Troubleshooting 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 or the topic for details:

Is your system new?

- If you're using a new system build, boot using the minimum number of components. For example, you might use one memory module and the processor.
- If you have a new processor, make sure it is compatible with the board.
- Check for visible bent or broken pin(s) on the motherboard. Physical damage may affect the optimum functionality of the processor.

Did your system work before?

- Determine if there have been any recent changes. Often if a change is made, that recent change is the cause of the problem. If there were any hardware changes, reverse the changes.
- If you made any BIOS changes and your system stopped working, we recommend contacting the vendor of the motherboard.

Is the processor compatible with the motherboard?

Check:

- The Intel® Processors and Boards Compatibility Tool to make sure the new processor is compatible with your board. The compatibility tool also determines if the new processor requires a specific desktop board or BIOS version.
- That the memory sticks installed in your system are compatible with the board and the processor.

Basic Troubleshooting

Is the LED light off, not visible on the motherboard, or outside the case near the power supply?

Check:

- All power cables. Ensure they are plugged into the outlet and into the computer.
- The power outlet to ensure it's working properly.
- That the power switch on the computer is on.
- Power supply issues.

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?

Check:

- All the fans are connected and spinning.
- All venting is clear of obstructions. If the processor overheats, the system does not boot.
- The monitor power cables are plugged in and the monitor is on.
- The video cable or cables are connected properly at the monitor and to the computer.
- The monitor for video input selection: VGA, DVI, HDMI, or USB-C.

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.
- And clear the CMOS (complementary metal-oxide-semiconductor). For no boot or no display issues, clearing CMOS may help recover the boards because it restores the BIOS default settings.
- 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.

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.

- 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

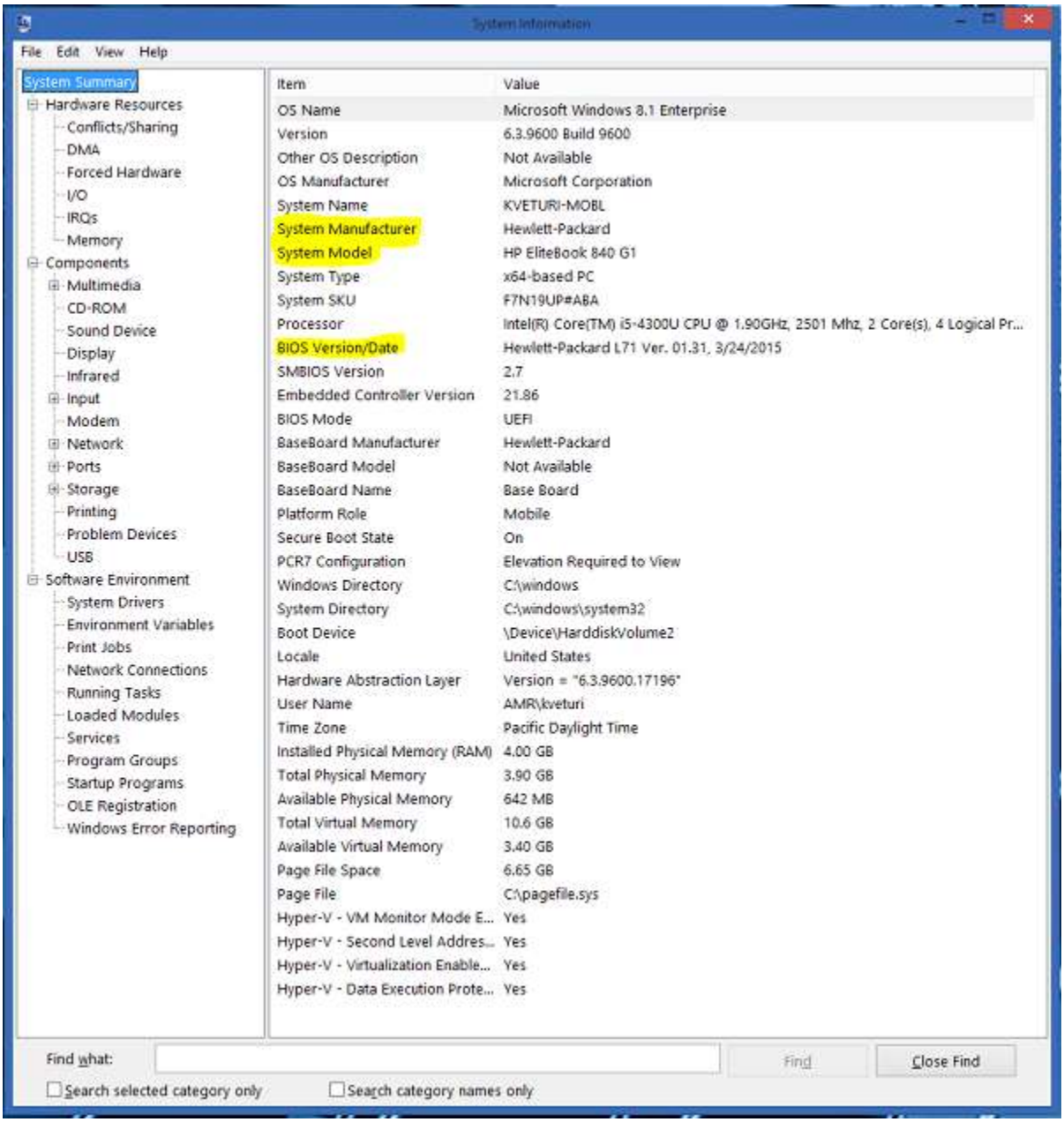
If you have an issue **specific to Intel® software or hardware** which can#39;t be addressed by your notebook manufacturer or service provider, Intel offers technical support via the web, email, and telephone. The Intel® System Support Utility discovers components inside your PC and provides relevant Intel support links.

- Web Support
  - Software downloads
  - Automatically identify and find drivers
  - 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.

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 displays a comprehensive view of your hardware, system components, and software environment.

To invoke system information, press “Windows” + “s” to bring up search. Type **system Information** and click **Enter** to see the system manufacture, system model, and BIOS version/date.