

# Module ENCODER

SKU:A006



## Description

**ENCODER** is compatible with FACE Kit. You can have it replace the key-card panel inside the FACE kit. It is designed for rotary encoder control, integrated Mega328 microprocessor inside and LEDs around the encoder.

The series communication protocol between M5 core and ENCODER is I2C (The default I2c address is: 0x5E)



## Product Features

- 12 RGB Led
- I2C communication
- Simple API for programming
- Mega328 inside
- Encoder detection

## Include

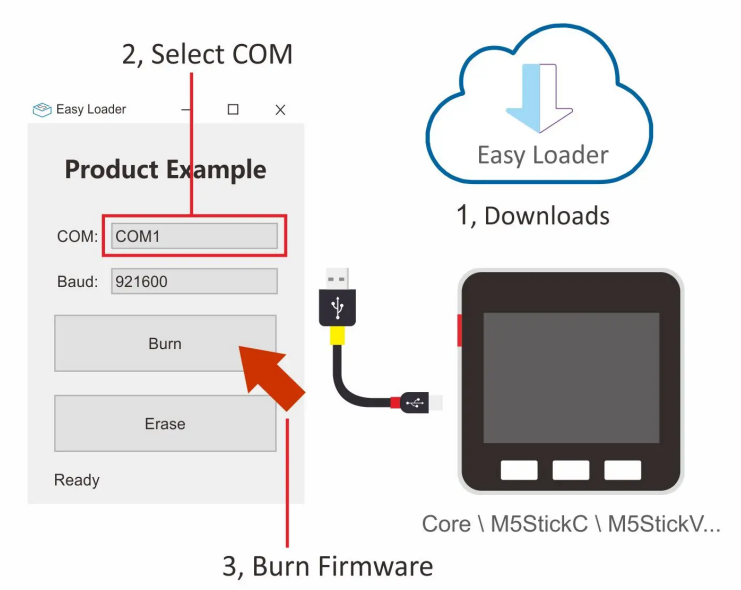
- 1x M5Stack ENCODER Module

## Specification

Resources	Parameter
RGB LED	x12
Net weight	27g
Gross weight	47g
Product Size	58.2*54.2*28mm
Package Size	95*65*25mm
Material	Plastic(PC)

## EasyLoader

EasyLoader is a concise and fast program writer, which has a built-in case program related to the product. It can be burned to the main control by simple steps to perform a series of function verification. Please install the corresponding driver according to the device type. M5Core host [Please click here to view the CP210X driver installation tutorial](#), M5StickC/V/T/ATOM series can be used without driver)



Windows

MacOS

## Function

### Control single RGB

```

/*
Parameter:
led_index: 0 ~ 11
r, g, b: 0 ~ 254
*/
void Led(int led_index, int r, int g, int b){
// I2C send data
Wire.beginTransmission(Faces_Encoder_I2C_ADDR);
Wire.write(led_index);
Wire.write(r);
Wire.write(g);
Wire.write(b);
Wire.endTransmission();
}

```

### Read encoder increment

```

void get_encoder_increment(void){
int temp_encoder_increment;

// I2C read data

```



```

Wire.requestFrom(Faces_Encoder_I2C_ADDR, 3);
if(Wire.available()){
  temp_encoder_increment = Wire.read();// get increment
  button_state = Wire.read();// get button value
}
if(temp_encoder_increment > 127){//anti-clockwise
  direction = 1;// flag for encoder direction
  encoder_increment = 256 - temp_encoder_increment;
}
else{// clockwise
  direction = 0;
  encoder_increment = temp_encoder_increment;
}
}
}

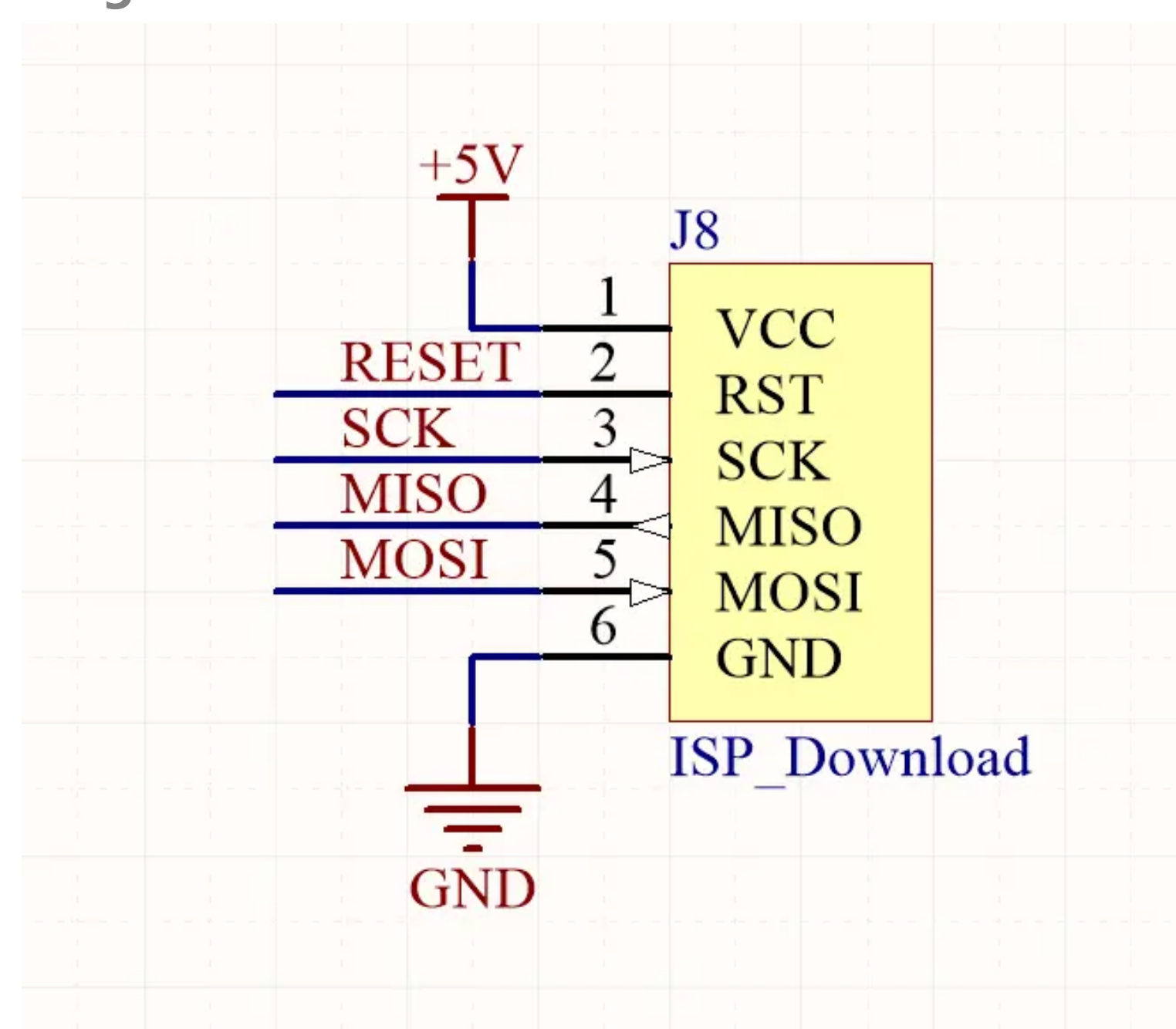
```

## Related Link

- [The Firmware of inside MEGA328](#)

## PinMap

Mega328 ISPDownload interface Pin foot definition



## Example

### 1. Arduino IDE

If you want the complete code `faces_encoder.ino`, please click [here](#)



### 2. UIFlow