M5STACK FACES KIT

- 3 different keyboards and charging station
- Includes Gray M5Core with ESP32 microcontroller
- Compatible with Arduino, MicroPython and Blockly

MAKER FACTORY

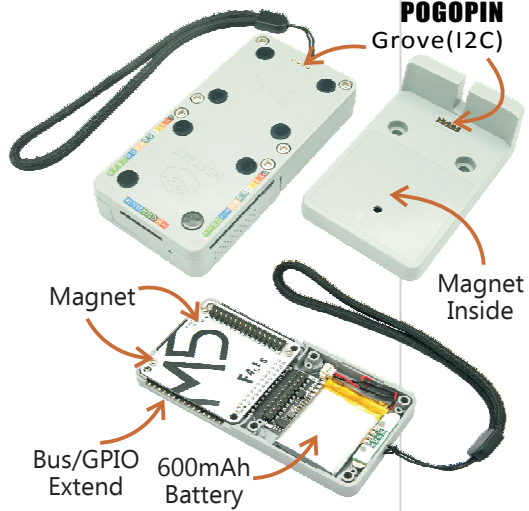
M5STACK

OpenSource

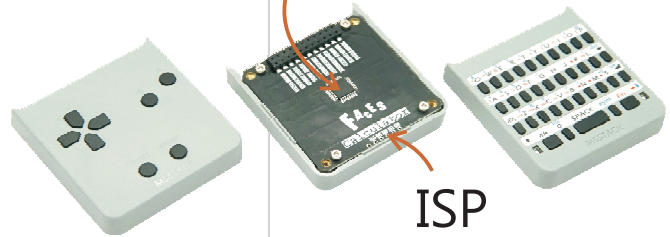
MicroPython
Arduino
ESP32
NDS

M5CORE Grey
+QWERTY keyboard
+Gaming keyboard
+Calculator keyboard
+Charging Base
+USB-C cable

POGOPIN
Grove(I2C)



MEGA328
Microcontroller



MAKER FACTORY

Item no. 2179960

https://www.conrad.de/

https://docs.makerfactory.io/

FACES Kit

FACES is a kit consisting of M5Core GRAY, functional panels, battery base, charger base and some accessories.

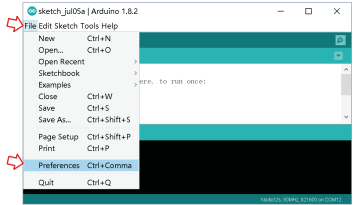
The functional keyboards are composed of gaming, Calculator and QWERTY. You can program it through ArduinoIDE or MicroPython. For different applications, you can stack relevant keyboards on the base and burn firmware into the M5Core.

For each keyboard a MEGA328 chip is integrated, so when you press a button, a relevant value (hexadecimal format) will be sent from keyboard to M5Core.

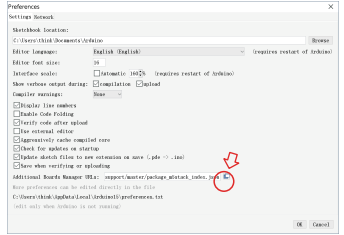
They (keyboard and M5core) communicate using I2C. And the I2C address of each keyboard is 0x08.Z

Software Installation

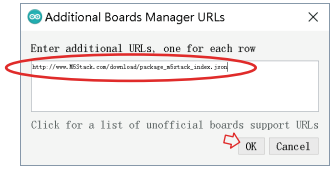
1. Install Arduino IDE.
   From: https://www.arduino.cc/en/Main/Software
2. Install M5Stack.
   - Run **Arduino** IDE, and click: File -> Preferences ,



   - Click the button like this:

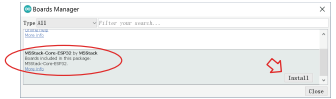


   - Add the following URL into the box, and Click OK.
     http://www.M5Stack.com/download/package_m5stack_index.json



   - Click: Tools -> Board: -> Boards Manager...

   - And Select M5Stack-Core-ESP32, Click Install.



   - Done!

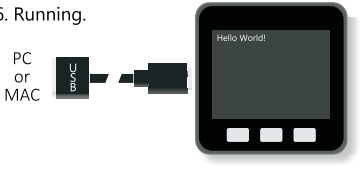
Hello World!

1. Select: Tools -> Board: -> M5Stack
2. Click: Files->Examples->M5Stack ->Basics->Hello

```
#include <M5Stack.h>
// the setup routine runs once when M5Stack starts up
void setup(){
  // initialize the M5Stack object
  M5.begin();
  // lcd display
  M5.Lcd.printf("Hello World!");
}

// the loop routine runs over and over again forever
void loop(){
}
```

3. Connect to PC or MAC with a usb cable.
4. Select: Tools->Port->ComX.
5. Click: Sketch->Upload.
6. Running.



Function List

SYSTEM
```
M5.begin();
M5.update();
```

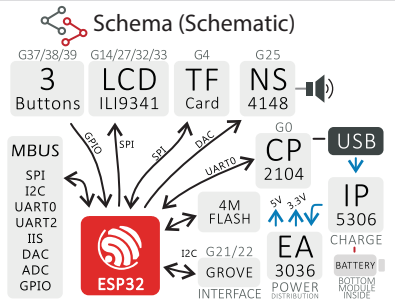
LCD
```
M5.Lcd.setLight(int light);
M5.Lcd.setCursor(int x, int y);
M5.Lcd.putChar(int x, int y, char ch);
M5.Lcd.putStr(int x, int y, string str);
M5.Lcd.printf(char* str,...);
M5.Lcd.fillScreen(uint16 color);
M5.Lcd.pixel(int x, int y, uint16 color);
M5.Lcd.line(int x1,y1,x2,y2,uint16 color);
M5.Lcd.drawRect(int x1,y1,x2,y2,uint16 color);
M5.Lcd.fillRect(int x1,y1,x2,y2,uint16 color);
```

BUTTON
```
M5.BtnA/B/C.pressed();
M5.BtnA/B/C.released();
M5.BtnA/B/C.held();
M5.BtnA/B/C.repeated();
```

SPEAKER
```
M5.Speaker.tone(int freq);
M5.Speaker.mute();
M5.Speaker.setBeep(int freq,int time);
M5.Speaker.beep();
```

SERIAL
```
M5.Serial0/2.begin(int bps);
M5.Serial0/2.print(char* str);
M5.Serial0/2.println(char* str);
M5.Serial0/2.read();
```

Schema (Schematic)



Technische Daten (Specifications)

Model	CORE Kit
ESP32	240 MHz dual core Tensilica LX6 microcontroller with 600 DMIPS, Integrated 520 KB SRAM,Integrated 802.11 b/g/n HT40 Wi-Fi transceiver, baseband, stack and LWIP, Integrated dual mode Bluetooth.
Input	5V @ 500mA
Interface	SPIx1, I2C(GROVE)x1, Uartx2,IISx1, TFx1
LCD	**5.08 cm (2") 320x240 Colorful TFT LCD, ILI9342**
Speaker	1W-0928
	150mAh@3.7V, Bottom module-inside.
Op.Temp.	32°F to 104°F (0°C to 40°C)
Size	54x54x17mm with Bottom, 54x54x12.6mm only CORE.
C.A.S.E	Plastic(PC)
Weight	120g with Bottom, 100g only CORE.