Subject: Re: A simple CP/M Z80 SBC without glue logic
Posted by etchedpixels on Fri, 15 Mar 2019 12:21:33 GMT
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If I remember rightly the Z80 PIO ports are deliberately set up to power on as inputs so you don't risk damage during power up and configuration. I guess therefore you can use that to do the ROM/RAM select at boot time if you pull it the right way and still have plenty of spare PIO bits.

You could also save logic by tying the chip select of the KIO to something like A15 low. Quite a few home micros actually avoided lots of glue by using A15 / A14 / A13 / ... as selects for the I/O device and wired the low bits to the register select - taking the small software hit of doing ld bc,#0x7ffx out (c),a etc for the different devices.

If you are trying to be minimal you could also bitbang an SD card with some of the PIO bits and 5v/3.3v shifting (or just one of the cheap off the shelf adapters). If you pick the right PIO bits a Z80 at 7.3MHz can do about 18-19Kbyte/second so floppy like and good enough for CP/M. If you mix the Ax low trick with the PIO bits you have to unroll one of the loops 8 ways but it's still works nicely.

What to do with the spare space - I guess support bigger RAM as an option, and maybe have flash with a jtag programming header not ROM, oh and rc2014 connector ?

Possibly more important if it's meant to be a 'first build' would be some status LEDs and test points ?