uChip Microcontroller Board

CS-USVC-KIT-04
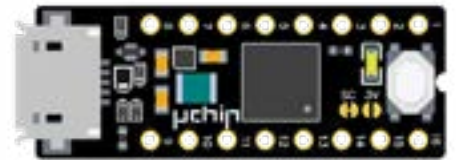
Description

Crowd Supply uChip Microcontroller Board features a CortexM0+ along with several interesting features such as OTG capabilities and a powerful step-down switching converter. uChip is the core of uChip Simple VGA Console (uSVC). uChip supports several programming languages and environments, from the traditional Arduino IDE to the most recent CircuitPython and BASIC. The uChip integrates 500mA boost and 1A buck converters and 14 I/O pins, two of which can be used for SWD programming and debugging. The tiny uChip can fit into a standard 0.3" 16-DIP socket or plug directly into a breadboard, making it easy to integrate into any application. The uChip Microcontroller Board can easily be programmed using BASIC, C/C++, asm, or CircuitPython.

The uChip kit comes with unsoldered headers, but they are included in the package so they can be soldered as per the needs of the project. The uChip can run Atmel Studio or the Arduino IDE out-of-the-box.
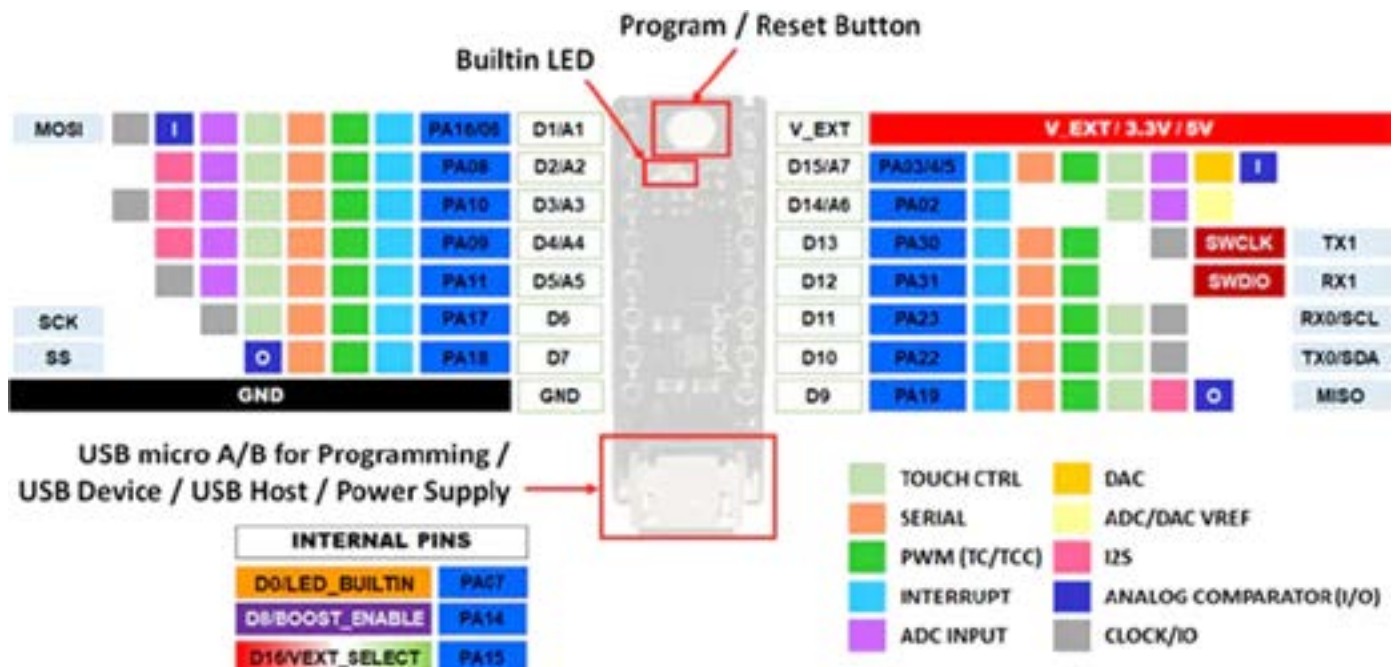
Features

- Microchip Technology ATSAMD21 MCU
  - 48MHz Arm Cortex M0+
  - 256KB flash (248KB free due to integrated bootloader)
  - 32KB RAM with zero wait states
- I/O via 2x 8-pin headers with 2.54mm pitch, 7.62mm (0.3") row spacing:
  - 14x I/O pins, including two that can be used to connect an external SWD programmer/debugger:
    - 7x 12-bit ADC inputs
    - 10-bit DAC output
    - 14x external interrupt input pins
    - Up to 5x serial interfaces using SPI, I²C, or UART
    - I2S port for audio decoders
    - Up to 13x PWM pins
- 2x power pins (VCC and GND)
- Programmable status LED
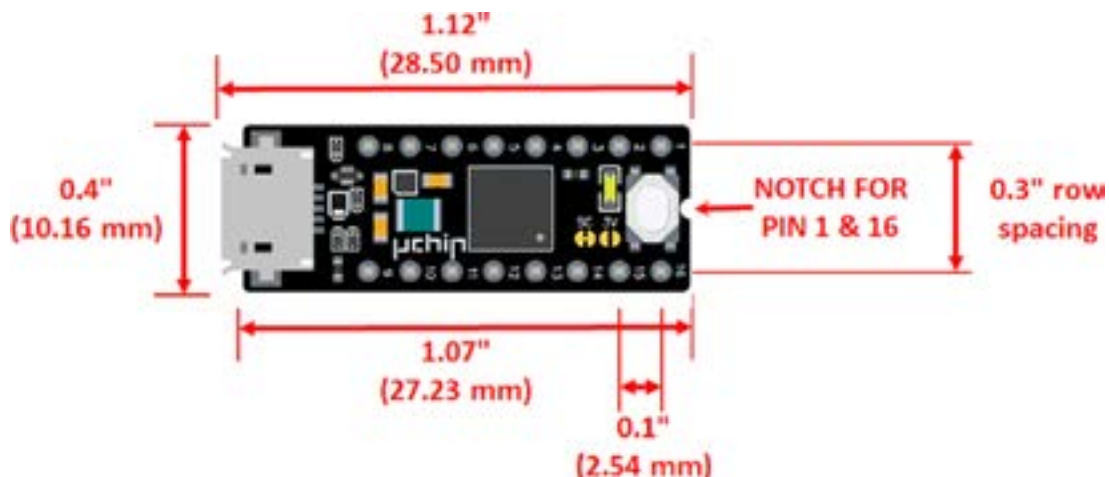- Multi-function push-button for reset/program

Features

- Power supply:
  - 5.0V via micro-USB port, or 3.3V to 5.0V via pin
  - Integrated 500mA boost and 1A buck converters
  - Automatic power switching circuitry
- Form-factor:
  - 28.5mm x 10.16mm including USB
  - 27.23mm x 10.16mm excluding USB
  - 4-layer PCB for improved noise performance

Pin Out

Dimensions

Mouser Part Number

View Part

To learn more, visit https://www.mouser.com/new/crowd-supply/crowd-supply-itaca-uchip-mcu-board/