mikroETH 100™

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

mikroETH 100

The mikroETH 100 additional board is used to connect the microcontroller installed in some device to the Ethernet network.

Key features:

- IEEE 802.3™ Compliant Fast Ethernet Controller;
- Integrated MAC and 10/100Base-T PHY;
- Hardware Security Acceleration Engines;
- 24-Kbyte Transmit/Receive Packet Buffer SRAM;
- Operating voltage range of 3.0V to 3.6V; etc.

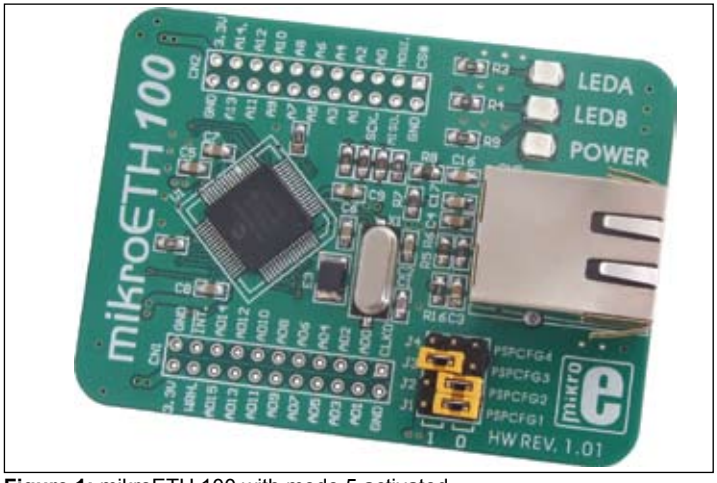

Figure 1: mikroETH 100 with mode 5 activated

How to connect the board?

The mikroETH 100 additional board is connected to the microcontroller in some device via pads CN1 and CN2. Connection with the Ethernet network is established via the RJ45 connector. Jumpers J1-J4 are used to select PSP mode (Parallel Slave Port interface), table 1.

	Position of jumpers J1-J4		
PSP MODE	**1**	**0**	**OFF**
1		PSPCFG2, PSPCFG3, PSPCFG4	PSPCFG1
2	PSPCFG4	PSPCFG2, PSPCFG3	PSPCFG1
3	PSPCFG2	PSPCFG3, PSPCFG4	PSPCFG1
4	PSPCFG2, PSPCFG4	PSPCFG3	PSPCFG1
5	PSPCFG3	PSPCFG1, PSPCFG2	PSPCFG4
6	PSPCFG1, PSPCFG3	PSPCFG2	PSPCFG4
9	PSPCFG2, PSPCFG3	PSPCFG1	PSPCFG4
10	PSPCFG1, PSPCFG2, PSPCFG3		PSPCFG4

Table 1

PSP MODE	#Pins		Data Width	Address/Data Multiplexing	Control lines	Theoretical Performance @ 10MHz (Mbits/s)
	min	max				
1	19	26	8 bit	No	CS, RD, WR	80
2	19	26	8 bit	No	CS, EN, R/W	80
3	26	34	16 bit	No	CS, RD, WRL, WRH	160
4	26	34	16 bit	No	CS, R/W, B0SEL, B1SEL	160
5	12	19	8 bit	Yes	AL, CS, RD, WR	<80
6	12	19	8 bit	Yes	AL, CS, EN, R/W	<80
9	19	21	16 bit	Yes	AL, CS, RD, WRL, WRH	<80
10	19	21	16 bit	Yes	AL, CS, R/W, B0SEL, B1SEL	<80

Table 2

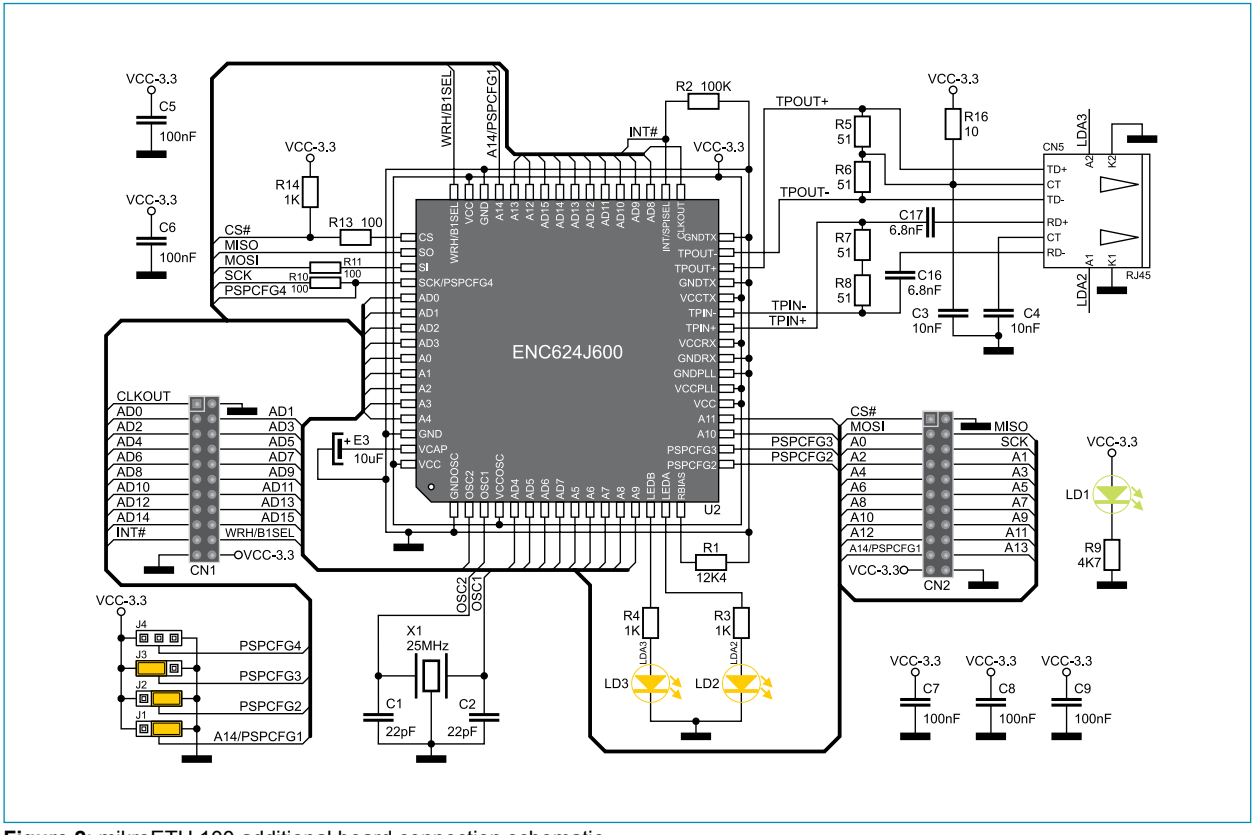

Figure 2: mikroETH 100 additional board connection schematic

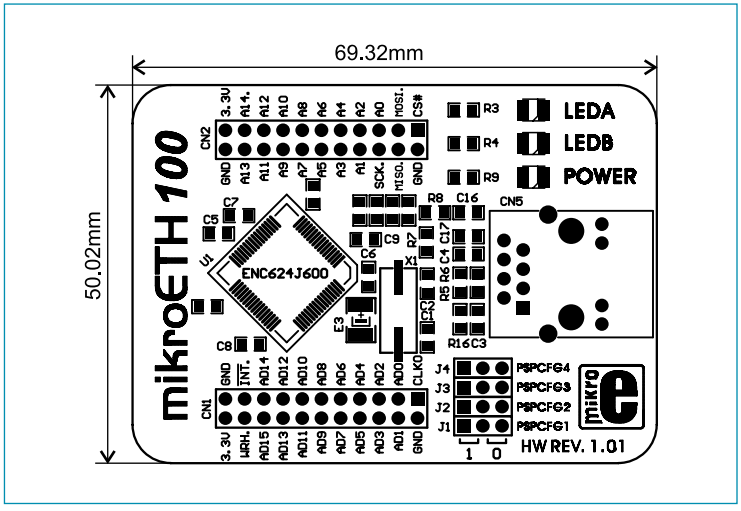

Figure 3: Dimensions of the mikroETH 100 additional board

Figure 4: mikroETH 100 connected to the Ethernet cable

If you want to learn more about our products, please visit our website at www.mikroe.com

If you are experiencing some problems with any of our products or just need additional information, please place your ticket at www.mikroe.com/en/support

If you have any questions, comments or business proposals, do not hesitate to contact us at office@mikroe.com