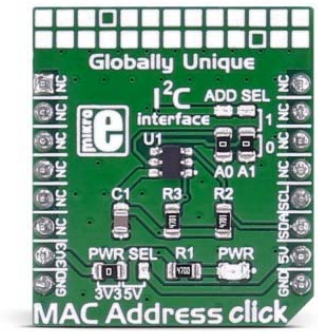
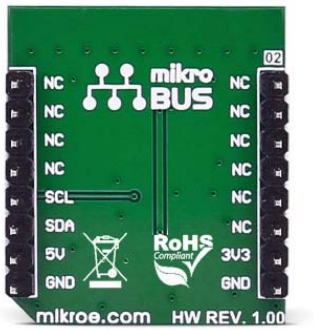
MAC Address click

PID: MIKROE-2733

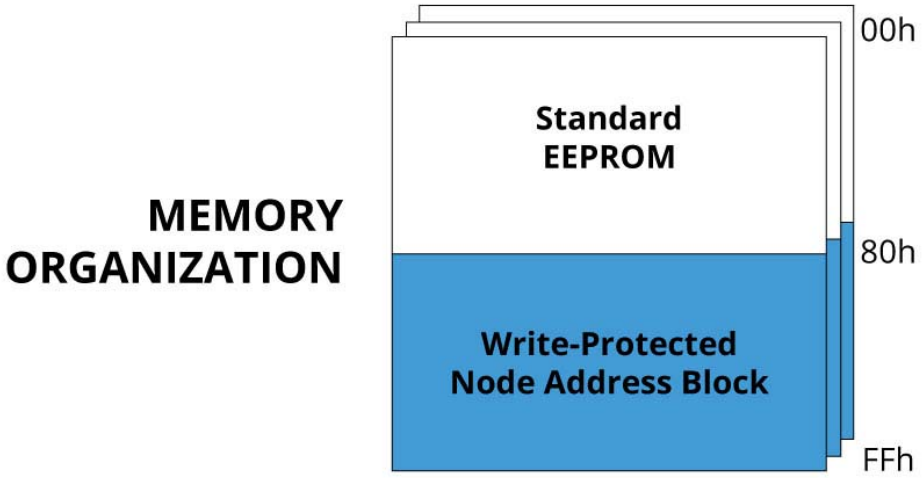




MAC Address click provides a unique node address for your application. It also has 1Kbit of writable EEPROM memory. MAC Address click carries the 24AA025E64 2K I2C Serial EEPROM with EUI-64™ node identity. The click is designed to run on either 3.3V or 5V power supply. MAC Address click communicates with the target microcontroller over I2C interface.

24AA025E64 features

The Microchip Technology Inc. 24AA025E64 is a 2Kb Serial EEPROM with a pre-programmed IEEE EUI-64 MAC Address. The device is organized as two blocks of 128 x 8-bit memory with a 2-wire serial interface. Low voltage design permits operation down to 1.7V, with maximum standby and active currents of only 1 uA and 1 mA, respectively. The 24AA025E64 also has a page write capability for up to sixteen bytes of data.



Specifications

Type	EEPROM
On-board modules	24AA025E64 2K I2C Serial EEPROMs with EUI-64™ node identity from Microchip
Key Features	Pre-programmed globally unique, 64-bit node address; more than 1 Million erase/write cycles
Key Benefits	1Kbit of writable EEPROM memory
Interface	I2C
Input Voltage	3.3V or 5V
Click board size	S (28.6 x 25.4 mm)

Pinout diagram

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

Notes	Pin	mikroBUS				Pin	Notes
	NC	1	AN	PWM	16	NC	
	NC	2	RST	INT	15	NC	
	NC	3	CS	TX	14	NC	
	NC	4	SCK	RX	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

Jumpers and settings

Designator	Name	Default Position	Default Option	Description
JP2	ADD SEL	Down	0	I2C slave address A0 (LSB) bit selection 0/1, down position 0, upper position 1.
JP3	ADD SEL	Down	0	I2C slave address A1 bit selection 0/1, down position 0, upper position 1.
PWR SEL	PWR SEL	Left	3.3V	Power Supply Voltage Selection 3V3/5V, left position 3V3, right position 5V

Programming

Code examples for MAC Address click, written for MikroElektronika hardware and compilers are available on Libstock.

Code snippet

The following code reads one byte from EEPROM and transmits data to UART.

```
01 if( !MACADDRESS_readByte( loop, &read ) )
02 {
03     LOG( "rn Byte value [ " );
04     ByteToHex( read, txt );
05     Ltrim( txt );
06     LOG( txt );
07     LOG( " ] succeessfully read from [ " );
08     ByteToHex( loop, txt );
09     Ltrim( txt );
10     LOG( txt );
11     LOG( " ] address" );
12 }
13 else
14 {
15     LOG( "rn Read Byte Error" );
16 }
17 }
```