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IrDA PROTO™

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

IrDA PROTO Additional Board

The *IrDA PROTO* 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 MCP2155 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 PROTO* board communicates with a microcontroller via serial communication UART.

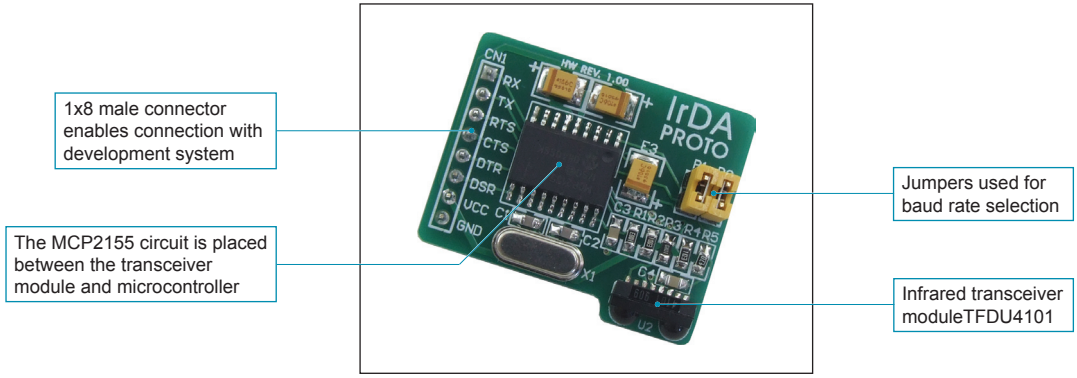

Figure 1: IrDA PROTO additional board

The *IrDA PROTO* additional board is connected with a amicrocontroller via a 1x8 male connector. 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 MCP2155 circuit and position of jumpers 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
B1	**B0**	
E	E	9.6 kbit/s
E	D	19.2 kbit/s
D	E	57.6 kbit/s
D	D	115.2 kbit/s

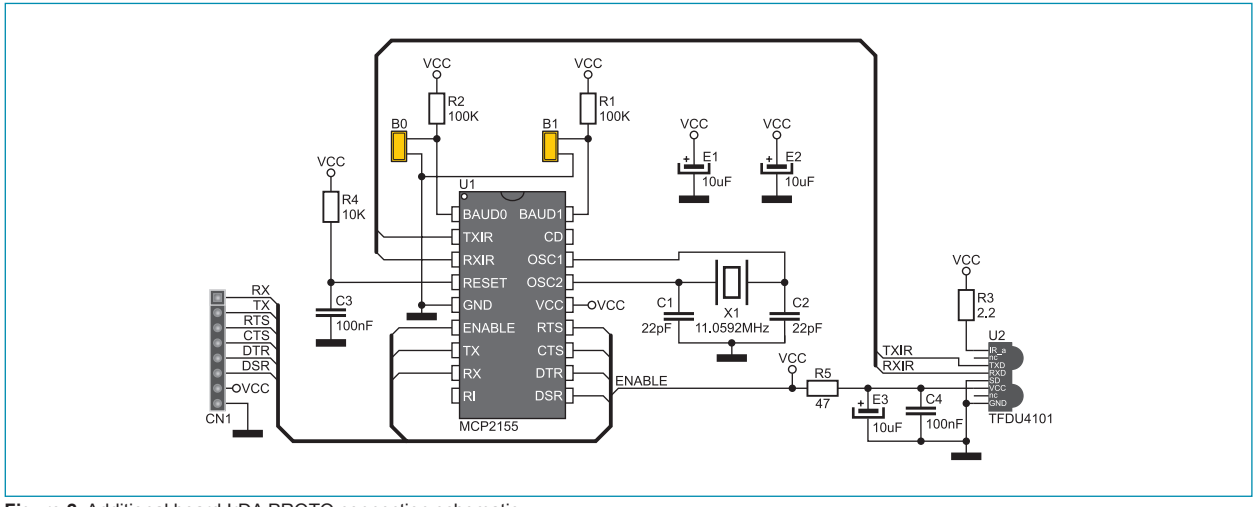

Figure 2: Additional board IrDA PROTO connection schematic

The function of the pins provided on the 1x8 male connector CN1:

RX - Receive data pin
TX - Transmit data pin
RTS - Request to send
CTS - Clear to send
DTR - Data terminal ready
DSR - Data set ready

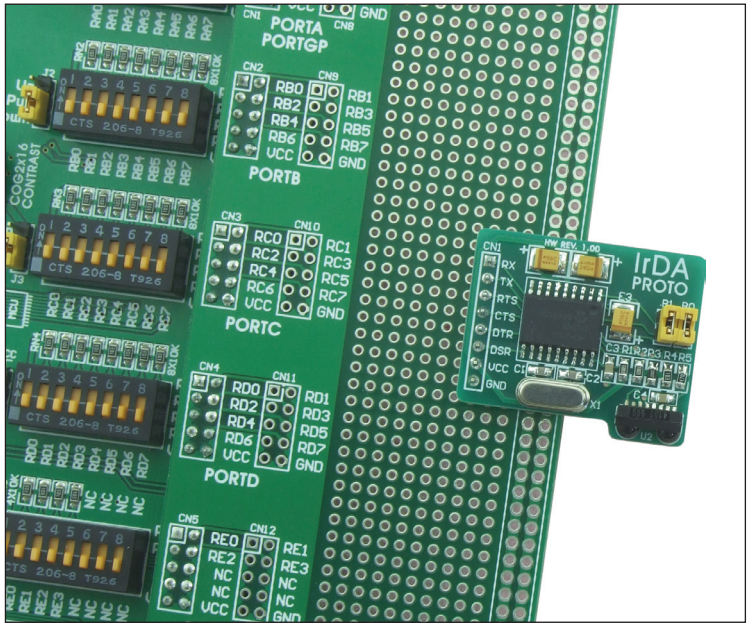

Figure 3: IrDA PROTO board connected to a development system by using a proto board

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