

Re: Faster LIN or simpler CAN or ...? PIC16 or Cypress FX2LP or ...?

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- *From:* "Ulf Samuelsson" <ulf@xxxxxxxxxxxxxx>
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Bill Davy wrote:

- > To support various modules inside a machine. The likely architecture
- > is a front end PC talking USB 2.0 to a Cypress FX2LP in the machine.
- > That then splits the control work out to various nodes (spinner,
- > motor, shutter, laser, etc), connected by a bus.
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- >
- > a) CAN involves me in checking each message was received once and
- > only once. There's not a lot of space in the Cypress for that sort of
- > thing.
- >
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- >
- > b) We could use LIN but it seems jolly slow. Would mean a nice simple
- > processor in each node with a little programming and offering some
- > flexibility.
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- > c) We could use a modified form of I2C but that means no intelligence
- > at each node (and no programming, which is quite a good thing, in
- > some ways).
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- >
- > Can I do LIN master in the Cypress FX2 (8051 based with a couple of
- > UART's)?
- >
- > Is there a reasonably standard way for doing LIN slave? I'd prefer
- > 8051 based (so I can go on using the Keil compiler) or PIC16 (which
- > we have also used).
- >
- > Any other thoughts (but not too innovative – this is a development
- > project)?

Control stuff from a PC and use of USB throughout?
No Central CPU, just some Hubs.

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AT89C5131 is 8051 with USB

Run a Fast USART : TXD,RXD,SCLK (driven by master) over RS485.

This is supported by AVRs and AT91 ARMs.

You would need a resonator with each node, but the speed is higher.

There are free GNU compilers /AVR Studio for the AVR.

ARMs up to 32 kB (AT91SAM7S321) compilers are quite often free of charge (Code restriction <= 32 kB).

I think You would enjoy AVR or ARM programming over 8051/PIC. Most do.

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>
> tia,
>
> Bill

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Best Regards,
Ulf Samuelsson
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This message is intended to be my own personal view and it may or may not be shared by my employer Atmel Nordic AB

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• **References:**

◆ **Faster LIN or simpler CAN or ...? PIC16 or Cypress FX2LP or ...?**

◇ From: Bill Davy

• Prev by