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Controller >

DFR0182 Wirless GamePad V2.0

DFR0100 DFRduino Beginner Kit For Arduino V3

DFR0267 Bluno

DFR0282 Beetle

DFR0283 Dreamer Maple V1.0

DFR0296 Bluno Nano

DFR0302 MiniQ 2WD Plus

DFR0304 BLE Wireless Gamepad V2

DFR0305 RoMeo BLE

DFR0351 Romeo BLE mini V2.0

DFR0306 Bluno Mega 1280

DFR0321 Wido-WIFI IoT Node

DFR0323 Bluno Mega 2560

DFR0329 Bluno M3

DFR0339 Bluno Beetle

DFR0343 UHex Low-power Controller

DFR0355 SIM808 with Leonardo mainboard

DFR0392 DFRduino M0 Mainboard Arduino Compatible

DFR0398 Romeo BLE Quad Robot Controller

DFR0416 Bluno M0 Mainboard

DFR0575 Beetle ESP32

DFR0133 X-Board

DFR0162 X-Board V2

DFR0428 3.5 inches TFT Touchscreen for Raspberry Pi

DFR0494 Raspberry Pi UPS HAT

DFR0514 DFR0603 IIC 16X2 RGB LCD KeyPad HAT V1.0

DFR0524 5.5 HDMI OLED-Display with Capacitive Touchscreen V2.0

DFR0550 5" TFT-Display with Touchscreen V1.0

Introduction

Application

Specification

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More Documents

SKU:DFR0792



(Product Link)

Introduction

This ADKey board with 10 keys can be used to drive your [DFPlayer Pro](#), [DFPlayer Mini](#), or [Voice Recorder Module](#) without programming or using various resistors. It offers 20 delicate key caps with comfortable hand feel, easy to be integrated in projects. You can also connect your favorite keys to the board through the welding pad on both sides. In addition, this ADkey board can be used as the ADkey input of a main-controller, by which it could expand 10 keys for your main-board via only one analog port.

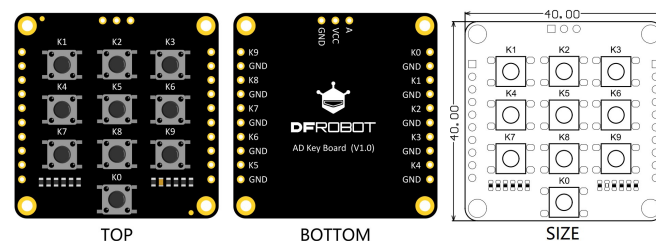
Application

- Drive DFPlayer PRO
- Drive DFPlayer Mini
- Drive Voice Recorder Module
- Main-controller Button Expansion

Specification

- Power Supply: 3.3~5V
- Key Size: 6×6×7mm
- Product Size: 40×40mm/1.57×1.57"

Board Overview



Key	Series Resistance	Key	Series Resistance
K0	0R	K1	3K
K2	6.2K	K3	9.1K
K4	15K	K5	24K
K6	33K	K7	51K
K8	100K	K9	220K

DFR0591 raspberry pi e-ink display module V1.0

DFR0592 DC Motor Driver HAT

DFR0604 I O Expansion HAT for Pi zero V1.0

DFR0566 IO Expansion HAT for Raspberry Pi

DFR0528 UPS HAT for Raspberry Pi Zero

DFR0331 Romeo for Edison Controller

DFR0453 DFRobot CurieNano - A mini Genuino Arduino 101 Board

TEL0110 CurieCore intel® Curie Neuron Module

DFR0478 FireBeetle ESP32 IOT Microcontroller(V3.0) Supports Wi-Fi & Bluetooth

DFR0483 FireBeetle Covers-Gravity I O Expansion Shield

FireBeetle Covers-24×8 LED Matrix

TEL0121 FireBeetle Covers-LoRa Radio 433MHz

TEL0122 FireBeetle Covers-LoRa Radio 915MHz

TEL0125 FireBeetle Covers LoRa Radio 868MHz

DFR0489 FireBeetle ESP8266 IOT Microcontroller

DFR0492 FireBeetle Board-328P with BLE4.1

DFR0498 FireBeetle Covers-Camera&Audio Media Board

DFR0507 FireBeetle Covers-OLED12864 Display

DFR0508 FireBeetle Covers-DC Motor & Stepper Driver

DFR0511 FireBeetle Covers-ePaper Black&White Display Module

DFR0531 FireBeetle Covers-ePaper Black&White&Red Display Module

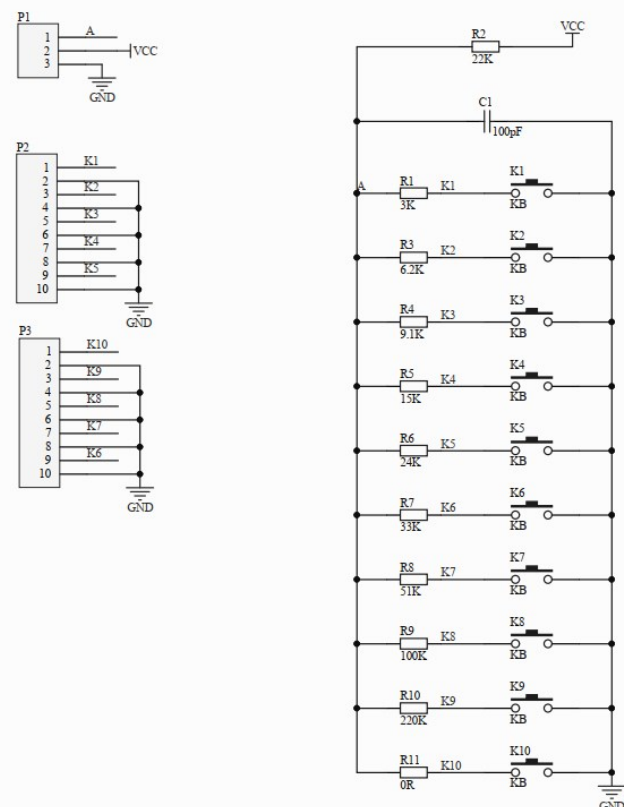
DFR0536 Micro bit Gamepad Expansion Board

DFR0548 Micro bit Driver Expansion Board

ROB0148 micro: Maqueen for micro:bit

ROB0150 Micro bit Circular RGB LED Expansion Board

Schematics



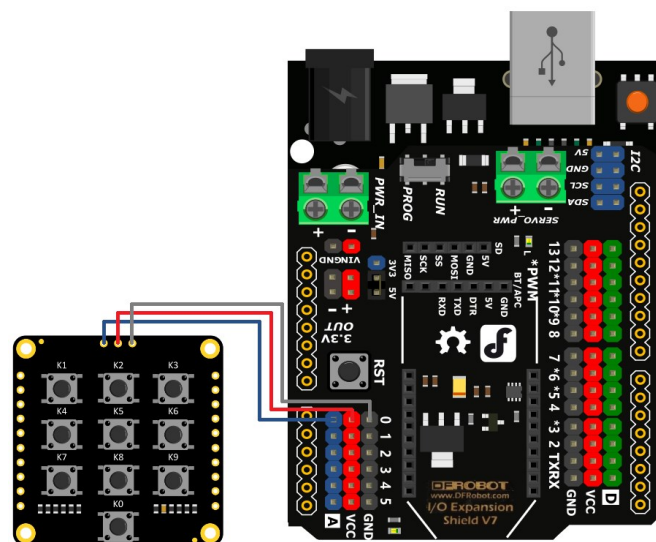
Tutorial

 NOTE: When using this board to drive modules like DFPlayer Pro, DFPlayer Mini or Voice Recorder module, please do not connect VCC to the board since these modules have been pulled up 22K internally.

Requirements

- Hardware
 - [DFRduino UNO R3](#) (or similar) x 1
 - ADKey board x1
 - Jumper wires
- Software
 - [Arduino IDE](#)

Connection Diagram



MBT0005 micro IO-BOX

SEN0159 CO2 Sensor

DFR0049 DFRobot Gas Sensor

TOY0058 Barometric Pressure Sensor

SEN0220 Infrared CO2 Sensor 0-50000ppm

SEN0219 Gravity Analog Infrared CO2 Sensor For Arduino

SEN0226 Gravity I2C BMP280 Barometer Sensor

SEN0231 Gravity HCHO Sensor

SEN0251 Gravity BMP280 Barometric Pressure Sensors

SEN0132 Carbon Monoxide Gas Sensor MQ7

SEN0032 Triple Axis Accelerometer Breakout - ADXL345

DFR0143 Triple Axis Accelerometer MMA7361

Triple Axis Accelerometer FXLN83XX Series

SEN0072 CMPS09 - Tilt Compensated Magnetic Compass

SEN0073 9 Degrees of Freedom - Razor IMU

DFR0188 Flymaple V1.1

SEN0224 Gravity I2C Triple Axis Accelerometer - LIS2DH

SEN0140 10 DOF Mems IMU Sensor V2.0

SEN0250 Gravity BMI160 6-Axis Inertial Motion Sensor

SEN0253 Gravity BNO055 + BMP280 intelligent 10DOF AHRS

SEN0001 URM37 V5.0 Ultrasonic Sensor

SEN0002 URM04 V2.0

SEN0004 SRF01 Ultrasonic sensor

SEN0005 SRF02 Ultrasonic sensor

SEN0006 SRF05 Ultrasonic sensor

SEN0007 SRF08 Ultrasonic Sensor

SEN0008 SRF10 Ultrasonic sensor

SEN0149 URM06-RS485 Ultrasonic

SEN0150 URM06 UART Ultrasonic

Sample Code 1-Read Data

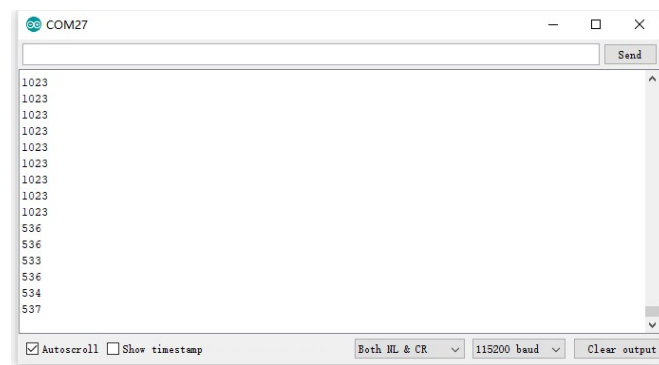
Press down a key, serial print a value.

```
#define ADPIN A0          //Read Pin

void setup() {
  Serial.begin(115200);
}

void loop() {
  // read the value from the sensor:
  Serial.println(analogRead(ADPIN));
  delay(10);
}
```

Expected Results



Sample Code 2-Read Key Value

Press a key on the board, serial print the corresponding key value.

```
#define RESOLUTION 10    //ADC resolution
#define MAXVALUE pow(2,RESOLUTION) //Resolution constant
#define PRECISION 10    //Admissible error
#define ADPIN A0        //Read pin

uint32_t ADKeyVal[10] = {0}; //Corresponding key value
uint32_t ADKeyIn = 0;

void setup() {
  Serial.begin(115200);
  ADKeybegin();
}

void loop() {
  ADKeyIn = analogRead(ADPIN);
  if(ADKeyIn < (MAXVALUE-PRECISION)){
    Serial.print("K = ");
    Serial.println(getKey());
  }
  delay(10);
}

void ADKeybegin(){
  float RESValue[10] = {0, 3, 6.2, 9.1, 15, 24, 33, 42, 51, 60};
  for(uint8_t i = 0; i < 10; i++){
    ADKeyVal[i] = RESValue[i]/(RESValue[i]+22)*MAXVALUE;
  }
}

int8_t getKey(){
  for(uint8_t i = 0; i < 10;i++){
```

>

SEN0151 URM06-PULSE Ultrasonic

SEN0152 URM06-ANALOG
Ultrasonic

SEN0153 URM07-UART Ultrasonic
Sensor

SEN0246 URM08-RS485 Waterproof
Sonar Range Finder

SEN0304 URM09 Ultrasonic Sensor
(Gravity-I2C) (V1.0)

SEN0304 URM09 Ultrasonic Sensor
(Gravity-I2C) (V1.0)

SEN0300 Water-proof Ultrasonic
Sensor ULS

SEN0301 Water-proof Ultrasonic
Sensor ULA

SEN0307 URM09 Ultrasonic Sensor
Gravity Analog

SEN0311 A02YYUW Waterproof
Ultrasonic Sensor

SEN0312 ME007YS Waterproof
Ultrasonic Sensor

SEN0313 A01NYUB Waterproof
Ultrasonic Sensor

DFR0066 SHT1x Humidity and
Temperature Sensor

DFR0067 DHT11 Temperature and
Humidity Sensor

SEN0137 DHT22 Temperature and
humidity module

DFR0023 DFRobot LM35 Linear
Temperature Sensor

DFR0024 Gravity DS18B20
Temperature Sensor Arduino
Compatible V2

DFR0024 Gravity DS18B20
Temperature Sensor Arduino
Compatible V2

SEN0114 Moisture Sensor

TOY0045 TMP100 Temperature
Sensor

TOY0054 SI7021 Temperature and
humidity sensor

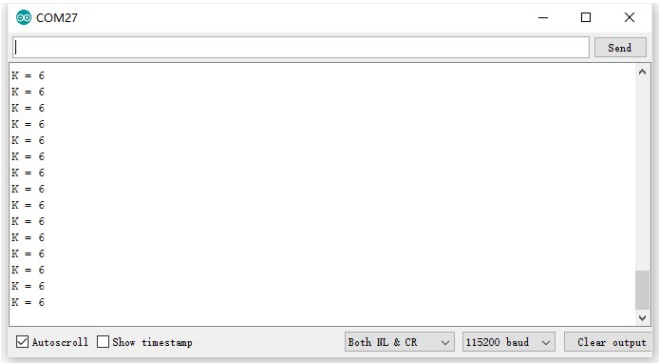
SEN0206 IR Thermometer Sensor
MLX90614

SEN0227 SHT20 I2C Temperature &
Humidity Sensor Waterproof Probe

SEN0236 Gravity I2C BME280
Environmental Sensor Temperature

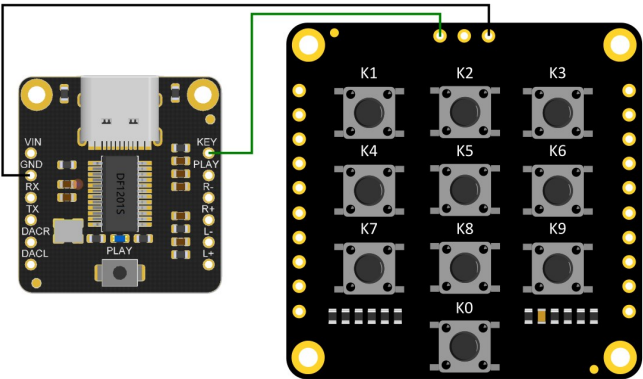
```
if(ADCKeyIn > ADKeyVal[i]){
    if((ADCKeyIn - ADKeyVal[i]) < PRECISION){
        return i;
    }
} else{
    if((ADKeyVal[i] - ADCKeyIn) < PRECISION){
        return i;
    }
}
}
return -1;
}
```

Expected Results



Connection with DFPlayer Pro

Key	Series Resistance	Tap	Long-press
K0	0R	Pause & Play	
K1	3K	Last	Volume+
K2	6.2K	Next	Volume-
K3	9.1K	Playback mode switch	
K4	15K	Fast Forward 10s	
K5	24K	Pause & Play	Next
K6	33K	Volume-	Volume-
K7	51K	Volume+	Volume+
K8	100K	Fast Backward 10s	
K9	220K	Play the first song, set volume to 10	



Connection with DFPlayer Mini

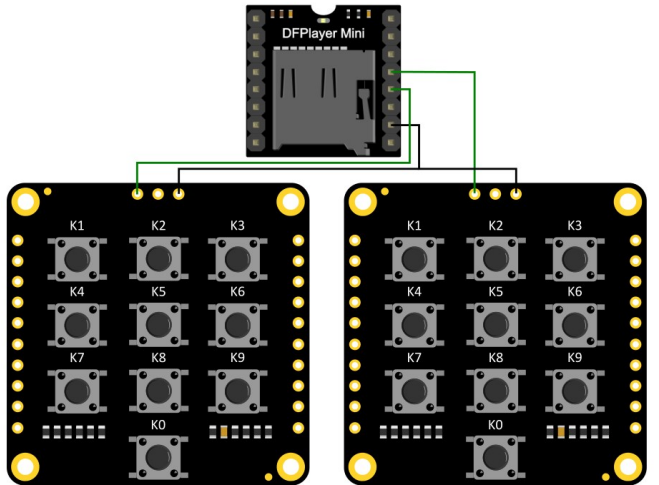
- Humidity, Barometer
- SEN0248 Gravity I2C BME680 Environmental Sensor VOC, Temperature, Humidity, Barometer
- DFR0558 Gravity Digital High Temperature Sensor K-type
- SEN0308 Waterproof Capacitive Soil Moisture Sensor
- SEN0019 Adjustable Infrared Sensor Switch
- SEN0042 DFRobot Infrared sensor breakout
- SEN0143 SHARP GP2Y0A41SK0F IR ranger sensor 4-30cm
- SEN0013 Sharp GP2Y0A02YK IR ranger sensor 150cm
- SEN0014 Sharp GP2Y0A21 Distance Sensor 10-80cm
- SEN0085 Sharp GP2Y0A710K Distance Sensor 100-550cm
- DFR0094 Digital IR Receiver Module
- DFR0095 DIGITAL IR Transmitter Module
- SEN0018 Digital Infrared motion sensor
- DFR0107 IR Kit
- SEN0264 TS01 IR Thermal Sensor (4-20mA)
- SEN0169 Analog pH Meter Pro
- DFR0300-H Gravity: Analog Electrical Conductivity Sensor(K=10)
- DFR0300 Gravity Analog Electrical Conductivity Sensor Meter V2 K=1
- SEN0165 Analog ORP Meter
- SEN0161-V2 Gravity Analog pH Sensor Meter Kit V2
- SEN0161 PH meter
- SEN0237 Gravity Analog Dissolved Oxygen Sensor
- SEN0204 Non-contact Liquid Level Sensor XKC-Y25-T12V
- SEN0205 Liquid Level Sensor-FS-IR02
- SEN0244 Gravity Analog TDS Sensor Meter For Arduino
- SEN0249 Gravity Analog Spear Tip pH Sensor Meter Kit For Soil And Food Applications

Left:

Key	Series Resistance	Tap	Long-press
K0	0R	First song	
K1	3K	Second song	
K2	6.2K	Third song	
K3	9.1K	Fourth song	
K4	15K	Last	Volume+
K5	24K	Next	Volume-
K6	33K	Pause & Play	Volume-
K7	51K	Repeat all	
K8	100K	U/SD/SPI	
K9	220K	Playback mode	

Right:

Key	Series Resistance	Tap	Long-press
K0	0R	Fifth song	
K1	3K	Sixth song	
K2	6.2K	Seventh song	
K3	9.1K	Eighth song	
K4	15K	Ninth	
K5	24K	Tenth	
K6	33K	Eleventh	
K7	51K	Twelveth	
K8	100K	Thirteenth	
K9	220K	Fourteenth	



Connection with Voice Recorder Module

SEN0121 Steam Sensor

SEN0097 Light Sensor

DFR0026 DFRobot Ambient Light Sensor

TOY0044 UV Sensor

SEN0172 LX1972 ambient light sensor

SEN0043 TEMENT6000 ambient light sensor

SEN0175 UV Sensor v1.0-ML8511

SEN0228 Gravity I2C VEML7700 Ambient Light Sensor

SEN0101 TCS3200 Color Sensor

DFR0022 DFRobot Grayscale Sensor

SEN0017 Line Tracking Sensor for Arduino V4

SEN0147 Smart Grayscale sensor

SEN0212 TCS34725 I2C Color Sensor For Arduino

SEN0245 Gravity VL53L0X ToF Laser Range Finder

SEN0259 TF Mini LiDAR ToF Laser Range Sensor

SEN0214 20A Current Sensor

SEN0262 Gravity Analog Current to Voltage Converter for 4~20mA Application

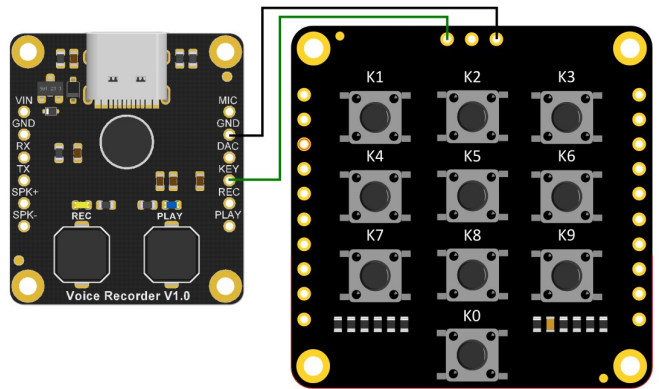
SEN0291 Gravity: I2C Digital Wattmeter

DFR0027 DFRobot Digital Vibration Sensor V2

DFR0028 DFRobot Tilt Sensor

DFR0029 DFRobot Digital Push Button

Key	Series Resistance	Tap	Long-press
K0	0R	Pause & Play	
K1	3K	Last	Volume+
K2	6.2K	Next	Volume-
K3	9.1K	Playback mode switch	
K4	15K	REC	
K5	24K	PLAY	
K6	33K	Volume-	Volume-
K7	51K	Volume+	Volume+
K8	100K	Working mode switch	
K9	220K	Delete currently playing file	



FAQ

For any questions, advice or cool ideas to share, please visit the [DFRobot Forum](#).

More Documents

 Get [ADKey Board 10Keys](#) from DFRobot Store or [DFRobot Distributor](#).

[Turn to the Top](#)