IrDA to PC™

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

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IrDA to PC Additional Board

The *IrDA to PC* additional board is used for wireless communication carried out via infrared waves. This board includes an infrared transceiver modul TFDU4101 used for serial communication with devices transferring data via infrared waves such as printers, fax machines, notebooks, industrial devices, etc. The MCP2120 circuit provided on the board is used to convert data received from the transceiver module and send it to the microcontroller for further processing. The *IrDA to PC* board communicates with a microcontroller via serial communication UART.
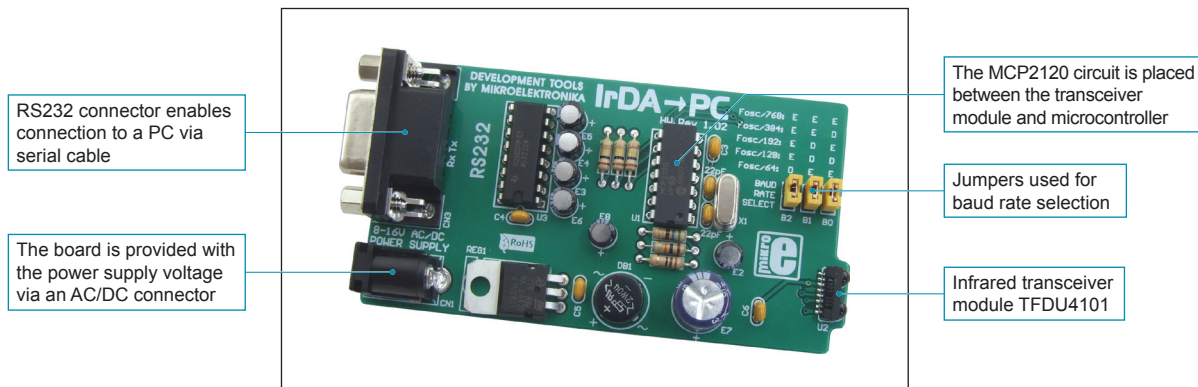

RS232 connector enables connection to a PC via serial cable

The board is provided with the power supply voltage via an AC/DC connector

The MCP2120 circuit is placed between the transceiver module and microcontroller

Jumpers used for baud rate selection

Infrared transceiver module TFDU4101

Figure 1: IrDA to PC Additional Board

The *IrDA to PC* additional board is connected to a PC via the RS232 connector. In addition, this board can also be connected to other devices provided with the RS232 connector and UART module. The *IrDA to PC* board requires the power supply voltage in a range between 8V and 16V for its operation. This voltage is provided via an AC/DC connector. For the *IrDA to PC* board to transmit and receive data to and from a PC, it is necessary to have the UART terminal installed on the PC you use for your work. All Mikroelektronika's compilers include this terminal.

The TFDU4101 infrared transceiver module can send and receive data in the scope of over 1m at a rate of up to 115.2kbit/s. The baud rate depends on the MCP2120 circuit and position of jumpers B2, B1 and B0. Refer to the table on the right.

Labels used in the table have the following meaning:

E - Jumper is placed (Enable)
D - Jumper is removed (Disable)

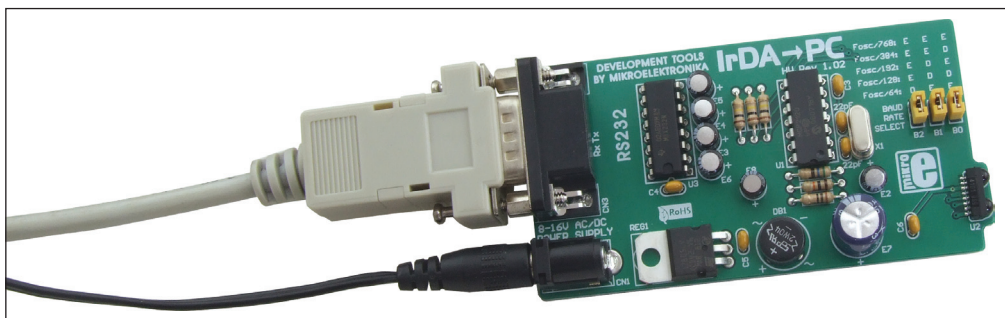| Baud rate selection			
Jumper position			Baud rate
B2	B1	B0	
E	E	E	14.4 kbit/s
E	E	D	28.8 kbit/s
E	D	E	57.6 kbit/s
E	D	D	86.4 kbit/s
D	E	E	172.8 kbit/s

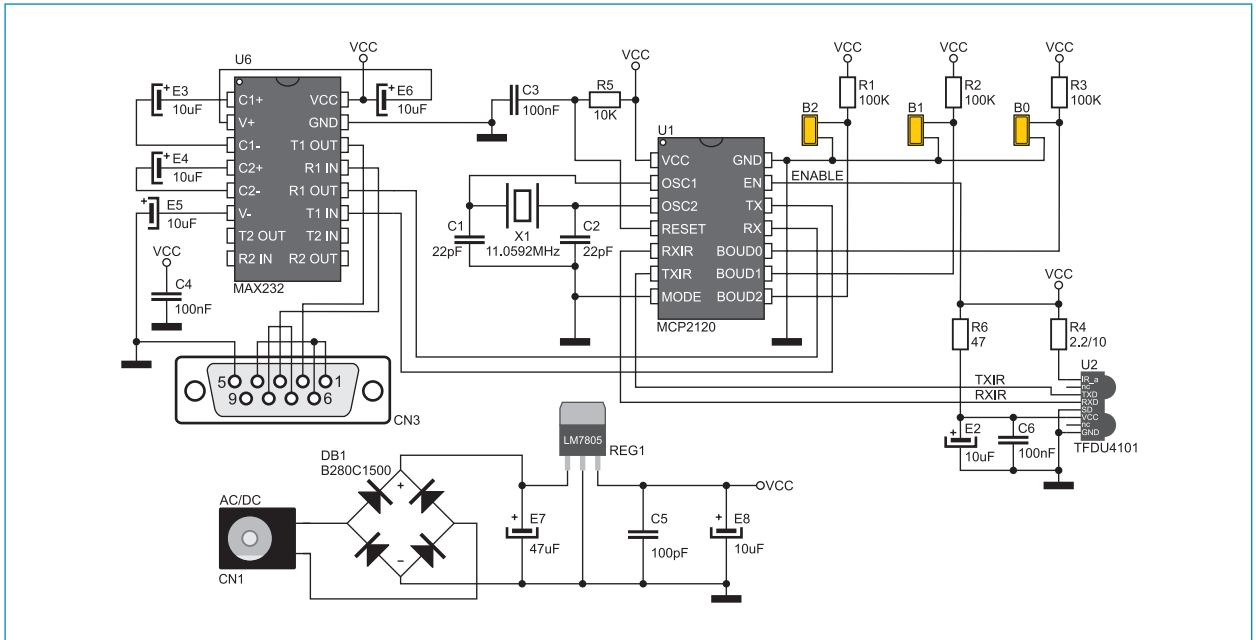**Figure 2:** IrDA to PC board connected to a development system

Figure 3: IrDA to PC additional board connection schematic

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