Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

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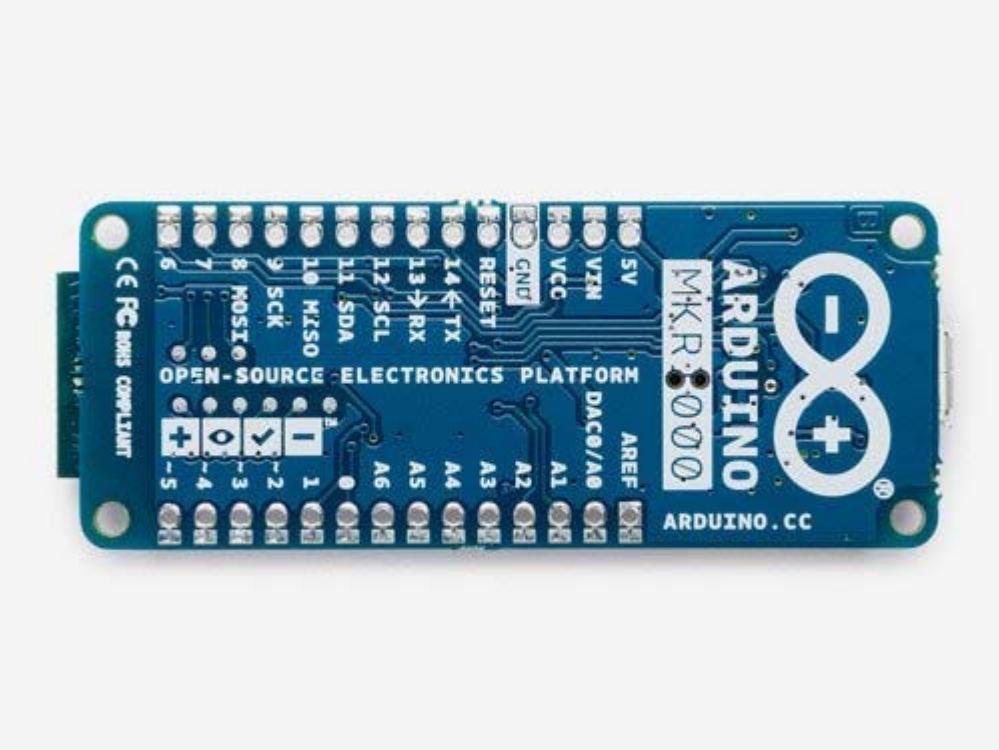
ARDUINO MKR1000






MKR1000 combines the functionality of the Zero and the WiFi Shield. Perfect for IoT projects!

Overview

Arduino MKR1000 has been designed to offer a practical and cost effective solution for makers seeking to add WiFi connectivity to their projects with minimal previous experience in networking. The design includes a Li-Po charging circuit that allows the Arduino MKR1000 to run on battery power or external 5V, charging the Li-Po battery while running on external power. Switching from one source to the other is done automatically.

Technology

MKR1000 has a good 32 bit computational power similar to the Zero board, the usual rich set of I/O interfaces, low power WiFi with a Cryptochip for secure communication, and the ease of use of the Arduino Software (IDE) for code development and programming. All these features make this board the preferred choice for the emerging IoT battery-powered projects in a compact form factor. The board will be shipped with male strip header not mounted so you can adapt the board to your project by easily soldering them.

Important note

Unlike most Arduino boards, the MKR1000 runs at 3.3V. The maximum voltage that the I/O pins can tolerate is 3.3V. Applying voltages higher than 3.3V to any I/O pin could damage the board. While output to 5V digital devices is possible, bidirectional communication with 5V devices needs proper level shifting. Li-Po batteries are charged at 4,2V with a current that is usually half of the nominal capacity (C/2).

For Arduino MKR1000 we use a specialized chip that has a preset charging current of 350mAh. This means that the MINIMUM capacity of the Li-Po battery shall be 700 mAh. Smaller cells will be damaged by this current and may overheat, develop internal gasses and explode, setting on fire the surroundings. We strongly recommend that you select a Li-Po battery of at least 700mAh capacity. A bigger cell will take more time to charge, but won't be harmed or overheated. The chip is programmed with 4 hours of charging time, then it goes into automatic sleep mode. This will limit the amount of charge to max 1400 mAh per charging round.

Microcontroller	SAMD21 Cortex-M0+
Operating Voltage	3.3 V
USBInput Voltage (recommended)	5 V
Digital I/O Pins	8
PWM Digital I/O Pins	4
1Analog Input Pins	6
Analog Output Pins	1
Flash Memory	256 Kb
SRAM	32 Kb
Clock Speed	48 Mhz
Features	WiFi, Encryption Chip, LiPo Battery Charger

WiFi, Encryption Chip, LiPo Battery Charger

Documentation

The Arduino MKR1000 is open-source hardware! These are the relevant files:

Schematics - Reference Design

If you want more information about programming the MKR1000 or how to interface hardware with it, please go to the Product Page. MKR1000 is programmed, as all the other Arduino boards with the Software (IDE) that you can download for free, with the addition of the Intel Curie core to download with Board Manager. To find

inspiration for what you can do with the MKR1000, please visit the Arduino.cc Tutorials Page or take part in the community the lively discussions on the Forum.

Also available in Mounted Headers version.