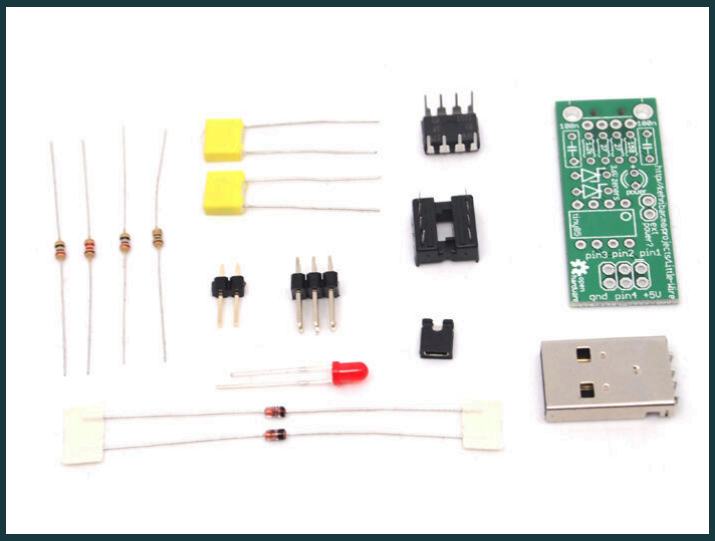
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INDUSTRIAL PRODUCT DATASHEET

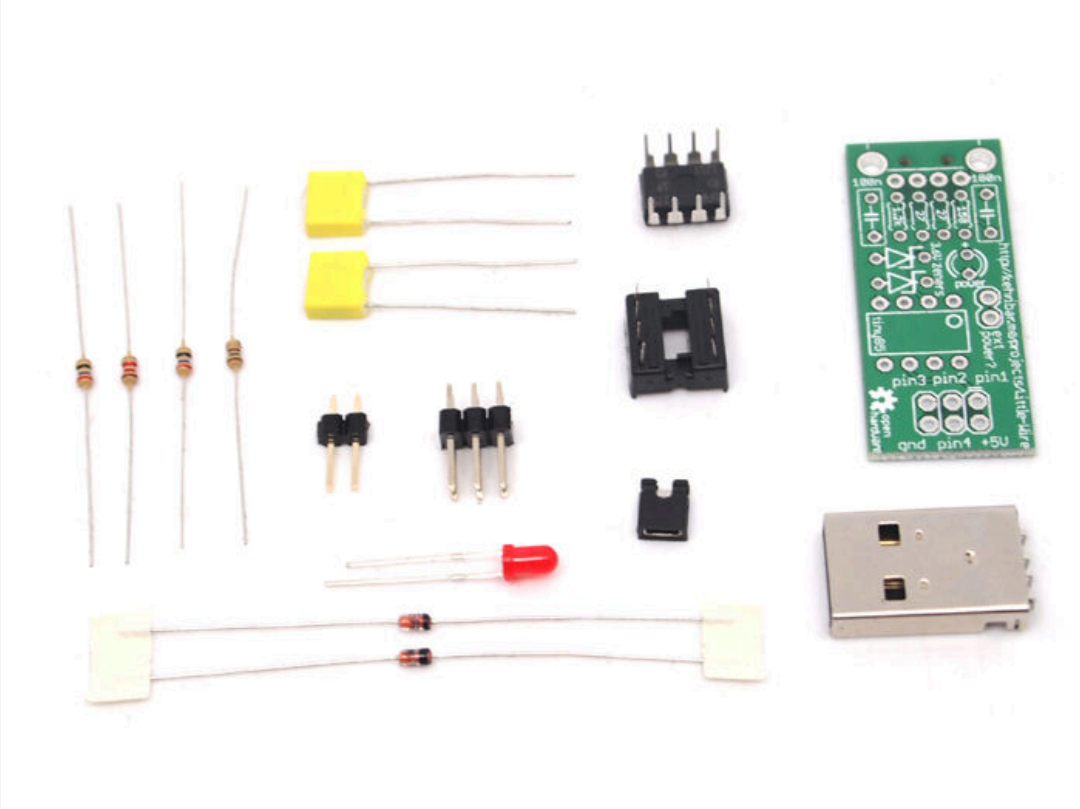
Little Wire

Little Wire is a compact, USB-controlled multi-tool with open-source hardware design, featuring digital I/O, ADC, PWM, SPI, I2C, and AVR ISP programming.

SKU	UPDATED	PRICE
AVR06071P	2024-08-09 02:11:41	$19.00(Excl. VAT)



Overview



Little Wire is an open-source, multi-featured USB controlled hardware tool packed in a minimal form factor, suitable for beginners due to its all through-hole component design. It provides 4-channel digital I/O, 10-bit ADC, two PWM outputs, SPI, I2C, USBtiny compatible AVR programmer, and USB to UART conversion, all controlled via USB from a host computer.

Key Features

Little Wire is multi-featured USB controlled open source hardware tool packed in a minimal form factor designed by ihsan Kehribar. Even though it has minimal form factor, and packed with full of features; there aren't any SMT components involved, therefore it is very suitable for beginners to assemble.

This tool has to take instructions at run-time over USB. It can't work in a computer-less environment.

Note

V1.1 beta firmware released for the Little Wire. You can find the changelog and details from this link.

Features

- USB controlled multi-tool with:
  - 4-channel digital input / output
  - ADC (10 bit resolution)
  - 2 parallel hardware PWM outputs
  - SPI interface
  - I2C interface
- USBtiny compatible AVR programmer
- **Printf style debugging over AVR-ISP pins**
- USB to UART converter (alternative firmware -- CDC-232 port)
- Onboard serial bootloader for firmware upgrades
- Minimal form factor and all through-hole components
- Open Source Hardware design

Applications

- AVR programming /summon captainObvious
- LED dimming, color mixing
- General servo driving
- Pan and tilt servo control of a webcam for face tracking
- With additional motor driver IC, 2 wheel robot driving
- Analog voltage recording and plotting
- Controlling LED matrix displays by using SPI module to drive shift registers
- USB to SPI bridge
- USB to I2C bridge
- USB to UART bridge
- General purpose V-USB developement board

Packing list

- 1 x Little Wire PCB
- 1 x Pre-programmed Attiny85 chip.
- 1 x 8pin IC socket
- 1 x USB Male Type A connector
- 2 x 3.6v zener diode
- 2 x 100 nF capacitor

- 2 x 27 Ohm resistor
- 1 x 1.2 kOhm resistor
- 1 x 150 ohm resitor
- 1 x LED (for power indication)
- 1 x 2pin male header
- 1 x 2pin jumper
- 1 x (2x3)pin male header

Pinout

Analog functionality on pin3 pin isn't stable but supported. Use it at your own risk.

Document Links

- **Project homepage**
- **Github repository for firmware and libraries**
- **Dowload the entire repository**
- **Hardware files**

What is included?

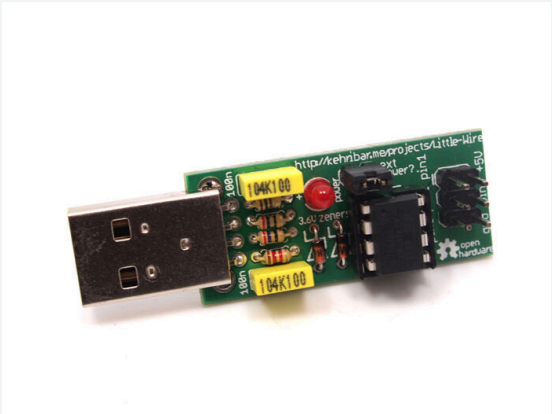
- Eagle schematic / layout files. Also in PDF format.
- Microcontroller firmware files and makefile
- Bootloader source files
- C function/header files for command line USB interface for Windows and Linux
- C++ class for Windows and Linux
- Processing library for Windows (With reduced feature set ...)
- C# class for Windows USB interface (in development ...)
- Example C projects for almost every feature of the board
- Example C++ projects for almost every feature of the board
- Example Processing projects
- Example C# project for analog voltage plotting based on zedGraph

Note

Do not use the Adafruit USB VID/PID without written permission from Adafruit Industries, LLC and Limor "Ladyada" Fried (**support@adafruit.com**). Permission is granted for littlewire Ihsan Kehribar and Seeed Studio by Adafruit Industries, LLC to use the Adafruit USB VID/PID for littlewire.

Product Gallery





Resource Links

- https://www.seeedstudio.com/Little-Wire-p-1212.html

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