

MIKROE  
Time-saving embedded tools



**CODE**GRIP Suite

U N I V E R S A L

QUICK START GUIDE

**UNI CODEGRIP** is a unified solution, designed to perform programming and debugging tasks on a range of different microcontroller devices [MCUs] based on both the ARM® Cortex®-M, RISC-V and PIC®, dsPIC, PIC32 and AVR architectures from Microchip. By bridging differences between various MCUs, it allows a huge number of MCUs from several different MCU vendors to be programmed and debugged. Although the number of supported MCUs is absolutely huge, more MCUs might be added in the future, along with some new functionalities.

Thanks to some advanced and unique features such as wireless connectivity and USB-C connector, the task of programming of a

huge number of microcontrollers becomes seamless and effortless, providing users with both the mobility and the complete control over the microcontroller programming and debugging process. The USB-C connector offers improved performance and reliability, compared to traditionally used USB Type A/B connectors. Wireless connectivity redefines the way the development board can be used.

The graphical user interface [GUI] of the CODEGRIP Suite is clear, intuitive, and easy to learn, offering a very pleasant user experience. The embedded HELP system provides detailed guidelines for every aspect of the CODEGRIP Suite.

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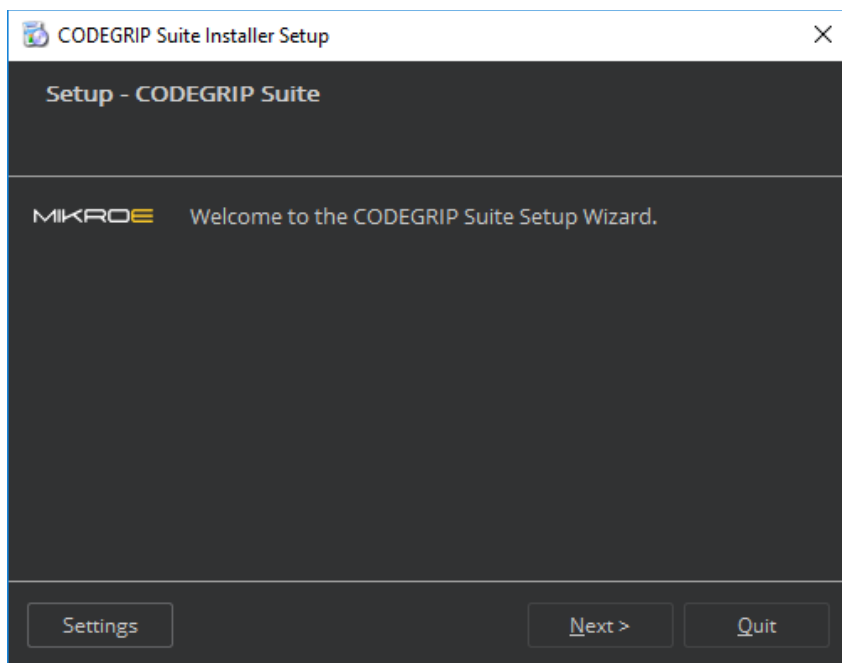
# Installing CODEGRIP Suite

The installation process is easy and straightforward.

Download CODEGRIP Suite software application from the link [www.mikroe.com/setups/codegrip](http://www.mikroe.com/setups/codegrip)

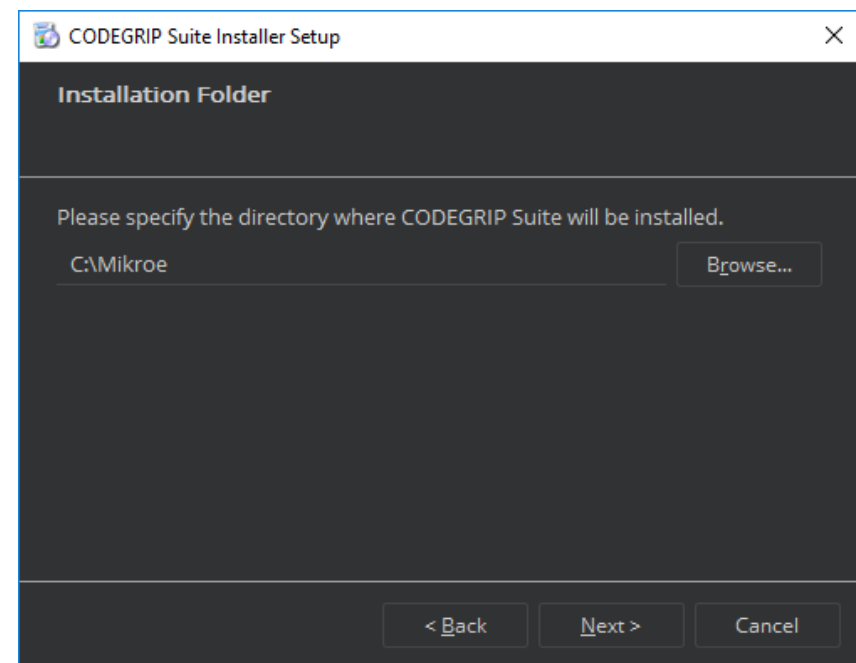
Then follow the steps below.

## 1. Step – Start the installation process



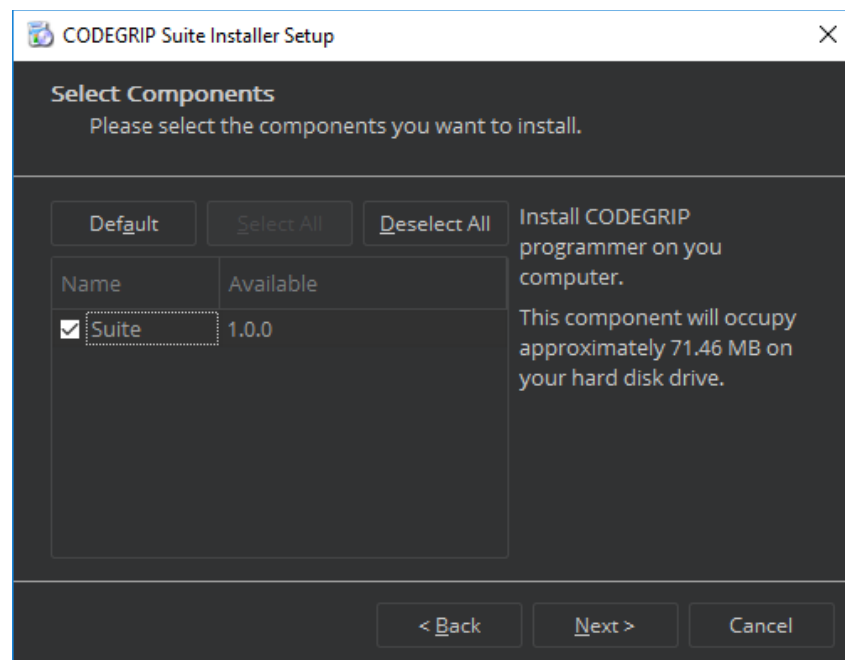
This is the welcome screen. Click **Next** to proceed or **Quit** to abort the installation. The installer will automatically check if there is a newer version available, if there is an Internet access. If you use a proxy server to access the internet, you can configure it by clicking the **Settings** button.

## 2. Step – Select the destination folder



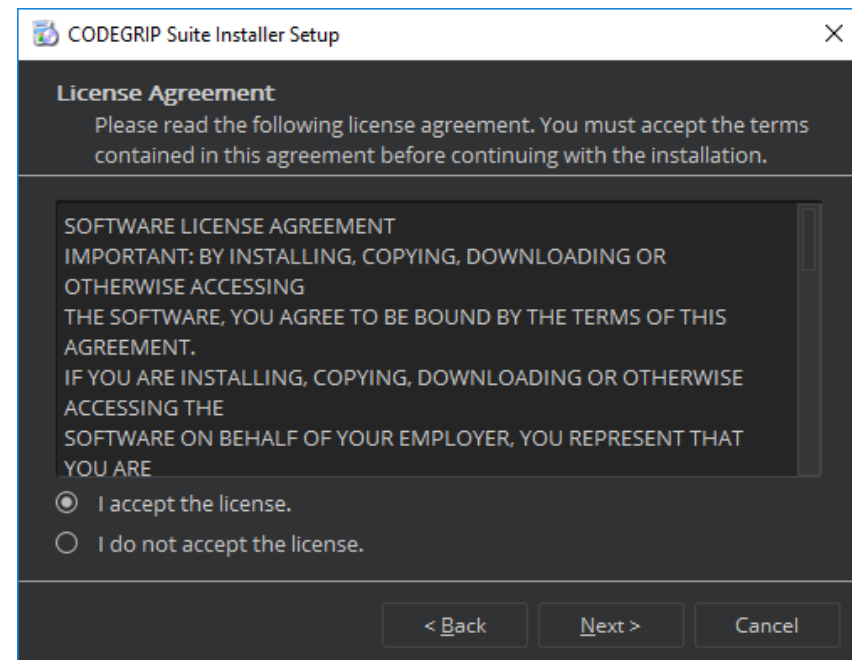
The destination folder can be selected on this screen. Use the suggested destination folder or select a different folder by clicking the Browse button. Click **Next** to proceed, **Back** to return to the previous screen, or **Cancel** to abort the installation process.

### 3. Step – Select the components to install



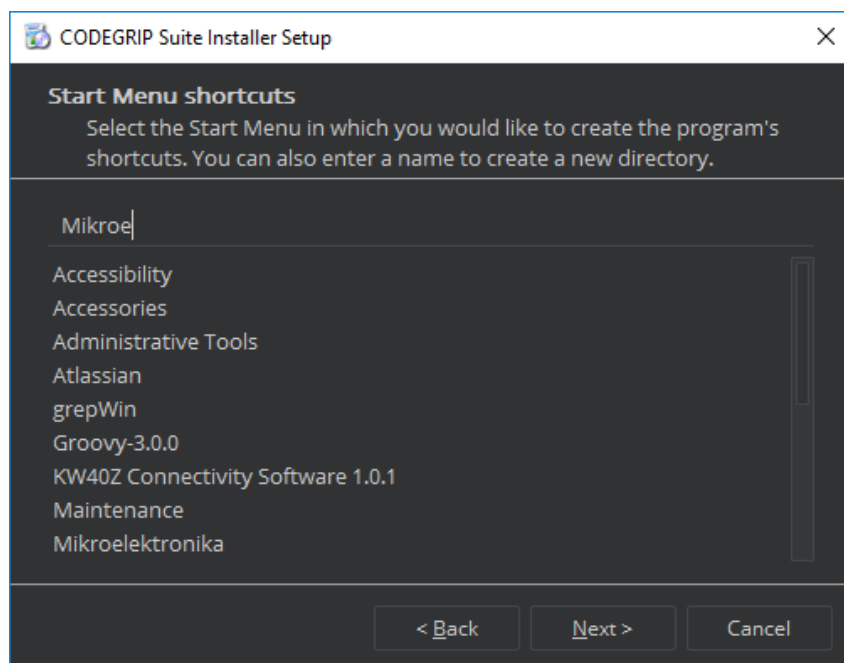
On this screen, you can choose which options you want to install. Buttons above the list of available options allow you to select or deselect all the options, or to select the default set of options. Currently, there is only a single installation option available, but more may be added in the future. Press **Next** to continue.

### 4. Step – License agreement



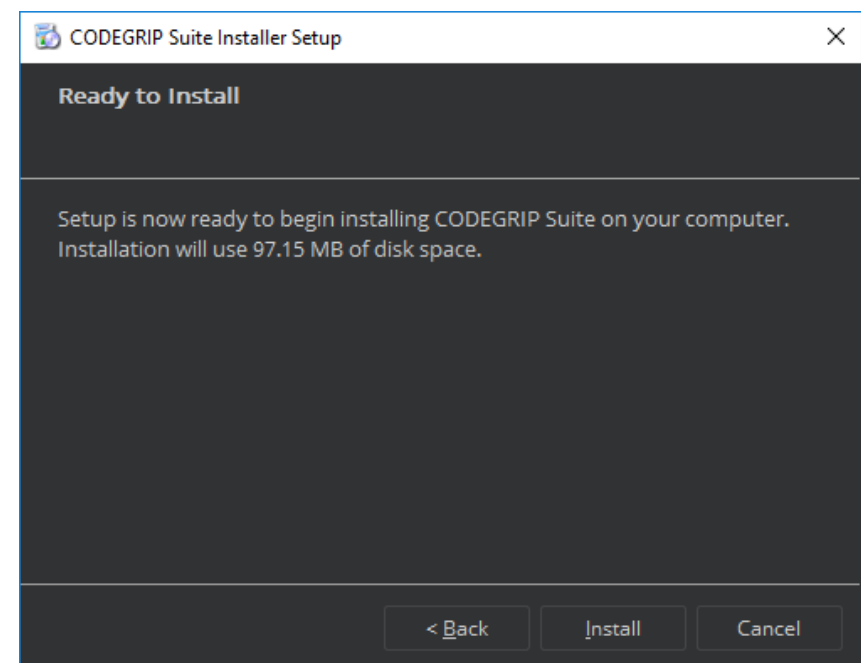
Carefully read the End User License Agreement [EULA]. Select the desired option and click **Next** to proceed. Note that if you do not agree with the license, you will not be able to proceed with the installation.

## 5. Step – Select the start menu shortcuts



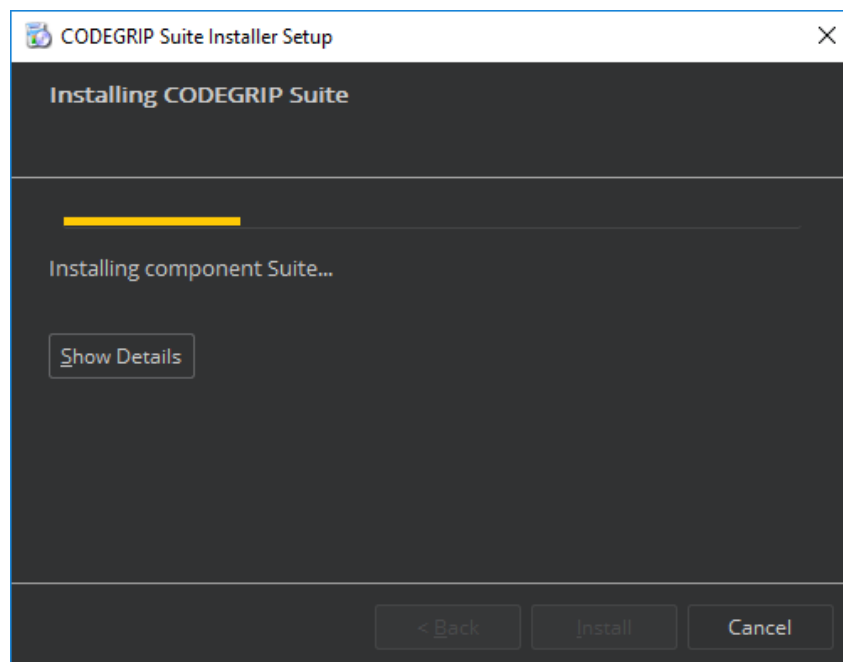
Windows Start Menu shortcuts folder can be selected on this screen. You can use the suggested name or use a custom folder name. Press **Next** to proceed, **Back** to return to the previous screen, or **Cancel** to quit the installation.

## 6. Step – Start the installation process



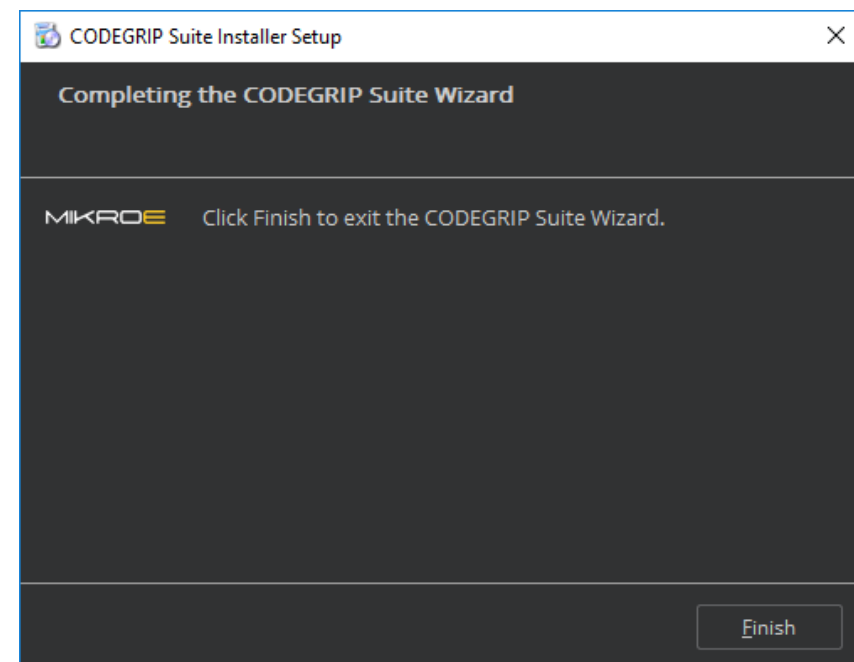
After all the installation options are properly configured, the installation process can now be started by clicking the **Install** button.

## 7. Step – Installation progress



The installation progress is indicated by the progress bar on this screen. Click the **Show Details** button to monitor the installation process more closely.

## 8. Step – Finish the installation process



Click the **Finish** button to close the Setup Wizard. The installation of the CODEGRIP Suite is now complete.





# CODEGRIP Suite overview

The CODEGRIP Suite GUI is divided into several sections (areas), each containing a set of tools and options. By following a logical concept, each menu function is easily accessible, making the navigation through complex menu structures easy and simple.

## 1. Menu section

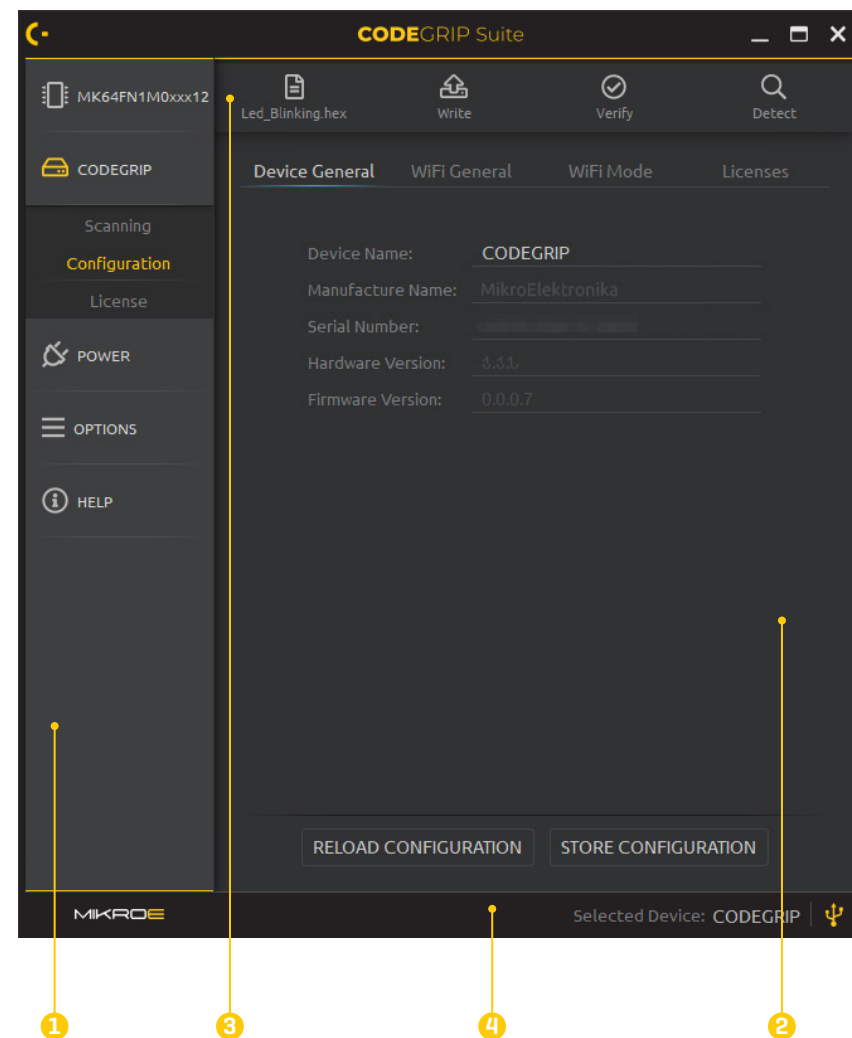
## 2. Menu Item section

## 3. Shortcut bar

## 4. Status bar

This document will guide you through a typical MCU programming scenario. You will get familiar with the basic concepts of the CODEGRIP Suite.

If you require more detailed information about all the features provided by CODEGRIP, please refer to the corresponding manual on the following link [www.mikroe.com/manual/codegrip](http://www.mikroe.com/manual/codegrip)



# Programming over USB-C

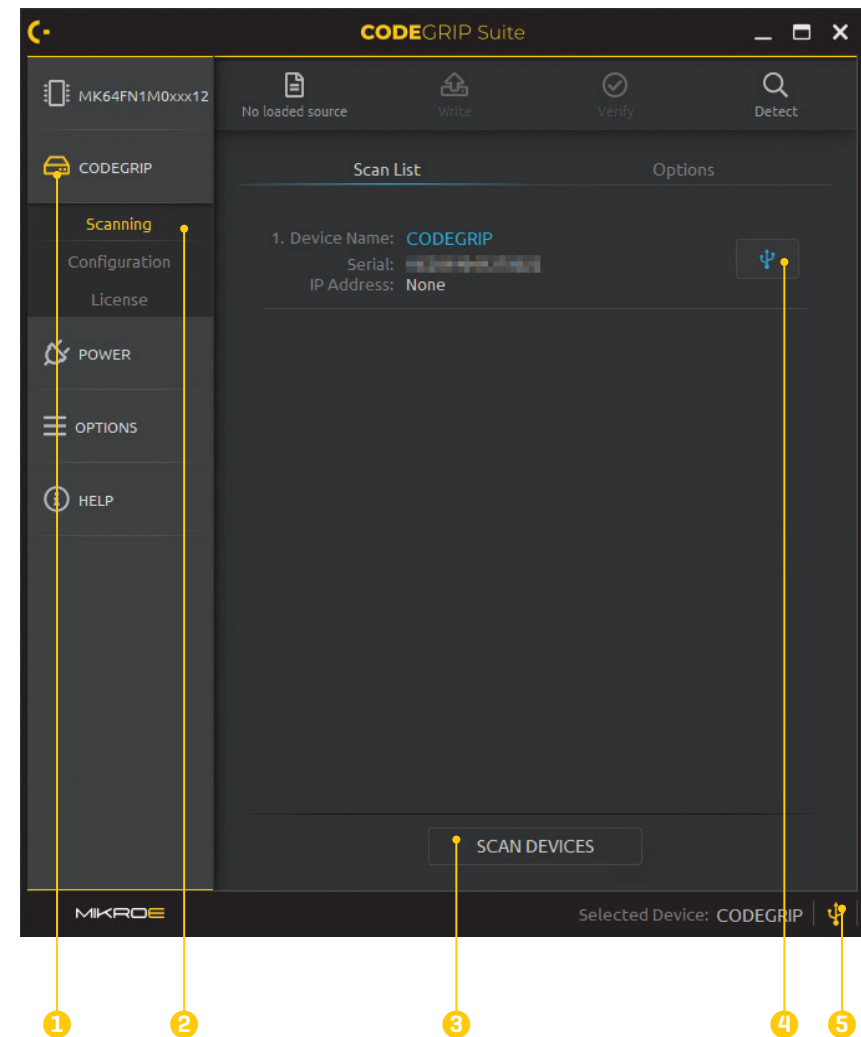
## 1. Connect to CODEGRIP over USB

Connect the CODEGRIP with a PC using the USB-C cable. If everything was connected properly, POWER, ACTIVE and USB LINK LED indicators on the CODEGRIP device should be ON. When the ACTIVE LED indicator stops blinking, the CODEGRIP is ready to be used.

Open the *CODEGRIP* menu [1] and select the newly unfolded *Scanning* menu item [2].

SCAN DEVICES [3] to get a list of available CODEGRIP devices. To connect with your CODEGRIP over USB cable click the USB Link button [4]. If more than one CODEGRIP is available, identify yours by it's serial number printed on the bottom side.

The USB Link indicator [5] will turn yellow upon successful connection.



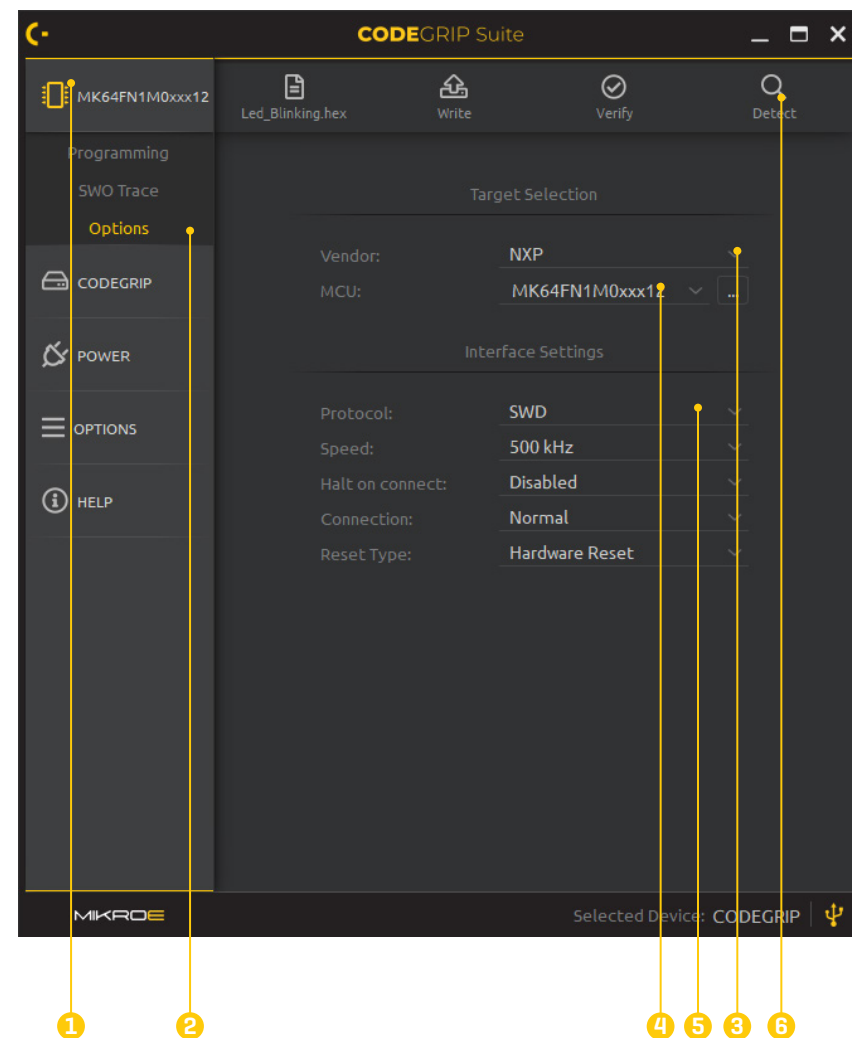
## 2. Programming setup

Open **TARGET** menu **[1]** and select the *Options* menu item **[2]**.

Set up target MCU either by selecting vendor first **[3]** or by directly entering MCU name in the *MCU* drop-down list **[4]**. To narrow down the list of available MCUs, start typing the name of the MCU manually **[4]**. The list will be dynamically filtered while typing.

Then select the programming protocol **[5]** to match your hardware setup.

Confirm the communication with the target MCU by clicking the *Detect* button located on the Shortcuts bar **[6]**. A small pop-up window will display the confirmation message.

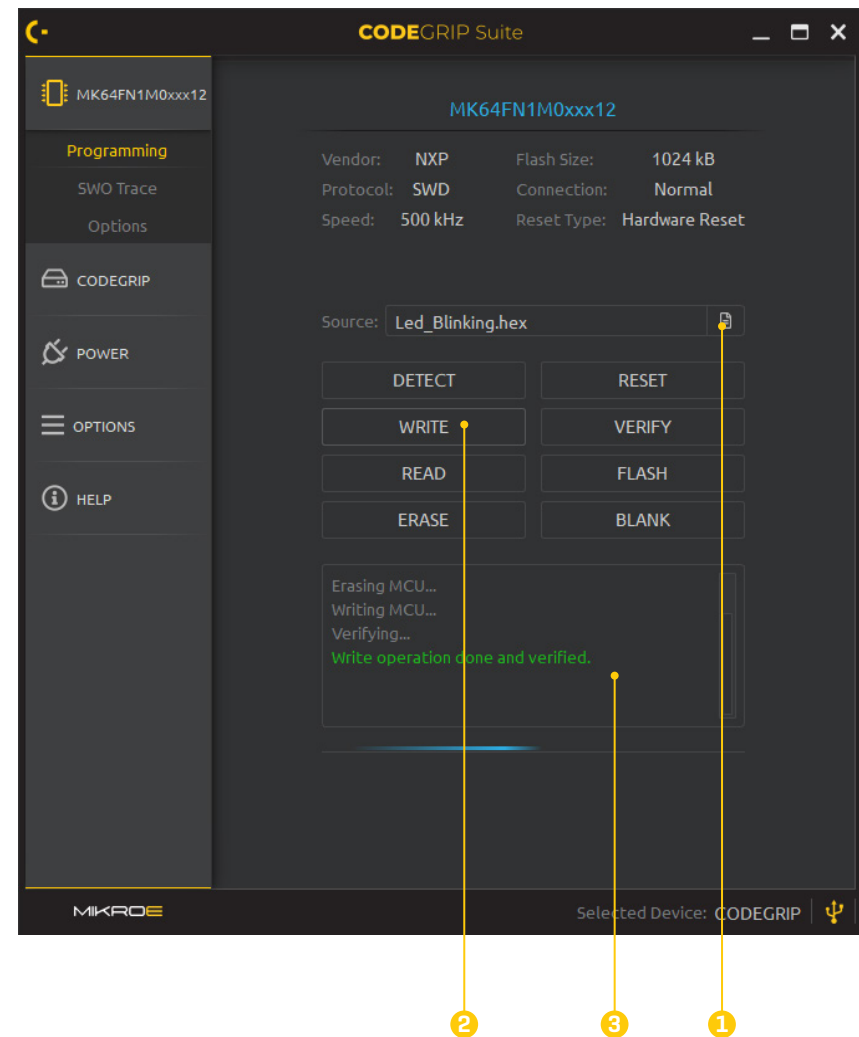


### 3. Programming the MCU

Load the .bin or .hex file by using the *Browse* button **[1]**.

Click the *WRITE* button **[2]** to program the target MCU.

The progress bar will indicate the programming process, while the programming status will be reported in the message area **[3]**.



# Programming over WiFi

Programming over the WiFi network is a unique feature provided by CODEGRIP allowing to program the MCU remotely. However, this is an optional feature of CODEGRIP and requires a WiFi license. For more information about the licensing process, please refer to [Licensing](#) chapter.

To configure CODEGRIP to use the WiFi network, a one-time setup through the USB cable is required. Make sure that the CODEGRIP is properly connected as previously described in [Connect to CODEGRIP over USB](#) section of the previous chapter and then proceed as follows.

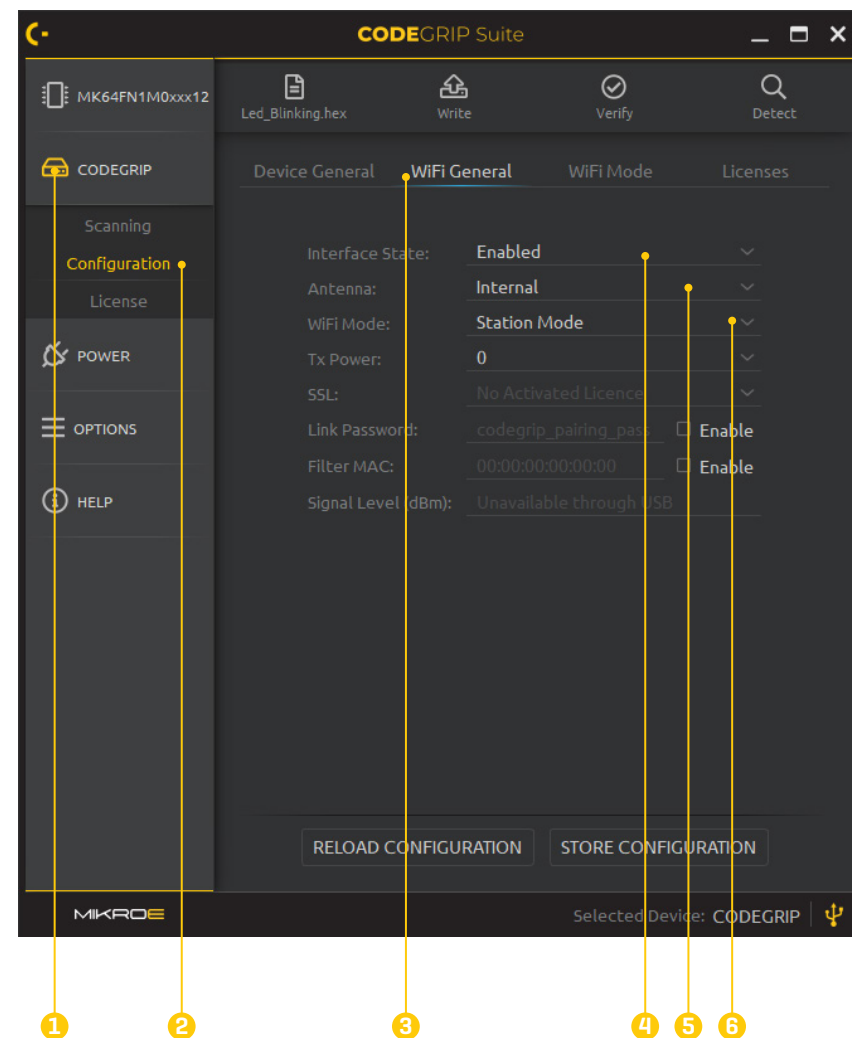
## 1. WiFi mode setup

Open the *CODEGRIP* menu **[1]** and select the newly unfolded *Configuration* menu item **[2]**. Click on the *WiFi General* tab **[3]**.

Enable WiFi in the *Interface State* drop-down menu **[4]**.

Choose the Antenna **[5]** type to match your hardware setup.

Select the *Station Mode* from the *WiFi Mode* drop-down menu **[6]**.



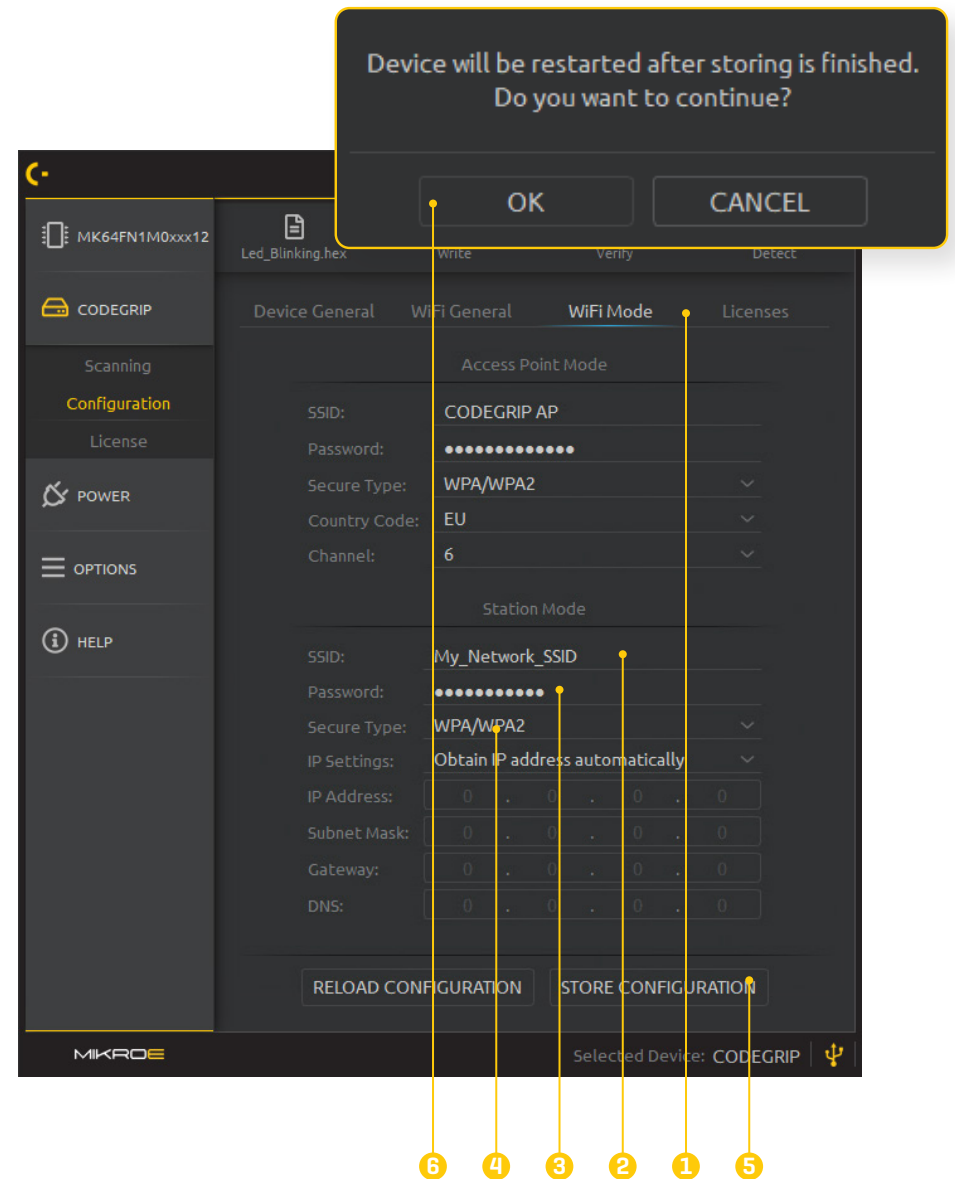
## 2. WiFi network setup

Click on the *WiFi Mode* tab **[1]** and fill in the respective fields in the Station Mode section as follows.

Type in the WiFi network name in the *SSID* text field **[2]** and the WiFi network password in the *Password* text field **[3]**.

Select the security type used by the WiFi network from the *Secure Type* drop-down menu. Available options are *Open*, *WEP*, *WPA/WPA2* **[4]**.

Click the *STORE CONFIGURATION* button **[5]**. A pop-up window will display a notification, explaining that the CODEGRIP will be restarted. Click OK button **[6]** to proceed.



### 3. Connect to CODEGRIP over WiFi

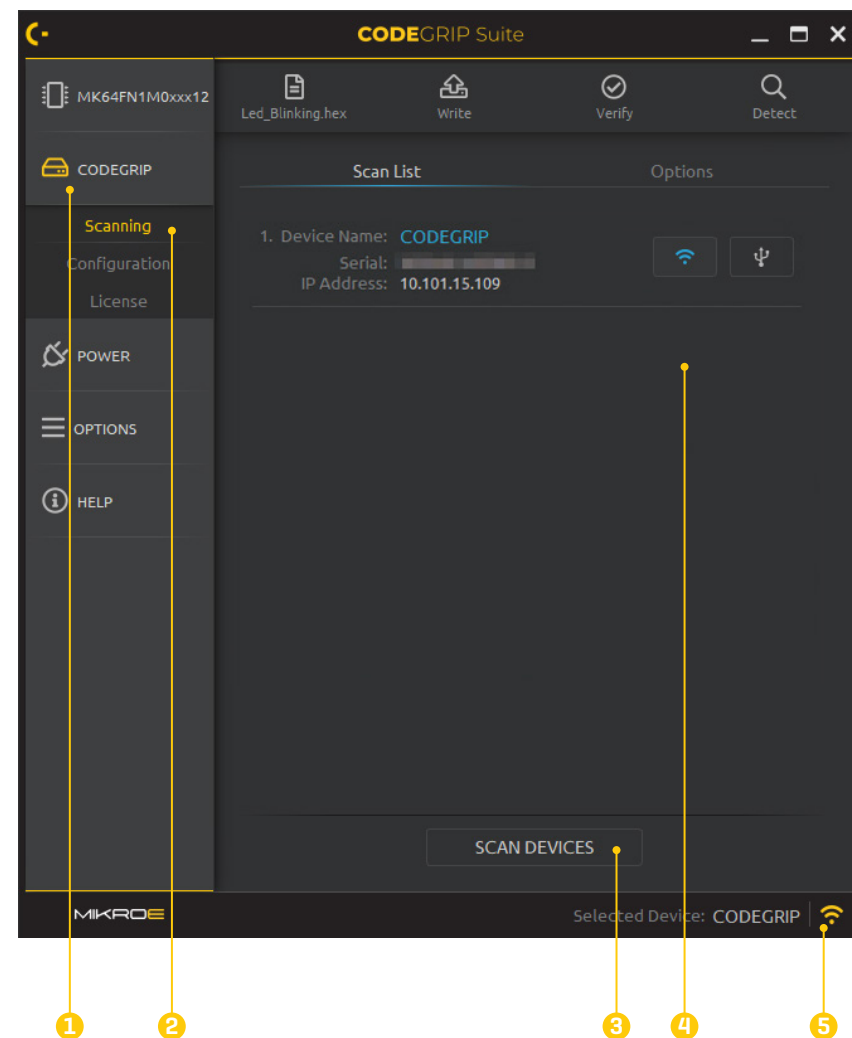
The CODEGRIP will now be reset. After the ACTIVITY LED stops blinking, the CODEGRIP is ready to be used.

Open the *CODEGRIP* menu **(1)** and select the newly unfolded *Scanning* menu item **(2)**.

*SCAN DEVICES* **(3)** to get a list of available CODEGRIP devices. To connect with your CODEGRIP over WiFi click the WiFi Link button **(4)**. If more than one CODEGRIP is available, identify yours by its serial number printed on the bottom side.

The WiFi Link indicator **(5)** will turn yellow upon successful connection.

Continue with programming the MCU as described in [Programming Setup](#) and [Programming the MCU](#) sections of the previous chapter.



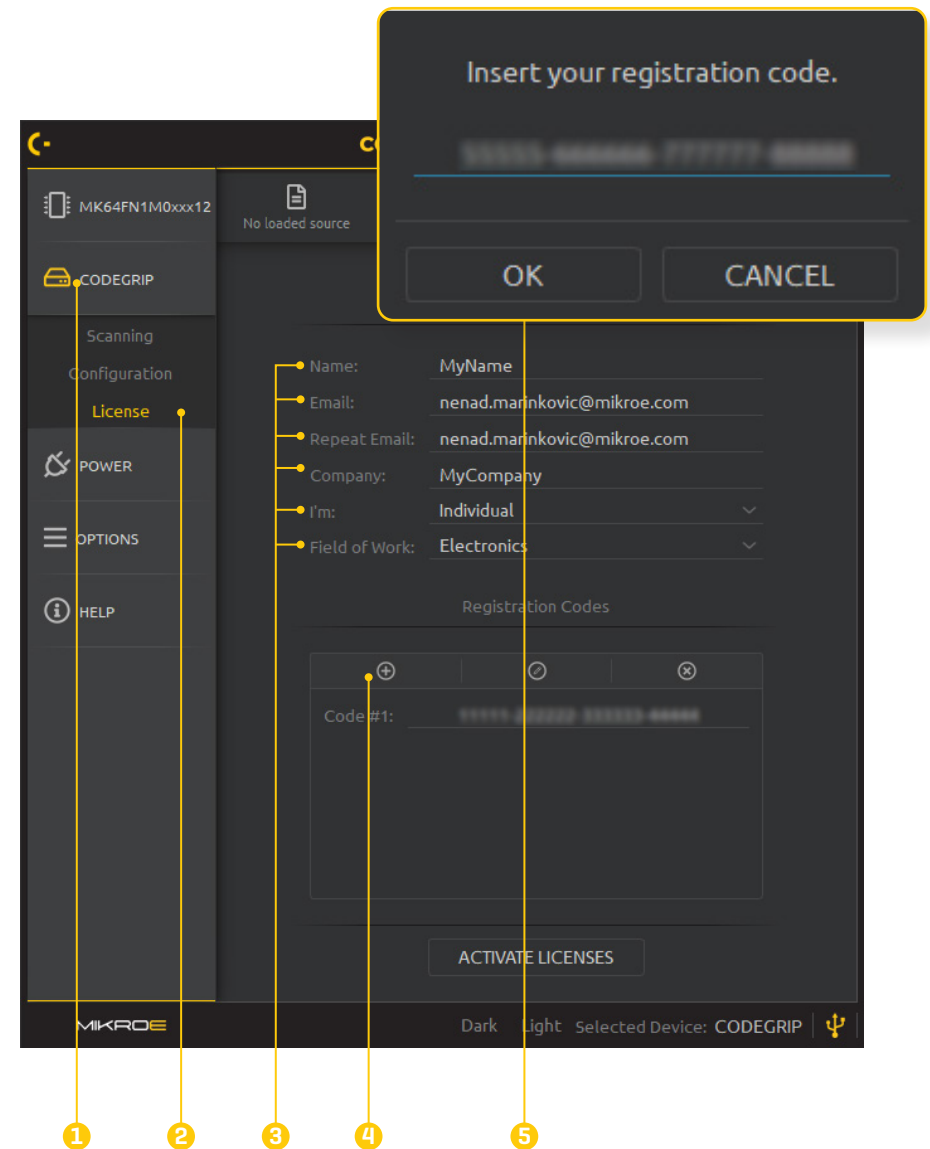
# Licensing

Some features of the CODEGRIP such as the functionality of the WiFi module, and the SSL security, require licensing. If no valid license is found, these options will be unavailable in the CODEGRIP Suite.

Open the *CODEGRIP* menu [1] and select the newly unfolded *License* menu item [2].

Fill in the user registration information [3]. All fields are mandatory in order to proceed with the licensing process.

Click on the ⊕ button [4] and a dialog window will pop up. Enter your registration code in the text field [5] and click the OK button. The entered registration code will appear in the *Registration Codes* subsection.



**NOTE** To successfully complete activation process, you have to create USB link with CODEGRIP device. Please have in mind that for successful license activation internet connection is required.



After a valid registration code[s] is added, click on the **ACTIVATE LICENSES** button [6]. A confirmation window will appear, suggesting that you should reload the CODEGRIP configuration. Click the OK button to close this window.

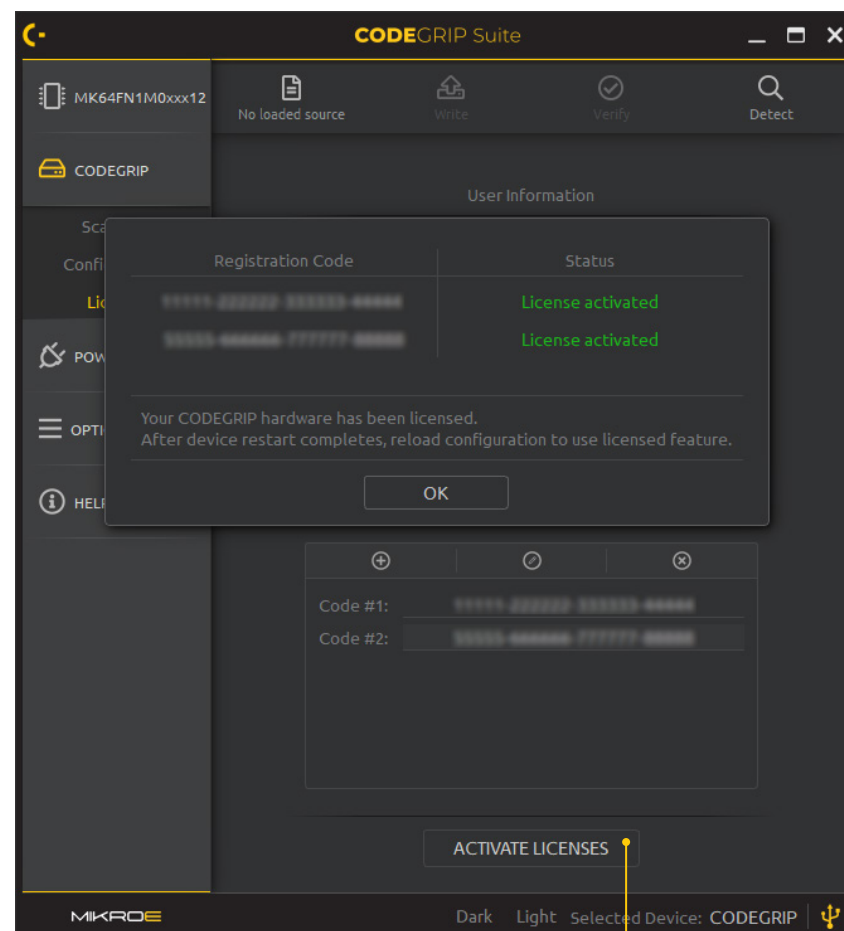
Once the licensing process is successfully completed, the licenses will be permanently stored within the CODEGRIP device.

For WiFi license, please visit

[www.mikroe.com/codegrip-wifi-license](http://www.mikroe.com/codegrip-wifi-license)

For SSL security license, please visit

[www.mikroe.com/codegrip-ssl-license](http://www.mikroe.com/codegrip-ssl-license)



**NOTE** Each registration code is used to permanently unlock a feature within the CODEGRIP device, after which it expires. Repeated attempts to use the same registration code will result with an error message.



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