SCRAMNet GT PMC-to-PCIe carrier

Patrick N Laplace <plaplace@unr.edu> Thu, May 16, 2019 at 8:47 AM
To: Andreas Schellenberg <andreas@maffei-structure.com>

Yes, the need for speed! Sadly I've never ran a Hybrid experiment nor used OpenSEES myself, only built the capabilities for someone to use. Moustafa is the first one.

No particular reason for the Innovation, maybe it was the first one I can across. I had the sc150s, then switched to the GTs some time ago. Back then there was the ScramNET PMC and PCI-X form factor. PCI-X slotted motherboards were common enough, so I bought those.

Sometime later I started having trouble finding that PCI-X slot motherboard, so decided to try a PCIe carrier as a future upgrade path if needed. Although the ScramNET PCI-X form factor is not a PMC on a PCI-X carrier, so I'm stuck with those forever.

Good comment on the PCI slots, as those are getting a little less common too. I've always feared ScramNET obsolescence, and I have a GE Fanuc fiber ring (2 cards) that I've tested here. MTS has done 1 or 2 GE controllers, but not very common.

I DO use a Dynamic Engineering cPCI carrier (http://www.dyneng.com/cpcibpmc3u64et.html) with a ScramNET PMC in my LabVIEW PXI boxes though, and that does work. National Instruments SCXI has been obsoleted, so I may be stuck with NI PXI boxes in the future versus doing my own real-time desktops.

Soon I will be obsoleted too!

Patrick

From: Andreas Schellenberg [mailto:andreas@maffei-structure.com]
Sent: Wednesday, May 15, 2019 6:04 PM
To: Patrick N Laplace <plaplace@unr.edu>
Cc: Mohamed A Moustafa <mmoustafa@unr.edu>
Subject: Re: SCRAMNet GT PMC-to-PCIe carrier

Thanks a lot Patrick!

Yes, I am trying to figure all this out for Barb, that is why she was in contact with Roger at Innovative Integration. Roger said that they still have a few carriers in stock, so we could buy 2 from them.

I think either Barb or I will first give Dynamic Engineering a call to see if they have any experience with their carrier being used for SCRAMNet.

The Speedgoat solution will not work for us, because I am building a super fast analysis machine for Barb that is using the i9-9900k CPU and there is no motherboards for that CPU that still have a 5V or 3.3V PCI bus. So we need a PCIe solution. Also, the SCRAMNet GT cards that Barb ordered are actually 3.3V 64bit PMC cards on 5V 32bit PCI carriers (same price as just a PMC card). So we are planning to take the PMC cards off the PCI carrier and put them on a 64bit PCIe carrier instead. According to Curtiss Wright, that should also give you better performance than the 5V 32bit PCI solution.

I will send you an update once we had a chance to talk to Dynamic Engineering.

Just out of curiosity, why did you end up going with the Innovative Integration carrier instead of the Dynamic Engineering one?

Cheers,

Andreas

On Wed, May 15, 2019, 15:52 Patrick N Laplace <plaplace@unr.edu> wrote:

> Andreas,
>
> You're never bothering me!

I finally heard back this morning from Innovation that, yes, they have end-of-lifed that carrier with no replacement, although they said they were preparing a quote for Barb (small world!) for one of a few left in stock.

I was going to recommend rolling the dice on the Dynamic Engineering, as that was next on my list, but I have not tried one yet (but have wanted to).

But, there's the Acromag that Speedgoat uses, it's a PCI carrier (not PCIe). It's nice and cheap at $265 since it's a dumb carrier. If it works in a Speedgoat on a PCI bus then it must work(!), but I have not tried one personally. https://www.acromag.com/catalog/192/embedded-io-processors/carrier-boards/pci-carrier-cards/pci-carrier-boards/apc-pmc

If you're willing to try either I'd love to know how they work. I don't quite have the bandwidth myself to go for one of them, but at least the Speedgoat one should be a guarantee (I hope).

Let me know what you plan on doing!

Patrick

From: Andreas Schellenberg [mailto:andreas@maffei-structure.com]
Sent: Wednesday, May 15, 2019 3:26 PM
To: Patrick N Laplace <plaplace@unr.edu>
Cc: Mohamed A Moustafa <mmoustafa@unr.edu>
Subject: Re: SCRAMNet GT PMC-to-PCIe carrier

Hi Patrick,

I am sorry to keep bothering you.

Did you by any chance use the following PMC-to-PCIe carrier cards from Innovative Integration?

http://www.entegra.co.uk/wp-content/uploads/2014/03/PMC_PCIe_Adapter_datasheet.pdf

This is what Roger Stumpff from Curtiss Wright recommended for the SCRAMNet GT PMC cards, but they are tricky to find nowadays because they stopped making them.

Have you heard anything about the carrier cards from Dynamic Engineering?

http://www.dyneng.com/pciebpmcx1.html

These use the same bridge "Tundra TSI384" and it seems that they provide more flexibility in adjusting clock settings. Also, they have not been discontinued like the cards from Innovative Integration.

Any information or insight you can provide is much appreciated.

Thanks,

Andreas

On Mon, May 13, 2019 at 4:54 PM Andreas Schellenberg <andreas@maffei-structure.com> wrote:

> Hi Patrick,
>
> I hope things are going well with you.
>
> I think that Mohamed has asked you about the PMC-to-PCIe carrier that you guys are using for the hybrid testing.
>
> If you have a chance, could you please send me the specifications and where you purchased the carriers that ended up working for you?
>
> I would much appreciate any information you can provide.
>
> Thanks,
>
> Andreas