



Computer Starts to Boot, but the Screen is Blank with 486 Upgrade V2

These kinds of problems usually indicate that a conflict exists between the upgrade and the motherboard, BIOS, chipset, motherboard architecture, or system peripherals. Below are some steps that may solve the problem.

1. Check the obvious. Look for any internal or external connections that may be loose or unconnected.
2. Does the system get power? You should get power to the LED lights on both your keyboard and the front of your computer. The fan on your power supply should spin. If the power supply fan or system lights do not operate the upgrade may not be properly seated or lined up with pin one on the socket. (See Step 3)
3. If you are not getting power to your system:
 - A. Turn the computer off, and check the pin one orientation of the upgrade. (See the Manual or Guide for information on proper Insertion of the upgrade)
 - B. Check the seating of the upgrade in the socket. In a LIF/Standard, or ZIF socket the upgrade should fit flush into the socket on all four sides. There should not be a gap between the bottom of the upgrade and the top of the socket. A misaligned socket can cause any number of problems with your system. Some LIF and Standard sockets have close tolerances and may require more force than you would normally expect to fully seat the upgrade. Be sure that the motherboard is properly supported, and does not flex when the upgrade is seated in the socket. Be sure that you do not push on the top of the upgrade to seat it; rather push on the edges of the upgrade's green circuit board.
 - C. Check the upgrade processor for bent or broken pins. The upgrade should have a full grid of pins. If any pins are bent or damaged, you should contact Evergreen Technologies Technical Support.
4. A blank screen can also be caused by cables that are not plugged in correctly. There is a red stripe on all ribbon cables to indicate their pin one side. This pin one side is usually oriented towards the power connector on the back of the drives. Check that all other cables are oriented correctly. Make sure that the cables are not off a row of pins, and that all of the Pins are covered by the cable. Correct alignment is very important
5. Make sure that all of the cards in your system are firmly seated and secured to the case.
6. If you are installing the upgrade into an overdrive socket, make sure the motherboard jumpers are set for the overdrive socket and that the original processor is turned off. This can be one jumper setting or several depending on your system. Make sure to jumper the upgrade for the overdrive socket.
7. Your motherboard's CPU Type should be set for an Intel 486DX or DX2 type processor. This setting is a starting point for troubleshooting; There may be other CPU Types that will work in your system (See Table). Set any jumpers which specify a CPU manufacturer such as Intel, AMD, or Cyrix, to the Intel setting. Once again this is a starting point and other jumper settings may work as well (See Table). Keep in mind that trying both the normal and the overdrive settings will not hurt your system and can help with compatibility and performance. As a general rule, utilize the following table when configuring your motherboard and upgrade :

Motherboard jumpers	Upgrade jumpers
AMD x5/133	Normal/WB
Intel P24D (equal performance to AMD 133)	Overdrive/WB
487sx or ODP (equal performance to DX/DX2)	Overdrive/WT
Intel 486DX or DX2 (Non SL enhanced)	Normal/WT
AMD DXL	Normal/WT

NOTE: Some machines require very specific settings to get them to run properly, and it may be necessary to call Evergreen Technical Support to get these settings.

806 NW Buchanan Ave
Corvallis, Oregon 97330-6211
www.everttech.com

Tech Support (541) 757-7341
FAX (541) 752-9851
techsupport@everttech.com

8. Make sure that the motherboard jumpers controlling the Voltage to the CPU socket are set to 5V (volts). Many motherboards do not allow you to configure the voltage settings, or they are incorporated into the CPU type settings. Other motherboards have separate jumpers to directly configure the voltage. Look in your motherboard documentation for jumpers that configure the CPU voltage. Occasionally, voltage settings are documented in the manual but, physically missing from the motherboard, this usually means that the voltage is controlled automatically and cannot be set. Generally, DX-40, DX4-100, DX2-80, DX4-75, and some DX2-66 processors run at 3.45 volts. On these motherboards the voltage will need to be reset to 5 Volts.
9. Set the 3X/4X jumper on the upgrade to its lowest clock multiplier (3x). If this change allows the system to start and run properly, consult the computer's documentation, and set the CPU clock speed on the motherboard to 40 MHz. This will generate a core speed of 120 MHz, which is generally is 5% faster than 33, and 4X mode. The upgrade is jumpered by default in 4X mode.
10. If your motherboard has VESA Local Bus slots you may need to adjust the VL bus jumpers on the motherboard. Look for jumpers to set the VL, VESA or Local Bus wait state(s) and configuration/speed. Set these to "1 wait state" and ">33 MHz" or to the highest clock speed available. If you are unsure about whether your system has VESA slots, check your system manual or documentation. You can visually check the expansion slots as well. VESA slots look like standard 16 bit ISA slots but have an extension that supports longer cards.

If these steps do not solve the problem, try the following suggestions for changing the settings in your BIOS/CMOS Setup. Your system manual should tell you how to access the Setup program. setup.

BIOS Manufacturer	How to enter BIOS settings
AMI and Award	During the POST process, the system displays the prompt to press DEL for Setup. Press the Delete key at this time
Phoenix	Some use the F2 key after memory count. Others use a CTRL-ALT- combination with the S, ESC or F1 keys.
Compaq	Some use the F10 key after memory count, others use a reference/diagnostic/setup disk.
IBM	Some use the F1 key when the IBM label appears in the upper right hand corner during POST. Others use a reference/setup disk.

NOTE: Whenever making changes to the BIOS, you should first take a moment to record your current settings. Because of the nature of the conflict with the upgrade, you may need to reinstall your original processor to modify your BIOS. Whenever installing or removing a processor from the socket, you should be extremely careful of the processors pins. These pins are very fragile and can be broken easily. Once you have modified the BIOS, you will need to power down the system and reinstall the upgrade processor. If any of these steps do not solve the problem you are experiencing, you should reset the BIOS back to its original settings. You also should limit the number of changes made in the BIOS to only a couple at a time so a bad setting can be returned to its beginning state easily.

CMOS settings you may want to try:

1. The Autoconfigure function and Memory Re-mapping should be set to disabled. They are usually in the Advanced Chipset Menu. In IBM BIOS's you should also disable the Read Pre-fetch feature.
2. Try disabling Hidden Refresh, Above one Meg Test, and Parity checking.

3. Set any wait states (DRAM Read/Write and Cache Read/Write) to the middle or highest settings available.
4. The AT bus Clock setting can also affect the way your upgrade is running. 1/4 or 2/8 is standard for 33 MHz. systems. 1/3 or 2/6 is standard for 25 MHz. systems. 1/5 or 2/10 is standard for 40 MHz. systems. On systems without these settings in the BIOS, a jumper on the motherboard may control this speed. This setting may be part of the "CPU Clock" jumper, so check to see if these jumpers are all set to the appropriate divisor. The AT bus Clock setting is especially important for the operation of cards installed on the motherboard. If it is set too fast or too slow your system will not work correctly.
5. Set both the Video BIOS shadowing and System BIOS shadowing to disable. If you have settings for Adapter ROM Shadowing set these to disable. You should also disable any energy saving features in your system. Note that "System ROM shadowing" and "Adapter ROM shadowing" should be among the first items that you reset back to normal once the upgrade is operational.
6. Check the BIOS for an External and Internal Cache setting; set this to disable. Since the external cache is an important component of system performance, you should re-enable it if the system begins to function correctly.

If these steps solve the problem, you should try returning the settings one at a time to their original values. If the system crashes as you make one of these changes, go back into the BIOS and reverse that change.

If none of these steps correct the difficulties you are experiencing, then the upgrade may be incompatible with your system. A BIOS upgrade **may** correct the incompatibility. Many systems have new "flash" BIOS's available on their web sites (e.g. AST and Compaq). It is important to get the correct BIOS for your specific machine. Please contact the computer manufacturer for more information.

If you are interested in a BIOS upgrade for your system, and cannot get one from your manufacturer, ask them for a recommendation of a third party vendor that may have a BIOS upgrade for your Machine.

You can also contact Unicore at 1-800-800-BIOS to see if your system's BIOS can be upgraded and whether this upgrade will fix the problem that you are experiencing. Be sure to mention that you were referred by Evergreen, and you will receive a discounted price on your BIOS upgrade.

PHOENIX BIOS users can call MicroFirmware at 1-800-767-5465.

If you have any questions, please contact our Technical Support line at 541 757 7341.

Technical support can also be faxed at 541 752 9851.

Visit our web site at www.everttech.com.