The **memSIM2** emulator is a modern and convenient device that allows you to emulate ROM/EPROM/FLASH memory in microprocessor systems. Significantly facilitates and speeds up the process of creating and running software, repeatedly increasing the productivity of the designer or programmer. It can be used in microprocessor systems regardless of the type of processor. Expenses incurred for the purchase of the emulator return after 1-2 weeks of its operation. The memSIM2 emulator is powered and controlled via USB interface.

From the side of the target system it has a 32-pin emulation plug and is seen by it as EPROM. Using a suitable emulation adapter, it is possible to emulate 8-bit memory in PLCC housings. The content of this memory is sent from the PC to the emulator by the control program.

The memSIM2 emulator can work in systems powered by 2.7 - 5.0 V, automatically adjusting the output voltage level to the supply voltage of the emulated memory.

The emulator is completely optoisolated from the control computer, minimising the risk of damage to the emulator and the computer due to the difference in potential between the computer and the target system.

The memSIM2 has a RESET output with a clip, that can be connected to the resetting input of the microprocessor and activated by the control program during data transmission to the emulator.

The control program for the emulator allows you to perform all necessary operations. It works on the operating systems Windows XP, Windows 7, 8 and 10.

Hardware and software installation

To use memSIM2 please download:

1. USB FTDI drivers: https://www.ftdichip.com/Drivers/CDM/CDM21228_Setup.zip
2. Control program: http://www.momik.pl/software/memsim2.exe

Install USB drivers, connect memSIM2 to the USB port and start the control program.

Connect the DIP32 plug to your EPROM socket.

If there is a 28-pin EPROM socket in your system, leave unconnected pins 1, 2, 31 and 32 of the 32-pin plug.

If your system has a PLCC32 EPROM socket, please use the proper adapter:

For 27C010-27C040 memories use **DIP32 socket - PLCC32 plug** adapter

For 2764-27512 memories use **DIP28 socket – PLCC32 plug** adapter

If your system has the resetting input, you can connect the RESET clip to it. In most cases the target system resets properly without using this clip.
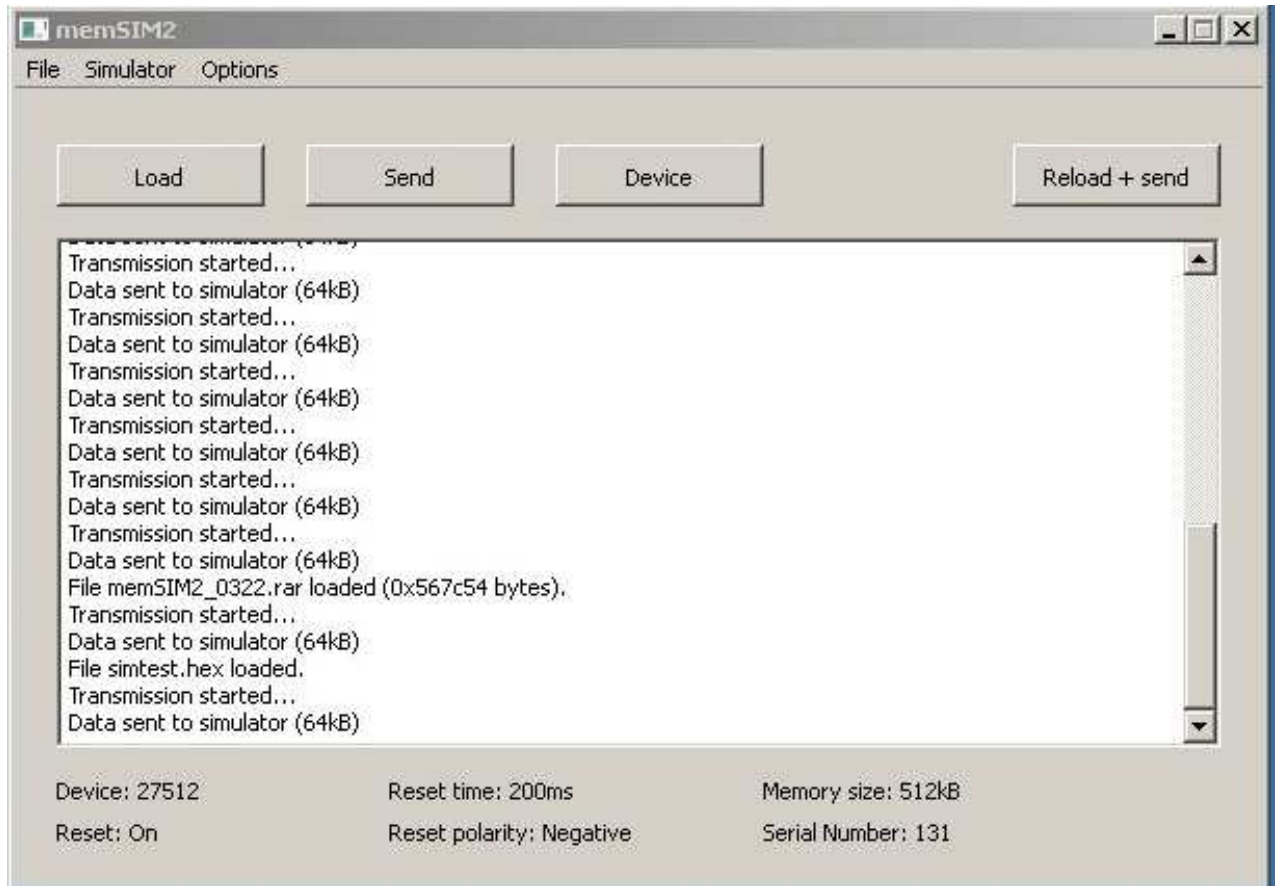
Select the proper memory size (2764-27040) in the Options menu.

If you use the RESET clip, select the reset signal polarity and time.

Load your file to the program buffer with LOAD button. You can load binary file or Intel HEX file of any size. If the file size is greater than your emulated memory, only the lower part of the file according to the EPROM size will be used. If the file size is smaller than EPROM size, the rest of emulated memory will be filled with 0xFF.

Now click the SEND button.

The green LED on the emulator will be on during the data transmission.

After successful data transfer, the green LED will be off and the READY (yellow) LED will be on.

Now you can power on your target system. If both CE and OE signals in the target system ale active (LOW level) then the RUN LED (red) will be on and your target should start.

If you recompile or change your file but do not change the filename, use the RELOAD+SEND button. It will load and send changed file to the emulator.

After data transfer you can also disconnect the emulator from your computer, it will be powered from the target system. Maximum current drawn by the emulator is about 80 mA.

If you disconnect the emulator from your PC and connect it again, you have to use the Reconnect command from Simulator menu.