

# RTC™ Board

Manual

*All Mikroelektronika's development systems feature a large number of peripheral modules expanding microcontroller's range of application and making the process of program testing easier. In addition to these modules, it is also possible to use numerous additional modules linked to the development system through the I/O port connectors. Some of these additional modules can operate as stand-alone devices without being connected to the microcontroller.*

**Additional Board**

 **MikroElektronika**

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## RTC (Real-Time Clock)

A real-time clock is used to keep the real time and date, generate interrupt and provide timer and alarm functions. Due to a battery cell, the operation of the real-time clock is enabled even when the microcontroller's power supply goes off. The real-time clock is linked to a development system via a 2x5 female connector provided on the RTC board and a 2x5 male connector provided on the I/O port of the development system. The real-time clock communicates with the microcontroller using I<sup>2</sup>C serial communication.

DIP switch SW1 is used to select a development system to connect the RTC board to

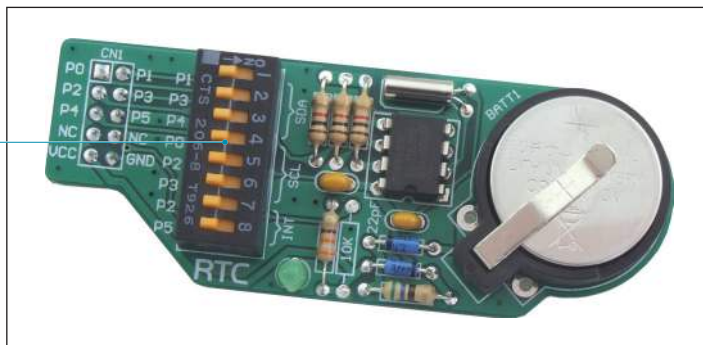


Figure 1: RTC board

DIP switch SW1 is used to select a development system to connect the RTC additional board to. This switch also enables connection between the SDA, SCL and INT-RTC pins provided on the RTC board and a serial I<sup>2</sup>C module built into the microcontroller. Figure 3 shows the pinout of the DIP switch SW1.

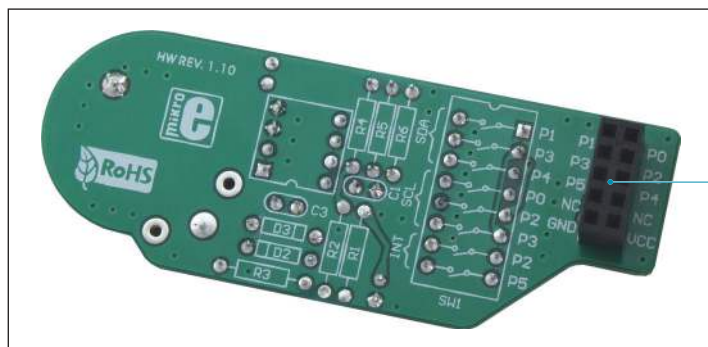


Figure 2: RTC board's bottom view

2x5 female connector enables the additional board to be connected to a development system

The function of pins provided on the PCF8583P circuit that is used for connection with the microcontroller:

INT - Open drain interrupt output  
SCL - Serial clock line  
SDA - Serial data line

The function of pins provided on the 2x5 female connector CN1:

P0 - SCL pin for EasyAVR and BIGAVR development systems;  
P1 - SDA pin for EasyAVR and BIGAVR development systems;  
P2 - SCL pin for BIGdsPIC, dsPICPRO, LV32MX and LV24-33 development systems; It is also used as an interrupt pin;  
P3 - SDA pin for BIGdsPIC, dsPICPRO, LV32MX and LV24-33 development systems and SCL pin for EasyPIC, BIGPIC, LV18FJ and EasyLV18 development systems;  
P4 - SDA pin for EasyPIC, BIGPIC, LV18FJ and EasyLV18 development systems;  
P5 - Interrupt pin;

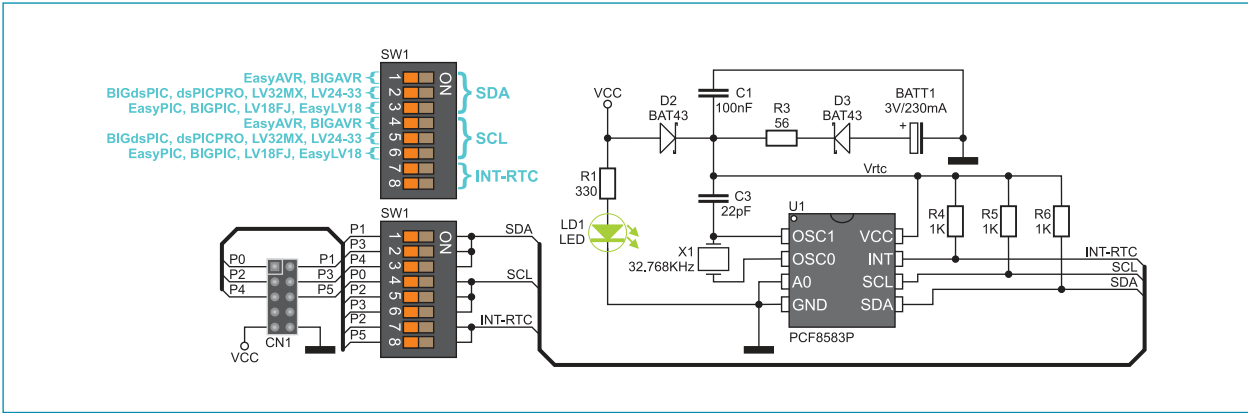


Figure 3: RTC board connection schematic

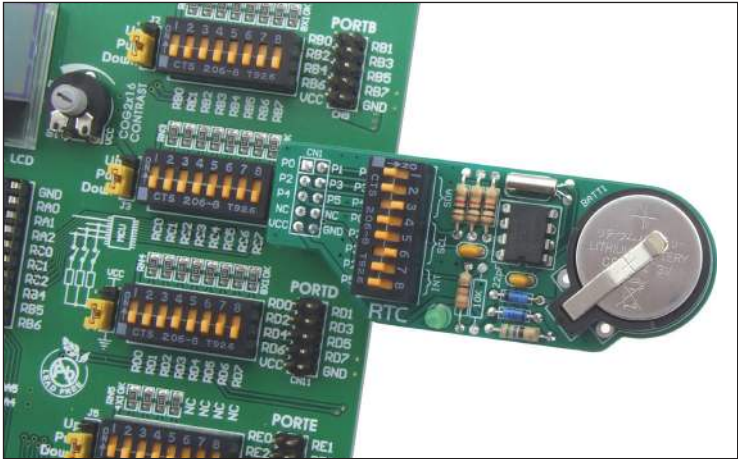


Figure 4: RTC board connected to a development system



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