
SunFounder x-sense-hat

www.sunfounder.com

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Thanks for choosing our X Sense HAT.

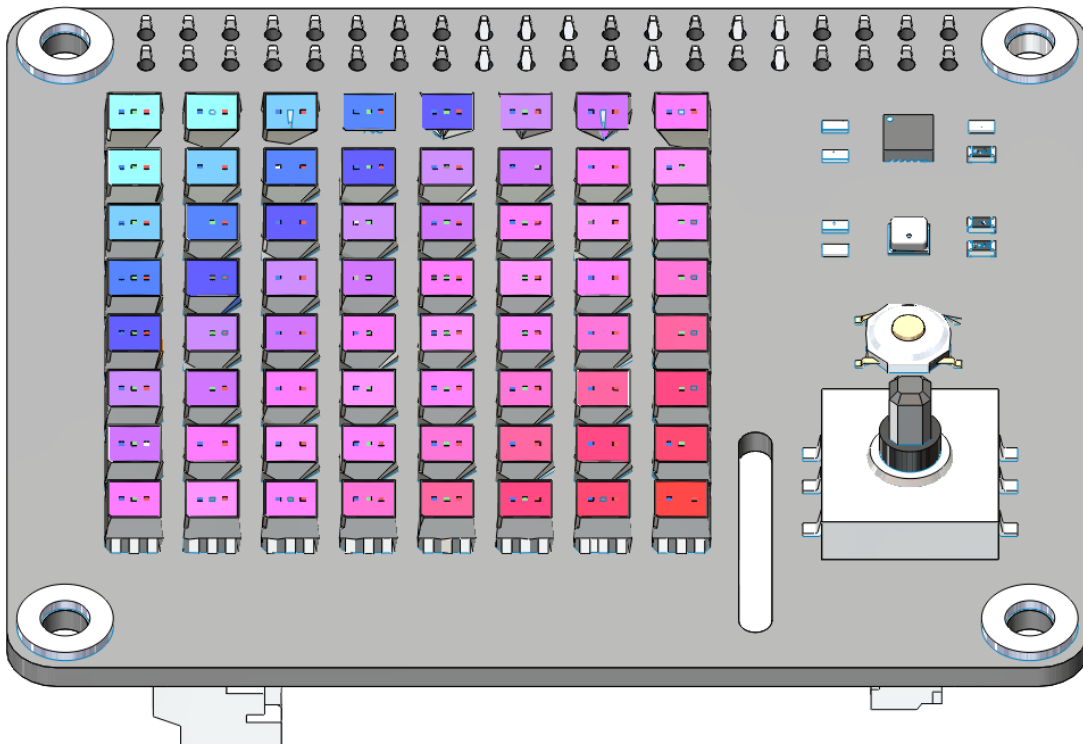
This manual introduces components list, assembling and programming. It is recommended that you read in order of chapters, I believe you will soon learn to use X Sense HAT.

In addition, the program part is divided into two chapters: **Play On Ezblock Studio & Play on Other Programming Platforms**, and each of them can get you started on making X Sense HAT work in way you want.

Ezblock Studio is a development platform developed by SunFounder designed for beginners to lower the barriers to getting started with Raspberry Pi. It has two programming languages: Graphical and Python, and available on almost all different types of devices. With Bluetooth and Wi-Fi support, you can download code, remote control a Raspberry Pi, on Ezblock Studio.

Of course, you can also use other programming platforms to program X Sense HAT in Python.

ABOUT X SENSE HAT

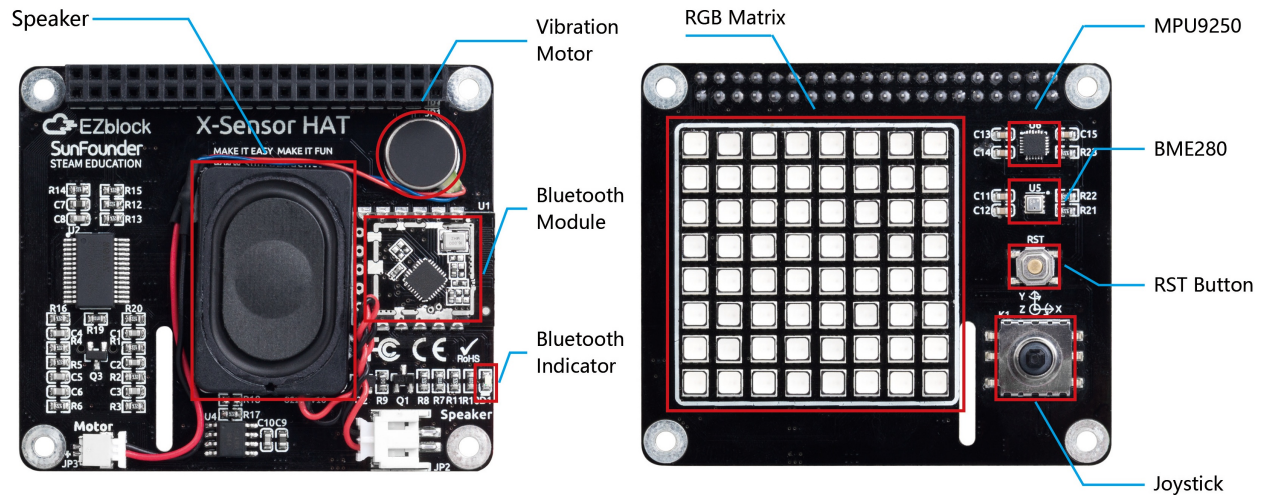


The X Sense HAT is an add-on board for Raspberry Pi. It includes an 8×8 RGB LED matrix, a joystick, a BME280 sensor and a MPU9250 sensor. At the same time it is also equipped with a speaker and a vibration motor, you can use them to make your X Sense HAT more interesting.

It contains the following functions

- Draw a pixmap and gif
- Detect Temperature
- Detect Humidity
- Detect Pressure
- Detect Acceleration
- Detect Angular velocity
- Detect Geomagnetic Direction
- Detect Attitude Angle

- TTS
- Play Sound Effects
- Play Backgrounds
- Feel the Vibration



RST Button:

- Short pressing RST Button causes program resetting.
- Long press RST Button, you will disconnect the Bluetooth.

Bluetooth Indicator:

The Bluetooth indicator keeps turning on at a well Bluetooth connection, blink at a Bluetooth disconnection, blink fast at a signal transmission.

MPU9250

MPU-9250 is a 9-axis MotionTracking device that combines a 3-axis gyroscope, 3-axis accelerometer, 3-axis magnetometer and a Digital Motion Processor™ (DMP) all in a small 3x3x1mm package available as a pin-compatible upgrade from the MPU6515. If you want to know more about it, please check the [MPU9250 Datasheet](#).

BME280

BME280 is an environmental sensor that integrates temperature, humidity, air pressure and trinity. With high-level, multi-function, small size, etc. If you want to know more about it, please check the [BME280 Datasheet](#).

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