

Environment click

PID: MIKROE-2467

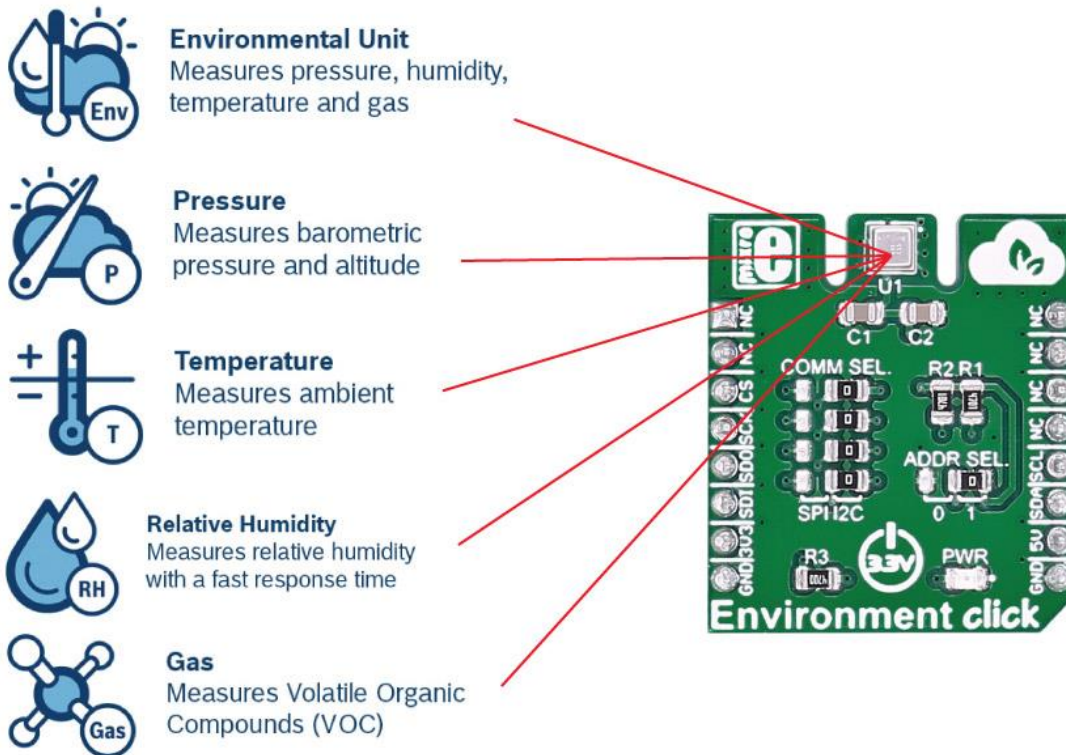
Environment click measures temperature, relative humidity, pressure and VOC (Volatile Organic compounds gases). The click carries the [BME680](#) environmental sensor from Bosch. Environment click is designed to run on a 3.3V power supply. It communicates with the target microcontroller over SPI or I2C interface.

You can use it to test your indoor air quality, to control HVAC (heating, ventilation, and air conditioning) systems, in a weather station, sports applications and more.



BME680 sensor features

The BME680 is a combined digital gas, humidity, pressure, and temperature sensor based on proven sensing principles.



The **humidity sensor** provides an extremely fast response time for fast context awareness applications and high overall accuracy over a wide temperature range. The **pressure sensor** is an absolute barometric pressure sensor with extremely high accuracy and resolution. The integrated **temperature sensor** has been optimized for lowest noise and highest resolution. Its output is used for temperature compensation of the pressure and humidity sensors and can also be used for estimation of the ambient temperature.

The **gas sensor** within the BME680 can detect a broad range of gases to measure indoor air quality for personal well being. Gases that can be detected by the BME680 include Volatile Organic Compounds (VOC) from paints (such


as formaldehyde), lacquers, paint strippers, cleaning supplies, furnishings, office equipment, glues, adhesives, and alcohol.

Specifications

Type	Environmental combo
Applications	Indoor air quality measurement, personalized weather station, home automation control, measuring ambient temperature, etc.
On-board modules	BME680 integrated environmental sensor
Key Features	A digital 4-in-1 sensor with gas, humidity, pressure and temperature measurement
Interface	I2C,SPI
Input Voltage	3.3V
Click board size	S (28.6 x 25.4 mm)

Pinout diagram

This table shows how the pinout on **Environment click** corresponds to the pinout on the mikroBUS™ socket (the latter shown in the two middle columns).

Notes	Pin					Pin	Notes
	NC	1	AN	PWM	16	NC	
	NC	2	RST	INT	15	NC	
Chip select	CS	3	CS	TX	14	NC	
SPI clock	SCK	4	SCK	RX	13	NC	
Master in slave out	MISO	5	MISO	SCL	12	SCL	I2C clock
Master out slave in	MOSI	6	MOSI	SDA	11	SDA	I2C data
Power supply	+3.3V	7	3.3V	5V	10	NC	
Ground	GND	8	GND	GND	9	GND	Ground

Jumpers and settings

Designator	Name	Default Position	Default Option	Description
JP1	COMM. SEL.	Right	I2C	Selecting communication with MCU between SPI and I2C
JP2	ADDR. SEL.	Right	1	I2C address selection
JP3	COMM. SEL.	Right	I2C	Selecting communication with MCU between SPI and I2C
JP4	COMM. SEL.	Right	I2C	Selecting communication with MCU between SPI and I2C
JP5	COMM. SEL.	Right	I2C	Selecting communication with MCU between SPI and I2C