

# Re: Designing a protocol for the first time

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*Source:* <http://coding.derkeiler.com/Archive/General/comp.arch.embedded/2008-03/msg00276.html>

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  - *Date:* Thu, 06 Mar 2008 20:36:07 GMT
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CBFalconer wrote:

If you are going to consider X-modem, try Z-modem. Much better error control, speed, etc. Uses the same transmission paths.

Sorry to pick on your idea CBF.

Xmodem is considerably easier to implement than Zmodem. I implemented Xmodem when I was about 10 or 11 years old, first in Basic, and then in C. I remember Zmodem when it was first released, and it was great. Big improvement over Xmodem and Ymodem, lots of extra features and functionality. But it was also a lot more complex. Sliding windows, automatic recovery, big checksums, transfer of filenames, etc etc.

I'm not necessarily advocating anything for your particular application, just wanted to point out that using Zmodem might not be a slam dunk.

Oh, and regarding FTDI chips. Their chips, drivers, and support are all top notch. I'm using their FT232BM chip at 2mbps, and it works reliably. I started using their VCP drivers, which work very well. I eventually switched to using their D2XX .dll drivers, because it offers more fine-grain control.

Be sure to download the datasheets, app notes, and tips on their website, especially when they talk about latency, baud rates, etc.

Hope this helps

Keith

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