

BME688 Environmental Sensor 4-in-1 Product Brief

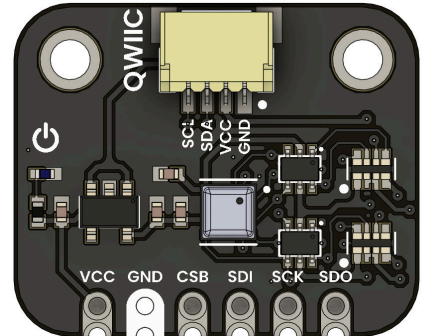
Versatile sensor module

Version: 1.0

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Introduction

The **BME688 Environmental Sensor 4-in-1** is a versatile sensor module that combines temperature, humidity, pressure, and gas sensing capabilities in a single compact package.



Functional Description

- Accurately measures ambient moisture for precise environmental monitoring.
- Detects atmospheric pressure changes to support dynamic weather tracking.
- Delivers consistent temperature readings even under varying conditions.
- Monitors a range of gases to help identify potential environmental hazards.

Electrical Characteristics

- current draw, logic levels, ADC resolution, touchpad sensitivity
- Power supply: 1.71V to 3.6V
-

Features

- List of main technical features of the microcontroller and board design

Applications

- **Environmental Monitoring**: Ideal for tracking air quality, humidity, temperature, and pressure in smart homes and industrial applications.
- **IoT Devices**: Can be integrated into IoT systems for real-time environmental data collection and analysis.
- **Weather Stations**: Useful in DIY weather stations for accurate weather forecasting and monitoring.
- **Smart Agriculture**: Helps in monitoring soil and air conditions to optimize crop growth and yield.
- **Wearable Devices**: Can be used in health and fitness wearables to monitor

Settings

Interface Overview

Interface	Signals / Pins	Typical Use
UART		
I2C	CSB must be connected to VDD	
SPI	CSB must be connected to GND	
USB		

Supported Pins

Symbol	I/O	Description
VCC	Input	3.3V or 5V
GND	GND	Common ground for all components
IO	Bidirectional	

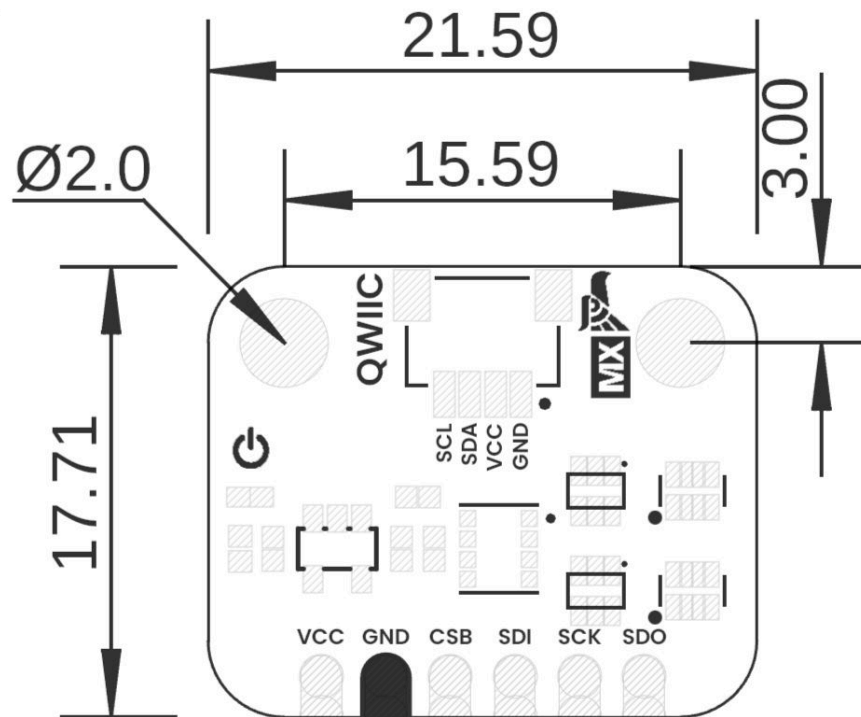
Pin & Connector Layout

Group	Available Pins	Suggested Use
GPIO		
UART		
TouchPad		
Analog		
SPI	SCK, SDI, SDO	
I ² C	QWIIC Connector	

Block Diagram



Dimensions



Mechanical dimensions in millimeters (mm)

Usage

- (e.g., Arduino IDE, ESP-IDF, PlatformIO, etc.)

Downloads

- Schematic PDF
- Board Dimensions DXF
- Pinout Diagram PNG

Purchase

- Buy from vendor
- Product page