

YUN HAT



Description

YUN HAT is a cloud-shaped multi-function environment information measurement base. Built-in temperature and humidity sensor SHT20, air pressure sensor BMP280, photoresistor, 14 RGB LEDs. The board is build with Embedded Microprocessor "STM32F030F4", which implemented a concise and efficient program APIs. YUN HAT features a pretty appearance which could be used as a decoration for your space. The base is designed for the MSStack, like other HAT devices, it is compatible with top socket of MSStack. The overall structure adopts a three-layer design, and the upper and lower PCB boards serve as fixed structure and main circuit respectively, which is beneficial to the circuit conduct long hours of work. The board also provides an independent external power interface. The middle layer is a light-guided acrylic component. To achieve a better light display effect, The acrylic outer contour cutting surface is partially polished, and the purpose is to effectively reduce the scattering of light, making it evenly saturated with light effects. One hook hole and two 64mm magnet mounting positions are reserved on the board, so users can easily magnet or hang in any corner of space.

Product Features

Compatible with MSStack
 On-board Microprocessor STM32F030F4
 Temperature and Humidity sensor SHT20
 Air pressure sensor BMP280
 Photoresistance
 14 x SK6812 4020 RGBLED
 Three-layer structure design:
 1 x hook hole
 2 x 64mm magnet mounting position
 1 x finishing Acrylic profile surface
 Development platform: Arduino, UIFlow(Blockly,Python)

Include

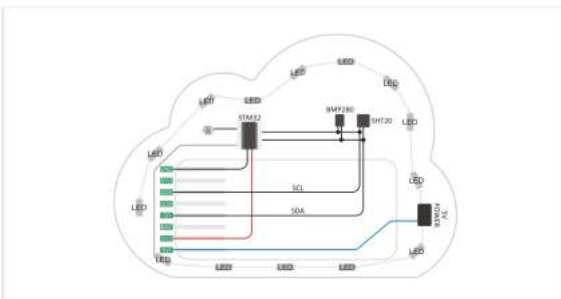
1x YUNHAT
 2x Dupont



Applications

Environmental information collection
 Smart home decoration
 Fridge Magnet

Schematic



Links

datasheet
[SHT20](#)
[BMP280](#)

EasyLoader

1.EasyLoader is a simple and fast program burner. Every product page in EasyLoader provides a product-related case program. It can be burned to the master through simple steps, and a series of function verification can be performed. (Currently EasyLoader is only available for Windows OS)

After downloading the software, double-click to run the application, connect the MS device to the computer through the data cable, select the port parameters, click "Burn" to start burning. (For MSStickC burning, please Set the baud rate to 750000 or 115200)

Example

UIFlow

Open <http://flow.msstack.com> and Load Demo

The screenshot shows the UIFlow software interface. At the top, there's a header with 'UiFlow V1.4.3' and 'Project YUN'. Below that, there's a navigation bar with 'Blockly' and 'Python' options. The main area is titled 'Examples' and contains a grid of 11 example projects, each with a small image and a label: PIR Hat, ENV Hat, SPK Hat, NCIR Hat, DAC Hat, ADC Hat, BeetlcC, Finger, PuppyC, Servo, and YUN. The 'YUN' example is highlighted in blue. Below the grid, there's a section for the selected 'YUN' example, which includes a description: 'Detect current ambient air pressure values and light intensity. When the light intensity is high, the screen displays the sun and the light color is yellow. When the light intensity is low, the screen displays the moon and the light color is blue.' A blue 'Load' button is positioned below the description.

Arduino

To get complete code, please click [here](#)

Pin Map

M5StickC	CMD	5V OUT	GPIO26	GPIO0	GPIO36	BAT	3V3	5V IN
YUN HAT	CMD	+5V	SCL	SDA	/	BAT	+3.3V	+5V IN