

mikroProg™ for 8051

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



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.

A white handwritten signature in cursive script, appearing to read 'N. Matic', set against a dark teal background.

Nebojsa Matic
General Manager

Table of Contents

Introduction to mikroProg™	4	2. Connecting to a PC	9
Key features	5	3. 8051Flash software	10
1. Driver installation	6	4. Connecting with a target device	12
step 1 - Start installation	7	5. Connector Pinout	13
step 2 - Accept EULA	7	6. Connection schematic example	14
step 3 - Installing the drivers	8	40-pin AT89S8253 schematic	15
step 4 - Finish installation	8		

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 its 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

mikroProg™ requires drivers in order to work. Drivers are located on the **Product DVD** that you received with the mikroProg™ package:



*DVD://download/eng/software/
development-tools/8051
/8051prog2/8051flash_driv-
ers_v200.zip*

When you locate 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.



8051flash_drivers_v200
WinRAR ZIP archive
1.51 MB



Windows 7 32 bit,
Vista 32bit, Win
2008 32 bit



Windows 7 64 bit,
Vista 64bit, Win
2008 64 bit



Win 2000, XP,
2003 32-bit

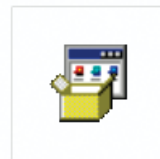


Win 98



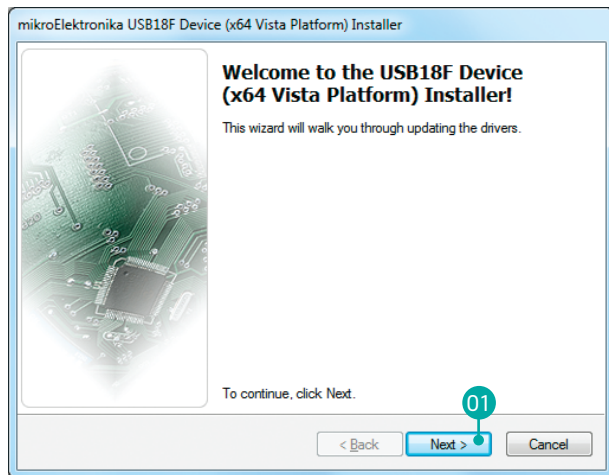
Win XP, 2003
64-bit

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.



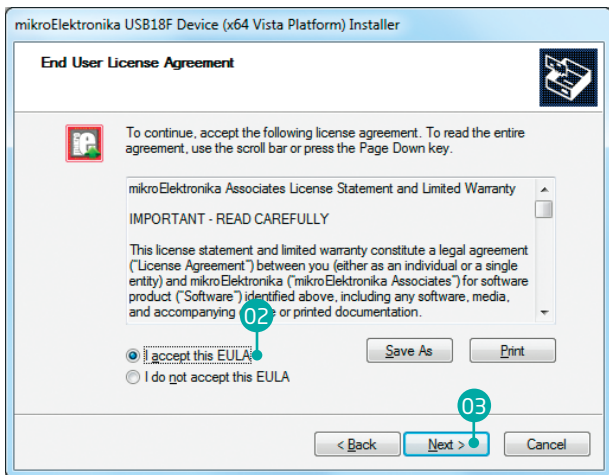
USB18PRG-Vista-
x64

step 1 - Start installation



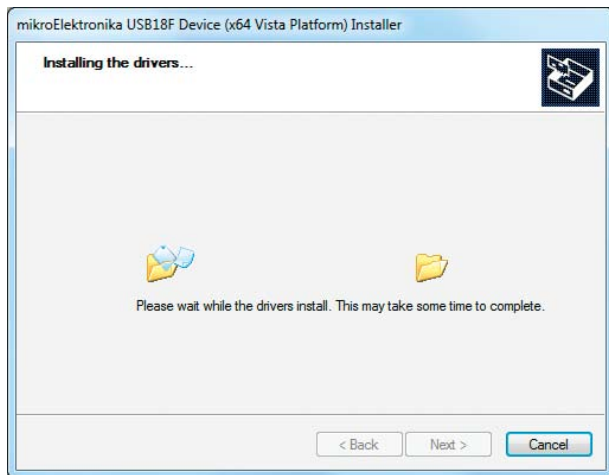
- 01 In welcome screen click the **Next >** button

step 2 - Accept EULA



- 02 Select **I accept this EULA** option
- 03 Click the **Next >** button

step 3 - Installing the drivers



step 4 - Finish installation



04 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 comes on

a Product DVD:



*DVD://download/eng/software
/development-tools/8051/
8051prog2/8051flash_program-
mer_v210.zip*

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



8051flash_programmer_v210
WinRAR ZIP archive
1.62 MB



8051Flash_v210_setup
1/28/2013 2:37 PM
1.64 MB

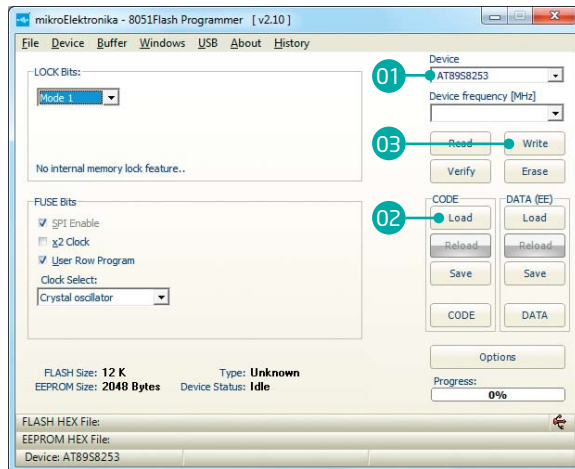


Figure 3-1: 8051Flash software window

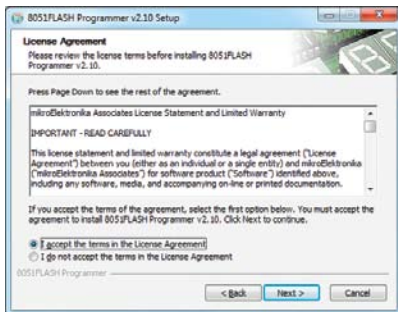
Quick Guide

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

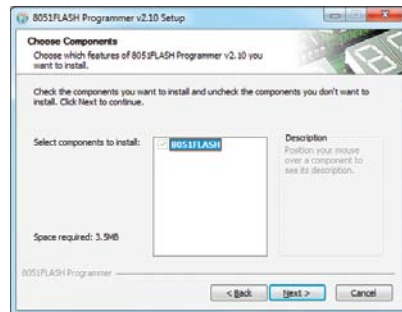
Software installation wizard



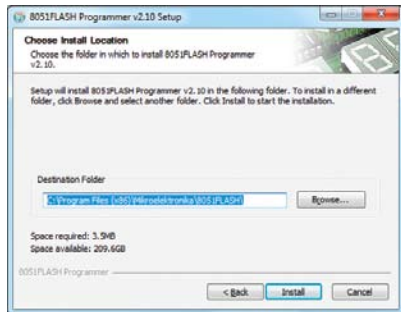
01 Start Installation



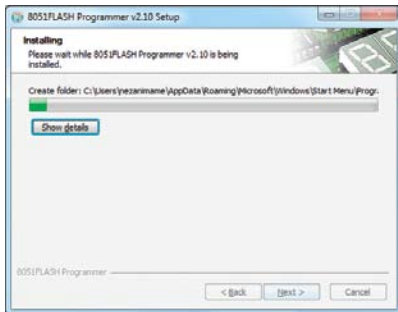
02 Accept EULA and continue



03 Click Next > button



04 Choose destination folder



05 Installation in progress



06 Finish installation

4. Connecting with a target device

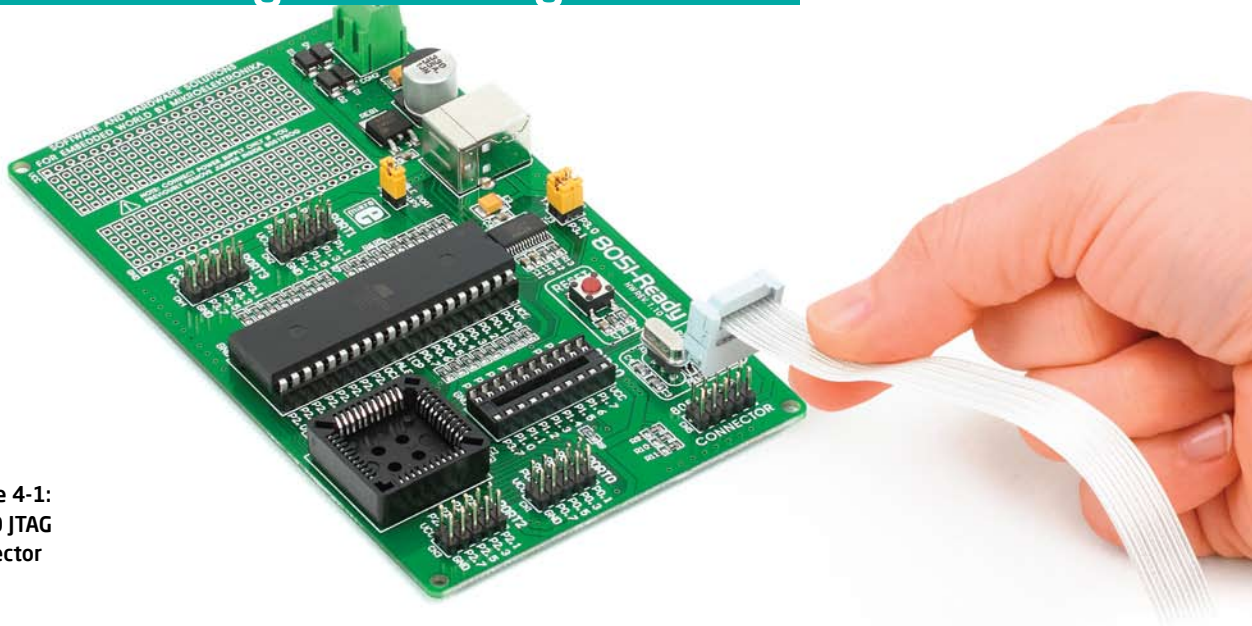


Figure 4-1:
IDC10 JTAG
connector

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

- 01 **MOSI** - Master output slave input
- 03 **NC** - Not connected
- 05 **RST** - Reset pin
- 07 **SCK** - Clock
- 09 **MISO** - Master input slave output

- 02 **VCC** - Power supply
- 04 **SS** - Slave port select
- 06 **NC** - Not connected
- 08 **NC** - Not connected
- 10 **GND** - Ground

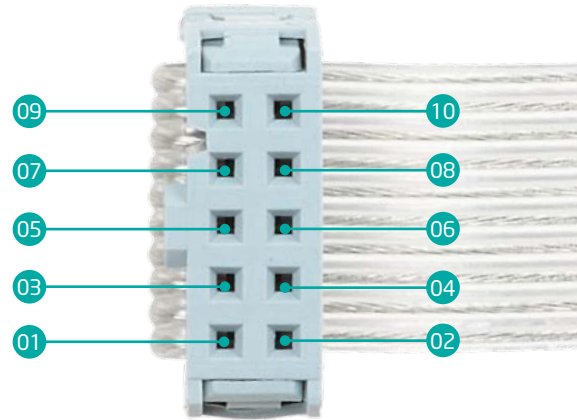
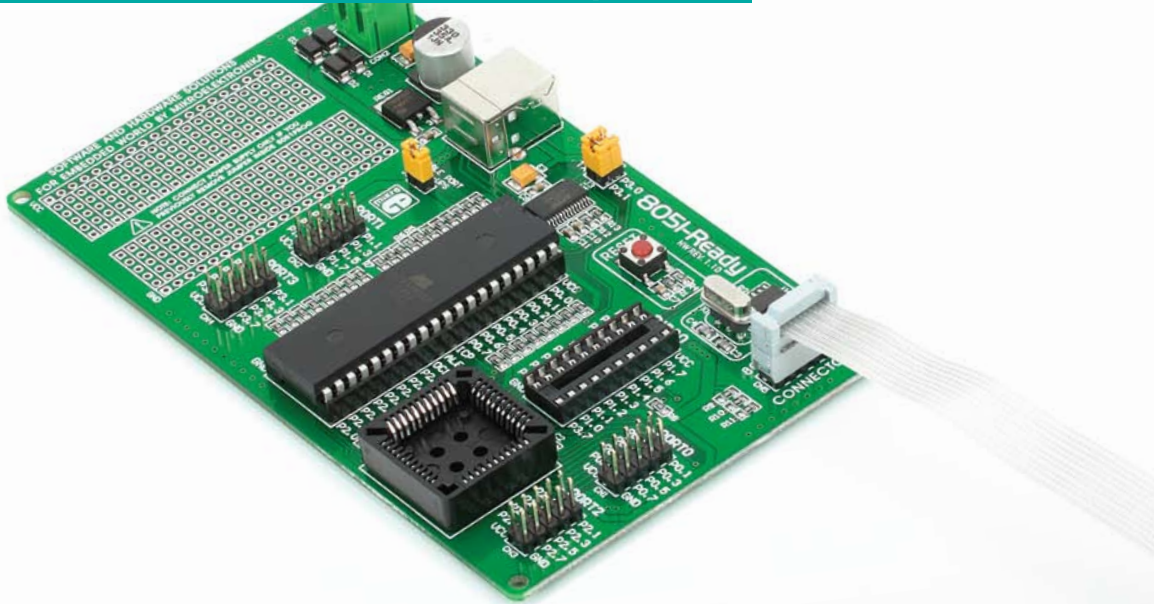


Figure 5-1: Female connector pinout

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.

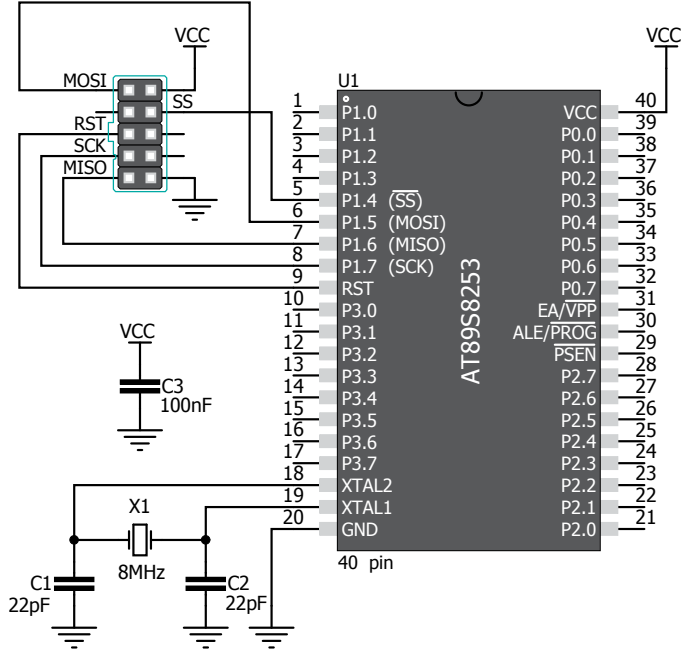
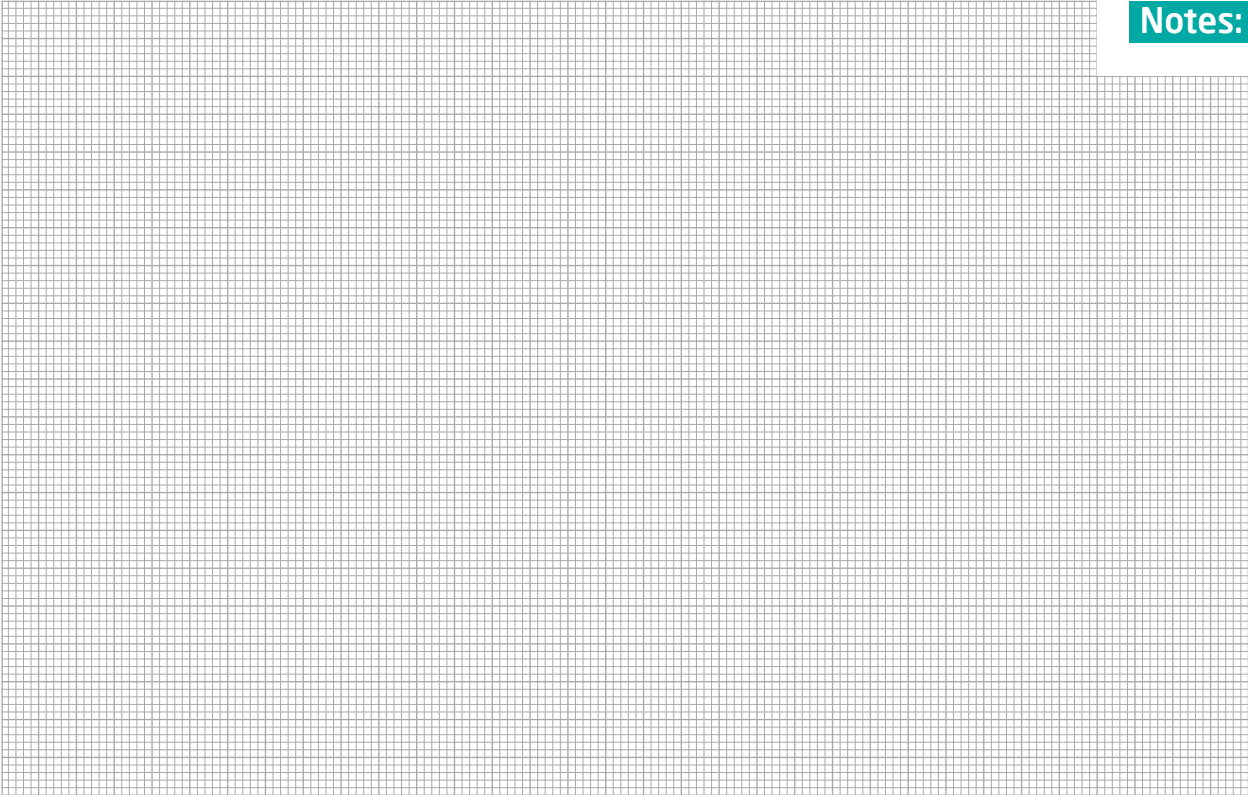


Figure 6-1: Connection schematic for 40-pin AT89S8253 MCU via 2x5 male header

Notes:



Notes:

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