

Intel® Processor Identification Utility Installation Guide for Windows*

Follow these steps to install the Microsoft Windows* version of the Intel® Processor Identification Utility.

Note Users must have system administrator rights for successful installation with Windows XP* and Windows 2000*.

1. Download and save the [Windows version of the Intel® Processor Identification Utility](#).
2. Click **Windows Start**, and browse the location for the Intel® Processor Identification Utility program.
3. Click the **Intel® Processor Identification Utility program**, click **Open**, and click **OK**.
4. Click **Next** at the InstallShield* wizard.

If a previous version is installed, the InstallShield wizard provides three options: Modify, **Note** repair, and remove. The previous version of the Intel® Processor Identification Utility should be removed before installing the newer version.

5. At the Software License screen, click **Agree** to the terms of the license agreement and click **Next**.
6. In the custom setup installation screen, choose the destination location and folder name for the program installation. Click **Next** to continue.

Note By default, the Intel® Processor Identification Utility is installed under the programs folder in the start menu.

7. Follow the on-screen installation instructions.
8. Click **Finish** in the Setup Complete window.

The installation is now complete. You do not need to restart the computer before running the Intel® Processor Identification Utility.

Running the Intel® Processor Identification Utility

1. Click **Start > All Programs > Intel Processor ID Utility > Processor ID Utility**.
2. At the Intel® Processor Identification Utility license agreement screen, click **Accept**. The Processor Identification Utility screen displays information about your processor.

Intel® Processor Support for Microsoft Windows® 10

Identify the processor in your system. Then see if we have validated your processor to work with Windows® 10.

If you do not see your processor on the list:

- Consult Microsoft's website for more details.
- Run Microsoft's upgrade advisory.


Microsoft may support upgrades on earlier Intel® Processors if the system passes the Windows Upgrade Advisor system review.

Expand all

Click or the topics for details:

How do I identify my processor and operating system? You can use a utility called *System* in the Windows Control Panel. It displays information about your system hardware, including processor information.

To get to *System*:

1. Press the **Windows**  key.
2. Press the **S** key.
3. Type *system* to see the operating system and the processor information. In some operating systems, you can press the **Windows** key and then simply type *system*.

You can also download and run the [Processor Identification Utility for Windows*](#).

How do I determine my processor's generation?

- Processor generation: The first digit in the four-number sequence.
- SKU number: The following three digits in that four-number sequence.

Where applicable, an alpha suffix appears at the end of the processor name, which represents the processor line. Learn more about [Intel® Processor Numbers](#).



Which Intel® Core™ Processors support Windows® 10? All Intel® Core™ Processors with the following codenames are validated to support Windows® 10. Click the appropriate entry below to see a complete list of processors.

- [All 7th Generation Intel® Core™ Processors formerly codenamed Kaby Lake](#)
- [All 6th Generation Intel® Core™ Processors formerly codenamed Skylake](#)
- [All 5th Generation Intel® Core™ Processors formerly codenamed Broadwell](#)
- [All 4th Generation Intel® Core™ Processors formerly codenamed Haswell](#)
- [All 3rd Generation Intel® Core™ Processors formerly codenamed Ivy Bridge](#)
- [All Intel® Processors formerly codenamed Braswell](#)

Which Intel Atom® Processors support Windows® 10? All Intel Atom® Processors with the following codenames support Windows® 10. Click the appropriate entry below to see a complete list of processors.

- [All Intel Atom® Processors formerly codenamed Cherry Trail](#)
- [All Intel Atom® Processors formerly codenamed Bay Trail](#)

Is my Windows 7* or Windows 8.x* system upgradeable to Windows® 10? For systems running Windows 7 or Windows 8.x, you can use the Get Windows® 10 (GWX) application from Microsoft to confirm your system is compatible.

Access the [Microsoft Windows® 10 Q&A](#) for more information.

The following two questions from the Q&A are the most relevant to system compatibility information:

- What is the Get Windows app?
- Why don't I have the Get Windows app?

The table below illustrates Intel's Windows® 10 driver support by version of the Windows® 10 operating system.

Note Other generations that are not listed do not support Windows® 10 driver

Intel® Processor Platform	Formerly Known as (codename)	Windows® 10 32-bit Driver Support	Windows 10 64-bit Driver Support
7th Generation Intel® Core™ Processors	Kaby Lake	No	Yes
6th Generation Intel® Core™ Processors	Skylake	No	Yes
5th Generation Intel® Core™ Processors	Broadwell	No	Yes
4th Generation Intel® Core™ Processors	Haswell	No	Yes
3rd Generation Intel® Core™ Processors	Ivy Bridge	No	Yes ¹
Intel® Atom® Processors	Cherry Trail	Yes	Yes
Intel® Atom® Processors	Bay Trail	Yes ²	Yes
Intel Atom® Processors	Braswell	Yes	Yes
Intel® Xeon® Processor E5 v4 Family (Workstation only)	Broadwell	No	Yes
Intel® Xeon® Processor E5 v3 Family (Workstation only)	Haswell	No	Yes
Intel® Xeon® Processor E3 v6	Kaby Lake	No	Yes
Intel® Xeon® Processor E3 v5	Skylake	No	Yes

¹Upgrade only

²Intel Atom® Processors (codename Bay Trail) are supported for Windows® 10 32-bit platform with the existing drivers that were delivered for Windows 8.1*. Intel plans to certify Windows 8.1* drivers for the Windows® 10 64-bit platform only.

Intel® Desktop Compatibility Tool

The Intel® Desktop Compatibility Tool will allow you to identify compatibility matches between Intel® Desktop Processors, Intel® Desktop Boards and 3rd party desktop boards.

This tool contains compatibility information on desktop processors released after July 27th, 2006, starting with the Intel® Core™2 Duo Processors. Information on previous processor families such as the Intel® Pentium® 4 Processors and Intel® Pentium D Desktop Processors are not available in this tool.

Laptop or Notebook Processor Runs Very Hot

This troubleshooting document is intended only as a guide to resolve various issues with laptops and/or notebooks. Ultimately, your laptop/notebook system manufacturer or mobile motherboard manufacturer may have the very latest information to help resolve your issues.

Note	Disassembling, assembling, upgrading, and troubleshooting computers should be performed only by a computer professional, since the electronic devices may cause serious damage to the installer, the system, and its components if it's done improperly. Before attempting to disassemble or assemble laptop computers, carefully review the documentation specific for the laptop computer and its related components. Make sure that you won't void the warranty of the system by opening the laptop computer or replacing any of the components in the laptop computer. Lastly, make sure to follow Electrostatic Discharge (ESD) procedures .
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- You should make sure that the laptop computer supports the processor that you are installing including type of processor, socket type, speed, and voltage. In addition, make sure that you do not run the processor at a faster speed than indicated on the processor. Lastly, you will need to check if there are any settings in the CMOS setup program that need to be configured on the laptop computer including those that indicate the speed of the processor.
 - [Processor information and comparisons](#)
 - [Intel® Processor Identification Utility](#)

- If the high temperature is being reported by software or the BIOS setup program, check to see if the system feels warm. If the system feels warm, the readings are probably correct. If not, your system may need a BIOS upgrade. Contact your laptop vendor or manufacturer.
- Make sure that the processor fan is connected properly and running properly.
- Make sure that there the air intakes for the fans are unobstructed.
- Make sure that the thermal interface material is applied properly. If you have removed the heatsink fan after initially installing the processor, you should replace the thermal interface material. Since the thermal interface material is different between laptop manufacturers, you must contact your laptop vendor or manufacturer to get the correct thermal interface material for your laptop and processor (those that indicate the speed of the processor).
 - [Thermal management for notebook processors](#)
- Swap the processor with a known good replacement. If possible, try the suspect processor in another notebook or try a known good processor in the suspect system.
 - [Intel® Processor Diagnostic Tool](#)
- If the problem still exists or you determine that the processor is defective, contact your laptop vendor, system manufacturer, or place of purchase.

For more information on [thermal specifications](#), processor power specifications, or on [Enhanced Intel SpeedStep® Technology](#) in general, please refer to explanation provided in each processor's datasheet:

- [Intel® Core™ i3, Intel® Core™ i5, Intel® Core™ i7, Intel® Core™ i7 Extreme Edition Technical Documentation](#)
- [Intel® Core™2 Duo Processors and Intel® Core™2 Extreme Processors for Platforms Based on Mobile Intel® 965 Express Chipset Family Datasheet](#)
- [Intel® Core™2 Duo Processor for Intel® Centrino® Duo Processor Technology Based on Mobile Intel® 945 Express Chipset Family Datasheet](#)
- [Intel® Core™ Duo Processor and Intel® Core™ Solo Processor on 65 nm Process Datasheet](#)
- [Intel® Pentium® Dual-Core Mobile Processor Datasheet](#)
- [Intel® Pentium® M Processor with 2-MB L2 Cache and 533-MHz Front Side Bus Datasheet](#)
- [Intel® Pentium® M Processor on 90 nm Process with 2-MB L2 Cache Datasheet](#)
- [Intel® Pentium® M Processor Datasheet](#)
- [Mobile Pentium® III Processor Datasheet](#)
- [Intel® Celeron® M Processor Datasheet](#)


Intel customer support

If you have an issue **specific to Intel® software or hardware** which can't be addressed by your notebook manufacturer or service provider, Intel offers technical support via the web, email, and telephone. The [Intel® System Information Utility](#) discovers components inside your PC and provides relevant Intel support links.

- [Web Support](#)
 - [Software downloads](#)
 - [Automatically identify and find drivers](#)
 - [Intel System Information Utility](#)
 - [Processor information and comparisons](#)
 - [Intel Support Communities](#)

Note	Customers registered with an Intel® Channel Partner Program should check the Intel® Reseller site for additional product support information.
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Troubleshooting Overheating Issues

Caution 	If you purchased your computer from a computer manufacturer such as Gateway* or Dell*, opening your computer case may void your warranty. Contact your manufacturer if you are experiencing any overheating warning signs.
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If your computer is overheating and it was recently built, the following tips may resolve your issue:

- **Check the Fan/Heat Sink.** Is it properly installed?
 - Are the push pins in the correct position and is the heat sink securely attached to the socket/motherboard?
 - Are you using the recommended fan/heat sink for your boxed processor?
 - If you are using the fan/heat sink that came in the box with your Intel® Boxed Processor, you have the correct one.
 - Is there Thermal Interface Material (TIM) on the bottom of the heat sink?

- Intel® heat sinks have thermal material on them from the factory. If you need additional Thermal Interface Material, and have a boxed processor that is still within the warranty period of three years, contact Intel Customer Support for TIM.
 - [Procedure to replace Thermal Interface Material \(TIM\).](#)
- **Airflow is not blocked.** Move cables or other hardware that may block airflow.
- Do not use more fans than are required for your chassis. More is not better.
- **Update the BIOS.** Verify you have the latest BIOS and [update](#) it if needed. You can identify your current BIOS version by looking at the BIOS string, which appears during boot-up. You can also display the BIOS version by entering BIOS setup by pressing "F2" during system boot-up. The main page of the BIOS setup includes the BIOS version string. For Intel® Motherboards - example, the version string **GB85010A.86A.0046.P05** identifies the BIOS version as **P05**.
- **Correct Chassis.** Do you have the correct chassis for the processor? See [How to recognize a Thermally Advantaged Chassis](#).

If your computer is overheating and it was running fine, the following tips may resolve your issue:

- **Check the Fan/Heat Sink.**
 - Is it damaged?
 - Are there any cracks or missing pieces?
 - Check the push pins for damage and reset them to the original position and reinstall.
 - Clean the fins on the heat sink if you see dust. (Using a can of compressed air/gas duster)
 - If the Thermal Interface Material has become dried and flaky, replace it with Thermally Conductive Compound (also referred to as Thermal Grease or Thermal Compound).
 - Are all your fans operational?
 - Carefully inspect that fans are plugged into the motherboard headers and spinning when system is turned on.
- **Loose or Damaged Cables.** Are there any hard drive cables that may have come loose and are blocking the air flow?
- **Airflow is not blocked.** Move cables or other hardware that may block airflow.
- Do not use more fans than are required for your chassis. More is not better.

No Boot Wizard for Intel® Desktop Processors

The No Boot Wizard provides an interactive, diagnostic flowchart to help you isolate and resolve no-boot situations with Intel® Desktop Boards.

Launch the [Online No Boot Wizard](#).

Special thanks goes to Morris Rosenthal, author of Computer Repair with Diagnostic Flowcharts, 1st Edition, Copyright © 2003.

This article applies to:

Active Products

[Intel® Core™ X-series Processors](#)

[7th Generation Intel® Core™ i7 Processors](#)

[7th Generation Intel® Core™ i5 Processors](#)

[See all](#)

Discontinued Products

[Legacy Intel® Core™ Processors](#)

Computer Is Overheating Warning Signs


Note Intel® Processors have built-in thermal protection. If the processor gets too hot, the built-in protection shuts down the processor. If your computer is not over-clocked, and is running under the design specifications, the built-in protection can help prevent damage to your system. [What do I do if my computer is overheating?](#)

Computer overheating warning signs

Expand all

Click on the topics to expand the content:

Unusual fan sounds Most computers have two fans, one fan that cools the power supply, and one that cools the processor. If a fan starts to make unusual whirring, clicking, clunking, or a musical sound or beep, the fan might be failing. If the fan is the problem, always replace, never repair. **Blue screen** If a fan does fail, the computer might boot up properly but then start to overheat. The most common result is a blue screen. If you keep getting a Windows* error and a blue screen, check the cooling fan and the air flow coming or going from your computer. **Constantly reboots or shuts down** To prevent damage to components, the computer shuts down or reboots if it senses an overheating issue. The system might reboot every few minutes until the problem is resolved. This often occurs if your system CPU is over-clocked (sped up past the recommended speed limits). The BIOS usually reports if a thermal event has occurred. **Non-fan-based CPU overheating** **High temperature** If you use a third party software to measure the temperature or the BIOS readings, contact the software vendor to ensure the software is validated to work with your processor.

Caution  If you purchased your computer from a computer manufacturer such as Gateway* or Dell*, you might void your warranty by opening your computer case. Contact your system manufacturer if you are experiencing any of the warning signs listed above.

How to Clear CMOS to Reset BIOS Settings

Caution



Use of unsupported motherboards can result in improper operation, damage to the desktop board or processor, or reduced product life. Intel may supply links to third party sites, providing such links only constitutes suggestions and should not be mistaken as an endorsement or recommendation for any specific action. Performing actions recommended by third party vendors can result in improper operation, damage to the board or processor, or reduced product life. Except as provided in the Intel Terms and Conditions of sale for such products, Intel assumes no liability whatsoever. Intel disclaims any express or implied warranty relating to sale and/or use of Intel products, including liability or warranties relating to fitness for a particular purpose, merchantability, infringement of any patent copyright, or other intellectual property right.

Expand all

Click or the topic for details:

What is CMOS? How do I clear CMOS? Steps to clear CMOS using the jumper method Steps to clear CMOS using the battery method

Troubleshooting Steps for No Display and No Boot Issues on Intel® Processors

Note This guide only applies to the system installed on Intel® Boxed Desktop Processors.

Use the questions below to troubleshoot No Display or No Boot issues. If the problem persists, contact [Intel Customer Support](#) or your point of purchase to get a replacement.

Begin by rebooting your system. Press the power button for a few seconds until the system reboots. Most motherboards power-on self-test (POST) or beep when there is a booting issue. If that is the case, refer to the motherboard manual to interpret.

Expand all

Click on the sections to expand the content:

Is your system new? Did your system work before? Is the processor compatible with the motherboard?

Basic Troubleshooting

Is the LED light off, not visible on the motherboard, or outside the case near the power supply? Is the LED light on, visible on the motherboard, or outside the case near the power supply? Does it indicate power but show no display?

Advanced Troubleshooting

Does your system still have no boot or no display?

Check:

- If there is any POST or Beep code. Refer to the motherboard manual for Beep code and POST interpretation details.
- You have the memory stick(s) seated properly. Start with one memory stick and insert it into the first channel. Refer to the motherboard manual for proper memory location.
- You have the processor seated properly. You may need to remove and reinstall the processor. Also check that you have the [heatsink installed properly](#).
- You have [properly applied thermal paste](#).

Processor is Not Identified Correctly by the Operating System or an Application

This troubleshooting document is intended only as a guide to resolve various issues with laptops and/or notebooks. Ultimately, your laptop/notebook system manufacturer or mobile motherboard manufacturer may have the very latest information to help resolve your issues.

Important Note: Disassembling, assembling, upgrading and troubleshooting computers should be performed only by a computer professional since the electronic devices may cause serious damage to the installer, the system and its components if it is done improperly. Before attempt to disassemble or assemble laptop computers, carefully review the documentation specific for the laptop computer and its related components. Make sure that you will not be voiding the warranty of the system by opening the laptop computer or replacing any of the components in the laptop computer. Lastly, make sure to follow [Electrostatic Discharge \(ESD\) procedures](#).

- Since many programs detect the processor so that they can better utilize their features, the software may have been written before the processor existed. Therefore, check with the software manufacturer for a patch.

If an application cannot identify a processor, the software will not run with the **Note** processor or it will assume it is an older processor without many of the features that the processor offers resulting in slower performance.

- You should make sure that the laptop computer supports the processor (including type of processor, socket type, speed, and voltage.)
 - [Processor information and comparisons](#)
 - [Intel® Processor Identification Utility](#)
- Make sure that you do not run the processor at a faster speed than is indicated on the processor. (over clocking)
- Check if there are any settings in the CMOS setup program that need to be configured on the laptop computer including those that indicate the speed of the processor.
- Check the CMOS setup program for processors settings.
- Your system may need a BIOS upgrade. Contact your laptop vendor or system manufacturer to see if you need to update to the newest BIOS version.
- Swap the processor with a known good replacement. If possible, try the suspect processor in another notebook or try a known good processor in the suspect system.
 - [Intel® Processor Diagnostic Tool](#)
- If the problem still exists or you determine that the processor is defective, contact your laptop vendor, system manufacturer, or place of purchase.

For more information about mobile Intel® Processors, please refer to [Product Specifications and Comparisons](#) or refer to the explanations provided in each processor's datasheet:

- [Intel® Core™ i7-900 Mobile Processor Extreme Edition Series, Intel® Core™ i7-800 and i7-700 Mobile Processor Series Datasheets](#)
- [Intel® Core™ i5 Mobile Processor datasheets](#)
- [Intel® Core™ i3 Mobile Processor datasheets](#)
- [Intel® Core™2 Duo Processors and Intel® Core™2 Extreme Processors for Platforms Based on Mobile Intel® 965 Express Chipset Family Datasheet](#)
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Intel customer support

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telephone. The [System Information Utility](#) discovers components inside your PC and provides relevant Intel support links.

- [Web Support](#)
 - [Software downloads](#)
 - [Automatically identify and find drivers](#)
 - [System Information Utility](#)
 - [Processor information and comparisons](#)
 - [Intel Support Communities](#)

Note Customers registered with an Intel® Channel Program should check the [Intel Reseller](#) site for additional product support information.

How to find BIOS Version, Motherboard Manufacturer and Model

BIOS version, motherboard (system) manufacturer and motherboard (system) model information can be found using the built-in Microsoft* System Information tool. The info is listed as part of System Summary (see the screenshot below).

System Information (or MSInfo Utility or msinfo32.exe) displays a comprehensive view of your hardware, system components, and software environment.

To invoke system information, choose one of the below methods:

1. Press “Windows” + “s” to bring up search. Type **msinfo32** in the search bar and click **Enter**.
2. Right-click on the Start button and choose **Run** to bring up the **Run** dialog. Type **msinfo32** and click **OK**.

Note	In Windows 7* and later versions, if you run MSINFO32 without Administrator privileges, you may see drivers as stopped when they are not. The cache requires Administrator privileges to update. To avoid the issue, make sure you run MSINFO32 with Administrator privileges.
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System Information

File Edit View Help

System Summary

- Hardware Resources
 - Conflicts/Sharing
 - DMA
 - Forced Hardware
 - I/O
 - IRQs
 - Memory
- Components
 - Multimedia
 - CD-ROM
 - Sound Device
 - Display
 - Infrared
 - Input
 - Modem
 - Network
 - Ports
 - Storage
 - Printing
 - Problem Devices
 - USB
- Software Environment
 - System Drivers
 - Environment Variables
 - Print Jobs
 - Network Connections
 - Running Tasks
 - Loaded Modules
 - Services
 - Program Groups
 - Startup Programs
 - OLE Registration
 - Windows Error Reporting

Item	Value
OS Name	Microsoft Windows 8.1 Enterprise
Version	6.3.9600 Build 9600
Other OS Description	Not Available
OS Manufacturer	Microsoft Corporation
System Name	KVETURI-MOBL
System Manufacturer	Hewlett-Packard
System Model	HP EliteBook 840 G1
System Type	x64-based PC
System SKU	F7N19UP#ABA
Processor	Intel(R) Core(TM) i5-4300U CPU @ 1.90GHz, 2501 Mhz, 2 Core(s), 4 Logical Pr...
BIOS Version/Date	Hewlett-Packard L71 Ver. 01.31, 3/24/2015
SMBIOS Version	2.7
Embedded Controller Version	21.86
BIOS Mode	UEFI
BaseBoard Manufacturer	Hewlett-Packard
BaseBoard Model	Not Available
BaseBoard Name	Base Board
Platform Role	Mobile
Secure Boot State	On
PCR7 Configuration	Elevation Required to View
Windows Directory	C:\windows
System Directory	C:\windows\system32
Boot Device	\Device\HarddiskVolume2
Locale	United States
Hardware Abstraction Layer	Version = "6.3.9600.17196"
User Name	AMR\kveturi
Time Zone	Pacific Daylight Time
Installed Physical Memory (RAM)	4.00 GB
Total Physical Memory	3.90 GB
Available Physical Memory	642 MB
Total Virtual Memory	10.6 GB
Available Virtual Memory	3.40 GB
Page File Space	6.65 GB
Page File	C:\pagefile.sys
Hyper-V - VM Monitor Mode E...	Yes
Hyper-V - Second Level Address...	Yes
Hyper-V - Virtualization Enable...	Yes
Hyper-V - Data Execution Prote...	Yes

Find what: Find Close Find

Search selected category only Search category names only

How to Clear the CMOS on Your Intel® Desktop Board

Clearing the Complementary Metal-Oxide-Semiconductor (CMOS) in your Intel® Desktop Board resets the BIOS settings to their factory defaults. Clearing the CMOS can help troubleshoot, solve certain computer problems, and resolve hardware compatibility issues.

To clear the CMOS:

1. Turn off all peripheral devices connected to the computer.
2. Disconnect the power cord from the AC power source.
3. Remove the computer cover.
4. Find the battery on the board. The battery may be in a horizontal or vertical battery holder, or connected to an onboard header with a wire.
 - a. If the battery is in a holder, note the orientation of the + and – on the battery. With a medium flat-blade screwdriver, gently pry the battery free from its connector.



- b. If the battery is connected to an onboard header with a wire, disconnect the wire from the onboard header.



5. Wait one to two minutes, then reconnect the battery.
6. Put the computer cover back on.
7. Plug the computer and all devices back in.