

# 8051-Ready™

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**

SOFTWARE AND HARDWARE SOLUTIONS FOR EMBEDDED WORLD ...making it simple

## 8051-Ready Additional Board

The 8051-Ready additional board enables a .hex code to be quickly and easily loaded into 8051 microcontrollers by using the 8051prog programmer. The additional board is supplied with three sockets for 8051 microcontrollers in DIP40, DIP20 and PLCC40 packages, 2x5 male connectors connected to the microcontroller pins, pads, screw terminal for power supply, USB connector, pull-up resistors and reset button.

### Key features:

- Data transfer via USB-UART communication;
- Programming via the external programmer;
- Pads;
- 8 to 16V AC/DC power supply voltage;

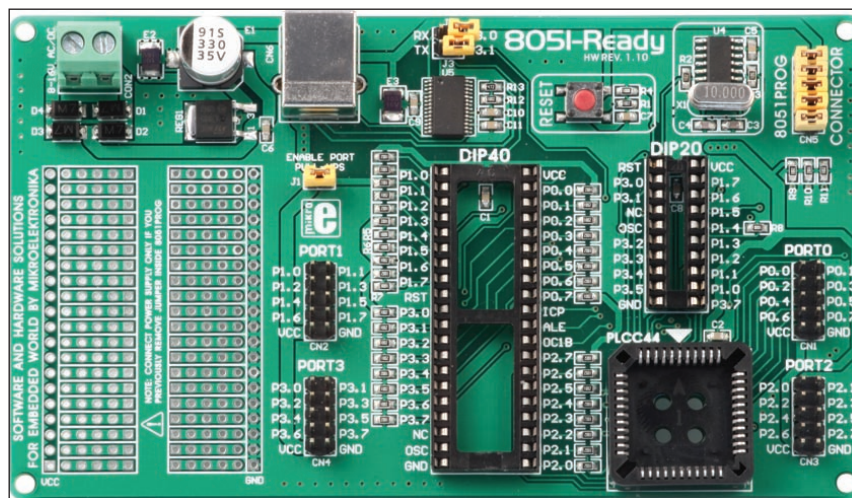


Figure 1: 8051-Ready additional board

### How to connect the board?

The 8051-Ready board features four 2x5 connectors (CN1 - CN4) that enable connection between the pins of the microcontroller plugged into the appropriate socket on the board and external devices. A 2x5 connector CN5 is used to connect the **8051prog** programmer to the microcontroller pins used for programming. A USB connector CN6 enables connection between the additional board and a PC via the UART module. In order to enable USB-UART communication, it is necessary to place jumpers J2 and J3. By doing this, the RX and TX pins of the USB-UART module are connected to the appropriate pins of the microcontroller (P3.0 for RX-MCU and P3.1 for TX-MCU), Figure 4. In order to connect pull-up resistors to MCU pins it is necessary to place jumper J1. The additional board is powered with voltage in a range between 8 and 16V AC/DC via the CN8 connector.

### How to use the board?

In order to use the 8051-Ready additional board, it is first necessary to place a microcontroller into the appropriate socket supplied on the board. The microcontroller is programmed with the 8051prog programmer that is plugged via its IDC10 connector into a 2x5 connector CN5 supplied on the board. In order to reset the microcontroller, just press the RESET button.

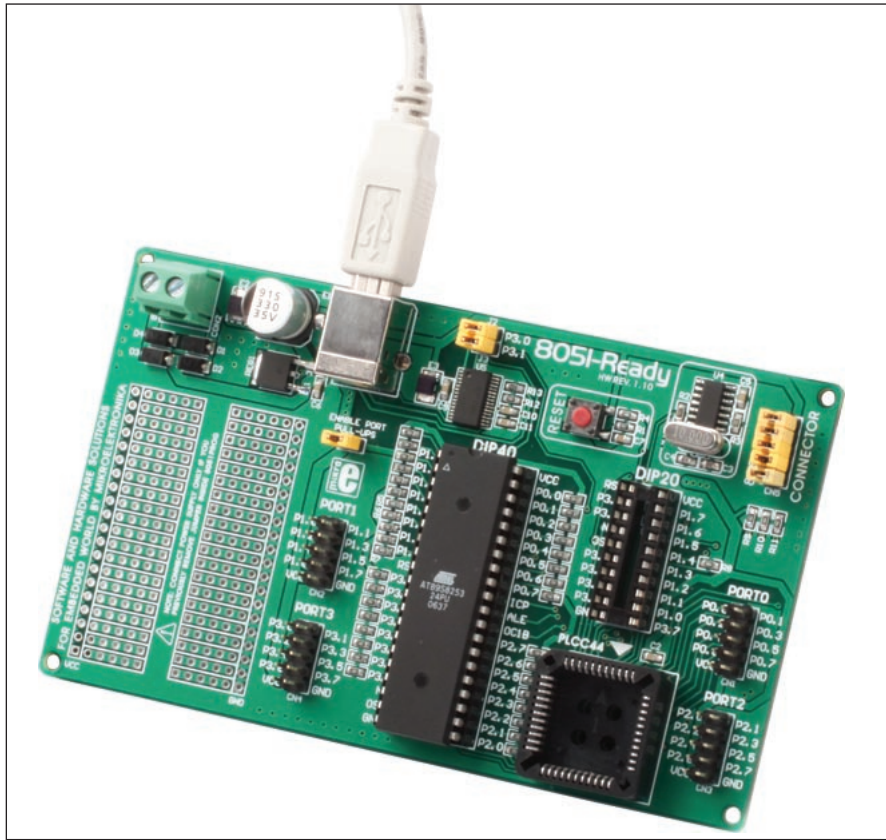
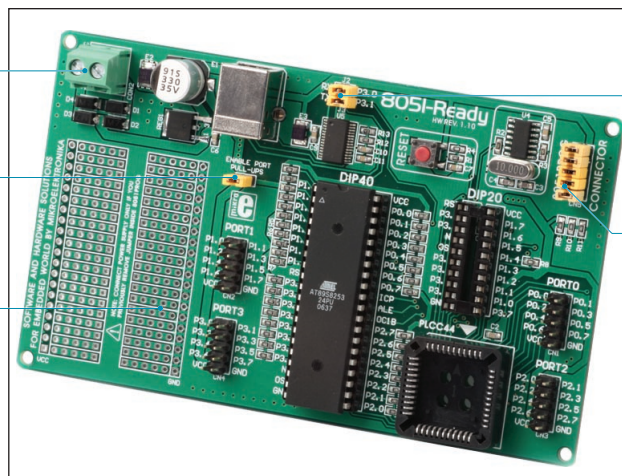


Figure 2: 8051-Ready additional board connected with a USB cable

8-16V AC/DC power supply voltage is provided via the CN8 connector

Jumper J1 is used to enable pull-up resistors

Pads that may be used as a proto board



Jumpers J2 and J3 must be placed in order to enable USB-UART communication

Connector CN5 is used for 8051prog connection

Figure 3: 8051-Ready with MCU

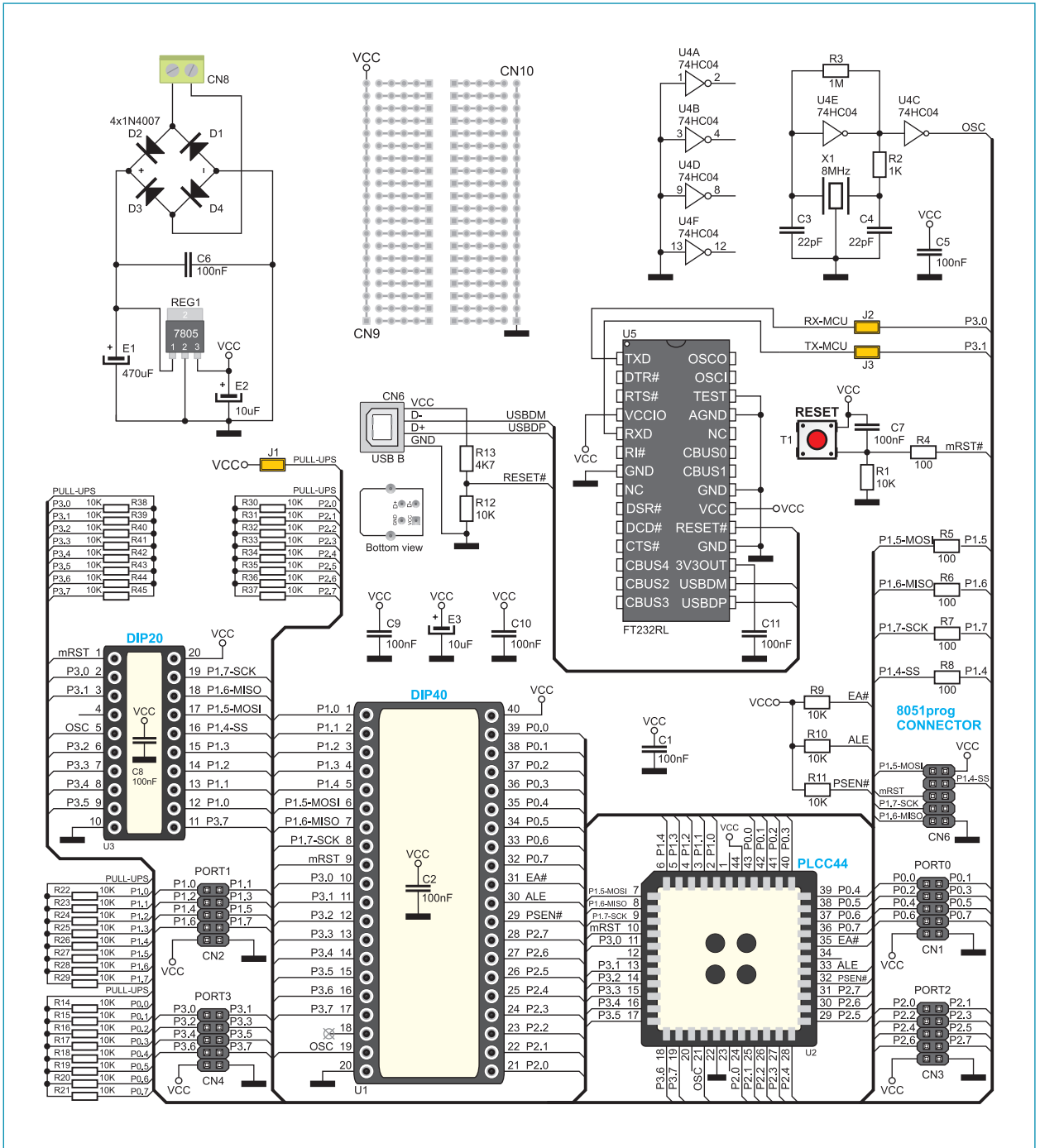


Figure 4: Additional board connection schematics

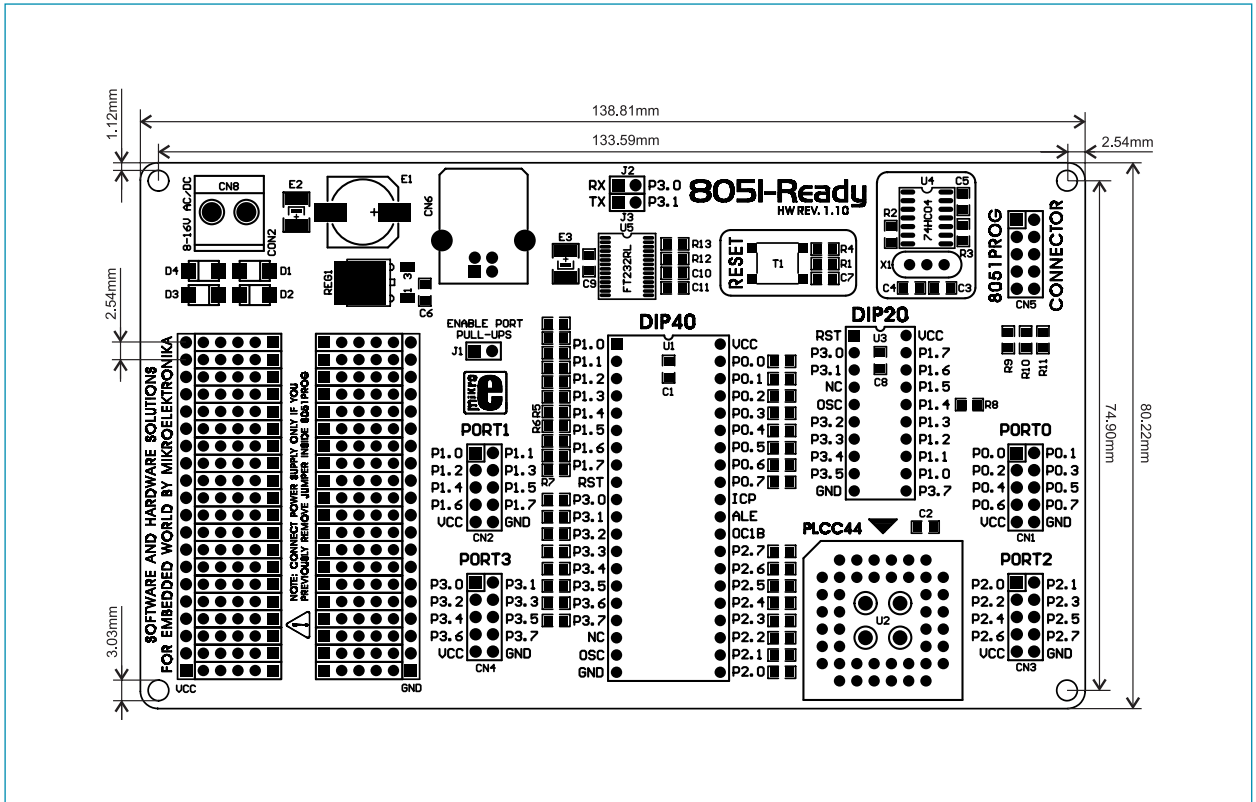


Figure 5: Additional board dimensions