

## Re: Hacking a SunPCi card – anyone tried this?

---

*Source:* <http://sci.tech–archive.net/Archive/sci.electronics.design/2005–11/msg01929.html>

---

- *From:* "Ken Taylor" <[ken123@xxxxxxxxxx](mailto:ken123@xxxxxxxxxx)>
  - *Date:* Fri, 18 Nov 2005 14:26:59 +1300
- 

"Chris Jones" <[luginut808@xxxxxxxxxxxxxxxxxx](mailto:luginut808@xxxxxxxxxxxxxxxxxx)> wrote in message  
[news:11nq77h99s39rab@xxxxxxxxxxxxxxxxxxxxxxxx](mailto:news:11nq77h99s39rab@xxxxxxxxxxxxxxxxxxxxxxxx)

> Hi all,

>

- > I have access to, and the opportunity to play with, (though not at present  
> ownership of) a large number of no–longer–required SunPCI cards. The  
> model  
> is Penguin, Bios V1.1.2 441B. These are basically an AMD x86 PC on a PCI  
> card which plugs into the bus of a SPARC based sun workstation, to allow  
> Sun users to run M\$ windows / PC programs without getting a separate box,  
> power supply, hard drive, network connection etc. The card has a 400MHz  
> AMD cpu, 2 DIMM banks, its own graphics chipset (SiS 5598), W48C67 clock  
> generation, ESS1869F audio chip, Winbond W83877TF peripherals, it has  
> USB1.1 I think, some slightly modified Award bios, a PIC16C64A programmed  
> by Sun, AFAIK to emulate a keyboard and mouse (to get the input from the  
> Sun keyboard and mouse and to provide this to the PC by emulating the  
> hardware. The sticker on the PIC says MSKB 18 (c)1998), and it has an  
> intel  
> 21554 PCI bus bridge, to allow the Sun to access the PC memory I think,  
> (or  
> vice versa?) which allows the PC to render its screen inside a window on  
> the sun desktop, although there is the option to use the internal graphics  
> hardware on the SunPCI card and the VGA connector on the card edge. The  
> card seems to also have an IDE interface though the connector has not been  
> soldered on since the normal usage is to access the a file on the Sun hard  
> drive via some software on the Sun CPU over the PCI bus bridge somehow.  
>
- > Anyhow, what I would like to be able to do is to make the card boot  
> without  
> the Sun workstation attached. It would be a nice little linux PC with  
> only  
> 25W maximum power consumption, and has USB so keyboard and mouse, network  
> and possibly even hard drive etc. could be attached, and could be used as  
> a  
> VOIP box or for web browsing or whatever.  
>
- > Just applying power doesn't seem to do it – I tried plugging it into the  
> PCI  
> bus of an old PC and the fan worked but nothing else. I think either: the

Re: Hacking a SunPCi card – anyone tried this?

- > PIC microcontroller or the Intel bus bridge IC might be holding the SunPCi
- > in reset, or the modified bios on the SunPCi card might be unwilling to
- > boot without some words of encouragement from a genuine Sun workstation,
- > or
- > something I haven't thought of.
- >
- > If I plug it into the Sun machine and run the software on the SPARC cpu
- > that
- > tells the SunPCI to boot, then from what I remember, the internal video
- > port of the SunPCI does become active and shows some text whilst the bios
- > boots properly and then when Win98 runs off the emulated hard drive, the
- > video is switched over to the window on the Sun desktop, so if it were
- > possible to boot the SunPCi without the Sun then I ought to see something
- > on the video port.
- >
- > I considered trying to find out about an open–source bios which could
- > replace the one on the board but it looks to me like these open BIOSs are
- > only available for specific motherboards.
- >
- > These cards are sitting in a pile at work and are causing me great anguish
- > because I can see that they are basically complete low power PCs and they
- > will sit there forever gathering dust unless I figure out how to persuade
- > them to boot. Has anyone else played with one of these? (or ideally I'd
- > love it if one of the designers were lurking here and could give me a
- > quiet
- > hint...)
- >
- > Chris
- >

Take a look here:

<http://www.vdberg.org/~richard/Linux-on-SunPCi-mini-Howto/preface.html#OVERVIEW>

as this dude has set one up with Linux. The approach may give clues about how to make it do MS stuff if that's your thing.

Cheers.

Ken

---

• *Follow-Ups:*

- ◆ *Re: Hacking a SunPCi card – anyone tried this?*

◇ From: Chris Jones

• *References:*

- ◆ *Hacking a SunPCi card – anyone tried this?*

◇ From: Chris Jones

Re: Hacking a SunPCi card – anyone tried this?

- Prev by Date: ***Re: OT : Idiot America !***
- Next by Date: ***Re: Excellent Landing!!!!!!!!!!!!!!!!!!!!!!!!!!!!***
- Previous by thread: ***Hacking a SunPCi card – anyone tried this?***
- Next by thread: ***Re: Hacking a SunPCi card – anyone tried this?***
- Index(es):
  - ◆ ***Date***
  - ◆ ***Thread***