mikroProg™
for 8051

mikroProg™ for 8051 is a fast USB programmer. With it's outstanding performance, simplicity and unique design it is a great tool for programming 8051 microcontrollers from Atmel®

MikroElektronika
DEVELOPMENT TOOLS | COMPILERS | BOOKS

8051

TO OUR VALUED CUSTOMERS

I want to express my thanks to you for being interested in our products and for having confidence in MikroElektronika.

The primary aim of our company is to design and produce high quality electronic products and to constantly improve the performance thereof in order to better suit your needs.

Nebojsa Matic
General Manager

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Introduction to mikroProg™

mikroProg™ for 8051 is a fast USB programmer. It is a great tool for programming 8051 microcontrollers from Atmel®. Outstanding performance, easy operation, elegant design and low price are it's top features.

Key features

What you see

01 Flat cable
02 USB MINIB connector
03 DATA transfer indication LED
04 ACTIVE indication LED
05 LINK indication LED
06 POWER indication LED

1. Driver installation

On-board mikroProg™ requires drivers in order to work. Drivers can be found on the link bellow:

www.mikroe.com/downloads/get/131/mikroprog_drivers_v200.zip

When you download the drivers, please extract files from the ZIP archive. Folder with extracted files contains folders with drivers for different operating systems. Depending on which operating system you use, choose adequate folder and open it.

mikroprog_drivers_v200.zip
WinRAR ZIP archive

Win 98

Win 2000, XP, 2003 32-bit

Win XP, 2003 64-bit

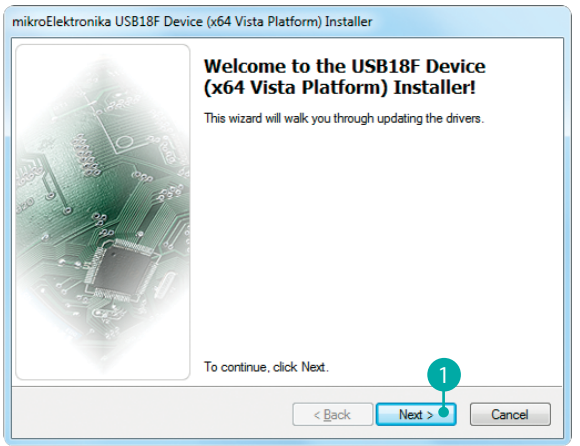
Windows (32 bit) - Vista, Win 2008, 7, 8, 8.1

Windows (64 bit) - Vista, Win 2008, 7, 8, 8.1

In the opened folder you should be able to locate the driver setup file. Double click on setup file to begin installation of the programmer drivers.

USB18PRG-Vista-x64.EXE

step 1 - Start installation

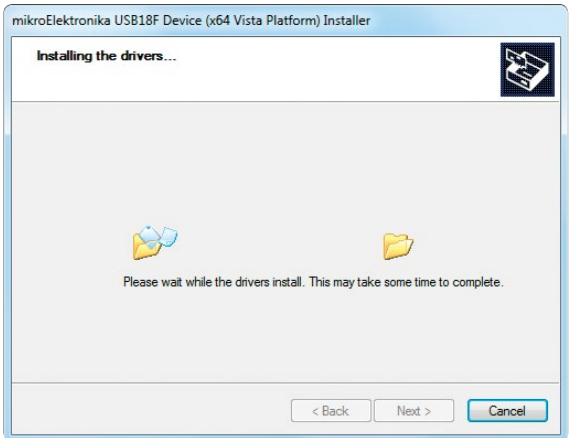


1. In welcome screen click the **Next>** button

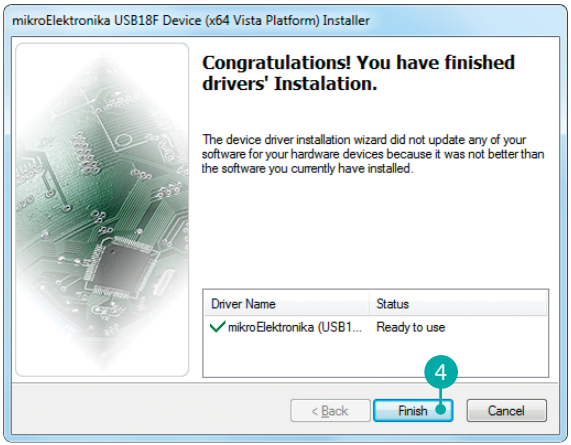
step 2 - Accept EULA

2. Select **I accept this EULA** option
3. Click the **Next>** button

step 3 - Installing the drivers

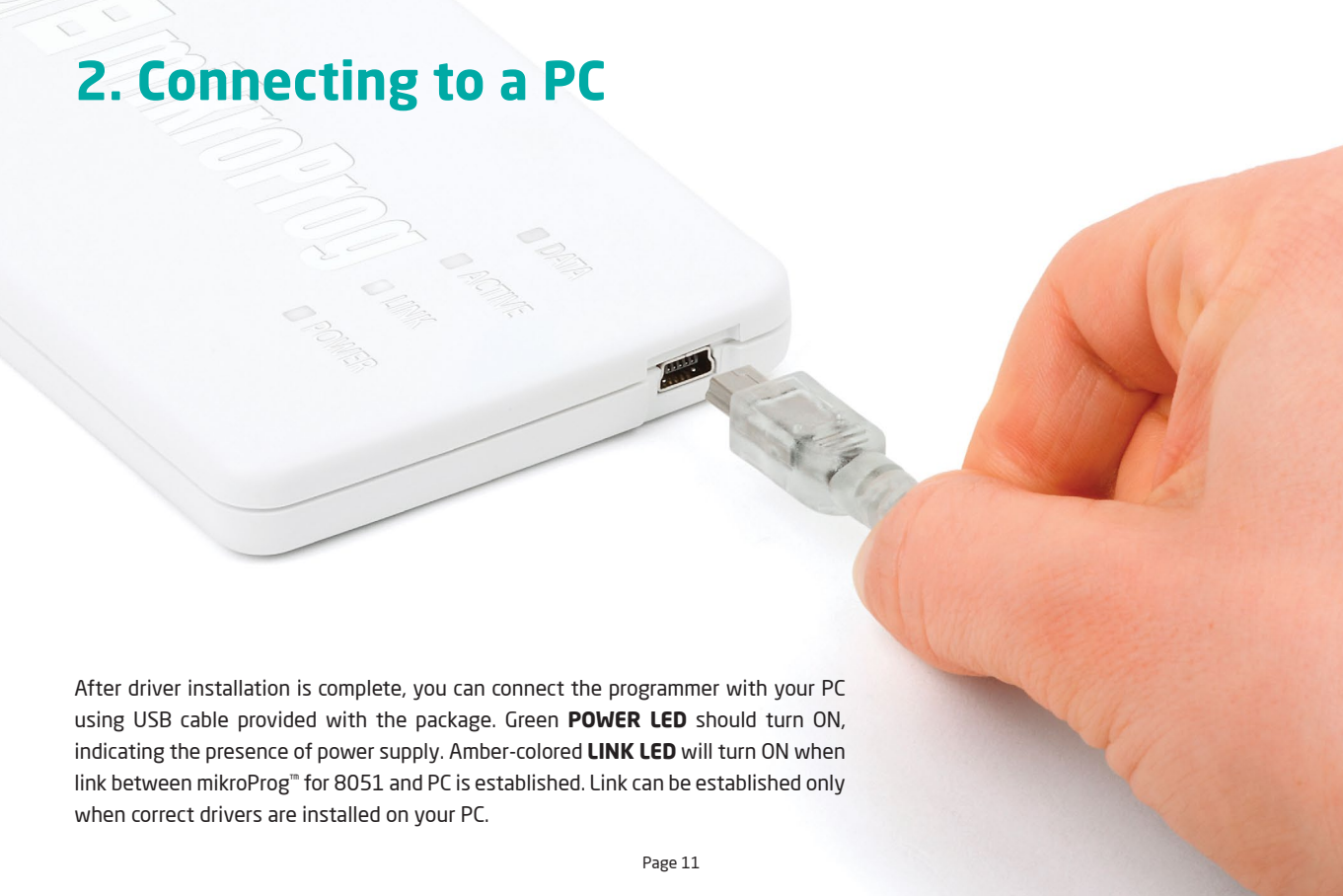


step 4 - Finish installation



4 Click the **Finish** button to end installation process

2. Connecting to a PC



After driver installation is complete, you can connect the programmer with your PC using USB cable provided with the package. Green **POWER LED** should turn ON, indicating the presence of power supply. Amber-colored **LINK LED** will turn ON when link between mikroProg™ for 8051 and PC is established. Link can be established only when correct drivers are installed on your PC.

3. 8051Flash software

mikroProg™ for 8051 programmer requires special programming software called 8051Flash. This software is used for programming ALL of 8051 microcontrollers from Atmel®. It features intuitive interface and SingleClick™ programming technology. Software installation is available on the following link:

www.mikroe.com/downloads/get/130/8051flash_programmer_v210.zip

After downloading, extract the package and double click the executable setup file, to start installation.

8051flash_programmer_v210.zip
WinRAR ZIP archive

8051Flash_v210_setup.exe

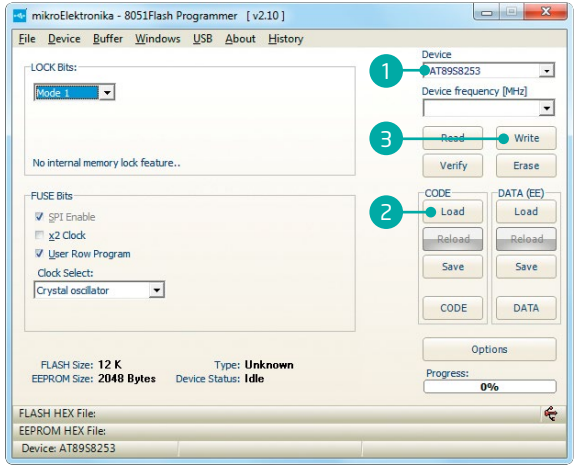


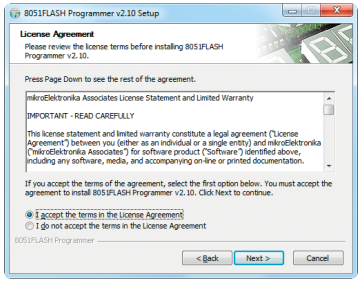
Figure 3-1: 8051Flash software window

Quick Guide

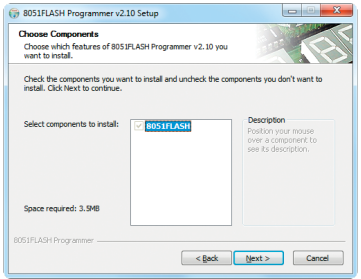
1. Select the microcontroller to be programmed
2. Click the **Load** button to open pop-up window and select the .hex code to be loaded in microcontroller
3. Click the **Write** option to start programming

Software installation wizard

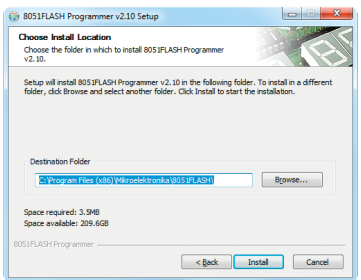
1 Start Installation



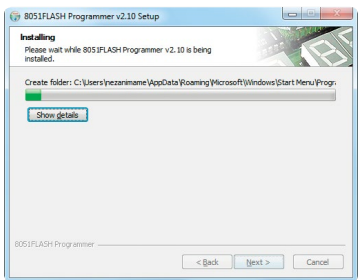
2 Accept EULA and continue



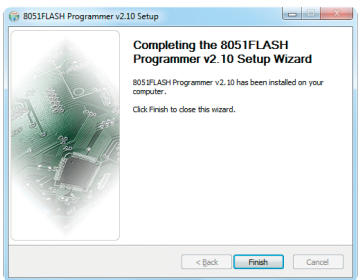
3 Click Next > button



4 Choose destination folder



5 Installation in progress



6 Finish installation

4. Connecting with a target device

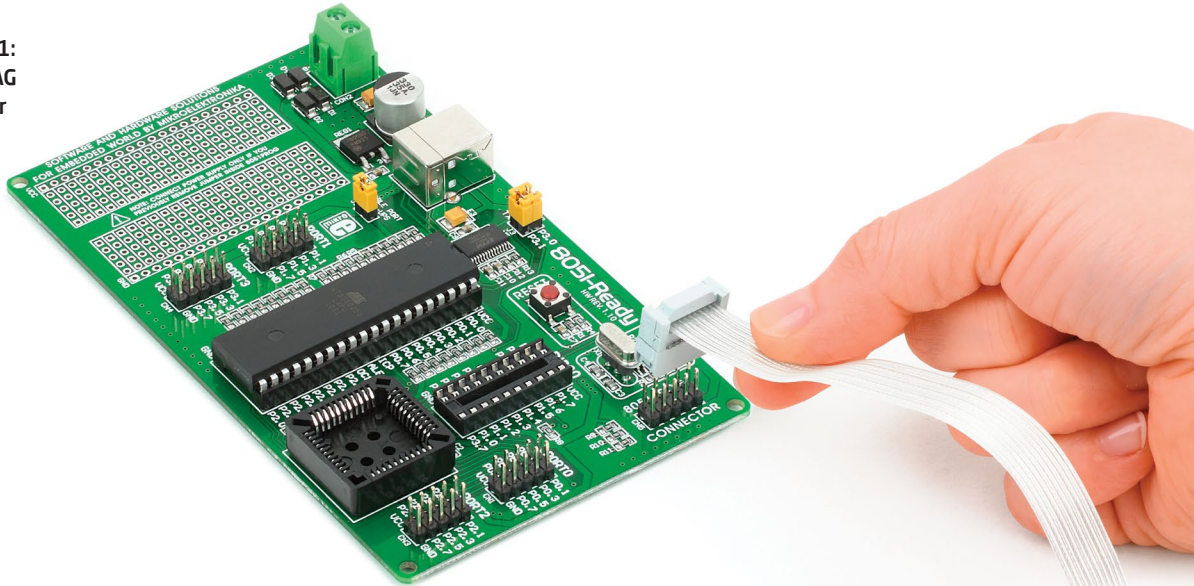


Figure 4-1: IDC10 JTAG connector

For connection with a target device mikroProg™ uses IDC10 connector, as shown on **Figure 4-1**. In order to make proper connection with the target board it is necessary to pay attention to IDC10 connector pinout. Every pin has a different purpose and for easy orientation IDC10 connector is marked with a little knob and incision between pins number 9 and 7, **Figure 5-1**.

5. Connector Pinout

1. **MOSI** - Master output slave input
3. **NC** - Not connected
5. **RST** - Reset pin
7. **SCK** - Clock
9. **MISO** - Master input slave output

2. **VCC** - Power supply
4. **SS** - Slave port select
6. **NC** - Not connected
8. **NC** - Not connected
10. **GND** - Ground

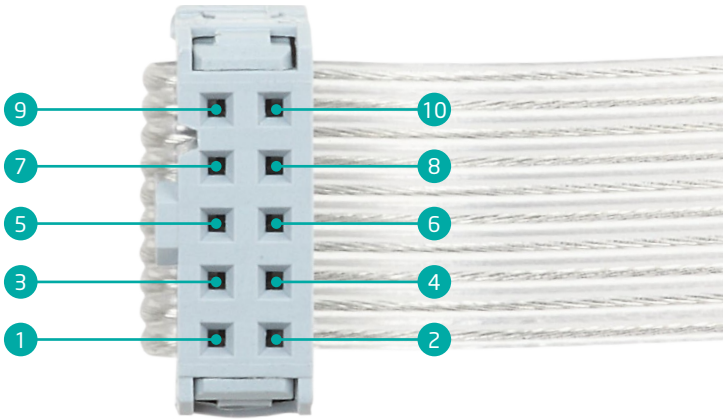
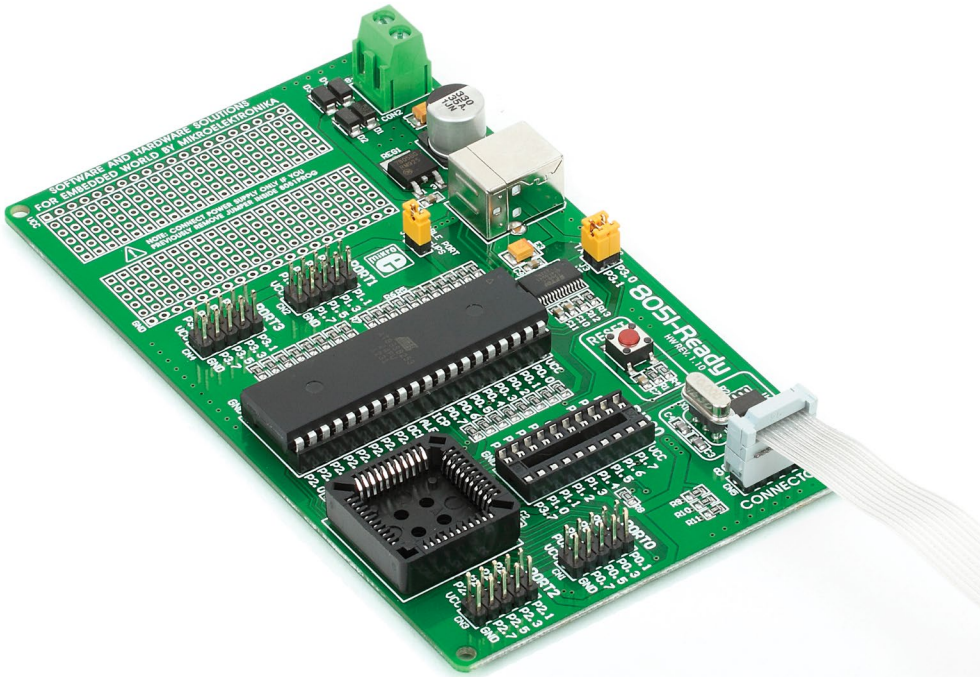


Figure 5-1: Female connector pinout

6. Connection schematic example

Following example demonstrate connections with one of the most popular supported microcontroller (**Figure 6-1**). MCU use MISO, MOSI, SCK, RST and SS lines for programming. In order for microcontroller to work properly, decoupling capacitors must be connected as close as possible to microcontroller's VCC pins. Whichever microcontroller you decide to use, make sure to connect each pin properly.



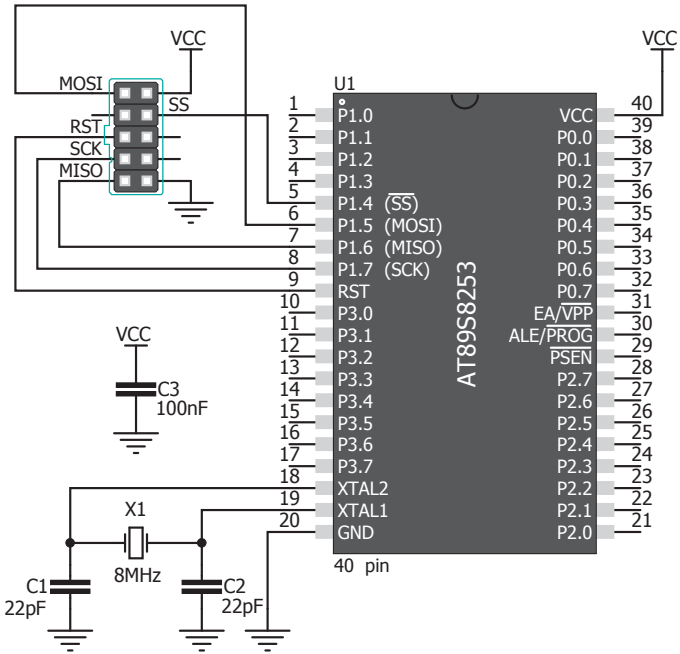


Figure 6-1: Connection schematic for 40-pin AT89S8253 MCU via 2x5 male header

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