

Glomation GESBC-9G20 Update

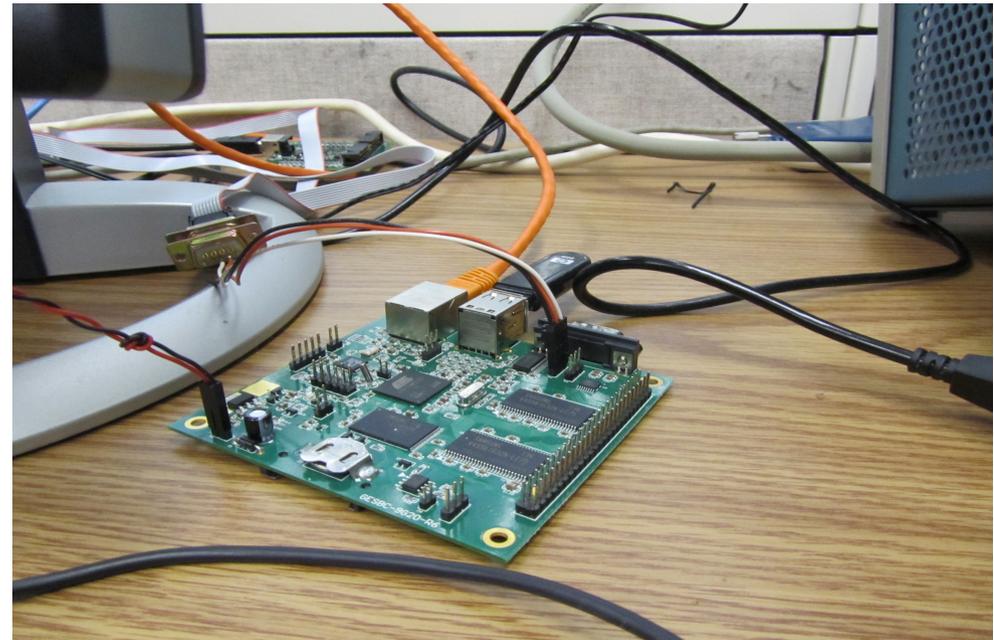
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(with work by D. Huffman)

Overview

- GESBC-9G20 is a single board computer with multiple serial ports, digital IO and 3 ADC channels and an ethernet port.
- One should be mounted in each rack, to measure rack temperature amongst others.
- It needs to run code that talks to its various inputs and presumably talk to an EPICS server over the net to download this data.
- Local logs are probably not sustainable for longer periods due to limited disk space (total 256MB total)

Progress up to now

- Dave Huffman did all the real work and set it up talking to a WIN machine (power supply + serial port connect).
- Out of the box needs to be connected via serial port 0 (debug). Can then setup ip address and connect via telnet.
- gcc not present in the standard version of the system.
- Got it to run a debian system (provided by Glomation) off of a usb-stick. gcc present – compiled “hello world”. Perl is also on board – can probably set up simple udp server or client.
- The “hello world” runs also on the “bare” system.
- Moved it to WH10NW



What to do next

- The extra debian system provided by Glomation is over 300MB, whereas GESBC-9G20 has 256 MB of space by default.
- There is a slot for a flash card on the board – maybe we can install the extra system on flash cards (1GB) and run off those.
- To do: get the board to boot off of flash card with new system (or just automatically chroot after standard boot). If we want to do it that way.
- “Kerberize” the board?
- Set up cross-compiling environment to speed up code development.
- Find out how to talk to the ADC and other non-standard ports (ATMEL chip library or just simple register writing/reading?)
- Set up a client/server protocol with an EPICs instance on a separate PC

