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Evercool PPGA/FC-PGA socket

Intel created quite a stir when they released the FC-PGA [Coppermine](#) CPUs. Only problem was that few consumers were willing to give up their BX boards and switch to the Intel i810 or i820 boards just to update to the latest Pentium design. Then I will hit the scene with their Socket II, which allowed a [FC-PGA](#) CPU to be installed on a slot-1 BX board. Not only did the Iwill unit correct the voltage problems many BX boards would have, but it more importantly corrected the pin-outs of two critical pins on the [FC-PGA](#) to allow it to interface with the BX chipset. Shortly thereafter the market saw many new FC-PGA adapters hit the market from different manufacturers.

[Evercool](#) sent us their new [FC-PGA](#) adapter recently. What struck me about this unit was its total lack of jumpers. The Iwill unit I had reviewed earlier had no less than nine jumpers on it. The jumpers on the Iwill socket were used to designate the CPU voltage, PPGA or [FC-PGA CPU](#), FSB, and whether the CPU was an Intel or Cyrix chip. So I scratched my head and kept staring at the Evercool unit. It looked just like an ordinary PPGA socket, but silk-screened on it is PPGA / FC-PGA. Its beginning to look like Evercool has one of the easiest to use sockets to date.

Installation:

I want to tell you right up front that the installation of this socket went without a hitch. I had some trouble with the original Iwill FC-PGA socket because of the handle on its CPU socket. Once the [Coppermine](#) was placed in the Iwill unit I had a problem with the aftermarket GlobalWin heatsink not sitting flush on the CPU. As a matter of fact, there was quite a noticeable gap when the heatsink was held up to the light. After a little tinkering my solution was to bend the arm of the CPU socket with pliers to get a good fit with the heatsink. I let out a sigh of relief when I mounted the same heatsink onto the Evercool socket. The fit is very tight – but the heatsink does clear the socket's arm. This unit's PCB is just slightly shorter than the Iwill unit – about the width of a nickel. That isn't much, but it does help in extremely tight situations like I encountered with the Palo Alto ATCX case. Likewise, the PPGA Celeron mounted without problems. Anyone who doesn't like the idea of taking hand tools to their new electronic toy will like this unit.

Its time to play:

One area where I was concerned was with FSB support. Iwill's jumpers allowed the selection of 66, 100, or 133 FSB with an additional feature that allowed the motherboard to select the FSB. This unit has nothing like those jumpers, and even stranger, in the upper right corner of the PCB is a soldered on selection of Auto or Overclock. Mine was soldered to the Auto selection. I was beginning to wonder if I had to resolder that connection to the Overclock position to allow me to use some of my motherboard's available FSBs. Good work [Evercool](#), the socket not only worked at normal PPGA and FC-PGA FSB speeds, but handled odd speeds like 138 and 144 MHz without a problem. As a matter of fact, my 500e FC-PGA previously only reached 690 MHz (138 MHz FSB) with the Iwill Socket II. The [Evercool](#) socket ran 690 MHz without any problems and I hit 720 (144 MHz FSB) MHz at which point it locked up at the Windows splash screen. The Iwill unit never even posted at this setting. I don't have to tell you just how out of spec that is compared to the normal 100 MHz this CPU is designed to run at. I fired off an e-mail and was assured by Evercool that the "Auto" setting will allow the motherboard to determine the FSB.

The only thing I can see on this socket that may be a problem is its lack of voltage selection. While most BX boards are now supporting 1.6 v (and lower) with their latest BIOS flash, if your board doesn't you may be in trouble. Both of my BX boards support the new lower FC-PGA voltages natively, and I would venture to guess that most of the BX motherboards on the market do, also. Make sure you are sure though, since waiting for another adapter to come in while your FC-PGA processor sits in its box could really test your patience.

Conclusions:

I'm not an electrical engineer. If I had to come up with a reason why I had better overclocking experiences with this socket over the Iwill unit I would guess it had to do with Iwill's jumpers. To make the jumpers easy to access they are located together on the PCB. This means that some of the tracings have to travel to the jumpers before they can return to their destination. That can cause signal degradation. With no jumpers, the tracings on the Evercool socket are kept to their shortest necessary length. This helps to maintain signal strength and quality. I suspect some "noise" may be introduced with Iwill's jumpers.

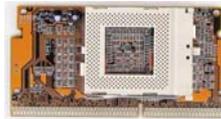
[Evercool's](#) socket is by far easier to use. I'm glad to see that a jumperless design works so well. Cyrix Joshua chips will be giving the [Coppermine](#) a run for their money soon, and since their architecture is specifically designed to be compatible with Intel's, you would think that it would be an easy swap, right? Wrong. This socket won't support the Joshua chip. At this point I can't tell how much of a hindrance this will be for this socket. If you have any plans to upgrade to a Joshua processor then look elsewhere. If you decide you'd rather just stick with Intel's PPGA and [FC-PGA](#) then by all means pick one of these up. Keep in mind that your motherboard needs to support the lower voltages that [FC-PGA](#) processors require so that you too can be running with this jumperless [FC-PGA](#) socket.

When I contacted [Evercool](#) for a distributor of their products in the U.S. they recommended [CWC Group](#). I went to

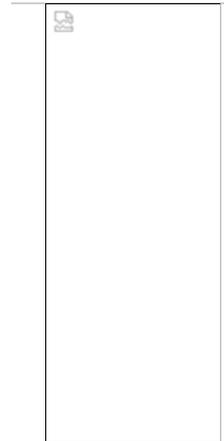
Features

- Supports all Intel PPGA and FC-PGA CPUs
- Works with BX Slot 1 boards
- Auto detects host frequency

The adapter



<http://www.evercool.com>



 Web Target PC

Notes

Pros:

- Totally jumperless – and it works
- My big heatsink fit without problems
- Overclocked better than the Iwill unit

Cons:

- May be hard to locate under the Evercool name (see below)
- No Cyrix Joshua support

[CWC-s](#) site and didn't see this slocket listed. I wrote to [CWC](#), but after a week of not hearing from them I can't give you the pricing or availability of this unit. A few vendors are selling jumperless [FC-PGA](#) adapters so you may want to find out if it is the same unit I tested here. I couldn't find [Evercool's](#) name on the packaging, so vendors may be listing it as a generic unit. Hopefully they'll let you know who supplies their generic unit. Now there's something I like to see, the new guy beating the established favorite, and probably for less money too.

[Victor Oshiro](#)
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