1-Wire I2C click

PID: MIKROE-2750

1-Wire I2C click carries the DS28E17 1-Wire-to-I2C master bridge from Maxim Integrated. The click runs on a 3.3V power supply.

It communicates with the target microcontroller over 1-Wire® protocol, using the following pins on the mikroBUS™ line: AN, PWM, RST.

How the click works

There are two on-board screw terminals used for connecting SCL, SDA, Vcc and GND of the I2C slave. After that, you are able to communicate with that slave through the onboard DS28E17 MCU.
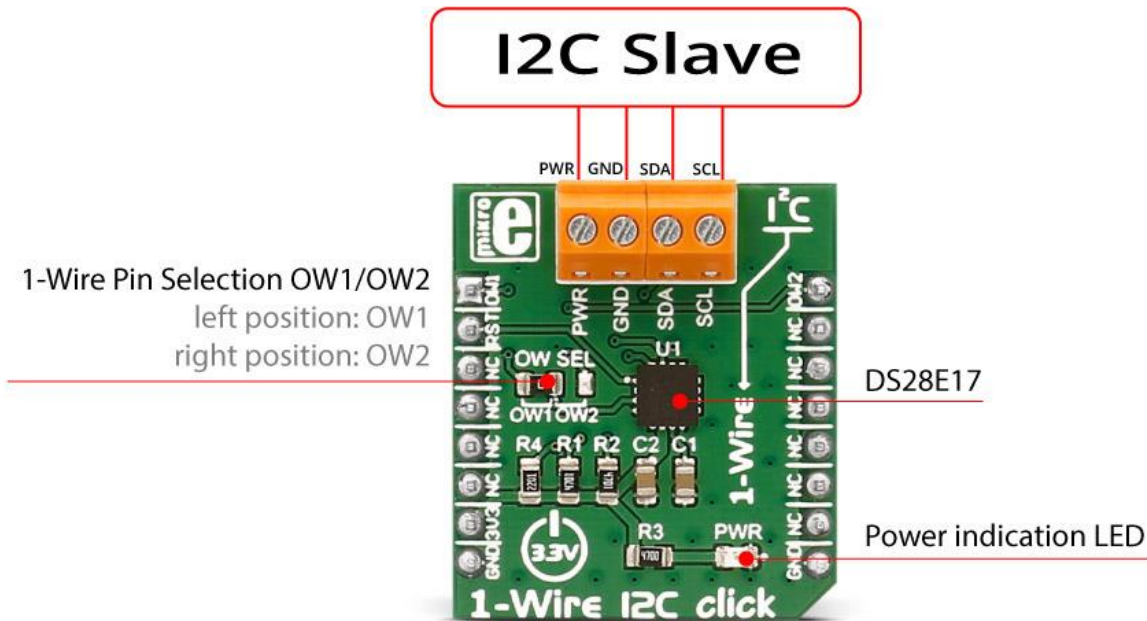
DS28E17 features

The DS28E17 is a 1-Wire slave to I2C master bridge device that interfaces directly to I2C slaves at standard (100 kHz max) or fast (400 kHz max). Data transfers serially through the **1-Wire® protocol**, which requires only a single data lead and a ground return. Every DS28E17 is guaranteed to have a unique 64-bit ROM registration number that serves as a node address in the 1-Wire network.

Specifications

Type	1-wire
Applications	1-Wire I2C click can be used to extend the length of I2C lines by converting I2C to 1-wire
On-board modules	DS28E17 1-Wire-to-I2C master bridge from Maxim Integrated
Interface	1-wire,GPIO
Input Voltage	3.3V
Click board size	S (28.6 x 25.4 mm)

Pinout diagram

This table shows how the pinout on **1-Wire I2C click** corresponds to the pinout on the mikroBUS™ socket (the latter shown in the two middle columns).

Notes	Pin		mikro™ BUS			Pin	Notes
1-Wire 1st pin	**OW1**	1	AN	PWM	16	**OW2**	1-Wire 2nd pin
Reset pin	**RST**	2	RST	INT	15	NC	
	NC	3	CS	TX	14	NC	
	NC	4	SCK	RX	13	NC	
	NC	5	MISO	SCL	12	NC	
	NC	6	MOSI	SDA	11	NC	
Power supply	+3.3V	7	3.3V	5V	10	NC	
Ground	**GND**	8	GND	GND	9	**GND**	Ground