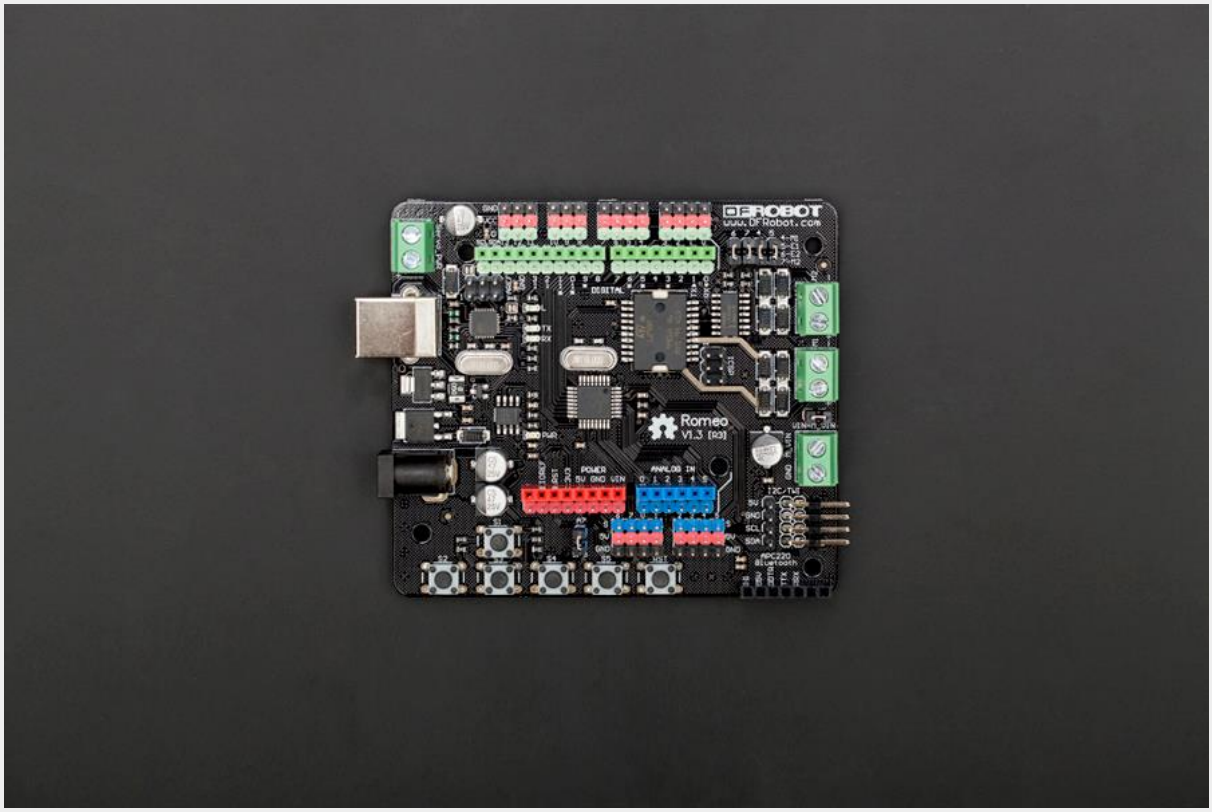
Romeo - a Robot Control Board with Motor Driver (Compatible with Arduino)

SKU:DFR0004



INTRODUCTION

Romeo family is an All-in-One Robot control board especially designed for robotics applications from DFRobot. It benefits from the Arduino open source platform, it is supported by thousands of open source codes, and can easily be expanded with your shields. The integrated 2 way DC motor driver and wireless socket allows you to start your own robot project immediately without the need for an additional motor driver. Not just has the motor driver, Romeo is also designed to have extra power for servos which need more current.

Romeo is also featured with DFRobot's standard 3 Pin-out designed and compatible with Gravity series sensors and actuators. Hundreds of sensors are now plug-play with Romeo.

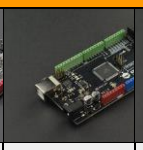
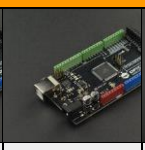
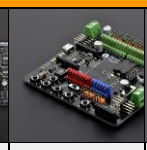
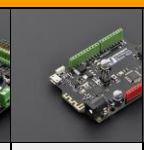
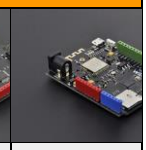
This is the first member in Romeo family that is born in 2009. It is not only the very first Arduino compatible robot controller but also the first Arduino-derived board in the market. The current version of Romeo is based on Arduino Uno. It has built-in 2x2A DC motor drivers and socket for bluetooth / APC220 Radio Communication Module communications. The integrated io sensor pinout allows it connect hundreds of different Gravity compatible sensors and modules. It has servo connector which is a plug & play. It is the ideal controller to build your own robot.

SPECIFICATION

- DC Supply:USB Powered or External 7V~12V DC

- DC Output:5V /3.3V DC and External Power Output
- Microcontroller: Atmega328
- Bootloader: Arduino Uno
- Compatible with the Arduino Uno pin mapping
- 8 Channels 10-bit Analog I/O
- USB interface
- 5 key inputs
- Auto sensing/switching power input
- ICSP header for direct program download
- Serial Interface TTL Level
- Support Male and Female Pin Header
- Integrated sockets for APC220 RF Module and DF-Bluetooth Module
- Three I2C Interface Pin Sets(two 90°pin headers)
- Two way Motor Driver with 2A maximum current
- Gold plating pcb board
- Size:90x80x14mm(3.54"x3.15"x0.55")
- Weight:60 gram

DFRobot Arduino Compatible Microcontroller Selection Guide

Picture								
Model	**DFRduino UNO**	**DFRduino Leonardo**	**DFRduino Mega2560**	**DFRduino Mega1280**	**Romeo V1**	**Romeo V2**	**Bluno**	**Wido**
SKU	**DFR0216**	**DFR0221**	**DFR0191**	**DFR0003**	**DFR0004**	**DFR0225**	**DFR0267**	**DFR0321**
Processor	ATmega328	ATmega32u4	ATmega2560	ATmega1280	ATmega328	ATmega32u4	ATmega328	ATmega32u4
Board Type	Arduino UNO	Arduino Leonardo	Arduino Mega 2560	Arduino Mega	Arduino UNO	Arduino Leonardo	Arduino UNO	Arduino Leonardo
Operating Voltage (Voltage / Input Voltage)	5 V/7-12 V	5 V/7-12 V	5 V/7-12 V	5 V/7-12 V	5 V/7-12 V	5 V/7-20 V	5 V/7-12 V	5 V/7-12 V
CPU Frequency	16MHz	16MHz	16MHz	16MHz	16MHz	16MHz	16MHz	16MHz
Analog Ports（Input / Output)	6 / 0	12 / 0	16 / 0	16 / 0	6 / 0	12 / 0	6 / 0	12 / 0
Digital Ports (IO/PWM）	14 / 6	20 / 7	54 / 15	54 / 15	14 / 6	20 / 7	14 / 6	20 / 7
EEPROM[KB]	1	1	4	4	1	1	1	1
SRAM[KB]	2	2.5	8	8	2	2.5	2	2.5
Flash[KB]	32	32	256	128	32	32	32	32
USB Interface	A-B	Micro	A-B	A-B	A-B	Micro	Micro	Micro

UART	1	2	4	4	1	2	1	2
Dimension	75 × 55mm	75 × 55mm	108 × 54mm	108 × 54mm	100 × 80mm	89 × 85mm	75 × 55mm	75 × 55mm
Features	*A low-cost controller board designed for domestic Arduino fans. Full compatible with Arduino UNO R3. *Suitable for Arduino Beginners.	*Low-cost mian controller board. The main difference from the official one is that this board offers XBee socket and SPI directly-plugged interface, making the best of UART ports.	*DFRduino Mega 2560 comes with plenty of IO ports, 54 digital ports, 16 analog ports, and 4 UARTs. *Applicable to large projects that requires many sensors.	*Mega1280 has as many IO ports as Mega256, but comes with a smaller Flash. Besides, its price is lower than Mega2560. *Suitable for low-cost projects requiring many sensors.	*Romeo V1 is specially designed for robot fans. It integrates motor driver, all sorts of communication ports, IO expansion port and so on. *Extremely suitable for robot fans.	*The only difference between V1 and V2 is that Romeo V2 adopts ATmega32u4 chip, which provides 2 UARTs, convenient for wireless communication. *For robot fans to build up projects with wireless communication.	*The first Arduino compatible controller board that integrates Bluetooth 4.0, bring much more flexibliy and possibility for Android and IOS mobile development. *For Android and IOS mobile App BLE developers.	*Integrated CC3000 wifi core and SD card function. Can store a large number of collected data. Compared with Wifi shield, wido is more lightweight and low-cost. *For IoT developers.