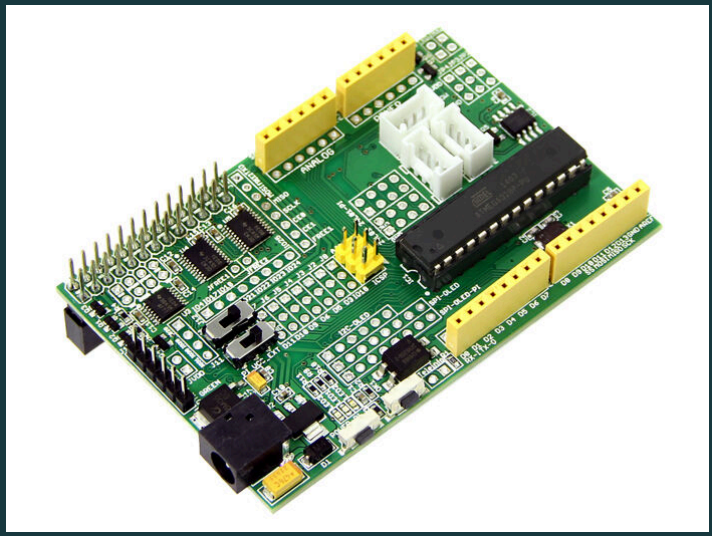
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INDUSTRIAL PRODUCT DATASHEET

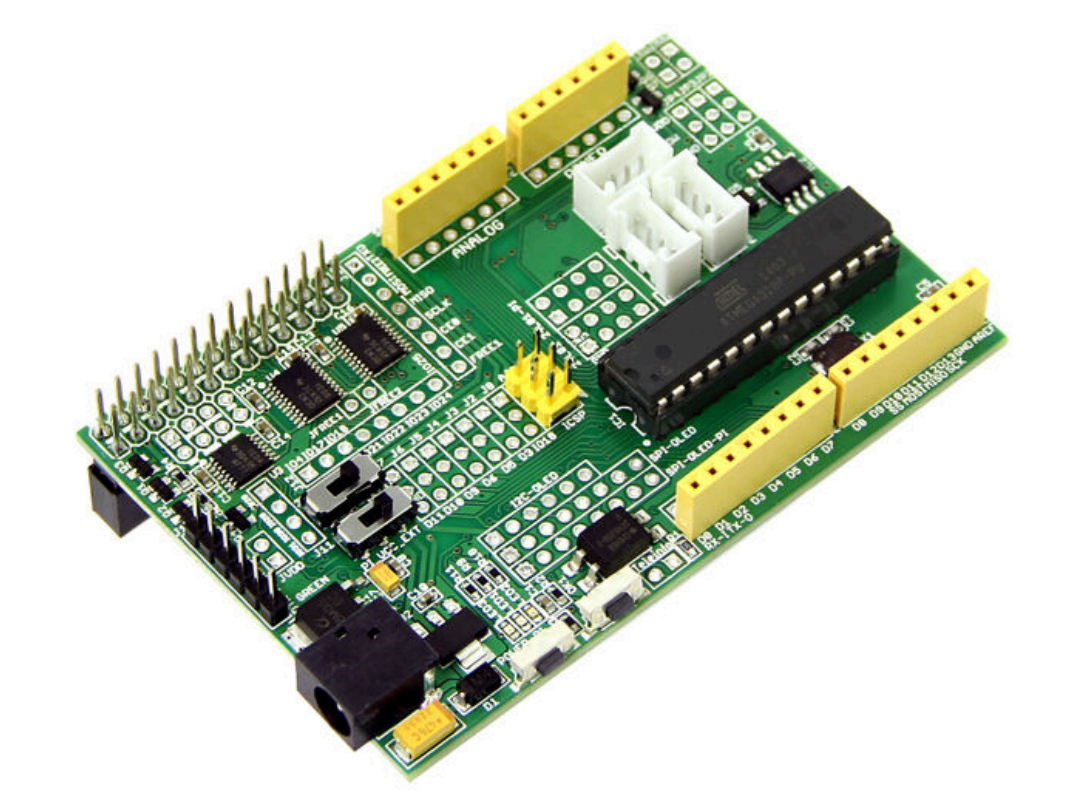
Arduipi

A board that combines Arduino and Raspberry Pi for flexible, networked embedded projects with extensive I/O and wireless options.

SKU	UPDATED	PRICE
102990087	2024-08-09 02:09:42	$35.00(Excl. VAT)



Overview



ArduiPi integrates Arduino's low-level I/O with Raspberry Pi's high-level computing, featuring level-shifted I2C, SPI, and UART interfaces, on-board power management, and dedicated connectors for sensors, wireless modules, and displays. It enables seamless communication between the two boards for advanced embedded and IoT applications.

Key Features

This product is retired, please consider our **GrovePi+** as your alternative choice.

ArduiPi is a new board that bring low level Arduino features combined with high level features of a Raspberry PI.

New Hardware version 1.1.

Arduino is pretty cool but as soon you want to connect it to network, shield are quite expensive and web server will take lot of space into your Arduino and taking some functions off (such as SPI). That is why Raspberry come, it cost less than a Arduino official shield and can do lot high level thing such as web server, database, home automation, ... But the drawback is that is I/O ports are quite complex to use and not so efficient than a Arduino. That said, this is why we decided that Raspberry Pi and Arduino need to get married, let them talk together and assign task to the most competitive one.

It has been designed to be open, flexible, extensible, and fulfill majority of use and features available in Arduino world and Raspberry world. What about for example having a full webserver with Apache, Php, SSL, .. , that is able drive low level peripherals such as sensors, leds, motors, strip.... This will become to life with ArduiPi board

The combination of these two words offer so much features that it is only limited by your imagination.

Feature

-
- Autoreset GPIO18 pin connected to Arduino Reset line allowing to program Arduino straight from Pi Uart (new in V.1.1)
-
- New switch connected to Raspberry PI GPIO17 pin, for example to shutdown PI (New in V1.1)
-
- Power the Arduino side with Raspberry power or with external power.
-
- Selectable Arduino side power with 5V or 3.3V
-
- FTDI cable connector to be able to program Arduino independently leaving RX/TX of arduino and Raspberry free.
-
- ICSP connector.
-
- Power level shifter between Pi side and Arduino side for I2C, SPI, Serial, and all Raspberry Pi GPIO pins
-
- Raspberry Pi board Revision 2 with four new GPIO
-
- I2C Bus available from Arduino and/or Raspberry Pi
-

- I2C to 1-Wire controller on the board providing fully OWFS (or other) support for Raspberry Pi or Arduino with dedicated library
-
- Feature to connect I2C between Arduino And Raspberry Pi (Arduino will become a I2C slave from Raspberry Pi)
-
- Feature to connect SPI between Arduino and Raspberry Pi (Arduino will become a SPI slave from Raspberry)
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- Feature to connect the Arduino UART to Raspberry Pi Serial to do communication
-
- Availability to use the French dedicated Téléinformation monitoring electricity signal issued from the main power meter to Arduino or Raspberry Pi (using serial RX)
-
- Grove connector on board for I2C and Serial connection for Raspberry and Arduino
-
- Sized place to plug aAdafruit I2C or SPI Oled breakout board that can be driven by Arduino or Raspberry Pi in SPI or I2C
-
- Sized place to plug a NRF24L01 Wireless breakout board. In the near future, some breakout board fitting this format will be available for RFM12B RFM69W, SD card and SPI flash memory. This will let you use the majority of RF module used today
-
- Sized place for 3 x 1-Wire devices on board.
-
- Sized place for using PWM devices (switchable with on board power or external power)
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- Two free pins available on level shifter chip, this mean that is you have a device that need level conversion between 3V3 and 5V in both way, you have two pins left for this.
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- Compatible with Raspberry Pi A+,B,B+.

Important
Note this unit does not include Raspbery Pi, it is only ArduiPi board.

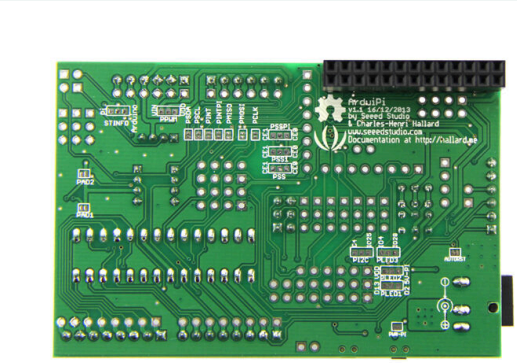
Resources

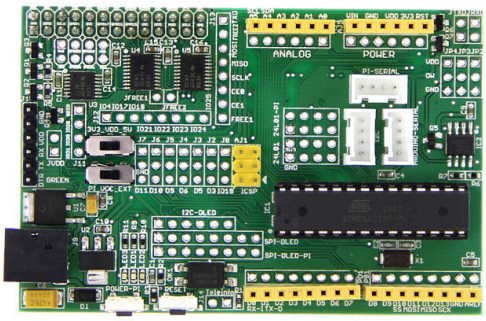
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- ArduiPi **description and presentation**
-
- ArduiPi **schematics**
-
- ArduiPi **github** repository

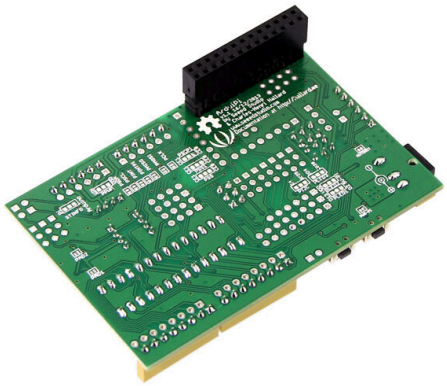
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- ArduiPi **protocol** between Raspberry and Arduino
-
- **Sample** of driving OLED LCD
-
- ArduiPi **test board** used to test the ArduiPi board
-
- Using NRF24L01 **connector** of ArduiPi to use RFM12B tranceiver
-
- **ArduiPi Getting Started Guide**
-

If you encounter any problems when using this product, please ask for the seeedstudio **forum**.

Product Gallery







Part List

Arduipi	1

Compliance & Logistics

HSCODE	8543709990

Resource Links

- https://www.seeedstudio.com/Arduipi-p-1609.html

Seeed Technology Co.,Ltd.
9F, Building G3, International E City,
Zhongshanyuan Road, Nanshan, Shenzhen, China

Tel: +86 0755-80695676
Web: www.seeed.cc
Shop: www.seeedstudio.com