00000000-00000000-00000000
CPUID 00000009	00000000-00000000-00000000-00000000
CPUID 0000000A	07300404-00000000-00000000-00000603
CPUID 0000000B	00000001-00000002-00000100-00000008 [SL 00]
CPUID 0000000B	00000004-0000000C-00000201-00000008 [SL 01]
CPUID 0000000C	00000000-00000000-00000000-00000000
CPUID 0000000D	0000001F-00000440-00000440-00000000 [SL 00]
CPUID 0000000D	0000000F-00000440-00000100-00000000 [SL 01]
CPUID 0000000D	00000100-00000240-00000000-00000000 [SL 02]
CPUID 0000000D	00000040-000003C0-00000000-00000000 [SL 03]
CPUID 0000000D	00000040-00000400-00000000-00000000 [SL 04]
CPUID 0000000E	00000000-00000000-00000000-00000000
CPUID 0000000F	00000000-00000000-00000000-00000000 [SL 00]
CPUID 0000000F	00000000-00000000-00000000-00000000 [SL 01]
CPUID 00000010	00000000-00000000-00000000-00000000 [SL 00]
CPUID 00000010	00000000-00000000-00000000-00000000 [SL 01]
CPUID 00000011	00000000-00000000-00000000-00000000
CPUID 00000012	00000001-00000000-00000000-0000241F [SL 00]
CPUID 00000012	00000036-00000000-0000001F-00000000 [SL 01]
CPUID 00000012	50200001-00000000-05D80001-00000000 [SL 02]
CPUID 00000013	00000000-00000000-00000000-00000000
CPUID 00000014	00000001-0000000F-00000007-00000000 [SL 00]
CPUID 00000014	02490002-003F3FFF-00000000-00000000 [SL 01]
CPUID 00000015	00000002-000000D8-00000000-00000000
CPUID 00000016	00000A28-000010CC-00000064-00000000
CPUID 80000000	80000008-00000000-00000000-00000000
CPUID 80000001	00000000-00000000-00000121-2C100000
CPUID 80000002	65746E49-2952286C-726F4320-4D542865 [Intel(R) Core(TM)
CPUID 80000003	37692029-3538382D-43204830-40205550 () i7-8850H CPU @]
CPUID 80000004	362E3220-7A484730-00000000-00000000 [ 2.60GHz]
CPUID 80000005	00000000-00000000-00000000-00000000
CPUID 80000006	00000000-00000000-01006040-00000000
CPUID 80000007	00000000-00000000-00000000-00000100
CPUID 80000008	00003027-00000000-00000000-00000000

**CPUID Registers (CPU #10 Virtual):**

CPUID 00000000	00000016-756E6547-6C65746E-49656E69 [GenuineIntel]
CPUID 00000001	000906EA-09100800-7FFAFBFF-BFEBFBFF
CPUID 00000002	76036301-00F0B5FF-00000000-00C30000
CPUID 00000003	00000000-00000000-00000000-00000000
CPUID 00000004	1C004121-01C0003F-0000003F-00000000 [SL 00]
CPUID 00000004	1C004122-01C0003F-0000003F-00000000 [SL 01]
CPUID 00000004	1C004143-00C0003F-000003FF-00000000 [SL 02]
CPUID 00000004	1C03C163-02C0003F-00002FFF-00000006 [SL 03]
CPUID 00000005	00000040-00000040-00000003-11142120
CPUID 00000006	000027F7-00000002-00000009-00000000

CPUID 00000007	00000000-029C6FBF-4~~~~~ Navigation
CPUID 00000008	00000000-00000000-C
CPUID 00000009	00000000-00000000-00000000-00000000
CPUID 0000000A	07300404-00000000-00000000-00000603
CPUID 0000000B	00000001-00000002-0000100-00000009 [SL 00]
CPUID 0000000B	00000004-0000000C-00000201-00000009 [SL 01]
CPUID 0000000C	00000000-00000000-00000000-00000000
CPUID 0000000D	00000001F-00000440-00000440-00000000 [SL 00]
CPUID 0000000D	0000000F-00000440-0000100-00000000 [SL 01]
CPUID 0000000D	00000100-00000240-00000000-00000000 [SL 02]
CPUID 0000000D	00000040-000003C0-00000000-00000000 [SL 03]
CPUID 0000000D	00000040-00000400-00000000-00000000 [SL 04]
CPUID 0000000E	00000000-00000000-00000000-00000000
CPUID 0000000F	00000000-00000000-00000000-00000000 [SL 00]
CPUID 0000000F	00000000-00000000-00000000-00000000 [SL 01]
CPUID 00000010	00000000-00000000-00000000-00000000 [SL 00]
CPUID 00000010	00000000-00000000-00000000-00000000 [SL 01]
CPUID 00000011	00000000-00000000-00000000-00000000
CPUID 00000012	00000001-00000000-00000000-0000241F [SL 00]
CPUID 00000012	00000036-00000000-0000001F-00000000 [SL 01]
CPUID 00000012	50200001-00000000-05D80001-00000000 [SL 02]
CPUID 00000013	00000000-00000000-00000000-00000000
CPUID 00000014	00000001-0000000F-00000007-00000000 [SL 00]
CPUID 00000014	02490002-003F3FFF-00000000-00000000 [SL 01]
CPUID 00000015	00000002-000000D8-00000000-00000000
CPUID 00000016	00000A28-000010CC-00000064-00000000
CPUID 80000000	80000008-00000000-00000000-00000000
CPUID 80000001	00000000-00000000-00000121-2C100000
CPUID 80000002	65746E49-2952286C-726F4320-4D542865 [Intel(R) Core(TM)]
CPUID 80000003	37692029-3538382D-43204830-40205550 () i7-8850H CPU @
CPUID 80000004	362E3220-7A484730-00000000-00000000 [ 2.60GHz]
CPUID 80000005	00000000-00000000-00000000-00000000
CPUID 80000006	00000000-00000000-01006040-00000000
CPUID 80000007	00000000-00000000-00000000-00000100
CPUID 80000008	00003027-00000000-00000000-00000000

**CPUID Registers (CPU #11):**

CPUID 00000000	00000016-756E6547-6C65746E-49656E69 [GenuineIntel]
CPUID 00000001	000906EA-0A100800-7FFAFBF-BFEBFBFF
CPUID 00000002	76036301-00F0B5FF-00000000-00C30000
CPUID 00000003	00000000-00000000-00000000-00000000
CPUID 00000004	1C004121-01C0003F-0000003F-00000000 [SL 00]
CPUID 00000004	1C004122-01C0003F-0000003F-00000000 [SL 01]
CPUID 00000004	1C004143-00C0003F-000003FF-00000000 [SL 02]
CPUID 00000004	1C03C163-02C0003F-00002FFF-00000006 [SL 03]
CPUID 00000005	00000040-00000040-00000003-11142120
CPUID 00000006	000027F7-00000002-00000009-00000000
CPUID 00000007	00000000-029C6FBF-40000000-9C000000
CPUID 00000008	00000000-00000000-00000000-00000000
CPUID 00000009	00000000-00000000-00000000-00000000
CPUID 0000000A	07300404-00000000-00000000-00000603
CPUID 0000000B	00000001-00000002-0000100-0000000A [SL 00]
CPUID 0000000B	00000004-0000000C-00000201-0000000A [SL 01]
CPUID 0000000C	00000000-00000000-00000000-00000000
CPUID 0000000D	00000001F-00000440-00000440-00000000 [SL 00]
CPUID 0000000D	0000000F-00000440-0000100-00000000 [SL 01]
CPUID 0000000D	00000100-00000240-00000000-00000000 [SL 02]
CPUID 0000000D	00000040-000003C0-00000000-00000000 [SL 03]
CPUID 0000000D	00000040-00000400-00000000-00000000 [SL 04]
CPUID 0000000E	00000000-00000000-00000000-00000000
CPUID 0000000F	00000000-00000000-00000000-00000000 [SL 00]
CPUID 0000000F	00000000-00000000-00000000-00000000 [SL 01]
CPUID 00000010	00000000-00000000-00000000-00000000 [SL 00]
CPUID 00000010	00000000-00000000-00000000-00000000 [SL 01]
CPUID 00000011	00000000-00000000-00000000-00000000
CPUID 00000012	00000001-00000000-00000000-0000241F [SL 00]
CPUID 00000012	00000036-00000000-0000001F-00000000 [SL 01]
CPUID 00000012	50200001-00000000-05D80001-00000000 [SL 02]

CPUID 00000013	00000000-00000000-0~~~~~ Navigation
CPUID 00000014	00000001-0000000F-0 ]
CPUID 00000014	02490002-003F3FFF-00000000-00000000 [ SL 01 ]
CPUID 00000015	00000002-000000D8-00000000-00000000
CPUID 00000016	00000A28-000010CC-00000064-00000000
CPUID 80000000	80000008-00000000-00000000-00000000
CPUID 80000001	00000000-00000000-00000121-2C100000
CPUID 80000002	65746E49-2952286C-726F4320-4D542865 [Intel(R) Core(TM)]
CPUID 80000003	37692029-3538382D-43204830-40205550 () i7-8850H CPU @ ]
CPUID 80000004	362E3220-7A484730-00000000-00000000 [ 2.60GHz ]
CPUID 80000005	00000000-00000000-00000000-00000000
CPUID 80000006	00000000-00000000-01006040-00000000
CPUID 80000007	00000000-00000000-00000000-00000100
CPUID 80000008	00003027-00000000-00000000-00000000

**CPUID Registers (CPU #12 Virtual):**

CPUID 00000000	00000016-756E6547-6C65746E-49656E69 [GenuineIntel]
CPUID 00000001	000906EA-0B100800-7FFAFBFF-BFEBFBFF
CPUID 00000002	76036301-00F0B5FF-00000000-00C30000
CPUID 00000003	00000000-00000000-00000000-00000000
CPUID 00000004	1C004121-01C0003F-0000003F-00000000 [SL 00]
CPUID 00000004	1C004122-01C0003F-0000003F-00000000 [SL 01]
CPUID 00000004	1C004143-00C0003F-000003FF-00000000 [SL 02]
CPUID 00000004	1C03C163-02C0003F-00002FFF-00000006 [SL 03]
CPUID 00000005	00000040-00000040-00000003-11142120
CPUID 00000006	000027F7-00000002-00000009-00000000
CPUID 00000007	00000000-029C6FBF-40000000-9C000000
CPUID 00000008	00000000-00000000-00000000-00000000
CPUID 00000009	00000000-00000000-00000000-00000000
CPUID 0000000A	07300404-00000000-00000000-00000603
CPUID 0000000B	00000001-00000002-00000100-0000000B [SL 00]
CPUID 0000000B	00000004-0000000C-00000201-0000000B [SL 01]
CPUID 0000000C	00000000-00000000-00000000-00000000
CPUID 0000000D	0000001F-00000440-00000440-00000000 [SL 00]
CPUID 0000000D	0000000F-00000440-00000100-00000000 [SL 01]
CPUID 0000000D	00000100-00000240-00000000-00000000 [SL 02]
CPUID 0000000D	00000040-000003C0-00000000-00000000 [SL 03]
CPUID 0000000D	00000040-00000400-00000000-00000000 [SL 04]
CPUID 0000000E	00000000-00000000-00000000-00000000
CPUID 0000000F	00000000-00000000-00000000-00000000 [SL 00]
CPUID 0000000F	00000000-00000000-00000000-00000000 [SL 01]
CPUID 00000010	00000000-00000000-00000000-00000000 [SL 00]
CPUID 00000010	00000000-00000000-00000000-00000000 [SL 01]
CPUID 00000011	00000000-00000000-00000000-00000000
CPUID 00000012	00000001-00000000-00000000-0000241F [SL 00]
CPUID 00000012	00000036-00000000-0000001F-00000000 [SL 01]
CPUID 00000012	50200001-00000000-05D80001-00000000 [SL 02]
CPUID 00000013	00000000-00000000-00000000-00000000
CPUID 00000014	00000001-0000000F-00000007-00000000 [SL 00]
CPUID 00000014	02490002-003F3FFF-00000000-00000000 [SL 01]
CPUID 00000015	00000002-000000D8-00000000-00000000
CPUID 00000016	00000A28-000010CC-00000064-00000000
CPUID 80000000	80000008-00000000-00000000-00000000
CPUID 80000001	00000000-00000000-00000121-2C100000
CPUID 80000002	65746E49-2952286C-726F4320-4D542865 [Intel(R) Core(TM)]
CPUID 80000003	37692029-3538382D-43204830-40205550 () i7-8850H CPU @ ]
CPUID 80000004	362E3220-7A484730-00000000-00000000 [ 2.60GHz ]
CPUID 80000005	00000000-00000000-00000000-00000000
CPUID 80000006	00000000-00000000-01006040-00000000
CPUID 80000007	00000000-00000000-00000000-00000100
CPUID 80000008	00003027-00000000-00000000-00000000

**MSR Registers:**

MSR 00000017	0014-0000-0000-0000 [PlatID = 5]
MSR 0000001B	0000-0000-FEE0-0D00
MSR 00000035	0000-0000-0006-000C
MSR 0000008B	0000-0096-0000-0000
MSR 000000CE	0808-083B-F101-1A00 [eD = 0]

MSR 000000E7	0000-005A-9B2B-CD4C
MSR 000000E7	0000-005A-9E25-B409
MSR 000000E7	0000-005A-A070-CAE0
MSR 000000E8	0000-0082-24B0-CB3A [S200]
MSR 000000E8	0000-0082-27EB-E56B [S200]
MSR 000000E8	0000-0082-2BED-E12B
MSR 00000194	0000-0000-0009-0000
MSR 00000198	0000-2453-0000-2900 [S200]
MSR 00000198	0000-2540-0000-2900
MSR 00000198	0000-25E4-0000-2900 [S200]
MSR 00000199	0000-0000-0000-1900
MSR 0000019A	0000-0000-0000-0000
MSR 0000019B	0000-0000-0000-0010
MSR 0000019C	0000-0000-8827-2A8A
MSR 0000019C	0000-0000-8827-2A8A [S200]
MSR 0000019C	0000-0000-8828-2A8A [S200]
MSR 0000019D	0000-0000-0000-0000
MSR 000001A0	0000-0000-0085-0089
MSR 000001A2	0000-0000-0364-0000
MSR 000001A4	0000-0000-0000-0000
MSR 000001AA	0000-0000-0040-1CC0
MSR 000001AC	< FAILED >
MSR 000001AD	0000-2829-292A-2A2B
MSR 000001B0	0000-0000-0000-0006
MSR 000001B1	0000-0000-8826-0A8A
MSR 000001B2	0000-0000-0000-0000
MSR 000001FC	0000-0000-0024-005F
MSR 00000300	< FAILED >
MSR 0000030A	0000-0000-0000-0000
MSR 0000030A	0000-0000-0000-0000 [S200]
MSR 0000030A	0000-0000-0000-0000 [S200]
MSR 0000030B	0000-0000-0000-0000
MSR 0000030B	0000-0000-0000-0000 [S200]
MSR 0000030B	0000-0000-0000-0000 [S200]
MSR 00000480	00DA-0400-0000-0004
MSR 00000481	0000-007F-0000-0016
MSR 00000482	FFF9-FFFE-0401-E172
MSR 00000483	01FF-FFFF-0003-6DFF
MSR 00000484	0003-FFFF-0000-11FF
MSR 00000485	0000-0000-7004-C1E7
MSR 00000486	0000-0000-8000-0021
MSR 00000487	0000-0000-FFFF-FFFF
MSR 00000488	0000-0000-0000-2000
MSR 00000489	0000-0000-0037-67FF
MSR 0000048A	0000-0000-0000-002E
MSR 0000048B	005F-FCFF-0000-0000
MSR 0000048C	0000-0F01-0673-4141
MSR 0000048D	0000-007F-0000-0016
MSR 0000048E	FFF9-FFFE-0400-6172
MSR 0000048F	01FF-FFFF-0003-6DFB
MSR 00000490	0003-FFFF-0000-11FB
MSR 00000601	0000-0000-0000-0410
MSR 00000602	< FAILED >
MSR 00000603	0036-0000-0036-3636
MSR 00000604	< FAILED >
MSR 00000606	0000-0000-000A-0E03
MSR 0000060A	0000-0000-0000-884E
MSR 0000060B	0000-0000-0000-8876
MSR 0000060C	0000-0000-0000-8894
MSR 0000060D	0000-0007-EE13-A21E
MSR 00000610	0042-8270-00DD-81B8
MSR 00000611	0000-0000-0CE9-A4B2 [S200]
MSR 00000611	0000-0000-0CE9-FCD6 [S200]
MSR 00000611	0000-0000-0CEA-549D
MSR 00000613	0000-0000-0000-003D
MSR 00000614	0000-0000-0000-0168
MSR 00000618	0054-00DE-0000-0000
MSR 00000619	0000-0000-00FE-D66E [S200]

MSR 00000619	0000-0000-00FE-E856	~~~~~
MSR 00000619	0000-0000-00FE-FA2B	Navigation
MSR 0000061B	0000-0000-0000-0000	
MSR 0000061C	< FAILED >	
MSR 0000061E	< FAILED >	
MSR 00000620	0000-0000-0000-0828	
MSR 00000621	0000-0000-0000-0026	
MSR 00000638	0000-0000-0000-0000	
MSR 00000639	0000-0000-0B43-D46F [S200]	
MSR 00000639	0000-0000-0B44-10BC [S200]	
MSR 00000639	0000-0000-0B44-47C7	
MSR 0000063A	0000-0000-0000-0009	
MSR 0000063B	< FAILED >	
MSR 00000640	0000-0000-0000-0000	
MSR 00000641	0000-0000-0039-308C	
MSR 00000641	0000-0000-0039-308C [S200]	
MSR 00000641	0000-0000-0039-308C [S200]	
MSR 00000642	0000-0000-0000-000D	
MSR 00000648	0000-0000-0000-001A	
MSR 00000649	0000-0000-0015-0118	
MSR 0000064A	0000-0000-0000-0000	
MSR 0000064B	0000-0000-0000-0000	
MSR 0000064C	0000-0000-0000-0019	
MSR 00000690	0000-0000-0000-0000	
MSR 000006B0	0000-0000-2101-0000	
MSR 000006B1	0000-0000-0100-0000	
MSR 00000770	0000-0000-0000-0001	
MSR 00000771	0000-0000-0109-1A2B	
MSR 00000772	< FAILED >	
MSR 00000773	0000-0000-0000-0001	
MSR 00000774	0000-019E-0000-2B1A	
MSR 00000777	0000-0000-0000-0000	
MSR 00000832	0000-0000-0003-00D1	
MSR 00000838	0000-0000-0000-0000	
MSR 00000839	0000-0000-0000-0000	
MSR 0000083E	0000-0000-0000-000A	
APIC Clock	99.78 MHz (AT = 12574 / TT = 15003 / try = 1 / SKL = 24.00 MHz)	
APIC Clock	99.76 MHz (AT = 12573 / TT = 15002 / try = 1 / SKL = 24.00 MHz)	
APIC Clock	99.76 MHz (AT = 12573 / TT = 15003 / try = 1 / SKL = 24.00 MHz)	
APIC Clock	99.76 MHz (AT = 12573 / TT = 15003 / try = 1 / SKL = 24.00 MHz)	
APIC Clock	99.76 MHz (AT = 12574 / TT = 15004 / try = 1 / SKL = 24.00 MHz)	

## Motherboard

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### Motherboard Properties:

Motherboard ID <DMI>  
 Motherboard Name Lenovo ThinkPad X1 Extreme

### Front Side Bus Properties:

Bus Type BCLK  
 Real Clock 100 MHz  
 Effective Clock 100 MHz

### Memory Bus Properties:

Bus Type Dual DDR4 SDRAM  
 Bus Width 128-bit  
 DRAM:FSB Ratio 40:3  
 Real Clock 1333 MHz (DDR)  
 Effective Clock 2667 MHz  
 Bandwidth 42667 MB/s

### Chipset Bus Properties:

Bus Type Intel Direct Media Interface v3.0

### Motherboard Manufacturer:

Company Name	Lenovo
Product Information	<a href="http://www.lenovo.com/products/us">http://www.lenovo.com/products/us</a>
BIOS Download	<a href="http://support.lenovo.com/en_US">http://support.lenovo.com/en_US</a>
Driver Update	<a href="http://www.aida64.com/driver-updates">http://www.aida64.com/driver-updates</a>
BIOS Upgrades	<a href="http://www.aida64.com/bios-updates">http://www.aida64.com/bios-updates</a>

Navigation

## Memory

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**Physical Memory:**

Total	32275 MB
Used	6743 MB
Free	25532 MB
Utilization	21 %

**Virtual Memory:**

Total	37395 MB
Used	8793 MB
Free	28602 MB
Utilization	24 %

**Paging File:**

Paging File	C:\pagefile.sys
Current Size	5120 MB
Current / Peak Usage	0 MB / 0 MB
Utilization	0 %

**Physical Address Extension (PAE):**

Supported by Operating System	Yes
Supported by CPU	Yes
Active	Yes

## SPD

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### [ DIMM1: Samsung M471A2K43CB1-CTD ]

**Memory Module Properties:**

Module Name	Samsung M471A2K43CB1-CTD
Serial Number	2385EC50h (1357677859)
Manufacture Date	Week 33 / 2018
Module Size	16 GB (2 ranks, 16 banks)
Module Type	SO-DIMM
Memory Type	DDR4 SDRAM
Memory Speed	DDR4-2666 (1333 MHz)
Module Width	64 bit
Module Voltage	1.2 V
Error Detection Method	None
DRAM Manufacturer	Samsung
DRAM Stepping	00h
SDRAM Die Count	1

**Memory Timings:**

@ 1333 MHz	20-19-19-43 (CL-RCD-RP-RAS) / 61-467-347-214-7-4-7-28 (RC-RFC1-RFC2-RFC4-RRDL-RRDS-CCDL-FAW)
@ 1333 MHz	19-19-19-43 (CL-RCD-RP-RAS) / 61-467-347-214-7-4-7-28 (RC-RFC1-RFC2-RFC4-RRDL-RRDS-CCDL-FAW)
@ 1309 MHz	18-18-18-42 (CL-RCD-RP-RAS) / 60-459-341-210-7-4-7-28 (RC-RFC1-RFC2-RFC4-RRDL-RRDS-CCDL-FAW)
@ 1236 MHz	17-17-17-40 (CL-RCD-RP-RAS) / 57-433-322-198-7-4-7-26 (RC-RFC1-RFC2-RFC4-RRDL-RRDS-CCDL-FAW)
@ 1163 MHz	16-16-16-38 (CL-RCD-RP-RAS) / 54-408-303-187-6-4-6-25 (RC-RFC1-RFC2-RFC4-RRDL-RRDS-CCDL-FAW)
@ 1090 MHz	15-15-15-35 (CL-RCD-RP-RAS) / 50-382-284-175-6-4-6-23 (RC-RFC1-RFC2-RFC4-RRDL-RRDS-CCDL-FAW)
@ 1018 MHz	14-14-14-33 (CL-RCD-RP-RAS) / 47-357-265-163-5-4-6-22 (RC-RFC1-RFC2-RFC4-RRDL-RRDS-CCDL-FAW)
@ 945 MHz	13-13-13-31 (CL-RCD-RP-RAS) / 44-331-246-152-5-3-5-20 (RC-RFC1-RFC2-RFC4-RRDL-RRDS-CCDL-FAW)
@ 872 MHz	12-12-12-28 (CL-RCD-RP-RAS) / 40-306-227-140-5-3-5-19 (RC-RFC1-RFC2-RFC4-RRDL-RRDS-CCDL-FAW)
@ 800 MHz	11-11-11-26 (CL-RCD-RP-RAS) / 37-280-208-128-4-3-4-17 (RC-RFC1-RFC2-RFC4-RRDL-RRDS-CCDL-FAW)
@ 727 MHz	10-10-10-24 (CL-RCD-RP-RAS) / 34-255-190-117-4-3-4-16 (RC-RFC1-RFC2-RFC4-RRDL-RRDS-CCDL-FAW)

**Memory Module Features:**

Monolithic DRAM Device	Yes
Thermal Sensor	Not Present

**Memory Module Manufacturer:**

Company Name	Samsung
Product Information	<a href="http://www.samsung.com/global/business/semiconductor">http://www.samsung.com/global/business/semiconductor</a>

**[ DIMM3: Samsung M471A2K43CB1-CTD ]****Memory Module Properties:**

Module Name	Samsung M471A2K43CB1-CTD
Serial Number	2385ECF0h (4042032419)
Manufacture Date	Week 33 / 2018
Module Size	16 GB (2 ranks, 16 banks)
Module Type	SO-DIMM
Memory Type	DDR4 SDRAM
Memory Speed	DDR4-2666 (1333 MHz)
Module Width	64 bit
Module Voltage	1.2 V
Error Detection Method	None
DRAM Manufacturer	Samsung
DRAM Stepping	00h
SDRAM Die Count	1

**Memory Timings:**

@ 1333 MHz	20-19-19-43 (CL-RCD-RP-RAS) / 61-467-347-214-7-4-7-28 (RC-RFC1-RFC2-RFC4-RRDL-RRDS-CCDL-FAW)
@ 1333 MHz	19-19-19-43 (CL-RCD-RP-RAS) / 61-467-347-214-7-4-7-28 (RC-RFC1-RFC2-RFC4-RRDL-RRDS-CCDL-FAW)
@ 1309 MHz	18-18-18-42 (CL-RCD-RP-RAS) / 60-459-341-210-7-4-7-28 (RC-RFC1-RFC2-RFC4-RRDL-RRDS-CCDL-FAW)
@ 1236 MHz	17-17-17-40 (CL-RCD-RP-RAS) / 57-433-322-198-7-4-7-26 (RC-RFC1-RFC2-RFC4-RRDL-RRDS-CCDL-FAW)
@ 1163 MHz	16-16-16-38 (CL-RCD-RP-RAS) / 54-408-303-187-6-4-6-25 (RC-RFC1-RFC2-RFC4-RRDL-RRDS-CCDL-FAW)
@ 1090 MHz	15-15-15-35 (CL-RCD-RP-RAS) / 50-382-284-175-6-4-6-23 (RC-RFC1-RFC2-RFC4-RRDL-RRDS-CCDL-FAW)
@ 1018 MHz	14-14-14-33 (CL-RCD-RP-RAS) / 47-357-265-163-5-4-6-22 (RC-RFC1-RFC2-RFC4-RRDL-RRDS-CCDL-FAW)
@ 945 MHz	13-13-13-31 (CL-RCD-RP-RAS) / 44-331-246-152-5-3-5-20 (RC-RFC1-RFC2-RFC4-RRDL-RRDS-CCDL-FAW)
@ 872 MHz	12-12-12-28 (CL-RCD-RP-RAS) / 40-306-227-140-5-3-5-19 (RC-RFC1-RFC2-RFC4-RRDL-RRDS-CCDL-FAW)
@ 800 MHz	11-11-11-26 (CL-RCD-RP-RAS) / 37-280-208-128-4-3-4-17 (RC-RFC1-RFC2-RFC4-RRDL-RRDS-CCDL-FAW)
@ 727 MHz	10-10-10-24 (CL-RCD-RP-RAS) / 34-255-190-117-4-3-4-16 (RC-RFC1-RFC2-RFC4-RRDL-RRDS-CCDL-FAW)

**Memory Module Features:**

Monolithic DRAM Device	Yes
Thermal Sensor	Not Present

**Memory Module Manufacturer:**

Company Name	Samsung
Product Information	<a href="http://www.samsung.com/global/business/semiconductor">http://www.samsung.com/global/business/semiconductor</a>

## Chipset

**[ North Bridge: Intel Coffee Lake-H IMC ]****North Bridge Properties:**

North Bridge	Intel Coffee Lake-H IMC
Supported Memory Types	DDR4-1333, DDR4-1600, DDR4-1866, DDR4-2133, DDR4-2400, DDR4-2667 SDRAM
Maximum Memory Amount	64 GB
Revision	07
Process Technology	14 nm
VT-d	Supported
Extended APIC (x2APIC)	Supported

**Memory Controller:**

Type	Dual Channel (128-bit)
Active Mode	Dual Channel (128-bit)

**Memory Timings:**

CAS Latency (CL)	19T	Navigation
RAS To CAS Delay (tRCD)	19T	
RAS Precharge (tRP)	19T	
RAS Active Time (tRAS)	43T	
Row Refresh Cycle Time (tRFC)	467T	
Command Rate (CR)	2T	
RAS To RAS Delay (tRRD)	Same Bank Group: 7T, Diff. Bank Group: 4T	
Write Recovery Time (tWR)	21T	
Read To Read Delay (tRTR)	Different Rank: 7T, Different DIMM: 7T, Same Bank Group: 7T, Diff. Bank Group: 4T	
Read To Write Delay (tRTW)	Different Rank: 9T, Different DIMM: 11T, Same Bank Group: 9T, Diff. Bank Group: 9T	
Write To Read Delay (tWTR)	Different Rank: 6T, Different DIMM: 6T, Same Bank Group: 33T, Diff. Bank Group: 27T	
Write To Write Delay (tWTW)	Different Rank: 7T, Different DIMM: 7T, Same Bank Group: 7T, Diff. Bank Group: 4T	
Read To Precharge Delay (tRTP)	10T	
Write To Precharge Delay (tWTP)	42T	
Four Activate Window Delay (tFAW)	28T	
Write CAS Latency (tWCL)	17T	
CKE Min. Pulse Width (tCKE)	7T	
Refresh Period (tREF)	10400T	
Round Trip Latency (tRTL)	DIMM1: 61T, DIMM2: 73T, DIMM3: 60T, DIMM4: 73T	
I/O Latency (tIOL)	DIMM1: 7T, DIMM2: 4T, DIMM3: 5T, DIMM4: 4T	
Burst Length (BL)	8	

**Error Correction:**

ECC	Not Supported
ChipKill ECC	Not Supported
RAID	Not Supported
ECC Scrubbing	Not Supported

**Memory Slots:**

DRAM Slot #1	16 GB (DDR4 SDRAM)
DRAM Slot #2	16 GB (DDR4 SDRAM)

**Integrated Graphics Controller:**

Graphics Controller Type	Intel HD Graphics
Graphics Controller Status	Enabled

**PCI Express Controller:**

PCI-E 2.0 x16 port #2	In Use @ x16 (nVIDIA GeForce GTX 1050 Ti Video Adapter, nVIDIA GP107 - High Definition Audio Controller)
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**Chipset Manufacturer:**

Company Name	Intel Corporation
Product Information	<a href="http://www.intel.com/products/chipsets">http://www.intel.com/products/chipsets</a>
Driver Download	<a href="http://support.intel.com/support/chipsets">http://support.intel.com/support/chipsets</a>
BIOS Upgrades	<a href="http://www.aida64.com/bios-updates">http://www.aida64.com/bios-updates</a>
Driver Update	<a href="http://www.aida64.com/driver-updates">http://www.aida64.com/driver-updates</a>

**[ South Bridge: Intel Cannon Lake PCH ]****South Bridge Properties:**

South Bridge	Intel Cannon Lake PCH
Revision	10

**PCI Express Controller:**

PCI-E 2.0 x4 port #9	In Use @ x4 (Standard NVM Express Controller [144D-A808] [NoDB])
PCI-E 2.0 x1 port #15	In Use @ x1 (Broadcom BCM15700A2 802.11ac Wireless Network Adapter)
PCI-E 2.0 x4 port #17	In Use @ x4 (Toshiba AIS NVMe SSD Controller)

**Chipset Manufacturer:**

Company Name	Intel Corporation
Product Information	<a href="http://www.intel.com/products/chipsets">http://www.intel.com/products/chipsets</a>
Driver Download	<a href="http://support.intel.com/support/chipsets">http://support.intel.com/support/chipsets</a>
BIOS Upgrades	<a href="http://www.aida64.com/bios-updates">http://www.aida64.com/bios-updates</a>
Driver Update	<a href="http://www.aida64.com/driver-updates">http://www.aida64.com/driver-updates</a>

## BIOS

Navigation

**BIOS Properties:**

BIOS Type	Phoenix EFI
BIOS Version	N2EET33W (1.15 )
SMBIOS Version	3.1
UEFI Boot	Yes
System BIOS Date	11/07/2018
Video BIOS Date	10/08/18

**BIOS Manufacturer:**

Company Name	Phoenix Technologies Ltd.
Product Information	<a href="http://www.phoenix.com/products">http://www.phoenix.com/products</a>
BIOS Upgrades	<a href="http://www.aida64.com/bios-updates">http://www.aida64.com/bios-updates</a>

## ACPI

**[ APIC: Multiple APIC Description Table ]****ACPI Table Properties:**

ACPI Signature	APIC
Table Description	Multiple APIC Description Table
Memory Address	4073A000h
Table Length	300 bytes
OEM ID	LENOVO
OEM Table ID	TP-N2E
OEM Revision	00001150h
Creator ID	PTEC
Creator Revision	00000002h
Local APIC Address	FEE00000h

**Processor Local APIC:**

ACPI Processor ID	01h
APIC ID	00h
Status	Enabled

**Processor Local APIC:**

ACPI Processor ID	02h
APIC ID	02h
Status	Enabled

**Processor Local APIC:**

ACPI Processor ID	03h
APIC ID	04h
Status	Enabled

**Processor Local APIC:**

ACPI Processor ID	04h
APIC ID	06h
Status	Enabled

**Processor Local APIC:**

ACPI Processor ID	05h
APIC ID	08h
Status	Enabled

**Processor Local APIC:**

ACPI Processor ID	06h
APIC ID	0Ah
Status	Enabled

**Processor Local APIC:**

ACPI Processor ID	07h
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APIC ID	01h
Status	Enabled

**Processor Local APIC:**

ACPI Processor ID	08h
APIC ID	03h
Status	Enabled

**Processor Local APIC:**

ACPI Processor ID	09h
APIC ID	05h
Status	Enabled

**Processor Local APIC:**

ACPI Processor ID	0Ah
APIC ID	07h
Status	Enabled

**Processor Local APIC:**

ACPI Processor ID	0Bh
APIC ID	09h
Status	Enabled

**Processor Local APIC:**

ACPI Processor ID	0Ch
APIC ID	0Bh
Status	Enabled

**Processor Local APIC:**

ACPI Processor ID	0Dh
APIC ID	FFh
Status	Disabled

**Processor Local APIC:**

ACPI Processor ID	0Eh
APIC ID	FFh
Status	Disabled

**Processor Local APIC:**

ACPI Processor ID	0Fh
APIC ID	FFh
Status	Disabled

**Processor Local APIC:**

ACPI Processor ID	10h
APIC ID	FFh
Status	Disabled

**I/O APIC:**

I/O APIC ID	02h
I/O APIC Address	FEC00000h
Global System Interrupt Base	00000000h

**Interrupt Source Override:**

Bus	ISA
Source	IRQ0
Global System Interrupt	00000002h
Polarity	Conforms to the specifications of the bus
Trigger Mode	Conforms to the specifications of the bus

**Interrupt Source Override:**

Bus	ISA
Source	IRQ9
Global System Interrupt	00000009h
Polarity	Active High
Trigger Mode	Level-Trigged

**Local APIC NMI:**

ACPI Processor ID	01h
Local ACPI LINT#	01h
Polarity	Active High
Trigger Mode	Edge-Triggered

**Local APIC NMI:**

ACPI Processor ID	02h
Local ACPI LINT#	01h
Polarity	Active High
Trigger Mode	Edge-Triggered

**Local APIC NMI:**

ACPI Processor ID	03h
Local ACPI LINT#	01h
Polarity	Active High
Trigger Mode	Edge-Triggered

**Local APIC NMI:**

ACPI Processor ID	04h
Local ACPI LINT#	01h
Polarity	Active High
Trigger Mode	Edge-Triggered

**Local APIC NMI:**

ACPI Processor ID	05h
Local ACPI LINT#	01h
Polarity	Active High
Trigger Mode	Edge-Triggered

**Local APIC NMI:**

ACPI Processor ID	06h
Local ACPI LINT#	01h
Polarity	Active High
Trigger Mode	Edge-Triggered

**Local APIC NMI:**

ACPI Processor ID	07h
Local ACPI LINT#	01h
Polarity	Active High
Trigger Mode	Edge-Triggered

**Local APIC NMI:**

ACPI Processor ID	08h
Local ACPI LINT#	01h
Polarity	Active High
Trigger Mode	Edge-Triggered

**Local APIC NMI:**

ACPI Processor ID	09h
Local ACPI LINT#	01h
Polarity	Active High
Trigger Mode	Edge-Triggered

**Local APIC NMI:**

ACPI Processor ID	0Ah
Local ACPI LINT#	01h
Polarity	Active High
Trigger Mode	Edge-Triggered

**Local APIC NMI:**

ACPI Processor ID	0Bh
Local ACPI LINT#	01h
Polarity	Active High
Trigger Mode	Edge-Triggered

**Local APIC NMI:**

ACPI Processor ID	0Ch
Local ACPI LINT#	01h

Polarity	Active High
Trigger Mode	Edge-Triggered

**Local APIC NMI:**

ACPI Processor ID	0Dh
Local ACPI LINT#	01h
Polarity	Active High
Trigger Mode	Edge-Triggered

**Local APIC NMI:**

ACPI Processor ID	0Eh
Local ACPI LINT#	01h
Polarity	Active High
Trigger Mode	Edge-Triggered

**Local APIC NMI:**

ACPI Processor ID	0Fh
Local ACPI LINT#	01h
Polarity	Active High
Trigger Mode	Edge-Triggered

**Local APIC NMI:**

ACPI Processor ID	10h
Local ACPI LINT#	01h
Polarity	Active High
Trigger Mode	Edge-Triggered

**[ ASF!: Alert Standard Format Table ]****ACPI Table Properties:**

ACPI Signature	ASF!
Table Description	Alert Standard Format Table
Memory Address	3E8D8000h
Table Length	116 bytes
OEM ID	LENOVO
OEM Table ID	TP-N2E
OEM Revision	00001150h
Creator ID	PTEC
Creator Revision	00000002h

**ASF\_INFO:**

Min Watchdog Reset Value	255 sec
Min ASF Sensor Interpoll Wait Time	1275 msec
System ID	204Ch
IANA Manufacturer ID	00-00-4A-66h

**ASF\_RCTL:**

Numer of Controls	4
Array Element Length	4

**ASF\_RMCP:**

Remote Control Capabilities	00-18-00-00-00-13-F0h
RMCP Boot Options Completion Code	01h (No options to process)
RMCP IANA Enterprise ID	00-00-00-00h
RMCP Special Command	00h
RMCP Special Command Parameter	0000h
RMCP Boot Options	0000h
RMCP OEM Parameters	0000h

**[ BATB: Unknown ]****ACPI Table Properties:**

ACPI Signature	BATB
Table Description	Unknown
Memory Address	406DE000h
Table Length	74 bytes
OEM ID	LENOVO

OEM Table ID	TP-N2E
OEM Revision	00001150h
Creator ID	PTEC
Creator Revision	00000002h

## [ BOOT: Simple Boot Flag Table ]

### ACPI Table Properties:

ACPI Signature	BOOT
Table Description	Simple Boot Flag Table
Memory Address	406FC000h
Table Length	40 bytes
OEM ID	LENOVO
OEM Table ID	TP-N2E
OEM Revision	00001150h
Creator ID	PTEC
Creator Revision	00000002h

## [ DBG2: Debug Port Table Type 2 ]

### ACPI Table Properties:

ACPI Signature	DBG2
Table Description	Debug Port Table Type 2
Memory Address	406F4000h
Table Length	84 bytes
OEM ID	LENOVO
OEM Table ID	TP-N2E
OEM Revision	00001150h
Creator ID	PTEC
Creator Revision	00000002h

## [ DBGP: Debug Port Table ]

### ACPI Table Properties:

ACPI Signature	DBGP
Table Description	Debug Port Table
Memory Address	406F5000h
Table Length	52 bytes
OEM ID	LENOVO
OEM Table ID	TP-N2E
OEM Revision	00001150h
Creator ID	PTEC
Creator Revision	00000002h

## [ DMAR: DMA Remapping Table ]

### ACPI Table Properties:

ACPI Signature	DMAR
Table Description	DMA Remapping Table
Memory Address	3E8D9000h
Table Length	168 bytes
OEM ID	LENOVO
OEM Table ID	TP-N2E
OEM Revision	00001150h
Creator ID	PTEC
Creator Revision	00000002h

## [ DSDT: Differentiated System Description Table ]

### ACPI Table Properties:

ACPI Signature	DSDT
Table Description	Differentiated System Description Table
Memory Address	00000000-40701000h
Table Length	221430 bytes
OEM ID	LENOVO
OEM Table ID	CFL

OEM Revision	20170001h
Creator ID	INTL
Creator Revision	20160422h

Navigation

**nVIDIA SLI:**

SLI Certification	Not Present
PCI 0-0-0 (Direct I/O)	8086-3EC4 (Intel)
PCI 0-0-0 (HAL)	8086-3EC4 (Intel)

**Lucid Virtu:**

Virtu Certification	Not Present
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**[ ECDT: Embedded Controller Boot Resources Table ]****ACPI Table Properties:**

ACPI Signature	ECDT
Table Description	Embedded Controller Boot Resources Table
Memory Address	40738000h
Table Length	83 bytes
OEM ID	LENOVO
OEM Table ID	TP-N2E
OEM Revision	00001150h
Creator ID	PTEC
Creator Revision	00000002h

**[ FACP: Fixed ACPI Description Table ]****ACPI Table Properties:**

ACPI Signature	FACP
Table Description	Fixed ACPI Description Table
Memory Address	4073C000h
Table Length	276 bytes
OEM ID	LENOVO
OEM Table ID	TP-N2E
OEM Revision	00001150h
Creator ID	PTEC
Creator Revision	00000002h
FACS Address	4FB8000h / 00000000-00000000h
DSDT Address	40701000h / 00000000-40701000h
SMI Command Port	000000B2h
PM Timer	00001808h

**[ FACS: Firmware ACPI Control Structure ]****ACPI Table Properties:**

ACPI Signature	FACS
Table Description	Firmware ACPI Control Structure
Memory Address	4FB8000h
Table Length	64 bytes
Hardware Signature	0000334Eh
Waking Vector	00000000h
Global Lock	00000000h

**[ FBPT: Firmware Basic Boot Performance Table ]****ACPI Table Properties:**

ACPI Signature	FBPT
Table Description	Firmware Basic Boot Performance Table
Memory Address	00000000-4E74E000h
Table Length	56 bytes

**[ FPDT: Firmware Performance Data Table ]****ACPI Table Properties:**

ACPI Signature	FPDT
Table Description	Firmware Performance Data Table

Memory Address	3E8D6000h
Table Length	68 bytes
OEM ID	LENOVO
OEM Table ID	TP-N2E
OEM Revision	00001150h
Creator ID	PTEC
Creator Revision	00000002h
FBPT Address	00000000-4E74E000h
S3PT Address	00000000-4EE4C000h

Navigation

## [ HPET: IA-PC High Precision Event Timer Table ]

### ACPI Table Properties:

ACPI Signature	HPET
Table Description	IA-PC High Precision Event Timer Table
Memory Address	4073B000h
Table Length	56 bytes
OEM ID	LENOVO
OEM Table ID	TP-N2E
OEM Revision	00001150h
Creator ID	PTEC
Creator Revision	00000002h
HPET Address	00000000-FED00000h
Vendor ID	8086h
Revision	01h
Number of Timers	3
Counter Size	64-bit
Minimum Clock Ticks	128
Page Protection	No Guarantee
OEM Attribute	0h
LegacyReplacement IRQ Routing	Supported

## [ LPIT: Low Power Idle Table ]

### ACPI Table Properties:

ACPI Signature	LPIT
Table Description	Low Power Idle Table
Memory Address	406F9000h
Table Length	92 bytes
OEM ID	LENOVO
OEM Table ID	TP-N2E
OEM Revision	00001150h
Creator ID	PTEC
Creator Revision	00000002h

### Native C-State Instruction Entry Trigger:

Unique ID	0
Status	Enabled
Minimum Residency	30000 us
Worst Case Exit Latency	3000 us
Residency Counter Frequency	9580

## [ MCFG: Memory Mapped Configuration Space Base Address Description Table ]

### ACPI Table Properties:

ACPI Signature	MCFG
Table Description	Memory Mapped Configuration Space Base Address Description Table
Memory Address	40739000h
Table Length	60 bytes
OEM ID	LENOVO
OEM Table ID	TP-N2E
OEM Revision	00001150h
Creator ID	PTEC
Creator Revision	00000002h
Config Space Address	00000000-E0000000h
PCI Segment	0000h
Start Bus Number	00h

End Bus Number

FFh

Navigation

## [ MSDM: Microsoft Data Management Table ]

**ACPI Table Properties:**

ACPI Signature	MSDM
Table Description	Microsoft Data Management Table
Memory Address	406F3000h
Table Length	85 bytes
OEM ID	LENOVO
OEM Table ID	TP-N2E
OEM Revision	00001150h
Creator ID	PTEC
Creator Revision	00000002h
SLS Version	1
SLS Data Type	1
SLS Data Length	29
SLS Data	6T8C7-NPC2V-XQ646-MTJQG-YG9TP

## [ NHLT: Non-HD Audio Endpoint Description Table ]

**ACPI Table Properties:**

ACPI Signature	NHLT
Table Description	Non-HD Audio Endpoint Description Table
Memory Address	3E8DB000h
Table Length	45 bytes
OEM ID	LENOVO
OEM Table ID	TP-N2E
OEM Revision	00001150h
Creator ID	PTEC
Creator Revision	00000002h

## [ RSD PTR: Root System Description Pointer ]

**ACPI Table Properties:**

ACPI Signature	RSD PTR
Table Description	Root System Description Pointer
Memory Address	000F0140h
Table Length	36 bytes
OEM ID	LENOVO
RSDP Revision	2 (ACPI 2.0+)
RSDT Address	4FD0C0C4h
XSDT Address	00000000-4FD0C188h

## [ RSDT: Root System Description Table ]

**ACPI Table Properties:**

ACPI Signature	RSDT
Table Description	Root System Description Table
Memory Address	4FD0C0C4h
Table Length	168 bytes
OEM ID	LENOVO
OEM Table ID	TP-N2E
OEM Revision	00001150h
Creator ID	PTEC
Creator Revision	00000002h
RSDT Entry #0	4073C000h (FACP)
RSDT Entry #1	40CD9000h (SSDT)
RSDT Entry #2	40CD8000h (SSDT)
RSDT Entry #3	40C9D000h (SSDT)
RSDT Entry #4	40744000h (SSDT)
RSDT Entry #5	40741000h (SSDT)
RSDT Entry #6	40740000h (SSDT)
RSDT Entry #7	4073F000h (TPM2)
RSDT Entry #8	4FBF1000h (UEFI)
RSDT Entry #9	4073D000h (SSDT)
RSDT Entry #10	4073B000h (HPET)

RSDT Entry #11	4073A000h (APIC)
RSDT Entry #12	40739000h (MCFG)
RSDT Entry #13	40738000h (ECDT)
RSDT Entry #14	406FF000h (SSDT)
RSDT Entry #15	406FD000h (SSDT)
RSDT Entry #16	406FC000h (BOOT)
RSDT Entry #17	406FB000h (SLIC)
RSDT Entry #18	406FA000h (SSDT)
RSDT Entry #19	406F9000h (LPIT)
RSDT Entry #20	406F8000h (WSMT)
RSDT Entry #21	406F6000h (SSDT)
RSDT Entry #22	406F5000h (DBGP)
RSDT Entry #23	406F4000h (DBG2)
RSDT Entry #24	406F3000h (MSDM)
RSDT Entry #25	406DE000h (BATB)
RSDT Entry #26	3E8DB000h (NHLT)
RSDT Entry #27	3E8DA000h (SSDT)
RSDT Entry #28	3E8D9000h (DMAR)
RSDT Entry #29	3E8D8000h (ASF!)
RSDT Entry #30	3E8D6000h (FPDT)
RSDT Entry #31	4FBD5000h (UEFI)
RSDT Entry #32	3E8D4000h (SSDT)

Navigation

## [ S3PT: S3 Performance Table ]

**ACPI Table Properties:**

ACPI Signature	S3PT
Table Description	S3 Performance Table
Memory Address	00000000-4EE4C000h
Table Length	52 bytes

## [ SLIC: Software Licensing Description Table ]

**ACPI Table Properties:**

ACPI Signature	SLIC
Table Description	Software Licensing Description Table
Memory Address	406FB000h
Table Length	374 bytes
OEM ID	LENOVO
OEM Table ID	TP-N2E
OEM Revision	00001150h
Creator ID	PTEC
Creator Revision	00000002h
SLIC Version	v2.1

**OEM Public Key:**

Key Type	06h
Version	02h
Algorithm	00002400h
Magic	RSA1
Bit Length	1024
Exponent	65537

**SLIC Marker:**

Version	00020001h
OEM ID	LENOVO
OEM Table ID	TP-N2E
Windows Flag	WINDOWS

## [ SSDT: Secondary System Description Table ]

**ACPI Table Properties:**

ACPI Signature	SSDT
Table Description	Secondary System Description Table
Memory Address	3E8D4000h
Table Length	7174 bytes
OEM ID	LENOVO

OEM Table ID	NvOptTbl
OEM Revision	00001000h
Creator ID	INTL
Creator Revision	20160527h

Navigation

## [ SSDT: Secondary System Description Table ]

**ACPI Table Properties:**

ACPI Signature	SSDT
Table Description	Secondary System Description Table
Memory Address	3E8DA000h
Table Length	174 bytes
OEM ID	LENOVO
OEM Table ID	SgPeg
OEM Revision	00001000h
Creator ID	INTL
Creator Revision	20160527h

## [ SSDT: Secondary System Description Table ]

**ACPI Table Properties:**

ACPI Signature	SSDT
Table Description	Secondary System Description Table
Memory Address	406F6000h
Table Length	5559 bytes
OEM ID	LENOVO
OEM Table ID	TbtTypeC
OEM Revision	00000000h
Creator ID	INTL
Creator Revision	20160527h

## [ SSDT: Secondary System Description Table ]

**ACPI Table Properties:**

ACPI Signature	SSDT
Table Description	Secondary System Description Table
Memory Address	406FA000h
Table Length	4002 bytes
OEM ID	LENOVO
OEM Table ID	UsbCTabl
OEM Revision	00001000h
Creator ID	INTL
Creator Revision	20160527h

## [ SSDT: Secondary System Description Table ]

**ACPI Table Properties:**

ACPI Signature	SSDT
Table Description	Secondary System Description Table
Memory Address	406FD000h
Table Length	7273 bytes
OEM ID	LENOVO
OEM Table ID	ProjSsdt
OEM Revision	00000010h
Creator ID	INTL
Creator Revision	20160527h

## [ SSDT: Secondary System Description Table ]

**ACPI Table Properties:**

ACPI Signature	SSDT
Table Description	Secondary System Description Table
Memory Address	406FF000h
Table Length	4601 bytes
OEM ID	LENOVO
OEM Table ID	CflH_Tbt

OEM Revision	00001000h
Creator ID	INTL
Creator Revision	20160527h

Navigation

## [ SSDT: Secondary System Description Table ]

**ACPI Table Properties:**

ACPI Signature	SSDT
Table Description	Secondary System Description Table
Memory Address	4073D000h
Table Length	1320 bytes
OEM ID	LENOVO
OEM Table ID	PerfTune
OEM Revision	00001000h
Creator ID	INTL
Creator Revision	20160527h

## [ SSDT: Secondary System Description Table ]

**ACPI Table Properties:**

ACPI Signature	SSDT
Table Description	Secondary System Description Table
Memory Address	40740000h
Table Length	993 bytes
OEM ID	LENOVO
OEM Table ID	Tpm2Tabl
OEM Revision	00001000h
Creator ID	INTL
Creator Revision	20160527h

## [ SSDT: Secondary System Description Table ]

**ACPI Table Properties:**

ACPI Signature	SSDT
Table Description	Secondary System Description Table
Memory Address	40741000h
Table Length	10854 bytes
OEM ID	LENOVO
OEM Table ID	PegSsdт
OEM Revision	00001000h
Creator ID	INTL
Creator Revision	20160527h

## [ SSDT: Secondary System Description Table ]

**ACPI Table Properties:**

ACPI Signature	SSDT
Table Description	Secondary System Description Table
Memory Address	40744000h
Table Length	12607 bytes
OEM ID	LENOVO
OEM Table ID	SaSsdт
OEM Revision	00003000h
Creator ID	INTL
Creator Revision	20160527h

## [ SSDT: Secondary System Description Table ]

**ACPI Table Properties:**

ACPI Signature	SSDT
Table Description	Secondary System Description Table
Memory Address	40C9D000h
Table Length	20768 bytes
OEM ID	LENOVO
OEM Table ID	DptfTabl
OEM Revision	00001000h

Creator ID  
Creator Revision

INTL  
20160527h

Navigation

## [ SSDT: Secondary System Description Table ]

### **ACPI Table Properties:**

ACPI Signature	SSDT
Table Description	Secondary System Description Table
Memory Address	40CD8000h
Table Length	1389 bytes
OEM ID	LENOVO
OEM Table ID	CtdpB
OEM Revision	00001000h
Creator ID	INTL
Creator Revision	20160527h

## [ SSDT: Secondary System Description Table ]

### **ACPI Table Properties:**

ACPI Signature	SSDT
Table Description	Secondary System Description Table
Memory Address	40CD9000h
Table Length	6101 bytes
OEM ID	LENOVO
OEM Table ID	CpuSsdт
OEM Revision	00003000h
Creator ID	INTL
Creator Revision	20160527h

## [ TPM2: TPM 2.0 Hardware Interface Table ]

### **ACPI Table Properties:**

ACPI Signature	TPM2
Table Description	TPM 2.0 Hardware Interface Table
Memory Address	4073F000h
Table Length	52 bytes
OEM ID	LENOVO
OEM Table ID	TP-N2E
OEM Revision	00001150h
Creator ID	PTEC
Creator Revision	00000002h

## [ UEFI: UEFI ACPI Boot Optimization Table ]

### **ACPI Table Properties:**

ACPI Signature	UEFI
Table Description	UEFI ACPI Boot Optimization Table
Memory Address	4FBBD5000h
Table Length	298 bytes
OEM ID	LENOVO
OEM Table ID	TP-N2E
OEM Revision	00001150h
Creator ID	PTEC
Creator Revision	00000002h

## [ UEFI: UEFI ACPI Boot Optimization Table ]

### **ACPI Table Properties:**

ACPI Signature	UEFI
Table Description	UEFI ACPI Boot Optimization Table
Memory Address	4FBF1000h
Table Length	66 bytes
OEM ID	LENOVO
OEM Table ID	TP-N2E
OEM Revision	00001150h
Creator ID	PTEC

## [ WSMT: Windows SMM Security Mitigations Table ]

**ACPI Table Properties:**

ACPI Signature	WSMT
Table Description	Windows SMM Security Mitigations Table
Memory Address	406F8000h
Table Length	40 bytes
OEM ID	LENOVO
OEM Table ID	TP-N2E
OEM Revision	00001150h
Creator ID	PTEC
Creator Revision	00000002h

## [ XSDT: Extended System Description Table ]

**ACPI Table Properties:**

ACPI Signature	XSDT
Table Description	Extended System Description Table
Memory Address	00000000-4FD0C188h
Table Length	300 bytes
OEM ID	LENOVO
OEM Table ID	TP-N2E
OEM Revision	00001150h
Creator ID	PTEC
Creator Revision	00000002h
XSDT Entry #0	00000000-4073C000h (FACP)
XSDT Entry #1	00000000-40CD9000h (SSDT)
XSDT Entry #2	00000000-40CD8000h (SSDT)
XSDT Entry #3	00000000-40C9D000h (SSDT)
XSDT Entry #4	00000000-40744000h (SSDT)
XSDT Entry #5	00000000-40741000h (SSDT)
XSDT Entry #6	00000000-40740000h (SSDT)
XSDT Entry #7	00000000-4073F000h (TPM2)
XSDT Entry #8	00000000-4FBF1000h (UEFI)
XSDT Entry #9	00000000-4073D000h (SSDT)
XSDT Entry #10	00000000-4073B000h (HPET)
XSDT Entry #11	00000000-4073A000h (APIC)
XSDT Entry #12	00000000-40739000h (MCFG)
XSDT Entry #13	00000000-40738000h (ECDT)
XSDT Entry #14	00000000-406FF000h (SSDT)
XSDT Entry #15	00000000-406FD000h (SSDT)
XSDT Entry #16	00000000-406FC000h (BOOT)
XSDT Entry #17	00000000-406FB000h (SLIC)
XSDT Entry #18	00000000-406FA000h (SSDT)
XSDT Entry #19	00000000-406F9000h (LPIT)
XSDT Entry #20	00000000-406F8000h (WSMT)
XSDT Entry #21	00000000-406F6000h (SSDT)
XSDT Entry #22	00000000-406F5000h (DBG)
XSDT Entry #23	00000000-406F4000h (DBG2)
XSDT Entry #24	00000000-406F3000h (MSDM)
XSDT Entry #25	00000000-406DE000h (BATB)
XSDT Entry #26	00000000-3E8DB000h (NHLT)
XSDT Entry #27	00000000-3E8DA000h (SSDT)
XSDT Entry #28	00000000-3E8D9000h (DMAR)
XSDT Entry #29	00000000-3E8D8000h (ASF!)
XSDT Entry #30	00000000-3E8D6000h (FPDT)
XSDT Entry #31	00000000-4FBBD5000h (UEFI)
XSDT Entry #32	00000000-3E8D4000h (SSDT)

## Windows Video

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### [ GeForce GTX 1050 Ti with Max-Q Design ]

**Video Adapter Properties:**

Device Description  
Adapter String  
BIOS String  
Chip Type  
DAC Type  
Driver Date  
Driver Version  
Driver Provider  
Memory Size

**Navigation**

GeForce GTX 1050 Ti with Max-Q Design  
GeForce GTX 1050 Ti with Max-Q Design  
Version86.7.59.0.70  
GeForce GTX 1050 Ti with Max-Q Design  
Integrated RAMDAC  
11/11/2018  
25.21.14.1694 - nVIDIA Detonator 16.94  
NVIDIA  
4 GB

**Installed Drivers:**

C:\Windows\System32\DriverStore\FileRepository\nvlti.inf\_amd64\_175895aa45f963be\nvldumdx.dll  
C:\Windows\System32\DriverStore\FileRepository\nvlti.inf\_amd64\_175895aa45f963be\nvldumdx.dll  
C:\Windows\System32\DriverStore\FileRepository\nvlti.inf\_amd64\_175895aa45f963be\nvldumdx.dll  
C:\Windows\System32\DriverStore\FileRepository\nvlti.inf\_amd64\_175895aa45f963be\nvldumdx.dll  
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C:\Windows\System32\DriverStore\FileRepository\nvlti.inf\_amd64\_175895aa45f963be\nvldumdx.dll  
C:\Windows\System32\DriverStore\FileRepository\nvlti.inf\_amd64\_175895aa45f963be\nvldumdx.dll  
C:\Windows\System32\DriverStore\FileRepository\nvlti.inf\_amd64\_175895aa45f963be\nvldumdx.dll

**Video Adapter Manufacturer:**

Company Name  
Product Information  
Driver Download  
Driver Update

NVIDIA Corporation  
<http://www.nvidia.com/page/products.html>  
<http://www.nvidia.com/content/drivers/drivers.asp>  
<http://www.aida64.com/driver-updates>

**[ GeForce GTX 1050 Ti with Max-Q Design ]****Video Adapter Properties:**

Device Description  
Adapter String  
BIOS String  
Chip Type  
DAC Type  
Driver Date  
Driver Version  
Driver Provider  
Memory Size

GeForce GTX 1050 Ti with Max-Q Design  
GeForce GTX 1050 Ti with Max-Q Design  
Version86.7.59.0.70  
GeForce GTX 1050 Ti with Max-Q Design  
Integrated RAMDAC  
11/11/2018  
25.21.14.1694 - nVIDIA Detonator 16.94  
NVIDIA  
4 GB

**Installed Drivers:**

C:\Windows\System32\DriverStore\FileRepository\nvlti.inf\_amd64\_175895aa45f963be\nvldumdx.dll  
C:\Windows\System32\DriverStore\FileRepository\nvlti.inf\_amd64\_175895aa45f963be\nvldumdx.dll  
C:\Windows\System32\DriverStore\FileRepository\nvlti.inf\_amd64\_175895aa45f963be\nvldumdx.dll  
C:\Windows\System32\DriverStore\FileRepository\nvlti.inf\_amd64\_175895aa45f963be\nvldumdx.dll  
C:\Windows\System32\DriverStore\FileRepository\nvlti.inf\_amd64\_175895aa45f963be\nvldumdx.dll  
C:\Windows\System32\DriverStore\FileRepository\nvlti.inf\_amd64\_175895aa45f963be\nvldumdx.dll  
C:\Windows\System32\DriverStore\FileRepository\nvlti.inf\_amd64\_175895aa45f963be\nvldumdx.dll  
C:\Windows\System32\DriverStore\FileRepository\nvlti.inf\_amd64\_175895aa45f963be\nvldumdx.dll

**Video Adapter Manufacturer:**

Company Name  
Product Information  
Driver Download  
Driver Update

NVIDIA Corporation  
<http://www.nvidia.com/page/products.html>  
<http://www.nvidia.com/content/drivers/drivers.asp>  
<http://www.aida64.com/driver-updates>

**[ GeForce GTX 1050 Ti with Max-Q Design ]****Video Adapter Properties:**

Device Description  
Adapter String  
BIOS String  
Chip Type  
DAC Type  
Driver Date  
Driver Version

GeForce GTX 1050 Ti with Max-Q Design  
GeForce GTX 1050 Ti with Max-Q Design  
Version86.7.59.0.70  
GeForce GTX 1050 Ti with Max-Q Design  
Integrated RAMDAC  
11/11/2018  
25.21.14.1694 - nVIDIA Detonator 16.94

Driver Provider  
Memory Size

Navigation

**Installed Drivers:**

C:\Windows\System32\DriverStore\FileRepository\nvlti.inf\_amd64\_175895aa45f963be\nvldumdx.dll  
 C:\Windows\System32\DriverStore\FileRepository\nvlti.inf\_amd64\_175895aa45f963be\nvldumdx.dll  
 C:\Windows\System32\DriverStore\FileRepository\nvlti.inf\_amd64\_175895aa45f963be\nvldumdx.dll  
 C:\Windows\System32\DriverStore\FileRepository\nvlti.inf\_amd64\_175895aa45f963be\nvldumdx.dll  
 C:\Windows\System32\DriverStore\FileRepository\nvlti.inf\_amd64\_175895aa45f963be\nvldumdx.dll  
 C:\Windows\System32\DriverStore\FileRepository\nvlti.inf\_amd64\_175895aa45f963be\nvldumdx.dll  
 C:\Windows\System32\DriverStore\FileRepository\nvlti.inf\_amd64\_175895aa45f963be\nvldumdx.dll  
 C:\Windows\System32\DriverStore\FileRepository\nvlti.inf\_amd64\_175895aa45f963be\nvldumdx.dll

**Video Adapter Manufacturer:**

Company Name NVIDIA Corporation  
 Product Information <http://www.nvidia.com/page/products.html>  
 Driver Download <http://www.nvidia.com/content/drivers/drivers.asp>  
 Driver Update <http://www.aida64.com/driver-updates>

**[ GeForce GTX 1050 Ti with Max-Q Design ]****Video Adapter Properties:**

Device Description	GeForce GTX 1050 Ti with Max-Q Design
Adapter String	GeForce GTX 1050 Ti with Max-Q Design
BIOS String	Version86.7.59.0.70
Chip Type	GeForce GTX 1050 Ti with Max-Q Design
DAC Type	Integrated RAMDAC
Driver Date	11/11/2018
Driver Version	25.21.14.1694 - nVIDIA Detonator 16.94
Driver Provider	NVIDIA
Memory Size	4 GB

**Installed Drivers:**

C:\Windows\System32\DriverStore\FileRepository\nvlti.inf\_amd64\_175895aa45f963be\nvldumdx.dll  
 C:\Windows\System32\DriverStore\FileRepository\nvlti.inf\_amd64\_175895aa45f963be\nvldumdx.dll  
 C:\Windows\System32\DriverStore\FileRepository\nvlti.inf\_amd64\_175895aa45f963be\nvldumdx.dll  
 C:\Windows\System32\DriverStore\FileRepository\nvlti.inf\_amd64\_175895aa45f963be\nvldumdx.dll  
 C:\Windows\System32\DriverStore\FileRepository\nvlti.inf\_amd64\_175895aa45f963be\nvldumdx.dll  
 C:\Windows\System32\DriverStore\FileRepository\nvlti.inf\_amd64\_175895aa45f963be\nvldumdx.dll  
 C:\Windows\System32\DriverStore\FileRepository\nvlti.inf\_amd64\_175895aa45f963be\nvldumdx.dll  
 C:\Windows\System32\DriverStore\FileRepository\nvlti.inf\_amd64\_175895aa45f963be\nvldumdx.dll

**Video Adapter Manufacturer:**

Company Name NVIDIA Corporation  
 Product Information <http://www.nvidia.com/page/products.html>  
 Driver Download <http://www.nvidia.com/content/drivers/drivers.asp>  
 Driver Update <http://www.aida64.com/driver-updates>

**[ Intel(R) UHD Graphics 630 ]****Video Adapter Properties:**

Device Description	Intel(R) UHD Graphics 630
Adapter String	Intel(R) UHD Graphics 630
BIOS String	Intel Video BIOS
Chip Type	Intel(R) UHD Graphics Family
DAC Type	Internal
Driver Date	7/25/2018
Driver Version	24.20.100.6227
Driver Provider	Intel Corporation
Memory Size	1 GB

**Installed Drivers:**

igdumdim64  
 igd10iumd64  
 igd10iumd64  
 igd12umd64  
 igdumdim32

igd10iumd32  
igd10iumd32  
igd12umd32

**Video Adapter Manufacturer:**

Company Name  
Product Information  
Driver Download  
Driver Update

Intel Corporation  
<http://www.intel.com/products/chipsets>  
<http://support.intel.com/support/graphics>  
<http://www.aida64.com/driver-updates>

**[ Intel(R) UHD Graphics 630 ]****Video Adapter Properties:**

Device Description  
Adapter String  
BIOS String  
Chip Type  
DAC Type  
Driver Date  
Driver Version  
Driver Provider  
Memory Size

Intel(R) UHD Graphics 630  
Intel(R) UHD Graphics 630  
Intel Video BIOS  
Intel(R) UHD Graphics Family  
Internal  
7/25/2018  
24.20.100.6227  
Intel Corporation  
1 GB

**Installed Drivers:**

igdumdim64  
igd10iumd64  
igd10iumd64  
igd12umd64  
igdumdim32  
igd10iumd32  
igd10iumd32  
igd12umd32

**Video Adapter Manufacturer:**

Company Name  
Product Information  
Driver Download  
Driver Update

Intel Corporation  
<http://www.intel.com/products/chipsets>  
<http://support.intel.com/support/graphics>  
<http://www.aida64.com/driver-updates>

**[ Intel(R) UHD Graphics 630 ]****Video Adapter Properties:**

Device Description  
Adapter String  
BIOS String  
Chip Type  
DAC Type  
Driver Date  
Driver Version  
Driver Provider  
Memory Size

Intel(R) UHD Graphics 630  
Intel(R) UHD Graphics 630  
Intel Video BIOS  
Intel(R) UHD Graphics Family  
Internal  
7/25/2018  
24.20.100.6227  
Intel Corporation  
1 GB

**Installed Drivers:**

igdumdim64  
igd10iumd64  
igd10iumd64  
igd12umd64  
igdumdim32  
igd10iumd32  
igd10iumd32  
igd12umd32

**Video Adapter Manufacturer:**

Company Name  
Product Information  
Driver Download  
Driver Update

Intel Corporation  
<http://www.intel.com/products/chipsets>  
<http://support.intel.com/support/graphics>  
<http://www.aida64.com/driver-updates>

## PCI / AGP Video

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Device Description	Device Type
nVIDIA GeForce GTX 1050 Ti	Video Adapter
nVIDIA GeForce GTX 1050 Ti	3D Accelerator

## GPU

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### [ PCI Express 3.0 x16: nVIDIA GeForce GTX 1050 Ti ]

#### Graphics Processor Properties:

Video Adapter	nVIDIA GeForce GTX 1050 Ti
GPU Code Name	GP107
PCI Device	10DE-1C8C / 17AA-2267 (Rev A1)
Transistors	3300 million
Process Technology	14 nm
Die Size	132 mm <sup>2</sup>
Bus Type	PCI Express 3.0 x16 @ 3.0 x16
Memory Size	4 GB
GPU Clock	772 MHz
RAMDAC Clock	400 MHz
Pixel Pipelines	32
Texture Mapping Units	48
Unified Shaders	768 (v5.0)
DirectX Hardware Support	DirectX v12
Performance Cap Reason	Utilization
WDDM Version	Unknown (ID = 2400)

#### Memory Bus Properties:

Bus Type	GDDR5 (Micron)
Bus Width	128-bit
Real Clock	1252 MHz (QDR)
Effective Clock	5008 MHz
Bandwidth	78.3 GB/s

#### Architecture:

Architecture	nVIDIA Pascal
Streaming Multiprocessors (SM)	6
L1 Texture Cache	24 KB per multiprocessor
L2 Cache	1 MB
Local Data Share	96 KB

#### Theoretical Peak Performance:

Pixel Fillrate	24704 MPixel/s @ 772 MHz
Texel Fillrate	37056 MTexel/s @ 772 MHz
Single-Precision FLOPS	1185.8 GFLOPS @ 772 MHz
Double-Precision FLOPS	37.1 GFLOPS @ 772 MHz
24-bit Integer IOPS	395.3 GIOPS @ 772 MHz
32-bit Integer IOPS	395.3 GIOPS @ 772 MHz

#### Utilization:

GPU	1%
Memory Controller	3%
Video Engine	0%
Bus Interface	0%
Dedicated Memory	457 MB
Dynamic Memory	70 MB

#### nVIDIA ForceWare Clocks:

Level #1	GPU: 607 MHz, Memory: 405 MHz
Level #2	GPU: 569 MHz, Memory: 810 MHz

Level #3  
Level #4

GPU: 569 MHz, Memory: 2505 MHz  
GPU: 569 MHz, Memory: 3504 MHz

Navigation

**Graphics Processor Manufacturer:**

Company Name	NVIDIA Corporation
Product Information	<a href="http://www.nvidia.com/page/products.html">http://www.nvidia.com/page/products.html</a>
Driver Download	<a href="http://www.nvidia.com/content/drivers/drivers.asp">http://www.nvidia.com/content/drivers/drivers.asp</a>
Driver Update	<a href="http://www.aida64.com/driver-updates">http://www.aida64.com/driver-updates</a>

**nVIDIA GPU Registers:**

nv-000000	137000A1
nv-001538	800003FF
nv-001704	800FFFE1
nv-001714	C00FFFE2
nv-00E114	0000021C
nv-00E118	0000021C
nv-00E11C	00000001
nv-00E120	03000000
nv-00E728	00000000
nv-00E820	02020015
nv-00E8A0	02000012
nv-020008	000030D7
nv-020014	024D01CE
nv-0200C4	000000D8
nv-0200C8	00000000
nv-0200D8	010000D8
nv-0200DC	00000000
nv-020340	000000A0
nv-020344	0000003B
nv-020348	000000A0
nv-020400	0000003A
nv-021000	C0040000
nv-0214A8	BADF510C
nv-022400	00000000
nv-022430	00000002
nv-022434	00000003
nv-022438	00000002
nv-02243C	00000002
nv-022440	00000004
nv-088000	1C8C10DE
nv-08A000	0FB910DE
nv-100714	00001416
nv-101000	00400080
nv-10100C	02013000
nv-120070	00000001
nv-120074	00000002
nv-120078	00000002
nv-122634	00000000
nv-300000	00000000
nv-310000	00000000
nv-700000	00000000
nv-7E0000	00000000

**[ Integrated: Intel Coffee Lake-H GT2 - Integrated Graphics Controller ]****Graphics Processor Properties:**

Video Adapter	Intel Coffee Lake-H GT2 - Integrated Graphics Controller
BIOS Version	Build Number: 1017_0 PC 14.34 10/08/2018 10:22:32
BIOS Date	10/8/2018
GPU Code Name	Coffee Lake-H GT2
PCI Device	8086-3E9B / 17AA-2267 (Rev 00)
Process Technology	14 nm
Bus Type	Integrated
GPU Clock	350 MHz (original: 350 MHz)
GPU Clock (Turbo)	350 - 1150 MHz
RAMDAC Clock	350 MHz
Pixel Pipelines	4
TMU Per Pipeline	1

Unified Shaders	96 (v5.0)
DirectX Hardware Support	DirectX v12
WDDM Version	Unknown (ID = 2400)

Navigation

**Architecture:**

Architecture	Intel Gen9.5
Execution Units (EU)	24

**Theoretical Peak Performance:**

Pixel Fillrate	1400 MPixel/s @ 350 MHz
Texel Fillrate	1400 MTexel/s @ 350 MHz
Single-Precision FLOPS	134.4 GFLOPS @ 350 MHz

**Utilization:**

Dedicated Memory	0 MB
Dynamic Memory	250 MB

**Graphics Processor Manufacturer:**

Company Name	Intel Corporation
Product Information	<a href="http://www.intel.com/products/chipsets">http://www.intel.com/products/chipsets</a>
Driver Download	<a href="http://support.intel.com/support/graphics">http://support.intel.com/support/graphics</a>
Driver Update	<a href="http://www.aida64.com/driver-updates">http://www.aida64.com/driver-updates</a>

**[ nVIDIA SLI ]****nVIDIA SLI:**

SLI Status	Disabled
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**Monitor****[ Dell P2715Q (DP4k60) ]****Monitor Properties:**

Monitor Name	Dell P2715Q (DP4k60)
Monitor ID	DEL40BD
Model	DELL P2715Q
Monitor Type	27" IPS LCD (4K UHD)
Manufacture Date	Week 1 / 2018
Serial Number	X24K1811460L
Max. Visible Display Size	597 mm x 336 mm (27.0")
Picture Aspect Ratio	16:9
Brightness	350 cd/m <sup>2</sup>
Contrast Ratio	1000:1
Viewing Angles	178/178°
Input Connectors	HDMI, DisplayPort, Mini DisplayPort
Horizontal Frequency	31 - 140 kHz
Vertical Frequency	29 - 75 Hz
Maximum Pixel Clock	540 MHz
Maximum Resolution	3840 x 2160
Pixel Density	163 ppi
Gamma	2.20
DPMS Mode Support	Active-Off

**Supported Video Modes:**

640 x 480	60 Hz
640 x 480	75 Hz
720 x 400	70 Hz
800 x 600	60 Hz
800 x 600	75 Hz
1024 x 768	60 Hz
1024 x 768	75 Hz
1152 x 864	75 Hz
1280 x 800	60 Hz
1280 x 1024	60 Hz

1280 x 1024	75 Hz
1600 x 1200	60 Hz
1680 x 1050	60 Hz
1920 x 1080	60 Hz
1920 x 1200	60 Hz
3840 x 2160	Pixel Clock: 533.25 MHz

Navigation

**Monitor Manufacturer:**

Company Name	Dell Computer Corporation
Product Information	<a href="http://accessories.us.dell.com/sna/category.aspx?c=us&amp;category_id=4009&amp;cs=19&amp;l=en&amp;s=dhs">http://accessories.us.dell.com/sna/category.aspx?c=us&amp;category_id=4009&amp;cs=19&amp;l=en&amp;s=dhs</a>
Driver Download	<a href="http://support.dell.com/support/topics/global.aspx/support/product_support/en/monitor_download?c=us&amp;cs=04&amp;l=en&amp;s=bsd">http://support.dell.com/support/topics/global.aspx/support/product_support/en/monitor_download?c=us&amp;cs=04&amp;l=en&amp;s=bsd</a>
Driver Update	<a href="http://www.aida64.com/driver-updates">http://www.aida64.com/driver-updates</a>

**[ Wide viewing angle & High density FlexView Display 3840x2160 [NoDB] ]****Monitor Properties:**

Monitor Name	Wide viewing angle & High density FlexView Display 3840x2160 [NoDB]
Monitor ID	LEN40BE
Manufacturer	B156ZAN03.2
Manufacture Date	2017
Serial Number	None
Max. Visible Display Size	344 mm x 193 mm (15.5")
Picture Aspect Ratio	16:9
Gamma	2.20
DPMS Mode Support	Standby, Suspend, Active-Off

**Supported Video Modes:**

3840 x 2160	Pixel Clock: 533.30 MHz
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## Desktop

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**Desktop Properties:**

Device Technology	Raster Display
Resolution	3840 x 2160
Color Depth	32-bit
Color Planes	1
Font Resolution	144 dpi
Pixel Width / Height	36 / 36
Pixel Diagonal	51
Vertical Refresh Rate	60 Hz
Desktop Wallpaper	D:\Deskop\Images\4KWorld.jpg

**Desktop Effects:**

Combo-Box Animation	Enabled
Drop Shadow Effect	Enabled
Flat Menu Effect	Enabled
Font Smoothing	Enabled
ClearType	Enabled
Full Window Dragging	Enabled
Gradient Window Title Bars	Enabled
Hide Menu Access Keys	Enabled
Hot Tracking Effect	Enabled
Icon Title Wrapping	Enabled
List-Box Smooth Scrolling	Enabled
Menu Animation	Enabled
Menu Fade Effect	Enabled
Minimize/Restore Animation	Enabled
Mouse Cursor Shadow	Enabled
Selection Fade Effect	Enabled
ShowSounds Accessibility Feature	Disabled
ToolTip Animation	Enabled
ToolTip Fade Effect	Enabled
Windows Aero	Enabled

## Multi-Monitor

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Device ID	Primary	Upper Left Corner	Bottom Right Corner
\.\DISPLAY4	Yes	(0,0)	(3840,2160)

## Video Modes

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### Resolution   Color Depth   Refresh Rate

640 x 480	32-bit	59 Hz
640 x 480	32-bit	60 Hz
640 x 480	32-bit	75 Hz
720 x 480	32-bit	59 Hz
720 x 480	32-bit	60 Hz
720 x 576	32-bit	50 Hz
800 x 600	32-bit	60 Hz
800 x 600	32-bit	75 Hz
1024 x 768	32-bit	60 Hz
1024 x 768	32-bit	75 Hz
1152 x 864	32-bit	75 Hz
1176 x 664	32-bit	50 Hz
1176 x 664	32-bit	50 Hz
1176 x 664	32-bit	50 Hz
1176 x 664	32-bit	59 Hz
1176 x 664	32-bit	59 Hz
1176 x 664	32-bit	60 Hz
1176 x 664	32-bit	60 Hz
1176 x 664	32-bit	60 Hz
1280 x 720	32-bit	50 Hz
1280 x 720	32-bit	59 Hz
1280 x 720	32-bit	60 Hz
1280 x 768	32-bit	60 Hz
1280 x 768	32-bit	60 Hz
1280 x 768	32-bit	60 Hz
1280 x 800	32-bit	60 Hz
1280 x 1024	32-bit	60 Hz
1280 x 1024	32-bit	75 Hz
1360 x 768	32-bit	59 Hz
1360 x 768	32-bit	59 Hz
1360 x 768	32-bit	59 Hz
1360 x 768	32-bit	60 Hz
1360 x 768	32-bit	60 Hz
1360 x 768	32-bit	60 Hz
1360 x 768	32-bit	60 Hz
1366 x 768	32-bit	59 Hz
1366 x 768	32-bit	59 Hz
1366 x 768	32-bit	59 Hz
1366 x 768	32-bit	60 Hz
1366 x 768	32-bit	60 Hz
1366 x 768	32-bit	60 Hz
1600 x 1200	32-bit	60 Hz
1680 x 1050	32-bit	59 Hz
1680 x 1050	32-bit	60 Hz
1768 x 992	32-bit	23 Hz
1768 x 992	32-bit	23 Hz
1768 x 992	32-bit	23 Hz
1768 x 992	32-bit	24 Hz
1768 x 992	32-bit	24 Hz
1768 x 992	32-bit	24 Hz
1768 x 992	32-bit	50 Hz
1768 x 992	32-bit	50 Hz
1768 x 992	32-bit	50 Hz
1768 x 992	32-bit	50 Hz

Navigation

1768 x 992	32-bit	59 Hz
1768 x 992	32-bit	59 Hz
1768 x 992	32-bit	59 Hz
1768 x 992	32-bit	60 Hz
1768 x 992	32-bit	60 Hz
1768 x 992	32-bit	60 Hz
1920 x 1080	32-bit	23 Hz
1920 x 1080	32-bit	24 Hz
1920 x 1080	32-bit	50 Hz
1920 x 1080	32-bit	59 Hz
1920 x 1080	32-bit	60 Hz
1920 x 1200	32-bit	60 Hz
2048 x 1536	32-bit	29 Hz
2048 x 1536	32-bit	29 Hz
2048 x 1536	32-bit	29 Hz
2048 x 1536	32-bit	30 Hz
2048 x 1536	32-bit	30 Hz
2048 x 1536	32-bit	30 Hz
2048 x 1536	32-bit	30 Hz
2048 x 1536	32-bit	60 Hz
2048 x 1536	32-bit	60 Hz
2048 x 1536	32-bit	60 Hz
2560 x 1440	32-bit	59 Hz
2560 x 1440	32-bit	60 Hz
3840 x 2160	32-bit	29 Hz
3840 x 2160	32-bit	30 Hz
3840 x 2160	32-bit	60 Hz

## OpenGL

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### OpenGL Properties:

Vendor	NVIDIA Corporation
Renderer	GeForce GTX 1050 Ti with Max-Q Design/PCIe/SSE2
Version	4.6.0 NVIDIA 416.94
Shading Language Version	4.60 NVIDIA
OpenGL DLL	10.0.17134.1(WinBuild.160101.0800)
Multitexture Texture Units	4
Occlusion Query Counter Bits	32
Sub-Pixel Precision	8-bit
Max Viewport Size	32768 x 32768
Max Cube Map Texture Size	32768 x 32768
Max Rectangle Texture Size	32768 x 32768
Max 3D Texture Size	16384 x 16384 x 16384
Max Anisotropy	16
Max Clipping Planes	8
Max Display-List Nesting Level	64
Max Draw Buffers	8
Max Evaluator Order	8
Max General Register Combiners	8
Max Light Sources	8
Max Pixel Map Table Size	65536
Min / Max Program Texel Offset	-8 / 7
Max Texture Array Layers	2048
Max Texture LOD Bias	15
Max Vertex Array Range Element Size	1048575

### OpenGL Compliancy:

OpenGL 1.1	Yes (100%)
OpenGL 1.2	Yes (100%)
OpenGL 1.3	Yes (100%)
OpenGL 1.4	Yes (100%)
OpenGL 1.5	Yes (100%)
OpenGL 2.0	Yes (100%)
OpenGL 2.1	Yes (100%)
OpenGL 3.0	Yes (100%)
OpenGL 3.1	Yes (100%)

OpenGL 3.2	Yes (100%)	
OpenGL 3.3	Yes (100%)	Navigation
OpenGL 4.0	Yes (100%)	
OpenGL 4.1	Yes (100%)	
OpenGL 4.2	Yes (100%)	
OpenGL 4.3	Yes (100%)	
OpenGL 4.4	Yes (100%)	
OpenGL 4.5	Yes (100%)	

**Max Stack Depth:**

Attribute Stack	16
Client Attribute Stack	16
Modelview Matrix Stack	32
Name Stack	128
Projection Matrix Stack	4
Texture Matrix Stack	10

**Draw Range Elements:**

Max Index Count	1048576
Max Vertex Count	1048576

**Extended Lighting Parameters:**

Max Shininess	128
Max Spot Exponent	128

**Transform Feedback:**

Max Interleaved Components	128
Max Separate Attributes	4
Max Separate Components	4

**Framebuffer Object:**

Max Color Attachments	8
Max Render Buffer Size	32768 x 32768

**Imaging:**

Max Color Matrix Stack Depth	2
Max Convolution Width / Height	11 / 11

**Vertex Shader:**

Max Uniform Vertex Components	4096
Max Varying Floats	124
Max Vertex Texture Image Units	32
Max Combined Texture Image Units	192

**Geometry Shader:**

Max Geometry Texture Units	32
Max Varying Components	124
Max Geometry Varying Components	124
Max Vertex Varying Components	124
Max Geometry Uniform Components	2048
Max Geometry Output Vertices	1024
Max Geometry Total Output Components	1024

**Fragment Shader:**

Max Uniform Fragment Components	4096
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**Vertex Program:**

Max Local Parameters	1024
Max Environment Parameters	256
Max Program Matrices	8
Max Program Matrix Stack Depth	1
Max Tracking Matrices	8
Max Tracking Matrix Stack Depth	1
Max Vertex Attributes	16
Max Instructions	65536
Max Native Instructions	65536
Max Temporaries	4096
Max Native Temporaries	4096

Max Parameters	1024	
Max Native Parameters	1024	Navigation
Max Attributes	16	
Max Native Attributes	16	
Max Address Registers	2	
Max Native Address Registers	2	

**Fragment Program:**

Max Local Parameters	1024
Max Environment Parameters	256
Max Texture Coordinates	8
Max Texture Image Units	32
Max Instructions	65536
Max Native Instructions	65536
Max Temporaries	4096
Max Native Temporaries	4096
Max Parameters	1024
Max Native Parameters	1024
Max Attributes	16
Max Native Attributes	16
Max Address Registers	1
Max Native Address Registers	1
Max ALU Instructions	65536
Max Native ALU Instructions	65536
Max Texture Instructions	65536
Max Native Texture Instructions	65536
Max Texture Indirections	65536
Max Native Texture Indirections	65536
Max Execution Instructions	16777216
Max Call Stack Depth	32
Max If Statement Depth	1024
Max Loop Depth	1024
Max Loop Count	16777216

**OpenGL Extensions:**

Total / Supported Extensions	1058 / 410
GL_3DFX_multisample	Not Supported
GL_3DFX_tbuffer	Not Supported
GL_3DFX_texture_compression_FXT1	Not Supported
GL_3DL_direct_texture_access2	Not Supported
GL_3Dlabs_multisample_transparency_id	Not Supported
GL_3Dlabs_multisample_transparency_range	Not Supported
GL_AMD_blend_minmax_factor	Not Supported
GL_AMD_compressed_3DC_texture	Not Supported
GL_AMD_compressed_ATC_texture	Not Supported
GL_AMD_conservative_depth	Not Supported
GL_AMD_debug_output	Not Supported
GL_AMD_depth_clamp_separate	Not Supported
GL_AMD_draw_buffers_blend	Not Supported
GL_AMD_framebuffer_sample_positions	Not Supported
GL_AMD_gcn_shader	Not Supported
GL_AMD_gpu_shader_half_float	Not Supported
GL_AMD_gpu_shader_half_float2	Not Supported
GL_AMD_gpu_shader_int64	Not Supported
GL_AMD_interleaved_elements	Not Supported
GL_AMD_multi_draw_indirect	Supported
GL_AMD_name_gen_delete	Not Supported
GL_AMD_occlusion_query_event	Not Supported
GL_AMD_performance_monitor	Not Supported
GL_AMD_pinned_memory	Not Supported
GL_AMD_program_binary_Z400	Not Supported
GL_AMD_query_buffer_object	Not Supported
GL_AMD_sample_positions	Not Supported
GL_AMD_seamless_cubemap_per_texture	Supported
GL_AMD_shader_atomic_counter_ops	Not Supported
GL_AMD_shader_stencil_export	Not Supported
GL_AMD_shader_stencil_value_export	Not Supported
GL_AMD_shader_trace	Not Supported

GL_AMD_shader_trinary_minmax	Not Supported	
GL_AMD_sparse_texture	Not Supported	Navigation
GL_AMD_sparse_texture_pool	Not Supported	
GL_AMD_stencil_operation_extended	Not Supported	
GL_AMD_texture_compression_dxt6	Not Supported	
GL_AMD_texture_compression_dxt7	Not Supported	
GL_AMD_texture_cube_map_array	Not Supported	
GL_AMD_texture_texture4	Not Supported	
GL_AMD_texture_tile_pool	Not Supported	
GL_AMD_transform_feedback3_lines_triangles	Not Supported	
GL_AMD_transform_feedback4	Not Supported	
GL_AMD_vertex_shader_layer	Supported	
GL_AMD_vertex_shader_tessellator	Not Supported	
GL_AMD_vertex_shader_viewport_index	Supported	
GL_AMDX_debug_output	Not Supported	
GL_AMDX_name_gen_delete	Not Supported	
GL_AMDX_random_access_target	Not Supported	
GL_AMDX_vertex_shader_tessellator	Not Supported	
GL_ANDROID_extension_pack_es31a	Not Supported	
GL_ANGLE_depth_texture	Not Supported	
GL_ANGLE_framebuffer.blit	Not Supported	
GL_ANGLE_framebuffer_multisample	Not Supported	
GL_ANGLE_instanced_arrays	Not Supported	
GL_ANGLE_pack_reverse_row_order	Not Supported	
GL_ANGLE_program_binary	Not Supported	
GL_ANGLE_texture_compression_dxt1	Not Supported	
GL_ANGLE_texture_compression_dxt3	Not Supported	
GL_ANGLE_texture_compression_dxt5	Not Supported	
GL_ANGLE_texture_usage	Not Supported	
GL_ANGLE_translated_shader_source	Not Supported	
GL_APPLE_aux_depth_stencil	Not Supported	
GL_APPLE_client_storage	Not Supported	
GL_APPLE_copy_texture_levels	Not Supported	
GL_APPLE_element_array	Not Supported	
GL_APPLE_fence	Not Supported	
GL_APPLE_float_pixels	Not Supported	
GL_APPLE_flush_buffer_range	Not Supported	
GL_APPLE_flush_render	Not Supported	
GL_APPLE_framebuffer_multisample	Not Supported	
GL_APPLE_object_purgeable	Not Supported	
GL_APPLE_packed_pixel	Not Supported	
GL_APPLE_packed_pixels	Not Supported	
GL_APPLE_pixel_buffer	Not Supported	
GL_APPLE_rgb_422	Not Supported	
GL_APPLE_row_bytes	Not Supported	
GL_APPLE_specular_vector	Not Supported	
GL_APPLE_sync	Not Supported	
GL_APPLE_texture_2D_limited_npot	Not Supported	
GL_APPLE_texture_format_BGRA8888	Not Supported	
GL_APPLE_texture_max_level	Not Supported	
GL_APPLE_texture_range	Not Supported	
GL_APPLE_transform_hint	Not Supported	
GL_APPLE_vertex_array_object	Not Supported	
GL_APPLE_vertex_array_range	Not Supported	
GL_APPLE_vertex_point_size	Not Supported	
GL_APPLE_vertex_program_evaluators	Not Supported	
GL_APPLE_ycbcr_422	Not Supported	
GL_ARB_arrays_of_arrays	Supported	
GL_ARB_base_instance	Supported	
GL_ARB_bindless_texture	Supported	
GL_ARB_blend_func_extended	Supported	
GL_ARB_buffer_storage	Supported	
GL_ARB_cl_event	Not Supported	
GL_ARB_clear_buffer_object	Supported	
GL_ARB_clear_texture	Supported	
GL_ARB_clip_control	Supported	
GL_ARB_color_buffer_float	Supported	
GL_ARB_compatibility	Supported	

GL_ARB_compressed_texture_pixel_storage	Supported	Navigation
GL_ARB_compute_shader	Supported	
GL_ARB_compute_variable_group_size	Supported	
GL_ARB_conditional_render_inverted	Supported	
GL_ARB_conservative_depth	Supported	
GL_ARB_context_flush_control	Not Supported	
GL_ARB_copy_buffer	Supported	
GL_ARB_copy_image	Supported	
GL_ARB_cull_distance	Supported	
GL_ARB_debug_group	Not Supported	
GL_ARB_debug_label	Not Supported	
GL_ARB_debug_output	Supported	
GL_ARB_debug_output2	Not Supported	
GL_ARB_depth_buffer_float	Supported	
GL_ARB_depth_clamp	Supported	
GL_ARB_depth_texture	Supported	
GL_ARB_derivative_control	Supported	
GL_ARB_direct_state_access	Supported	
GL_ARB_draw_buffers	Supported	
GL_ARB_draw_buffers_blend	Supported	
GL_ARB_draw_elements_base_vertex	Supported	
GL_ARB_draw_indirect	Supported	
GL_ARB_draw_instanced	Supported	
GL_ARB_enhanced_layouts	Supported	
GL_ARB_ES2_compatibility	Supported	
GL_ARB_ES3_1_compatibility	Supported	
GL_ARB_ES3_2_compatibility	Supported	
GL_ARB_ES3_compatibility	Supported	
GL_ARB_explicit_attrib_location	Supported	
GL_ARB_explicit_uniform_location	Supported	
GL_ARB_fragment_coord_conventions	Supported	
GL_ARB_fragment_layer_viewport	Supported	
GL_ARB_fragment_program	Supported	
GL_ARB_fragment_program_shadow	Supported	
GL_ARB_fragment_shader	Supported	
GL_ARB_fragment_shader_interlock	Supported	
GL_ARB_framebuffer_no_attachments	Supported	
GL_ARB_framebuffer_object	Supported	
GL_ARB_framebuffer_sRGB	Supported	
GL_ARB_geometry_shader4	Supported	
GL_ARB_get_program_binary	Supported	
GL_ARB_get_texture_sub_image	Supported	
GL_ARB_gl_spirv	Supported	
GL_ARB_gpu_shader_fp64	Supported	
GL_ARB_gpu_shader_int64	Supported	
GL_ARB_gpu_shader5	Supported	
GL_ARB_half_float_pixel	Supported	
GL_ARB_half_float_vertex	Supported	
GL_ARB_imaging	Supported	
GL_ARB_indirect_parameters	Supported	
GL_ARB_instanced_arrays	Supported	
GL_ARB_internalformat_query	Supported	
GL_ARB_internalformat_query2	Supported	
GL_ARB_invalidate_subdata	Supported	
GL_ARB_make_current_read	Not Supported	
GL_ARB_map_buffer_alignment	Supported	
GL_ARB_map_buffer_range	Supported	
GL_ARB_matrix_palette	Not Supported	
GL_ARB_multi_bind	Supported	
GL_ARB_multi_draw_indirect	Supported	
GL_ARB_multisample	Supported	
GL_ARB_multitexture	Supported	
GL_ARB_occlusion_query	Supported	
GL_ARB_occlusion_query2	Supported	
GL_ARB_parallel_shader_compile	Supported	
GL_ARB_pipeline_statistics_query	Supported	
GL_ARB_pixel_buffer_object	Supported	
GL_ARB_point_parameters	Supported	

GL_ARB_point_sprite	Supported	
GL_ARB_polygon_offset_clamp	Supported	Navigation
GL_ARB_post_depth_coverage	Supported	
GL_ARB_program_interface_query	Supported	
GL_ARB_provoking_vertex	Supported	
GL_ARB_query_buffer_object	Supported	
GL_ARB_robust_buffer_access_behavior	Supported	
GL_ARB_robustness	Supported	
GL_ARB_robustness_isolation	Not Supported	
GL_ARB_sample_locations	Supported	
GL_ARB_sample_shading	Supported	
GL_ARB_sampler_objects	Supported	
GL_ARB_seamless_cube_map	Supported	
GL_ARB_seamless_cubemap_per_texture	Supported	
GL_ARB_separate_shader_objects	Supported	
GL_ARB_shader_atomic_counter_ops	Supported	
GL_ARB_shader_atomic_counters	Supported	
GL_ARB_shader_ballot	Supported	
GL_ARB_shader_bit_encoding	Supported	
GL_ARB_shader_clock	Supported	
GL_ARB_shader_draw_parameters	Supported	
GL_ARB_shader_group_vote	Supported	
GL_ARB_shader_image_load_store	Supported	
GL_ARB_shader_image_size	Supported	
GL_ARB_shader_objects	Supported	
GL_ARB_shader_precision	Supported	
GL_ARB_shader_stencil_export	Not Supported	
GL_ARB_shader_storage_buffer_object	Supported	
GL_ARB_shader_subroutine	Supported	
GL_ARB_shader_texture_image_samples	Supported	
GL_ARB_shader_texture_lod	Supported	
GL_ARB_shader_viewport_layer_array	Supported	
GL_ARB_shading_language_100	Supported	
GL_ARB_shading_language_120	Not Supported	
GL_ARB_shading_language_420pack	Supported	
GL_ARB_shading_language_include	Supported	
GL_ARB_shading_language_packing	Supported	
GL_ARB_shadow	Supported	
GL_ARB_shadow_ambient	Not Supported	
GL_ARB_sparse_buffer	Supported	
GL_ARB_sparse_texture	Supported	
GL_ARB_sparse_texture_clamp	Supported	
GL_ARB_sparse_texture2	Supported	
GL_ARB_spirv_extensions	Supported	
GL_ARB_stencil_texturing	Supported	
GL_ARB_swap_buffers	Not Supported	
GL_ARB_sync	Supported	
GL_ARB_tessellation_shader	Supported	
GL_ARB_texture_barrier	Supported	
GL_ARB_texture_border_clamp	Supported	
GL_ARB_texture_buffer_object	Supported	
GL_ARB_texture_buffer_object_rgb32	Supported	
GL_ARB_texture_buffer_range	Supported	
GL_ARB_texture_compression	Supported	
GL_ARB_texture_compression_bptc	Supported	
GL_ARB_texture_compression_rgbc	Supported	
GL_ARB_texture_compression_rtgc	Not Supported	
GL_ARB_texture_cube_map	Supported	
GL_ARB_texture_cube_map_array	Supported	
GL_ARB_texture_env_add	Supported	
GL_ARB_texture_env_combine	Supported	
GL_ARB_texture_env_crossbar	Supported	
GL_ARB_texture_env_dot3	Supported	
GL_ARB_texture_filter_anisotropic	Supported	
GL_ARB_texture_filter_minmax	Supported	
GL_ARB_texture_float	Supported	
GL_ARB_texture_gather	Supported	
GL_ARB_texture_mirror_clamp_to_edge	Supported	

	Supported	Navigation
GL_ARB_texture_mirrored_repeat	Supported	
GL_ARB_texture_multisample	Supported	
GL_ARB_texture_non_power_of_two	Supported	
GL_ARB_texture_query_levels	Supported	
GL_ARB_texture_query_lod	Supported	
GL_ARB_texture_rectangle	Supported	
GL_ARB_texture_rg	Supported	
GL_ARB_texture_rgb10_a2ui	Supported	
GL_ARB_texture_snorm	Not Supported	
GL_ARB_texture_stencil8	Supported	
GL_ARB_texture_storage	Supported	
GL_ARB_texture_storage_multisample	Supported	
GL_ARB_texture_swizzle	Supported	
GL_ARB_texture_view	Supported	
GL_ARB_timer_query	Supported	
GL_ARB_transform_feedback_instanced	Supported	
GL_ARB_transform_feedback_overflow_query	Supported	
GL_ARB_transform_feedback2	Supported	
GL_ARB_transform_feedback3	Supported	
GL_ARB_transpose_matrix	Supported	
GL_ARB_uber_buffers	Not Supported	
GL_ARB_uber_mem_image	Not Supported	
GL_ARB_uber_vertex_array	Not Supported	
GL_ARB_uniform_buffer_object	Supported	
GL_ARB_vertex_array_bgra	Supported	
GL_ARB_vertex_array_object	Supported	
GL_ARB_vertex_attrib_64bit	Supported	
GL_ARB_vertex_attrib_binding	Supported	
GL_ARB_vertex_blend	Not Supported	
GL_ARB_vertex_buffer_object	Supported	
GL_ARB_vertex_program	Supported	
GL_ARB_vertex_shader	Supported	
GL_ARB_vertex_type_10f_11f_11f_rev	Supported	
GL_ARB_vertex_type_2_10_10_10_rev	Supported	
GL_ARB_viewport_array	Supported	
GL_ARB_window_pos	Supported	
GL_ARM_mali_program_binary	Not Supported	
GL_ARM_mali_shader_binary	Not Supported	
GL_ARM_rgba8	Not Supported	
GL_ARM_shader_framebuffer_fetch	Not Supported	
GL_ARM_shader_framebuffer_fetch_depth_stencil	Not Supported	
GL_ATI_array_rev_comps_in_4_bytes	Not Supported	
GL_ATI_blend_equation_separate	Not Supported	
GL_ATI_blend_weighted_minmax	Not Supported	
GL_ATI_draw_buffers	Supported	
GL_ATI_element_array	Not Supported	
GL_ATI_envmap_bumpmap	Not Supported	
GL_ATI_fragment_shader	Not Supported	
GL_ATI_lock_texture	Not Supported	
GL_ATI_map_object_buffer	Not Supported	
GL_ATI_meminfo	Not Supported	
GL_ATI_pixel_format_float	Not Supported	
GL_ATI_pn_triangles	Not Supported	
GL_ATI_point_cull_mode	Not Supported	
GL_ATI_separate_stencil	Not Supported	
GL_ATI_shader_texture_lod	Not Supported	
GL_ATI_text_fragment_shader	Not Supported	
GL_ATI_texture_compression_3dc	Not Supported	
GL_ATI_texture_env_combine3	Not Supported	
GL_ATI_texture_float	Supported	
GL_ATI_texture_mirror_once	Supported	
GL_ATI_vertex_array_object	Not Supported	
GL_ATI_vertex_attrib_array_object	Not Supported	
GL_ATI_vertex_blend	Not Supported	
GL_ATI_vertex_shader	Not Supported	
GL_ATI_vertex_streams	Not Supported	
GL_ATIX_pn_triangles	Not Supported	
GL_ATIX_texture_env_combine3	Not Supported	

GL_ATIX_texture_env_route	Not Supported	
GL_ATIX_vertex_shader_output_point_size	Not Supported	Navigation
GL_Autodesk_facet_normal	Not Supported	
GL_Autodesk_valid_back_buffer_hint	Not Supported	
GL_CR_bounding_box	Not Supported	
GL_CR_cursor_position	Not Supported	
GL_CR_head_spu_name	Not Supported	
GL_CR_performance_info	Not Supported	
GL_CR_print_string	Not Supported	
GL_CR_readback_barrier_size	Not Supported	
GL_CR_saveframe	Not Supported	
GL_CR_server_id_sharing	Not Supported	
GL_CR_server_matrix	Not Supported	
GL_CR_state_parameter	Not Supported	
GL_CR_synchronization	Not Supported	
GL_CR_tile_info	Not Supported	
GL_CR_tilesort_info	Not Supported	
GL_CR_window_size	Not Supported	
GL_DIMD_YUV	Not Supported	
GL_DMP_shader_binary	Not Supported	
GL_EXT_422_pixels	Not Supported	
GL_EXT_abgr	Supported	
GL_EXT_bgra	Supported	
GL_EXT_bindable_uniform	Supported	
GL_EXT_blend_color	Supported	
GL_EXT_blend_equation_separate	Supported	
GL_EXT_blend_func_separate	Supported	
GL_EXT_blend_logic_op	Not Supported	
GL_EXT_blend_minmax	Supported	
GL_EXT_blend_subtract	Supported	
GL_EXT_Cg_shader	Supported	
GL_EXT_clip_control	Not Supported	
GL_EXT_clip_volume_hint	Not Supported	
GL_EXT_cmyka	Not Supported	
GL_EXT_color_buffer_float	Not Supported	
GL_EXT_color_buffer_half_float	Not Supported	
GL_EXT_color_matrix	Not Supported	
GL_EXT_color_subtable	Not Supported	
GL_EXT_color_table	Not Supported	
GL_EXT_compiled_vertex_array	Supported	
GL_EXT_convolution	Not Supported	
GL_EXT_convolution_border_modes	Not Supported	
GL_EXT_coordinate_frame	Not Supported	
GL_EXT_copy_buffer	Not Supported	
GL_EXT_copy_image	Not Supported	
GL_EXT_copy_texture	Not Supported	
GL_EXT_cull_vertex	Not Supported	
GL_EXT_debug_label	Not Supported	
GL_EXT_debug_marker	Not Supported	
GL_EXT_depth_bounds_test	Supported	
GL_EXT_depth_buffer_float	Not Supported	
GL_EXT_direct_state_access	Supported	
GL_EXT_discard framebuffer	Not Supported	
GL_EXT_disjoint_timer_query	Not Supported	
GL_EXT_draw_buffers	Not Supported	
GL_EXT_draw_buffers_indexed	Not Supported	
GL_EXT_draw_buffers2	Supported	
GL_EXT_draw_indirect	Not Supported	
GL_EXT_draw_instanced	Supported	
GL_EXT_draw_range_elements	Supported	
GL_EXT_fog_coord	Supported	
GL_EXT_fog_function	Not Supported	
GL_EXT_fog_offset	Not Supported	
GL_EXT_frag_depth	Not Supported	
GL_EXT_fragment_lighting	Not Supported	
GL_EXT_framebuffer.blit	Supported	
GL_EXT_framebuffer_multisample	Supported	
GL_EXT_framebuffer_multisample.blit_scaled	Supported	

	Supported	Navigation
GL_EXT_framebuffer_object	Supported	
GL_EXT_framebuffer_sRGB	Supported	
GL_EXT_generate_mipmap	Not Supported	
GL_EXT_geometry_point_size	Not Supported	
GL_EXT_geometry_shader	Not Supported	
GL_EXT_geometry_shader4	Supported	
GL_EXT_glx_stereo_tree	Not Supported	
GL_EXT_gpu_program_parameters	Supported	
GL_EXT_gpu_shader_fp64	Not Supported	
GL_EXT_gpu_shader4	Supported	
GL_EXT_gpu_shader5	Not Supported	
GL_EXT_histogram	Not Supported	
GL_EXT_import_sync_object	Supported	
GL_EXT_index_array_formats	Not Supported	
GL_EXT_index_func	Not Supported	
GL_EXT_index_material	Not Supported	
GL_EXT_index_texture	Not Supported	
GL_EXT_instanced_arrays	Not Supported	
GL_EXT_interlace	Not Supported	
GL_EXT_light_texture	Not Supported	
GL_EXT_map_buffer_range	Not Supported	
GL_EXT_memory_object	Supported	
GL_EXT_memory_object_win32	Supported	
GL_EXT_misc_attribute	Not Supported	
GL_EXT_multi_draw_arrays	Supported	
GL_EXT_multisample	Not Supported	
GL_EXT_multisampled_render_to_texture	Not Supported	
GL_EXT_multiview_draw_buffers	Not Supported	
GL_EXT_occlusion_query_boolean	Not Supported	
GL_EXT_packed_depth_stencil	Supported	
GL_EXT_packed_float	Supported	
GL_EXT_packed_pixels	Supported	
GL_EXT_packed_pixels_12	Not Supported	
GL_EXT_paletted_texture	Not Supported	
GL_EXT_pixel_buffer_object	Supported	
GL_EXT_pixel_format	Not Supported	
GL_EXT_pixel_texture	Not Supported	
GL_EXT_pixel_transform	Not Supported	
GL_EXT_pixel_transform_color_table	Not Supported	
GL_EXT_point_parameters	Supported	
GL_EXT_polygon_offset	Not Supported	
GL_EXT_polygon_offset_clamp	Supported	
GL_EXT_post_depth_coverage	Supported	
GL_EXT_primitive_bounding_box	Not Supported	
GL_EXT_provoking_vertex	Supported	
GL_EXT_pvrtc_sRGB	Not Supported	
GL_EXT_raster_multisample	Supported	
GL_EXT_read_format_bgra	Not Supported	
GL_EXT_rescale_normal	Supported	
GL_EXT_robustness	Not Supported	
GL_EXT_scene_marker	Not Supported	
GL_EXT_secondary_color	Supported	
GL_EXT_semaphore	Supported	
GL_EXT_semaphore_win32	Supported	
GL_EXT_separate_shader_objects	Supported	
GL_EXT_separate_specular_color	Supported	
GL_EXT_shader_atomic_counters	Not Supported	
GL_EXT_shader_framebuffer_fetch	Not Supported	
GL_EXT_shader_image_load_formatted	Supported	
GL_EXT_shader_image_load_store	Supported	
GL_EXT_shader_implicit_conversions	Not Supported	
GL_EXT_shader_integer_mix	Supported	
GL_EXT_shader_io_blocks	Not Supported	
GL_EXT_shader_pixel_local_storage	Not Supported	
GL_EXT_shader_subroutine	Not Supported	
GL_EXT_shader_texture_lod	Not Supported	
GL_EXT_shadow_funcs	Supported	
GL_EXT_shadow Samplers	Not Supported	

GL_EXT_shared_texture_palette	Not Supported	
GL_EXT_sparse_texture2	Supported	Navigation
GL_EXT_sRGB	Not Supported	
GL_EXT_sRGB_write_control	Not Supported	
GL_EXT_static_vertex_array	Not Supported	
GL_EXT_stencil_clear_tag	Not Supported	
GL_EXT_stencil_two_side	Supported	
GL_EXT_stencil_wrap	Supported	
GL_EXT_subtexture	Not Supported	
GL_EXT_swap_control	Not Supported	
GL_EXT_tessellation_point_size	Not Supported	
GL_EXT_tessellation_shader	Not Supported	
GL_EXT_txgen_reflection	Not Supported	
GL_EXT_texture	Not Supported	
GL_EXT_texture_array	Supported	
GL_EXT_texture_border_clamp	Not Supported	
GL_EXT_texture_buffer	Not Supported	
GL_EXT_texture_buffer_object	Supported	
GL_EXT_texture_buffer_object_rgb32	Not Supported	
GL_EXT_texture_color_table	Not Supported	
GL_EXT_texture_compression_bptc	Not Supported	
GL_EXT_texture_compression_dxt1	Supported	
GL_EXT_texture_compression_latc	Supported	
GL_EXT_texture_compression_rgtc	Supported	
GL_EXT_texture_compression_s3tc	Supported	
GL_EXT_texture_cube_map	Supported	
GL_EXT_texture_cube_map_array	Not Supported	
GL_EXT_texture_edge_clamp	Supported	
GL_EXT_texture_env	Not Supported	
GL_EXT_texture_env_add	Supported	
GL_EXT_texture_env_combine	Supported	
GL_EXT_texture_env_dot3	Supported	
GL_EXT_texture_filter_anisotropic	Supported	
GL_EXT_texture_filter_minmax	Supported	
GL_EXT_texture_format_BGRA8888	Not Supported	
GL_EXT_texture_integer	Supported	
GL_EXT_texture_lod	Supported	
GL_EXT_texture_lod_bias	Supported	
GL_EXT_texture_mirror_clamp	Supported	
GL_EXT_texture_object	Supported	
GL_EXT_texture_perturb_normal	Not Supported	
GL_EXT_texture_rectangle	Not Supported	
GL_EXT_texture_rg	Not Supported	
GL_EXT_texture_shared_exponent	Supported	
GL_EXT_texture_snorm	Not Supported	
GL_EXT_texture_sRGB	Supported	
GL_EXT_texture_sRGB_decode	Supported	
GL_EXT_texture_sRGB_R8	Supported	
GL_EXT_texture_storage	Supported	
GL_EXT_texture_swizzle	Supported	
GL_EXT_texture_type_2_10_10_10_REV	Not Supported	
GL_EXT_texture_view	Not Supported	
GL_EXT_texture3D	Supported	
GL_EXT_texture4D	Not Supported	
GL_EXT_timer_query	Supported	
GL_EXT_transform_feedback	Not Supported	
GL_EXT_transform_feedback2	Supported	
GL_EXT_transform_feedback3	Not Supported	
GL_EXT_unpack_subimage	Not Supported	
GL_EXT_vertex_array	Supported	
GL_EXT_vertex_array_bgra	Supported	
GL_EXT_vertex_array_set	Not Supported	
GL_EXT_vertex_array_setXXX	Not Supported	
GL_EXT_vertex_attrib_64bit	Supported	
GL_EXT_vertex_shader	Not Supported	
GL_EXT_vertex_weighting	Not Supported	
GL_EXT_win32_keyed_mutex	Supported	
GL_EXT_window_rectangles	Supported	

GL_EXT_x11_sync_object	Not Supported	
GL_EXTX_framebuffer_mixed_formats	Supported	Navigation
GL_EXTX_packed_depth_stencil	Not Supported	
GL_FGL_lock_texture	Not Supported	
GL_FJ_shader_binary_GCCSO	Not Supported	
GL_GL2_geometry_shader	Not Supported	
GL_GREMEDY_frame_terminator	Not Supported	
GL_GREMEDY_string_marker	Not Supported	
GL_HP_convolution_border_modes	Not Supported	
GL_HP_image_transform	Not Supported	
GL_HP_occlusion_test	Not Supported	
GL_HP_texture_lighting	Not Supported	
GL_I3D_argb	Not Supported	
GL_I3D_color_clamp	Not Supported	
GL_I3D_interlace_read	Not Supported	
GL_IBM_clip_check	Not Supported	
GL_IBM_cull_vertex	Not Supported	
GL_IBM_load_named_matrix	Not Supported	
GL_IBM_multi_draw_arrays	Not Supported	
GL_IBM_multimode_draw_arrays	Not Supported	
GL_IBM_occlusion_cull	Not Supported	
GL_IBM_pixel_filter_hint	Not Supported	
GL_IBM_rasterpos_clip	Supported	
GL_IBM_rescale_normal	Not Supported	
GL_IBM_static_data	Not Supported	
GL_IBM_texture_clamp_nodraw	Not Supported	
GL_IBM_texture_mirrored_repeat	Supported	
GL_IBM_vertex_array_lists	Not Supported	
GL_IBM_YCbCr	Not Supported	
GL_IMG_multisampled_render_to_texture	Not Supported	
GL_IMG_program_binary	Not Supported	
GL_IMG_read_format	Not Supported	
GL_IMG_sgx_binary	Not Supported	
GL_IMG_shader_binary	Not Supported	
GL_IMG_texture_compression_pvrtc	Not Supported	
GL_IMG_texture_compression_pvrtc2	Not Supported	
GL_IMG_texture_env_enhanced_fixed_function	Not Supported	
GL_IMG_texture_format_BGRA8888	Not Supported	
GL_IMG_user_clip_plane	Not Supported	
GL_IMG_vertex_program	Not Supported	
GL_INGR_blend_func_separate	Not Supported	
GL_INGR_color_clamp	Not Supported	
GL_INGR_interlace_read	Not Supported	
GL_INGR_multiple_palette	Not Supported	
GL_INTEL_compute_shader_lane_shift	Not Supported	
GL_INTEL_conservative_rasterization	Not Supported	
GL_INTEL_fragment_shader_ordering	Not Supported	
GL_INTEL_fragment_shader_span_sharing	Not Supported	
GL_INTEL_framebuffer_CMAA	Not Supported	
GL_INTEL_image_serialize	Not Supported	
GL_INTEL_map_texture	Not Supported	
GL_INTEL_multi_rate_fragment_shader	Not Supported	
GL_INTEL_parallel_arrays	Not Supported	
GL_INTEL_performance_queries	Not Supported	
GL_INTEL_performance_query	Not Supported	
GL_INTEL_texture_scissor	Not Supported	
GL_KHR_blend_equation_advanced	Supported	
GL_KHR_blend_equation_advanced_coherent	Supported	
GL_KHR_context_flush_control	Supported	
GL_KHR_debug	Supported	
GL_KHR_no_error	Supported	
GL_KHR_parallel_shader_compile	Supported	
GL_KHR_robust_buffer_access_behavior	Supported	
GL_KHR_robustness	Supported	
GL_KHR_texture_compression_astc_hdr	Not Supported	
GL_KHR_texture_compression_astc_ldr	Not Supported	
GL_KHR_vulkan_glsl	Not Supported	
GL_KTX_buffer_region	Supported	

GL_MESA_pack_invert	Not Supported	
GL_MESA_program_debug	Not Supported	Navigation
GL_MESA_resize_buffers	Not Supported	
GL_MESA_texture_array	Not Supported	
GL_MESA_texture_signed_rgba	Not Supported	
GL_MESA_window_pos	Not Supported	
GL_MESA_ycbcr_texture	Not Supported	
GL_MESAX_texture_float	Not Supported	
GL_MESAX_texture_stack	Not Supported	
GL_MTX_fragment_shader	Not Supported	
GL_MTX_precision_dpi	Not Supported	
GL_NV_3dvision_settings	Not Supported	
GL_NV_alpha_test	Not Supported	
GL_NV_alpha_to_coverage_dither_control	Supported	
GL_NV_bgr	Not Supported	
GL_NV_bindless_multi_draw_indirect	Supported	
GL_NV_bindless_multi_draw_indirect_count	Supported	
GL_NV_bindless_texture	Supported	
GL_NV_blend_equation_advanced	Supported	
GL_NV_blend_equation_advanced_coherent	Supported	
GL_NV_blend_minmax	Not Supported	
GL_NV_blend_minmax_factor	Supported	
GL_NV_blend_square	Supported	
GL_NV_centroid_sample	Not Supported	
GL_NV_clip_space_w_scaling	Supported	
GL_NV_command_list	Supported	
GL_NV_complex_primitives	Not Supported	
GL_NV_compute_program5	Supported	
GL_NV_conditional_render	Supported	
GL_NV_conservative_raster	Supported	
GL_NV_conservative_raster_dilate	Supported	
GL_NV_conservative_raster_pre_snap_triangles	Supported	
GL_NV_copy_buffer	Not Supported	
GL_NV_copy_depth_to_color	Supported	
GL_NV_copy_image	Supported	
GL_NV_coverage_sample	Not Supported	
GL_NV_deep_texture3D	Not Supported	
GL_NV_depth_buffer_float	Supported	
GL_NV_depth_clamp	Supported	
GL_NV_depth_nonlinear	Not Supported	
GL_NV_depth_range_unclamped	Not Supported	
GL_NV_draw_buffers	Not Supported	
GL_NV_draw_instanced	Not Supported	
GL_NV_draw_texture	Supported	
GL_NV_draw_vulkan_image	Supported	
GL_NV_EGL_stream_consumer_external	Not Supported	
GL_NV_ES1_1_compatibility	Supported	
GL_NV_ES3_1_compatibility	Supported	
GL_NV_evaluators	Not Supported	
GL_NV_explicit_attrib_location	Not Supported	
GL_NV_explicit_multisample	Supported	
GL_NV_fbo_color_attachments	Not Supported	
GL_NV_feature_query	Supported	
GL_NV_fence	Supported	
GL_NV_fill_rectangle	Supported	
GL_NV_float_buffer	Supported	
GL_NV_fog_distance	Supported	
GL_NV_fragdepth	Not Supported	
GL_NV_fragment_coverage_to_color	Supported	
GL_NV_fragment_program	Supported	
GL_NV_fragment_program_option	Supported	
GL_NV_fragment_program2	Supported	
GL_NV_fragment_program4	Not Supported	
GL_NV_fragment_shader_interlock	Supported	
GL_NV_framebuffer.blit	Not Supported	
GL_NV_framebuffer_mixed_samples	Supported	
GL_NV_framebuffer_multisample	Not Supported	
GL_NV_framebuffer_multisample_coverage	Supported	

GL_NV_framebuffer_multisample_ex	Not Supported	
GL_NV_generate_mipmap_SRGB	Not Supported	Navigation
GL_NV_geometry_program4	Not Supported	
GL_NV_geometry_shader_passthrough	Supported	
GL_NV_geometry_shader4	Supported	
GL_NV_gpu_program_fp64	Supported	
GL_NV_gpu_program4	Supported	
GL_NV_gpu_program4_1	Supported	
GL_NV_gpu_program5	Supported	
GL_NV_gpu_program5_mem_extended	Supported	
GL_NV_gpu_shader5	Supported	
GL_NV_half_float	Supported	
GL_NV_instanced_arrays	Not Supported	
GL_NV_internalformat_sample_query	Supported	
GL_NV_light_max_exponent	Supported	
GL_NV_memory_attachment	Supported	
GL_NV_multisample_coverage	Supported	
GL_NV_multisample_filter_hint	Supported	
GL_NV_non_square_matrices	Not Supported	
GL_NV_occlusion_query	Supported	
GL_NV_pack_subimage	Not Supported	
GL_NV_packed_depth_stencil	Supported	
GL_NV_packed_float	Not Supported	
GL_NV_packed_float_linear	Not Supported	
GL_NV_parameter_buffer_object	Supported	
GL_NV_parameter_buffer_object2	Supported	
GL_NV_path_rendering	Supported	
GL_NV_path_rendering_shared_edge	Supported	
GL_NV_pixel_buffer_object	Not Supported	
GL_NV_pixel_data_range	Supported	
GL_NV_platform_binary	Not Supported	
GL_NV_point_sprite	Supported	
GL_NV_present_video	Not Supported	
GL_NV_primitive_restart	Supported	
GL_NV_query_resource	Supported	
GL_NV_query_resource_tag	Supported	
GL_NV_read_buffer	Not Supported	
GL_NV_read_buffer_front	Not Supported	
GL_NV_read_depth	Not Supported	
GL_NV_read_depth_stencil	Not Supported	
GL_NV_read_stencil	Not Supported	
GL_NV_register_combiners	Supported	
GL_NV_register_combiners2	Supported	
GL_NV_robustness_video_memory_purge	Not Supported	
GL_NV_sample_locations	Supported	
GL_NV_sample_mask_override_coverage	Supported	
GL_NV_shader_atomic_counters	Supported	
GL_NV_shader_atomic_float	Supported	
GL_NV_shader_atomic_float64	Supported	
GL_NV_shader_atomic_fp16_vector	Supported	
GL_NV_shader_atomic_int64	Supported	
GL_NV_shader_buffer_load	Supported	
GL_NV_shader_buffer_store	Not Supported	
GL_NV_shader_storage_buffer_object	Supported	
GL_NV_shader_thread_group	Supported	
GL_NV_shader_thread_shuffle	Supported	
GL_NV_shadow_samplers_array	Not Supported	
GL_NV_shadow_samplers_cube	Not Supported	
GL_NV_sRGB_formats	Not Supported	
GL_NV_stereo_view_rendering	Supported	
GL_NV_tessellation_program5	Not Supported	
GL_NV_txgen_emboss	Not Supported	
GL_NV_txgen_reflection	Supported	
GL_NV_texture_array	Not Supported	
GL_NV_texture_barrier	Supported	
GL_NV_texture_border_clamp	Not Supported	
GL_NV_texture_compression_latc	Not Supported	
GL_NV_texture_compression_s3tc	Not Supported	

GL_NV_texture_compression_s3tc_update	Not Supported	
GL_NV_texture_compression_htc	Supported	Navigation
GL_NV_texture_env_combine4	Supported	
GL_NV_texture_expand_normal	Not Supported	
GL_NV_texture_lod_clamp	Not Supported	
GL_NV_texture_multisample	Supported	
GL_NV_texture_npot_2D_mipmap	Not Supported	
GL_NV_texture_rectangle	Supported	
GL_NV_texture_rectangle_compressed	Supported	
GL_NV_texture_shader	Supported	
GL_NV_texture_shader2	Supported	
GL_NV_texture_shader3	Supported	
GL_NV_timer_query	Not Supported	
GL_NV_transform_feedback	Supported	
GL_NV_transform_feedback2	Supported	
GL_NV_uniform_buffer_unified_memory	Supported	
GL_NV_vpdpau_interop	Not Supported	
GL_NV_vertex_array_range	Supported	
GL_NV_vertex_array_range2	Supported	
GL_NV_vertex_attrib_64bit	Not Supported	
GL_NV_vertex_attrib_integer_64bit	Supported	
GL_NV_vertex_buffer_unified_memory	Supported	
GL_NV_vertex_program	Supported	
GL_NV_vertex_program1_1	Supported	
GL_NV_vertex_program2	Supported	
GL_NV_vertex_program2_option	Supported	
GL_NV_vertex_program3	Supported	
GL_NV_vertex_program4	Not Supported	
GL_NV_video_capture	Not Supported	
GL_NV_viewport_array2	Supported	
GL_NV_viewport_swizzle	Supported	
GL_NVX_blend_equation_advanced_multi_draw_buffers	Supported	
GL_NVX_conditional_render	Supported	
GL_NVX_flush_hold	Not Supported	
GL_NVX_gpu_memory_info	Supported	
GL_NVX_instanced_arrays	Not Supported	
GL_NVX_multigpu_info	Supported	
GL_NVX_nvenc_interop	Supported	
GL_NVX_shader_thread_group	Not Supported	
GL_NVX_shader_thread_shuffle	Not Supported	
GL_NVX_shared_sync_object	Not Supported	
GL_NVX_sysmem_buffer	Not Supported	
GL_NVX_ycrcb	Not Supported	
GL_OES_blend_equation_separate	Not Supported	
GL_OES_blend_func_separate	Not Supported	
GL_OES_blend_subtract	Not Supported	
GL_OES_byte_coordinates	Not Supported	
GL_OES_compressed_EAC_R11_signed_texture	Not Supported	
GL_OES_compressed_EAC_R11_unsigned_texture	Not Supported	
GL_OES_compressed_EAC_RG11_signed_texture	Not Supported	
GL_OES_compressed_EAC_RG11_unsigned_texture	Not Supported	
GL_OES_compressed_ETC1_RGB8_texture	Not Supported	
GL_OES_compressed_ETC2_punchthroughA_RGBA8_texture	Not Supported	
GL_OES_compressed_ETC2_punchthroughA_sRGB8_alpha_texture	Not Supported	
GL_OES_compressed_ETC2_RGB8_texture	Not Supported	
GL_OES_compressed_ETC2_RGB8_texture	Not Supported	
GL_OES_compressed_ETC2_sRGB8_alpha8_texture	Not Supported	
GL_OES_compressed_ETC2_sRGB8_texture	Not Supported	
GL_OES_compressed_paletted_texture	Not Supported	
GL_OES_conditional_query	Not Supported	
GL_OES_depth_texture	Not Supported	
GL_OES_depth_texture_cube_map	Not Supported	
GL_OES_depth24	Not Supported	
GL_OES_depth32	Not Supported	
GL_OES_draw_texture	Not Supported	
GL_OES_EGL_image	Not Supported	
GL_OES_EGL_image_external	Not Supported	
GL_OES_EGL_sync	Not Supported	

GL_OES_element_index_uint	Not Supported	
GL_OES_extended_matrix_palette	Not Supported	Navigation
GL_OES_fbo_render_mipmap	Not Supported	
GL_OES_fixed_point	Not Supported	
GL_OES_fragment_precision_high	Not Supported	
GL_OES_framebuffer_object	Not Supported	
GL_OES_get_program_binary	Not Supported	
GL_OES_mapbuffer	Not Supported	
GL_OES_matrix_get	Not Supported	
GL_OES_matrix_palette	Not Supported	
GL_OES_packed_depth_stencil	Not Supported	
GL_OES_point_size_array	Not Supported	
GL_OES_point_sprite	Not Supported	
GL_OES_query_matrix	Not Supported	
GL_OES_read_format	Not Supported	
GL_OES_required_internalformat	Not Supported	
GL_OES_rgb8_rgba8	Not Supported	
GL_OES_sample_shading	Not Supported	
GL_OES_sample_variables	Not Supported	
GL_OES_shader_image_atomic	Not Supported	
GL_OES_shader_multisample_interpolation	Not Supported	
GL_OES_single_precision	Not Supported	
GL_OES_standard_derivatives	Not Supported	
GL_OES_stencil_wrap	Not Supported	
GL_OES_stencil1	Not Supported	
GL_OES_stencil4	Not Supported	
GL_OES_stencil8	Not Supported	
GL_OES_surfaceless_context	Not Supported	
GL_OES_texture_3D	Not Supported	
GL_OES_texture_compression_astc	Not Supported	
GL_OES_texture_cube_map	Not Supported	
GL_OES_texture_env_crossbar	Not Supported	
GL_OES_texture_float	Not Supported	
GL_OES_texture_float_linear	Not Supported	
GL_OES_texture_half_float	Not Supported	
GL_OES_texture_half_float_linear	Not Supported	
GL_OES_texture_mirrored_repeat	Not Supported	
GL_OES_texture_npot	Not Supported	
GL_OES_texture_stencil8	Not Supported	
GL_OES_texture_storage_multisample_2d_array	Not Supported	
GL_OES_vertex_array_object	Not Supported	
GL_OES_vertex_half_float	Not Supported	
GL_OES_vertex_type_10_10_10_2	Not Supported	
GL_OML_interlace	Not Supported	
GL_OML_resample	Not Supported	
GL_OML_subsample	Not Supported	
GL_OVR_multiview	Supported	
GL_OVR_multiview2	Supported	
GL_PGI_misc_hints	Not Supported	
GL_PGI_vertex_hints	Not Supported	
GL_QCOM_alpha_test	Not Supported	
GL_QCOM_binning_control	Not Supported	
GL_QCOM_driver_control	Not Supported	
GL_QCOM_extended_get	Not Supported	
GL_QCOM_extended_get2	Not Supported	
GL_QCOM_perfmon_global_mode	Not Supported	
GL_QCOM_tiled_rendering	Not Supported	
GL_QCOM_writeonly_rendering	Not Supported	
GL_RENDER_SCREEN_COORDINATES	Not Supported	
GL_S3_performance_analyzer	Not Supported	
GL_S3_s3tc	Supported	
GL_SGI_color_matrix	Not Supported	
GL_SGI_color_table	Not Supported	
GL_SGI_compiled_vertex_array	Not Supported	
GL_SGI_cull_vertex	Not Supported	
GL_SGI_index_array_formats	Not Supported	
GL_SGI_index_func	Not Supported	
GL_SGI_index_material	Not Supported	

GL_SGI_index_texture	Not Supported	
GL_SGI_make_current_read	Not Supported	Navigation
GL_SGI_texture_add_env	Not Supported	
GL_SGI_texture_color_table	Not Supported	
GL_SGI_texture_edge_clamp	Not Supported	
GL_SGI_texture_lod	Not Supported	
GL_SGIS_color_range	Not Supported	
GL_SGIS_detail_texture	Not Supported	
GL_SGIS_fog_function	Not Supported	
GL_SGIS_generate_mipmap	Supported	
GL_SGIS_multisample	Not Supported	
GL_SGIS_multitexture	Not Supported	
GL_SGIS_pixel_texture	Not Supported	
GL_SGIS_point_line_texgen	Not Supported	
GL_SGIS_sharpen_texture	Not Supported	
GL_SGIS_texture_border_clamp	Not Supported	
GL_SGIS_texture_color_mask	Not Supported	
GL_SGIS_texture_edge_clamp	Not Supported	
GL_SGIS_texture_filter4	Not Supported	
GL_SGIS_texture_lod	Supported	
GL_SGIS_texture_select	Not Supported	
GL_SGIS_texture4D	Not Supported	
GL_SGIX_async	Not Supported	
GL_SGIX_async_histogram	Not Supported	
GL_SGIX_async_pixel	Not Supported	
GL_SGIX_blend_alpha_minmax	Not Supported	
GL_SGIX_clipmap	Not Supported	
GL_SGIX_convolution_accuracy	Not Supported	
GL_SGIX_depth_pass_instrument	Not Supported	
GL_SGIX_depth_texture	Supported	
GL_SGIX_flush_raster	Not Supported	
GL_SGIX_fog_offset	Not Supported	
GL_SGIX_fog_texture	Not Supported	
GL_SGIX_fragment_specular_lighting	Not Supported	
GL_SGIX_framezoom	Not Supported	
GL_SGIX_instruments	Not Supported	
GL_SGIX_interlace	Not Supported	
GL_SGIX_ir_instrument1	Not Supported	
GL_SGIX_list_priority	Not Supported	
GL_SGIX_pbuffer	Not Supported	
GL_SGIX_pixel_texture	Not Supported	
GL_SGIX_pixel_texture_bits	Not Supported	
GL_SGIX_reference_plane	Not Supported	
GL_SGIX_resample	Not Supported	
GL_SGIX_shadow	Supported	
GL_SGIX_shadow_ambient	Not Supported	
GL_SGIX_sprite	Not Supported	
GL_SGIX_subsample	Not Supported	
GL_SGIX_tag_sample_buffer	Not Supported	
GL_SGIX_texture_add_env	Not Supported	
GL_SGIX_texture_coordinate_clamp	Not Supported	
GL_SGIX_texture_lod_bias	Not Supported	
GL_SGIX_texture_multi_buffer	Not Supported	
GL_SGIX_texture_range	Not Supported	
GL_SGIX_texture_scale_bias	Not Supported	
GL_SGIX_vertex_preclip	Not Supported	
GL_SGIX_vertex_preclip_hint	Not Supported	
GL_SGIX_ycrcb	Not Supported	
GL_SGIX_ycrcb_subsample	Not Supported	
GL_SUN_convolution_border_modes	Not Supported	
GL_SUN_global_alpha	Not Supported	
GL_SUN_mesh_array	Not Supported	
GL_SUN_multi_draw_arrays	Not Supported	
GL_SUN_read_video_pixels	Not Supported	
GL_SUN_slice_accum	Supported	
GL_SUN_triangle_list	Not Supported	
GL_SUN_vertex	Not Supported	
GL_SUNX_constant_data	Not Supported	

GL_VIV_shader_binary	Not Supported	
GL_WGL_ARB_extensions_string	Not Supported	Navigation
GL_WGL_EXT_extensions_string	Not Supported	
GL_WGL_EXT_swap_control	Not Supported	
GL_WIN_phong_shading	Not Supported	
GL_WIN_specular_fog	Not Supported	
GL_WIN_swap_hint	Supported	
GLU_EXT_nurbs_tessellator	Not Supported	
GLU_EXT_object_space_tess	Not Supported	
GLU_SGI_filter4_parameters	Not Supported	
GLX_AMD_gpu_association	Not Supported	
GLX_ARB_create_context	Not Supported	
GLX_ARB_create_context_profile	Not Supported	
GLX_ARB_create_context_robustness	Not Supported	
GLX_ARB_fbconfig_float	Not Supported	
GLX_ARB_framebuffer_sRGB	Not Supported	
GLX_ARB_get_proc_address	Not Supported	
GLX_ARB_multisample	Not Supported	
GLX_ARB_robustness_application_isolation	Not Supported	
GLX_ARB_robustness_share_group_isolation	Not Supported	
GLX_ARB_vertex_buffer_object	Not Supported	
GLX_EXT_buffer_age	Not Supported	
GLX_EXT_create_context_es_profile	Not Supported	
GLX_EXT_create_context_es2_profile	Not Supported	
GLX_EXT_fbconfig_packed_float	Not Supported	
GLX_EXT_framebuffer_sRGB	Not Supported	
GLX_EXT_import_context	Not Supported	
GLX_EXT_scene_marker	Not Supported	
GLX_EXT_swap_control	Not Supported	
GLX_EXT_swap_control_tear	Not Supported	
GLX_EXT_texture_from_pixmap	Not Supported	
GLX_EXT_visual_info	Not Supported	
GLX_EXT_visual_rating	Not Supported	
GLX_INTEL_swap_event	Not Supported	
GLX_MESA_agp_offset	Not Supported	
GLX_MESA_copy_sub_buffer	Not Supported	
GLX_MESA_multithread_makecurrent	Not Supported	
GLX_MESA_pixmap_colormap	Not Supported	
GLX_MESA_query_renderer	Not Supported	
GLX_MESA_release_buffers	Not Supported	
GLX_MESA_set_3dfx_mode	Not Supported	
GLX_MESA_swap_control	Not Supported	
GLX_NV_copy_image	Not Supported	
GLX_NV_delay_before_swap	Not Supported	
GLX_NV_float_buffer	Not Supported	
GLX_NV_multisample_coverage	Not Supported	
GLX_NV_present_video	Not Supported	
GLX_NV_swap_group	Not Supported	
GLX_NV_video_capture	Not Supported	
GLX_NV_video_out	Not Supported	
GLX_NV_video_output	Not Supported	
GLX_OML_interlace	Not Supported	
GLX_OML_swap_method	Not Supported	
GLX_OML_sync_control	Not Supported	
GLX_SGI_cushion	Not Supported	
GLX_SGI_make_current_read	Not Supported	
GLX_SGI_swap_control	Not Supported	
GLX_SGI_video_sync	Not Supported	
GLX_SGIS_blended_overlay	Not Supported	
GLX_SGIS_color_range	Not Supported	
GLX_SGIS_multisample	Not Supported	
GLX_SGIX_dm_buffer	Not Supported	
GLX_SGIX_fbconfig	Not Supported	
GLX_SGIX_hyperpipe	Not Supported	
GLX_SGIX_pbuffer	Not Supported	
GLX_SGIX_swap_barrier	Not Supported	
GLX_SGIX_swap_group	Not Supported	
GLX_SGIX_video_resize	Not Supported	

GLX_SGIX_video_source	Not Supported	
GLX_SGIX_visual_select_group	Not Supported	Navigation
GLX_SUN_get_transparent_index	Not Supported	
GLX_SUN_video_resize	Not Supported	
WGL_3DFX_gamma_control	Not Supported	
WGL_3DFX_multisample	Not Supported	
WGL_3DL_stereo_control	Not Supported	
WGL_AMD_gpu_association	Not Supported	
WGL_AMDX_gpu_association	Not Supported	
WGL_ARB_buffer_region	Supported	
WGL_ARB_context_flush_control	Supported	
WGL_ARB_create_context	Supported	
WGL_ARB_create_context_no_error	Supported	
WGL_ARB_create_context_profile	Supported	
WGL_ARB_create_context_robustness	Supported	
WGL_ARB_extensions_string	Supported	
WGL_ARB_framebuffer_sRGB	Not Supported	
WGL_ARB_make_current_read	Supported	
WGL_ARB_multisample	Supported	
WGL_ARB_pbuffer	Supported	
WGL_ARB_pixel_format	Supported	
WGL_ARB_pixel_format_float	Supported	
WGL_ARB_render_texture	Supported	
WGL_ARB_robustness_application_isolation	Not Supported	
WGL_ARB_robustness_share_group_isolation	Not Supported	
WGL_ATI_pbuffer_memory_hint	Not Supported	
WGL_ATI_pixel_format_float	Supported	
WGL_ATI_render_texture_rectangle	Not Supported	
WGL_EXT_buffer_region	Not Supported	
WGL_EXT_colorspace	Supported	
WGL_EXT_create_context_es_profile	Supported	
WGL_EXT_create_context_es2_profile	Supported	
WGL_EXT_depth_float	Not Supported	
WGL_EXT_display_color_table	Not Supported	
WGL_EXT_extensions_string	Supported	
WGL_EXT_framebuffer_sRGB	Supported	
WGL_EXT_framebuffer_sRGBWGL_ARB_create_context	Not Supported	
WGL_EXT_gamma_control	Not Supported	
WGL_EXT_make_current_read	Not Supported	
WGL_EXT_multisample	Not Supported	
WGL_EXT_pbuffer	Not Supported	
WGL_EXT_pixel_format	Not Supported	
WGL_EXT_pixel_format_packed_float	Supported	
WGL_EXT_render_texture	Not Supported	
WGL_EXT_swap_control	Supported	
WGL_EXT_swap_control_tear	Supported	
WGL_EXT_swap_interval	Not Supported	
WGL_I3D_digital_video_control	Not Supported	
WGL_I3D_gamma	Not Supported	
WGL_I3D_genlock	Not Supported	
WGL_I3D_image_buffer	Not Supported	
WGL_I3D_swap_frame_lock	Not Supported	
WGL_I3D_swap_frame_usage	Not Supported	
WGL_INTEL_cl_sharing	Not Supported	
WGL_MTX_video_preview	Not Supported	
WGL_NV_bridged_display	Not Supported	
WGL_NV_copy_image	Supported	
WGL_NV_delay_before_swap	Supported	
WGL_NV_DX_interop	Supported	
WGL_NV_DX_interop2	Supported	
WGL_NV_float_buffer	Supported	
WGL_NV_gpu_affinity	Not Supported	
WGL_NV_multisample_coverage	Supported	
WGL_NV_present_video	Not Supported	
WGL_NV_render_depth_texture	Supported	
WGL_NV_render_texture_rectangle	Supported	
WGL_NV_swap_group	Not Supported	
WGL_NV_texture_rectangle	Not Supported	

WGL_NV_vertex_array_range	Not Supported	
WGL_NV_video_capture	Not Supported	Navigation
WGL_NV_video_output	Not Supported	
WGL_NVX_DX_interop	Supported	
WGL_OML_sync_control	Not Supported	
WGL_S3_cl_sharingWGL_ARB_create_context_profile	Not Supported	

**Supported Compressed Texture Formats:**

RGB DXT1	Supported
RGBA DXT1	Not Supported
RGBA DXT3	Supported
RGBA DXT5	Supported
RGB FXT1	Not Supported
RGBA FXT1	Not Supported
3Dc	Not Supported

**Video Adapter Manufacturer:**

Company Name	NVIDIA Corporation
Product Information	<a href="http://www.nvidia.com/page/products.html">http://www.nvidia.com/page/products.html</a>
Driver Download	<a href="http://www.nvidia.com/content/drivers/drivers.asp">http://www.nvidia.com/content/drivers/drivers.asp</a>
Driver Update	<a href="http://www.aida64.com/driver-updates">http://www.aida64.com/driver-updates</a>

**GPGPU****[ CUDA: nVIDIA GeForce GTX 1050 Ti with Max-Q Design (GP107) ]****Device Properties:**

Device Name	GeForce GTX 1050 Ti with Max-Q Design
GPU Code Name	GP107
PCI Domain / Bus / Device	0 / 1 / 0
Clock Rate	1290 MHz
Asynchronous Engines	5
Multiprocessors / Cores	6 / 768
L2 Cache	1 MB
Max Threads Per Multiprocessor	2048
Max Threads Per Block	1024
Max Registers Per Block	65536
Max 32-bit Registers Per Multiprocessor	65536
Max Instructions Per Kernel	512 million
Warp Size	32 threads
Max Block Size	1024 x 1024 x 64
Max Grid Size	2147483647 x 65535 x 65535
Max 1D Texture Width	131072
Max 2D Texture Size	131072 x 65536
Max 3D Texture Size	16384 x 16384 x 16384
Max 1D Linear Texture Width	134217728
Max 2D Linear Texture Size	131072 x 65000
Max 2D Linear Texture Pitch	2097120 bytes
Max 1D Layered Texture Width	32768
Max 1D Layered Texture Layers	2048
Max Mipmapped 1D Texture Width	16384
Max Mipmapped 2D Texture Size	32768 x 32768
Max Cubemap Texture Size	32768 x 32768
Max Cubemap Layered Texture Size	32768 x 32768
Max Cubemap Layered Texture Layers	2046
Max Texture Array Size	32768 x 32768
Max Texture Array Slices	2048
Max 1D Surface Width	32768
Max 2D Surface Size	131072 x 65536
Max 3D Surface Size	16384 x 16384 x 16384
Max 1D Layered Surface Width	32768
Max 1D Layered Surface Layers	2048
Max 2D Layered Surface Size	32768 x 32768
Max 2D Layered Surface Layers	2048
Compute Mode	Default: Multiple contexts allowed per device

Compute Capability  
CUDA DLL

6.1  
nvcuda.dll (25.21.14.1694 - nVIDIA Detona) Navigation

**Memory Properties:**

Memory Clock	3504 MHz
Global Memory Bus Width	128-bit
Total Memory	4095 MB
Total Constant Memory	64 KB
Max Shared Memory Per Block	48 KB
Max Shared Memory Per Multiprocessor	96 KB
Max Memory Pitch	2147483647 bytes
Texture Alignment	512 bytes
Texture Pitch Alignment	32 bytes
Surface Alignment	512 bytes

**Device Features:**

32-bit Floating-Point Atomic Addition	Supported
32-bit Integer Atomic Operations	Supported
64-bit Integer Atomic Operations	Supported
Caching Globals in L1 Cache	Supported
Caching Locals in L1 Cache	Supported
Concurrent Kernel Execution	Supported
Concurrent Memory Copy & Execute	Supported
Double-Precision Floating-Point	Supported
ECC	Disabled
Funnel Shift	Supported
Half-Precision Floating-Point	Not Supported
Host Memory Mapping	Supported
Integrated Device	No
Managed Memory	Not Supported
Multi-GPU Board	No
Stream Priorities	Supported
Surface Functions	Supported
TCC Driver	No
Warp Vote Functions	Supported
<code>__ballot()</code>	Supported
<code>__syncthreads_and()</code>	Supported
<code>__syncthreads_count()</code>	Supported
<code>__syncthreads_or()</code>	Supported
<code>__threadfence_system()</code>	Supported

**Device Manufacturer:**

Company Name	NVIDIA Corporation
Product Information	<a href="http://www.nvidia.com/page/products.html">http://www.nvidia.com/page/products.html</a>
Driver Download	<a href="http://www.nvidia.com/content/drivers/drivers.asp">http://www.nvidia.com/content/drivers/drivers.asp</a>
Driver Update	<a href="http://www.aida64.com/driver-updates">http://www.aida64.com/driver-updates</a>

**[ Direct3D: NVIDIA GeForce GTX 1050 Ti with Max-Q Design (GP107) ]****Device Properties:**

Device Name	NVIDIA GeForce GTX 1050 Ti with Max-Q Design
GPU Code Name	GP107
PCI Device	10DE-1C8C / 17AA-2267 (Rev A1)
Dedicated Memory	3 GB
Driver Name	nvldumd.dll
Driver Version	25.21.14.1694 - nVIDIA Detonator 16.94
Shader Model	SM 5.1
Max Threads	1024
Multiple UAV Access	64 UAVs
Thread Dispatch	3D
Thread Local Storage	32 KB

**Device Features:**

10-bit Precision Floating-Point	Not Supported
16-bit Precision Floating-Point	Not Supported
Append/Consume Buffers	Supported
Atomic Operations	Supported
Double-Precision Floating-Point	Supported

Gather4	Supported	Navigation
Indirect Compute Dispatch	Supported	
Map On Default Buffers	Supported	

**Device Manufacturer:**

Company Name	NVIDIA Corporation
Product Information	<a href="http://www.nvidia.com/page/products.html">http://www.nvidia.com/page/products.html</a>
Driver Download	<a href="http://www.nvidia.com/content/drivers/drivers.asp">http://www.nvidia.com/content/drivers/drivers.asp</a>
Driver Update	<a href="http://www.aida64.com/driver-updates">http://www.aida64.com/driver-updates</a>

**[ Direct3D: Intel(R) UHD Graphics 630 ]****Device Properties:**

Device Name	Intel(R) UHD Graphics 630
PCI Device	8086-3E9B / 17AA-2267 (Rev 00)
Dedicated Memory	128 MB
Shader Model	SM 5.1
Max Threads	1024
Multiple UAV Access	64 UAVs
Thread Dispatch	3D
Thread Local Storage	32 KB

**Device Features:**

10-bit Precision Floating-Point	Not Supported
16-bit Precision Floating-Point	Supported
Append/Consume Buffers	Supported
Atomic Operations	Supported
Double-Precision Floating-Point	Supported
Gather4	Supported
Indirect Compute Dispatch	Supported
Map On Default Buffers	Supported

**Device Manufacturer:**

Company Name	Intel Corporation
Product Information	<a href="http://www.intel.com/products/chipsets">http://www.intel.com/products/chipsets</a>
Driver Download	<a href="http://support.intel.com/support/graphics">http://support.intel.com/support/graphics</a>
Driver Update	<a href="http://www.aida64.com/driver-updates">http://www.aida64.com/driver-updates</a>

**[ OpenCL: nVIDIA GeForce GTX 1050 Ti with Max-Q Design (GP107) ]****OpenCL Properties:**

Platform Name	NVIDIA CUDA
Platform Vendor	NVIDIA Corporation
Platform Version	OpenCL 1.2 CUDA 10.0.132
Platform Profile	Full

**Device Properties:**

Device Name	GeForce GTX 1050 Ti with Max-Q Design
GPU Code Name	GP107
Device Type	GPU
Device Vendor	NVIDIA Corporation
Device Version	OpenCL 1.2 CUDA
Device Profile	Full
Driver Version	416.94
OpenCL C Version	OpenCL C 1.2
Clock Rate	1290 MHz
Compute Units / Cores	6 / 768
Address Space Size	32-bit
Max 2D Image Size	16384 x 32768
Max 3D Image Size	16384 x 16384 x 16384
Max Image Array Size	2048
Max Image Buffer Size	134217728
Max Samplers	32
Max Work-Item Size	1024 x 1024 x 64
Max Work-Group Size	1024
Max Argument Size	4352 bytes
Max Constant Buffer Size	64 KB

Max Constant Arguments	9	Navigation
Max Printf Buffer Size	1 MB	
Native ISA Vector Widths	char1, short1, int1, float1, double1	
Preferred Native Vector Widths	char1, short1, int1, long1, float1, double1	
Profiling Timer Resolution	1000 ns	
CUDA Compute Capability	6.1	
Max Registers Per Block	65536	
Warp Size	32 threads	
Asynchronous Engines	5	
PCI Bus / Device	1 / 0	
OpenCL DLL	opencl.dll (2.2.1.0)	

**Memory Properties:**

Global Memory	4 GB
Global Memory Cache	96 KB (Read/Write, 128-byte line)
Local Memory	48 KB
Max Memory Object Allocation Size	1 GB
Memory Base Address Alignment	4096-bit
Min Data Type Alignment	128 bytes

**OpenCL Compliance:**

OpenCL 1.1	Yes (100%)
OpenCL 1.2	Yes (100%)
OpenCL 2.0	No (62%)

**Device Features:**

Command-Queue Out Of Order Execution	Enabled
Command-Queue Profiling	Enabled
Compiler Available	Yes
Error Correction	Not Supported
Images	Supported
Kernel Execution	Supported
Linker Available	Yes
Little-Endian Device	Yes
Native Kernel Execution	Not Supported
Sub-Group Independent Forward Progress	Not Supported
SVM Atomics	Not Supported
SVM Coarse Grain Buffer	Not Supported
SVM Fine Grain Buffer	Supported
SVM Fine Grain System	Not Supported
Thread Trace	Not Supported
Unified Memory	No

**Half-Precision Floating-Point Capabilities:**

Correctly Rounded Divide and Sqrt	Not Supported
Denorms	Not Supported
IEEE754-2008 FMA	Not Supported
INF and NaNs	Not Supported
Rounding to Infinity	Not Supported
Rounding to Nearest Even	Not Supported
Rounding to Zero	Not Supported
Software Basic Floating-Point Operations	No

**Single-Precision Floating-Point Capabilities:**

Correctly Rounded Divide and Sqrt	Supported
Denorms	Supported
IEEE754-2008 FMA	Supported
INF and NaNs	Supported
Rounding to Infinity	Supported
Rounding to Nearest Even	Supported
Rounding to Zero	Supported
Software Basic Floating-Point Operations	No

**Double-Precision Floating-Point Capabilities:**

Correctly Rounded Divide and Sqrt	Not Supported
Denorms	Supported
IEEE754-2008 FMA	Supported
INF and NaNs	Supported

Rounding to Infinity	Supported
Rounding to Nearest Even	Supported
Rounding to Zero	Supported
Software Basic Floating-Point Operations	No

Navigation

**Device Extensions:**

Total / Supported Extensions	97 / 16
cl_altera_compiler_mode	Not Supported
cl_altera_device_temperature	Not Supported
cl_altera_live_object_tracking	Not Supported
cl_amd_bus_addressable_memory	Not Supported
cl_amd_c1x_atomics	Not Supported
cl_amd_compile_options	Not Supported
cl_amd_core_id	Not Supported
cl_amd_d3d10_interop	Not Supported
cl_amd_d3d9_interop	Not Supported
cl_amd_device_attribute_query	Not Supported
cl_amd_device_board_name	Not Supported
cl_amd_device_memory_flags	Not Supported
cl_amd_device_persistent_memory	Not Supported
cl_amd_device_profiling_timer_offset	Not Supported
cl_amd_device_topology	Not Supported
cl_amd_event_callback	Not Supported
cl_amd_fp64	Not Supported
cl_amd_hsa	Not Supported
cl_amd_image2d_from_buffer_read_only	Not Supported
cl_amd_liquid_flash	Not Supported
cl_amd_media_ops	Not Supported
cl_amd_media_ops2	Not Supported
cl_amd_offline_devices	Not Supported
cl_amd_popcnt	Not Supported
cl_amd_predefined_macros	Not Supported
cl_amd_printf	Not Supported
cl_amd_svm	Not Supported
cl_amd_vec3	Not Supported
cl_apple_contextloggingfunctions	Not Supported
cl_apple_gl_sharing	Not Supported
cl_apple_setmemobjectdestructor	Not Supported
cl_arm_core_id	Not Supported
cl_arm_printf	Not Supported
cl_ext_atomic_counters_32	Not Supported
cl_ext_atomic_counters_64	Not Supported
cl_ext_device_fission	Not Supported
cl_ext_migrate_memobject	Not Supported
cl_intel_accelerator	Not Supported
cl_intel_advanced_motion_estimation	Not Supported
cl_intel_ctz	Not Supported
cl_intel_d3d11_nv12_media_sharing	Not Supported
cl_intel_device_partition_by_names	Not Supported
cl_intel_dx9_media_sharing	Not Supported
cl_intel_exec_by_local_thread	Not Supported
cl_intel_motion_estimation	Not Supported
cl_intel_packed_yuv	Not Supported
cl_intel_printf	Not Supported
cl_intel_required_subgroup_size	Not Supported
cl_intel_simultaneous_sharing	Not Supported
cl_intel_subgroups	Not Supported
cl_intel_thread_local_exec	Not Supported
cl_intel_va_api_media_sharing	Not Supported
cl_intel_visual_analytics	Not Supported
cl_khr_3d_image_writes	Not Supported
cl_khr_byte_addressable_store	Supported
cl_khr_context_abort	Not Supported
cl_khr_d3d10_sharing	Supported
cl_khr_d3d11_sharing	Not Supported
cl_khr_depth_images	Not Supported
cl_khr_dx9_media_sharing	Not Supported
cl_khr_egl_event	Not Supported

cl_khr_egl_image	Not Supported	Navigation
cl_khr_fp16	Not Supported	
cl_khr_fp64	Supported	
cl_khr_gl_depth_images	Not Supported	
cl_khr_gl_event	Not Supported	
cl_khr_gl_msaa_sharing	Not Supported	
cl_khr_gl_sharing	Supported	
cl_khr_global_int32_base_atomics	Supported	
cl_khr_global_int32_extended_atomics	Supported	
cl_khr_icd	Supported	
cl_khr_il_program	Not Supported	
cl_khr_image2d_from_buffer	Not Supported	
cl_khr_initialize_memory	Not Supported	
cl_khr_int64_base_atomics	Not Supported	
cl_khr_int64_extended_atomics	Not Supported	
cl_khr_local_int32_base_atomics	Supported	
cl_khr_local_int32_extended_atomics	Supported	
cl_khr_mipmap_image	Not Supported	
cl_khr_mipmap_image_writes	Not Supported	
cl_khr_priority_hints	Not Supported	
cl_khr_select_fprounding_mode	Not Supported	
cl_khr_spir	Not Supported	
cl_khr_srgb_image_writes	Not Supported	
cl_khr_subgroups	Not Supported	
cl_khr_terminate_context	Not Supported	
cl_khr_throttle_hints	Not Supported	
cl_nv_compiler_options	Supported	
cl_nv_copy_opts	Supported	
cl_nv_create_buffer	Supported	
cl_nv_d3d10_sharing	Supported	
cl_nv_d3d11_sharing	Supported	
cl_nv_d3d9_sharing	Not Supported	
cl_nv_device_attribute_query	Supported	
cl_nv pragma_unroll	Supported	
cl_qcom_ext_host_ptr	Not Supported	
cl_qcom_ion_host_ptr	Not Supported	

**Device Manufacturer:**

Company Name	NVIDIA Corporation
Product Information	<a href="http://www.nvidia.com/page/products.html">http://www.nvidia.com/page/products.html</a>
Driver Download	<a href="http://www.nvidia.com/content/drivers/drivers.asp">http://www.nvidia.com/content/drivers/drivers.asp</a>
Driver Update	<a href="http://www.aida64.com/driver-updates">http://www.aida64.com/driver-updates</a>

**[ OpenCL: Intel(R) UHD Graphics 630 ]****OpenCL Properties:**

Platform Name	Intel(R) OpenCL
Platform Vendor	Intel(R) Corporation
Platform Version	OpenCL 2.1
Platform Profile	Full

**Device Properties:**

Device Name	Intel(R) UHD Graphics 630
Device Type	GPU
Device Vendor	Intel(R) Corporation
Device Version	OpenCL 2.1 NEO
Device Profile	Full
Driver Version	24.20.100.6227
OpenCL C Version	OpenCL C 2.0
Supported Built-In Kernels	block_motion_estimate_intel; block_advanced_motion_estimate_check_intel; block_advanced_motion_estimate_bidirectional_check_intel;
Supported SPIR Versions	1.2
Supported IL Versions	SPIR-V_1.0
Clock Rate	1150 MHz
Compute Units / Cores	24 / 96
Address Space Size	32-bit
Max 2D Image Size	16384 x 16384
Max 3D Image Size	16384 x 16384 x 2048

Max Image Array Size	2048	Navigation
Max Image Buffer Size	53685376	
Max Samplers	16	
Max Work-Item Size	256 x 256 x 256	
Max Work-Group Size	256	
Max Sub-Groups	32	
Max Global Variable Size	64 KB	
Preferred Global Variables Total Size	838834 KB	
Max Argument Size	1 KB	
Max Constant Buffer Size	838834 KB	
Max Constant Arguments	8	
Max Pipe Arguments	16	
Max Printf Buffer Size	4 MB	
Native ISA Vector Widths	char16, short8, int1, half8, float1, double1	
Preferred Native Vector Widths	char16, short8, int4, long1, half8, float1, double1	
Host Timer Resolution	395 ns	
Profiling Timer Resolution	83 ns	
OpenCL DLL	opencl.dll (2.2.1.0)	

**Memory Properties:**

Global Memory	1638 MB
Global Memory Cache	512 KB (Read/Write, 64-byte line)
Local Memory	64 KB
Max Memory Object Allocation Size	838834 KB
Memory Base Address Alignment	1024-bit
Min Data Type Alignment	128 bytes
Image Row Pitch Alignment	4 pixels
Image Base Address Alignment	4 pixels
Preferred Platform Atomic Alignment	64 bytes
Preferred Global Atomic Alignment	64 bytes
Preferred Local Atomic Alignment	64 bytes

**OpenCL Compliance:**

OpenCL 1.1	Yes (100%)
OpenCL 1.2	Yes (100%)
OpenCL 2.0	Yes (100%)

**Device Features:**

Command-Queue Out Of Order Execution	Enabled
Command-Queue Profiling	Enabled
Compiler Available	Yes
Error Correction	Not Supported
Images	Supported
Kernel Execution	Supported
Linker Available	Yes
Little-Endian Device	Yes
Native Kernel Execution	Not Supported
Sub-Group Independent Forward Progress	Supported
SVM Atomics	Not Supported
SVM Coarse Grain Buffer	Supported
SVM Fine Grain Buffer	Supported
SVM Fine Grain System	Supported
Thread Trace	Not Supported
Unified Memory	Yes

**Half-Precision Floating-Point Capabilities:**

Correctly Rounded Divide and Sqrt	Not Supported
Denorms	Supported
IEEE754-2008 FMA	Supported
INF and NaNs	Supported
Rounding to Infinity	Supported
Rounding to Nearest Even	Supported
Rounding to Zero	Supported
Software Basic Floating-Point Operations	No

**Single-Precision Floating-Point Capabilities:**

Correctly Rounded Divide and Sqrt	Supported
Denorms	Supported

IEEE754-2008 FMA	Supported
INF and NaNs	Supported
Rounding to Infinity	Supported
Rounding to Nearest Even	Supported
Rounding to Zero	Supported
Software Basic Floating-Point Operations	No

Navigation

**Double-Precision Floating-Point Capabilities:**

Correctly Rounded Divide and Sqrt	Not Supported
Denorms	Supported
IEEE754-2008 FMA	Supported
INF and NaNs	Supported
Rounding to Infinity	Supported
Rounding to Nearest Even	Supported
Rounding to Zero	Supported
Software Basic Floating-Point Operations	No

**Device Extensions:**

Total / Supported Extensions	102 / 40
cl_altera_compiler_mode	Not Supported
cl_altera_device_temperature	Not Supported
cl_altera_live_object_tracking	Not Supported
cl_amd_bus_addressable_memory	Not Supported
cl_amd_c1x_atomics	Not Supported
cl_amd_compile_options	Not Supported
cl_amd_core_id	Not Supported
cl_amd_d3d10_interop	Not Supported
cl_amd_d3d9_interop	Not Supported
cl_amd_device_attribute_query	Not Supported
cl_amd_device_board_name	Not Supported
cl_amd_device_memory_flags	Not Supported
cl_amd_device_persistent_memory	Not Supported
cl_amd_device_profiling_timer_offset	Not Supported
cl_amd_device_topology	Not Supported
cl_amd_event_callback	Not Supported
cl_amd_fp64	Not Supported
cl_amd_hsa	Not Supported
cl_amd_image2d_from_buffer_read_only	Not Supported
cl_amd_liquid_flash	Not Supported
cl_amd_media_ops	Not Supported
cl_amd_media_ops2	Not Supported
cl_amd_offline_devices	Not Supported
cl_amd_popcnt	Not Supported
cl_amd_predefined_macros	Not Supported
cl_amd_printf	Not Supported
cl_amd_svm	Not Supported
cl_amd_vec3	Not Supported
cl_apple_contextloggingfunctions	Not Supported
cl_apple_gl_sharing	Not Supported
cl_apple_setmemobjectdestructor	Not Supported
cl_arm_core_id	Not Supported
cl_arm_printf	Not Supported
cl_ext_atomic_counters_32	Not Supported
cl_ext_atomic_counters_64	Not Supported
cl_ext_device_fission	Not Supported
cl_ext_migrate_memobject	Not Supported
cl_intel_accelerator	Supported
cl_intel_advanced_motion_estimation	Supported
cl_intel_ctz	Not Supported
cl_intel_d3d11_nv12_media_sharing	Supported
cl_intel_device_partition_by_names	Not Supported
cl_intel_device_side_avc_motion_estimation	Supported
cl_intel_driver_diagnostics	Supported
cl_intel_dx9_media_sharing	Supported
cl_intel_exec_by_local_thread	Not Supported
cl_intel_media_block_io	Supported
cl_intel_motion_estimation	Supported
cl_intel_packed_yuv	Supported

cl_intel_planar_yuv	Supported	Navigation
cl_intel_printf	Not Supported	
cl_intel_required_subgroup_size	Supported	
cl_intel_simultaneous_sharing	Supported	
cl_intel_subgroups	Supported	
cl_intel_subgroups_short	Supported	
cl_intel_thread_local_exec	Not Supported	
cl_intel_va_api_media_sharing	Not Supported	
cl_intel_visual_analytics	Not Supported	
cl_khr_3d_image_writes	Supported	
cl_khr_byte_addressable_store	Supported	
cl_khr_context_abort	Not Supported	
cl_khr_create_command_queue	Supported	
cl_khr_d3d10_sharing	Supported	
cl_khr_d3d11_sharing	Supported	
cl_khr_depth_images	Supported	
cl_khr_dx9_media_sharing	Supported	
cl_khr_egl_event	Not Supported	
cl_khr_egl_image	Not Supported	
cl_khr_fp16	Supported	
cl_khr_fp64	Supported	
cl_khr_gl_depth_images	Supported	
cl_khr_gl_event	Supported	
cl_khr_gl_msaa_sharing	Supported	
cl_khr_gl_sharing	Supported	
cl_khr_global_int32_base_atomics	Supported	
cl_khr_global_int32_extended_atomics	Supported	
cl_khr_icd	Supported	
cl_khr_il_program	Supported	
cl_khr_image2d_from_buffer	Supported	
cl_khr_initialize_memory	Not Supported	
cl_khr_int64_base_atomics	Not Supported	
cl_khr_int64_extended_atomics	Not Supported	
cl_khr_local_int32_base_atomics	Supported	
cl_khr_local_int32_extended_atomics	Supported	
cl_khr_mipmap_image	Supported	
cl_khr_mipmap_image_writes	Supported	
cl_khr_priority_hints	Supported	
cl_khr_select_fprounding_mode	Not Supported	
cl_khr_spir	Supported	
cl_khr_srgb_image_writes	Not Supported	
cl_khr_subgroups	Supported	
cl_khr_terminate_context	Not Supported	
cl_khr_throttle_hints	Supported	
cl_nv_compiler_options	Not Supported	
cl_nv_copy_opts	Not Supported	
cl_nv_d3d10_sharing	Not Supported	
cl_nv_d3d11_sharing	Not Supported	
cl_nv_d3d9_sharing	Not Supported	
cl_nv_device_attribute_query	Not Supported	
cl_nv pragma_unroll	Not Supported	
cl_qcom_ext_host_ptr	Not Supported	
cl_qcom_ion_host_ptr	Not Supported	

**Device Manufacturer:**

Company Name	Intel Corporation
Product Information	<a href="http://www.intel.com/products/chipsets">http://www.intel.com/products/chipsets</a>
Driver Download	<a href="http://support.intel.com/support/graphics">http://support.intel.com/support/graphics</a>
Driver Update	<a href="http://www.aida64.com/driver-updates">http://www.aida64.com/driver-updates</a>

**[ OpenCL: Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz ]****OpenCL Properties:**

Platform Name	Intel(R) OpenCL
Platform Vendor	Intel(R) Corporation
Platform Version	OpenCL 2.1
Platform Profile	Full

**Device Properties:**

	Navigation
Device Name	Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz
Device Type	CPU
Device Vendor	Intel(R) Corporation
Device Version	OpenCL 2.1 (Build 716)
Device Profile	Full
Driver Version	7.6.0.716
OpenCL C Version	OpenCL C 2.0
Supported SPIR Versions	1.2
Supported IL Versions	SPIR-V_1.0
Clock Rate	2600 MHz
Compute Units	12
Address Space Size	32-bit
Max 2D Image Size	16384 x 16384
Max 3D Image Size	2048 x 2048 x 2048
Max Image Array Size	2048
Max Image Buffer Size	33552384
Max Samplers	480
Max Work-Item Size	8192 x 8192 x 8192
Max Work-Group Size	8192
Max Sub-Groups	1
Max Global Variable Size	64 KB
Preferred Global Variables Total Size	64 KB
Max Argument Size	3840 bytes
Max Constant Buffer Size	128 KB
Max Constant Arguments	480
Max Pipe Arguments	16
Max Printf Buffer Size	1 MB
Native ISA Vector Widths	char32, short16, int4, float8, double4
Preferred Native Vector Widths	char1, short1, int1, long1, float1, double1
Host Timer Resolution	395 ns
Profiling Timer Resolution	395 ns
OpenCL DLL	opencl.dll (2.2.1.0)

**Memory Properties:**

Global Memory	511 MB
Global Memory Cache	256 KB (Read/Write, 64-byte line)
Local Memory	32 KB
Max Memory Object Allocation Size	524256 KB
Memory Base Address Alignment	1024-bit
Min Data Type Alignment	128 bytes
Image Row Pitch Alignment	64 pixels
Image Base Address Alignment	64 pixels
Preferred Platform Atomic Alignment	64 bytes
Preferred Global Atomic Alignment	64 bytes

**OpenCL Compliancy:**

OpenCL 1.1	Yes (100%)
OpenCL 1.2	Yes (100%)
OpenCL 2.0	Yes (100%)

**Device Features:**

Command-Queue Out Of Order Execution	Enabled
Command-Queue Profiling	Enabled
Compiler Available	Yes
Error Correction	Not Supported
Images	Supported
Kernel Execution	Supported
Linker Available	Yes
Little-Endian Device	Yes
Native Kernel Execution	Supported
Sub-Group Independent Forward Progress	Not Supported
SVM Atomics	Not Supported
SVM Coarse Grain Buffer	Supported
SVM Fine Grain Buffer	Supported
SVM Fine Grain System	Supported
Thread Trace	Not Supported
Unified Memory	Yes

**Half-Precision Floating-Point Capabilities:**

Correctly Rounded Divide and Sqrt	Not Supported
Denorms	Not Supported
IEEE754-2008 FMA	Not Supported
INF and NaNs	Not Supported
Rounding to Infinity	Not Supported
Rounding to Nearest Even	Not Supported
Rounding to Zero	Not Supported
Software Basic Floating-Point Operations	No

**Single-Precision Floating-Point Capabilities:**

Correctly Rounded Divide and Sqrt	Not Supported
Denorms	Supported
IEEE754-2008 FMA	Not Supported
INF and NaNs	Supported
Rounding to Infinity	Not Supported
Rounding to Nearest Even	Supported
Rounding to Zero	Not Supported
Software Basic Floating-Point Operations	No

**Double-Precision Floating-Point Capabilities:**

Correctly Rounded Divide and Sqrt	Not Supported
Denorms	Supported
IEEE754-2008 FMA	Supported
INF and NaNs	Supported
Rounding to Infinity	Supported
Rounding to Nearest Even	Supported
Rounding to Zero	Supported
Software Basic Floating-Point Operations	No

**Device Extensions:**

Total / Supported Extensions	97 / 17
cl_altera_compiler_mode	Not Supported
cl_altera_device_temperature	Not Supported
cl_altera_live_object_tracking	Not Supported
cl_amd_bus_addressable_memory	Not Supported
cl_amd_c1x_atomics	Not Supported
cl_amd_compile_options	Not Supported
cl_amd_core_id	Not Supported
cl_amd_d3d10_interop	Not Supported
cl_amd_d3d9_interop	Not Supported
cl_amd_device_attribute_query	Not Supported
cl_amd_device_board_name	Not Supported
cl_amd_device_memory_flags	Not Supported
cl_amd_device_persistent_memory	Not Supported
cl_amd_device_profiling_timer_offset	Not Supported
cl_amd_device_topology	Not Supported
cl_amd_event_callback	Not Supported
cl_amd_fp64	Not Supported
cl_amd_hsa	Not Supported
cl_amd_image2d_from_buffer_read_only	Not Supported
cl_amd_liquid_flash	Not Supported
cl_amd_media_ops	Not Supported
cl_amd_media_ops2	Not Supported
cl_amd_offline_devices	Not Supported
cl_amd_popcnt	Not Supported
cl_amd_predefined_macros	Not Supported
cl_amd_printf	Not Supported
cl_amd_svm	Not Supported
cl_amd_vec3	Not Supported
cl_apple_contextloggingfunctions	Not Supported
cl_apple_gl_sharing	Not Supported
cl_apple_setmemobjectdestructor	Not Supported
cl_arm_core_id	Not Supported
cl_arm_printf	Not Supported
cl_ext_atomic_counters_32	Not Supported
cl_ext_atomic_counters_64	Not Supported

cl_ext_device_fission	Not Supported	Navigation
cl_ext_migrate_memobject	Not Supported	
cl_intel_accelerator	Not Supported	
cl_intel_advanced_motion_estimation	Not Supported	
cl_intel_ctz	Not Supported	
cl_intel_d3d11_nv12_media_sharing	Not Supported	
cl_intel_device_partition_by_names	Not Supported	
cl_intel_dx9_media_sharing	Supported	
cl_intel_exec_by_local_thread	Supported	
cl_intel_motion_estimation	Not Supported	
cl_intel_packed_yuv	Not Supported	
cl_intel_printf	Not Supported	
cl_intel_required_subgroup_size	Not Supported	
cl_intel_simultaneous_sharing	Not Supported	
cl_intel_subgroups	Not Supported	
cl_intel_thread_local_exec	Not Supported	
cl_intel_va_api_media_sharing	Not Supported	
cl_intel_vec_len_hint	Supported	
cl_intel_visual_analytics	Not Supported	
cl_khr_3d_image_writes	Supported	
cl_khr_byte_addressable_store	Supported	
cl_khr_context_abort	Not Supported	
cl_khr_d3d10_sharing	Not Supported	
cl_khr_d3d11_sharing	Supported	
cl_khr_depth_images	Supported	
cl_khr_dx9_media_sharing	Supported	
cl_khr_egl_event	Not Supported	
cl_khr_egl_image	Not Supported	
cl_khr_fp16	Not Supported	
cl_khr_fp64	Supported	
cl_khr_gl_depth_images	Not Supported	
cl_khr_gl_event	Not Supported	
cl_khr_gl_msaa_sharing	Not Supported	
cl_khr_gl_sharing	Supported	
cl_khr_global_int32_base_atomics	Supported	
cl_khr_global_int32_extended_atomics	Supported	
cl_khr_icd	Supported	
cl_khr_il_program	Not Supported	
cl_khr_image2d_from_buffer	Supported	
cl_khr_initialize_memory	Not Supported	
cl_khr_int64_base_atomics	Not Supported	
cl_khr_int64_extended_atomics	Not Supported	
cl_khr_local_int32_base_atomics	Supported	
cl_khr_local_int32_extended_atomics	Supported	
cl_khr_mipmap_image	Not Supported	
cl_khr_mipmap_image_writes	Not Supported	
cl_khr_priority_hints	Not Supported	
cl_khr_select_fprounding_mode	Not Supported	
cl_khr_spir	Supported	
cl_khr_srgb_image_writes	Not Supported	
cl_khr_subgroups	Not Supported	
cl_khr_terminate_context	Not Supported	
cl_khr_throttle_hints	Not Supported	
cl_nv_compiler_options	Not Supported	
cl_nv_copy_opts	Not Supported	
cl_nv_d3d10_sharing	Not Supported	
cl_nv_d3d11_sharing	Not Supported	
cl_nv_d3d9_sharing	Not Supported	
cl_nv_device_attribute_query	Not Supported	
cl_nv pragma_unroll	Not Supported	
cl_qcom_ext_host_ptr	Not Supported	
cl_qcom_ion_host_ptr	Not Supported	

**Device Manufacturer:**

Company Name	Intel Corporation
Product Information	<a href="http://www.intel.com/products/chipsets">http://www.intel.com/products/chipsets</a>
Driver Download	<a href="http://support.intel.com/support/graphics">http://support.intel.com/support/graphics</a>
Driver Update	<a href="http://www.aida64.com/driver-updates">http://www.aida64.com/driver-updates</a>

## Windows Audio

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Device	Identifier	Device Description
midi-out.0	0001 001B	Microsoft GS Wavetable Synth
mixer.0	FFFF FFFF	Speakers (2- Dell AC511 USB Sou
mixer.1	0001 0068	DELL P2715Q (NVIDIA High Defini
mixer.2	0001 0068	Speaker/HP (Realtek(R) Audio)
mixer.3	FFFF FFFF	Microphone Array (Razer Stargaz
mixer.4	FFFF FFFF	Microphone (2- AK5371
mixer.5	FFFF FFFF	Line (2- Dell AC511 USB SoundBa
mixer.6	0001 0068	Microphone Array (Realtek(R) Au
wave-in.0	FFFF FFFF	Microphone Array (Razer Stargaz
wave-in.1	FFFF FFFF	Microphone (2- AK5371
wave-in.2	FFFF FFFF	Line (2- Dell AC511 USB SoundBa
wave-in.3	0001 0065	Microphone Array (Realtek(R) Au
wave-out.0	FFFF FFFF	Speakers (2- Dell AC511 USB Sou
wave-out.1	0001 0064	DELL P2715Q (NVIDIA High Defini
wave-out.2	0001 0064	Speaker/HP (Realtek(R) Audio)

## PCI / PnP Audio

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Device Description	Type
Intel Kaby Lake HDMI @ Intel Cannon Lake PCH - cAVS (Audio, Voice, Speech)	PCI
nVIDIA HDMI/DP @ nVIDIA GP107 - High Definition Audio Controller	PCI
Realtek ALC285 @ Intel Cannon Lake PCH - cAVS (Audio, Voice, Speech)	PCI

## HD Audio

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### [ Intel Cannon Lake PCH - cAVS (Audio, Voice, Speech) ]

**Device Properties:**

Device Description	Intel Cannon Lake PCH - cAVS (Audio, Voice, Speech)
Device Description (Windows)	High Definition Audio Controller
Bus Type	PCI
Bus / Device / Function	0 / 31 / 3
Device ID	8086-A348
Subsystem ID	17AA-2267
Revision	10
Hardware ID	PCI\VEN_8086&DEV_A348&SUBSYS_226717AA&REV_10

**Device Manufacturer:**

Company Name	Intel Corporation
Product Information	<a href="http://www.intel.com/products/chipsets">http://www.intel.com/products/chipsets</a>
Driver Download	<a href="http://support.intel.com/support/chipsets">http://support.intel.com/support/chipsets</a>
BIOS Upgrades	<a href="http://www.aida64.com/bios-updates">http://www.aida64.com/bios-updates</a>
Driver Update	<a href="http://www.aida64.com/driver-updates">http://www.aida64.com/driver-updates</a>

### [ Realtek ALC285 ]

**Device Properties:**

Device Description	Realtek ALC285
Device Description (Windows)	Realtek(R) Audio
Device Type	Audio
Bus Type	HDAUDIO
Device ID	10EC-0285
Subsystem ID	17AA-2276
Revision	1000
Hardware ID	HDAUDIO\FUNC_01&VEN_10EC&DEV_0285&SUBSYS_17AA2276&REV_1000

**Device Manufacturer:**

Company Name	Realtek Semiconductor Corp.	Navigation
Product Information	<a href="http://www.realtek.com.tw/products/productsView.aspx?Langid=1&amp;PNid=8&amp;PFid=14&amp;Level=3&amp;Conn=2">http://www.realtek.com.tw/products/productsView.aspx?Langid=1&amp;PNid=8&amp;PFid=14&amp;Level=3&amp;Conn=2</a>	
Driver Download	<a href="http://www.realtek.com.tw/downloads">http://www.realtek.com.tw/downloads</a>	
Driver Update	<a href="http://www.aida64.com/driver-updates">http://www.aida64.com/driver-updates</a>	

**[ Intel Kaby Lake HDMI ]****Device Properties:**

Device Description	Intel Kaby Lake HDMI
Device Description (Windows)	Intel(R) Display Audio
Device Type	Audio
Bus Type	HDAUDIO
Device ID	8086-280B
Subsystem ID	8086-0101
Revision	1000
Hardware ID	HDAUDIO\FUNC_01&VEN_8086&DEV_280B&SUBSYS_80860101&REV_1000

**Device Manufacturer:**

Company Name	Intel Corporation
Product Information	<a href="http://www.intel.com/products/chipsets">http://www.intel.com/products/chipsets</a>
Driver Download	<a href="http://support.intel.com/support/chipsets">http://support.intel.com/support/chipsets</a>
Driver Update	<a href="http://www.aida64.com/driver-updates">http://www.aida64.com/driver-updates</a>

**[ nVIDIA GP107 - High Definition Audio Controller ]****Device Properties:**

Device Description	nVIDIA GP107 - High Definition Audio Controller
Device Description (Windows)	High Definition Audio Controller
Bus Type	PCI
Bus / Device / Function	1 / 0 / 1
Device ID	10DE-0FB9
Subsystem ID	0000-0000
Revision	A1
Hardware ID	PCI\VEN_10DE&DEV_0FB9&SUBSYS_00000000&REV_A1

**Device Manufacturer:**

Company Name	NVIDIA Corporation
Product Information	<a href="http://www.nvidia.com/page/mobo.html">http://www.nvidia.com/page/mobo.html</a>
Driver Download	<a href="http://www.nvidia.com/content/drivers/drivers.asp">http://www.nvidia.com/content/drivers/drivers.asp</a>
BIOS Upgrades	<a href="http://www.aida64.com/bios-updates">http://www.aida64.com/bios-updates</a>
Driver Update	<a href="http://www.aida64.com/driver-updates">http://www.aida64.com/driver-updates</a>

**[ nVIDIA HDMI/DP ]****Device Properties:**

Device Description	nVIDIA HDMI/DP
Device Description (Windows)	NVIDIA High Definition Audio
Device Type	Audio
Bus Type	HDAUDIO
Device ID	10DE-0080
Subsystem ID	0000-0000
Revision	1001
Hardware ID	HDAUDIO\FUNC_01&VEN_10DE&DEV_0080&SUBSYS_00000000&REV_1001

**Device Manufacturer:**

Company Name	NVIDIA Corporation
Product Information	<a href="http://www.nvidia.com/page/mobo.html">http://www.nvidia.com/page/mobo.html</a>
Driver Download	<a href="http://www.nvidia.com/content/drivers/drivers.asp">http://www.nvidia.com/content/drivers/drivers.asp</a>
Driver Update	<a href="http://www.aida64.com/driver-updates">http://www.aida64.com/driver-updates</a>

**Windows Storage****[ SAMSUNG MZVLB1T0HALR-000L7 ]**

**Device Properties:**

Driver Description	SAMSUNG MZVLB1T0HALR-000L7
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	disk.inf
INF Section	disk_install.NT

**[ Samsung SSD 850 PRO SCSI Disk Device ]****Device Properties:**

Driver Description	Samsung SSD 850 PRO SCSI Disk Device
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	disk.inf
INF Section	disk_install.NT

**[ SDXC Card ]****Device Properties:**

Driver Description	SDXC Card
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	disk.inf
INF Section	disk_install.NT

**[ THNSN51T02DU7 NVMe TOSHIBA 1024GB ]****Device Properties:**

Driver Description	THNSN51T02DU7 NVMe TOSHIBA 1024GB
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	disk.inf
INF Section	disk_install.NT

**[ Microsoft Storage Spaces Controller ]****Device Properties:**

Driver Description	Microsoft Storage Spaces Controller
Driver Date	6/21/2006
Driver Version	10.0.17134.376
Driver Provider	Microsoft
INF File	spaceport.inf
INF Section	Spaceport_Install

**[ Standard NVM Express Controller ]****Device Properties:**

Driver Description	Standard NVM Express Controller
Driver Date	6/21/2006
Driver Version	10.0.17134.81
Driver Provider	Microsoft
INF File	stornvme.inf
INF Section	Stornvme_Inst

**Device Resources:**

IRQ	65536

IRQ	65536
Memory	C0900000-C0903FFF

Navigation

## [ Standard NVM Express Controller ]

### Device Properties:

Driver Description	Standard NVM Express Controller
Driver Date	6/21/2006
Driver Version	10.0.17134.81
Driver Provider	Microsoft
INF File	stornvme.inf
INF Section	Stornvme_Inst

### Device Resources:

IRQ	65536
Memory	COA00000-C0A03FFF

## [ USB Attached SCSI (UAS) Mass Storage Device ]

### Device Properties:

Driver Description	USB Attached SCSI (UAS) Mass Storage Device
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	uaspstor.inf
INF Section	UASPort_Install_Control

## Logical Drives

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Drive	Drive Type	File System	Total Size	Used Space	Free Space	% Free	Volume Serial
C: (Windows)	Local Disk	NTFS	975484 MB	440773 MB	534711 MB	55 %	E4E9-E425
D: (NexRepo)	Removable Disk	exFAT	122105 MB	46531 MB	75573 MB	62 %	C0BD-BB6A
F: (NexHub)	Local Disk	NTFS	976755 MB	473779 MB	502976 MB	51 %	OFC2-141D

## Physical Drives

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### [ Drive #1 - THNSN51T02DU7 NVMe TOSHIBA 1024GB (953 GB) ]

Partition	Partition Type	Drive	Start Offset	Partition Length
#1	EFI System		0 MB	200 MB
#2	Unknown (GUID: {7C3457EF-0000-11AA-AA11-00306543ECAC})		200 MB	976562 MB

### [ Drive #2 - SAMSUNG MZVLB1T0HALR-000L7 (953 GB) ]

Partition	Partition Type	Drive	Start Offset	Partition Length
#1	EFI System		1 MB	260 MB
#2	MS Reserved		261 MB	16 MB
#3	Basic Data	C: (Windows)	277 MB	975485 MB
#4	MS Recovery		975762 MB	1000 MB

Navigation

## [ Drive #3 - Generic-SD/MMC CRW (119 GB) ]

Partition	Partition Type	Drive	Start Offset	Partition Length
#1	Basic Data	D:	1 MB	122110 MB

## [ Drive #4 - Samsung SSD 850 PRO (953 GB) ]

Partition	Partition Type	Drive	Start Offset	Partition Length
#1	NTFS	F: (NexHub)	1 MB	976755 MB

## ASPI

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Host	ID	LUN	Device Type	Vendor	Model	Rev	Extra Information
00	00	00	Disk Drive	NVMe	THNSN51T02DU7 NV	4103	
00	07	00	Host Adapter	stornvme			
01	00	00	Disk Drive	NVMe	SAMSUNG MZVLB1T0	EXA7	
01	07	00	Host Adapter	stornvme			
02	00	00	Disk Drive	Samsung	SSD 850 PRO		EXM0
02	07	00	Host Adapter	UASPStor			

## ATA

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## [ SAMSUNG MZVLB1T0HALR-000L7 (S3TPNX0K804159) ]

### NVMe Device Properties:

Model ID	SAMSUNG MZVLB1T0HALR-000L7
Serial Number	S3TPNX0K804159
Revision	4L2QEXA7
Device Type	NVMe v1.2.0
Unformatted Capacity	976762 MB
PCI Vendor ID	144Dh (Samsung)
PCI Subsystem Vendor ID	144Dh (Samsung)
IEEE OUI Identifier	38-25-00 (Samsung)
Controller ID	4
Version	66048
Recommended Arbitration Burst Size	2
Max Data Transfer Size	9
Runtime D3 Resume Latency	100000 us
Runtime D3 Entry Latency	8000000 us
Abort Command Limit	8
Asynchronous Event Request Limit	4
Firmware Slots	3
Max Error Log Page Entries	64
Power States	5
Warning Composite Temperature Threshold	354
Critical Composite Temperature Threshold	355
Total NVM Capacity	976762 MB
Min / Max Submission Queue Entry Size	64 / 64 bytes
Min / Max Completion Queue Entry Size	16 / 16 bytes
Namespaces	1
Atomic Write Unit Normal	1024 blocks
Atomic Write Unit Power Fail	1 blocks

### NVMe Device Features:

128-bit Host Identifier	Not Supported
Autonomous Power State Transitions	Supported
Command Effects Log Page	Supported
Compare & Write Fused Operation	Not Supported
Cryptographic Erase	Supported
Directives	Not Supported

Firmware Activation Notices	Not Supported	Navigation
Firmware Activation Without Reset	Supported	
First Firmware Slot Read Only	No	
Format All Namespaces	Not Supported	
Multiple Controllers	No	
Multiple PCIe Ports	No	
Namespace Attribute Changed Event	Not Supported	
Non-Operational Power State Permissive Mode	Not Supported	
Reservations	Not Supported	
Save / Select Fields	Supported	
Secure Erase All Namespaces	Not Supported	
SGLs	Not Supported	
SGL Bit Bucket Descriptor	Not Supported	
SGL Byte Aligned Contiguous Physical Buffer of Metadata	Not Supported	
SGL Commands Larger Than Data	Not Supported	
SMART Information Per Namespace	Supported	
SR-IOV Virtual Function	No	
Volatile Write Cache	Present	

**NVMe Commands:**

Compare	Supported
Dataset Management	Supported
Device Self-test	Supported
Doorbell Buffer Config	Not Supported
Format NVM	Supported
Firmware Commit	Supported
Firmware Image Download	Supported
Namespace Attachment	Not Supported
Namespace Management	Not Supported
NVMe-MI Receive	Not Supported
NVMe-MI Send	Not Supported
Security Receive	Supported
Security Send	Supported
Virtualization Management	Not Supported
Write Uncorrectable	Supported
Write Zeroes	Supported

**Device Manufacturer:**

Company Name	Samsung
Product Information	<a href="http://www.samsung.com/us/computer/solid-state-drives">http://www.samsung.com/us/computer/solid-state-drives</a>
Driver Update	<a href="http://www.aida64.com/driver-updates">http://www.aida64.com/driver-updates</a>

**[ THNSN51T02DU7 NVMe TOSHIBA 1024GB (56BS105PT61V) ]****NVMe Device Properties:**

Model ID	THNSN51T02DU7 NVMe TOSHIBA 1024GB
Serial Number	56BS105PT61V
Revision	57DA4103
Device Type	NVMe v1.1.0
Unformatted Capacity	976762 MB
PCI Vendor ID	1179h (Toshiba)
PCI Subsystem Vendor ID	1179h (Toshiba)
IEEE OUI Identifier	00-08-0D
Recommended Arbitration Burst Size	1
Max Data Transfer Size	0
Abort Command Limit	4
Asynchronous Event Request Limit	4
Firmware Slots	1
Max Error Log Page Entries	128
Power States	5
Warning Composite Temperature Threshold	351
Critical Composite Temperature Threshold	355
Min / Max Submission Queue Entry Size	64 / 64 bytes
Min / Max Completion Queue Entry Size	16 / 16 bytes
Namespaces	1
Atomic Write Unit Normal	256 blocks
Atomic Write Unit Power Fail	1 blocks

**NVMe Device Features:**

	Navigation
128-bit Host Identifier	Not Supported
Autonomous Power State Transitions	Supported
Command Effects Log Page	Not Supported
Compare & Write Fused Operation	Not Supported
Cryptographic Erase	Not Supported
Directives	Not Supported
Firmware Activation Notices	Not Supported
Firmware Activation Without Reset	Not Supported
First Firmware Slot Read Only	No
Format All Namespaces	Not Supported
Multiple Controllers	No
Multiple PCIe Ports	No
Namespace Attribute Changed Event	Not Supported
Non-Operational Power State Permissive Mode	Not Supported
Reservations	Not Supported
Save / Select Fields	Supported
Secure Erase All Namespaces	Not Supported
SGLs	Not Supported
SGL Bit Bucket Descriptor	Not Supported
SGL Byte Aligned Contiguous Physical Buffer of Metadata	Not Supported
SGL Commands Larger Than Data	Not Supported
SMART Information Per Namespace	Not Supported
SR-IOV Virtual Function	No
Volatile Write Cache	Present

**NVMe Commands:**

Compare	Not Supported
Dataset Management	Supported
Device Self-test	Supported
Doorbell Buffer Config	Not Supported
Format NVM	Supported
Firmware Commit	Supported
Firmware Image Download	Supported
Namespace Attachment	Not Supported
Namespace Management	Not Supported
NVMe-MI Receive	Not Supported
NVMe-MI Send	Not Supported
Security Receive	Not Supported
Security Send	Not Supported
Virtualization Management	Not Supported
Write Uncorrectable	Supported
Write Zeroes	Supported

**SSD Physical Info:**

Manufacturer	Toshiba
SSD Family	XG3
Form Factor	M.2 2280
Formatted Capacity	1024 GB
Controller Type	Toshiba TC58NCP070GSB
Flash Memory Type	Toshiba 15nm MLC NAND
Physical Dimensions	80 x 22 x 3.58 mm
Max. Weight	8.6 g
Max. Sequential Read Speed	2400 MB/s
Max. Sequential Write Speed	1500 MB/s
Interface	PCI-E 3.0 x4
Interface Data Rate	4000 MB/s
Buffer Size	1 GB

**Device Manufacturer:**

Company Name	Toshiba Corp., Storage Device Division
Product Information	<a href="http://sdd.toshiba.com">http://sdd.toshiba.com</a>
Driver Update	<a href="http://www.aida64.com/driver-updates">http://www.aida64.com/driver-updates</a>

**[ Samsung SSD 850 PRO 1TB (S252NWAG307627J) ]****ATA Device Properties:**

Model ID	Samsung SSD 850 PRO 1TB
Serial Number	S252NWAG307627J
Revision	EXM04B6Q
World Wide Name	5-002538-8700D3948
Device Type	SATA-III UAS @ Oxford
Parameters	1984533 cylinders, 16 heads, 63 sectors per track, 512 bytes per sector
LBA Sectors	2000409264
Physical / Logical Sector Size	512 bytes / 512 bytes
Multiple Sectors	1
Max. PIO Transfer Mode	PIO 4
Max. MWDMA Transfer Mode	MWDMA 2
Max. UDMA Transfer Mode	UDMA 6
Active UDMA Transfer Mode	UDMA 6
Unformatted Capacity	976762 MB
Rotational Speed	SSD
ATA Standard	ACS-2

Navigation

**ATA Device Features:**

48-bit LBA	Supported, Enabled
Automatic Acoustic Management (AAM)	Not Supported
Device Configuration Overlay (DCO)	Supported, Enabled
DMA Setup Auto-Activate	Supported, Enabled
Free-Fall Control	Not Supported
General Purpose Logging (GPL)	Supported, Enabled
Hardware Feature Control	Supported, Enabled
Host Protected Area (HPA)	Supported, Enabled
HPA Security Extensions	Supported, Disabled
Hybrid Information Feature	Not Supported
In-Order Data Delivery	Not Supported
Native Command Queuing (NCQ)	Supported
NCQ Autosense	Not Supported
NCQ Priority Information	Not Supported
NCQ Queue Management Command	Not Supported
NCQ Streaming	Not Supported
Phy Event Counters	Supported
Read Look-Ahead	Supported, Enabled
Release Interrupt	Not Supported
Security Mode	Supported, Disabled
Sense Data Reporting (SDR)	Not Supported
Service Interrupt	Not Supported
SMART	Supported, Enabled
SMART Error Logging	Supported, Enabled
SMART Self-Test	Supported, Enabled
Software Settings Preservation (SSP)	Supported, Enabled
Streaming	Not Supported
Tagged Command Queuing (TCQ)	Not Supported
Write Cache	Supported, Enabled
Write-Read-Verify	Supported, Disabled

**SSD Features:**

Data Set Management	Supported
Deterministic Read After TRIM	Not Supported
TRIM Command	Supported

**Power Management Features:**

Advanced Power Management	Not Supported
Automatic Partial to Slumber Transitions (APST)	Disabled
Device Initiated Interface Power Management (DIPM)	Supported, Disabled
Device Sleep (DEVSLP)	Supported
Extended Power Conditions (EPC)	Not Supported
Host Initiated Interface Power Management (HIPM)	Not Supported
IDLE IMMEDIATE With UNLOAD FEATURE	Not Supported
Link Power State Device Sleep	Supported, Disabled
Power Management	Supported, Enabled
Power-Up In Standby (PUIS)	Not Supported

**ATA Commands:**

DEVICE RESET	Not Supported
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DOWNLOAD MICROCODE	Supported, Enabled
FLUSH CACHE	Supported, Enabled
FLUSH CACHE EXT	Supported, Enabled
NOP	Supported, Enabled
READ BUFFER	Supported, Enabled
WRITE BUFFER	Supported, Enabled

Navigation

**SSD Physical Info:**

Manufacturer	Samsung
SSD Family	850 Pro
Form Factor	2.5"
Formatted Capacity	1024 GB
Controller Type	Samsung MEX S4LN045X01
Flash Memory Type	Samsung 40nm MLC V-NAND
Physical Dimensions	100 x 69.85 x 7 mm
Max. Sequential Read Speed	550 MB/s
Max. Sequential Write Speed	520 MB/s
Max. Random 4 KB Read	100000 IOPS
Max. Random 4 KB Write	90000 IOPS
Interface	SATA-III
Interface Data Rate	600 MB/s
Buffer Size	1 GB

**Device Manufacturer:**

Company Name	Samsung
Product Information	<a href="http://www.samsung.com/us/computer/solid-state-drives">http://www.samsung.com/us/computer/solid-state-drives</a>
Driver Update	<a href="http://www.aida64.com/driver-updates">http://www.aida64.com/driver-updates</a>

**SMART****[ SAMSUNG MZVLB1T0HALR-000L7 (S3TPNX0K804159) ]**

ID	Attribute Description	Threshold	Value	Worst	Data	Status
0	Critical Warning	0	OK: Value is normal			
1	Temperature	46	OK: Always passes			
3	Available Spare	100 %	OK: Always passes			
4	Available Spare Threshold	10 %	OK: Always passes			
5	Percentage Used	0 %	OK: Value is normal			
32	Data Units Read	1.17 TB	OK: Always passes			
48	Data Units Written	550.30 GB	OK: Always passes			
64	Host Read Commands	5696474	OK: Always passes			
80	Host Write Commands	9991064	OK: Always passes			
96	Controller Busy Time	43 min	OK: Always passes			
112	Power Cycles	59	OK: Always passes			
128	Power-On Hours	8	OK: Always passes			
144	Unsafe Shutdowns	46	OK: Always passes			
160	Media Errors	0	OK: Value is normal			
176	Error Information Log Entries	90	OK: Always passes			
192	Warning Composite Temperature Time	0 min	OK: Always passes			
196	Critical Composite Temperature Time	0 min	OK: Always passes			
200	Temperature Sensor 1	46 °C	OK: Always passes			
202	Temperature Sensor 2	75 °C	OK: Always passes			

**[ THNSN51T02DU7 NVMe TOSHIBA 1024GB (56BS105PT61V) ]**

ID	Attribute Description	Threshold	Value	Worst	Data	Status
0	Critical Warning	0	OK: Value is normal			
1	Temperature	45	OK: Always passes			
3	Available Spare	100 %	OK: Always passes			
4	Available Spare Threshold	50 %	OK: Always passes			
5	Percentage Used	6 %	OK: Value is normal			
32	Data Units Read	34.33 TB	OK: Always passes			
48	Data Units Written	23.77 TB	OK: Always passes			
64	Host Read Commands	945880400	OK: Always passes			

		Navigation	:: Always passes
80	Host Write Commands	5855 min	OK: Always passes
96	Controller Busy Time	4308	OK: Always passes
112	Power Cycles	7401	OK: Always passes
128	Power-On Hours	1033	OK: Always passes
144	Unsafe Shutdowns	0	OK: Value is normal
160	Media Errors	0	OK: Always passes
176	Error Information Log Entries	0 min	OK: Always passes
192	Warning Composite Temperature Time	0 min	OK: Always passes
196	Critical Composite Temperature Time	45 °C	OK: Always passes
200	Temperature Sensor 1		

## [ Samsung SSD 850 PRO 1TB (S252NWAG307627J) ]

ID	Attribute Description	Threshold	Value	Worst	Data	Status
05	Reallocated Sector Count	10	100	100	0	OK: Value is normal
09	Power-On Hours Count	0	97	97	12666	OK: Always passes
0C	Power Cycle Count	0	95	95	4045	OK: Always passes
B1	Wear Leveling Count	0	99	1	48	OK: Always passes
B3	Used Reserved Block Count (Total)	10	100	100	0	OK: Value is normal
B5	Program Fail Count (Total)	10	100	100	0	OK: Value is normal
B6	Erase Fail Count (Total)	10	100	100	0	OK: Value is normal
B7	Runtime Bad Block (Total)	10	100	100	0	OK: Value is normal
BB	Uncorrectable Error Count	0	100	100	0	OK: Always passes
BE	Airflow Temperature	0	74	41	26	OK: Always passes
C3	ECC Error Rate	0	200	200	0	OK: Always passes
C7	CRC Error Count	0	88	88	11603	OK: Always passes
EB	POR Recovery Count	0	99	99	810	OK: Always passes
F1	Total LBAs Written	0	99	99	25.33 TB	OK: Always passes

## Windows Network

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### [ Dell Wireless 1830 802.11ac ]

#### Network Adapter Properties:

Network Adapter	Dell Wireless 1830 802.11ac
Interface Type	802.11 Wireless Ethernet
Hardware Address	60-6D-C7-C6-8E-FB
Connection Name	Wi-Fi 2
MTU	1500 bytes
Bytes Received	0
Bytes Sent	0

#### WLAN Properties:

Network Type	Infrastructure
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#### Network Adapter Manufacturer:

Company Name	Dell Computer Corporation
Product Information	<a href="http://www.dell.com">http://www.dell.com</a>
Driver Download	<a href="http://support.dell.com">http://support.dell.com</a>
Driver Update	<a href="http://www.aida64.com/driver-updates">http://www.aida64.com/driver-updates</a>

### [ Intel(R) Ethernet Connection (7) I219-LM ]

#### Network Adapter Properties:

Network Adapter	Intel(R) Ethernet Connection (7) I219-LM
Interface Type	Ethernet
Hardware Address	48-2A-E3-1E-32-39
Connection Name	Ethernet 2
Connection Speed	1 Gbps
MTU	1500 bytes
DHCP Lease Obtained	11/21/2018 4:55:57 PM
DHCP Lease Expires	11/30/2018 5:24:44 PM
Bytes Received	1482654683 (1414.0 MB)
Bytes Sent	16989036 (16.2 MB)

**Network Adapter Addresses:**

IP / Subnet Mask	10.154.32.77 / 255.255.254.0
Gateway	10.154.32.1
DHCP	140.142.5.85
DNS	128.95.120.1
DNS	128.95.112.1

**Network Adapter Manufacturer:**

Company Name	Intel Corporation
Product Information	<a href="http://www.intel.com/embedded">http://www.intel.com/embedded</a>
Driver Download	<a href="http://www.intel.com/support/network">http://www.intel.com/support/network</a>
Driver Update	<a href="http://www.aida64.com/driver-updates">http://www.aida64.com/driver-updates</a>

**[ Microsoft Wi-Fi Direct Virtual Adapter #3 ]****Network Adapter Properties:**

Network Adapter	Microsoft Wi-Fi Direct Virtual Adapter #3
Interface Type	802.11 Wireless Ethernet
Hardware Address	62-6D-C7-C6-8E-FB
Connection Name	Local Area Connection* 12
MTU	1500 bytes
Bytes Received	0
Bytes Sent	0

**[ Microsoft Wi-Fi Direct Virtual Adapter #4 ]****Network Adapter Properties:**

Network Adapter	Microsoft Wi-Fi Direct Virtual Adapter #4
Interface Type	802.11 Wireless Ethernet
Hardware Address	62-6D-C7-C6-86-FB
Connection Name	Local Area Connection* 13
MTU	1500 bytes
Bytes Received	0
Bytes Sent	0

**WLAN Properties:**

Network Type	Infrastructure
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**[ VMware Virtual Ethernet Adapter for VMnet1 ]****Network Adapter Properties:**

Network Adapter	VMware Virtual Ethernet Adapter for VMnet1
Interface Type	Ethernet
Hardware Address	00-50-56-C0-00-01
Connection Name	VMware Network Adapter VMnet1
Connection Speed	100 Mbps
MTU	1500 bytes
DHCP Lease Obtained	11/21/2018 4:55:59 PM
DHCP Lease Expires	11/21/2018 5:25:59 PM
Bytes Received	1
Bytes Sent	439

**Network Adapter Addresses:**

IP / Subnet Mask	192.168.16.1 / 255.255.255.0
DHCP	192.168.16.254

**Network Adapter Manufacturer:**

Company Name	VMware, Inc.
Product Information	<a href="http://www.vmware.com">http://www.vmware.com</a>
Driver Download	<a href="http://www.vmware.com">http://www.vmware.com</a>
Driver Update	<a href="http://www.aida64.com/driver-updates">http://www.aida64.com/driver-updates</a>

**[ VMware Virtual Ethernet Adapter for VMnet8 ]****Network Adapter Properties:**

Network Adapter	VMware Virtual Ethernet Adapter for VMnet8
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Interface Type Ethernet  
 Hardware Address 00-50-56-C0-00-08  
 Connection Name VMware Network Adapter VMnet8  
 Connection Speed 100 Mbps  
 MTU 1500 bytes  
 DHCP Lease Obtained 11/21/2018 4:55:59 PM  
 DHCP Lease Expires 11/21/2018 5:25:59 PM  
 Bytes Received 1  
 Bytes Sent 519

Navigation

**Network Adapter Addresses:**

IP / Subnet Mask 192.168.71.1 / 255.255.255.0  
 DHCP 192.168.71.254  
 WINS 192.168.71.2

**Network Adapter Manufacturer:**

Company Name VMware, Inc.  
 Product Information <http://www.vmware.com>  
 Driver Download <http://www.vmware.com>  
 Driver Update <http://www.aida64.com/driver-updates>

## PCI / PnP Network

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<b>Device Description</b>	<b>Type</b>
Broadcom BCM15700A2 802.11ac Wireless Network Adapter	PCI
Intel(R) Ethernet Connection (7) I219-LM [8086-15BB] [NoDB]	PCI

## DirectX Video

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**[ Primary Display Driver ]****DirectDraw Device Properties:**

DirectDraw Driver Name	display
DirectDraw Driver Description	Primary Display Driver
Hardware Driver	nvldumd.dll
Hardware Description	NVIDIA GeForce GTX 1050 Ti with Max-Q Design

**Direct3D Device Properties:**

Total / Free Video Memory	4096 MB / 3565 MB
Rendering Bit Depths	8, 16, 32
Z-Buffer Bit Depths	16, 24, 32
Multisample Anti-Aliasing Modes	MSAA 2x, MSAA 4x, MSAA 8x, CSAA 8xQ
Min Texture Size	1 x 1
Max Texture Size	16384 x 16384
Unified Shader Version	5.1
DirectX Hardware Support	DirectX v11.1

**Direct3D Device Features:**

Additive Texture Blending	Supported
AGP Texturing	Supported
Anisotropic Filtering	Supported
Automatic Mipmap Generation	Supported
Bilinear Filtering	Supported
Compute Shader	Supported
Cubic Environment Mapping	Supported
Cubic Filtering	Not Supported
Decal-Alpha Texture Blending	Supported
Decal Texture Blending	Supported
Directional Lights	Supported
DirectX Texture Compression	Not Supported
DirectX Volumetric Texture Compression	Not Supported
Dithering	Supported

Dot3 Texture Blending	Supported
Double-Precision Floating-Point	Supported
Driver Concurrent Creates	Supported
Driver Command Lists	Supported
Dynamic Textures	Supported
Edge Anti-Aliasing	Supported
Environmental Bump Mapping	Supported
Environmental Bump Mapping + Luminance	Supported
Factor Alpha Blending	Supported
Geometric Hidden-Surface Removal	Not Supported
Geometry Shader	Supported
Guard Band	Supported
Hardware Scene Rasterization	Supported
Hardware Transform & Lighting	Supported
Legacy Depth Bias	Supported
Map On Default Buffers	Supported
Mipmap LOD Bias Adjustments	Supported
Mipmapped Cube Textures	Supported
Mipmapped Volume Textures	Supported
Modulate-Alpha Texture Blending	Supported
Modulate Texture Blending	Supported
Non-Square Textures	Supported
N-Patches	Not Supported
Perspective Texture Correction	Supported
Point Lights	Supported
Point Sampling	Supported
Projective Textures	Supported
Quintic Bezier Curves & B-Splines	Not Supported
Range-Based Fog	Supported
Rectangular & Triangular Patches	Not Supported
Rendering In Windowed Mode	Supported
Runtime Shader Linking	Supported
Scissor Test	Supported
Slope-Scale Based Depth Bias	Supported
Specular Flat Shading	Supported
Specular Gouraud Shading	Supported
Specular Phong Shading	Not Supported
Spherical Mapping	Supported
Spot Lights	Supported
Stencil Buffers	Supported
Sub-Pixel Accuracy	Supported
Subtractive Texture Blending	Supported
Table Fog	Supported
Texture Alpha Blending	Supported
Texture Clamping	Supported
Texture Mirroring	Supported
Texture Transparency	Supported
Texture Wrapping	Supported
Tiled Resources	Supported
Triangle Culling	Not Supported
Trilinear Filtering	Supported
Two-Sided Stencil Test	Supported
Vertex Alpha Blending	Supported
Vertex Fog	Supported
Vertex Tweening	Not Supported
Volume Textures	Supported
W-Based Fog	Supported
W-Buffering	Not Supported
Z-Based Fog	Supported
Z-Bias	Supported
Z-Test	Supported

Navigation

**Supported FourCC Codes:**

3x11	Supported
3x16	Supported
AI44	Supported
AIP8	Supported
ATOC	Supported

AV12	Supported
AYUV	Supported
NV12	Supported
NV24	Supported
NVDB	Supported
NVDP	Supported
NVMD	Supported
P010	Supported
PLFF	Supported
SSAA	Supported
UYVY	Supported
YUY2	Supported
YV12	Supported

Navigation

**Video Adapter Manufacturer:**

Company Name	NVIDIA Corporation
Product Information	<a href="http://www.nvidia.com/page/products.html">http://www.nvidia.com/page/products.html</a>
Driver Download	<a href="http://www.nvidia.com/content/drivers/drivers.asp">http://www.nvidia.com/content/drivers/drivers.asp</a>
Driver Update	<a href="http://www.aida64.com/driver-updates">http://www.aida64.com/driver-updates</a>

## DirectX Sound

### [ Primary Sound Driver ]

**DirectSound Device Properties:**

Device Description	Primary Sound Driver
Driver Module	
Primary Buffers	1
Min / Max Secondary Buffers Sample Rate	100 / 200000 Hz
Primary Buffers Sound Formats	8-bit, 16-bit, Mono, Stereo
Secondary Buffers Sound Formats	8-bit, 16-bit, Mono, Stereo
Total / Free Sound Buffers	1 / 0
Total / Free Static Sound Buffers	1 / 0
Total / Free Streaming Sound Buffers	1 / 0
Total / Free 3D Sound Buffers	0 / 0
Total / Free 3D Static Sound Buffers	0 / 0
Total / Free 3D Streaming Sound Buffers	0 / 0

**DirectSound Device Features:**

Certified Driver	No
Emulated Device	No
Precise Sample Rate	Supported
DirectSound3D	Not Supported
Creative EAX 1.0	Not Supported
Creative EAX 2.0	Not Supported
Creative EAX 3.0	Not Supported
Creative EAX 4.0	Not Supported
Creative EAX 5.0	Not Supported
I3DL2	Not Supported
Sensaura ZoomFX	Not Supported

### [ Speakers (2- Dell AC511 USB SoundBar) ]

**DirectSound Device Properties:**

Device Description	Speakers (2- Dell AC511 USB SoundBar)
Driver Module	{0.0.0.00000000}.{376cbd06-bfbf-4cbe-9a89-27ae4b0e090e}
Primary Buffers	1
Min / Max Secondary Buffers Sample Rate	100 / 200000 Hz
Primary Buffers Sound Formats	8-bit, 16-bit, Mono, Stereo
Secondary Buffers Sound Formats	8-bit, 16-bit, Mono, Stereo
Total / Free Sound Buffers	1 / 0
Total / Free Static Sound Buffers	1 / 0
Total / Free Streaming Sound Buffers	1 / 0
Total / Free 3D Sound Buffers	0 / 0
Total / Free 3D Static Sound Buffers	0 / 0

Total / Free 3D Streaming Sound Buffers 0 / 0

Navigation

**DirectSound Device Features:**

Certified Driver	No
Emulated Device	No
Precise Sample Rate	Supported
DirectSound3D	Not Supported
Creative EAX 1.0	Not Supported
Creative EAX 2.0	Not Supported
Creative EAX 3.0	Not Supported
Creative EAX 4.0	Not Supported
Creative EAX 5.0	Not Supported
I3DL2	Not Supported
Sensaura ZoomFX	Not Supported

**[ DELL P2715Q (NVIDIA High Definition Audio) ]****DirectSound Device Properties:**

Device Description	DELL P2715Q (NVIDIA High Definition Audio)
Driver Module	{0.0.0.00000000}.{62a19160-a195-4a30-8cf9-93e2fcf9b184}
Primary Buffers	1
Min / Max Secondary Buffers Sample Rate	100 / 200000 Hz
Primary Buffers Sound Formats	8-bit, 16-bit, Mono, Stereo
Secondary Buffers Sound Formats	8-bit, 16-bit, Mono, Stereo
Total / Free Sound Buffers	1 / 0
Total / Free Static Sound Buffers	1 / 0
Total / Free Streaming Sound Buffers	1 / 0
Total / Free 3D Sound Buffers	0 / 0
Total / Free 3D Static Sound Buffers	0 / 0
Total / Free 3D Streaming Sound Buffers	0 / 0

**DirectSound Device Features:**

Certified Driver	No
Emulated Device	No
Precise Sample Rate	Supported
DirectSound3D	Not Supported
Creative EAX 1.0	Not Supported
Creative EAX 2.0	Not Supported
Creative EAX 3.0	Not Supported
Creative EAX 4.0	Not Supported
Creative EAX 5.0	Not Supported
I3DL2	Not Supported
Sensaura ZoomFX	Not Supported

**[ Speaker/HP (Realtek(R) Audio) ]****DirectSound Device Properties:**

Device Description	Speaker/HP (Realtek(R) Audio)
Driver Module	{0.0.0.00000000}.{a77903da-7eae-4bf9-8fb7-4faa172b47eb}
Primary Buffers	1
Min / Max Secondary Buffers Sample Rate	100 / 200000 Hz
Primary Buffers Sound Formats	8-bit, 16-bit, Mono, Stereo
Secondary Buffers Sound Formats	8-bit, 16-bit, Mono, Stereo
Total / Free Sound Buffers	1 / 0
Total / Free Static Sound Buffers	1 / 0
Total / Free Streaming Sound Buffers	1 / 0
Total / Free 3D Sound Buffers	0 / 0
Total / Free 3D Static Sound Buffers	0 / 0
Total / Free 3D Streaming Sound Buffers	0 / 0

**DirectSound Device Features:**

Certified Driver	No
Emulated Device	No
Precise Sample Rate	Supported
DirectSound3D	Not Supported
Creative EAX 1.0	Not Supported
Creative EAX 2.0	Not Supported

Creative EAX 3.0	Not Supported
Creative EAX 4.0	Not Supported
Creative EAX 5.0	Not Supported
I3DL2	Not Supported
Sensaura ZoomFX	Not Supported

Navigation

## Windows Devices

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### [ Devices ]

**Audio inputs and outputs:**

DELL P2715Q (NVIDIA High Definition Audio)	10.0.17134.1
Line (2- Dell AC511 USB SoundBar)	10.0.17134.1
Microphone (2- AK5371 )	10.0.17134.1
Microphone Array (Razer Stargazer-Microphone)	10.0.17134.1
Microphone Array (Realtek(R) Audio)	10.0.17134.1
Speaker/HP (Realtek(R) Audio)	10.0.17134.1
Speakers (2- Dell AC511 USB SoundBar)	10.0.17134.1

**Batteries:**

Microsoft AC Adapter	10.0.17134.1
Microsoft ACPI-Compliant Control Method Battery	10.0.17134.1

**Biometric devices:**

Synaptics WBDI - SGX	5.3.3532.26
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**Cameras:**

Integrated Camera	5.0.18.21
Integrated IR Camera	5.0.18.21
Intel(R) RealSense(TM) Camera SR300 RGB	10.0.17134.1

**Computer:**

ACPI x64-based PC	10.0.17134.1
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**Disk drives:**

SAMSUNG MZVLB1T0HALR-000L7	10.0.17134.1
Samsung SSD 850 PRO SCSI Disk Device	10.0.17134.1
SDXC Card	10.0.17134.1
THNSN51T02DU7 NVMe TOSHIBA 1024GB	10.0.17134.1

**Display adapters:**

Intel(R) UHD Graphics 630	24.20.100.6227
NVIDIA GeForce GTX 1050 Ti with Max-Q Design	25.21.14.1694

**Firmware:**

Device Firmware	10.0.17134.1
Device Firmware	10.0.17134.1
System Firmware	10.0.17134.1

**Human Interface Devices:**

HID-compliant bar code badge reader	10.0.17134.112
HID-compliant consumer control device	10.0.17134.1
HID-compliant device	10.0.17134.112
HID-compliant device	10.0.17134.112
HID-compliant headset	10.0.17134.112
HID-compliant pen	10.0.17134.112
HID-compliant system controller	10.0.17134.112
HID-compliant system controller	10.0.17134.112

HID-compliant touch pad	10.0.17134.112
HID-compliant touch screen	10.0.17134.112
HID-compliant vendor-defined device	10.0.17134.112
HID-compliant vendor-defined device	10.0.17134.112
HID-compliant vendor-defined device	10.0.17134.112
Lenovo Pen Device	7.5.2.26
Microsoft Input Configuration Device	10.0.17134.1
Microsoft Input Configuration Device	10.0.17134.1
Razer Basilisk	10.0.15063.0
Razer Basilisk	6.2.9200.16437
Synaptics HID-Compliant Touch pad Device	19.5.19.25
USB Input Device	10.0.17134.112

Navigation

**Imaging devices:**

Intel(R) RealSense(TM) Camera SR300 Depth	3.3.27.5718
Intel(R) RealSense(TM) Camera SR300 Virtual Driver	12.11.38.553

**Keyboards:**

HID Keyboard Device	10.0.17134.1
Razer Basilisk	10.0.15063.0
Standard PS/2 Keyboard	10.0.17134.1

**Mice and other pointing devices:**

HID-compliant mouse	10.0.17134.1
HID-compliant mouse	10.0.17134.1
HID-compliant mouse	10.0.17134.1
Razer Basilisk	10.0.15063.0
Synaptics Pointing Device	19.5.19.25

**Monitors:**

Generic PnP Monitor	10.0.17134.1
Wide viewing angle & High density FlexView Display 3840x2160	6.9.1.0

**Network adapters:**

Dell Wireless 1830 802.11ac	1.558.56.0
Intel(R) Ethernet Connection (7) I219-LM	12.17.10.7
Microsoft Kernel Debug Network Adapter	10.0.17134.1
Microsoft Wi-Fi Direct Virtual Adapter #3	10.0.17134.1
Microsoft Wi-Fi Direct Virtual Adapter #4	10.0.17134.1
VMware Virtual Ethernet Adapter for VMnet1	14.0.0.0
VMware Virtual Ethernet Adapter for VMnet8	14.0.0.0
WAN Miniport (IKEv2)	10.0.17134.1
WAN Miniport (IP)	10.0.17134.1
WAN Miniport (IPv6)	10.0.17134.1
WAN Miniport (L2TP)	10.0.17134.1
WAN Miniport (Network Monitor)	10.0.17134.1
WAN Miniport (PPPOE)	10.0.17134.1
WAN Miniport (PPTP)	10.0.17134.1
WAN Miniport (SSTP)	10.0.17134.1

**Portable Devices:**

NexHub	10.0.17134.1
NexRepo	10.0.17134.1

**Print queues:**

Fax	10.0.17134.1
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Microsoft Print to PDF	10.0.17134.1	Navigation
Microsoft XPS Document Writer	10.0.17134.1	
Root Print Queue	10.0.17134.1	

**Processors:**

Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz	10.0.17134.1
Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz	10.0.17134.1
Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz	10.0.17134.1
Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz	10.0.17134.1
Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz	10.0.17134.1
Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz	10.0.17134.1
Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz	10.0.17134.1
Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz	10.0.17134.1
Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz	10.0.17134.1
Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz	10.0.17134.1
Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz	10.0.17134.1
Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz	10.0.17134.1
Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz	10.0.17134.1
Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz	10.0.17134.1
Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz	10.0.17134.1
Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz	10.0.17134.1
Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz	10.0.17134.1
Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz	10.0.17134.1
Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz	10.0.17134.1

**Razer Device:**

Razer Control Device	10.0.15063.0
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**Security devices:**

Trusted Platform Module 2.0	10.0.17134.254
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**Software components:**

DolbyAPO Software Device (HSA)	3.20200.247.0
DolbyAPO SWC Device	3.20200.247.0
Fortemedia SAMSoft Effects Component	12.0.6001.5740
Intel(R) Graphics Control Panel	24.20.100.6227
Intel(R) Grfx VK binaries	24.20.100.6227
Intel(R) Media SDK binaries	24.20.100.6227
Intel(R) Software Guard Extensions Software	2.1.100.46245
Lenovo Pen Service	7.5.1.35
Realtek Audio Effects Component	11.0.6000.642
Realtek Audio Universal Service	1.0.0.103
Realtek Hardware Support Application	11.0.6000.136

**Software devices:**

Lenovo Camera Group	10.0.17134.1
Microsoft Device Association Root Enumerator	10.0.17134.1
Microsoft GS Wavetable Synth	10.0.17134.1
Microsoft Radio Device Enumeration Bus	10.0.17134.1
Microsoft RRAS Root Enumerator	10.0.17134.1
Wi-Fi 2	10.0.17134.1

**Sound, video and game controllers:**

AK5371	10.0.17134.1
Dell AC511 USB SoundBar	10.0.17134.1
Intel(R) Display Audio	10.25.0.9
NVIDIA High Definition Audio	1.3.38.4
NVIDIA Virtual Audio Device (Wave Extensible) (WDM)	4.11.1.0
Razer Stargazer-Microphone	10.0.17134.1
Realtek(R) Audio	6.0.1.8519

**Storage controllers:**

Microsoft Storage Spaces Controller	10.0.17134.376
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Standard NVM Express Controller	10.0.17134.81	Navigation
Standard NVM Express Controller	10.0.17134.81	
USB Attached SCSI (UAS) Mass Storage Device	10.0.17134.1	

**Storage volume shadow copies:**

Generic volume shadow copy	10.0.17134.1
Generic volume shadow copy	10.0.17134.1
Generic volume shadow copy	10.0.17134.1

**Storage volumes:**

Volume	10.0.17134.1

**System devices:**

ACPI Fixed Feature Button	10.0.17134.1
ACPI Lid	10.0.17134.1
ACPI Processor Aggregator	10.0.17134.1
ACPI Sleep Button	10.0.17134.1
ACPI Thermal Zone	10.0.17134.1
Charge Arbitration Driver	10.0.17134.1
Composite Bus Enumerator	10.0.17134.1
Fn and function keys	9.0.2.15
High Definition Audio Controller	10.0.17134.1
High Definition Audio Controller	10.0.17134.1
High precision event timer	10.0.17134.1
Intel(R) C240 Series Chipset Family LPC Controller - A30E	10.1.16.5
Intel(R) Dynamic Platform and Thermal Framework Generic Participant	8.4.11000.6436
Intel(R) Dynamic Platform and Thermal Framework Generic Participant	8.4.11000.6436
Intel(R) Dynamic Platform and Thermal Framework Generic Participant	8.4.11000.6436
Intel(R) Dynamic Platform and Thermal Framework Generic Participant	8.4.11000.6436
Intel(R) Dynamic Platform and Thermal Framework Generic Participant	8.4.11000.6436
Intel(R) Dynamic Platform and Thermal Framework Generic Participant	8.4.11000.6436
Intel(R) Dynamic Platform and Thermal Framework Generic Participant	8.4.11000.6436
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Intel(R) Dynamic Platform and Thermal Framework Generic Participant	8.4.11000.6436
Intel(R) Dynamic Platform and Thermal Framework Generic Participant	8.4.11000.6436
Intel(R) Dynamic Platform and Thermal Framework Generic Participant	8.4.11000.6436
Intel(R) Dynamic Platform and Thermal Framework Generic Participant	8.4.11000.6436
Intel(R) Dynamic Platform and Thermal Framework Manager	8.4.11000.6436
Intel(R) Dynamic Platform and Thermal Framework Processor Participant	8.4.11000.6436
Intel(R) Gaussian Mixture Model - 1911	10.1.7.2
Intel(R) Host Bridge/DRAM Registers - 3EC4	10.1.14.4
Intel(R) LPSS: I2C Controller #0 - A368	10.1.16.5
Intel(R) LPSS: UART #0 - A328	10.1.16.5

Navigation

Intel(R) Management Engine Interface	1815.12.0.2021
Intel(R) PCI Express Root Port #15 - A336	10.1.16.5
Intel(R) PCI Express Root Port #17 - A340	10.1.16.5
Intel(R) PCI Express Root Port #21 - A32C	10.1.16.5
Intel(R) PCI Express Root Port #9 - A330	10.1.16.5
Intel(R) PCIe Controller (x16) - 1901	10.1.7.2
Intel(R) Power Engine Plug-in	10.0.17134.1
Intel(R) RealSense(TM) Camera Virtual Bus Enumerator	3.4.31.955
Intel(R) Software Guard Extensions Device	1.9.105.41752
Intel(R) SPI (flash) Controller - A324	10.1.16.5
Intel(R) Thermal Subsystem - A379	10.1.16.5
Lenovo Active Protection System Driver	1.82.5.5
Lenovo Intelligent Thermal Solution	1.0.1.248
Lenovo PM Device	1.67.14.7
Microsoft ACPI-Compliant Embedded Controller	10.0.17134.1
Microsoft ACPI-Compliant System	10.0.17134.1
Microsoft Basic Display Driver	10.0.17134.1
Microsoft Basic Render Driver	10.0.17134.1
Microsoft System Management BIOS Driver	10.0.17134.1
Microsoft UEFI-Compliant System	10.0.17134.112
Microsoft Virtual Drive Enumerator	10.0.17134.1
Microsoft Windows Management Interface for ACPI	10.0.17134.1
Microsoft Windows Management Interface for ACPI	10.0.17134.1
Microsoft Windows Management Interface for ACPI	10.0.17134.1
Microsoft Windows Management Interface for ACPI	10.0.17134.1
Microsoft Windows Management Interface for ACPI	10.0.17134.1
Microsoft Windows Management Interface for ACPI	10.0.17134.1
Motherboard resources	10.0.17134.1
NDIS Virtual Network Adapter Enumerator	10.0.17134.1
Numeric data processor	10.0.17134.1
NVVHCI Enumerator	3.2.2395.1287
PCI Express Downstream Switch Port	10.0.17134.254
PCI Express Downstream Switch Port	10.0.17134.254
PCI Express Downstream Switch Port	10.0.17134.254
PCI Express Downstream Switch Port	10.0.17134.254
PCI Express Root Complex	10.0.17134.254
PCI Express Upstream Switch Port	10.0.17134.254
PCI standard RAM Controller	10.0.17134.1
Plug and Play Software Device Enumerator	10.0.17134.1
Programmable interrupt controller	10.0.17134.1
Remote Desktop Camera Bus	10.0.17134.1
Remote Desktop Device Redirector Bus	10.0.17134.1
Remote Desktop USB Hub	10.0.17134.1
Synaptics RAW PDO Device	19.5.19.25
Synaptics SMBus Driver	19.5.19.25
System board	10.0.17134.1
System CMOS/real time clock	10.0.17134.1
System Interface Foundation V2 Device	1.1.16.0
System speaker	10.0.17134.1
System timer	10.0.17134.1
Thunderbolt(TM) Controller - 15EB	17.4.77.13
UMBus Enumerator	10.0.17134.1
UMBus Enumerator	10.0.17134.1

UMBus Enumerator	10.0.17134.1	Navigation
UMBus Root Bus Enumerator	10.0.17134.1	
VMware VMCI Host Device	9.8.6.0	
Volume Manager	10.0.17134.137	

**Universal Serial Bus controllers:**

Generic SuperSpeed USB Hub	10.0.17134.228
Generic USB Hub	10.0.17134.228
Generic USB Hub	10.0.17134.228
Generic USB Hub	10.0.17134.228
Intel(R) USB 3.1 eXtensible Host Controller - 1.10 (Microsoft)	10.0.17134.1
Intel(R) USB 3.1 eXtensible Host Controller - 1.10 (Microsoft)	10.0.17134.1
Realtek USB 3.0 Card Reader	10.0.17134.31242
USB Composite Device	10.0.17134.1
USB Root Hub (USB 3.0)	10.0.17134.228
USB Root Hub (USB 3.0)	10.0.17134.228

**Universal Serial Bus devices:**

Intel(R) RealSense(TM) Camera SR300	10.0.17134.1
USB 2.0 BILLBOARD	10.0.17134.1

**Unknown:**

Unknown

**USB Connector Managers:**

UCSI USB Connector Manager	10.0.17134.1
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**[ Audio inputs and outputs / DELL P2715Q (NVIDIA High Definition Audio) ]****Device Properties:**

Driver Description	DELL P2715Q (NVIDIA High Definition Audio)
Driver Date	4/11/2018
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	audioendpoint.inf
INF Section	NO_DRV
Hardware ID	MMDEVAPI\AudioEndpoints

**[ Audio inputs and outputs / Line (2- Dell AC511 USB SoundBar) ]****Device Properties:**

Driver Description	Line (2- Dell AC511 USB SoundBar)
Driver Date	4/11/2018
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	audioendpoint.inf
INF Section	NO_DRV
Hardware ID	MMDEVAPI\AudioEndpoints

**[ Audio inputs and outputs / Microphone (2- AK5371 ) ]****Device Properties:**

Driver Description	Microphone (2- AK5371 )
Driver Date	4/11/2018

Driver Version	10.0.17134.1	Navigation
Driver Provider	Microsoft	
INF File	audioendpoint.inf	
INF Section	NO_DRV	
Hardware ID	MMDEVAPI\AudioEndpoints	

## [ Audio inputs and outputs / Microphone Array (Razer Stargazer-Microphone) ]

**Device Properties:**

Driver Description	Microphone Array (Razer Stargazer-Microphone)
Driver Date	4/11/2018
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	audioendpoint.inf
INF Section	NO_DRV
Hardware ID	MMDEVAPI\AudioEndpoints

## [ Audio inputs and outputs / Microphone Array (Realtek(R) Audio) ]

**Device Properties:**

Driver Description	Microphone Array (Realtek(R) Audio)
Driver Date	4/11/2018
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	audioendpoint.inf
INF Section	NO_DRV
Hardware ID	MMDEVAPI\AudioEndpoints

## [ Audio inputs and outputs / Speaker/HP (Realtek(R) Audio) ]

**Device Properties:**

Driver Description	Speaker/HP (Realtek(R) Audio)
Driver Date	4/11/2018
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	audioendpoint.inf
INF Section	NO_DRV
Hardware ID	MMDEVAPI\AudioEndpoints

## [ Audio inputs and outputs / Speakers (2- Dell AC511 USB SoundBar) ]

**Device Properties:**

Driver Description	Speakers (2- Dell AC511 USB SoundBar)
Driver Date	4/11/2018
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	audioendpoint.inf
INF Section	NO_DRV
Hardware ID	MMDEVAPI\AudioEndpoints

## [ Batteries / Microsoft AC Adapter ]

**Device Properties:**

Driver Description	Microsoft AC Adapter
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	cmbatt.inf
INF Section	AcAdapter_Inst
Hardware ID	ACPI\VEN_ACPI&DEV_0003

**Device Manufacturer:**

Driver Update <http://www.aida64.com/driver-updates>

## [ Batteries / Microsoft ACPI-Compliant Control Method Battery ]

## **Device Properties:**

Driver Description	Microsoft ACPI-Compliant Control Method Ba
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	cmbatt.inf
INF Section	CmBatt_Inst
Hardware ID	ACPI\VEN_PNP&DEV_0C0A

## Navigation

**Device Manufacturer:**

Driver Update <http://www.aida64.com/driver-updates>

[ Biometric devices / Synaptics WBDI - SGX ]

## **Device Properties:**

Driver Description	Synaptics WBDI - SGX
Driver Date	8/23/2018
Driver Version	5.3.3532.26
Driver Provider	Synaptics Incorporated
INF File	oem73.inf
INF Section	Biometric_Install_10.NTamd64
Hardware ID	USB\VID_06CB&PID_009A&REV_0164
Location Information	Port #0009.Hub #0001

## [ Cameras / Integrated Camera ]

## Device Properties:

## [ Cameras / Integrated IR Camera ]

## Device Properties:

Driver Description	Integrated IR Camera
Driver Date	6/21/2018
Driver Version	5.0.18.21
Driver Provider	SunplusIT
INF File	oem26.inf
INF Section	SPUVCb.Device_x64.NTamd64
Hardware ID	USB\VID_5986&PID_2123&REV_5473&MI_00
Location Information	0000.0014.0000.012.000.000.000.000.000.000

[ Cameras / Intel(R) RealSense(TM) Camera SR300 RGB ]

## Device Properties:

Driver Description	Intel(R) RealSense(TM) Camera SR300 RGB
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	usbvideo.inf
INF Section	USBVideo.NT
Hardware ID	USB\VID_8086&PID_0AA5&REV_3150&MI_00
Location Information	003b.0000.0000.004.004.001.001.000.000

[ Computer / ACPI x64-based PC ]

## Device Properties:

Driver Description ACPI x64-based PC  
Driver Date 6/21/2006  
Driver Version 10.0.17134.1

Driver Provider	Microsoft
INF File	hal.inf
INF Section	ACPI_AMD64_HAL
Hardware ID	acpiapic

Navigation

## [ Disk drives / SAMSUNG MZVLB1T0HALR-000L7 ]

**Device Properties:**

Driver Description	SAMSUNG MZVLB1T0HALR-000L7
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	disk.inf
INF Section	disk_install.NT
Hardware ID	SCSI\DiskNVMe____SAMSUNG_MZVLB1T0EXA7
Location Information	Bus Number 0, Target Id 0, LUN 0

**Device Manufacturer:**

Company Name	Samsung
Product Information	<a href="http://www.samsung.com/us/computer/solid-state-drives">http://www.samsung.com/us/computer/solid-state-drives</a>
Driver Update	<a href="http://www.aida64.com/driver-updates">http://www.aida64.com/driver-updates</a>

## [ Disk drives / Samsung SSD 850 PRO SCSI Disk Device ]

**Device Properties:**

Driver Description	Samsung SSD 850 PRO SCSI Disk Device
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	disk.inf
INF Section	disk_install.NT
Hardware ID	SCSI\DiskSamsung_SSD_850_PRO____EXM0
Location Information	Bus Number 0, Target Id 0, LUN 0

**Device Manufacturer:**

Company Name	Samsung
Product Information	<a href="http://www.samsung.com/us/computer/solid-state-drives">http://www.samsung.com/us/computer/solid-state-drives</a>
Driver Update	<a href="http://www.aida64.com/driver-updates">http://www.aida64.com/driver-updates</a>

## [ Disk drives / SDXC Card ]

**Device Properties:**

Driver Description	SDXC Card
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	disk.inf
INF Section	disk_install.NT
Hardware ID	USBSTOR\GenDisk

**Device Manufacturer:**

Driver Update	<a href="http://www.aida64.com/driver-updates">http://www.aida64.com/driver-updates</a>
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## [ Disk drives / THNSN51T02DU7 NVMe TOSHIBA 1024GB ]

**Device Properties:**

Driver Description	THNSN51T02DU7 NVMe TOSHIBA 1024GB
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	disk.inf
INF Section	disk_install.NT
Hardware ID	SCSI\DiskNVMe____THNSN51T02DU7_NV4103
Location Information	Bus Number 0, Target Id 0, LUN 0

**Device Manufacturer:**

Company Name	Toshiba Corp., Storage Device Division
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Product Information  
Driver Update

<http://sdd.toshiba.com>  
<http://www.aida64.com/driver-updates>

Navigation

## [ Display adapters / Intel(R) UHD Graphics 630 ]

### Device Properties:

Driver Description	Intel(R) UHD Graphics 630
Driver Date	7/26/2018
Driver Version	24.20.100.6227
Driver Provider	Intel Corporation
INF File	oem52.inf
INF Section	iCFL_w10_DS
Hardware ID	PCI\VEN_8086&DEV_3E9B&SUBSYS_226717AA&REV_00
Location Information	PCI bus 0, device 2, function 0
PCI Device	Intel Coffee Lake-H GT2 - Integrated Graphics Controller

### Device Resources:

IRQ	65536
Memory	000A0000-000BFFFF
Memory	4A000000-4AFFFFFF
Memory	80000000-8FFFFFFF
Port	03B0-03BB
Port	03C0-03DF
Port	3000-303F

### Video Adapter Manufacturer:

Company Name	Intel Corporation
Product Information	<a href="http://www.intel.com/products/chipsets">http://www.intel.com/products/chipsets</a>
Driver Download	<a href="http://support.intel.com/support/graphics">http://support.intel.com/support/graphics</a>
Driver Update	<a href="http://www.aida64.com/driver-updates">http://www.aida64.com/driver-updates</a>

## [ Display adapters / NVIDIA GeForce GTX 1050 Ti with Max-Q Design ]

### Device Properties:

Driver Description	NVIDIA GeForce GTX 1050 Ti with Max-Q Design
Driver Date	11/12/2018
Driver Version	25.21.14.1694
Driver Provider	NVIDIA
INF File	oem114.inf
INF Section	Section012
Hardware ID	PCI\VEN_10DE&DEV_1C8C&SUBSYS_226717AA&REV_A1
Location Information	PCI bus 1, device 0, function 0
PCI Device	nVIDIA GeForce GTX 1050 Ti Video Adapter

### Device Resources:

IRQ	65536
Memory	60000000-6FFFFFFF
Memory	70000000-71FFFFFF
Memory	BF000000-BFFFFFFF

### Video Adapter Manufacturer:

Company Name	NVIDIA Corporation
Product Information	<a href="http://www.nvidia.com/page/products.html">http://www.nvidia.com/page/products.html</a>
Driver Download	<a href="http://www.nvidia.com/content/drivers/drivers.asp">http://www.nvidia.com/content/drivers/drivers.asp</a>
Driver Update	<a href="http://www.aida64.com/driver-updates">http://www.aida64.com/driver-updates</a>

## [ Firmware / Device Firmware ]

### Device Properties:

Driver Description	Device Firmware
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	c_firmware.inf
INF Section	FirmwareResource.NT
Hardware ID	UEFI\RES_{4226a48a-8c1e-4f66-8f54-7e5dc33dcba9}&REV_C0060460

**[ Firmware / Device Firmware ]****Device Properties:**

Driver Description	Device Firmware
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	c_firmware.inf
INF Section	FirmwareResource.NT
Hardware ID	UEFI\RES_{74997a6b-1adf-4b12-b994-401f06ea8c72}&REV_10008

**[ Firmware / System Firmware ]****Device Properties:**

Driver Description	System Firmware
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	c_firmware.inf
INF Section	FirmwareResource.NT
Hardware ID	UEFI\RES_{a95d69e7-2fa0-4849-9159-75645bc6e153}&REV_1000F

**[ Human Interface Devices / HID-compliant bar code badge reader ]****Device Properties:**

Driver Description	HID-compliant bar code badge reader
Driver Date	6/21/2006
Driver Version	10.0.17134.112
Driver Provider	Microsoft
INF File	input.inf
INF Section	HID_Raw_Inst.NT
Hardware ID	HID\VID_0483&PID_5029&REV_0000&MI_01

**Device Manufacturer:**

Driver Update <http://www.aida64.com/driver-updates>

**[ Human Interface Devices / HID-compliant consumer control device ]****Device Properties:**

Driver Description	HID-compliant consumer control device
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	hidserv.inf
INF Section	HIDSystemConsumerDevice
Hardware ID	HID\VID_0483&PID_5029&REV_0000&MI_02&Col01

**Device Manufacturer:**

Driver Update <http://www.aida64.com/driver-updates>

**[ Human Interface Devices / HID-compliant consumer control device ]****Device Properties:**

Driver Description	HID-compliant consumer control device
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	hidserv.inf
INF Section	HIDSystemConsumerDevice
Hardware ID	HID\VID_1532&PID_0E01&REV_1000&MI_03&Col01

**Device Manufacturer:**

Driver Update <http://www.aida64.com/driver-updates>

**[ Human Interface Devices / HID-compliant consumer control device ]**

**Device Properties:**

Driver Description	HID-compliant consumer control device	Navigation
Driver Date	6/21/2006	
Driver Version	10.0.17134.1	
Driver Provider	Microsoft	
INF File	hidserv.inf	
INF Section	HIDSystemConsumerDevice	
Hardware ID	HID\VID_1532&PID_0064&REV_0200&MI_01&Col02	

**Device Manufacturer:**

Driver Update <http://www.aida64.com/driver-updates>

**[ Human Interface Devices / HID-compliant consumer control device ]****Device Properties:**

Driver Description	HID-compliant consumer control device
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	hidserv.inf
INF Section	HIDSystemConsumerDevice
Hardware ID	HID\VID_413C&PID_A503&REV_0110&MI_03

**Device Manufacturer:**

Driver Update <http://www.aida64.com/driver-updates>

**[ Human Interface Devices / HID-compliant device ]****Device Properties:**

Driver Description	HID-compliant device
Driver Date	6/21/2006
Driver Version	10.0.17134.112
Driver Provider	Microsoft
INF File	input.inf
INF Section	HID_Raw_Inst.NT
Hardware ID	HID\VID_1532&PID_0064&REV_0200&MI_01&Col04

**Device Manufacturer:**

Driver Update <http://www.aida64.com/driver-updates>

**[ Human Interface Devices / HID-compliant device ]****Device Properties:**

Driver Description	HID-compliant device
Driver Date	6/21/2006
Driver Version	10.0.17134.112
Driver Provider	Microsoft
INF File	input.inf
INF Section	HID_Raw_Inst.NT
Hardware ID	HID\VID_1532&PID_0064&REV_0200&MI_01&Col05

**Device Manufacturer:**

Driver Update <http://www.aida64.com/driver-updates>

**[ Human Interface Devices / HID-compliant headset ]****Device Properties:**

Driver Description	HID-compliant headset
Driver Date	6/21/2006
Driver Version	10.0.17134.112
Driver Provider	Microsoft
INF File	input.inf
INF Section	HID_Raw_Inst.NT
Hardware ID	HID\VID_1532&PID_0E01&REV_1000&MI_03&Col02

**Device Manufacturer:**

Driver Update <http://www.aida64.com/driver-updates>

## [ Human Interface Devices / HID-compliant pen ]

**Device Properties:**

Driver Description	HID-compliant pen
Driver Date	6/21/2006
Driver Version	10.0.17134.112
Driver Provider	Microsoft
INF File	input.inf
INF Section	HID_Raw_Inst.NT
Hardware ID	HID\VID_056A&PID_5193&REV_0002&Col04

**Device Manufacturer:**

Driver Update <http://www.aida64.com/driver-updates>

## [ Human Interface Devices / HID-compliant system controller ]

**Device Properties:**

Driver Description	HID-compliant system controller
Driver Date	6/21/2006
Driver Version	10.0.17134.112
Driver Provider	Microsoft
INF File	input.inf
INF Section	HID_Raw_Inst.NT
Hardware ID	HID\VID_0483&PID_5029&REV_0000&MI_02&Col02

**Device Manufacturer:**

Driver Update <http://www.aida64.com/driver-updates>

## [ Human Interface Devices / HID-compliant system controller ]

**Device Properties:**

Driver Description	HID-compliant system controller
Driver Date	6/21/2006
Driver Version	10.0.17134.112
Driver Provider	Microsoft
INF File	input.inf
INF Section	HID_Raw_Inst.NT
Hardware ID	HID\VID_1532&PID_0064&REV_0200&MI_01&Col03

**Device Manufacturer:**

Driver Update <http://www.aida64.com/driver-updates>

## [ Human Interface Devices / HID-compliant touch pad ]

**Device Properties:**

Driver Description	HID-compliant touch pad
Driver Date	6/21/2006
Driver Version	10.0.17134.112
Driver Provider	Microsoft
INF File	input.inf
INF Section	HID_Raw_Inst.NT
Hardware ID	HID\VID_06CB&PID_000F&Col02

**Device Manufacturer:**

Driver Update <http://www.aida64.com/driver-updates>

## [ Human Interface Devices / HID-compliant touch screen ]

**Device Properties:**

Driver Description	HID-compliant touch screen
Driver Date	6/21/2006
Driver Version	10.0.17134.112
Driver Provider	Microsoft
INF File	input.inf
INF Section	HID_Raw_Inst.NT

Hardware ID

HID\VID\_056A&amp;PID\_5193&amp;REV\_0002&amp;Col01

Navigation

**Device Manufacturer:**

Driver Update

<http://www.aida64.com/driver-updates>**[ Human Interface Devices / HID-compliant vendor-defined device ]****Device Properties:**

Driver Description	HID-compliant vendor-defined device
Driver Date	6/21/2006
Driver Version	10.0.17134.112
Driver Provider	Microsoft
INF File	input.inf
INF Section	HID_Raw_Inst.NT
Hardware ID	HID\VID_056A&PID_5193&REV_0002&Col02

**Device Manufacturer:**

Driver Update

<http://www.aida64.com/driver-updates>**[ Human Interface Devices / HID-compliant vendor-defined device ]****Device Properties:**

Driver Description	HID-compliant vendor-defined device
Driver Date	6/21/2006
Driver Version	10.0.17134.112
Driver Provider	Microsoft
INF File	input.inf
INF Section	HID_Raw_Inst.NT
Hardware ID	HID\VID_056A&PID_5193&REV_0002&Col05

**Device Manufacturer:**

Driver Update

<http://www.aida64.com/driver-updates>**[ Human Interface Devices / HID-compliant vendor-defined device ]****Device Properties:**

Driver Description	HID-compliant vendor-defined device
Driver Date	6/21/2006
Driver Version	10.0.17134.112
Driver Provider	Microsoft
INF File	input.inf
INF Section	HID_Raw_Inst.NT
Hardware ID	HID\VID_06CB&PID_000F&Col04

**Device Manufacturer:**

Driver Update

<http://www.aida64.com/driver-updates>**[ Human Interface Devices / Lenovo Pen Device ]****Device Properties:**

Driver Description	Lenovo Pen Device
Driver Date	6/24/2018
Driver Version	7.5.2.26
Driver Provider	Wacom Technology
INF File	oem19.inf
INF Section	WacHIDRouterBase_USB.NT
Hardware ID	USB\VID_056A&PID_5193&REV_0002
Location Information	Port_#0010.Hub_#0001

**Device Manufacturer:**

Driver Update

<http://www.aida64.com/driver-updates>**[ Human Interface Devices / Microsoft Input Configuration Device ]****Device Properties:**

Driver Description	Microsoft Input Configuration Device
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Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	mtconfig.inf
INF Section	MTConfigInst.NT
Hardware ID	HID\VID_056A&PID_5193&REV_0002&Col03

Navigation

**Device Manufacturer:**

Driver Update <http://www.aida64.com/driver-updates>

**[ Human Interface Devices / Microsoft Input Configuration Device ]****Device Properties:**

Driver Description	Microsoft Input Configuration Device
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	mtconfig.inf
INF Section	MTConfigInst.NT
Hardware ID	HID\VID_06CB&PID_000F&Col03

**Device Manufacturer:**

Driver Update <http://www.aida64.com/driver-updates>

**[ Human Interface Devices / Razer Basilisk ]****Device Properties:**

Driver Description	Razer Basilisk
Driver Date	4/23/2018
Driver Version	10.0.15063.0
Driver Provider	Razer Inc
INF File	oem78.inf
INF Section	RzDev_Device.NT
Hardware ID	USB\VID_1532&PID_0064&REV_0200&MI_01
Location Information	0000.0014.0000.007.003.000.000.000.000

**Device Manufacturer:**

Driver Update <http://www.aida64.com/driver-updates>

**[ Human Interface Devices / Razer Basilisk ]****Device Properties:**

Driver Description	Razer Basilisk
Driver Date	1/2/2017
Driver Version	6.2.9200.16437
Driver Provider	Razer Inc
INF File	oem76.inf
INF Section	Razer.NTamd64
Hardware ID	USB\VID_1532&PID_0064&REV_0200&MI_02
Location Information	0000.0014.0000.007.003.000.000.000.000

**Device Manufacturer:**

Driver Update <http://www.aida64.com/driver-updates>

**[ Human Interface Devices / Synaptics HID-Compliant Touch pad Device ]****Device Properties:**

Driver Description	Synaptics HID-Compliant Touch pad Device
Driver Date	7/19/2018
Driver Version	19.5.19.25
Driver Provider	Synaptics
INF File	oem42.inf
INF Section	SynHIDMini_Inst
Hardware ID	SWC\VID_06CB&PID_000F

**Device Manufacturer:**

Driver Update <http://www.aida64.com/driver-updates>

## [ Human Interface Devices / USB Input Device ]

**Device Properties:**

Driver Description	USB Input Device
Driver Date	6/21/2006
Driver Version	10.0.17134.112
Driver Provider	Microsoft
INF File	input.inf
INF Section	HID_Inst.NT
Hardware ID	USB\VID_0483&PID_5029&REV_0000&MI_00
Location Information	0000.0014.0000.001.000.000.000.000.000

**Device Manufacturer:**

Driver Update <http://www.aida64.com/driver-updates>

## [ Human Interface Devices / USB Input Device ]

**Device Properties:**

Driver Description	USB Input Device
Driver Date	6/21/2006
Driver Version	10.0.17134.112
Driver Provider	Microsoft
INF File	input.inf
INF Section	HID_Inst.NT
Hardware ID	USB\VID_0483&PID_5029&REV_0000&MI_01
Location Information	0000.0014.0000.001.000.000.000.000.000

**Device Manufacturer:**

Driver Update <http://www.aida64.com/driver-updates>

## [ Human Interface Devices / USB Input Device ]

**Device Properties:**

Driver Description	USB Input Device
Driver Date	6/21/2006
Driver Version	10.0.17134.112
Driver Provider	Microsoft
INF File	input.inf
INF Section	HID_Inst.NT
Hardware ID	USB\VID_0483&PID_5029&REV_0000&MI_02
Location Information	0000.0014.0000.001.000.000.000.000.000

**Device Manufacturer:**

Driver Update <http://www.aida64.com/driver-updates>

## [ Human Interface Devices / USB Input Device ]

**Device Properties:**

Driver Description	USB Input Device
Driver Date	6/21/2006
Driver Version	10.0.17134.112
Driver Provider	Microsoft
INF File	input.inf
INF Section	HID_Inst.NT
Hardware ID	USB\VID_1532&PID_0E01&REV_1000&MI_03
Location Information	0000.0014.0000.007.004.001.002.000.000

**Device Manufacturer:**

Driver Update <http://www.aida64.com/driver-updates>

## [ Human Interface Devices / USB Input Device ]

**Device Properties:**

Driver Description	USB Input Device
Driver Date	6/21/2006

Driver Version	10.0.17134.112
Driver Provider	Microsoft
INF File	input.inf
INF Section	HID_Inst.NT
Hardware ID	USB\VID_1532&PID_0064&REV_0200&MI_00
Location Information	0000.0014.0000.007.003.000.000.000.000

Navigation

**Device Manufacturer:**

Driver Update <http://www.aida64.com/driver-updates>

**[ Human Interface Devices / USB Input Device ]****Device Properties:**

Driver Description	USB Input Device
Driver Date	6/21/2006
Driver Version	10.0.17134.112
Driver Provider	Microsoft
INF File	input.inf
INF Section	HID_Inst.NT
Hardware ID	USB\VID_413C&PID_A503&REV_0110&MI_03
Location Information	0000.0014.0000.007.004.003.000.000.000

**Device Manufacturer:**

Driver Update <http://www.aida64.com/driver-updates>

**[ Imaging devices / Intel(R) RealSense(TM) Camera SR300 Depth ]****Device Properties:**

Driver Description	Intel(R) RealSense(TM) Camera SR300 Depth
Driver Date	9/22/2016
Driver Version	3.3.27.5718
Driver Provider	Intel(R) Corporation
INF File	oem100.inf
INF Section	SR300CameraDepth.NT
Hardware ID	USB\VID_8086&PID_0AA5&REV_3150&MI_02
Location Information	003b.0000.0000.004.004.001.001.000.000

**Device Manufacturer:**

Driver Update <http://www.aida64.com/driver-updates>

**[ Imaging devices / Intel(R) RealSense(TM) Camera SR300 Virtual Driver ]****Device Properties:**

Driver Description	Intel(R) RealSense(TM) Camera SR300 Virtual Driver
Driver Date	6/8/2016
Driver Version	12.11.38.553
Driver Provider	Intel
INF File	oem102.inf
INF Section	DCMCamera.NTamd64
Hardware ID	{58FC88C6-C915-468E-8103-EE8139E5EBD9}\REALSENSEVDSR300
Location Information	RealSenseDcmBus Bus 0

**Device Manufacturer:**

Driver Update <http://www.aida64.com/driver-updates>

**[ Keyboards / HID Keyboard Device ]****Device Properties:**

Driver Description	HID Keyboard Device
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	keyboard.inf
INF Section	HID_Keyboard_Inst.NT
Hardware ID	VID_056A&PID_5193&REV_0002&Col07

**Device Manufacturer:**

Driver Update

<http://www.aida64.com/driver-updates>

Navigation

## [ Keyboards / HID Keyboard Device ]

**Device Properties:**

Driver Description	HID Keyboard Device
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	keyboard.inf
INF Section	HID_Keyboard_Inst.NT
Hardware ID	HID\VID_0483&PID_5029&REV_0000&MI_00

**Device Manufacturer:**

Driver Update

<http://www.aida64.com/driver-updates>

## [ Keyboards / HID Keyboard Device ]

**Device Properties:**

Driver Description	HID Keyboard Device
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	keyboard.inf
INF Section	HID_Keyboard_Inst.NT
Hardware ID	HID\VID_0483&PID_5029&REV_0000&MI_02&Col03

**Device Manufacturer:**

Driver Update

<http://www.aida64.com/driver-updates>

## [ Keyboards / HID Keyboard Device ]

**Device Properties:**

Driver Description	HID Keyboard Device
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	keyboard.inf
INF Section	HID_Keyboard_Inst.NT
Hardware ID	HID\VID_1532&PID_0064&REV_0200&MI_02

**Device Manufacturer:**

Driver Update

<http://www.aida64.com/driver-updates>

## [ Keyboards / Razer Basilisk ]

**Device Properties:**

Driver Description	Razer Basilisk
Driver Date	4/23/2018
Driver Version	10.0.15063.0
Driver Provider	Razer Inc
INF File	oem79.inf
INF Section	RzDev_Device.NT
Hardware ID	HID\VID_1532&PID_0064&REV_0200&MI_01&Col01

**Device Manufacturer:**

Driver Update

<http://www.aida64.com/driver-updates>

## [ Keyboards / Standard PS/2 Keyboard ]

**Device Properties:**

Driver Description	Standard PS/2 Keyboard
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	keyboard.inf

INF Section  
Hardware ID

STANDARD\_Inst  
ACPI\VEN\_LEN&DEV\_0071

Navigation

**Device Resources:**

IRQ	01
Port	0060-0060
Port	0064-0064

**Device Manufacturer:**

Driver Update <http://www.aida64.com/driver-updates>

**[ Mice and other pointing devices / HID-compliant mouse ]****Device Properties:**

Driver Description	HID-compliant mouse
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	msmouse.inf
INF Section	HID_Mouse_Inst.NT
Hardware ID	HID\VID_056A&PID_5193&REV_0002&Col06

**Device Manufacturer:**

Driver Update <http://www.aida64.com/driver-updates>

**[ Mice and other pointing devices / HID-compliant mouse ]****Device Properties:**

Driver Description	HID-compliant mouse
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	msmouse.inf
INF Section	HID_Mouse_Inst.NT
Hardware ID	HID\VID_06CB&PID_000F&Col01

**Device Manufacturer:**

Driver Update <http://www.aida64.com/driver-updates>

**[ Mice and other pointing devices / HID-compliant mouse ]****Device Properties:**

Driver Description	HID-compliant mouse
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	msmouse.inf
INF Section	HID_Mouse_Inst.NT
Hardware ID	HID\VID_0483&PID_5029&REV_0000&MI_02&Col04

**Device Manufacturer:**

Driver Update <http://www.aida64.com/driver-updates>

**[ Mice and other pointing devices / Razer Basilisk ]****Device Properties:**

Driver Description	Razer Basilisk
Driver Date	4/23/2018
Driver Version	10.0.15063.0
Driver Provider	Razer Inc
INF File	oem80.inf
INF Section	RzDev_Device.NT
Hardware ID	HID\VID_1532&PID_0064&REV_0200&MI_00

**Mouse Manufacturer:**

Company Name	Razer Inc.
Product Information	<a href="http://www.razerzone.com">http://www.razerzone.com</a>

Driver Download  
Driver Update

<http://www.razerzone.com>  
<http://www.aida64.com/driver-updates>

Navigation

## [ Mice and other pointing devices / Synaptics Pointing Device ]

### Device Properties:

Driver Description	Synaptics Pointing Device
Driver Date	7/19/2018
Driver Version	19.5.19.25
Driver Provider	Synaptics
INF File	oem43.inf
INF Section	LENOVO_UWP_GROUP4_InterTouch_Inst
Hardware ID	ACPI\VEN_LEN&DEV_0099

### Device Resources:

IRQ	12
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### Device Manufacturer:

Driver Update	<a href="http://www.aida64.com/driver-updates">http://www.aida64.com/driver-updates</a>
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## [ Monitors / Generic PnP Monitor ]

### Device Properties:

Driver Description	Generic PnP Monitor
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	monitor.inf
INF Section	PnPMonitor.Install
Hardware ID	MONITOR\DEL40BD
Monitor	Dell P2715Q (DP4k60)

### Monitor Manufacturer:

Company Name	Dell Computer Corporation
Product Information	<a href="http://accessories.us.dell.com/sna/category.aspx?c=us&amp;category_id=4009&amp;cs=19&amp;l=en&amp;s=dhs">http://accessories.us.dell.com/sna/category.aspx?c=us&amp;category_id=4009&amp;cs=19&amp;l=en&amp;s=dhs</a>
Driver Download	<a href="http://support.dell.com/support/topics/global.aspx/support/product_support/en/monitor_download?c=us&amp;cs=04&amp;l=en&amp;s=bsd">http://support.dell.com/support/topics/global.aspx/support/product_support/en/monitor_download?c=us&amp;cs=04&amp;l=en&amp;s=bsd</a>
Driver Update	<a href="http://www.aida64.com/driver-updates">http://www.aida64.com/driver-updates</a>

## [ Monitors / Wide viewing angle & High density FlexView Display 3840x2160 ]

### Device Properties:

Driver Description	Wide viewing angle & High density FlexView Display 3840x2160
Driver Date	8/16/2018
Driver Version	6.9.1.0
Driver Provider	Lenovo
INF File	oem15.inf
INF Section	TPLCDWUHDF_40BE.Install
Hardware ID	MONITOR\LEN40BE

### Device Manufacturer:

Driver Update	<a href="http://www.aida64.com/driver-updates">http://www.aida64.com/driver-updates</a>
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## [ Network adapters / Dell Wireless 1830 802.11ac ]

### Device Properties:

Driver Description	Dell Wireless 1830 802.11ac
Driver Date	4/21/2016
Driver Version	1.558.56.0
Driver Provider	Broadcom
INF File	oem112.inf
INF Section	BCM43XAC_NT62_43602
Hardware ID	PCI\VEN_14E4&DEV_43BA&SUBSYS_00241028&REV_01
Location Information	PCI bus 114, device 0, function 0
PCI Device	Broadcom BCM15700A2 802.11ac Wireless Network Adapter

**Device Resources:**

IRQ	1048576
Memory	C0400000-C07FFFFF
Memory	C08F8000-C08FFFFFF

Navigation

**Network Adapter Manufacturer:**

Company Name	Broadcom Corporation
Product Information	<a href="http://www.broadcom.com/products">http://www.broadcom.com/products</a>
Driver Download	<a href="http://www.broadcom.com/support/?gid=9">http://www.broadcom.com/support/?gid=9</a>
Driver Update	<a href="http://www.aida64.com/driver-updates">http://www.aida64.com/driver-updates</a>

**[ Network adapters / Intel(R) Ethernet Connection (7) I219-LM ]****Device Properties:**

Driver Description	Intel(R) Ethernet Connection (7) I219-LM
Driver Date	5/2/2018
Driver Version	12.17.10.7
Driver Provider	Intel
INF File	oem22.inf
INF Section	E15BB.10.0.1
Hardware ID	PCI\VEN_8086&DEV_15BB&SUBSYS_226717AA&REV_10
Location Information	PCI bus 0, device 31, function 6
PCI Device	Intel(R) Ethernet Connection (7) I219-LM [8086-15BB] [NoDB]

**Device Resources:**

IRQ	65536
Memory	FE1E0000-FE1FFFFFF

**Network Adapter Manufacturer:**

Company Name	Intel Corporation
Product Information	<a href="http://www.intel.com/embedded">http://www.intel.com/embedded</a>
Driver Download	<a href="http://www.intel.com/support/network">http://www.intel.com/support/network</a>
Driver Update	<a href="http://www.aida64.com/driver-updates">http://www.aida64.com/driver-updates</a>

**[ Network adapters / Microsoft Kernel Debug Network Adapter ]****Device Properties:**

Driver Description	Microsoft Kernel Debug Network Adapter
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	kdnic.inf
INF Section	KdNic.ndi
Hardware ID	root\kdnic

**Device Manufacturer:**

Driver Update	<a href="http://www.aida64.com/driver-updates">http://www.aida64.com/driver-updates</a>
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**[ Network adapters / Microsoft Wi-Fi Direct Virtual Adapter #3 ]****Device Properties:**

Driver Description	Microsoft Wi-Fi Direct Virtual Adapter #3
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	netwifimp.inf
INF Section	vwifimp_wfd.ndi
Hardware ID	{5d624f94-8850-40c3-a3fa-a4fd2080baf3}\vwifimp_wfd
Location Information	VWiFi Bus 0

**Device Manufacturer:**

Driver Update	<a href="http://www.aida64.com/driver-updates">http://www.aida64.com/driver-updates</a>
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**[ Network adapters / Microsoft Wi-Fi Direct Virtual Adapter #4 ]****Device Properties:**

Driver Description	Microsoft Wi-Fi Direct Virtual Adapter #4
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Driver Date	6/21/2006	Navigation
Driver Version	10.0.17134.1	
Driver Provider	Microsoft	
INF File	netvwifimp.inf	
INF Section	vwifimp_wfd.ndi	
Hardware ID	{5d624f94-8850-40c3-a3fa-a4fd2080baf3}\vwifimp_wfd	
Location Information	VWiFi Bus 0	

**Device Manufacturer:**

Driver Update <http://www.aida64.com/driver-updates>

**[ Network adapters / VMware Virtual Ethernet Adapter for VMnet1 ]****Device Properties:**

Driver Description	VMware Virtual Ethernet Adapter for VMnet1
Driver Date	8/15/2017
Driver Version	14.0.0.0
Driver Provider	VMware, Inc.
INF File	oem106.inf
INF Section	VMnetAdapter1.Install
Hardware ID	*VMnetAdapter1

**Network Adapter Manufacturer:**

Company Name	VMware, Inc.
Product Information	<a href="http://www.vmware.com">http://www.vmware.com</a>
Driver Download	<a href="http://www.vmware.com">http://www.vmware.com</a>
Driver Update	<a href="http://www.aida64.com/driver-updates">http://www.aida64.com/driver-updates</a>

**[ Network adapters / VMware Virtual Ethernet Adapter for VMnet8 ]****Device Properties:**

Driver Description	VMware Virtual Ethernet Adapter for VMnet8
Driver Date	8/15/2017
Driver Version	14.0.0.0
Driver Provider	VMware, Inc.
INF File	oem106.inf
INF Section	VMnetAdapter8.Install
Hardware ID	*VMnetAdapter8

**Network Adapter Manufacturer:**

Company Name	VMware, Inc.
Product Information	<a href="http://www.vmware.com">http://www.vmware.com</a>
Driver Download	<a href="http://www.vmware.com">http://www.vmware.com</a>
Driver Update	<a href="http://www.aida64.com/driver-updates">http://www.aida64.com/driver-updates</a>

**[ Network adapters / WAN Miniport (IKEv2) ]****Device Properties:**

Driver Description	WAN Miniport (IKEv2)
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	netavpna.inf
INF Section	Ndi-Mp-AgileVpn
Hardware ID	ms_agilevpnminiport

**Device Manufacturer:**

Driver Update <http://www.aida64.com/driver-updates>

**[ Network adapters / WAN Miniport (IP) ]****Device Properties:**

Driver Description	WAN Miniport (IP)
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft

INF File	netrasa.inf
INF Section	Ndi-Mp-Ip
Hardware ID	ms_ndiswanip

Navigation

**Device Manufacturer:**

Driver Update <http://www.aida64.com/driver-updates>

**[ Network adapters / WAN Miniport (IPv6) ]****Device Properties:**

Driver Description	WAN Miniport (IPv6)
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	netrasa.inf
INF Section	Ndi-Mp-Ipv6
Hardware ID	ms_ndiswanipv6

**Device Manufacturer:**

Driver Update <http://www.aida64.com/driver-updates>

**[ Network adapters / WAN Miniport (L2TP) ]****Device Properties:**

Driver Description	WAN Miniport (L2TP)
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	netrasa.inf
INF Section	Ndi-Mp-L2tp
Hardware ID	ms_l2tpminiport

**Device Manufacturer:**

Driver Update <http://www.aida64.com/driver-updates>

**[ Network adapters / WAN Miniport (Network Monitor) ]****Device Properties:**

Driver Description	WAN Miniport (Network Monitor)
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	netrasa.inf
INF Section	Ndi-Mp-Bh
Hardware ID	ms_ndiswanbh

**Device Manufacturer:**

Driver Update <http://www.aida64.com/driver-updates>

**[ Network adapters / WAN Miniport (PPPOE) ]****Device Properties:**

Driver Description	WAN Miniport (PPPOE)
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	netrasa.inf
INF Section	Ndi-Mp-Pppoe
Hardware ID	ms_pppoeminiport

**Device Manufacturer:**

Driver Update <http://www.aida64.com/driver-updates>

**[ Network adapters / WAN Miniport (PPTP) ]****Device Properties:**

Driver Description	WAN Miniport (PPTP)	Navigation
Driver Date	6/21/2006	
Driver Version	10.0.17134.1	
Driver Provider	Microsoft	
INF File	netrasa.inf	
INF Section	Ndi-Mp-Pptp	
Hardware ID	ms_pptpminiport	

**Device Manufacturer:**

Driver Update <http://www.aida64.com/driver-updates>

**[ Network adapters / WAN Miniport (SSTP) ]****Device Properties:**

Driver Description	WAN Miniport (SSTP)
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	netsstpa.inf
INF Section	Ndi-Mp-Sstp
Hardware ID	ms_sstpmiport

**Device Manufacturer:**

Driver Update <http://www.aida64.com/driver-updates>

**[ Portable Devices / NexHub ]****Device Properties:**

Driver Description	NexHub
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	wpdfs.inf
INF Section	Basic_Install

**[ Portable Devices / NexRepo ]****Device Properties:**

Driver Description	NexRepo
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	wpdfs.inf
INF Section	Basic_Install

**[ Print queues / Fax ]****Device Properties:**

Driver Description	Fax
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	printqueue.inf
INF Section	NO_DRV_LOCAL
Hardware ID	PRINTENUM\microsoftmicrosoft_s7d14

**[ Print queues / Microsoft Print to PDF ]****Device Properties:**

Driver Description	Microsoft Print to PDF
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	printqueue.inf
INF Section	NO_DRV_LOCAL
Hardware ID	PRINTENUM\{084f01fa-e634-4d77-83ee-074817c03581}

## [ Print queues / Microsoft XPS Document Writer ]

**Device Properties:**

Driver Description	Microsoft XPS Document Writer
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	printqueue.inf
INF Section	NO_DRV_LOCAL
Hardware ID	PRINTENUM\{0f4130dd-19c7-7ab6-99a1-980f03b2ee4e}

## [ Print queues / Root Print Queue ]

**Device Properties:**

Driver Description	Root Print Queue
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	printqueue.inf
INF Section	NO_DRV_LOCAL
Hardware ID	PRINTENUM\LocalPrintQueue

## [ Processors / Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz ]

**Device Properties:**

Driver Description	Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz
Driver Date	4/21/2009
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	cpu.inf
INF Section	IntelPPM_Inst.NT
Hardware ID	ACPI\GenuineIntel_-_Intel64_Family_6_Model_158

**CPU Manufacturer:**

Company Name	Intel Corporation
Product Information	<a href="http://ark.intel.com/search.aspx?q=Intel%20Core%20i7">http://ark.intel.com/search.aspx?q=Intel%20Core%20i7</a>
Driver Update	<a href="http://www.aida64.com/driver-updates">http://www.aida64.com/driver-updates</a>

## [ Processors / Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz ]

**Device Properties:**

Driver Description	Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz
Driver Date	4/21/2009
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	cpu.inf
INF Section	IntelPPM_Inst.NT
Hardware ID	ACPI\GenuineIntel_-_Intel64_Family_6_Model_158

**CPU Manufacturer:**

Company Name	Intel Corporation
Product Information	<a href="http://ark.intel.com/search.aspx?q=Intel%20Core%20i7">http://ark.intel.com/search.aspx?q=Intel%20Core%20i7</a>
Driver Update	<a href="http://www.aida64.com/driver-updates">http://www.aida64.com/driver-updates</a>

## [ Processors / Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz ]

**Device Properties:**

Driver Description	Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz
Driver Date	4/21/2009
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	cpu.inf
INF Section	IntelPPM_Inst.NT
Hardware ID	ACPI\GenuineIntel_-_Intel64_Family_6_Model_158

**CPU Manufacturer:**

Company Name  
Product Information  
Driver Update

Intel Corporation  
<http://ark.intel.com/search.aspx?q=Intel%20Core%20i7>  
<http://www.aida64.com/driver-updates>

Navigation

**[ Processors / Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz ]****Device Properties:**

Driver Description  
Driver Date  
Driver Version  
Driver Provider  
INF File  
INF Section  
Hardware ID

Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz  
4/21/2009  
10.0.17134.1  
Microsoft  
cpu.inf  
IntelPPM\_Inst.NT  
ACPI\GenuineIntel\_-\_Intel64\_Family\_6\_Model\_158

**CPU Manufacturer:**

Company Name  
Product Information  
Driver Update

Intel Corporation  
<http://ark.intel.com/search.aspx?q=Intel%20Core%20i7>  
<http://www.aida64.com/driver-updates>

**[ Processors / Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz ]****Device Properties:**

Driver Description  
Driver Date  
Driver Version  
Driver Provider  
INF File  
INF Section  
Hardware ID

Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz  
4/21/2009  
10.0.17134.1  
Microsoft  
cpu.inf  
IntelPPM\_Inst.NT  
ACPI\GenuineIntel\_-\_Intel64\_Family\_6\_Model\_158

**CPU Manufacturer:**

Company Name  
Product Information  
Driver Update

Intel Corporation  
<http://ark.intel.com/search.aspx?q=Intel%20Core%20i7>  
<http://www.aida64.com/driver-updates>

**[ Processors / Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz ]****Device Properties:**

Driver Description  
Driver Date  
Driver Version  
Driver Provider  
INF File  
INF Section  
Hardware ID

Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz  
4/21/2009  
10.0.17134.1  
Microsoft  
cpu.inf  
IntelPPM\_Inst.NT  
ACPI\GenuineIntel\_-\_Intel64\_Family\_6\_Model\_158

**CPU Manufacturer:**

Company Name  
Product Information  
Driver Update

Intel Corporation  
<http://ark.intel.com/search.aspx?q=Intel%20Core%20i7>  
<http://www.aida64.com/driver-updates>

**[ Processors / Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz ]****Device Properties:**

Driver Description  
Driver Date  
Driver Version  
Driver Provider  
INF File  
INF Section  
Hardware ID

Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz  
4/21/2009  
10.0.17134.1  
Microsoft  
cpu.inf  
IntelPPM\_Inst.NT  
ACPI\GenuineIntel\_-\_Intel64\_Family\_6\_Model\_158

**CPU Manufacturer:**

Company Name  
Product Information

Intel Corporation  
<http://ark.intel.com/search.aspx?q=Intel%20Core%20i7>

Driver Update

<http://www.aida64.com/driver-updates>

Navigation

## [ Processors / Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz ]

**Device Properties:**

Driver Description	Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz
Driver Date	4/21/2009
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	cpu.inf
INF Section	IntelPPM_Inst.NT
Hardware ID	ACPI\GenuineIntel_-_Intel64_Family_6_Model_158

**CPU Manufacturer:**

Company Name	Intel Corporation
Product Information	<a href="http://ark.intel.com/search.aspx?q=Intel%20Core%20i7">http://ark.intel.com/search.aspx?q=Intel%20Core%20i7</a>
Driver Update	<a href="http://www.aida64.com/driver-updates">http://www.aida64.com/driver-updates</a>

## [ Processors / Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz ]

**Device Properties:**

Driver Description	Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz
Driver Date	4/21/2009
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	cpu.inf
INF Section	IntelPPM_Inst.NT
Hardware ID	ACPI\GenuineIntel_-_Intel64_Family_6_Model_158

**CPU Manufacturer:**

Company Name	Intel Corporation
Product Information	<a href="http://ark.intel.com/search.aspx?q=Intel%20Core%20i7">http://ark.intel.com/search.aspx?q=Intel%20Core%20i7</a>
Driver Update	<a href="http://www.aida64.com/driver-updates">http://www.aida64.com/driver-updates</a>

## [ Processors / Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz ]

**Device Properties:**

Driver Description	Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz
Driver Date	4/21/2009
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	cpu.inf
INF Section	IntelPPM_Inst.NT
Hardware ID	ACPI\GenuineIntel_-_Intel64_Family_6_Model_158

**CPU Manufacturer:**

Company Name	Intel Corporation
Product Information	<a href="http://ark.intel.com/search.aspx?q=Intel%20Core%20i7">http://ark.intel.com/search.aspx?q=Intel%20Core%20i7</a>
Driver Update	<a href="http://www.aida64.com/driver-updates">http://www.aida64.com/driver-updates</a>

## [ Processors / Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz ]

**Device Properties:**

Driver Description	Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz
Driver Date	4/21/2009
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	cpu.inf
INF Section	IntelPPM_Inst.NT
Hardware ID	ACPI\GenuineIntel_-_Intel64_Family_6_Model_158

**CPU Manufacturer:**

Company Name	Intel Corporation
Product Information	<a href="http://ark.intel.com/search.aspx?q=Intel%20Core%20i7">http://ark.intel.com/search.aspx?q=Intel%20Core%20i7</a>
Driver Update	<a href="http://www.aida64.com/driver-updates">http://www.aida64.com/driver-updates</a>

**[ Processors / Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz ]****Device Properties:**

Driver Description	Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz
Driver Date	4/21/2009
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	cpu.inf
INF Section	IntelPPM_Inst.NT
Hardware ID	ACPI\GenuineIntel_-_Intel64_Family_6_Model_158

**CPU Manufacturer:**

Company Name	Intel Corporation
Product Information	<a href="http://ark.intel.com/search.aspx?q=Intel%20Core%20i7">http://ark.intel.com/search.aspx?q=Intel%20Core%20i7</a>
Driver Update	<a href="http://www.aida64.com/driver-updates">http://www.aida64.com/driver-updates</a>

**[ Razer Device / Razer Control Device ]****Device Properties:**

Driver Description	Razer Control Device
Driver Date	9/13/2018
Driver Version	10.0.15063.0
Driver Provider	Razer Inc
INF File	oem81.inf
INF Section	RzCommon_Device.NT
Hardware ID	RZCONTROL\VID_1532&PID_0064&MI_00
Location Information	RazerBus

**[ Security devices / Trusted Platform Module 2.0 ]****Device Properties:**

Driver Description	Trusted Platform Module 2.0
Driver Date	6/21/2006
Driver Version	10.0.17134.254
Driver Provider	Microsoft
INF File	tpm.inf
INF Section	Tpm2BaseInstall
Hardware ID	ACPI\VEN_STM&DEV_7304

**Device Resources:**

Memory	FED40000-FED44FFF
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**[ Software components / DolbyAPO Software Device (HSA) ]****Device Properties:**

Driver Description	DolbyAPO Software Device (HSA)
Driver Date	7/27/2018
Driver Version	3.20200.247.0
Driver Provider	Dolby
INF File	oem94.inf
INF Section	DolbyAtmos_SoftwareComponent_Install.NT
Hardware ID	SWC\VEN_DOLBY&PID_DAX3HSA_DolbyAtmos

**[ Software components / DolbyAPO SWC Device ]****Device Properties:**

Driver Description	DolbyAPO SWC Device
Driver Date	7/27/2018
Driver Version	3.20200.247.0
Driver Provider	Dolby
INF File	oem93.inf
INF Section	DolbyAPO_SoftwareComponent_Install.NT
Hardware ID	SWC\VEN_DOLBY&PID_DAX3APOSVC

**[ Software components / Fortemedia SAMSoft Effects Component ]**

**Device Properties:**

Driver Description	Fortimedia SAMSoft Effects Component
Driver Date	7/11/2018
Driver Version	12.0.6001.5740
Driver Provider	Fortimedia
INF File	oem95.inf
INF Section	ApoComponent_Install
Hardware ID	SWC\VEN_1319&AID_0001

Navigation

**[ Software components / Intel(R) Graphics Control Panel ]****Device Properties:**

Driver Description	Intel(R) Graphics Control Panel
Driver Date	7/26/2018
Driver Version	24.20.100.6227
Driver Provider	Intel Corporation
INF File	oem85.inf
INF Section	Igdlh_CUI_Component_Install
Hardware ID	SWC\100.6227_VEN8086_GFXUI

**[ Software components / Intel(R) Grfx VK binaries ]****Device Properties:**

Driver Description	Intel(R) Grfx VK binaries
Driver Date	7/26/2018
Driver Version	24.20.100.6227
Driver Provider	Intel Corporation
INF File	oem84.inf
INF Section	Igdlh_VK_Component_Install
Hardware ID	SWC\100.6227_VEN8086_Vulkan

**[ Software components / Intel(R) Media SDK binaries ]****Device Properties:**

Driver Description	Intel(R) Media SDK binaries
Driver Date	7/26/2018
Driver Version	24.20.100.6227
Driver Provider	Intel Corporation
INF File	oem86.inf
INF Section	MSDKComponent_Install_Gen9p5
Hardware ID	SWC\100.6227_VEN8086_MSDK_Gen9p5

**[ Software components / Intel(R) Software Guard Extensions Software ]****Device Properties:**

Driver Description	Intel(R) Software Guard Extensions Software
Driver Date	8/29/2018
Driver Version	2.1.100.46245
Driver Provider	Intel Corporation
INF File	oem72.inf
INF Section	SGX_PSW.NT
Hardware ID	SWC\VEN_INT&DEV_0E0C

**[ Software components / Lenovo Pen Service ]****Device Properties:**

Driver Description	Lenovo Pen Service
Driver Date	6/21/2018
Driver Version	7.5.1.35
Driver Provider	Wacom Technology
INF File	oem20.inf
INF Section	WacomSvc_Install.NT
Hardware ID	SWC\VID_056A&PID_F004

**[ Software components / Realtek Audio Effects Component ]**

**Device Properties:**

Driver Description	Realtek Audio Effects Component
Driver Date	8/20/2018
Driver Version	11.0.6000.642
Driver Provider	Realtek
INF File	oem96.inf
INF Section	ApoComponent_Install
Hardware ID	SWC\VEN_10EC&AID_0001

Navigation

**[ Software components / Realtek Audio Universal Service ]****Device Properties:**

Driver Description	Realtek Audio Universal Service
Driver Date	8/21/2018
Driver Version	1.0.0.103
Driver Provider	Realtek
INF File	oem98.inf
INF Section	SrvComponent_Install
Hardware ID	SWC\VEN_10EC&SID_0001

**[ Software components / Realtek Hardware Support Application ]****Device Properties:**

Driver Description	Realtek Hardware Support Application
Driver Date	8/21/2018
Driver Version	11.0.6000.136
Driver Provider	Realtek
INF File	oem97.inf
INF Section	HsaComponent_Install
Hardware ID	SWC\VEN_10EC&HID_0001

**[ Software devices / Lenovo Camera Group ]****Device Properties:**

Driver Description	Lenovo Camera Group
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	c_swdevice.inf
INF Section	SoftwareDevice
Hardware ID	SGDEVAPI\SensorGroup

**[ Software devices / Microsoft Device Association Root Enumerator ]****Device Properties:**

Driver Description	Microsoft Device Association Root Enumerator
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	c_swdevice.inf
INF Section	SoftwareDevice

**[ Software devices / Microsoft GS Wavetable Synth ]****Device Properties:**

Driver Description	Microsoft GS Wavetable Synth
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	c_swdevice.inf
INF Section	SoftwareDevice

**[ Software devices / Microsoft Radio Device Enumeration Bus ]****Device Properties:**

Driver Description	Microsoft Radio Device Enumeration Bus
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Driver Date	6/21/2006	Navigation
Driver Version	10.0.17134.1	
Driver Provider	Microsoft	
INF File	c_swdevice.inf	
INF Section	SoftwareDevice	

## [ Software devices / Microsoft RRAS Root Enumerator ]

**Device Properties:**

Driver Description	Microsoft RRAS Root Enumerator
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	c_swdevice.inf
INF Section	SoftwareDevice

## [ Software devices / Wi-Fi 2 ]

**Device Properties:**

Driver Description	Wi-Fi 2
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	c_swdevice.inf
INF Section	SoftwareDevice

## [ Sound, video and game controllers / AK5371 ]

**Device Properties:**

Driver Description	AK5371
Driver Date	4/11/2018
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	wdma_usb.inf
INF Section	USBAudio
Hardware ID	USB\VID_0556&PID_0002&REV_0001&MI_00
Location Information	0000.0014.0000.007.004.004.000.000.000

**Device Manufacturer:**

Driver Update <http://www.aida64.com/driver-updates>

## [ Sound, video and game controllers / Dell AC511 USB SoundBar ]

**Device Properties:**

Driver Description	Dell AC511 USB SoundBar
Driver Date	4/11/2018
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	wdma_usb.inf
INF Section	USBAudio
Hardware ID	USB\VID_413C&PID_A503&REV_0110&MI_00
Location Information	0000.0014.0000.007.004.003.000.000.000

**Device Manufacturer:**

Driver Update <http://www.aida64.com/driver-updates>

## [ Sound, video and game controllers / Intel(R) Display Audio ]

**Device Properties:**

Driver Description	Intel(R) Display Audio
Driver Date	6/18/2018
Driver Version	10.25.0.9
Driver Provider	Intel(R) Corporation
INF File	oem83.inf
INF Section	IntcAudModel
Hardware ID	HDAUDIO\FUNC_01&VEN_8086&DEV_280B&SUBSYS_80860101&REV_1000

Location Information

Internal High Definition Audio Bus

Navigation

**Device Manufacturer:**

Driver Update

<http://www.aida64.com/driver-updates>**[ Sound, video and game controllers / NVIDIA High Definition Audio ]****Device Properties:**

Driver Description	NVIDIA High Definition Audio
Driver Date	10/22/2018
Driver Version	1.3.38.4
Driver Provider	NVIDIA Corporation
INF File	oem115.inf
INF Section	WINBLUENVHDA64V
Hardware ID	HDAUDIO\FUNC_01&VEN_10DE&DEV_0080&SUBSYS_00000000&REV_1001
Location Information	Internal High Definition Audio Bus

**Device Manufacturer:**

Company Name	NVIDIA Corporation
Product Information	<a href="http://www.nvidia.com/page/mobo.html">http://www.nvidia.com/page/mobo.html</a>
Driver Download	<a href="http://www.nvidia.com/content/drivers/drivers.asp">http://www.nvidia.com/content/drivers/drivers.asp</a>
Driver Update	<a href="http://www.aida64.com/driver-updates">http://www.aida64.com/driver-updates</a>

**[ Sound, video and game controllers / NVIDIA Virtual Audio Device (Wave Extensible) (WDM) ]****Device Properties:**

Driver Description	NVIDIA Virtual Audio Device (Wave Extensible) (WDM)
Driver Date	8/22/2018
Driver Version	4.11.1.0
Driver Provider	NVIDIA
INF File	oem113.inf
INF Section	NVVAD_WaveExtensible64.NT
Hardware ID	USB\VID_0955&PID_9000

**Device Manufacturer:**

Company Name	NVIDIA Corporation
Product Information	<a href="http://www.nvidia.com/page/mobo.html">http://www.nvidia.com/page/mobo.html</a>
Driver Download	<a href="http://www.nvidia.com/content/drivers/drivers.asp">http://www.nvidia.com/content/drivers/drivers.asp</a>
Driver Update	<a href="http://www.aida64.com/driver-updates">http://www.aida64.com/driver-updates</a>

**[ Sound, video and game controllers / Razer Stargazer-Microphone ]****Device Properties:**

Driver Description	Razer Stargazer-Microphone
Driver Date	4/11/2018
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	wdma_usb.inf
INF Section	USBAudio
Hardware ID	USB\VID_1532&PID_0E01&REV_1000&MI_00
Location Information	0000.0014.0000.007.004.001.002.000.000

**Device Manufacturer:**Driver Update <http://www.aida64.com/driver-updates>**[ Sound, video and game controllers / Realtek(R) Audio ]****Device Properties:**

Driver Description	Realtek(R) Audio
Driver Date	8/21/2018
Driver Version	6.0.1.8519
Driver Provider	Realtek Semiconductor Corp.
INF File	oem92.inf
INF Section	IntcAzAudModel.NTamd64
Hardware ID	HDAUDIO\FUNC_01&VEN_10EC&DEV_0285&SUBSYS_17AA2276&REV_1000
Location Information	Internal High Definition Audio Bus

**Device Manufacturer:**

Driver Update

<http://www.aida64.com/driver-updates>

Navigation

**[ Storage controllers / Microsoft Storage Spaces Controller ]****Device Properties:**

Driver Description	Microsoft Storage Spaces Controller
Driver Date	6/21/2006
Driver Version	10.0.17134.376
Driver Provider	Microsoft
INF File	spaceport.inf
INF Section	Spaceport_Install
Hardware ID	Root\Spaceport

**Device Manufacturer:**

Driver Update

<http://www.aida64.com/driver-updates>**[ Storage controllers / Standard NVM Express Controller ]****Device Properties:**

Driver Description	Standard NVM Express Controller
Driver Date	6/21/2006
Driver Version	10.0.17134.81
Driver Provider	Microsoft
INF File	stornvme.inf
INF Section	Stornvme_Inst
Hardware ID	PCI\VEN_144D&DEV_A808&SUBSYS_A801144D&REV_00
Location Information	PCI bus 113, device 0, function 0
PCI Device	Standard NVM Express Controller [144D-A808] [NoDB]

**Device Resources:**

IRQ	65536
Memory	C0900000-C0903FFF

**Device Manufacturer:**

Driver Update

<http://www.aida64.com/driver-updates>**[ Storage controllers / Standard NVM Express Controller ]****Device Properties:**

Driver Description	Standard NVM Express Controller
Driver Date	6/21/2006
Driver Version	10.0.17134.81
Driver Provider	Microsoft
INF File	stornvme.inf
INF Section	Stornvme_Inst
Hardware ID	PCI\VEN_1179&DEV_010F&SUBSYS_00011179&REV_01
Location Information	PCI bus 2, device 0, function 0
PCI Device	Toshiba AIS NVMe SSD Controller

**Device Resources:**

IRQ	65536

IRQ	65536	Navigation
IRQ	65536	
IRQ	65536	
IRQ	65536	
Memory	C0A00000-C0A03FFF	

**Device Manufacturer:**

Driver Update

<http://www.aida64.com/driver-updates>**[ Storage controllers / USB Attached SCSI (UAS) Mass Storage Device ]****Device Properties:**

Driver Description	USB Attached SCSI (UAS) Mass Storage Device
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	uaspstor.inf
INF Section	UASPort_Install_Control
Hardware ID	USB\VID_2109&PID_0715&REV_0131
Location Information	Port_#0004.Hub_#0003

**Device Manufacturer:**

Driver Update

<http://www.aida64.com/driver-updates>**[ Storage volume shadow copies / Generic volume shadow copy ]****Device Properties:**

Driver Description	Generic volume shadow copy
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	volsnap.inf
INF Section	volume_snapshot_install.NTamd64
Hardware ID	STORAGE\VolumeSnapshot

**[ Storage volume shadow copies / Generic volume shadow copy ]****Device Properties:**

Driver Description	Generic volume shadow copy
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	volsnap.inf
INF Section	volume_snapshot_install.NTamd64
Hardware ID	STORAGE\VolumeSnapshot

**[ Storage volume shadow copies / Generic volume shadow copy ]****Device Properties:**

Driver Description	Generic volume shadow copy
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	volsnap.inf
INF Section	volume_snapshot_install.NTamd64
Hardware ID	STORAGE\VolumeSnapshot

**[ Storage volumes / Volume ]****Device Properties:**

Driver Description	Volume
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	volume.inf
INF Section	volume_install.NT

Hardware ID

STORAGE\Volume

Navigation

**[ Storage volumes / Volume ]****Device Properties:**

Driver Description	Volume
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	volume.inf
INF Section	volume_install.NT
Hardware ID	STORAGE\Volume

**[ Storage volumes / Volume ]****Device Properties:**

Driver Description	Volume
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	volume.inf
INF Section	volume_install.NT
Hardware ID	STORAGE\Volume

**[ Storage volumes / Volume ]****Device Properties:**

Driver Description	Volume
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	volume.inf
INF Section	volume_install.NT
Hardware ID	STORAGE\Volume

**[ Storage volumes / Volume ]****Device Properties:**

Driver Description	Volume
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	volume.inf
INF Section	volume_install.NT
Hardware ID	STORAGE\Volume

**[ Storage volumes / Volume ]****Device Properties:**

Driver Description	Volume
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	volume.inf
INF Section	volume_install.NT
Hardware ID	STORAGE\Volume

**[ Storage volumes / Volume ]****Device Properties:**

Driver Description	Volume
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	volume.inf
INF Section	volume_install.NT

## [ Storage volumes / Volume ]

**Device Properties:**

Driver Description	Volume
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	volume.inf
INF Section	volume_install.NT
Hardware ID	STORAGE\Volume

## [ System devices / ACPI Fixed Feature Button ]

**Device Properties:**

Driver Description	ACPI Fixed Feature Button
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	machine.inf
INF Section	NO_DRV
Hardware ID	ACPI\FixedButton

## [ System devices / ACPI Lid ]

**Device Properties:**

Driver Description	ACPI Lid
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	machine.inf
INF Section	NO_DRV
Hardware ID	ACPI\VEN_PNP&DEV_0C0D

## [ System devices / ACPI Processor Aggregator ]

**Device Properties:**

Driver Description	ACPI Processor Aggregator
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	acpipagr.inf
INF Section	PagrInstall
Hardware ID	ACPI\VEN_ACPI&DEV_000C

## [ System devices / ACPI Sleep Button ]

**Device Properties:**

Driver Description	ACPI Sleep Button
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	machine.inf
INF Section	NO_DRV
Hardware ID	ACPI\VEN_PNP&DEV_0C0E

## [ System devices / ACPI Thermal Zone ]

**Device Properties:**

Driver Description	ACPI Thermal Zone
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	machine.inf
INF Section	NO_DRV

## [ System devices / Charge Arbitration Driver ]

**Device Properties:**

Driver Description	Charge Arbitration Driver
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	ChargeArbitration.inf
INF Section	CAD_Inst.NT
Hardware ID	ROOT\CAD

## [ System devices / Composite Bus Enumerator ]

**Device Properties:**

Driver Description	Composite Bus Enumerator
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	compositebus.inf
INF Section	CompositeBus_Device.NT
Hardware ID	ROOT\CompositeBus

## [ System devices / Fn and function keys ]

**Device Properties:**

Driver Description	Fn and function keys
Driver Date	10/11/2018
Driver Version	9.0.2.15
Driver Provider	Lenovo
INF File	oem99.inf
INF Section	Install
Hardware ID	{5425BAE1-FDEE-4761-BB5E-14706E8DC386}

## [ System devices / High Definition Audio Controller ]

**Device Properties:**

Driver Description	High Definition Audio Controller
Driver Date	4/11/2018
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	hdaudbus.inf
INF Section	HDAudio_Device.NT
Hardware ID	PCI\VEN_8086&DEV_A348&SUBSYS_226717AA&REV_10
Location Information	PCI bus 0, device 31, function 3
PCI Device	Intel Cannon Lake PCH - cAVS (Audio, Voice, Speech)

**Device Resources:**

IRQ	16
Memory	FFEFC000-FFFFFF
Memory	FFF00000-FFFFFF

## [ System devices / High Definition Audio Controller ]

**Device Properties:**

Driver Description	High Definition Audio Controller
Driver Date	4/11/2018
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	hdaudbus.inf
INF Section	HDAudio_Device.NT
Hardware ID	PCI\VEN_10DE&DEV_0FB9&SUBSYS_00000000&REV_A1
Location Information	PCI bus 1, device 0, function 1
PCI Device	nVIDIA GP107 - High Definition Audio Controller

**Device Resources:**

IRQ	17
Memory	C00FC000-C00FFFFF

Navigation

**[ System devices / High precision event timer ]****Device Properties:**

Driver Description	High precision event timer
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	machine.inf
INF Section	NO_DRV_HPET
Hardware ID	ACPI\VEN_PNP&DEV_0103

**[ System devices / Intel(R) C240 Series Chipset Family LPC Controller - A30E ]****Device Properties:**

Driver Description	Intel(R) C240 Series Chipset Family LPC Controller - A30E
Driver Date	7/18/1968
Driver Version	10.1.16.5
Driver Provider	INTEL
INF File	oem5.inf
INF Section	Needs_ISAPNP_DRV
Hardware ID	PCI\VEN_8086&DEV_A30E&SUBSYS_226717AA&REV_10
Location Information	PCI bus 0, device 31, function 0
PCI Device	Intel Cannon Lake PCH - LPC/eSPI Controller

**Chipset Manufacturer:**

Company Name	Intel Corporation
Product Information	<a href="http://www.intel.com/products/chipsets">http://www.intel.com/products/chipsets</a>
Driver Download	<a href="http://support.intel.com/support/chipsets">http://support.intel.com/support/chipsets</a>
BIOS Upgrades	<a href="http://www.aida64.com/bios-updates">http://www.aida64.com/bios-updates</a>
Driver Update	<a href="http://www.aida64.com/driver-updates">http://www.aida64.com/driver-updates</a>

**[ System devices / Intel(R) Dynamic Platform and Thermal Framework Generic Participant ]****Device Properties:**

Driver Description	Intel(R) Dynamic Platform and Thermal Framework Generic Participant
Driver Date	4/27/2018
Driver Version	8.4.11000.6436
Driver Provider	Intel
INF File	oem68.inf
INF Section	DptfAcpi.NTAMD64
Hardware ID	ACPI\VEN_INT&DEV_3403

**[ System devices / Intel(R) Dynamic Platform and Thermal Framework Generic Participant ]****Device Properties:**

Driver Description	Intel(R) Dynamic Platform and Thermal Framework Generic Participant
Driver Date	4/27/2018
Driver Version	8.4.11000.6436
Driver Provider	Intel
INF File	oem68.inf
INF Section	DptfAcpi.NTAMD64
Hardware ID	ACPI\VEN_INT&DEV_3403

**[ System devices / Intel(R) Dynamic Platform and Thermal Framework Generic Participant ]****Device Properties:**

Driver Description	Intel(R) Dynamic Platform and Thermal Framework Generic Participant
Driver Date	4/27/2018
Driver Version	8.4.11000.6436
Driver Provider	Intel
INF File	oem68.inf
INF Section	DptfAcpi.NTAMD64

## [ System devices / Intel(R) Dynamic Platform and Thermal Framework Generic Participant ]

**Device Properties:**

Driver Description	Intel(R) Dynamic Platform and Thermal Framework Generic Participant
Driver Date	4/27/2018
Driver Version	8.4.11000.6436
Driver Provider	Intel
INF File	oem68.inf
INF Section	DptfAcpi.NTamd64
Hardware ID	ACPI\VEN_INT&DEV_3403

## [ System devices / Intel(R) Dynamic Platform and Thermal Framework Generic Participant ]

**Device Properties:**

Driver Description	Intel(R) Dynamic Platform and Thermal Framework Generic Participant
Driver Date	4/27/2018
Driver Version	8.4.11000.6436
Driver Provider	Intel
INF File	oem68.inf
INF Section	DptfAcpi.NTamd64
Hardware ID	ACPI\VEN_INT&DEV_3403

## [ System devices / Intel(R) Dynamic Platform and Thermal Framework Generic Participant ]

**Device Properties:**

Driver Description	Intel(R) Dynamic Platform and Thermal Framework Generic Participant
Driver Date	4/27/2018
Driver Version	8.4.11000.6436
Driver Provider	Intel
INF File	oem68.inf
INF Section	DptfAcpi.NTamd64
Hardware ID	ACPI\VEN_INT&DEV_3403

## [ System devices / Intel(R) Dynamic Platform and Thermal Framework Generic Participant ]

**Device Properties:**

Driver Description	Intel(R) Dynamic Platform and Thermal Framework Generic Participant
Driver Date	4/27/2018
Driver Version	8.4.11000.6436
Driver Provider	Intel
INF File	oem68.inf
INF Section	DptfAcpi.NTamd64
Hardware ID	ACPI\VEN_INT&DEV_3403

## [ System devices / Intel(R) Dynamic Platform and Thermal Framework Generic Participant ]

**Device Properties:**

Driver Description	Intel(R) Dynamic Platform and Thermal Framework Generic Participant
Driver Date	4/27/2018
Driver Version	8.4.11000.6436
Driver Provider	Intel
INF File	oem68.inf
INF Section	DptfAcpi.NTamd64
Hardware ID	ACPI\VEN_INT&DEV_3403

## [ System devices / Intel(R) Dynamic Platform and Thermal Framework Generic Participant ]

**Device Properties:**

Driver Description	Intel(R) Dynamic Platform and Thermal Framework Generic Participant
Driver Date	4/27/2018
Driver Version	8.4.11000.6436
Driver Provider	Intel
INF File	oem68.inf
INF Section	DptfAcpi.NTamd64

## [ System devices / Intel(R) Dynamic Platform and Thermal Framework Generic Participant ]

**Device Properties:**

Driver Description	Intel(R) Dynamic Platform and Thermal Framework Generic Participant
Driver Date	4/27/2018
Driver Version	8.4.11000.6436
Driver Provider	Intel
INF File	oem68.inf
INF Section	DptfAcpi.NTamd64
Hardware ID	ACPI\VEN_INT&DEV_3403

## [ System devices / Intel(R) Dynamic Platform and Thermal Framework Generic Participant ]

**Device Properties:**

Driver Description	Intel(R) Dynamic Platform and Thermal Framework Generic Participant
Driver Date	4/27/2018
Driver Version	8.4.11000.6436
Driver Provider	Intel
INF File	oem68.inf
INF Section	DptfAcpi.NTamd64
Hardware ID	ACPI\VEN_INT&DEV_3403

## [ System devices / Intel(R) Dynamic Platform and Thermal Framework Generic Participant ]

**Device Properties:**

Driver Description	Intel(R) Dynamic Platform and Thermal Framework Generic Participant
Driver Date	4/27/2018
Driver Version	8.4.11000.6436
Driver Provider	Intel
INF File	oem68.inf
INF Section	DptfAcpi.NTamd64
Hardware ID	ACPI\VEN_INT&DEV_3403

## [ System devices / Intel(R) Dynamic Platform and Thermal Framework Generic Participant ]

**Device Properties:**

Driver Description	Intel(R) Dynamic Platform and Thermal Framework Generic Participant
Driver Date	4/27/2018
Driver Version	8.4.11000.6436
Driver Provider	Intel
INF File	oem68.inf
INF Section	DptfAcpi.NTamd64
Hardware ID	ACPI\VEN_INT&DEV_3403

## [ System devices / Intel(R) Dynamic Platform and Thermal Framework Generic Participant ]

**Device Properties:**

Driver Description	Intel(R) Dynamic Platform and Thermal Framework Generic Participant
Driver Date	4/27/2018
Driver Version	8.4.11000.6436
Driver Provider	Intel
INF File	oem68.inf
INF Section	DptfAcpi.NTamd64
Hardware ID	ACPI\VEN_INT&DEV_3403

## [ System devices / Intel(R) Dynamic Platform and Thermal Framework Manager ]

**Device Properties:**

Driver Description	Intel(R) Dynamic Platform and Thermal Framework Manager
Driver Date	4/27/2018
Driver Version	8.4.11000.6436
Driver Provider	Intel
INF File	oem68.inf
INF Section	DptfAcpi.NTamd64

## [ System devices / Intel(R) Dynamic Platform and Thermal Framework Processor Participant ]

**Device Properties:**

Driver Description	Intel(R) Dynamic Platform and Thermal Framework Processor Participant
Driver Date	4/27/2018
Driver Version	8.4.11000.6436
Driver Provider	Intel
INF File	oem69.inf
INF Section	EsifManager10.0.NTamd64
Hardware ID	PCI\VEN_8086&DEV_1903&SUBSYS_226717AA&REV_07
Location Information	PCI bus 0, device 4, function 0
PCI Device	Intel Skylake - Dynamic Platform & Thermal Framework Processor Participant [R-0]

**Device Resources:**

IRQ	16
Memory	FFEF0000-FFEF7FFF

## [ System devices / Intel(R) Gaussian Mixture Model - 1911 ]

**Device Properties:**

Driver Description	Intel(R) Gaussian Mixture Model - 1911
Driver Date	7/18/1968
Driver Version	10.1.7.2
Driver Provider	INTEL
INF File	oem11.inf
INF Section	Needs_NO_DRV
Hardware ID	PCI\VEN_8086&DEV_1911&SUBSYS_226717AA&REV_00
Location Information	PCI bus 0, device 8, function 0
PCI Device	Intel Skylake - Gaussian Mixture Model

## [ System devices / Intel(R) Host Bridge/DRAM Registers - 3EC4 ]

**Device Properties:**

Driver Description	Intel(R) Host Bridge/DRAM Registers - 3EC4
Driver Date	7/18/1968
Driver Version	10.1.14.4
Driver Provider	INTEL
INF File	oem8.inf
INF Section	Needs_NO_DRV
Hardware ID	PCI\VEN_8086&DEV_3EC4&SUBSYS_226717AA&REV_07
Location Information	PCI bus 0, device 0, function 0
PCI Device	Intel Coffee Lake-H - Host Bridge/DRAM Controller

## [ System devices / Intel(R) LPSS: I2C Controller #0 - A368 ]

**Device Properties:**

Driver Description	Intel(R) LPSS: I2C Controller #0 - A368
Driver Date	7/18/1968
Driver Version	10.1.16.5
Driver Provider	INTEL
INF File	oem6.inf
INF Section	Needs_NO_DRV
Hardware ID	PCI\VEN_8086&DEV_A368&SUBSYS_226717AA&REV_10
Location Information	PCI bus 0, device 21, function 0
PCI Device	Intel Cannon Lake PCH - LPSS: I2C Controller 0

## [ System devices / Intel(R) LPSS: UART #0 - A328 ]

**Device Properties:**

Driver Description	Intel(R) LPSS: UART #0 - A328
Driver Date	7/18/1968
Driver Version	10.1.16.5
Driver Provider	INTEL
INF File	oem6.inf

INF Section                            Needs\_NO\_DRV  
 Hardware ID                         PCI\VEN\_8086&DEV\_A328&SUBSYS\_22671; Navigation  
 Location Information                PCI bus 0, device 30, function 0  
 PCI Device                          Intel Cannon Lake PCH - LPSS: UART Controller 0

## [ System devices / Intel(R) Management Engine Interface ]

**Device Properties:**

Driver Description	Intel(R) Management Engine Interface
Driver Date	4/11/2018
Driver Version	1815.12.0.2021
Driver Provider	Intel
INF File	oem50.inf
INF Section	TEE_DDI_W10_x64
Hardware ID	PCI\VEN_8086&DEV_A360&SUBSYS_226717AA&REV_10
Location Information	PCI bus 0, device 22, function 0
PCI Device	Intel Cannon Lake PCH - HECI Controller 1

**Device Resources:**

IRQ	65536
Memory	FFEFB000-FFEFBFFF

**Chipset Manufacturer:**

Company Name	Intel Corporation
Product Information	<a href="http://www.intel.com/products/chipsets">http://www.intel.com/products/chipsets</a>
Driver Download	<a href="http://support.intel.com/support/chipsets">http://support.intel.com/support/chipsets</a>
BIOS Upgrades	<a href="http://www.aida64.com/bios-updates">http://www.aida64.com/bios-updates</a>
Driver Update	<a href="http://www.aida64.com/driver-updates">http://www.aida64.com/driver-updates</a>

## [ System devices / Intel(R) PCI Express Root Port #15 - A336 ]

**Device Properties:**

Driver Description	Intel(R) PCI Express Root Port #15 - A336
Driver Date	7/18/1968
Driver Version	10.1.16.5
Driver Provider	INTEL
INF File	oem5.inf
INF Section	Needs_PCI_DRV
Hardware ID	PCI\VEN_8086&DEV_A336&SUBSYS_226717AA&REV_F0
Location Information	PCI bus 0, device 29, function 6
PCI Device	Intel Cannon Lake PCH - PCI Express Root Port 15

**Device Resources:**

IRQ	131071
Memory	C0400000-C08FFFFF

**Chipset Manufacturer:**

Company Name	Intel Corporation
Product Information	<a href="http://www.intel.com/products/chipsets">http://www.intel.com/products/chipsets</a>
Driver Download	<a href="http://support.intel.com/support/chipsets">http://support.intel.com/support/chipsets</a>
BIOS Upgrades	<a href="http://www.aida64.com/bios-updates">http://www.aida64.com/bios-updates</a>
Driver Update	<a href="http://www.aida64.com/driver-updates">http://www.aida64.com/driver-updates</a>

## [ System devices / Intel(R) PCI Express Root Port #17 - A340 ]

**Device Properties:**

Driver Description	Intel(R) PCI Express Root Port #17 - A340
Driver Date	7/18/1968
Driver Version	10.1.16.5
Driver Provider	INTEL
INF File	oem5.inf
INF Section	Needs_PCI_DRV
Hardware ID	PCI\VEN_8086&DEV_A340&SUBSYS_226717AA&REV_F0
Location Information	PCI bus 0, device 27, function 0
PCI Device	Intel Cannon Lake PCH - PCI Express Root Port 17

**Device Resources:**

IRQ  
Memory

131071  
COA00000-C0AFFFFF

Navigation

**Chipset Manufacturer:**

Company Name Intel Corporation  
 Product Information <http://www.intel.com/products/chipsets>  
 Driver Download <http://support.intel.com/support/chipsets>  
 BIOS Upgrades <http://www.aida64.com/bios-updates>  
 Driver Update <http://www.aida64.com/driver-updates>

**[ System devices / Intel(R) PCI Express Root Port #21 - A32C ]****Device Properties:**

Driver Description Intel(R) PCI Express Root Port #21 - A32C  
 Driver Date 7/18/1968  
 Driver Version 10.1.16.5  
 Driver Provider INTEL  
 INF File oem5.inf  
 INF Section Needs\_PCI\_DRV  
 Hardware ID PCI\VEN\_8086&DEV\_A32C&SUBSYS\_226717AA&REV\_F0  
 Location Information PCI bus 0, device 27, function 4  
 PCI Device Intel(R) PCI Express Root Port #21 - A32C [8086-A32C] [NoDB]

**Device Resources:**

IRQ 131071  
 Memory 00000000-49FFFFFF  
 Memory 90000000-BE0FFFFF

**Chipset Manufacturer:**

Company Name Intel Corporation  
 Product Information <http://www.intel.com/products/chipsets>  
 Driver Download <http://support.intel.com/support/chipsets>  
 BIOS Upgrades <http://www.aida64.com/bios-updates>  
 Driver Update <http://www.aida64.com/driver-updates>

**[ System devices / Intel(R) PCI Express Root Port #9 - A330 ]****Device Properties:**

Driver Description Intel(R) PCI Express Root Port #9 - A330  
 Driver Date 7/18/1968  
 Driver Version 10.1.16.5  
 Driver Provider INTEL  
 INF File oem5.inf  
 INF Section Needs\_PCI\_DRV  
 Hardware ID PCI\VEN\_8086&DEV\_A330&SUBSYS\_226717AA&REV\_F0  
 Location Information PCI bus 0, device 29, function 0  
 PCI Device Intel Cannon Lake PCH - PCI Express Root Port 9

**Device Resources:**

IRQ 131071  
 Memory C0900000-C09FFFFFF

**Chipset Manufacturer:**

Company Name Intel Corporation  
 Product Information <http://www.intel.com/products/chipsets>  
 Driver Download <http://support.intel.com/support/chipsets>  
 BIOS Upgrades <http://www.aida64.com/bios-updates>  
 Driver Update <http://www.aida64.com/driver-updates>

**[ System devices / Intel(R) PCIe Controller (x16) - 1901 ]****Device Properties:**

Driver Description Intel(R) PCIe Controller (x16) - 1901  
 Driver Date 7/18/1968  
 Driver Version 10.1.7.2  
 Driver Provider INTEL  
 INF File oem10.inf

INF Section                            Needs\_PCI\_DRV  
 Hardware ID                         PCI\VEN\_8086&DEV\_1901&SUBSYS\_226717  
 Location Information                PCI bus 0, device 1, function 0  
 PCI Device                          Intel Skylake - PCI Express x16 Controller [R-0]

Navigation

**Device Resources:**

IRQ	131071
Memory	60000000-71FFFFFF
Memory	BF000000-C00FFFFFF
Port	2000-2FFF

**Chipset Manufacturer:**

Company Name	Intel Corporation
Product Information	<a href="http://www.intel.com/products/chipsets">http://www.intel.com/products/chipsets</a>
Driver Download	<a href="http://support.intel.com/support/chipsets">http://support.intel.com/support/chipsets</a>
BIOS Upgrades	<a href="http://www.aida64.com/bios-updates">http://www.aida64.com/bios-updates</a>
Driver Update	<a href="http://www.aida64.com/driver-updates">http://www.aida64.com/driver-updates</a>

**[ System devices / Intel(R) Power Engine Plug-in ]****Device Properties:**

Driver Description	Intel(R) Power Engine Plug-in
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	intelpep.inf
INF Section	HSWULT
Hardware ID	ACPI\VEN_INT&DEV_33A1

**[ System devices / Intel(R) RealSense(TM) Camera Virtual Bus Enumerator ]****Device Properties:**

Driver Description	Intel(R) RealSense(TM) Camera Virtual Bus Enumerator
Driver Date	6/14/2016
Driver Version	3.4.31.955
Driver Provider	Intel
INF File	oem101.inf
INF Section	RealSenseDCMBus.NT
Hardware ID	ROOT\REALSENSEVBD

**[ System devices / Intel(R) Software Guard Extensions Device ]****Device Properties:**

Driver Description	Intel(R) Software Guard Extensions Device
Driver Date	1/12/2018
Driver Version	1.9.105.41752
Driver Provider	Intel Corporation
INF File	oem65.inf
INF Section	SGXPSW_Device.NT
Hardware ID	ACPI\VEN_INT&DEV_0E0C

**Device Resources:**

Memory	50200000-55F7FFFF
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**[ System devices / Intel(R) SPI (flash) Controller - A324 ]****Device Properties:**

Driver Description	Intel(R) SPI (flash) Controller - A324
Driver Date	7/18/1968
Driver Version	10.1.16.5
Driver Provider	INTEL
INF File	oem5.inf
INF Section	Needs_NO_DRV
Hardware ID	PCI\VEN_8086&DEV_A324&SUBSYS_226717AA&REV_10
Location Information	PCI bus 0, device 31, function 5
PCI Device	Intel Cannon Lake PCH - SPI (Flash) Controller

## [ System devices / Intel(R) Thermal Subsystem - A379 ]

**Device Properties:**

Driver Description	Intel(R) Thermal Subsystem - A379
Driver Date	7/18/1968
Driver Version	10.1.16.5
Driver Provider	INTEL
INF File	oem7.inf
INF Section	Needs_NO_DRV
Hardware ID	PCI\VEN_8086&DEV_A379&SUBSYS_226717AA&REV_10
Location Information	PCI bus 0, device 18, function 0
PCI Device	Intel Cannon Lake PCH - Thermal Controller

## [ System devices / Lenovo Active Protection System Driver ]

**Device Properties:**

Driver Description	Lenovo Active Protection System Driver
Driver Date	4/17/2018
Driver Version	1.82.5.5
Driver Provider	Lenovo Japan, Ltd.
INF File	oem67.inf
INF Section	ApsKern_Inst.NTamd64
Hardware ID	ACPI\LEN0095

## [ System devices / Lenovo Intelligent Thermal Solution ]

**Device Properties:**

Driver Description	Lenovo Intelligent Thermal Solution
Driver Date	9/7/2018
Driver Version	1.0.1.248
Driver Provider	Lenovo
INF File	oem74.inf
INF Section	LenovoITS_Ins.NTamd64.10.0...16278
Hardware ID	ACPI\VEN_LEN&DEV_0100

## [ System devices / Lenovo PM Device ]

**Device Properties:**

Driver Description	Lenovo PM Device
Driver Date	8/30/2018
Driver Version	1.67.14.7
Driver Provider	Lenovo
INF File	oem82.inf
INF Section	ibmpm.NTamd64
Hardware ID	ACPI\VEN_LEN&DEV_0268

## [ System devices / Microsoft ACPI-Compliant Embedded Controller ]

**Device Properties:**

Driver Description	Microsoft ACPI-Compliant Embedded Controller
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	machine.inf
INF Section	NO_DRV
Hardware ID	ACPI\VEN_PNP&DEV_0C09

**Device Resources:**

Port	0062-0062
Port	0066-0066

## [ System devices / Microsoft ACPI-Compliant System ]

**Device Properties:**

Driver Description	Microsoft ACPI-Compliant System
Driver Date	6/21/2006

Driver Version	10.0.17134.1	Navigation
Driver Provider	Microsoft	
INF File	acpi.inf	
INF Section	ACPI_Inst.NT	
Hardware ID	ACPI_HAL\PNP0C08	
PnP Device	ACPI Driver/BIOS	

**Device Resources:**

IRQ	100
IRQ	101
IRQ	102
IRQ	103
IRQ	104
IRQ	105
IRQ	106
IRQ	107
IRQ	108
IRQ	109
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IRQ	111
IRQ	112
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IRQ	92

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IRQ	93
IRQ	94
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IRQ	97
IRQ	98
IRQ	99

Navigation

## [ System devices / Microsoft Basic Display Driver ]

**Device Properties:**

Driver Description	Microsoft Basic Display Driver
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	basicdisplay.inf
INF Section	MSBDD_Fallback
Hardware ID	ROOT\BasicDisplay

## [ System devices / Microsoft Basic Render Driver ]

**Device Properties:**

Driver Description	Microsoft Basic Render Driver
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	basicrender.inf
INF Section	BasicRender
Hardware ID	ROOT\BasicRender

## [ System devices / Microsoft System Management BIOS Driver ]

**Device Properties:**

Driver Description	Microsoft System Management BIOS Driver
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	mssmbios.inf
INF Section	MSSMBIOS_DRV
Hardware ID	ROOT\mssmbios

## [ System devices / Microsoft UEFI-Compliant System ]

**Device Properties:**

Driver Description	Microsoft UEFI-Compliant System
Driver Date	6/21/2006
Driver Version	10.0.17134.112
Driver Provider	Microsoft
INF File	uefi.inf
INF Section	UEFI_Inst.NT
Hardware ID	ACPI_HAL\UEFI

## [ System devices / Microsoft Virtual Drive Enumerator ]

**Device Properties:**

Driver Description	Microsoft Virtual Drive Enumerator
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	vdrvroot.inf
INF Section	VDRVROOT
Hardware ID	ROOT\vdrvroot

## [ System devices / Microsoft Windows Management Interface for ACPI ]

**Device Properties:**

Driver Description	Microsoft Windows Management Interface fo
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	wmiacpi.inf
INF Section	WMIMAP_Inst.NT
Hardware ID	ACPI\VEN_PNP&DEV_0C14

## [ System devices / Microsoft Windows Management Interface for ACPI ]

### Device Properties:

Driver Description	Microsoft Windows Management Interface for ACPI
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	wmiacpi.inf
INF Section	WMIMAP_Inst.NT
Hardware ID	ACPI\VEN_PNP&DEV_0C14

## [ System devices / Microsoft Windows Management Interface for ACPI ]

### Device Properties:

Driver Description	Microsoft Windows Management Interface for ACPI
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	wmiacpi.inf
INF Section	WMIMAP_Inst.NT
Hardware ID	ACPI\VEN_PNP&DEV_0C14

## [ System devices / Microsoft Windows Management Interface for ACPI ]

### Device Properties:

Driver Description	Microsoft Windows Management Interface for ACPI
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	wmiacpi.inf
INF Section	WMIMAP_Inst.NT
Hardware ID	ACPI\VEN_PNP&DEV_0C14

## [ System devices / Microsoft Windows Management Interface for ACPI ]

### Device Properties:

Driver Description	Microsoft Windows Management Interface for ACPI
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	wmiacpi.inf
INF Section	WMIMAP_Inst.NT
Hardware ID	ACPI\VEN_PNP&DEV_0C14

## [ System devices / Microsoft Windows Management Interface for ACPI ]

### Device Properties:

Driver Description	Microsoft Windows Management Interface for ACPI
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	wmiacpi.inf
INF Section	WMIMAP_Inst.NT
Hardware ID	ACPI\VEN_PNP&DEV_0C14

## [ System devices / Motherboard resources ]

### Device Properties:

Navigation

Driver Description	Motherboard resources
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	machine.inf
INF Section	NO_DRV_MBRES
Hardware ID	ACPI\VEN_INT&DEV_3394

## [ System devices / Motherboard resources ]

**Device Properties:**

Driver Description	Motherboard resources
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	machine.inf
INF Section	NO_DRV_MBRES
Hardware ID	ACPI\VEN_PNP&DEV_0C02

## [ System devices / Motherboard resources ]

**Device Properties:**

Driver Description	Motherboard resources
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	machine.inf
INF Section	NO_DRV_MBRES
Hardware ID	ACPI\VEN_PNP&DEV_0C02

## [ System devices / Motherboard resources ]

**Device Properties:**

Driver Description	Motherboard resources
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	machine.inf
INF Section	NO_DRV_MBRES
Hardware ID	ACPI\VEN_PNP&DEV_0C02

## [ System devices / Motherboard resources ]

**Device Properties:**

Driver Description	Motherboard resources
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	machine.inf
INF Section	NO_DRV_MBRES
Hardware ID	ACPI\VEN_PNP&DEV_0C02

## [ System devices / Motherboard resources ]

**Device Properties:**

Driver Description	Motherboard resources
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	machine.inf
INF Section	NO_DRV_MBRES
Hardware ID	ACPI\VEN_PNP&DEV_0C02

## [ System devices / Motherboard resources ]

**Device Properties:**

Driver Description	Motherboard resources
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	machine.inf
INF Section	NO_DRV_MBRES
Hardware ID	ACPI\VEN_INT&DEV_3F0D

Navigation

## [ System devices / Motherboard resources ]

**Device Properties:**

Driver Description	Motherboard resources
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	machine.inf
INF Section	NO_DRV_MBRES
Hardware ID	ACPI\VEN_PNP&DEV_0C02

## [ System devices / Motherboard resources ]

**Device Properties:**

Driver Description	Motherboard resources
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	machine.inf
INF Section	NO_DRV_MBRES
Hardware ID	ACPI\VEN_PNP&DEV_0C02

## [ System devices / NDIS Virtual Network Adapter Enumerator ]

**Device Properties:**

Driver Description	NDIS Virtual Network Adapter Enumerator
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	ndisvirtualbus.inf
INF Section	NdisVirtualBus_Device.NT
Hardware ID	ROOT\NdisVirtualBus

## [ System devices / Numeric data processor ]

**Device Properties:**

Driver Description	Numeric data processor
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	machine.inf
INF Section	NO_DRV_X
Hardware ID	ACPI\VEN_PNP&DEV_0C04

## [ System devices / NVVHCI Enumerator ]

**Device Properties:**

Driver Description	NVVHCI Enumerator
Driver Date	4/17/2018
Driver Version	3.2.2395.1287
Driver Provider	NVIDIA
INF File	oem89.inf
INF Section	NVVHCI_Device.NTamd64
Hardware ID	ROOT\NVVHCI

## [ System devices / PCI Express Downstream Switch Port ]

**Device Properties:**

Driver Description	PCI Express Downstream Switch Port	Navigation
Driver Date	6/21/2006	
Driver Version	10.0.17134.254	
Driver Provider	Microsoft	
INF File	pci.inf	
INF Section	PCI_BRIDGE	
Hardware ID	PCI\VEN_8086&DEV_15EA&SUBSYS_226717EF&REV_06	
Location Information	PCI bus 5, device 0, function 0	
PCI Device	PCI Express Downstream Switch Port [8086-15EA] [NoDB]	

**Device Resources:**

Memory	BE000000-BE0FFFFF
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**[ System devices / PCI Express Downstream Switch Port ]****Device Properties:**

Driver Description	PCI Express Downstream Switch Port
Driver Date	6/21/2006
Driver Version	10.0.17134.254
Driver Provider	Microsoft
INF File	pci.inf
INF Section	PCI_BRIDGE
Hardware ID	PCI\VEN_8086&DEV_15EA&SUBSYS_226717EF&REV_06
Location Information	PCI bus 5, device 1, function 0
PCI Device	PCI Express Downstream Switch Port [8086-15EA] [NoDB]

**Device Resources:**

IRQ	131071
Memory	25000000-49FFFFFF
Memory	A6F00000-BDEFFFFFF

**[ System devices / PCI Express Downstream Switch Port ]****Device Properties:**

Driver Description	PCI Express Downstream Switch Port
Driver Date	6/21/2006
Driver Version	10.0.17134.254
Driver Provider	Microsoft
INF File	pci.inf
INF Section	PCI_BRIDGE
Hardware ID	PCI\VEN_8086&DEV_15EA&SUBSYS_226717EF&REV_06
Location Information	PCI bus 5, device 2, function 0
PCI Device	PCI Express Downstream Switch Port [8086-15EA] [NoDB]

**Device Resources:**

Memory	BDF00000-BDFFFFFF
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**[ System devices / PCI Express Downstream Switch Port ]****Device Properties:**

Driver Description	PCI Express Downstream Switch Port
Driver Date	6/21/2006
Driver Version	10.0.17134.254
Driver Provider	Microsoft
INF File	pci.inf
INF Section	PCI_BRIDGE
Hardware ID	PCI\VEN_8086&DEV_15EA&SUBSYS_226717EF&REV_06
Location Information	PCI bus 5, device 4, function 0
PCI Device	PCI Express Downstream Switch Port [8086-15EA] [NoDB]

**Device Resources:**

IRQ	131071
Memory	00000000-24FFFFFF
Memory	90000000-A6EFFFFFF

**[ System devices / PCI Express Root Complex ]**

**Device Properties:**

Driver Description	PCI Express Root Complex
Driver Date	6/21/2006
Driver Version	10.0.17134.254
Driver Provider	Microsoft
INF File	pci.inf
INF Section	PCI_ROOT
Hardware ID	ACPI\VEN_PNP&DEV_0A08

Navigation

**Device Resources:**

Memory	000A0000-000BFFFF
Memory	5E800000-DFFFFFFF
Memory	FC800000-FE7FFFFF
Port	0000-0CF7
Port	0D00-FFFF

**[ System devices / PCI Express Upstream Switch Port ]****Device Properties:**

Driver Description	PCI Express Upstream Switch Port
Driver Date	6/21/2006
Driver Version	10.0.17134.254
Driver Provider	Microsoft
INF File	pci.inf
INF Section	PCI_BRIDGE
Hardware ID	PCI\VEN_8086&DEV_15EA&SUBSYS_226717EF&REV_06
Location Information	PCI bus 4, device 0, function 0
PCI Device	PCI Express Downstream Switch Port [8086-15EA] [NoDB]

**Device Resources:**

Memory	00000000-49FFFFFF
Memory	90000000-BE0FFFFF

**[ System devices / PCI standard RAM Controller ]****Device Properties:**

Driver Description	PCI standard RAM Controller
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	machine.inf
INF Section	NO_DRV
Hardware ID	PCI\VEN_8086&DEV_A36F&SUBSYS_226717AA&REV_10
Location Information	PCI bus 0, device 20, function 2
PCI Device	Intel Cannon Lake PCH - Shared SRAM

**[ System devices / Plug and Play Software Device Enumerator ]****Device Properties:**

Driver Description	Plug and Play Software Device Enumerator
Driver Date	4/10/2018
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	swenum.inf
INF Section	SWENUM
Hardware ID	ROOT\SWENUM

**[ System devices / Programmable interrupt controller ]****Device Properties:**

Driver Description	Programmable interrupt controller
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	machine.inf
INF Section	NO_DRV_PIC
Hardware ID	ACPI\VEN_PNP&DEV_0000

## [ System devices / Remote Desktop Camera Bus ]

**Device Properties:**

Driver Description	Remote Desktop Camera Bus
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	umbus.inf
INF Section	UmBus_Device.NT
Hardware ID	UMB\UMBUS

## [ System devices / Remote Desktop Device Redirector Bus ]

**Device Properties:**

Driver Description	Remote Desktop Device Redirector Bus
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	rdpbus.inf
INF Section	RDPBUS
Hardware ID	ROOT\RDPBUS

## [ System devices / Remote Desktop USB Hub ]

**Device Properties:**

Driver Description	Remote Desktop USB Hub
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	tsusbhub.inf
INF Section	TsUsbHubXDynamicBus_Device.NT
Hardware ID	UMB\TS_URB_HUB

## [ System devices / Synaptics RAW PDO Device ]

**Device Properties:**

Driver Description	Synaptics RAW PDO Device
Driver Date	7/19/2018
Driver Version	19.5.19.25
Driver Provider	Synaptics
INF File	oem45.inf
INF Section	NODRV
Hardware ID	SynTP_RAWPDO
Location Information	SynTP

## [ System devices / Synaptics SMBus Driver ]

**Device Properties:**

Driver Description	Synaptics SMBus Driver
Driver Date	7/19/2018
Driver Version	19.5.19.25
Driver Provider	Synaptics
INF File	oem46.inf
INF Section	SynapticsInstallIntel
Hardware ID	PCI\VEN_8086&DEV_A323&SUBSYS_226717AA&REV_10
Location Information	PCI bus 0, device 31, function 4
PCI Device	Intel Cannon Lake PCH - SMBus Controller

**Device Resources:**

IRQ	16
Memory	FFEFCAF00-FFEFCAFF
Port	FEE0-FEFF

## [ System devices / System board ]

**Device Properties:**

Driver Description	System board
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	machine.inf
INF Section	NO_DRV_MBRES
Hardware ID	ACPI\VEN_PNP&DEV_0C01

Navigation

**[ System devices / System CMOS/real time clock ]****Device Properties:**

Driver Description	System CMOS/real time clock
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	machine.inf
INF Section	NO_DRV_X
Hardware ID	ACPI\VEN_PNP&DEV_0B00

**Device Resources:**

IRQ	08
Port	0070-0077

**[ System devices / System Interface Foundation V2 Device ]****Device Properties:**

Driver Description	System Interface Foundation V2 Device
Driver Date	5/15/2018
Driver Version	1.1.16.0
Driver Provider	Lenovo
INF File	oem4.inf
INF Section	LnvAppFrmDevice_Install.NT
Hardware ID	root\iMDriverV2

**[ System devices / System speaker ]****Device Properties:**

Driver Description	System speaker
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	machine.inf
INF Section	NO_DRV_X
Hardware ID	ACPI\VEN_PNP&DEV_0800

**[ System devices / System timer ]****Device Properties:**

Driver Description	System timer
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	machine.inf
INF Section	NO_DRV_X
Hardware ID	ACPI\VEN_PNP&DEV_0100

**[ System devices / Thunderbolt(TM) Controller - 15EB ]****Device Properties:**

Driver Description	Thunderbolt(TM) Controller - 15EB
Driver Date	5/16/2018
Driver Version	17.4.77.13
Driver Provider	Intel(R) Corporation
INF File	oem47.inf
INF Section	TbtBusDrv_Device.NT

Hardware ID  
Location Information  
PCI Device

PCI\VEN\_8086&DEV\_15EB&SUBSYS\_22671755&C&PCI bus 6, device 0, function 0  
Navigation  
Thunderbolt(TM) Controller - 15EB [8086-15EB] [NoDB]

**Device Resources:**

IRQ	65536
Memory	BE0BF000-BE0BFFFF
Memory	BE0C0000-BE0FFFFF

**[ System devices / UMBus Enumerator ]****Device Properties:**

Driver Description	UMBus Enumerator
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	umbus.inf
INF Section	UmBus_Device.NT
Hardware ID	UMB\UMBUS

**[ System devices / UMBus Enumerator ]****Device Properties:**

Driver Description	UMBus Enumerator
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	umbus.inf
INF Section	UmBus_Device.NT
Hardware ID	UMB\UMBUS

**[ System devices / UMBus Enumerator ]****Device Properties:**

Driver Description	UMBus Enumerator
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	umbus.inf
INF Section	UmBus_Device.NT
Hardware ID	UMB\UMBUS

**[ System devices / UMBus Root Bus Enumerator ]****Device Properties:**

Driver Description	UMBus Root Bus Enumerator
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	umbus.inf
INF Section	UmBusRoot_Device.NT
Hardware ID	root\umbus

**[ System devices / VMware VMCI Host Device ]****Device Properties:**

Driver Description	VMware VMCI Host Device
Driver Date	5/25/2016
Driver Version	9.8.6.0
Driver Provider	VMware, Inc.
INF File	oem107.inf
INF Section	vmci.install.x64.NT
Hardware ID	ROOT\VMWVMCIHOSTDEV

**[ System devices / Volume Manager ]****Device Properties:**

Driver Description	Volume Manager
Driver Date	6/21/2006
Driver Version	10.0.17134.137
Driver Provider	Microsoft
INF File	volmgr.inf
INF Section	Volmgr
Hardware ID	ROOT\VOLMGR

**[ Universal Serial Bus controllers / Generic SuperSpeed USB Hub ]****Device Properties:**

Driver Description	Generic SuperSpeed USB Hub
Driver Date	8/2/2018
Driver Version	10.0.17134.228
Driver Provider	Microsoft
INF File	usbhub3.inf
INF Section	Generic.Install.NT
Hardware ID	USB\VID_05E3&PID_0620&REV_9303
Location Information	Port_{#0004}.Hub_{#0006}

**[ Universal Serial Bus controllers / Generic SuperSpeed USB Hub ]****Device Properties:**

Driver Description	Generic SuperSpeed USB Hub
Driver Date	8/2/2018
Driver Version	10.0.17134.228
Driver Provider	Microsoft
INF File	usbhub3.inf
INF Section	Generic.Install.NT
Hardware ID	USB\VID_0424&PID_5534&REV_6080
Location Information	Port_{#0004}.Hub_{#0007}

**[ Universal Serial Bus controllers / Generic SuperSpeed USB Hub ]****Device Properties:**

Driver Description	Generic SuperSpeed USB Hub
Driver Date	8/2/2018
Driver Version	10.0.17134.228
Driver Provider	Microsoft
INF File	usbhub3.inf
INF Section	Generic.Install.NT
Hardware ID	USB\VID_05E3&PID_0616&REV_9224
Location Information	Port_{#0002}.Hub_{#0007}

**[ Universal Serial Bus controllers / Generic SuperSpeed USB Hub ]****Device Properties:**

Driver Description	Generic SuperSpeed USB Hub
Driver Date	8/2/2018
Driver Version	10.0.17134.228
Driver Provider	Microsoft

INF File	usbhub3.inf
INF Section	Generic.Install.NT
Hardware ID	USB\VID_05E3&PID_0616&REV_4474
Location Information	Port_#0001.Hub_#0008

Navigation

## [ Universal Serial Bus controllers / Generic USB Hub ]

**Device Properties:**

Driver Description	Generic USB Hub
Driver Date	8/2/2018
Driver Version	10.0.17134.228
Driver Provider	Microsoft
INF File	usbhub3.inf
INF Section	Generic.Install.NT
Hardware ID	USB\VID_05E3&PID_0610&REV_9303
Location Information	Port_#0007.Hub_#0001

## [ Universal Serial Bus controllers / Generic USB Hub ]

**Device Properties:**

Driver Description	Generic USB Hub
Driver Date	8/2/2018
Driver Version	10.0.17134.228
Driver Provider	Microsoft
INF File	usbhub3.inf
INF Section	Generic.Install.NT
Hardware ID	USB\VID_05E3&PID_0610&REV_9224
Location Information	Port_#0002.Hub_#0002

## [ Universal Serial Bus controllers / Generic USB Hub ]

**Device Properties:**

Driver Description	Generic USB Hub
Driver Date	8/2/2018
Driver Version	10.0.17134.228
Driver Provider	Microsoft
INF File	usbhub3.inf
INF Section	Generic.Install.NT
Hardware ID	USB\VID_0424&PID_2134&REV_6080
Location Information	Port_#0004.Hub_#0002

## [ Universal Serial Bus controllers / Generic USB Hub ]

**Device Properties:**

Driver Description	Generic USB Hub
Driver Date	8/2/2018
Driver Version	10.0.17134.228
Driver Provider	Microsoft
INF File	usbhub3.inf
INF Section	Generic.Install.NT
Hardware ID	USB\VID_05E3&PID_0610&REV_4474
Location Information	Port_#0001.Hub_#0004

## [ Universal Serial Bus controllers / Intel(R) USB 3.1 eXtensible Host Controller - 1.10 (Microsoft) ]

**Device Properties:**

Driver Description	Intel(R) USB 3.1 eXtensible Host Controller - 1.10 (Microsoft)
Driver Date	4/10/2018
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	usbxhci.inf
INF Section	Generic.Install.NT
Hardware ID	PCI\VEN_8086&DEV_A36D&SUBSYS_226717AA&REV_10
Location Information	PCI bus 0, device 20, function 0
PCI Device	Intel Cannon Lake PCH - USB 3.1 xHCI Host Controller

**Device Resources:**

IRQ	65536
Memory	C0B20000-C0B2FFFF

Navigation

**Chipset Manufacturer:**

Company Name	Intel Corporation
Product Information	<a href="http://www.intel.com/products/chipsets">http://www.intel.com/products/chipsets</a>
Driver Download	<a href="http://support.intel.com/support/chipsets">http://support.intel.com/support/chipsets</a>
BIOS Upgrades	<a href="http://www.aida64.com/bios-updates">http://www.aida64.com/bios-updates</a>
Driver Update	<a href="http://www.aida64.com/driver-updates">http://www.aida64.com/driver-updates</a>

**[ Universal Serial Bus controllers / Intel(R) USB 3.1 eXtensible Host Controller - 1.10 (Microsoft) ]****Device Properties:**

Driver Description	Intel(R) USB 3.1 eXtensible Host Controller - 1.10 (Microsoft)
Driver Date	4/10/2018
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	usbhci.inf
INF Section	Generic.Install.NT
Hardware ID	PCI\VEN_8086&DEV_15EC&SUBSYS_226717EF&REV_06
Location Information	PCI bus 59, device 0, function 0
PCI Device	Intel(R) USB 3.1 eXtensible Host Controller - 1.10 (Microsoft) [8086-15EC] [NoDB]

**Device Resources:**

IRQ	65536
Memory	BDFF0000-BDFFFFFF

**Chipset Manufacturer:**

Company Name	Intel Corporation
Product Information	<a href="http://www.intel.com/products/chipsets">http://www.intel.com/products/chipsets</a>
Driver Download	<a href="http://support.intel.com/support/chipsets">http://support.intel.com/support/chipsets</a>
BIOS Upgrades	<a href="http://www.aida64.com/bios-updates">http://www.aida64.com/bios-updates</a>
Driver Update	<a href="http://www.aida64.com/driver-updates">http://www.aida64.com/driver-updates</a>

**[ Universal Serial Bus controllers / Realtek USB 3.0 Card Reader ]****Device Properties:**

Driver Description	Realtek USB 3.0 Card Reader
Driver Date	4/18/2018
Driver Version	10.0.17134.31242
Driver Provider	Realtek Semiconductor Corp.
INF File	oem24.inf
INF Section	RSUER.USTOR.NTamd64
Hardware ID	USB\VID_0BDA&PID_0328&REV_2908
Location Information	Port_#0019.Hub_#0001

**[ Universal Serial Bus controllers / USB Composite Device ]****Device Properties:**

Driver Description	USB Composite Device
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	usb.inf
INF Section	Composite.Dev.NT
Hardware ID	USB\VID_5986&PID_2115&REV_5420
Location Information	Port_#0008.Hub_#0001

**[ Universal Serial Bus controllers / USB Composite Device ]****Device Properties:**

Driver Description	USB Composite Device
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	usb.inf

INF Section	Composite.Dev.NT
Hardware ID	USB\VID_5986&PID_2123&REV_5473
Location Information	Port_#0012.Hub_#0001

Navigation

## [ Universal Serial Bus controllers / USB Composite Device ]

**Device Properties:**

Driver Description	USB Composite Device
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	usb.inf
INF Section	Composite.Dev.NT
Hardware ID	USB\VID_0483&PID_5029&REV_0000
Location Information	Port_#0001.Hub_#0001

## [ Universal Serial Bus controllers / USB Composite Device ]

**Device Properties:**

Driver Description	USB Composite Device
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	usb.inf
INF Section	Composite.Dev.NT
Hardware ID	USB\VID_1532&PID_0E01&REV_1000
Location Information	Port_#0002.Hub_#0005

## [ Universal Serial Bus controllers / USB Composite Device ]

**Device Properties:**

Driver Description	USB Composite Device
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	usb.inf
INF Section	Composite.Dev.NT
Hardware ID	USB\VID_8086&PID_0AA5&REV_3150
Location Information	Port_#0001.Hub_#0010

## [ Universal Serial Bus controllers / USB Composite Device ]

**Device Properties:**

Driver Description	USB Composite Device
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	usb.inf
INF Section	Composite.Dev.NT
Hardware ID	USB\VID_1532&PID_0064&REV_0200
Location Information	Port_#0003.Hub_#0002

## [ Universal Serial Bus controllers / USB Composite Device ]

**Device Properties:**

Driver Description	USB Composite Device
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	usb.inf
INF Section	Composite.Dev.NT
Hardware ID	USB\VID_413C&PID_A503&REV_0110
Location Information	Port_#0003.Hub_#0004

## [ Universal Serial Bus controllers / USB Composite Device ]

**Device Properties:**

Driver Description	USB Composite Device
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	usb.inf
INF Section	Composite.Dev.NT
Hardware ID	USB\VID_0556&PID_0002&REV_0001
Location Information	Port_#0004.Hub_#0004

Navigation

**[ Universal Serial Bus controllers / USB Root Hub (USB 3.0) ]****Device Properties:**

Driver Description	USB Root Hub (USB 3.0)
Driver Date	8/2/2018
Driver Version	10.0.17134.228
Driver Provider	Microsoft
INF File	usbhub3.inf
INF Section	Generic.Install.NT
Hardware ID	USB\ROOT_HUB30&VID8086&PIDA36D&REV0010

**[ Universal Serial Bus controllers / USB Root Hub (USB 3.0) ]****Device Properties:**

Driver Description	USB Root Hub (USB 3.0)
Driver Date	8/2/2018
Driver Version	10.0.17134.228
Driver Provider	Microsoft
INF File	usbhub3.inf
INF Section	Generic.Install.NT
Hardware ID	USB\ROOT_HUB30&VID8086&PID15EC&REV0006

**[ Universal Serial Bus devices / Intel(R) RealSense(TM) Camera SR300 ]****Device Properties:**

Driver Description	Intel(R) RealSense(TM) Camera SR300
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	winusb.inf
INF Section	WINUSB.NT
Hardware ID	USB\VID_8086&PID_0AA5&REV_3150&MI_04
Location Information	003b.0000.0000.004.004.001.001.000.000

**[ Universal Serial Bus devices / USB 2.0 BILLBOARD ]****Device Properties:**

Driver Description	USB 2.0 BILLBOARD
Driver Date	6/21/2006
Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	winusb.inf
INF Section	BILLBOARD.NT
Hardware ID	USB\VID_2109&PID_0100&REV_0300
Location Information	Port_#0004.Hub_#0001

**[ Unknown / Unknown ]****Device Properties:**

Driver Description	Unknown
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**[ USB Connector Managers / UCSI USB Connector Manager ]****Device Properties:**

Driver Description	UCSI USB Connector Manager
Driver Date	6/21/2006

Driver Version	10.0.17134.1
Driver Provider	Microsoft
INF File	UcmUcsi.inf
INF Section	UcmUcsi.Install.NT
Hardware ID	ACPI\VEN_USB&DEV_C000

Navigation

**Device Resources:**

Memory	4FBD6000-4FBD6FFF
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## Physical Devices

**PCI Devices:**

Bus 114, Device 0, Function 0	Broadcom BCM15700A2 802.11ac Wireless Network Adapter
Bus 0, Device 31, Function 3	Intel Cannon Lake PCH - cAVS (Audio, Voice, Speech)
Bus 0, Device 22, Function 0	Intel Cannon Lake PCH - HECI Controller 1
Bus 0, Device 31, Function 0	Intel Cannon Lake PCH - LPC/eSPI Controller
Bus 0, Device 21, Function 0	Intel Cannon Lake PCH - LPSS: I2C Controller 0
Bus 0, Device 30, Function 0	Intel Cannon Lake PCH - LPSS: UART Controller 0
Bus 0, Device 29, Function 6	Intel Cannon Lake PCH - PCI Express Root Port 15
Bus 0, Device 27, Function 0	Intel Cannon Lake PCH - PCI Express Root Port 17
Bus 0, Device 29, Function 0	Intel Cannon Lake PCH - PCI Express Root Port 9
Bus 0, Device 20, Function 2	Intel Cannon Lake PCH - Shared SRAM
Bus 0, Device 31, Function 4	Intel Cannon Lake PCH - SMBus Controller
Bus 0, Device 31, Function 5	Intel Cannon Lake PCH - SPI (Flash) Controller
Bus 0, Device 18, Function 0	Intel Cannon Lake PCH - Thermal Controller
Bus 0, Device 20, Function 0	Intel Cannon Lake PCH - USB 3.1 xHCI Host Controller
Bus 0, Device 0, Function 0	Intel Coffee Lake-H - Host Bridge/DRAM Controller
Bus 0, Device 2, Function 0	Intel Coffee Lake-H GT2 - Integrated Graphics Controller
Bus 0, Device 4, Function 0	Intel Skylake - Dynamic Platform & Thermal Framework Processor Participant [R-0]
Bus 0, Device 8, Function 0	Intel Skylake - Gaussian Mixture Model
Bus 0, Device 1, Function 0	Intel Skylake - PCI Express x16 Controller [R-0]
Bus 0, Device 31, Function 6	Intel(R) Ethernet Connection (7) I219-LM [8086-15BB] [NoDB]
Bus 0, Device 27, Function 4	Intel(R) PCI Express Root Port #21 - A32C [8086-A32C] [NoDB]
Bus 1, Device 0, Function 0	nVIDIA GeForce GTX 1050 Ti Video Adapter
Bus 1, Device 0, Function 1	nVIDIA GP107 - High Definition Audio Controller
Bus 113, Device 0, Function 0	Standard NVM Express Controller [144D-A808] [NoDB]
Bus 2, Device 0, Function 0	Toshiba AIS NVMe SSD Controller

**PnP Devices:**

PNP0C08	ACPI Driver/BIOS
FIXEDBUTTON	ACPI Fixed Feature Button
ACPI000C	ACPI Processor Aggregator
THERMALZONE	ACPI Thermal Zone
PNP0A08	ACPI Three-wire Device Bus
PNP0C0A	Control Method Battery
PNP0C09	Embedded Controller Device
PNP0103	High Precision Event Timer
INT3394	Intel ACPI BIOS Control
INT3403	Intel Dynamic Platform & Thermal Framework Generic Participant
INT3403	Intel Dynamic Platform & Thermal Framework Generic Participant
INT3403	Intel Dynamic Platform & Thermal Framework Generic Participant
INT3403	Intel Dynamic Platform & Thermal Framework Generic Participant
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INT3403	Intel Dynamic Platform & Thermal Framework Generic Participant
INT3403	Intel Dynamic Platform & Thermal Framework Generic Participant

	Participant	Navigation	Framework	Generic
INT3403	Intel Dynamic Platform & Thermal Framework Participant			
INT3403	Intel Dynamic Platform & Thermal Framework Participant			
INT3403	Intel Dynamic Platform & Thermal Framework Participant			
INT3403	Intel Dynamic Platform & Thermal Framework Participant			
INT3403	Intel Dynamic Platform & Thermal Framework Participant			
INT3400	Intel Dynamic Platform & Thermal Framework			
INT33A1	Intel Power Engine Plug-in			
INT0E0C	Intel Software Guard Extensions Device			
INT3F0D	Intel Watchdog Timer			
GENUINEINTEL_-_INTEL64_FAMILY_6_MODEL_158_-_INTEL(R)_CORE(TM)_I7-8850H_CPU_@_2.60GHZ	Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz			
GENUINEINTEL_-_INTEL64_FAMILY_6_MODEL_158_-_INTEL(R)_CORE(TM)_I7-8850H_CPU_@_2.60GHZ	Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz			
GENUINEINTEL_-_INTEL64_FAMILY_6_MODEL_158_-_INTEL(R)_CORE(TM)_I7-8850H_CPU_@_2.60GHZ	Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz			
GENUINEINTEL_-_INTEL64_FAMILY_6_MODEL_158_-_INTEL(R)_CORE(TM)_I7-8850H_CPU_@_2.60GHZ	Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz			
GENUINEINTEL_-_INTEL64_FAMILY_6_MODEL_158_-_INTEL(R)_CORE(TM)_I7-8850H_CPU_@_2.60GHZ	Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz			
GENUINEINTEL_-_INTEL64_FAMILY_6_MODEL_158_-_INTEL(R)_CORE(TM)_I7-8850H_CPU_@_2.60GHZ	Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz			
GENUINEINTEL_-_INTEL64_FAMILY_6_MODEL_158_-_INTEL(R)_CORE(TM)_I7-8850H_CPU_@_2.60GHZ	Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz			
GENUINEINTEL_-_INTEL64_FAMILY_6_MODEL_158_-_INTEL(R)_CORE(TM)_I7-8850H_CPU_@_2.60GHZ	Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz			
GENUINEINTEL_-_INTEL64_FAMILY_6_MODEL_158_-_INTEL(R)_CORE(TM)_I7-8850H_CPU_@_2.60GHZ	Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz			
GENUINEINTEL_-_INTEL64_FAMILY_6_MODEL_158_-_INTEL(R)_CORE(TM)_I7-8850H_CPU_@_2.60GHZ	Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz			
GENUINEINTEL_-_INTEL64_FAMILY_6_MODEL_158_-_INTEL(R)_CORE(TM)_I7-8850H_CPU_@_2.60GHZ	Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz			
GENUINEINTEL_-_INTEL64_FAMILY_6_MODEL_158_-_INTEL(R)_CORE(TM)_I7-8850H_CPU_@_2.60GHZ	Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz			
LEN0100	Lenovo Intelligent Thermal Solution [NoDB]			
LEN0268	Lenovo Power Management Device			
LEN0071	Lenovo ThinkPad Keyboard			
PNP0C0D	Lid			
ACPI0003	Microsoft AC Adapter			
UEFI	Microsoft UEFI-Compliant System			
PNP0C14	Microsoft Windows Management Interface for ACPI			
PNP0C14	Microsoft Windows Management Interface for ACPI			
PNP0C14	Microsoft Windows Management Interface for ACPI			
PNP0C14	Microsoft Windows Management Interface for ACPI			
PNP0C14	Microsoft Windows Management Interface for ACPI			
PNP0C14	Microsoft Windows Management Interface for ACPI			
PNP0C04	Numeric Data Processor			
PNP0800	PC Speaker			
PNP0000	Programmable Interrupt Controller			
PNP0B00	Real-Time Clock			
PNP0C0E	Sleep Button			
LEN0099	Synaptics Pointing Device [NoDB]			
PNP0C01	System Board Extension			
PNP0100	System Timer			
PNP0C02	Thermal Monitoring ACPI Device			
PNP0C02	Thermal Monitoring ACPI Device			
PNP0C02	Thermal Monitoring ACPI Device			
PNP0C02	Thermal Monitoring ACPI Device			
PNP0C02	Thermal Monitoring ACPI Device			
PNP0C02	Thermal Monitoring ACPI Device			
PNP0C02	Thermal Monitoring ACPI Device			
STM7304	Trusted Platform Module 2.0 [NoDB]			
USBC000	UCSI USB Connector Manager			

**USB Devices:**

0556 0002

AK5371

413C A503	Dell ACE Navigation
0424 5534	Generic
05E3 0616	Generic SuperSpeed USB Hub
05E3 0616	Generic SuperSpeed USB Hub
05E3 0620	Generic SuperSpeed USB Hub
0424 2134	Generic USB Hub
05E3 0610	Generic USB Hub
05E3 0610	Generic USB Hub
05E3 0610	Generic USB Hub
5986 2115	Integrated Camera
5986 2123	Integrated IR Camera
8086 0AA5	Intel(R) RealSense(TM) Camera SR300 Depth
8086 0AA5	Intel(R) RealSense(TM) Camera SR300 RGB
8086 0AA5	Intel(R) RealSense(TM) Camera SR300
056A 5193	Lenovo Pen Device
1532 0064	Razer Basilisk
1532 0064	Razer Basilisk
1532 0E01	Razer Stargazer-Microphone
0BDA 0328	Realtek USB 3.0 Card Reader
06CB 009A	Synaptics WBDI - SGX
2109 0100	USB 2.0 BILLBOARD
2109 0715	USB Attached SCSI (UAS) Mass Storage Device
0483 5029	USB Composite Device
0556 0002	USB Composite Device
1532 0064	USB Composite Device
1532 0E01	USB Composite Device
413C A503	USB Composite Device
5986 2115	USB Composite Device
5986 2123	USB Composite Device
8086 0AA5	USB Composite Device
0483 5029	USB Input Device
0483 5029	USB Input Device
0483 5029	USB Input Device
1532 0064	USB Input Device
1532 0E01	USB Input Device
413C A503	USB Input Device

## PCI Devices

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### [ Broadcom BCM15700A2 802.11ac Wireless Network Adapter ]

**Device Properties:**

Device Description	Broadcom BCM15700A2 802.11ac Wireless Network Adapter
Bus Type	PCI Express 2.0 x1
Bus / Device / Function	114 / 0 / 0
Device ID	14E4-43BA
Subsystem ID	1028-0024
Device Class	0280 (Network Controller)
Revision	01
Fast Back-to-Back Transactions	Not Supported

**Device Features:**

66 MHz Operation	Not Supported
Bus Mastering	Enabled

### [ Intel Cannon Lake PCH - cAVS (Audio, Voice, Speech) ]

**Device Properties:**

Device Description	Intel Cannon Lake PCH - cAVS (Audio, Voice, Speech)
Bus Type	PCI
Bus / Device / Function	0 / 31 / 3
Device ID	8086-A348
Subsystem ID	17AA-2267
Device Class	0403 (High Definition Audio)
Revision	10

**Device Features:**

66 MHz Operation	Not Supported
Bus Mastering	Enabled

**[ Intel Cannon Lake PCH - HECI Controller 1 ]****Device Properties:**

Device Description	Intel Cannon Lake PCH - HECI Controller 1
Bus Type	PCI
Bus / Device / Function	0 / 22 / 0
Device ID	8086-A360
Subsystem ID	17AA-2267
Device Class	0780 (Communications Controller)
Revision	10
Fast Back-to-Back Transactions	Not Supported

**Device Features:**

66 MHz Operation	Not Supported
Bus Mastering	Enabled

**[ Intel Cannon Lake PCH - LPC/eSPI Controller ]****Device Properties:**

Device Description	Intel Cannon Lake PCH - LPC/eSPI Controller
Bus Type	PCI
Bus / Device / Function	0 / 31 / 0
Device ID	8086-A30E
Subsystem ID	17AA-2267
Device Class	0601 (PCI/ISA Bridge)
Revision	10
Fast Back-to-Back Transactions	Not Supported

**Device Features:**

66 MHz Operation	Not Supported
Bus Mastering	Enabled

**[ Intel Cannon Lake PCH - LPSS: I2C Controller 0 ]****Device Properties:**

Device Description	Intel Cannon Lake PCH - LPSS: I2C Controller 0
Bus Type	PCI
Bus / Device / Function	0 / 21 / 0
Device ID	8086-A368
Subsystem ID	17AA-2267
Device Class	0C80 (Serial Bus Controller)
Revision	10
Fast Back-to-Back Transactions	Not Supported

**Device Features:**

66 MHz Operation	Not Supported
Bus Mastering	Disabled

**[ Intel Cannon Lake PCH - LPSS: UART Controller 0 ]****Device Properties:**

Device Description	Intel Cannon Lake PCH - LPSS: UART Controller 0
Bus Type	PCI
Bus / Device / Function	0 / 30 / 0
Device ID	8086-A328
Subsystem ID	17AA-2267
Device Class	0780 (Communications Controller)
Revision	10
Fast Back-to-Back Transactions	Not Supported

**Device Features:**

66 MHz Operation	Not Supported
Bus Mastering	Disabled

Navigation

## [ Intel Cannon Lake PCH - PCI Express Root Port 15 ]

**Device Properties:**

Device Description	Intel Cannon Lake PCH - PCI Express Root Port 15
Bus Type	PCI
Bus / Device / Function	0 / 29 / 6
Device ID	8086-A336
Subsystem ID	0000-0000
Device Class	0604 (PCI/PCI Bridge)
Revision	F0
Fast Back-to-Back Transactions	Not Supported

**Device Features:**

66 MHz Operation	Not Supported
Bus Mastering	Enabled

## [ Intel Cannon Lake PCH - PCI Express Root Port 17 ]

**Device Properties:**

Device Description	Intel Cannon Lake PCH - PCI Express Root Port 17
Bus Type	PCI
Bus / Device / Function	0 / 27 / 0
Device ID	8086-A340
Subsystem ID	0000-0000
Device Class	0604 (PCI/PCI Bridge)
Revision	F0
Fast Back-to-Back Transactions	Not Supported

**Device Features:**

66 MHz Operation	Not Supported
Bus Mastering	Enabled

## [ Intel Cannon Lake PCH - PCI Express Root Port 9 ]

**Device Properties:**

Device Description	Intel Cannon Lake PCH - PCI Express Root Port 9
Bus Type	PCI
Bus / Device / Function	0 / 29 / 0
Device ID	8086-A330
Subsystem ID	0000-0000
Device Class	0604 (PCI/PCI Bridge)
Revision	F0
Fast Back-to-Back Transactions	Not Supported

**Device Features:**

66 MHz Operation	Not Supported
Bus Mastering	Enabled

## [ Intel Cannon Lake PCH - Shared SRAM ]

**Device Properties:**

Device Description	Intel Cannon Lake PCH - Shared SRAM
Bus Type	PCI
Bus / Device / Function	0 / 20 / 2
Device ID	8086-A36F
Subsystem ID	17AA-2267
Device Class	0500 (RAM Controller)
Revision	10
Fast Back-to-Back Transactions	Not Supported

**Device Features:**

66 MHz Operation	Not Supported
Bus Mastering	Disabled

## [ Intel Cannon Lake PCH - SMBus Controller ]

**Device Properties:**

Device Description	Intel Cannon Lake PCH - SMBus Controller
Bus Type	PCI
Bus / Device / Function	0 / 31 / 4
Device ID	8086-A323
Subsystem ID	17AA-2267
Device Class	0C05 (SMBus Controller)
Revision	10
Fast Back-to-Back Transactions	Supported, Disabled

**Device Features:**

66 MHz Operation	Not Supported
Bus Mastering	Disabled

## [ Intel Cannon Lake PCH - SPI (Flash) Controller ]

**Device Properties:**

Device Description	Intel Cannon Lake PCH - SPI (Flash) Controller
Bus Type	PCI
Bus / Device / Function	0 / 31 / 5
Device ID	8086-A324
Subsystem ID	17AA-2267
Device Class	0C80 (Serial Bus Controller)
Revision	10
Fast Back-to-Back Transactions	Not Supported

**Device Features:**

66 MHz Operation	Not Supported
Bus Mastering	Disabled

## [ Intel Cannon Lake PCH - Thermal Controller ]

**Device Properties:**

Device Description	Intel Cannon Lake PCH - Thermal Controller
Bus Type	PCI
Bus / Device / Function	0 / 18 / 0
Device ID	8086-A379
Subsystem ID	17AA-2267
Device Class	1180 (Data Acquisition / Signal Processing Controller)
Revision	10
Fast Back-to-Back Transactions	Not Supported

**Device Features:**

66 MHz Operation	Not Supported
Bus Mastering	Disabled

## [ Intel Cannon Lake PCH - USB 3.1 xHCI Host Controller ]

**Device Properties:**

Device Description	Intel Cannon Lake PCH - USB 3.1 xHCI Host Controller
Bus Type	PCI
Bus / Device / Function	0 / 20 / 0
Device ID	8086-A36D
Subsystem ID	17AA-2267
Device Class	0C03 (USB3 xHCI Controller)
Revision	10
Fast Back-to-Back Transactions	Supported, Disabled

**Device Features:**

66 MHz Operation	Not Supported
Bus Mastering	Enabled

## [ Intel Coffee Lake-H - Host Bridge/DRAM Controller ]

**Device Properties:**

Device Description	Intel Coffee Lake-H - Host Bridge/DRAM Controller
Bus Type	PCI
Bus / Device / Function	0 / 0 / 0
Device ID	8086-3EC4
Subsystem ID	17AA-2267
Device Class	0600 (Host/PCI Bridge)
Revision	07
Fast Back-to-Back Transactions	Supported, Disabled

**Device Features:**

66 MHz Operation	Not Supported
Bus Mastering	Enabled

**[ Intel Coffee Lake-H GT2 - Integrated Graphics Controller ]****Device Properties:**

Device Description	Intel Coffee Lake-H GT2 - Integrated Graphics Controller
Bus Type	PCI Express 2.0
Bus / Device / Function	0 / 2 / 0
Device ID	8086-3E9B
Subsystem ID	17AA-2267
Device Class	0300 (VGA Display Controller)
Revision	00
Fast Back-to-Back Transactions	Not Supported

**Device Features:**

66 MHz Operation	Not Supported
Bus Mastering	Enabled

**Video Adapter Manufacturer:**

Company Name	Intel Corporation
Product Information	<a href="http://www.intel.com/products/chipsets">http://www.intel.com/products/chipsets</a>
Driver Download	<a href="http://support.intel.com/support/graphics">http://support.intel.com/support/graphics</a>
Driver Update	<a href="http://www.aida64.com/driver-updates">http://www.aida64.com/driver-updates</a>

**[ Intel Skylake - Dynamic Platform & Thermal Framework Processor Participant [R-0] ]****Device Properties:**

Device Description	Intel Skylake - Dynamic Platform & Thermal Framework Processor Participant [R-0]
Bus Type	PCI
Bus / Device / Function	0 / 4 / 0
Device ID	8086-1903
Subsystem ID	17AA-2267
Device Class	1180 (Data Acquisition / Signal Processing Controller)
Revision	07
Fast Back-to-Back Transactions	Supported, Disabled

**Device Features:**

66 MHz Operation	Not Supported
Bus Mastering	Enabled

**[ Intel Skylake - Gaussian Mixture Model ]****Device Properties:**

Device Description	Intel Skylake - Gaussian Mixture Model
Bus Type	PCI
Bus / Device / Function	0 / 8 / 0
Device ID	8086-1911
Subsystem ID	17AA-2267
Device Class	0880 (Base System Peripheral)
Revision	00
Fast Back-to-Back Transactions	Not Supported

**Device Features:**

66 MHz Operation	Not Supported
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Bus Mastering

Disabled

Navigation

## [ Intel Skylake - PCI Express x16 Controller [R-0] ]

**Device Properties:**

Device Description	Intel Skylake - PCI Express x16 Controller [R-0]
Bus Type	PCI
Bus / Device / Function	0 / 1 / 0
Device ID	8086-1901
Subsystem ID	0000-0000
Device Class	0604 (PCI/PCI Bridge)
Revision	07
Fast Back-to-Back Transactions	Not Supported

**Device Features:**

66 MHz Operation	Not Supported
Bus Mastering	Enabled

## [ Intel(R) Ethernet Connection (7) I219-LM [8086-15BB] [NoDB] ]

**Device Properties:**

Device Description	Intel(R) Ethernet Connection (7) I219-LM [8086-15BB] [NoDB]
Bus Type	PCI
Bus / Device / Function	0 / 31 / 6
Device ID	8086-15BB
Subsystem ID	17AA-2267
Device Class	0200 (Ethernet Controller)
Revision	10
Fast Back-to-Back Transactions	Not Supported

**Device Features:**

66 MHz Operation	Not Supported
Bus Mastering	Enabled

**Network Adapter Manufacturer:**

Company Name	Intel Corporation
Product Information	<a href="http://www.intel.com/embedded">http://www.intel.com/embedded</a>
Driver Download	<a href="http://www.intel.com/support/network">http://www.intel.com/support/network</a>
Driver Update	<a href="http://www.aida64.com/driver-updates">http://www.aida64.com/driver-updates</a>

## [ Intel(R) PCI Express Root Port #21 - A32C [8086-A32C] [NoDB] ]

**Device Properties:**

Device Description	Intel(R) PCI Express Root Port #21 - A32C [8086-A32C] [NoDB]
Bus Type	PCI
Bus / Device / Function	0 / 27 / 4
Device ID	8086-A32C
Subsystem ID	0040-0000
Device Class	0604 (PCI/PCI Bridge)
Revision	F0
Fast Back-to-Back Transactions	Not Supported

**Device Features:**

66 MHz Operation	Not Supported
Bus Mastering	Disabled

## [ nVIDIA GeForce GTX 1050 Ti Video Adapter ]

**Device Properties:**

Device Description	nVIDIA GeForce GTX 1050 Ti Video Adapter
Bus Type	PCI Express 3.0 x16
Bus / Device / Function	1 / 0 / 0
Device ID	10DE-1C8C
Subsystem ID	17AA-2267
Device Class	0300 (VGA Display Controller)
Revision	A1
Fast Back-to-Back Transactions	Not Supported

**Device Features:**

66 MHz Operation	Not Supported
Bus Mastering	Enabled

**Video Adapter Manufacturer:**

Company Name	NVIDIA Corporation
Product Information	<a href="http://www.nvidia.com/page/products.html">http://www.nvidia.com/page/products.html</a>
Driver Download	<a href="http://www.nvidia.com/content/drivers/drivers.asp">http://www.nvidia.com/content/drivers/drivers.asp</a>
Driver Update	<a href="http://www.aida64.com/driver-updates">http://www.aida64.com/driver-updates</a>

**[ nVIDIA GP107 - High Definition Audio Controller ]****Device Properties:**

Device Description	nVIDIA GP107 - High Definition Audio Controller
Bus Type	PCI Express 3.0 x16
Bus / Device / Function	1 / 0 / 1
Device ID	10DE-0FB9
Subsystem ID	0000-0000
Device Class	0403 (High Definition Audio)
Revision	A1
Fast Back-to-Back Transactions	Not Supported

**Device Features:**

66 MHz Operation	Not Supported
Bus Mastering	Enabled

**[ Standard NVM Express Controller [144D-A808] [NoDB] ]****Device Properties:**

Device Description	Standard NVM Express Controller [144D-A808] [NoDB]
Bus Type	PCI Express 3.0 x4
Bus / Device / Function	113 / 0 / 0
Device ID	144D-A808
Subsystem ID	144D-A801
Device Class	0108 (Non-Volatile Memory Controller)
Revision	00
Fast Back-to-Back Transactions	Not Supported

**Device Features:**

66 MHz Operation	Not Supported
Bus Mastering	Enabled

**[ Toshiba AIS NVMe SSD Controller ]****Device Properties:**

Device Description	Toshiba AIS NVMe SSD Controller
Bus Type	PCI Express 3.0 x4
Bus / Device / Function	2 / 0 / 0
Device ID	1179-010F
Subsystem ID	1179-0001
Device Class	0108 (Non-Volatile Memory Controller)
Revision	01
Fast Back-to-Back Transactions	Not Supported

**Device Features:**

66 MHz Operation	Not Supported
Bus Mastering	Enabled

**USB Devices****[ USB Composite Device (84EC-XRGB) ]****Device Properties:**

Device Description	USB Composite Device
Device ID	0483-5029
Device Class	03 / 01 (Human Interface Device)
Device Protocol	01
Revision	0000h
Manufacturer	CATEX TECH.
Product	84EC-XRGB
Serial Number	CA2017090002
Supported USB Version	1.10
Current Speed	Full (USB 1.1)

Navigation

## [ USB 2.0 BILLBOARD ]

**Device Properties:**

Device Description	USB 2.0 BILLBOARD
Device ID	2109-0100
Device Class	11 / 00 (Billboard Device)
Device Protocol	00
Revision	0300h
Supported USB Version	2.01
Current Speed	High (USB 2.0)

## [ Generic USB Hub (USB2.1 Hub) ]

**Device Properties:**

Device Description	Generic USB Hub
Device ID	05E3-0610
Device Class	09 / 00 (Hi-Speed Hub with multiple TTs)
Device Protocol	02
Revision	9303h
Manufacturer	GenesysLogic
Product	USB2.1 Hub
Supported USB Version	2.10 (USB 3.0 device connected to a USB 2.0 port)
Current Speed	High (USB 2.0)

## [ Generic USB Hub (USB2.0 Hub) ]

**Device Properties:**

Device Description	Generic USB Hub
Device ID	05E3-0610
Device Class	09 / 00 (Hi-Speed Hub with multiple TTs)
Device Protocol	02
Revision	9224h
Manufacturer	GenesysLogic
Product	USB2.0 Hub
Supported USB Version	2.00
Current Speed	High (USB 2.0)

## [ USB Attached SCSI (UAS) Mass Storage Device (VLI Product String) ]

**Device Properties:**

Device Description	USB Attached SCSI (UAS) Mass Storage Device
Device ID	2109-0715
Device Class	08 / 06 (Mass Storage)
Device Protocol	50
Revision	0131h
Manufacturer	VLI Manufacture String
Product	VLI Product String
Serial Number	000000123ADA
Supported USB Version	2.10 (USB 3.0 device connected to a USB 2.0 port)
Current Speed	High (USB 2.0)

## [ USB Composite Device (Razer Basilisk) ]

**Device Properties:**

Device Description	USB Composite Device
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Device ID	1532-0064	Navigation
Device Class	03 / 01 (Human Interface Device)	
Device Protocol	02	
Revision	0200h	
Manufacturer	Razer	
Product	Razer Basilisk	
Supported USB Version	2.00	
Current Speed	Full (USB 1.1)	

## [ Generic USB Hub (USB2134B) ]

**Device Properties:**

Device Description	Generic USB Hub
Device ID	0424-2134
Device Class	09 / 00 (Hi-Speed Hub with multiple TTs)
Device Protocol	02
Revision	6080h
Manufacturer	SMSC
Product	USB2134B
Supported USB Version	2.10 (USB 3.0 device connected to a USB 2.0 port)
Current Speed	High (USB 2.0)

## [ Generic USB Hub (USB2.0 Hub) ]

**Device Properties:**

Device Description	Generic USB Hub
Device ID	05E3-0610
Device Class	09 / 00 (Hi-Speed Hub with multiple TTs)
Device Protocol	02
Revision	4474h
Manufacturer	GenesysLogic
Product	USB2.0 Hub
Supported USB Version	2.10 (USB 3.0 device connected to a USB 2.0 port)
Current Speed	High (USB 2.0)

## [ USB Composite Device (Razer Stargazer-Microphone) ]

**Device Properties:**

Device Description	USB Composite Device
Device ID	1532-0E01
Device Class	01 / 01 (Audio Control)
Device Protocol	00
Revision	1000h
Manufacturer	Razer
Product	Razer Stargazer-Microphone
Serial Number	401644L00500118
Supported USB Version	2.00
Current Speed	Full (USB 1.1)

## [ USB Composite Device (Dell AC511 USB SoundBar) ]

**Device Properties:**

Device Description	USB Composite Device
Device ID	413C-A503
Device Class	01 / 01 (Audio Control)
Device Protocol	00
Revision	0110h
Manufacturer	Dell
Product	Dell AC511 USB SoundBar
Supported USB Version	1.10
Current Speed	Full (USB 1.1)

## [ USB Composite Device (AK5371) ]

**Device Properties:**

Device Description	USB Composite Device
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Device ID	0556-0002
Device Class	01 / 01 (Audio Control)
Device Protocol	00
Revision	0001h
Manufacturer	AKM
Product	AK5371
Supported USB Version	1.10
Current Speed	Full (USB 1.1)

Navigation

## [ USB Composite Device ]

**Device Properties:**

Device Description	USB Composite Device
Device ID	5986-2115
Device Class	EF / 02 (Interface Association Descriptor)
Device Protocol	01
Revision	5420h
Supported USB Version	2.01
Current Speed	High (USB 2.0)

## [ Synaptics WBDI - SGX ]

**Device Properties:**

Device Description	Synaptics WBDI - SGX
Device ID	06CB-009A
Device Class	FF / 10
Device Protocol	FF
Revision	0164h
Supported USB Version	2.00
Current Speed	Full (USB 1.1)

## [ Lenovo Pen Device (Pen and multitouch sensor) ]

**Device Properties:**

Device Description	Lenovo Pen Device
Device ID	056A-5193
Device Class	03 / 00 (Human Interface Device)
Device Protocol	00
Revision	0002h
Manufacturer	Wacom Co.,Ltd.
Product	Pen and multitouch sensor
Supported USB Version	2.00
Current Speed	Full (USB 1.1)

## [ USB Composite Device ]

**Device Properties:**

Device Description	USB Composite Device
Device ID	5986-2123
Device Class	EF / 02 (Interface Association Descriptor)
Device Protocol	01
Revision	5473h
Supported USB Version	2.01
Current Speed	High (USB 2.0)

## [ Realtek USB 3.0 Card Reader (USB3.0-CRW) ]

**Device Properties:**

Device Description	Realtek USB 3.0 Card Reader
Device ID	0BDA-0328
Device Class	08 / 06 (Mass Storage)
Device Protocol	50
Revision	2908h
Manufacturer	Generic
Product	USB3.0-CRW
Serial Number	28203008282014000

Supported USB Version	3.00
Current Speed	Super (USB 3.0)

Navigation

## [ Generic SuperSpeed USB Hub ]

**Device Properties:**

Device Description	Generic SuperSpeed USB Hub
Device ID	05E3-0620
Device Class	09 / 00 (Hub)
Device Protocol	03
Revision	9303h
Supported USB Version	3.10
Current Speed	Super (USB 3.0)

## [ Generic SuperSpeed USB Hub ]

**Device Properties:**

Device Description	Generic SuperSpeed USB Hub
Device ID	05E3-0616
Device Class	09 / 00 (Hub)
Device Protocol	03
Revision	9224h
Supported USB Version	3.00
Current Speed	Super (USB 3.0)

## [ Generic SuperSpeed USB Hub ]

**Device Properties:**

Device Description	Generic SuperSpeed USB Hub
Device ID	0424-5534
Device Class	09 / 00 (Hub)
Device Protocol	03
Revision	6080h
Supported USB Version	3.00
Current Speed	Super (USB 3.0)

## [ Generic SuperSpeed USB Hub ]

**Device Properties:**

Device Description	Generic SuperSpeed USB Hub
Device ID	05E3-0616
Device Class	09 / 00 (Hub)
Device Protocol	03
Revision	4474h
Supported USB Version	3.10
Current Speed	Super (USB 3.0)

## [ USB Composite Device ]

**Device Properties:**

Device Description	USB Composite Device
Device ID	8086-0AA5
Device Class	EF / 02 (Interface Association Descriptor)
Device Protocol	01
Revision	3150h
Supported USB Version	3.10
Current Speed	Super (USB 3.0)

## Device Resources

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Resource	Share	Device Description
IRQ 01	Exclusive	Standard PS/2 Keyboard
IRQ 08	Exclusive	System CMOS/real time clock
IRQ 100	Exclusive	Microsoft ACPI-Compliant System

IRQ 101	Exclusive	Microsoft ACPI-Compliant System
IRQ 102	Exclusive	Microsoft ACPI-Compliant System
IRQ 103	Exclusive	Microsoft ACPI-Compliant System
IRQ 104	Exclusive	Microsoft ACPI-Compliant System
IRQ 1048576	Exclusive	Dell Wireless 1830 802.11ac
IRQ 105	Exclusive	Microsoft ACPI-Compliant System
IRQ 106	Exclusive	Microsoft ACPI-Compliant System
IRQ 107	Exclusive	Microsoft ACPI-Compliant System
IRQ 108	Exclusive	Microsoft ACPI-Compliant System
IRQ 109	Exclusive	Microsoft ACPI-Compliant System
IRQ 110	Exclusive	Microsoft ACPI-Compliant System
IRQ 111	Exclusive	Microsoft ACPI-Compliant System
IRQ 112	Exclusive	Microsoft ACPI-Compliant System
IRQ 113	Exclusive	Microsoft ACPI-Compliant System
IRQ 114	Exclusive	Microsoft ACPI-Compliant System
IRQ 115	Exclusive	Microsoft ACPI-Compliant System
IRQ 116	Exclusive	Microsoft ACPI-Compliant System
IRQ 117	Exclusive	Microsoft ACPI-Compliant System
IRQ 118	Exclusive	Microsoft ACPI-Compliant System
IRQ 119	Exclusive	Microsoft ACPI-Compliant System
IRQ 12	Exclusive	Synaptics Pointing Device
IRQ 120	Exclusive	Microsoft ACPI-Compliant System
IRQ 121	Exclusive	Microsoft ACPI-Compliant System
IRQ 122	Exclusive	Microsoft ACPI-Compliant System
IRQ 123	Exclusive	Microsoft ACPI-Compliant System
IRQ 124	Exclusive	Microsoft ACPI-Compliant System
IRQ 125	Exclusive	Microsoft ACPI-Compliant System
IRQ 126	Exclusive	Microsoft ACPI-Compliant System
IRQ 127	Exclusive	Microsoft ACPI-Compliant System
IRQ 128	Exclusive	Microsoft ACPI-Compliant System
IRQ 129	Exclusive	Microsoft ACPI-Compliant System
IRQ 130	Exclusive	Microsoft ACPI-Compliant System
IRQ 131	Exclusive	Microsoft ACPI-Compliant System
IRQ 131071	Exclusive	Intel(R) PCI Express Root Port #15 - A336
IRQ 131071	Exclusive	Intel(R) PCI Express Root Port #17 - A340
IRQ 131071	Exclusive	Intel(R) PCI Express Root Port #21 - A32C
IRQ 131071	Exclusive	Intel(R) PCI Express Root Port #9 - A330
IRQ 131071	Exclusive	Intel(R) PCIe Controller (x16) - 1901
IRQ 131071	Exclusive	PCI Express Downstream Switch Port
IRQ 131071	Exclusive	PCI Express Downstream Switch Port
IRQ 132	Exclusive	Microsoft ACPI-Compliant System
IRQ 133	Exclusive	Microsoft ACPI-Compliant System
IRQ 134	Exclusive	Microsoft ACPI-Compliant System
IRQ 135	Exclusive	Microsoft ACPI-Compliant System
IRQ 136	Exclusive	Microsoft ACPI-Compliant System
IRQ 137	Exclusive	Microsoft ACPI-Compliant System
IRQ 138	Exclusive	Microsoft ACPI-Compliant System
IRQ 139	Exclusive	Microsoft ACPI-Compliant System
IRQ 140	Exclusive	Microsoft ACPI-Compliant System
IRQ 141	Exclusive	Microsoft ACPI-Compliant System
IRQ 142	Exclusive	Microsoft ACPI-Compliant System
IRQ 143	Exclusive	Microsoft ACPI-Compliant System
IRQ 144	Exclusive	Microsoft ACPI-Compliant System
IRQ 145	Exclusive	Microsoft ACPI-Compliant System
IRQ 146	Exclusive	Microsoft ACPI-Compliant System
IRQ 147	Exclusive	Microsoft ACPI-Compliant System
IRQ 148	Exclusive	Microsoft ACPI-Compliant System
IRQ 149	Exclusive	Microsoft ACPI-Compliant System
IRQ 150	Exclusive	Microsoft ACPI-Compliant System
IRQ 151	Exclusive	Microsoft ACPI-Compliant System
IRQ 152	Exclusive	Microsoft ACPI-Compliant System
IRQ 153	Exclusive	Microsoft ACPI-Compliant System
IRQ 154	Exclusive	Microsoft ACPI-Compliant System
IRQ 155	Exclusive	Microsoft ACPI-Compliant System
IRQ 156	Exclusive	Microsoft ACPI-Compliant System
IRQ 157	Exclusive	Microsoft ACPI-Compliant System
IRQ 158	Exclusive	Microsoft ACPI-Compliant System
IRQ 159	Exclusive	Microsoft ACPI-Compliant System

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IRQ 16	Shared	High Definition Audio Controller	Navigation
IRQ 16	Shared	Intel(R) Dynamic Platform and Thermal Framework	
IRQ 16	Shared	Synaptics SMBus Driver	
IRQ 160	Exclusive	Microsoft ACPI-Compliant System	
IRQ 161	Exclusive	Microsoft ACPI-Compliant System	
IRQ 162	Exclusive	Microsoft ACPI-Compliant System	
IRQ 163	Exclusive	Microsoft ACPI-Compliant System	
IRQ 164	Exclusive	Microsoft ACPI-Compliant System	
IRQ 165	Exclusive	Microsoft ACPI-Compliant System	
IRQ 166	Exclusive	Microsoft ACPI-Compliant System	
IRQ 167	Exclusive	Microsoft ACPI-Compliant System	
IRQ 168	Exclusive	Microsoft ACPI-Compliant System	
IRQ 169	Exclusive	Microsoft ACPI-Compliant System	
IRQ 17	Shared	High Definition Audio Controller	
IRQ 170	Exclusive	Microsoft ACPI-Compliant System	
IRQ 171	Exclusive	Microsoft ACPI-Compliant System	
IRQ 172	Exclusive	Microsoft ACPI-Compliant System	
IRQ 173	Exclusive	Microsoft ACPI-Compliant System	
IRQ 174	Exclusive	Microsoft ACPI-Compliant System	
IRQ 175	Exclusive	Microsoft ACPI-Compliant System	
IRQ 176	Exclusive	Microsoft ACPI-Compliant System	
IRQ 177	Exclusive	Microsoft ACPI-Compliant System	
IRQ 178	Exclusive	Microsoft ACPI-Compliant System	
IRQ 179	Exclusive	Microsoft ACPI-Compliant System	
IRQ 180	Exclusive	Microsoft ACPI-Compliant System	
IRQ 181	Exclusive	Microsoft ACPI-Compliant System	
IRQ 182	Exclusive	Microsoft ACPI-Compliant System	
IRQ 183	Exclusive	Microsoft ACPI-Compliant System	
IRQ 184	Exclusive	Microsoft ACPI-Compliant System	
IRQ 185	Exclusive	Microsoft ACPI-Compliant System	
IRQ 186	Exclusive	Microsoft ACPI-Compliant System	
IRQ 187	Exclusive	Microsoft ACPI-Compliant System	
IRQ 188	Exclusive	Microsoft ACPI-Compliant System	
IRQ 189	Exclusive	Microsoft ACPI-Compliant System	
IRQ 190	Exclusive	Microsoft ACPI-Compliant System	
IRQ 191	Exclusive	Microsoft ACPI-Compliant System	
IRQ 192	Exclusive	Microsoft ACPI-Compliant System	
IRQ 193	Exclusive	Microsoft ACPI-Compliant System	
IRQ 194	Exclusive	Microsoft ACPI-Compliant System	
IRQ 195	Exclusive	Microsoft ACPI-Compliant System	
IRQ 196	Exclusive	Microsoft ACPI-Compliant System	
IRQ 197	Exclusive	Microsoft ACPI-Compliant System	
IRQ 198	Exclusive	Microsoft ACPI-Compliant System	
IRQ 199	Exclusive	Microsoft ACPI-Compliant System	
IRQ 200	Exclusive	Microsoft ACPI-Compliant System	
IRQ 201	Exclusive	Microsoft ACPI-Compliant System	
IRQ 202	Exclusive	Microsoft ACPI-Compliant System	
IRQ 203	Exclusive	Microsoft ACPI-Compliant System	
IRQ 204	Exclusive	Microsoft ACPI-Compliant System	
IRQ 256	Exclusive	Microsoft ACPI-Compliant System	
IRQ 257	Exclusive	Microsoft ACPI-Compliant System	
IRQ 258	Exclusive	Microsoft ACPI-Compliant System	
IRQ 259	Exclusive	Microsoft ACPI-Compliant System	
IRQ 260	Exclusive	Microsoft ACPI-Compliant System	
IRQ 261	Exclusive	Microsoft ACPI-Compliant System	
IRQ 262	Exclusive	Microsoft ACPI-Compliant System	
IRQ 263	Exclusive	Microsoft ACPI-Compliant System	
IRQ 264	Exclusive	Microsoft ACPI-Compliant System	
IRQ 265	Exclusive	Microsoft ACPI-Compliant System	
IRQ 266	Exclusive	Microsoft ACPI-Compliant System	
IRQ 267	Exclusive	Microsoft ACPI-Compliant System	
IRQ 268	Exclusive	Microsoft ACPI-Compliant System	
IRQ 269	Exclusive	Microsoft ACPI-Compliant System	
IRQ 270	Exclusive	Microsoft ACPI-Compliant System	
IRQ 271	Exclusive	Microsoft ACPI-Compliant System	
IRQ 272	Exclusive	Microsoft ACPI-Compliant System	
IRQ 273	Exclusive	Microsoft ACPI-Compliant System	
IRQ 274	Exclusive	Microsoft ACPI-Compliant System	

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IRQ 479	Exclusive	Microsoft ACPI-Compliant System	Navigation
IRQ 480	Exclusive	Microsoft ACPI-Compliant System	
IRQ 481	Exclusive	Microsoft ACPI-Compliant System	
IRQ 482	Exclusive	Microsoft ACPI-Compliant System	
IRQ 483	Exclusive	Microsoft ACPI-Compliant System	
IRQ 484	Exclusive	Microsoft ACPI-Compliant System	
IRQ 485	Exclusive	Microsoft ACPI-Compliant System	
IRQ 486	Exclusive	Microsoft ACPI-Compliant System	
IRQ 487	Exclusive	Microsoft ACPI-Compliant System	
IRQ 488	Exclusive	Microsoft ACPI-Compliant System	
IRQ 489	Exclusive	Microsoft ACPI-Compliant System	
IRQ 490	Exclusive	Microsoft ACPI-Compliant System	
IRQ 491	Exclusive	Microsoft ACPI-Compliant System	
IRQ 492	Exclusive	Microsoft ACPI-Compliant System	
IRQ 493	Exclusive	Microsoft ACPI-Compliant System	
IRQ 494	Exclusive	Microsoft ACPI-Compliant System	
IRQ 495	Exclusive	Microsoft ACPI-Compliant System	
IRQ 496	Exclusive	Microsoft ACPI-Compliant System	
IRQ 497	Exclusive	Microsoft ACPI-Compliant System	
IRQ 498	Exclusive	Microsoft ACPI-Compliant System	
IRQ 499	Exclusive	Microsoft ACPI-Compliant System	
IRQ 500	Exclusive	Microsoft ACPI-Compliant System	
IRQ 501	Exclusive	Microsoft ACPI-Compliant System	
IRQ 502	Exclusive	Microsoft ACPI-Compliant System	
IRQ 503	Exclusive	Microsoft ACPI-Compliant System	
IRQ 504	Exclusive	Microsoft ACPI-Compliant System	
IRQ 505	Exclusive	Microsoft ACPI-Compliant System	
IRQ 506	Exclusive	Microsoft ACPI-Compliant System	
IRQ 507	Exclusive	Microsoft ACPI-Compliant System	
IRQ 508	Exclusive	Microsoft ACPI-Compliant System	
IRQ 509	Exclusive	Microsoft ACPI-Compliant System	
IRQ 510	Exclusive	Microsoft ACPI-Compliant System	
IRQ 511	Exclusive	Microsoft ACPI-Compliant System	
IRQ 54	Exclusive	Microsoft ACPI-Compliant System	
IRQ 55	Exclusive	Microsoft ACPI-Compliant System	
IRQ 56	Exclusive	Microsoft ACPI-Compliant System	
IRQ 57	Exclusive	Microsoft ACPI-Compliant System	
IRQ 58	Exclusive	Microsoft ACPI-Compliant System	
IRQ 59	Exclusive	Microsoft ACPI-Compliant System	
IRQ 60	Exclusive	Microsoft ACPI-Compliant System	
IRQ 61	Exclusive	Microsoft ACPI-Compliant System	
IRQ 62	Exclusive	Microsoft ACPI-Compliant System	
IRQ 63	Exclusive	Microsoft ACPI-Compliant System	
IRQ 64	Exclusive	Microsoft ACPI-Compliant System	
IRQ 65	Exclusive	Microsoft ACPI-Compliant System	
IRQ 65536	Exclusive	Intel(R) USB 3.1 eXtensible Host Controller - 1.10 (Microsoft)	
IRQ 65536	Exclusive	Intel(R) USB 3.1 eXtensible Host Controller - 1.10 (Microsoft)	
IRQ 65536	Exclusive	Intel(R) Ethernet Connection (7) I219-LM	
IRQ 65536	Exclusive	Intel(R) Management Engine Interface	
IRQ 65536	Exclusive	Thunderbolt(TM) Controller - 15EB	
IRQ 65536	Exclusive	Thunderbolt(TM) Controller - 15EB	
IRQ 65536	Exclusive	Thunderbolt(TM) Controller - 15EB	
IRQ 65536	Exclusive	Thunderbolt(TM) Controller - 15EB	
IRQ 65536	Exclusive	Thunderbolt(TM) Controller - 15EB	
IRQ 65536	Exclusive	Thunderbolt(TM) Controller - 15EB	
IRQ 65536	Exclusive	Thunderbolt(TM) Controller - 15EB	
IRQ 65536	Exclusive	Thunderbolt(TM) Controller - 15EB	
IRQ 65536	Exclusive	Thunderbolt(TM) Controller - 15EB	
IRQ 65536	Exclusive	Thunderbolt(TM) Controller - 15EB	
IRQ 65536	Exclusive	Thunderbolt(TM) Controller - 15EB	
IRQ 65536	Exclusive	Intel(R) UHD Graphics 630	
IRQ 65536	Exclusive	NVIDIA GeForce GTX 1050 Ti with Max-Q Design	
IRQ 65536	Exclusive	Standard NVM Express Controller	



				Navigation
Memory 90000000-A6FFFFFF	Exclusive	PCI Express Downstream Switch Port		
Memory 90000000-BE0FFFFF	Exclusive	Intel(R) PCI Express Root Port #21 - A32C		
Memory 90000000-BE0FFFFF	Exclusive	PCI Express Upstream Switch Port		
Memory A6F00000-BDEFFFFF	Exclusive	PCI Express Downstream Switch Port		
Memory BDF00000-BDFFFFFF	Exclusive	PCI Express Downstream Switch Port		
Memory BDFF0000-BDFFFFFF	Exclusive	Intel(R) USB 3.1 eXtensible Host Controller - 1.10 (Microsoft)		
Memory BE000000-BE0FFFFF	Exclusive	PCI Express Downstream Switch Port		
Memory BE0BF000-BE0BFFFF	Exclusive	Thunderbolt(TM) Controller - 15EB		
Memory BE0C0000-BE0FFFFF	Exclusive	Thunderbolt(TM) Controller - 15EB		
Memory BF000000-BFFFFFFF	Exclusive	NVIDIA GeForce GTX 1050 Ti with Max-Q Design		
Memory BF000000-C00FFFFF	Exclusive	Intel(R) PCIe Controller (x16) - 1901		
Memory C00FC000-C00FFFFF	Exclusive	High Definition Audio Controller		
Memory C0400000-C07FFFFF	Exclusive	Dell Wireless 1830 802.11ac		
Memory C0400000-C08FFFFF	Exclusive	Intel(R) PCI Express Root Port #15 - A336		
Memory C08F8000-C08FFFFF	Exclusive	Dell Wireless 1830 802.11ac		
Memory C0900000-C0903FFF	Exclusive	Standard NVM Express Controller		
Memory C0900000-C09FFFFF	Exclusive	Intel(R) PCI Express Root Port #9 - A330		
Memory COA00000-C0A03FFF	Exclusive	Standard NVM Express Controller		
Memory COA00000-C0AFFFFF	Exclusive	Intel(R) PCI Express Root Port #17 - A340		
Memory C0B20000-C0B2FFFF	Exclusive	Intel(R) USB 3.1 eXtensible Host Controller - 1.10 (Microsoft)		
Memory FC800000-FE7FFFFF	Shared	PCI Express Root Complex		
Memory FE1E0000-FE1FFFFF	Exclusive	Intel(R) Ethernet Connection (7) I219-LM		
Memory FED40000-FED44FFF	Exclusive	Trusted Platform Module 2.0		
Memory FFEF0000-FFEF7FFF	Exclusive	Intel(R) Dynamic Platform and Thermal Framework Processor Participant		
Memory FFEFAF00-FFEFAFFF	Exclusive	Synaptics SMBus Driver		
Memory FFEFB000-FFEFBFFF	Exclusive	Intel(R) Management Engine Interface		
Memory FFEFC000-FFEFFFFF	Exclusive	High Definition Audio Controller		
Memory FFF00000-FFFFFFFFFF	Exclusive	High Definition Audio Controller		
Port 0000-0CF7	Shared	PCI Express Root Complex		
Port 0060-0060	Exclusive	Standard PS/2 Keyboard		
Port 0062-0062	Exclusive	Microsoft ACPI-Compliant Embedded Controller		
Port 0064-0064	Exclusive	Standard PS/2 Keyboard		
Port 0066-0066	Exclusive	Microsoft ACPI-Compliant Embedded Controller		
Port 0070-0077	Exclusive	System CMOS/real time clock		
Port 03B0-03BB	Shared	Intel(R) UHD Graphics 630		
Port 03C0-03DF	Shared	Intel(R) UHD Graphics 630		
Port 0D00-FFFF	Shared	PCI Express Root Complex		
Port 2000-2FFF	Exclusive	Intel(R) PCIe Controller (x16) - 1901		
Port 3000-303F	Exclusive	Intel(R) UHD Graphics 630		
Port FEE0-FEFF	Exclusive	Synaptics SMBus Driver		

## Input

---

### [ HID Keyboard Device ]

**Keyboard Properties:**

Keyboard Name	HID Keyboard Device
Keyboard Type	Japanese keyboard
Keyboard Layout	Chinese (Simplified) - US Keyboard
ANSI Code Page	65001 - Unicode (UTF-8)
OEM Code Page	65001 - Unicode (UTF-8)
Repeat Delay	1
Repeat Rate	31

### [ HID-compliant mouse ]

**Mouse Properties:**

Mouse Name	HID-compliant mouse
Mouse Buttons	5
Mouse Hand	Right
Pointer Speed	1
Double-Click Time	500 msec
X/Y Threshold	6 / 10
Wheel Scroll Lines	3

**Mouse Features:**

Active Window Tracking	Disabled
ClickLock	Disabled
Hide Pointer While Typing	Enabled
Mouse Wheel	Present
Move Pointer To Default Button	Disabled
Pointer Trails	Disabled
Sonar	Disabled

## Printers

---

### [ Fax ]

**Printer Properties:**

Printer Name	Fax
Default Printer	No
Share Point	Not shared
Printer Port	SHRFAX:
Printer Driver	Microsoft Shared Fax Driver (v4.00)
Device Name	Fax
Print Processor	winprint
Separator Page	None
Availability	5:00 PM - 5:00 PM
Priority	1
Print Jobs Queued	0
Status	Unknown

**Paper Properties:**

Paper Size	Letter, 8.5 x 11 in
Orientation	Portrait
Print Quality	200 x 200 dpi Mono

### [ Microsoft Print to PDF (Default) ]

**Printer Properties:**

Printer Name	Microsoft Print to PDF
Default Printer	Yes
Share Point	Not shared
Printer Port	PORTPROMPT:
Printer Driver	Microsoft Print To PDF (v6.03)
Device Name	Microsoft Print to PDF
Print Processor	winprint
Separator Page	None
Availability	5:00 PM - 5:00 PM
Priority	1
Print Jobs Queued	0
Status	Unknown

**Paper Properties:**

Paper Size	Letter, 8.5 x 11 in
Orientation	Portrait
Print Quality	600 x 600 dpi Color

### [ Microsoft XPS Document Writer ]

**Printer Properties:**

Printer Name	Microsoft XPS Document Writer
Default Printer	No
Share Point	Not shared
Printer Port	PORTPROMPT:
Printer Driver	Microsoft XPS Document Writer v4 (v6.03)
Device Name	Microsoft XPS Document Writer
Print Processor	winprint

Separator Page None  
 Availability 5:00 PM - 5:00 PM  
 Priority 1  
 Print Jobs Queued 0  
 Status Unknown

Navigation

**Paper Properties:**

Paper Size Letter, 8.5 x 11 in  
 Orientation Portrait  
 Print Quality 600 x 600 dpi Color

## Debug - PCI

---

B00 D00 F00: Intel Coffee Lake-H - Host Bridge/DRAM Controller

```
Offset 000: 86 80 C4 3E 06 00 90 20 07 00 00 06 00 00 00 00 00
Offset 010: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 020: 00 00 00 00 00 00 00 00 00 00 00 00 00 AA 17 67 22
Offset 030: 00 00 00 E0 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 040: 01 90 D1 FE 00 00 00 00 01 00 D1 FE 00 00 00 00
Offset 050: C1 02 00 00 B9 80 00 00 47 00 70 5E E7 00 00 59
Offset 060: 01 00 00 E0 00 00 00 00 01 80 D1 FE 00 00 00 00
Offset 070: 00 00 00 FC 07 00 00 00 00 0C 00 FC 7F 00 00 00
Offset 080: 10 11 11 11 11 11 00 1A 00 00 00 00 00 00 00 00 00
Offset 090: 01 00 00 FC 07 00 00 00 01 00 70 9D 08 00 00 00
Offset 0A0: 01 00 00 00 08 00 00 00 01 00 80 9D 08 00 00 00
Offset 0B0: 01 00 80 5A 01 00 00 5A 01 00 00 59 01 00 80 5E
Offset 0C0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 0D0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 0E0: 09 00 10 01 79 20 01 62 CC 00 E4 B4 00 C0 02 00
Offset 0F0: 00 00 00 C8 0F 0A 00 00 00 00 00 00 00 00 00 00 00
```

B00 D01 F00: Intel Skylake - PCI Express x16 Controller [R-0]

```
Offset 000: 86 80 01 19 07 04 10 00 07 00 04 06 00 00 81 00
Offset 010: 00 00 00 00 00 00 00 00 01 01 00 20 20 00 20
Offset 020: 00 BF 00 C0 01 60 F1 71 00 00 00 00 00 00 00 00 00
Offset 030: 00 00 00 88 00 00 00 00 00 00 00 00 00 00 01 00 00
Offset 040: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 050: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 060: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 070: 00 00 00 00 00 00 00 00 00 00 62 17 00 00 00 00 0A
Offset 080: 01 90 03 C8 08 00 00 00 0D 80 00 00 AA 17 67 22
Offset 090: 05 A0 01 00 18 01 E0 FE 00 00 00 00 00 00 00 00 00
Offset 0A0: 10 00 42 01 01 80 00 00 20 00 00 00 03 AD 61 02
Offset 0B0: 41 00 03 D1 80 25 0C 00 00 00 48 00 08 00 00 00
Offset 0C0: 00 00 00 80 0B 08 00 00 04 00 00 0E 00 00 00 00
Offset 0D0: 43 00 1E 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 0E0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 0F0: 00 60 01 20 4E 01 01 32 00 00 00 00 E0 00 10 00
```

B00 D02 F00: Intel Coffee Lake-H GT2 - Integrated Graphics Controller

```
Offset 000: 86 80 9B 3E 07 04 10 00 00 00 03 00 00 00 00 00
Offset 010: 04 00 00 4A 40 00 00 00 0C 00 00 80 00 00 00 00
Offset 020: 01 30 00 00 00 00 00 00 00 00 00 00 AA 17 67 22
Offset 030: 00 00 00 40 00 00 00 00 00 00 00 00 01 00 00 00
Offset 040: 09 70 0C 01 79 20 01 62 CC 00 E4 B4 00 00 00 00
Offset 050: C1 02 00 00 B9 80 00 00 00 00 00 01 00 80 5A
Offset 060: 00 00 01 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 070: 10 AC 92 00 00 80 00 10 00 00 00 00 00 00 00 00 00
Offset 080: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 090: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 0A0: 00 00 00 00 00 00 00 00 00 00 00 00 05 D0 01 00
Offset 0B0: B8 04 E0 FE 00 00 00 00 00 00 00 00 00 00 00 00 00
```

Offset 0C0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0D0: 01 00 22 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0E0: 00 00 00 00 00 00 00 00 80 00 00 00 00 00 00 00  
 Offset 0F0: 00 00 00 00 00 00 00 00 00 00 00 00 18 40 BF 4F

Navigation

B00 D04 F00: Intel Skylake - Dynamic Platform & Thermal Framework Processor Participant [R-0]

Offset 000: 86 80 03 19 06 00 90 00 07 00 80 11 00 00 00 00  
 Offset 010: 04 00 EF FF 7F 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 020: 00 00 00 00 00 00 00 00 00 00 00 00 AA 17 67 22  
 Offset 030: 00 00 00 00 90 00 00 00 00 00 00 00 10 01 00 00  
 Offset 040: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 050: 00 00 00 00 B9 80 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 060: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 070: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 080: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 090: 05 D0 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0A0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0B0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0C0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0D0: 01 E0 03 00 08 00 00 00 01 00 00 00 00 00 00 00 00 00  
 Offset 0E0: 09 00 0C 01 79 20 01 62 CC 00 E4 B4 00 00 00 00 00  
 Offset 0F0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

B00 D08 F00: Intel Skylake - Gaussian Mixture Model

Offset 000: 86 80 11 19 00 00 10 00 00 00 80 08 00 00 00 00  
 Offset 010: 04 40 11 4B 40 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 020: 00 00 00 00 00 00 00 00 00 00 00 00 AA 17 67 22  
 Offset 030: 00 00 00 00 90 00 00 00 00 00 00 00 FF 01 00 00  
 Offset 040: FF 01 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 050: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 060: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 070: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 080: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 090: 05 DC 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0A0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0B0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0C0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0D0: 00 00 00 00 00 00 00 00 00 00 00 00 01 F0 02 00  
 Offset 0E0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0F0: 13 00 06 03 00 00 00 00 00 00 00 00 00 00 00 00 00 00

B00 D12 F00: Intel Cannon Lake PCH - Thermal Controller

Offset 000: 86 80 79 A3 02 00 10 00 10 00 80 11 00 00 80 00  
 Offset 010: 04 30 11 4B 40 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 020: 00 00 00 00 00 00 00 00 00 00 00 00 AA 17 67 22  
 Offset 030: 00 00 00 50 00 00 00 00 00 00 00 FF 01 00 00  
 Offset 040: 04 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 050: 01 80 23 00 08 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 060: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 070: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 080: 05 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 090: 10 00 01 00 C2 0F 00 00 40 00 00 00 11 F0 03 00  
 Offset 0A0: 40 00 11 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0B0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0C0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0D0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0E0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0F0: 00 00 00 00 00 00 00 00 00 00 00 00 B5 0F 11 01 00 00 00

B00 D14 F00: Intel Cannon Lake PCH - USB 3.1 xHCI Host Controller

Offset 000: 86 80 6D A3 06 04 90 02 10 30 03 0C 00 00 80 00  
 Offset 010: 04 00 B2 C0 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 020: 00 00 00 00 00 00 00 00 00 00 00 00 AA 17 67 22  
 Offset 030: 00 00 00 70 00 00 00 00 00 00 00 00 01 00 00 00

Offset 040:	FD 01 34 80 8F C6 FF 83 00 00 00 00 00 00 00 00 00 00 00
Offset 050:	7F 6D DC 0F 00 00 00 00 FA 13 38 37 00 00 00 00 00 00 00 00
Offset 060:	31 60 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 070:	01 80 C2 C1 08 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 080:	05 90 87 00 98 04 E0 FE 00 00 00 00 00 00 00 00 00 00 00 00
Offset 090:	09 00 14 F0 10 00 40 01 00 00 00 00 00 C1 0A 08 00
Offset 0A0:	00 08 0E 00 00 18 00 00 8F 40 02 00 00 01 00 00
Offset 0B0:	01 00 00 00 02 00 00 00 20 00 00 00 00 00 00 00 00 00 00 00
Offset 0C0:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 0D0:	01 00 00 00 02 00 00 00 20 00 00 00 00 00 00 00 00 00 00 00
Offset 0E0:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 0F0:	00 00 00 00 00 00 00 B5 0F 11 01 12 00 00 00 00

Navigation

B00 D14 F02: Intel Cannon Lake PCH - Shared SRAM

Offset 000:	86 80 6F A3 00 00 10 00 10 00 00 05 00 00 00 00 00 00 00
Offset 010:	04 C0 10 4B 40 00 00 00 04 20 11 4B 40 00 00 00
Offset 020:	00 00 00 00 00 00 00 00 00 00 00 00 AA 17 67 22
Offset 030:	00 00 00 00 80 00 00 00 00 00 00 00 FF 00 00 00
Offset 040:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 050:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 060:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 070:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 080:	01 00 03 00 08 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 090:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 0A0:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 0B0:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 0C0:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 0D0:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 0E0:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 0F0:	00 00 00 00 00 00 00 B5 0F 11 01 00 00 00 00 00

B00 D15 F00: Intel Cannon Lake PCH - LPSS: I2C Controller 0

Offset 000:	86 80 68 A3 00 00 10 00 10 00 80 0C 00 00 80 00
Offset 010:	04 10 11 4B 40 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 020:	00 00 00 00 00 00 00 00 00 00 00 00 AA 17 67 22
Offset 030:	00 00 00 00 80 00 00 00 00 00 00 00 FF 01 00 00
Offset 040:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 050:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 060:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 070:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 080:	01 90 03 00 08 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 090:	09 00 14 F0 10 00 40 01 01 21 00 00 C1 24 00 00
Offset 0A0:	00 08 0F 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 0B0:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 0C0:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 0D0:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 0E0:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 0F0:	00 00 00 00 00 00 00 B5 0F 11 01 00 00 00 00 00

B00 D16 F00: Intel Cannon Lake PCH - HECI Controller 1

Offset 000:	86 80 60 A3 06 04 10 00 10 00 80 07 00 00 80 00
Offset 010:	04 B0 EF FF 7F 00 00 00 00 00 00 00 00 00 00 00 00
Offset 020:	00 00 00 00 00 00 00 00 00 00 00 00 AA 17 67 22
Offset 030:	00 00 00 00 50 00 00 00 00 00 00 00 00 01 00 00
Offset 040:	45 02 00 94 00 00 00 80 06 05 F1 09 00 00 00 00
Offset 050:	01 8C 03 40 08 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 060:	30 00 00 00 04 40 00 00 01 1F 00 00 C9 0A 40 C4
Offset 070:	00 00 00 00 03 00 00 E0 00 00 00 00 00 00 00 00 00 00
Offset 080:	00 00 00 00 00 00 00 00 00 00 00 00 00 05 A4 81 00
Offset 090:	18 07 E0 FE 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 0A0:	04 00 00 00 09 00 14 F0 10 00 40 01 00 00 00 00
Offset 0B0:	01 80 00 00 38 0D 0E 00 00 00 00 00 00 00 00 00 40
Offset 0C0:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 0D0:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 0E0:	00 00 00 00 00 00 00 B5 0F 11 01 00 00 00 00 00

Offset 0F0: 00 00 00 00 00 00 00 B5 OF 11 01 00 00 00 00

Navigation

B00 D1B F00: Intel Cannon Lake PCH - PCI Express Root Port 17

Offset 000: 86 80 40 A3 06 04 10 00 F0 00 04 06 00 00 81 00  
 Offset 010: 00 00 00 00 00 00 00 00 02 02 00 F0 00 00 20  
 Offset 020: A0 C0 A0 C0 F1 FF 01 00 00 00 00 00 00 00 00 00 00  
 Offset 030: 00 00 00 00 40 00 00 00 00 00 00 00 00 00 01 00 00  
 Offset 040: 10 80 42 01 01 80 00 00 00 00 10 00 43 4C 72 11  
 Offset 050: 42 00 43 70 00 FD 84 00 00 00 40 01 08 00 00 00  
 Offset 060: 00 00 00 00 37 08 00 00 00 04 00 00 0E 00 00 00  
 Offset 070: 03 00 1F 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 080: 05 90 01 00 38 01 E0 FE 00 00 00 00 00 00 00 00 00 00  
 Offset 090: 0D A0 00 00 AA 17 67 22 00 00 00 00 00 00 00 00 00 00  
 Offset 0A0: 01 00 03 C8 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0B0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0C0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0D0: 01 10 00 07 42 18 02 00 08 00 9E 09 00 00 00 00 00 00  
 Offset 0E0: 00 77 73 00 00 00 00 00 16 80 12 00 00 00 00 00 00 00  
 Offset 0F0: 50 01 00 00 00 03 00 40 B5 OF 11 01 00 C0 00 41

B00 D1B F04: Intel(R) PCI Express Root Port #21 - A32C [8086-A32C] [NoDB]

Offset 000: 86 80 2C A3 00 04 10 00 F0 00 04 06 00 00 81 00  
 Offset 010: 00 00 00 00 00 00 00 00 04 70 00 F0 00 00 20  
 Offset 020: 00 90 00 BE 01 00 F1 49 40 00 00 00 40 00 00 00  
 Offset 030: 00 00 00 40 00 00 00 00 00 00 00 00 00 01 00 00  
 Offset 040: 10 80 42 01 00 80 00 00 00 00 11 00 43 78 72 15  
 Offset 050: 02 00 43 70 60 FD A4 00 28 10 40 00 08 00 00 00  
 Offset 060: 00 00 00 00 37 08 00 00 00 04 00 00 0E 00 00 00  
 Offset 070: 03 00 1F 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 080: 05 90 00 00 58 01 E0 FE 00 00 00 00 00 00 00 00 00 00  
 Offset 090: 0D A0 00 00 AA 17 67 22 00 00 00 00 00 00 00 00 00 00  
 Offset 0A0: 01 00 03 C8 03 01 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0B0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0C0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0D0: 01 10 00 07 42 18 02 00 0A 00 9E C9 00 00 00 00 00 00  
 Offset 0E0: 80 37 73 00 60 0C 60 0C 16 80 12 00 00 00 00 00 00 00  
 Offset 0F0: 50 01 00 00 00 03 00 40 B5 OF 11 01 00 C0 00 41

B00 D1D F00: Intel Cannon Lake PCH - PCI Express Root Port 9

Offset 000: 86 80 30 A3 06 04 10 00 F0 00 04 06 00 00 81 00  
 Offset 010: 00 00 00 00 00 00 00 00 71 71 00 F0 00 00 20  
 Offset 020: 90 C0 90 C0 F1 FF 01 00 00 00 00 00 00 00 00 00 00  
 Offset 030: 00 00 00 40 00 00 00 00 00 00 00 00 00 01 00 00  
 Offset 040: 10 80 42 01 01 80 00 00 20 00 10 00 43 4C 72 09  
 Offset 050: 42 00 43 70 00 FD 44 00 00 00 40 01 08 00 00 00  
 Offset 060: 00 00 00 00 37 08 00 00 00 04 00 00 0E 00 00 00  
 Offset 070: 03 00 1F 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 080: 05 90 01 00 78 01 E0 FE 00 00 00 00 00 00 00 00 00 00  
 Offset 090: 0D A0 00 00 AA 17 67 22 00 00 00 00 00 00 00 00 00 00  
 Offset 0A0: 01 00 03 C8 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0B0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0C0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0D0: 11 10 00 07 42 18 02 00 08 00 9E 09 00 00 00 00 00 00  
 Offset 0E0: 00 77 F3 00 46 88 46 88 16 80 12 00 00 00 00 00 00 00  
 Offset 0F0: 50 01 00 00 00 03 00 40 B5 OF 11 01 00 C0 00 41

B00 D1D F06: Intel Cannon Lake PCH - PCI Express Root Port 15

Offset 000: 86 80 36 A3 06 04 10 00 F0 00 04 06 00 00 81 00  
 Offset 010: 00 00 00 00 00 00 00 00 72 72 00 F0 00 00 20  
 Offset 020: 40 C0 80 C0 F1 FF 01 00 00 00 00 00 00 00 00 00 00  
 Offset 030: 00 00 00 40 00 00 00 00 00 00 00 00 00 03 00 00  
 Offset 040: 10 80 42 01 01 80 00 00 20 00 11 00 13 4C 72 0F  
 Offset 050: 43 00 11 70 00 B2 74 00 00 00 40 01 08 00 00 00  
 Offset 060: 00 00 00 00 37 08 00 00 00 04 00 00 0E 00 00 00 00

Offset 070:	03 00 01 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 080:	05 90 01 00 98 01 E0 FE 00 00 00 00 00 00 00 00 00
Offset 090:	0D A0 00 00 AA 17 67 22 00 00 00 00 00 00 00 00 00
Offset 0A0:	01 00 03 C8 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 0B0:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 0C0:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 0D0:	11 10 00 07 42 18 02 00 08 00 9E 09 00 00 00 00 00 00
Offset 0E0:	00 03 63 00 03 90 03 90 16 00 10 00 00 00 00 00 00 00
Offset 0F0:	50 01 00 00 00 00 00 4C B5 0F 11 01 00 00 00 00 83

Navigation

B00 D1E F00: Intel Cannon Lake PCH - LPSS: UART Controller 0

Offset 000:	86 80 28 A3 00 00 10 00 10 00 80 07 00 00 80 00
Offset 010:	04 F0 10 4B 40 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 020:	00 00 00 00 00 00 00 00 00 00 00 00 00 AA 17 67 22
Offset 030:	00 00 00 00 80 00 00 00 00 00 00 00 FF 01 00 00
Offset 040:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 050:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 060:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 070:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 080:	01 90 03 00 08 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 090:	09 00 14 F0 10 00 40 01 01 21 00 00 C1 24 00 00
Offset 0A0:	00 08 0F 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 0B0:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 0C0:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 0D0:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 0E0:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 0F0:	00 00 00 00 00 00 00 B5 0F 11 01 00 00 00 00 00

B00 D1F F00: Intel Cannon Lake PCH - LPC/eSPI Controller

Offset 000:	86 80 0E A3 07 00 00 02 10 00 01 06 00 00 80 00
Offset 010:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 020:	00 00 00 00 00 00 00 00 00 00 00 00 AA 17 67 22
Offset 030:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 040:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 050:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 060:	00 00 00 90 00 00 00 00 00 00 00 00 00 00 00 00
Offset 070:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 080:	10 00 0F 3F 01 16 7C 00 E1 15 0C 00 81 06 0C 00
Offset 090:	81 00 0C 00 00 0F 00 00 00 00 00 00 00 00 00 00
Offset 0A0:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 0B0:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 0C0:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 0D0:	33 22 11 00 67 45 00 00 CF FF 00 00 A2 00 00 00
Offset 0E0:	08 03 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 0F0:	00 00 00 00 00 00 B5 0F 11 01 00 00 00 00

B00 D1F F03: Intel Cannon Lake PCH - cAVS (Audio, Voice, Speech)

Offset 000:	86 80 48 A3 06 00 10 00 10 80 03 04 00 00 00 00
Offset 010:	04 C0 EF FF 7F 00 00 00 00 00 00 00 00 00 00 00 00
Offset 020:	04 00 F0 FF 7F 00 00 00 00 00 00 00 AA 17 67 22
Offset 030:	00 00 00 50 00 00 00 00 00 00 00 10 01 00 00
Offset 040:	00 00 00 00 00 00 00 FF 09 7B 00 00 00 00 00
Offset 050:	01 80 43 C0 08 00 00 00 00 00 00 00 00 00 00 00
Offset 060:	05 00 80 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 070:	10 00 91 00 00 00 10 00 28 10 00 00 00 00 00 00
Offset 080:	09 60 14 F0 10 00 40 01 00 00 00 00 A1 04 01 00
Offset 090:	00 08 28 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 0A0:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 0B0:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 0C0:	08 06 02 21 00 60 80 04 00 0C A5 82 10 00 03 00
Offset 0D0:	00 0C B5 02 10 00 03 00 00 00 00 00 00 00 00 00
Offset 0E0:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 0F0:	00 00 00 00 00 00 B5 0F 11 01 00 00 00 00

B00 D1F F04: Intel Cannon Lake PCH - SMBus Controller

## Navigation

Offset 000: 86 80 23 A3 03 00 80 02 10 00 05 0C 00 00 00 00  
 Offset 010: 04 AF EF FF 7F 00 00 00 00 00 00 00 00 00 00 00  
 Offset 020: E1 FE 00 00 00 00 00 00 00 00 00 AA 17 67 22  
 Offset 030: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 10 01 00 00  
 Offset 040: 11 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 050: 01 04 00 00 01 01 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 060: 04 05 05 00 00 00 0A 0A 00 00 00 00 00 00 00 00 00 00  
 Offset 070: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 080: 24 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 090: 00 00 21 01 00 0C 00 00 17 00 20 01 00 0C 00 00  
 Offset 0A0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0B0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0C0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0D0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0E0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0F0: 00 00 00 00 00 00 B5 0F 11 01 00 00 00 00 00

B00 D1F F05: Intel Cannon Lake PCH - SPI (Flash) Controller

Offset 000: 86 80 24 A3 02 04 00 00 10 00 80 0C 00 00 00 00  
 Offset 010: 00 00 01 FE 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 020: 00 00 00 00 00 00 00 00 00 00 00 00 AA 17 67 22  
 Offset 030: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 040: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 050: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 060: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 070: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 080: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 090: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0A0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0B0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0C0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0D0: 00 00 00 00 00 00 00 00 CF FF 00 00 AA 08 00 00  
 Offset 0E0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0F0: 00 00 00 00 00 00 B5 0F 11 01 00 00 00 00 00

B00 D1F F06: Intel(R) Ethernet Connection (7) I219-LM [8086-15BB] [NoDB]

Offset 000: 86 80 BB 15 06 04 10 00 10 00 00 02 00 00 00 00  
 Offset 010: 00 00 1E FE 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 020: 00 00 00 00 00 00 00 00 00 00 00 00 AA 17 67 22  
 Offset 030: 00 00 00 C8 00 00 00 00 00 00 00 00 01 00 00  
 Offset 040: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 050: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 060: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 070: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 080: 28 00 00 08 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 090: 00 00 00 00 1F 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0A0: 00 00 00 FF FF FF FF 03 10 03 10 00 00 00 00  
 Offset 0B0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0C0: 00 00 00 00 00 00 00 00 00 00 01 D0 23 C8 08 21 00 00  
 Offset 0D0: 05 00 81 00 38 07 E0 FE 00 00 00 00 00 00 00 00 00 00  
 Offset 0E0: 13 00 06 03 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0F0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

B01 D00 F00: nVIDIA GeForce GTX 1050 Ti Video Adapter

Offset 000: DE 10 8C 1C 06 00 10 00 A1 00 00 03 00 00 80 00  
 Offset 010: 00 00 00 BF 0C 00 00 60 00 00 00 00 00 0C 00 00 70  
 Offset 020: 00 00 00 01 00 00 00 00 00 00 00 AA 17 67 22  
 Offset 030: 00 00 00 60 00 00 00 00 00 00 00 00 00 00 01 00 00  
 Offset 040: AA 17 67 22 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 050: 01 00 00 00 01 00 00 00 CE D6 23 00 00 00 00 00 00  
 Offset 060: 01 68 03 00 08 00 00 00 05 78 81 00 D8 04 E0 FE  
 Offset 070: 00 00 00 00 00 00 00 00 10 00 02 00 E1 8D 2C 01  
 Offset 080: 30 21 09 00 03 4D 45 00 41 01 03 11 00 00 00 00  
 Offset 090: 00 00 00 00 00 00 00 00 00 00 00 00 13 08 04 00

Offset 0A0: 00 04 00 00 0E 00 00 00 03 00 1F 00 00 00 00 00  
 Offset 0B0: 00 00 00 00 09 00 14 01 00 00 00 00 00 00 00 00  
 Offset 0C0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0D0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0E0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0F0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

Navigation

B01 D00 F01: nVIDIA GP107 - High Definition Audio Controller

Offset 000: DE 10 B9 0F 06 00 10 00 A1 00 03 04 00 00 80 00  
 Offset 010: 00 C0 0F C0 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 020: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 030: 00 00 00 60 00 00 00 00 00 00 00 00 11 02 00 00  
 Offset 040: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 050: 00 00 00 00 00 00 00 00 CE D6 23 00 00 00 00 00 00  
 Offset 060: 01 68 03 00 08 00 00 00 05 78 80 00 00 00 00 00  
 Offset 070: 00 00 00 00 00 00 00 00 10 00 02 00 E1 8D 2C 01  
 Offset 080: 30 21 09 00 03 4D 45 00 03 00 03 11 00 00 00 00  
 Offset 090: 00 00 00 00 00 00 00 00 00 00 00 00 13 08 04 00  
 Offset 0A0: 00 00 00 00 0E 00 00 00 00 00 01 00 00 00 00 00  
 Offset 0B0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0C0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0D0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0E0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0F0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

B02 D00 F00: Toshiba AIS NVMe SSD Controller

Offset 000: 79 11 0F 01 06 04 10 00 01 02 08 01 00 00 00 00  
 Offset 010: 04 00 A0 C0 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 020: 00 00 00 00 00 00 00 00 00 00 00 00 79 11 01 00  
 Offset 030: 00 00 00 40 00 00 00 00 00 00 00 00 00 00 01 00 00  
 Offset 040: 01 50 03 00 08 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 050: 05 70 86 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 060: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 070: 10 B0 02 00 E0 8F E8 17 10 21 19 00 43 78 41 00  
 Offset 080: 42 00 43 10 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 090: 00 00 00 1F 08 00 00 00 04 00 00 0E 00 00 00 00  
 Offset 0A0: 03 00 1E 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0B0: 11 00 07 80 00 20 00 00 00 30 00 00 00 00 00 00 00  
 Offset 0C0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0D0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0E0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0F0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

B71 D00 F00: Standard NVM Express Controller [144D-A808] [NoDB]

Offset 000: 4D 14 08 A8 06 04 10 00 00 02 08 01 00 00 00 00  
 Offset 010: 04 00 90 C0 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 020: 00 00 00 00 00 00 00 00 00 00 00 00 4D 14 01 A8  
 Offset 030: 00 00 00 40 00 00 00 00 00 00 00 00 00 00 01 00 00  
 Offset 040: 01 50 03 00 08 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 050: 05 70 8A 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 060: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 070: 10 B0 02 00 C1 8F E8 17 30 20 00 00 43 78 47 00  
 Offset 080: 42 01 43 10 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 090: 00 00 00 1F 08 00 00 00 04 00 00 0E 00 00 00 00  
 Offset 0A0: 03 00 1E 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0B0: 11 00 20 80 00 30 00 00 00 20 00 00 00 00 00 00 00  
 Offset 0C0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0D0: 03 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0E0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 Offset 0F0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

B72 D00 F00: Broadcom BCM15700A2 802.11ac Wireless Network Adapter

Offset 000: E4 14 BA 43 06 04 10 00 01 00 80 02 00 00 00 00  
 Offset 010: 04 80 8F C0 00 00 00 00 04 00 40 C0 00 00 00 00

Offset 020:	00 00 00 00 00 00 00 00 00 00 00 00 28 10 24 00
Offset 030:	00 00 00 00 48 00 00 00 00 00 00 00 01 00 00
Offset 040:	00 00 00 00 00 00 00 00 01 58 03 FE 08 40 00 00
Offset 050:	00 00 00 00 00 00 00 00 05 68 C9 00 18 05 E0 FE
Offset 060:	00 00 00 00 00 00 00 00 00 09 AC 44 00 09 01 00 00
Offset 070:	00 30 10 18 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 080:	00 30 00 18 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 090:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 0A0:	00 00 00 00 00 00 00 00 40 00 07 00 10 00 02 00
Offset 0B0:	81 8F 90 05 30 24 10 00 11 DC 46 00 43 01 11 10
Offset 0C0:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 0D0:	1F 08 08 00 00 04 00 00 00 00 00 00 01 00 01 00
Offset 0E0:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Offset 0F0:	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

Navigation

## Debug - Video BIOS

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```
C000:0000 U...A.000000000000@0.I/.@...0IBM VGA Compatible BIOS. .....
C000:0040 PCIR.....>.>.>.>.>.>.>.>.>.>.>.>.
C000:0080 .>.....Q.....
C000:00C0 .....DH....DH....DH....0DH....DI....DI....DJ...
C000:0100 ..DJ....0DJ....DI....0DI....DJ....DK....DK....DK....0L....
C000:0140 ..L.....L....0.L.....M.....M....0.^..2....4....8....:<..
C000:0180 ..A.^..C....E....I....K....M....P ^..R ...T ...X ...Z ...` ..
C000:01C0 '..a.'..b'..c.A..d.A..e A..f:[..g.[..h [..i.u..j.u..k u..l..m
C000:0200 ....n ...o....p....q ...}....~.... -..` .....
C000:0240 1..l.....rQ.. n(U..!..... `..... @.....
C000:0280 ....1X. (.....V. .1X. .P.....d..@A.&0..6..... A. 0
C000:02C0 .`.....0*..Q.*@0p.....4..Q.*@.....H?@0b.2@@.....
C000:0300 h[..r.<P.....E.....
C000:0340 .....E.....For Evaluation Use
C000:0380 Only....(.....c-'(.+.....
C000:03C0 .....(.....c-'(.+.....
```

## Debug - Unknown

---

ACPI	BATB: Unknown
HDD	SAMSUNG MZVLB1T0HALR-000L7
HDD	SDXC Card
HDD	THNSN51T02DU7 NVMe TOSHIBA 1024GB
Monitor ID	LEN40BE: Wide viewing angle & High density FlexView Display 3840x2160 [NoDB]
Monitor Vendor	B156ZAN03.2
PCI/AGP	144D-A808 [SubSys: 144D-A801]: Standard NVM Express Controller [144D-A808] [NoDB]
PCI/AGP	8086-15BB [SubSys: 17AA-2267]: Intel(R) Ethernet Connection (7) I219-LM [8086-15BB] [NoDB]
PCI/AGP	8086-A32C [SubSys: 0040-0000]: Intel(R) PCI Express Root Port #21 - A32C [8086-A32C] [NoDB]
PnP	LEN0099: Synaptics Pointing Device [NoDB]
PnP	LEN0100: Lenovo Intelligent Thermal Solution [NoDB]
PnP	STM7304: Trusted Platform Module 2.0 [NoDB]
SSD	SAMSUNG MZVLB1T0HALR-000L7
SSD	Samsung SSD 850 PRO SCSI Disk Device

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