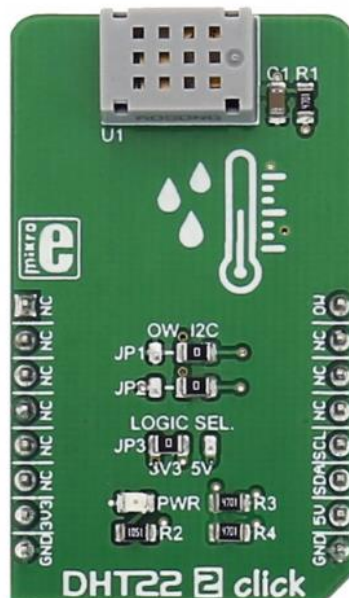


DHT22 2 click

PID: MIKROE-2818

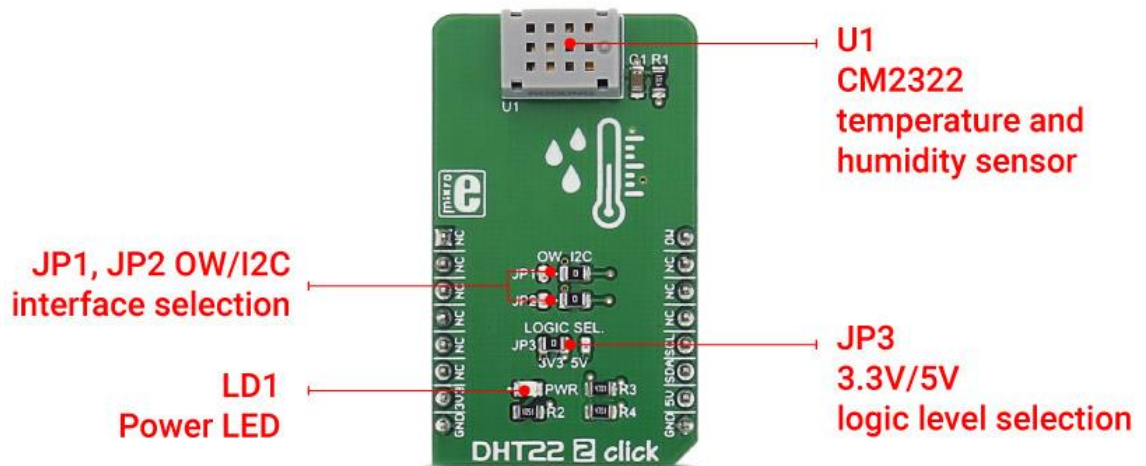
DHT22 2 click is used for measuring the environmental temperature and relative humidity. It uses the CM2322 sensor, with very accurate thermal and humidity measuring capabilities. It can use either 1-Wire or I2C protocol to communicate with the integrated circuit.

Attributes like the ultra-small size, low power consumption, data signal transmission distance up to 20 meters, make this sensor the perfect choice for all kinds of applications that require measurement of the temperature and humidity.



How does the click work?

The sensor used on this click is CM2322. This sensor contains humidity and temperature measurement elements, compensated and calibrated in the accurate calibration chamber. The calibration coefficient is saved in the OTP memory of an integrated MCU. The integrated MCU also provides I2C or 1-Wire interface, selectable by the onboard SMD jumper selectors. The operating voltage can also be selected by the onboard SMD jumper.




Typical temperature accuracy is $\pm 0.3^{\circ}\text{C}$, while relative humidity accuracy is 2% RH, with the resolution of 0.1 for both measured properties. I2C/1-Wire interface is used to communicate with the host MCU, sending the measurement data every 2 seconds. Proprietary data collecting techniques are used to average the sampled values, after which the result is sent via the I2C/1-Wire bus.

Specifications

Type	Temperature / Humidity
On-board modules	CM2322 sensor with very accurate thermal and humidity measuring capabilities
Key Features	Great measuring accuracy: $\pm 0.3^{\circ}\text{C}$, $\pm 2\% \text{RH}$ at 25°C , ultra-small size, low power consumption, signal transmission distance up to 20 meters.
Interface	1-wire, I2C
Input Voltage	3.3V or 5V
Click board size	M (42.9 x 25.4 mm)

Pinout diagram

This table shows how the pinout on **DHT22 2 click** corresponds to the pinout on the mikroBUS™ socket (the latter shown in the two middle columns).

Notes	Pin	 mikro™ BUS				Pin	Notes
	NC	1	AN	PWM	16	OW	1-wire
	NC	2	RST	INT	15	NC	
	NC	3	CS	RX	14	NC	
	NC	4	SCK	TX	13	NC	
	NC	5	MISO	SCL	12	SCL	I2C clock
	NC	6	MOSI	SDA	11	SDA	I2C data
Power supply	+3.3V	7	3.3V	5V	10	+5V	Power supply
Ground	GND	8	GND	GND	9	GND	Ground

DHT22 2 click maximum ratings

Description	Min	Typ	Max	Unit
Logic voltage level	3.3	5	5.5	V
SCL clock frequency			100	kHz
Measuring range (T)	-40		+80	°C
Measuring range (RH)	0%		99%	RH

Onboard settings and indicators

Label	Name	Default	Description
JP1	OW/SCL	Right	Digital interface selection. Left position 1-Wire, right position I2C.
JP2	OW/SDA	Right	Digital interface selection. Left position 1-Wire, right position I2C.
JP3	LOGIC SEL	Left	Logic level voltage selection. Left position 3.3V, right position 5V.
PWR	Power LED	-	Power LED indicates that the click is powered on