Rev1 Assembly Notes

Debug board

- F202 footprint appears to be too large for the fuse ordered (NANOSMDC050F/13.2-2)
4C4B7710-7F08-4D19-BEB5-0A50049FE9E9.jpeg
- F201 is actually 1.1A, not 1.5A as the schematics indicate
- Caps under Teensy (C316/C317) could use with being moved a bit
- U508/U509 package sucks ass
- C512/C511 should be further away from IC in -Y
- The indications for RESET and HALT are inverted (D401, D402) from what they should be
- Teensy USB port interferes with J302 with some USB cables
- Solder pads for DIN connectors could be slightly wider copper
- Logic probe connectors need more spacing in Y direction to fit the probes

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CPU Board

- +12V fuse (F202) footprint is wrong
- Reset and NMI button logic is inverted from what it should be (lol)
  - U501 shouldn't be inverting type (use 74HC2G17 instead)
- D201 should be further set back (.3mm) from board edge
  - The H100 series LED seems to have a slightly different pin-to-front distance than the H201 double LED indicators
- 5V Analog caps (C608, C609, C614) should be up more
- LED current limiting resistors are out of whack
  - Lower the current limiting resistors for right angle LED indicators (needs more current)
  - Increase the current limiting resistors for two bonus debug LEDs (needs less current)
- Read/modify/write cycles may not work right
  - We need to deassert /DTACK when both /LDS and /UDS get deasserted
    - Neither of the byte strobes are on U102, which is responsible for generating /DTACK
    - *May* be able to bodge these into the GAL, since there’s a few spare inputs
  - Also, the /BERR timer and peripheral waitstate generator are reset by /AS
    - Probably a non issue since RAM is going to be 0 waitstate, and we can say CPU board peripherals don’t support read-modify-write (maybe only an issue for NVRAM)
- UART B (J503) should be centered between LEDs and UART A jack

Revision #15
Created 25 December 2021 02:05:17
Updated 29 December 2021 07:52:29