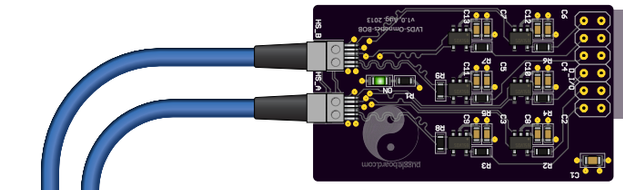
puggle

www.puggleboard.com

- Low cost, ARM-based data acquisition and processing tool
- Sense, process, and react to input signals in hard real-time
- Built on the popular Beaglebone $45 embedded Linux computer

$150* *Approximate materials cost. Does not include Intan™ chips, cables, or headstage PCBs.

Acquisition to processor to output: < 1 msec

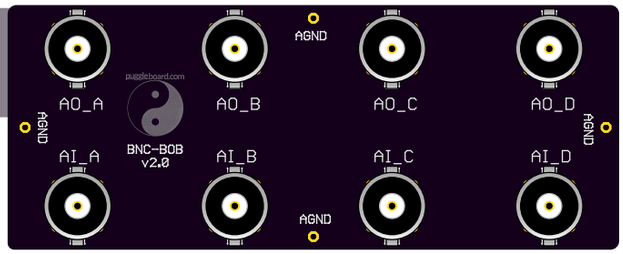


LVDS break-out board

2X SPI Buses

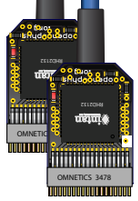
Integrated SD-card

Analog I/O



BNC break-out board

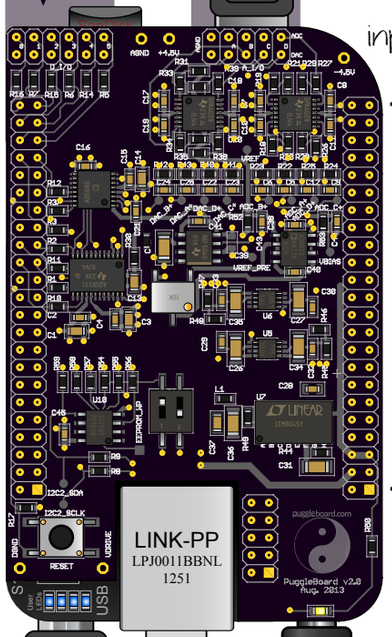
USB2.0 input



Open Ephys or Intan™ headstage(s)

Under the Hood:

- Beaglebone computer w/ 1 GHz ARM Sitara™ Cortex-A8 processor
- Light-weight, real-time OS based on Ångström Linux
- Dual 32-bit MCUs for driving Intan™ chips
- Hard real-time floating point processing
- 512MB DDR3 RAM
- 2 GBs eMMC along with SD-Card for extended on-board storage



Lots of extra GPIO

1.0 in.
25.4 mm

USB2.0 to host PC

10/100 ethernet connectivity

+5V from wall-wart

I/O Summary:

- 2X LVDS SPI buses for communicating with Intan™ chips
- 4X 16-bit auxiliary analog inputs over +/- 4.096V
- 4X 16-bit auxiliary analog outputs over +/- 4.096V
- Many options for host PC interfacing (USB, ethernet, etc.)
- Compatible with RTXI and Open Ephys for visualization and buffered processing routines

Learn more

www.puggleboard.com
www.rtxi.org
www.open-ephys.org

Fork us on github

github.com/PuggleBoard

Visit our poster

783.27/NNN32
Wednesday, Nov 13
10:00 -11:00 AM

beagleboard.org RTXI open ephys Laboratory for Neuroengineering Georgia Tech