

Setup:

Hardware tools used:

- Cnano AVR128DA48 A6
- Power debugger
- Another Avr128da48 cnano (for DAC)

Software tools:

- Hercules terminal software (9600, 8N1)
- MPLABX IDE 5.40
- Atmel Studio (to control power debugger)

Performed steps:

- Connect Power debugger with wires to the board (GND and PD1).
- Connect USB for board and USB for power debugger/ USB for the second board to PC.
- Start terminal software and configure communication parameters.
- Program the board using MPLAB X.

Expected behavior:

- nothing visible should happen after programming.
- press on board button
- the on board LED will toggle
- in terminal a message will appear with the conversion result

Test voltage steps: (generated from power debugger)

0.00

0.82

=====

1.65

2.47

3.30

The first two values are produced by the DAC from the second cnano board while the final three values are produced by the power debugger.

The values will be tested first increasing and then decreasing.

Expected measurement results should not exceed 5% error.

Every button press should produce only one conversion result and only one LED toggle.