

## Re: Sharing memory

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- *From:* "Chris" <[cfoley1064@xxxxxxxxxx](mailto:cfoley1064@xxxxxxxxxx)>
  - *Date:* 8 Mar 2007 17:07:02 -0800
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On Mar 8, 9:13 am, "eromlignod" <[eromlig...@xxxxxxxx](mailto:eromlig...@xxxxxxxx)> wrote:

Hi guys:

I'm an ME and I have an application where I'd like to use two Basic Stamp microcontrollers working together. One is the main processor that runs the show and does calculations; the other is a dedicated slave that constantly distributes a series of 16-bit numbers to various devices in a continuous, timed loop. The first processor calculates what these numbers are based on feedback sources.

The reason I use a dedicated second processor is that its stream of numbers can't be interrupted...it has to provide a continuous series of values on a clock. The problem is that I can't even interrupt it long enough to pass numbers to it from the other processor without messing up the sequence.

What I'd like to try (if possible) is to share the same memory between the two MCU's. So the first Basic Stamp is calculating values and storing them to memory and the second Basic Stamp is using them as if they were in its own memory bank simply by referring to a value by variable name (or address??...I don't know).

Is this possible and, if so, what would be a good way of going about it? I'm also open to alternate suggestions to solve the problem including using a different processor (I would like to avoid investing in another development kit or chip burner if possible though).

Thanks for any help you can provide.

Don

Hi, Don. I'm guessing from the description of your problem that you're using two BS2-ICs, which have 16 I/O pins. You might want to look into the Parallax BS2p40-IC. It has 32 I/O pins, and runs at the same clock speed as the BS2. This will allow you to retain nearly all of your investment in programming and debug time, and you can duplicate your BS2 development board for the BS2p40-IC with little

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effort. This way you can output your 16-bit number and do everything you're doing now with almost no changes (except you'll have time to relax for a change).

The Basic Stamp isn't set up to share memory -- the serial EEPROM is meant to store the tokenized program, which needs to be continuously accessed. Any external memory is going to be an I/O hog, unless you use serial. If you are spending time bit-banging an external serial EEPROM from I/O pins in Stamp BASIC, not to mention arbitrating between two Stamps, your already slow setup will get even more bogged down.

Good luck, and feel free to post again if this isn't satisfactory -- there are many other solutions, depending on the specifics of your problem. If you decide to post again, please include some specifics -- such as which Stamp you're using, how many I/O you need, and a sense of what you're doing with your project.

Chris

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