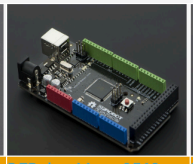
INTRODUCTION

The new version of DFRduino Mega2560 has improved the VIN power supply circuit by changing the easily overheat LDO to DC-DC circuit for ensuring safety and reliability in long-term use. In addition to optimizing the overheating issue, it offers a wider input voltage range. What's more, DFRduino Mega2560 can work steadily even when only powered by a 3.7V lithium battery.
DFRduino Mega2560 is an ATmega2560-based microcontroller that provides full compatibility with "Arduino MEGA2560". It features 54 digital I/O ports, 16 analog signal input ports, 4 UARTs(hardware serial ports), and a 16MHz crystal oscillator. The board comes with a bootloader that enables users to download programs directly via a USB. You can simply power it with a USB cable or a standard adapter or use a battery as external power. Mega 2560 has 256KB FLASH, two times of Mega1280, which could offer a larger create space for your projects.

DFRobot Arduino Compatible Microcontrollers Series

					
Name	DFRduino UNO	DFRobot Leonardo	DFRobot Mega 2560	Romeo V2	Romeo
SKU	DFR0216	DFR0221	DFR0191	DFR0225	DFR0004
Microcontroller	ATmega328p	ATmega32u4	ATmega2560	ATmega32U4	Atmega328
Working voltage	5V	5V	5V	5V	5V
CPU Frequency	16MHz	16MHz	16MHz	16MHz	16MHz
TIO ports / PWM	6 / 14	7 / 20	54 / 15	20 / 7	14 / 6
Analog inputs	6	12	16	12	8
UART	1	2	4	2	1
I2C	1	1	2	3	3
SPI	1	1	1	1	1
Interrupt pins	2	2	2	2	2
EEPROM[KB]	1	1	4	1	1
Flash[KB]	32	32	256	32	32
SRAM[KB]	2	2.5	8	2.5	2
USB	A-B USB cable	micro USB cable	A-B USB cable	micro USB cable	A-B USB cable
Dimension	75*55*15mm	75*55*15mm	100*53*15mm	89*84*14mm	90*80*14mm
Vin	7-12V	7-12V	7-12V	7-12V	7-12V
Price	$19.9	$19.9	$24.9	$34.95	$29.5
Weight (g)	45	50	70	80	80
IDE version	Arduino 1.0 and above	Arduino 1.0 and above	Arduino 1.0 and above	Arduino 1.0 and above	Arduino 1.0 and above
Feature	DFRduino UNO is fully compatible with Arduino UNO R3, suitable for Arduino beginners and hobbyists	DFRobot Leonardo is a low-cost controller, integrated with Xbee and SPI. Suitable for low cost and communication demand of hobbyists	DFRduino Mega has 54 digital pins and 16 analog pins, 4 UART channels. Suitable for demands of vast sensors	Use ATmega32u4, 2 serial ports. Integrated with Xbee socket and motor drivers	Microcontroller with motor driver, communication ports, IO expansion ports, it can be used as the main controller of robots

SPECIFICATION

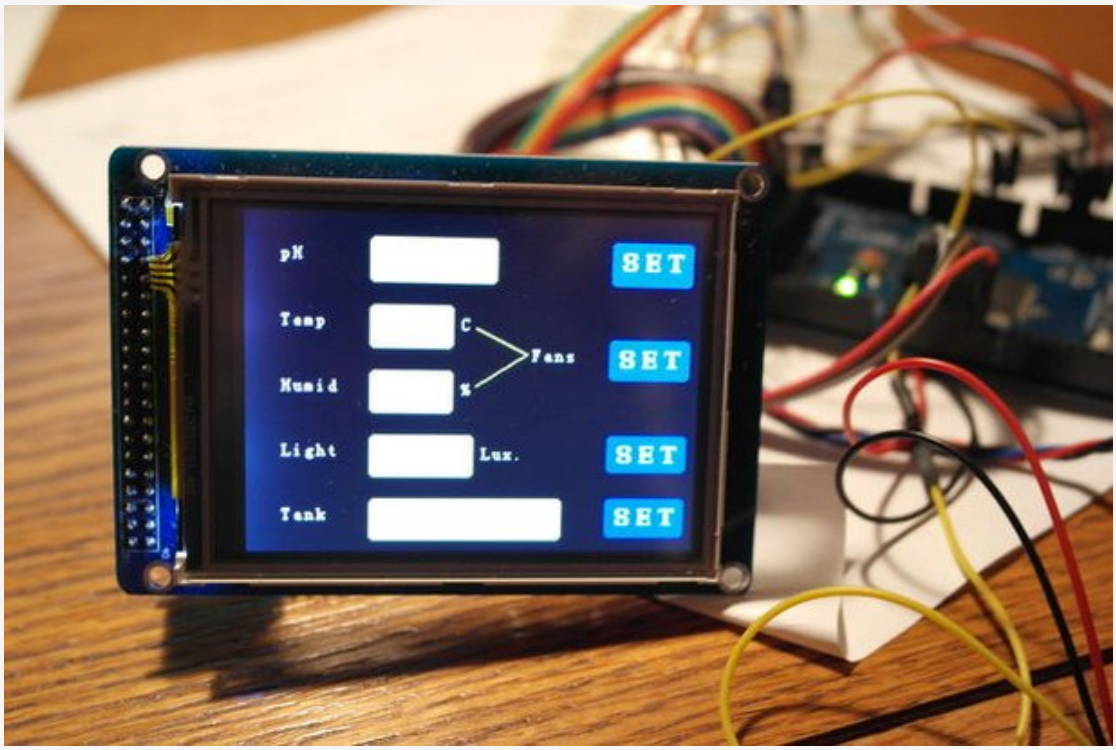
- Controller Model: ATmega2560
- Operating Voltage: 5V

- Input Voltage(VIN): 3-16V(20V max)
- Digital I/O Pins: 54 (of which 15 provide PWM output)
- Analog Inputs: 16 I/O
- FLASH: 256 KB (of which 4 KB is used by the bootloader)
- SRAM: 8KB
- EEPROM: 4KB
- Frequency: 16MHz

PROJECTS

Project 1. **Hyduino - Automated Hydroponics with DFRduino Mega2560**

Introduction: Hydroponics is growing plants without the use of a traditional dirt medium by using a nutrient-rich water solution. This is especially great for those people that have limited areas in their backyard to grow in.



Project 2. **Simple Arduino based Bioresonance Therapy device, RIFE Machine.**

Introduction: The purpose of this project was to explain how to make such a device yourself with "professional" features whose complete cost does not exceed twenty-five dollars. This is how I want to capture the real value of such devices that are sold today on the Internet.

DOCUMENTS

- DFRobot Arduino Compatible Microcontroller Selection Guide

- DFRduino Mega 2560 Selection Guide
- Arduino Mega 2560 Website
- Arduino IDE Download
- DFRduino Mega2560 Controller Schematics

SHIPPING LIST

- DFRduino Mega2560 Microcontroller x1