



PL-ProMMX PL-ProMMX Plus!

Troubleshooting Guide

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General Troubleshooting Tips

If you encounter difficulties after installing the PL-ProMMX or PL-ProMMX Plus!, please check the following.

1. What kind of processor are you using for the upgrade?

We recommend using the PL-ProMMX and the PL-ProMMX Plus! with the Intel Pentium and Pentium MMX, AMD K6 and K6-2, Cyrix M-II, or IDT WinChip CPUs.

We don't recommend using the AMD K6-III 400MHz CPU with the PL-ProMMX or PL-ProMMX Plus!. The K6-III's 1:1 400MHz L2 cache is too fast for the BIOS "I/O Ready" response, and in most cases will cause the system to hang after checking memory. The K6-III 450MHz is over-specification, and should not be used with the PL-ProMMX.

Note: For the AMD K6-III 400MHz and 450MHz CPUs, use the PowerLeap PL-K6-III instead.

2. Is the system/motherboard on the PowerLeap AMD K6 compatibility list?

Check the AMD K6 compatibility list at http://www.powerleap.com/k6_compatibility_list.htm, and note any information listed in the Upgrade Notes. If your system/motherboard is not listed, it probably has not yet been tested. Please let us know the result of your testing and we will post it.

3. Does the CPU work without the PL-Pro/MMX?

Please confirm that the CPU is functioning normally without the PL-ProMMX or PL-ProMMX Plus!. Also, check for bent pins on both CPU and the PowerLeap adapter.

4. Is the CPU firmly seated in the socket?

Make sure that the CPU is pushed into the socket on the PL-ProMMX or PL-ProMMX Plus! as far down as it will go. The CPU must make firm contact in the socket--there shouldn't be any gap (pins showing). Also, make sure that the adapter is not touching any capacitor or other component on the motherboard.



5. Is the PL-Pro/MMX connected to an external power supply using a dedicated line?

The PL-ProMMX must have sufficient power in order to operate properly. Make sure that the unused connector on the power cord is not connected to a hard disk drive or other device.

6. Does a Windows "Protection Error" appear?

If you are running Windows 95 on a computer with an AMD-K6-2 processor running at speeds of 350MHz and above, you may receive one of the following error messages:

- Windows Protection Error.
- Device IOS failed to initialize.
- You must reboot your computer.

Microsoft recently released a patch for Windows 95 OSR2 (OSR2, OSR2.1, or OSR2.5) to correct a timing problem with the AMD K6-2 at speeds of 350MHz and higher. For complete information on this patch and to get a copy, please go to

http://www.microsoft.com/windows95/downloads/contents/wurecommended/s_wuservicepacks/amdpatch/default.asp?site=95.

Please note that this patch will not resolve issues associated with any versions of Windows 95 other than the OEM SR2 version. If you are not sure which version of Windows 95 you have, you can find out by checking your System Properties. An OEM SR2 system will show a version designator such as "4.00.9500 B". The number may vary slightly, but the letter designator will be a "B" for the OSR2 version. Version designators without a "B", such as an "A" or nothing after the number, cannot use the patch.

If you're running Windows 95 OSR1 (version "A"), your options are: a) upgrade to Windows 98, Win 95 OSR2, or another operating system; or b) run the processor at a speed of less than 350MHz. These error messages are not an issue under Windows 98, Windows NT, or Linux.



7. Is the motherboard bus speed correct? Is the multiplier setting correct for the PL-Pro/MMX?

If the PL-Pro/MMX is working, but not performing at the expected level, make sure that the bus speed and multiplier settings are correct, using this formula:

$$\text{CPU upgrade speed} = \text{bus speed} \times \text{multiplier}$$

For details on how to change the bus speed, please refer to the documentation that came with the motherboard. The PL-ProMMX manual shows the switch settings for changing the clock multiplier.

To check for a timing problem, try setting a lower bus speed and multiplier and see where the upgrade CPU starts working properly.

8. Is the CPU overheating?

If the CPU Control Panel software indicates that the CPU is overheating, please clean off any dust inside the CPU fan. Please also check the airflow path inside the system chassis.

9. What kind of BIOS does the motherboard use? Is the BIOS up-to-date?

If the motherboard has an Intel BIOS, you'll need a third-party BIOS upgrade in order to use a non-Intel CPU. For a motherboard with an Award BIOS, there are no restrictions on the CPU brand.

To determine the computer's BIOS ID, download the CTBIOS tool from <ftp://ftp.heise.de/pub/ct/ctsi/ctbios13.zip>. It displays information about the motherboard chipset, manufacturer, and BIOS ID string.

Many brand name computer manufacturers use OEM motherboards. Check if the BIOS string contains the original maker's ID, then go to their site to look for a BIOS upgrade. Third-party BIOS upgrade sites may also be of use.

You may find it useful to write down the system's IRQ settings before you upgrade the BIOS.



10. Have you checked the BIOS settings?

If your system has timing problems with the new CPU, it may help to change chipset features settings to their slowest values. Enter the BIOS setup and try any of the following:

- In the BIOS's chipset features setup, turn off *Speculative Leadoff* for the memory.
- Disable *Fast EDO Leadoff*.
- Disable *SDRAM Speculative Read*.
- Disable *Auto Configuration*.

Note: The above settings may not be present in all BIOS brands and versions.

You can also select the slowest values by reloading the BIOS default settings.

11. Have you checked for pin AL-1 compatibility?

For split-voltage CPUs, certain HP Vectra (LV5/133 Series 5 DT) systems and certain Biostar motherboards (M5ALA) check for the presence of a signal from pin AL-1. Unfortunately, these aforementioned systems use the pin AL-1 signal differently: the Biostar motherboards need to detect the signal in order to boot, while the signal must be disabled in order for the HP Vectra systems to function properly.

Earlier models of the PL-ProMMX had the AL-1 pin removed, for compatibility with these certain HP Vectra systems. However, current models include the pin, so that the Biostar motherboards are compatible.

If your HP Vectra or Biostar system cannot run properly with the PL-ProMMX installed, try using the CPU with the PowerLeap PL-K6-III (v2.0). This upgrade adapter includes a DIP switch that lets you toggle the pin AL-1 signal on and off.