

HWiNFO Computer Hardware Diagnostic

With the hardware diagnostic tool **HWiNFO**, which is free for private use, you can view your computer's data.

HWiNFO is available for DOS up to Windows 11.

<https://www.hwinfo.com/download/>

HWiNFO32 in **Portable** can perform benchmarks on Windows 95 to Windows 10 (32-bit).

Portable also includes **HWiNFO_ARM64** for Raspberry Pi and smartphones.

Use **HWiNFO32** for Windows 32-bit and **HWiNFO64** for Windows 64-bit.

32-bit: Windows 95 to Windows 10 (x86)

64-bit: Windows XP (x64) to Windows 11

HWiNFO64 ran until version 7.72 on Windows XP (64-Bit) to Windows 11.

<https://www.fosshub.com/HWiNFO-old.html>

HWiNFO64 has been running since version 8.00 on Windows 7 (64-bit) to Windows 11.

Version History -> Full version history

<https://www.hwinfo.com/version-history/>

HWiNFO shows all hardware components of your computer.

Example:

Central Processor: Intel Core i5-4570

The screenshot displays the HWiNFO 64 v8.16-5600 application window. The left sidebar shows a tree view of hardware components, with 'Central Processor(s)' selected, showing 'Intel Core i5-4570'. The main panel displays a table of features and descriptions for the processor.

Feature	Description
General Information	
Processor Name:	Intel Core i5-4570
Original Processor Frequency:	3200.0 MHz
CPU ID:	000306C3
CPU Brand Name:	Intel(R) Core(TM) i5-4570 CPU @ 3...
CPU Vendor:	GenuineIntel
CPU Stepping:	C0
CPU Code Name:	Haswell-DT
CPU Technology:	22 nm
CPU S-Spec:	SR14E
CPU Thermal Design Power (TDP):	84.0 W
CPU Thermal Design Current (TDC):	95.0 A
CPU Power Limits (Max):	Power = Unlimited, Time = Unlimited
CPU Power Limit 1 (Long Duration)/P...	Power = 84.00 W, Time = 8.00 se...
CPU Power Limit 2 (Short Duration)/...	Power = 105.00 W, Time = 2.44 ...
CPU Max. Junction Temperature (Tj),...	100 °C
CPU Type:	Production Unit
CPU Platform:	Socket H3 (LGA1150)
Microcode Update Revision:	24
Number of CPU Cores:	4
Number of Logical CPUs:	4

HELGA-PC -> Central Processor(s) -> Intel Core i5-4570

Motherboard: ASUS B85M-E

The screenshot shows the HWiNFO 64 v8.16-5600 interface. The left sidebar lists system components, with 'Motherboard' selected. The main panel displays the following information:

Feature	Description
Computer	
Computer Brand Name:	XTPC XTPC Office 3004BM
Motherboard	
Motherboard Model:	ASUS B85M-E
Motherboard Chipset:	Intel B85 (Lynx Point)
Motherboard Slots:	1xPCI, 2xPCI Express x1, 2xPCI Exp...
PCI Express Version Supported:	v3.0
USB Version Supported:	v3.0
PCH PEG/DMI Ratio:	5/5
BIOS	
BIOS Manufacturer:	American Megatrends
BIOS Date:	04/04/2018
BIOS Version:	3602
UEFI BIOS:	Capable
Super-I/O/LPC Chip:	Nuvoton NCT6791D
Trusted Platform Module (TPM) Chip:	Not Found

HELGA-PC -> Motherboard

Memory: 2 x Crucial 4GB DDR3-1600 / PC3-12800

The screenshot shows the HWiNFO 64 v8.16-5600 interface. The left sidebar lists system components, with 'Memory' selected. The main panel displays the following information:

Feature	Description
General Module Information	
Module Number:	0
Module Size:	4 GBytes
Memory Type:	DDR3 SDRAM
Memory Speed:	Unbuffered DIMM (UDIMM)
Memory Type:	800.0 MHz (DDR3-1600 / PC3-12800)
Module Manufacturer:	Crucial Technology
Module Part Number:	CT51264BA160BJ.C8F
Module Revision:	1
Module Serial Number:	4741 (85120000)
Module Manufacturing Date:	Year: 2000, Week: 0
Module Manufacturing Location:	8
SDRAM Manufacturer:	Micron
Error Check/Correction:	None
Module Characteristics	
Row Address Bits:	16
Column Address Bits:	10
Number Of Banks:	8
Module Density:	4096 Mb
Number Of Ranks:	1
Device Width:	8 bits
Bus Width:	64 bits

HELGA-PC -> Memory -> Row: 0 [BANK 0/ChannelA-DIMM0] - 4 GB PC3-12800 DDR3 SDRAM Crucial Technology CT51264BA160BJ.C8F

Bus: Intel Haswell-DT

The screenshot shows the HWiNFO 64 v8.16-5600 interface. The left sidebar displays a tree view of system components, with 'Bus' expanded and 'PCI Bus #0' selected. The main panel shows the details for the 'Intel Haswell-DT - Host Bridge/DRAM Controller'.

Feature	Description
General Information	
Device Name:	Intel Haswell-DT - Host Bridge/
Original Device Name:	Intel Haswell-DT - Host Bridge/
Device Class:	Host-to-PCI Bridge
Revision ID:	6
PCI Address (Bus:Device:Function) N...	0:0:0
PCI Latency Timer:	0
Hardware ID:	PCI\VEN_8086&DEV_0C00&SUBSY
System Resources	
Interrupt Line:	N/A
Interrupt Pin:	N/A
Features	
Bus Mastering:	Enabled
Running At 66 MHz:	Not Capable
Fast Back-to-Back Transactions:	Capable
Driver Information	
Driver Manufacturer:	Microsoft
Driver Description:	PCI Standard-Host-CPU-Brücke
Driver Provider:	Microsoft

HELGA-PC -> Bus -> PCI Bus #0 -> Intel Haswell-DT - Host Bridge/DRAM Controller

Video Adapter: Intel HD Graphics 4600

The screenshot shows the HWiNFO 64 v8.16-5600 interface. The left sidebar displays a tree view of system components, with 'Video Adapter' expanded and 'Intel HD Graphics 4600' selected. The main panel shows the details for the 'Intel HD Graphics 4600'.

Feature	Description
Video Chipset	
Video Chipset:	Intel HD Graphics 4600
Video Chipset Codename:	Haswell GT2
Video Memory:	1024 MBytes
Video Card	
Video Card:	Intel Haswell-DT GT2 - Integrated Graphics [ASUS]
Video Bus:	PCI
GPU Type:	Integrated
Video RAMDAC:	Internal
Performance	
Graphics Processor Clock:	599.4 MHz
Graphics Memory Clock:	665.0 MHz
Resizable BAR (ReBAR) Support:	Not Supported
Hardware ID:	PCI\VEN_8086&DEV_0412&SUBSYS_85341043&REV_06
PCI Location (Bus:Dev:Fnc):	0:02:0
Driver Information	
Driver Manufacturer:	Intel Corporation
Driver Description:	Intel(R) HD Graphics 4600

HELGA-PC -> Video Adapter -> Intel HD Graphics 4600

Monitor: BenQ E900

The screenshot shows the HWiNFO 64 v8.16-5600 interface. The left sidebar lists system components, with 'Monitor' expanded to show 'BenQ E900 (Analog)'. The main panel displays the following details:

Feature	Description
General Information	
Monitor Name:	BenQ E900 (Analog)
Monitor Name (Manuf):	BenQ E900
Serial Number:	VA805767SL0
Date Of Manufacture:	Week: 42, Year: 2008
Monitor Hardware ID:	Monitor\BNQ7903
Max. Vertical Size:	30 cm
Max. Horizontal Size:	38 cm
Horizontal Frequency:	31 - 83 kHz
Vertical Frequency:	55 - 76 Hz
Maximum Pixel Clock:	140 MHz
Advanced parameters	
Input Signal:	Analog: 0.700 V / 0.300 V (1.000 V p-p)
Display Type:	RGB color
Gamma Factor:	2.20
DPMS Modes	
Standby:	Not Supported
Suspend:	Not Supported
Active Off:	Supported
Standard Colour Space (sRGB) Default:	Supported

HELGA-PC -> Monitor -> BenQ E900 (Analog)

Drives: Seagate ST500DM002-1BD142, SAMSUNG HD322HJ, TSSTcorp CDDVDW SH-224DB

The screenshot shows the HWiNFO 64 v8.16-5600 interface. The left sidebar lists system components, with 'Drives' expanded to show '(S)ATA/ATAPI Drives'. The main panel displays the following details for the selected drive:

Feature	Description
General Information	
Drive Controller:	Serial ATA 6Gb/s @ 6Gb/s
Host Controller:	IDE-Kanal
Drive Model:	Seagate ST500DM002-1BD142
Drive Firmware Revision:	KC48
Drive Serial Number:	Z3TW6Y8L
World Wide Name:	5000C500659CCC7C
Drive Capacity:	476,940 MBytes (500 GB)
Media Rotation Rate:	7200 RPM
ATA Major Version Supported:	ATA/ATAPI-5, ATA/ATAPI-6, ATA/ATAPI-7, ATA...
ATA Minor Version Supported:	ATA8-ACS version 4
ATA Transport Version Supported:	SATA 3.0
Drive Letter(s):	C:, E:, I:
Drive Geometry	
Number of Cylinders:	16383
Number of Heads:	16
Sectors Per Track:	63
Number Of ECC Bytes:	4
Number of Sectors:	16514064
Total 48-bit LBA Sectors:	976773168
Logical Sector Size:	512 Bytes
Cache Buffer Size:	16384 KBytes

HELGA-PC -> Drives -> (S)ATA/ATAPI Drives -> ST500DM002-1BD142

Audio: RealTek ALC887

The screenshot shows the HWINFO 64 v8.16-5600 application window. The left sidebar lists system components, with 'Audio' expanded and 'Intel Lynx Point PCH - High Definition Audio' selected. The main pane displays the following information:

Feature	Description
Audio Adapter:	Intel Lynx Point PCH - High Definition Audio Controller [C2]
Audio Controller Hardware ID:	PCI\VEN_8086&DEV_8C20&SUBSYS_85761043&REV_05
High Definition Audio Codec:	RealTek ALC887
Audio Codec Hardware ID:	HDAUDIO\FUNC_01&VEN_10EC&DEV_0887&SUBSYS_10438576...
Driver Information	
Driver Manufacturer:	Realtek Semiconductor Corp.
Driver Description:	Realtek High Definition Audio
Driver Provider:	Realtek Semiconductor Corp.
Driver Version:	6.0.1.7770
Driver Date:	15-Mar-2016
DeviceInstanceId	HDAUDIO\FUNC_01&VEN_10EC&DEV_0887&SUBSYS_10438576...

HELGA-PC -> Audio -> Intel Lynx Point PCH - High Definition Audio Controller [C2]

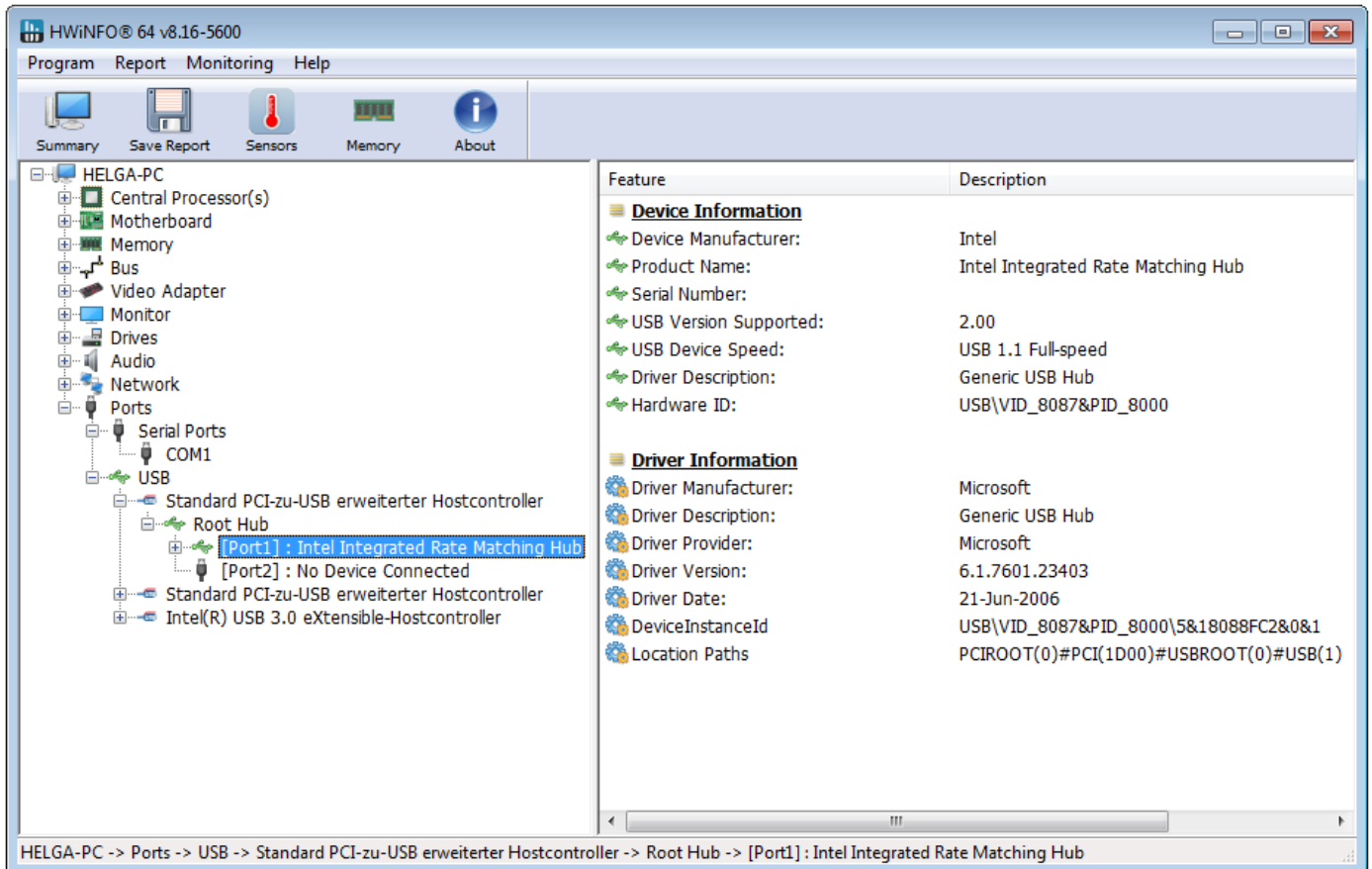
Network: RealTek RTL8168/8111 PCI-E Gigabit Ethernet NIC

The screenshot shows the HWINFO 64 v8.16-5600 application window. The left sidebar lists system components, with 'Network' expanded and 'RealTek Semiconductor RTL8168/8111 PCI-E Gigabit Ethernet NIC' selected. The main pane displays the following information:

Feature	Description
General Information	
Network Card:	RealTek Semiconductor RTL8168/8111 PCI-E Gigabit Ethernet NIC
Vendor Description:	Realtek PCIe GBE Family Controller
MAC Address:	D8-50-E6-BA-3A-EE
Capabilities	
Maximum Link Speed:	1 Gbps
Current Link Speed:	100 Mbps
Transmit Buffer Size:	193792 Bytes
Receive Buffer Size:	775168 Bytes
Hardware ID:	PCI\VEN_10EC&DEV_8168&SUBSYS_85051043&REV_09
Driver Information	
Driver Manufacturer:	Realtek
Driver Description:	Realtek PCIe GBE Family Controller
Driver Provider:	Realtek
Driver Version:	7.92.115.2015
Driver Date:	15-Jan-2015
DeviceInstanceId	PCI\VEN_10EC&DEV_8168&SUBSYS_85051043&REV_09\4&33CE3517&...
Location Paths	PCIROOT(0)#PCI(1C02)#PCI(0000)

HELGA-PC -> Network -> RealTek Semiconductor RTL8168/8111 PCI-E Gigabit Ethernet NIC

Ports: Serial COM1, USB 2.0, USB 3.0



With the information about the Motherboard Model, you can download the Motherboard manual and drivers for the components on the Motherboard from the manufacturer.

There you can also look for different driver versions, for example for the Motherboard Chipset (Chipset), Video Chipset (VGA Drivers), Audio Codec (Audio) and the Network Card (LAN). In most cases, the latest driver version is recommended.

With the information about the components on the Motherboard, you can also see from the manufacturer under CPU / Memory Support which Central Processor (CPU Support) and Memory (Memory / Device Support) the Motherboard can be upgraded with.

ASUS Support

https://www.asus.com/supportonly/b85m-e/helpdesk_cpu/

<https://www.asus.com/support/>

ASRock Support

<https://www.asrock.com/support/>

Gigabyte Support

<https://www.gigabyte.com/Support>

MSI Support

<https://www.msi.com/support>