mikroProg™ is a fast USB programmer with hardware Debugger support. Smart engineering allows mikroProg™ to support all Tiva™ and Stellaris® ARM® Cortex™-M3 and Cortex™-M4 microcontrollers in a single programmer.
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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**mikroProg™ for Tiva™** is a fast programmer and hardware debugger. Smart engineering allows mikroProg™ to support all Tiva™ and Stellaris® ARM® Cortex™-M3 and Cortex™-M4 devices in a single programmer! Outstanding performance, easy operation, elegant design and low price are it's top features. It is supported in MikroElektronika ARM® compilers, as well as in other ARM® compilers.
Key features

- Hardware Debugging
- No need for firmware update
- New microcontrollers supported via latest version of *mikroProgs Suite™ for ARM®* software

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 mikroProgs™ requires drivers in order to work. Drivers can be found on the link below:

http://www.mikroe.com/downloads/get/1810/mikroprog_tiva_drivers_v100.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.

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

NOTE: Make sure to disconnect mikroProgs™ before installing drivers.
step 1 - Start installation

01 In welcome screen click the Next> button

step 2 - Accept EULA

02 In order to proceed select I accept the this EULA (End User License Agreement)

03 Click the Next> button
step 3 - Installing the drivers

Drivers are installed automatically

step 4 - Finish installation

Click the Finish button to end installation process
After driver installation is complete, you can now 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™ and PC is established. Link can be established only when correct drivers are installed on your PC.
mikroProg™ for Tiva™ programmer requires special programming software called mikroProg Suite™ for ARM®. This software is used for programming all Tiva™ and Stellaris® ARM® Cortex-M3™ and Cortex-M4™ microcontroller families. It features intuitive interface and SingleClick™ programming technology. Software installation is available on following link:

http://www.mikroe.com/downloads/get/1809/mikroprog_suite_for_arm.zip

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

**Quick Guide**

1. Click the **Detect MCU** button in order to recognize the device ID.
2. Click the **Read** button to read the entire microcontroller memory. You can click the **Save** button to save it to the target HEX file.
3. If you want to write the HEX file into the microcontroller, first make sure to load the target HEX file using the **Load** button. Then click the **Write** button to begin programming.
4. Click the **Erase** button to clear the microcontroller memory.
Software installation wizard

01 Start Installation
02 Accept EULA and continue
03 Install for all users
04 Choose destination folder
05 Installation in progress
06 Finish installation
For connection with a target device mikroProg™ uses IDC10 JTAG 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 VCC-3.3V - MCU power supply
03 GND - Ground
05 GND - Ground
07 N/C - Not Connected
09 GND - Ground

02 TMS - Mode Select
04 TCK - Clock
06 TDO - Data output
08 TDI - Data input
10 SRSTn - System Reset

JTAG programming/debugging lines

Figure 5-1: Female connector pinout
Following examples demonstrate connections with some of the most popular supported microcontrollers. Each one is carefully selected as a representative of the entire family. All MCUs use TMS, TCK, TDO, TDI and SRSTn lines for programming. These lines are located on same microcontroller pins within a family.
Figure 6-1: Connection schematics for 48-pin LM3S817 MCU via 2x5 male header
Connecting with LM3S1000 series

Figure 6-2: Connection schematic for 100-pin LM3S1538 MCU via 2x5 male header
Figure 6-3: Connection schematic for 100-pin LM3S2B93 MCU via 2x5 male header
Figure 6-4: Connection schematic for 100-pin LM3S3749 MCU via 2x5 male header
Figure 6-5: Connection schematic for 100-pin LM3S5G31 MCU via 2x5 male header
Figure 6-6: Connection schematic for 100-pin LM3S6537 MCU via 2x5 male header
Figure 6-7: Connection schematic for 100-pin LM3S8962 MCU via 2x5 male header
Connecting with LM3S9000 series

Figure 6-8: Connection schematic for 100-pin LM3S9B96 MCU via 2x5 male header
Figure 6-9: Connection schematics for 144-pin TM4C123GH6PZ MCU via 2x5 male header
Connecting with TM4C129 series

Figure 6-10: Connection schematic for 212-pin TM4C129LNCZAD MCU via 2x5 male header
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