

Re: Is a USB to GPIB dongle/convertor a difficult project ?

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- *From:* Joerg <notthisjoergsch@xxxxxxxxxxxxxxxxxxxxxxxxxxxx>
 - *Date:* Mon, 05 May 2008 09:04:50 -0700
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Robert Lacoste wrote:

"Joerg" <notthisjoergsch@xxxxxxxxxxxxxxxxxxxxxxxxxxxx> a écrit dans le message de news: nbmSj.13931\$2g1.11917@xxxxxxxxxxxxxxxxxxxxxxxxxxxx

Hi Joerg,

Just for your information we have just developed and commercialized a new low cost USB/GPIB interface, nicknamed smart488 (well, more information at <http://www.alciom.com/en/smart488.htm>, but my goal here is not to promote it but to answer to the OP...). On the hardware side such a project is not that difficult. We haven't used a FTDI chip plus a microcontroller as Prologix did, but a single USB-enabled microcontroller (a Microchip 18F4550), which allows us to build a more compact device and to simplify advanced firmware features like firmware download through USB and no driver required on the PC side. However the firmware side for such a project is far more complex. GPIB basics are quite easy to understand as long as you buy the IEEE488 specs, but making such an interface compatible with a significant number of GPIB equipments is not that easy. If you develop such a product yourself take care of the EOI subtleties in particular...

No pun intended, Robert, but the Prologix over here seems to be cheaper than the the price your French distributor charges:

http://www.sparkfun.com/commerce/product_info.php?products_id=549
versus
<http://www.lextronic.fr/P3171-cordon-dinterface-usb--gpiib.html>

But I guess that's because the USD/Euro exchange rate has pretty much flipped around within a couple years.

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Yes, we hope that the US\$ will be higher soon... and I think we are not alone to have the same hope over the world ;+). A 60% increase of the \$US to Eur exchange rate in a couple of years is not really understandable, at least by an engineer !

It is an over-reaction and might be turning around now but who knows. It's even less understandable in view of inflation levels in Europe. I thought they must be higher here but yesterday we had an article in the morning paper about a French couple just outside of Paris. Even the bread price had been raised three times already this year. Both working. They had a combined annual net income of around 40000 Euros and lived frugally but ran into overdraft on their bank account every month.

I still miss the cheese section of the Carrefour supermarket ...

Is there a chance your adapter will be marketed in the US anytime soon?

As soon as a distributor will ring us ;;+).

If they find it. GPIB isn't a hot bus anymore, you might have to ring them instead of waiting. Or as one family here put it when their daughter was considering not going to a certain party: Mr. Nice Guy isn't going to come along on a white horse anymore these days. She found Mr. Nice Guy on that party and they are getting married ;-)

For future versions you might want to consider a separate USB cable like on the Prologix. The main reason is that large analyzers must often be pushed close to the wall because of their depth. That requires a USB connector so you can insert one of those right angle adapters and then the USB cable. Otherwise there is a chance the USB cable will be bent at too sharp a radius or even hit the wall.

We hesitated twice between the option of a fixed USB cable and the use of a standard type-B USB connector. We finally decided that the fixed cable option was better just because it is more reliable. You're right, cable may be deteriorated, but we didn't want to have the risk of disconnected type-B connectors behind a pile of a dozen heavy equipments... Moreover the built in cable allowed us to have drastically better EMC results...

Yes, EMC is a pain with USB. Loose connector aren't such a problem. Happens all the time. Did I plug in that BNC? Oh no ... move that freaking heavy HP4191 back out, plug in, push it back, take pain pill before the sciatic nerve flares up again.

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Regards, Joerg

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