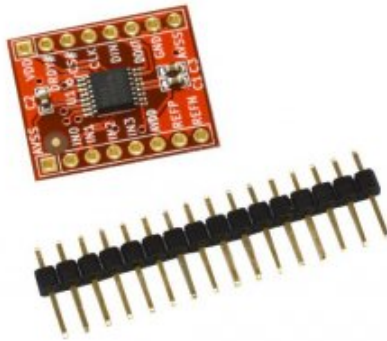


BB-ADS1220



BB-ADS1220 is [OSHW certified](#) Open Source Hardware with UID BG000068.

ADS1220 features two differential or four single-ended inputs through a flexible input multiplexer (MUX), a low-noise, programmable gain amplifier (PGA), two programmable excitation current sources, a voltage reference, an oscillator, a low-side switch, and a precision temperature sensor.

FEATURES

Board features:

- Fully integrated TI ADS1220
- All IC pins available at the two connector rows
- Each signal is named near the connector
- Breadboard-friendly 0.1" step between pins
- Included plastic headers for easier mounting on a breadboard (not soldered to the board)

DOCUMENTS

- [ADS1220 datasheet](#)
- [BB-ADS1220 European Declaration of Conformity](#)

HARDWARE

- [KiCAD CAD files on GitHub](#)
- [BB-ADS1220 schematic in PDF format](#)

SOFTWARE

→ Board dimensions: (750 x 850)mil ~ (19.0 x 21.5)mm

→ [OLIMEXINO-32U4 \(Arduino Leonardo\) example](#)

→ [Python example \(Debian Wheezy images only\)](#)

→ [Arduino examples](#)

Texas Instruments ADS1220 features:

→ Low Current Consumption 120 μ A in Duty-Cycle Mode

→ Wide Supply Range: 2.3 V to 5.5 V

→ Programmable Gain: 1 V/V to 128 V/V

→ Programmable Data Rates: Up to 2 kSPS

→ Up to 20-Bits Effective Resolution

→ Simultaneous 50-Hz and 60-Hz Rejection at 20 SPS
with Single-Cycle Settling Digital Filter

→ Two Differential or Four Single-Ended Inputs

→ Dual Matched Programmable Current Sources: 10 μ A to
1.5 mA

→ Internal 2.048-V Reference: 5 ppm/ $^{\circ}$ C (typ) Drift

→ Internal 2% Accurate Oscillator

→ Internal Temperature Sensor: 0.5 $^{\circ}$ C (typ) Accuracy

→ SPI-Compatible Interface (Mode 1)