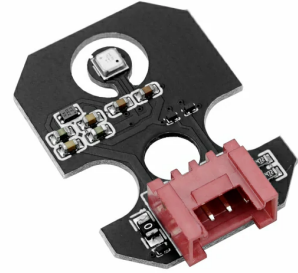


Unit ENV-Pro

SKU:U169



Description

The **Unit ENV-Pro** sensor is a highly integrated environmental detection unit, equipped with the **BME688** sensor solution. It supports the measurement of various environmental parameters such as VOCs (volatile organic compounds), CO₂ equivalent, indoor air quality (IAQ), temperature, humidity, and atmospheric pressure. The sensor uses an I2C communication interface (0x77), making it suitable for applications like weather stations, indoor environment monitoring, and air quality detection.

Features

- Highly integrated sensor
- I2C communication
- High precision and low power consumption
- Real-time monitoring
- Multi-platform programming with Arduino and UIFlow

Includes

- 1 x Unit ENV-Pro
- 1 x HY2.0-4P Grove connection cable (20cm)

Applications

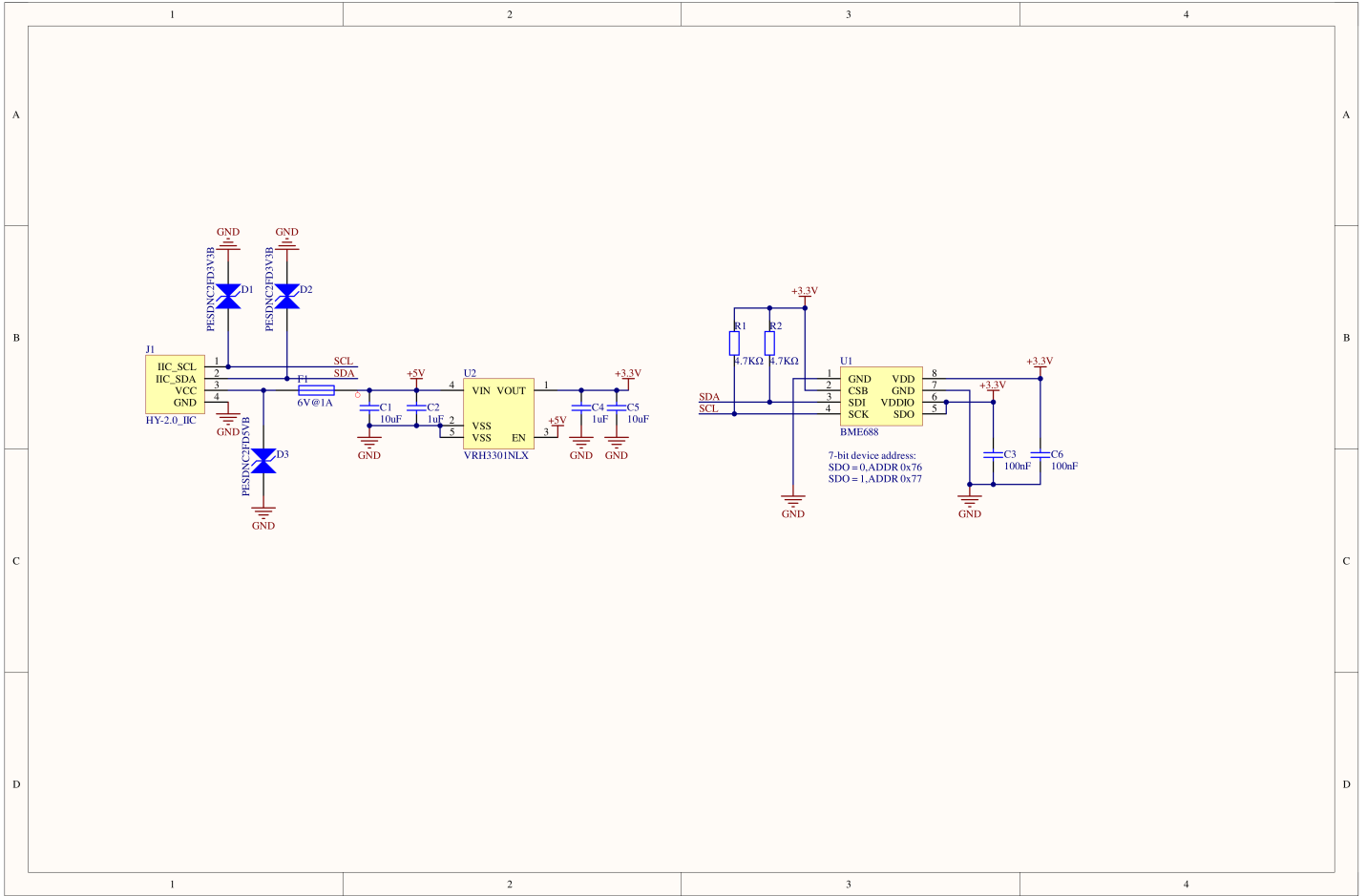
- Indoor and outdoor air quality measurement
- Detection of leaks or fires
- Agricultural temperature and humidity detection

Specifications

Specification	Parameters
Key parameters of gas sensor	Standard scan speed: 10.8 s
Key parameters of humidity sensor	Response time (τ 0-63%): 8 seconds Accuracy: $\pm 3\%$ R.H. Measurement range: 0 ~ 100% R.H.
Key parameters of atmospheric pressure sensor	Root mean square noise: 0.12 Pa, approximately equal to 1.7 cm altitude Temperature coefficient offset: ± 1.3 Pa/K, approximately equal to ± 10.9 cm altitude (for 1°C temperature change) Measurement range: 300 ~ 1100 hPa
Key parameters of temperature sensor	Absolute accuracy: ± 0.5 $^\circ\text{C}$ (0 ~ 65°C) Measurement range: -40 ~ $+85$ $^\circ\text{C}$
Communication Interface	I2C @0x77
Product Size	32.0 x 24.0 x 8.0mm
Product Weight	3.9g
Package Size	138.0 x 93.0 x 9.0mm
Gross Weight	9.2g

Schematics

- [Unit ENV-Pro Schematics PDF](#)

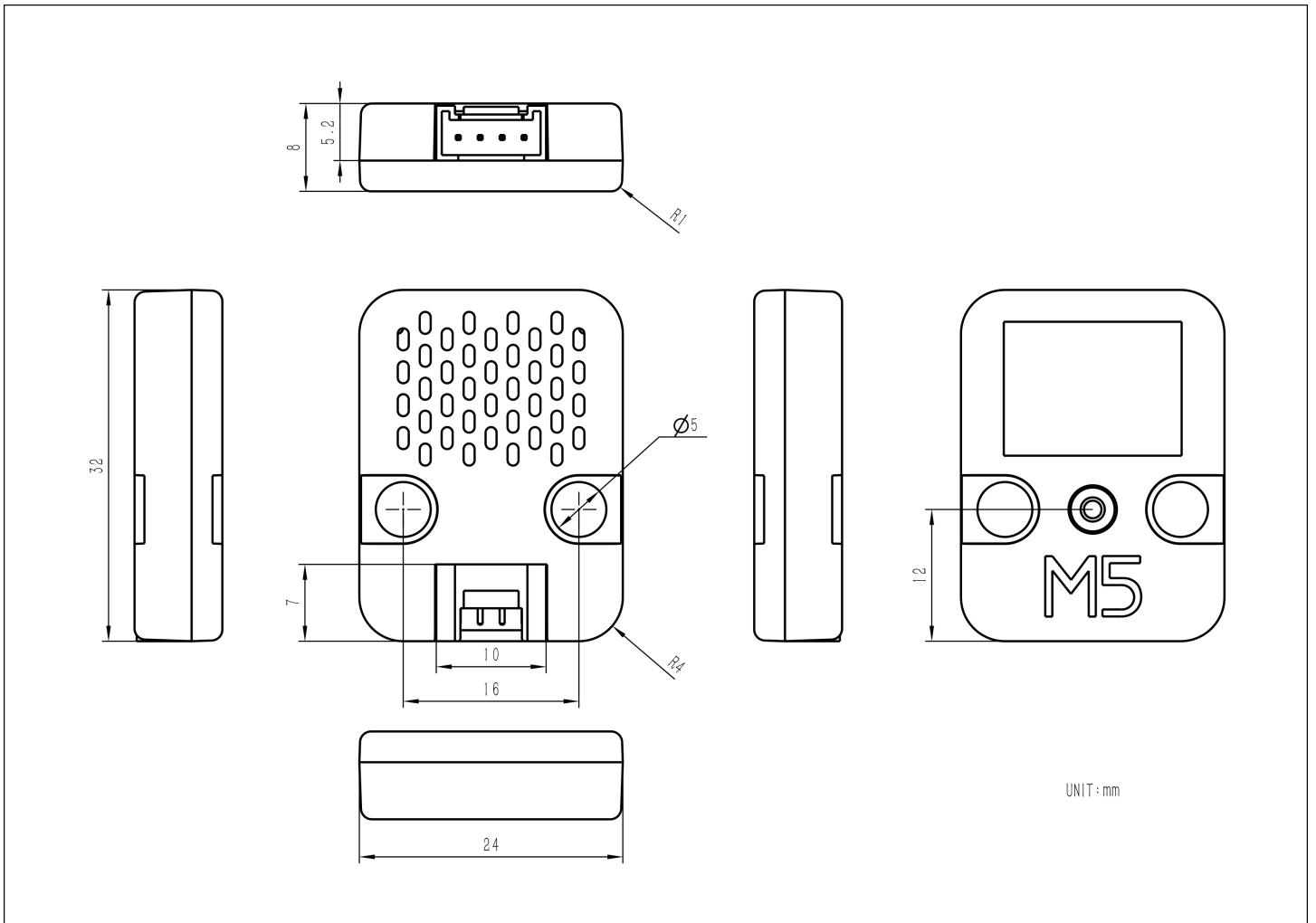


PinMap

Unit ENV-Pro

HY2.0-4P	Black	Red	Yellow	White
PORT.A	GND	5V	SDA	SCL

Model Size



Datasheets

- [BME688 Datasheet](#)

Softwares

Arduino

- [ENV PRO UNIT Arduino Example \(Read temperature, humidity, pressure, and indoor air quality values\)](#)
- [Bosch BME688 Official Library Files](#)
- [Bosch BME688 Official Detection and Analysis Tool](#)

UiFlow1

- [Unit ENV-Pro Test Example](#)

UiFlow2

- [Unit ENV-Pro UiFlow2 Docs](#)

Home Assistant

- [Unit ENV-Pro Home Assistant Integration](#)

Video

- Unit ENV-Pro Example (Read temperature, humidity, pressure, and indoor air quality values)

[ENV PRO UNIT.mp4](#)

- Unit ENV-Pro UIFlow Getting Started Example (Read temperature, humidity, pressure, and indoor air quality values)

[ENV_PRO_UIFLOW.mp4](#)

Product Comparison

Product Compare					
	Unit ENV	Unit ENV-II	Unit ENV-III	Unit ENV-IV	Unit ENV-Pro
Sensor	DHT12+BMP280	SHT30+BMP280	SHT30+QMP6988	SHT40+BMP280	BME688
Data Type Detected	Temperature+Pressure+Humidity	Temperature+Pressure+Humidity	Temperature+Pressure+Humidity	Temperature+Pressure+Humidity	Temperature+Pressure+Humidity+Gas
Interface	I2C	I2C	I2C	I2C	I2C
I2C Address	DHT12:0x5C BMP280:0x76	SHT30:0x44 BMP280:0x76	SHT30:0x44 QMP6988:0x70	SHT40:0x44 BMP280:0x76	BME688:0x77
Accuracy	Temp: ±0.5°C Humidity: ±5%RH Pressure: ±0.12 hPa	Temp: ±0.2°C Humidity: ±2%RH Pressure: ±0.12 hPa	Temp: ±0.2°C Humidity: ±2%RH Pressure: ±0.12 hPa	Temp: ±0.2°C Humidity: ±1.8%RH Pressure: ±0.12 hPa	Temp: ±0.5°C Humidity: ±3%RH Pressure: ±0.12 hPa
Range	Temp: -20~60°C Humidity: 20~95%RH Pressure: 300~1100 hPa	Temp: -40~125°C Humidity: 0~100%RH Pressure: 300~1100 hPa	Temp: -40~125°C Humidity: 0~100%RH Pressure: 300~1100 hPa	Temp: -40~125°C Humidity: 0~100%RH Pressure: 300~1100 hPa	Temp: -40~85°C Humidity: 0~100%RH Pressure: 300~1100 hPa