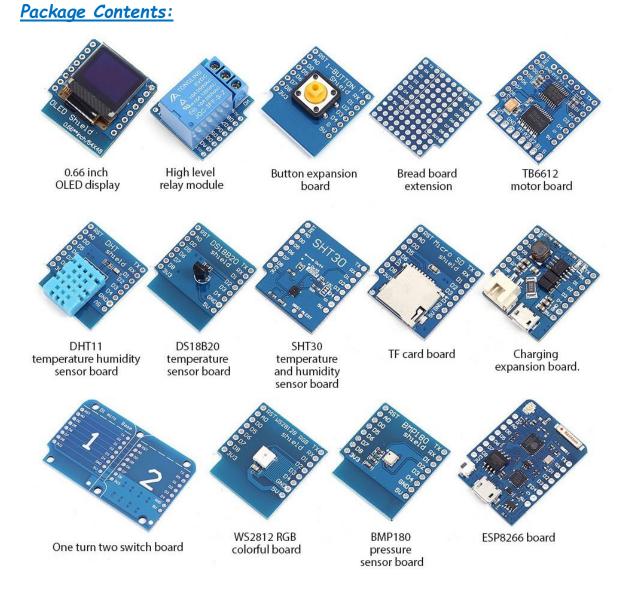


# 15 Sensor Mini D1 Pro Learning Kit



### **Description:**

This is a set of blue metal mini D1 PRO WiFi ESP8266 development board 15 different sensors learning kit compatible with NodeMcu Lua with a 17\*10\*2cm packaging.



## **Detailed Explanation of Some Modules:**

#### ESP 8266 Board:

- 1. Based on ESP 8266EX, all IO ports elicited.
- 2. Use CP 2102 to ensure stability to serial port driver as transmission
- 3. Board high quality antenna secured wireless transmission signal and distance
- 4. Built-in 16M bytes (128M bit) memory
- 5. Reserved external antenna

#### WS 2812 RGB Colorful Board:

- 1. Working temperature is 25~80°C
- 2. The speed data transmission is up to 800 Kbps
- 3. With the control circuit and the RGB chip integrated into a complete 5050 packaged component to integrate the complete external control pixel points
- 4. Each pixel can obtain three colors, 256 luminance display, and all color display of 16777216 colors, less than 400 Hertz / without scanning frequency

#### DS18B20 Temperature Sensor Board:

- 1. The range temperature measurement is -55~+ 125°C
- 2. Accuracy is  $\pm 0.5$  centigrade (-10 to  $85^{\circ}C$ )
- 3. Acquisition accuracy is 12 bits from 9 bits
- 4. Mode communication is 1-wire

#### DHT11 Temperature and Humidity Sensor Board:

- 1. Moisture measurement range is 95% to 20% (range from  $0^{\circ}C$  to  $50^{\circ}C$ )
- 2. Error humidity measurement ± 5%
- 3. Error temperature measurement  $\pm$  2  $^{\circ}C$
- 4. Operating voltage is 3.3 / 5 volts
- 5. Output form is digital output

#### BMP180 Pressure Sensor Board:

- 1. Pressure range 300 m to 1100 hpa (500 m above sea level to 9000 m)
- 2. The power supply voltage is 3.6 volts (vddd)
- 3. High accuracy: low power mode, resolution 0.06 hPa (0.5 m)
- 4. With high linearity, the resolution is 0.03 hpa (0.25 m)

#### SHT30 temperature and humidity sensor board:

- 1. Measurement accuracy is ± 0.3 °C, ± 3% RH
- 2. The measurement range is -40 to +125 °C, 0 to 100% RH
- 3. Response time is 8 s (tau 63%) 5 30 (tau 63%)
- 4. Interface 12c interface

#### High Level Relay Module:

- 1. High quality relay
- 2. It is more convenient to connect the control line to the kf301 terminal
- 3. High level trigger
- 4. Power supply is DC 5V

#### TF Card Board:

- 1. Power supply voltage is 5 volts
- 2. The interface level is 5 volts to 3.3 volts
- 3. Support card type micro SD card (2 grams) and micro SDHC (32 grams)
- 4. Current to milliamperes (max)

#### Button Expansion Board:

- 1. Operating voltage is 3.5 volts, 5 volts
- 2. Output is digital level (press high level, release low level)
- 3. 12 mm \* 12 mm \* 5 mm button
- 4. The insulation voltage is 30 vDC  $\,$

#### TB6612 Motor Board:

- 1. Built in driver boot loader
- 2. Use driver chip
- 3. Interface definition:

VM: DC +

GND: DC -

- A1, A2: motor A
- B1, B2: motor B
- S: IO pattern selection

#### 0.66 inch OLED Display:

- 1. The screen size is 0.66 inch (64 mm \* 48 mm)
- 2. Driver chip SSD 1306
- 3. The operating voltage is 3.3 volts
- 4. IIC (I2c) interface
- 5. The i2c address is 0X3C or 0X3D

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