

# MAC Address click

PID: MIKROE-2733

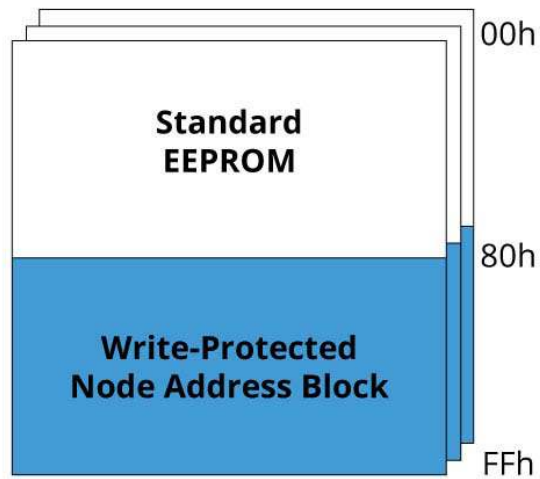


**MAC Address click** provides a unique node address for your application. It also has 1Kbit of writable EEPROM memory. MAC Address click carries the 24AA025E64 2K I2C Serial EEPROM with EUJ-64™ node identity. The click is designed to run on either 3.3V or 5V power supply. MAC Address click communicates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

## 24AA025E64 features

The Microchip Technology Inc. 24AA025E64 is a 2Kb Serial EEPROM with a pre-programmed IEEE EUJ-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.

## MEMORY ORGANIZATION




## 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					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	<b>SCL</b>	I2C clock
	NC	6	MOSI	SDA	11	<b>SDA</b>	I2C data
Power supply	<b>+3.3V</b>	7	3.3V	5V	10	<b>+5V</b>	Power supply
Ground	<b>GND</b>	8	GND	GND	9	<b>GND</b>	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( " ] successfully 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 }
```