

# PowerLeap PL-P3/SMP™ Installation Guide

## Slot 1 Server/Workstation CPU Upgrade Adapter

### Before You Start...

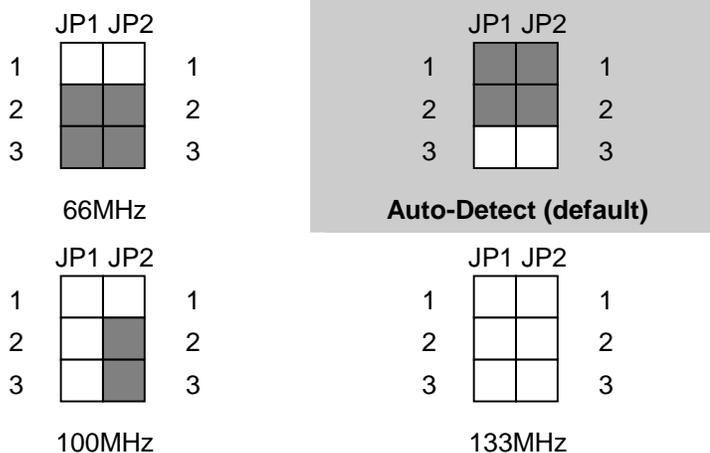
- Check the website of your system or motherboard manufacturer to see if they are offering an updated BIOS version for your system. If you need to upgrade your system BIOS, do so before removing your old CPU.

For more information about BIOS upgrades, refer to "Upgrading Your Computer's BIOS" later in this document.

- Update your computer's sound and video drivers.
- Select the frontside bus speed and dual CPU pin signal by configuring jumper settings on the PL-P3/SMP.
- Unplug your system and remove the cover.

### PL-P3/SMP Jumper Settings

#### JP1 & JP2: Frontside Bus (FSB) Speed



**Note:** This setting depends on the motherboard circuitry design: some VIA 694 chipset-based SMP motherboards can only work stably at 100MHz, not 133MHz.

#### JP3: Dual CPU Signal



### What is the PowerLeap PL-P3/SMP?



The PowerLeap PL-P3/SMP™ provides an economical CPU upgrade path for dual-CPU Slot 1 (Pentium II™- and Pentium III™-based) servers/workstations. With the innovative PL-P3/SMP, you can obtain significantly faster performance (up to 1.4GHz) from your server/workstation by upgrading to Intel Pentium III-S™ ("Tualatin" core, 512KB L2 cache) processors. The PL-P3/SMP™ also supports the Intel Pentium III 1.13/1.2GHz and Celeron 1.0A~1.4GHz CPU for single-CPU operation.

## Installation

Installing the PL-P3/SMP™ is quick and easy: First, remove the original processors from the motherboard's processor slots. Next, insert a processor into the PL-P3/SMP™, apply thermal compound to the processor, and install the heatsink/fan. Finally, install the PL-P3/SMP™ into the motherboard's processor slot and make power connections.

### Removing the original processors from the CPU slots



The original Slot 1 processors. Be sure to disconnect the system power before continuing with your processor upgrade.

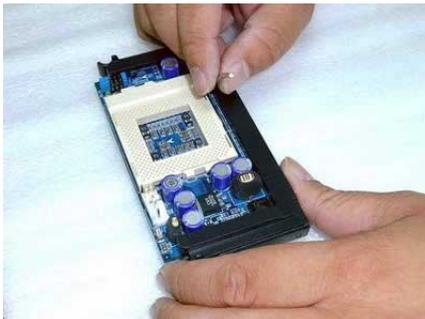


After removing one of the original processors (for details, refer to your motherboard manual).

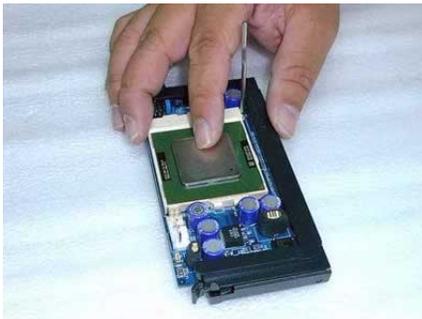


After removing both original processors. We recommend using a small brush to remove any dust from the slots.

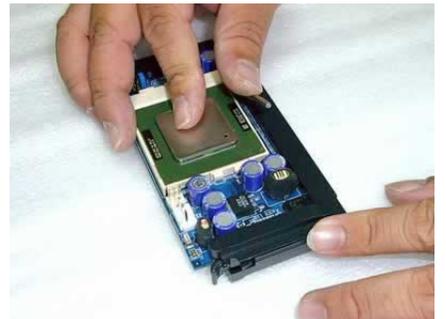
### Inserting a processor, applying thermal compound, and installing the heatsink/fan



Before installing the processor in the PL-P3/SMP.



Installing the processor in the PL-P3/SMP. (1)



Installing the processor in the PL-P3/SMP. (2)



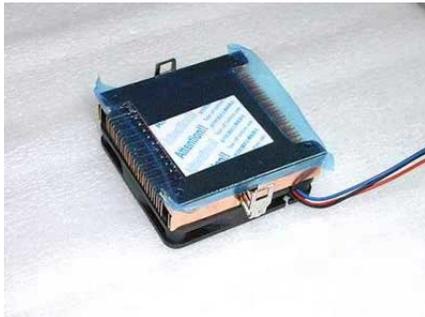
The PL-P3/SMP with installed processor.



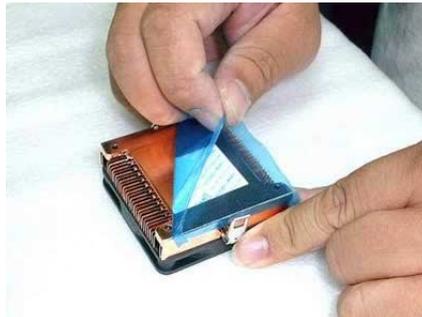
Applying thermal compound to the processor.



The processor after applying thermal compound.



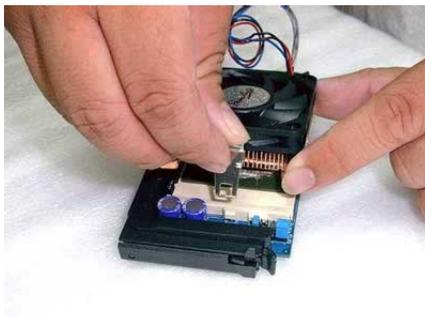
The heatsink with protective membrane.



Peeling off the protective membrane.



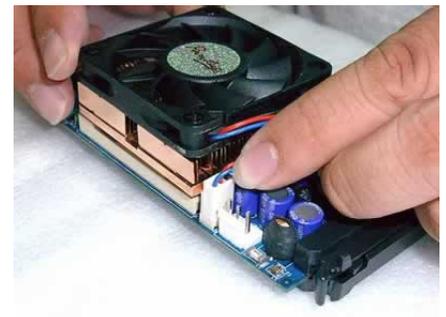
Installing the heatsink/fan onto the processor.



Attaching the heatsink/fan's retaining clip to the ZIF socket. (1)



Attaching the heatsink/fan's retaining clip to the ZIF socket. (2)



Connecting the fan's power cable to the PL-P3/SMP.

## Installing the PL-P3/SMP™ and connecting to a power supply

For most systems, you can connect the provided power cable directly from the PL-P3/SMP to an unused 4-pin connector from the power supply.

### Connecting the PL-P3/SMP™ power cable to an unused connector from the power supply:



After removing the original CPUs.



Connecting the 3-pin end of the PL-P3/SMP's power cable to the PW1 connector on the PL-P3/SMP.



Inserting the first PL-P3/SMP into the processor slot.



Inserting the second PL-P3/SMP into the processor slot.



Connecting the 4-pin end of the PL-P3/SMP's power cable to an unused 4-pin connector from the power supply.



The connected cables for two PL-P3/SMPs.

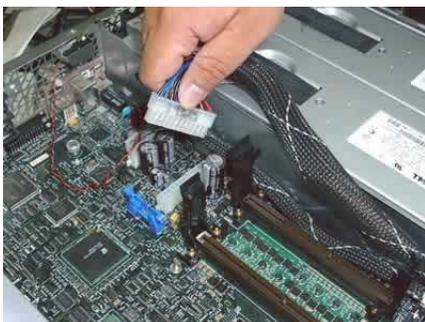
**Important!** Do not connect the PL-P3/SMP to a connector from a hard disk drive or other device.

## Other Power Connection Options

If you can't connect the PL-P3/SMP to an unused connector from your power supply (as shown above)—for example, your system uses a WTX power supply, or a proprietary power supply (including Dell and Compaq models) with non-standard pin signal definitions, or your power supply simply does not have any remaining unused connectors—we can suggest several options:

- Consider upgrading the power supply to obtain more reserved connectors (contact your system vendor for information on power supply upgrades).
- Contact PowerLeap for a custom-designed power cable solution (minimum order: 50 pcs.). The photos below illustrate using a custom-designed power cable to connect the PL-P3/SMP to a power supply.

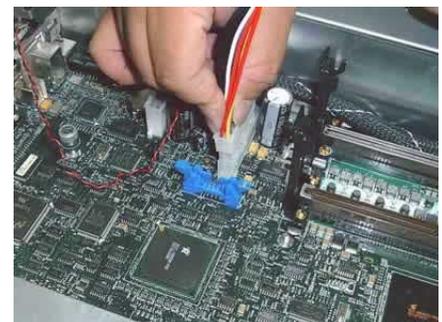
### Using a custom-designed power cable to connect the PL-P3/SMP to a power supply:



Disconnecting the WTX power supply connector from the motherboard.



Connecting the PL-P3/SMP's power cable to the WTX power supply connector.



Connecting the PL-P3/SMP's power cable to the motherboard.



Inserting the first PL-P3/SMP into the processor slot.



Inserting the second PL-P3/SMP into the processor slot.



Connecting the power cable to the first PL-P3/SMP.



Connecting the power cable to the second PL-P3/SMP.



Dual PL-P3/SMPs, installed and connected.

## Troubleshooting

- If the computer won't boot (blank screen) with the PL-P3/SMP™ installed, most likely the CPU is NOT inserted firmly in the upgrade adapter. Also make sure that you have selected the correct frontside bus speed for the new processor.
- If the system stops after memory counting or during system initialization, use more conservative BIOS settings for the main memory and cache memory (for example, change the "CL=2" to "CL=3"), and load the "Fail-Safe" or "BIOS Default Values" option in the BIOS setup. For more information, please refer to the BIOS Guide links listed below.
- If your PL-P3/SMP encounters stability problems (i.e., periodic system freezes), it should be the result of *CPU overheating*. Please make sure the heatsink is properly connected and the fan is working. If overheating is suspected, you need to use "thermal compound" to improve the heat dissipation. We suggest that you read here ([www.arcticsilver.com](http://www.arcticsilver.com)) for more details.
- SoundBlaster audio card users: please upgrade to the latest drivers, or the system may not work normally. This is a known problem with SoundBlaster cards when the CPU is changed. Check here: [www.soundblaster.com/support/drivers/](http://www.soundblaster.com/support/drivers/).
- For Adobe Photoshop 5.5 (or later) crashes or freezes, Adobe suggests moving the Extensions Folder out of the Plug-Ins folder. See [www.adobe.com/support/techdocs/2256a.htm](http://www.adobe.com/support/techdocs/2256a.htm) for more details.
- If your BIOS can't detect and report the new CPU speed and type (or displays an error message during POST), but the system otherwise boots and operates normally, please just ignore the message. The old BIOS was programmed long before the newer CPU became available. This won't affect the performance or compatibility at all. Please use benchmarking software such as WCPUID ([www.h-oda.com](http://www.h-oda.com)) or SiSoftware Sandra ([www.sisoftware.demon.co.uk/sandra/index.htm](http://www.sisoftware.demon.co.uk/sandra/index.htm)) to identify the new CPU.
- Remove any anti-virus program that you may be running before installing the PL-P3/SMP. You can reinstall the anti-virus program after the upgrade installation.



## Upgrading Your Computer's BIOS

Some motherboards may require a BIOS upgrade in order to work with the latest Pentium III and Celeron CPUs. For information about getting a BIOS upgrade for your computer system, start by visiting the brand-name manufacturer's web site. *Do this with your original CPU installed in the motherboard.* BIOS upgrades may be downloaded from the system vendor or the motherboard maker's website(s). If you can't find BIOS upgrade information there, try the following:

- Many brand-name computer manufacturers use OEM motherboards. Check the motherboard maker's ID, then go to their site to look for a BIOS upgrade. Look for upgrades at the sites of your motherboard's original BIOS manufacturer: AMI ([www.amibios.com](http://www.amibios.com)), Award ([www.award.com](http://www.award.com)), MR BIOS ([www.mrbios.com](http://www.mrbios.com)), and Phoenix ([www.ptitd.com](http://www.ptitd.com)) produce popular BIOS software.
- Wim's BIOS Page ([www.wimsbios.com](http://www.wimsbios.com)) discusses BIOS flashing in detail, and so do Lost Circuits ([www.lostcircuits.com/advice/bios.html](http://www.lostcircuits.com/advice/bios.html)) and FlashBIOS ([www.flashbios.org/](http://www.flashbios.org/)). The BIOS Setup Information Guide ([www.matrix-bios.nl/frames.html](http://www.matrix-bios.nl/frames.html)), Tom's Hardware BIOS Guide ([www.tomshardware.com/bios.html](http://www.tomshardware.com/bios.html)), and the BIOS Optimization Guide (<http://www.rojakpot.com/bog.aspx>) also offer a wealth of BIOS information.

**Important!** When installing the latest BIOS for your system, be sure to follow the BIOS upgrade instructions carefully.

**Visit our online technical support area at [www.powerleap.com/support](http://www.powerleap.com/support).**

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