Diodes Incorporated's Keil MDK ICE Driver EVB User Guide

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Chapter 1 General Introduction

The Diodes Incorporated (Diodes) Keil® MDK ICE Driver works with the Diodes debugger and provides a debug interface for Keil µVision5 MDK IDE. By integrating the debugger with Keil's IDE, users can develop their projects and download the program into the target board with this ICE driver and do source level debugging.

Installation

In this section, we will guide you on how to install the Diodes Keil MDK ICE Driver for Windows on your computer. Firstly, we'll outline system requirements, and then, introduce the steps of installation.

Note: You must first install Keil µVision MDK.

System Requirements

The current version of the tool runs in Windows Win10. The proposed minimum system requirements are:

- CPU clock: 600MHz
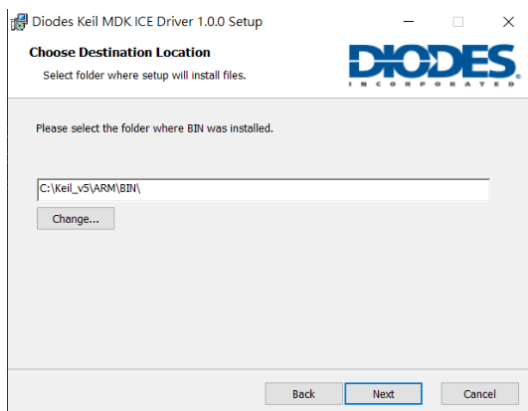- Capacity of memory: 128 MB
- Free hard disk space: 2GB

Steps

Take the following steps, to install the driver on your computer:

1. Run the installation file.
2. Choose destination location. Select folder where setup will install files.
3. Select the option "Will be installed on local hard drive".
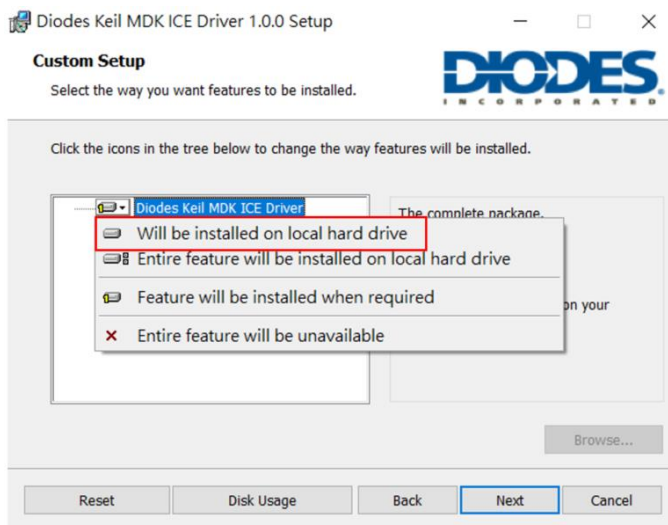
4. Select the folder where "BIN" folder was installed.

   **Note:** BIN is specify the path to the binary folder of the toolchain in use from Arm Keil µVision User's Guide.

5. Finish.
6. Restart Keil µVision.

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Chapter 2   New project

In order to use the ICE driver you must perform the following steps:

1. Start Keil µVision5.
2. Select 'Project – New Project' to new project and input the project name and path. From the combo box, select "Diodes AMS32" which is our device's database.
3. Select required microcontroller type you and then click "OK" to save the setting and close the dialog box.
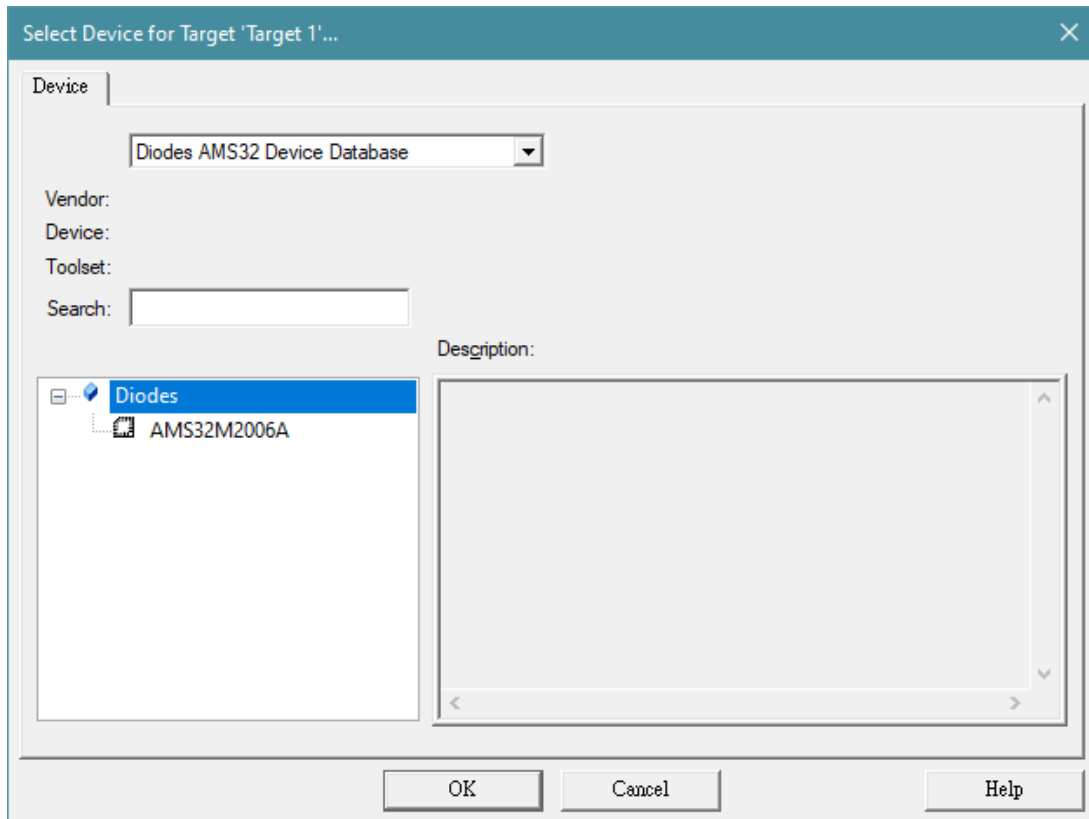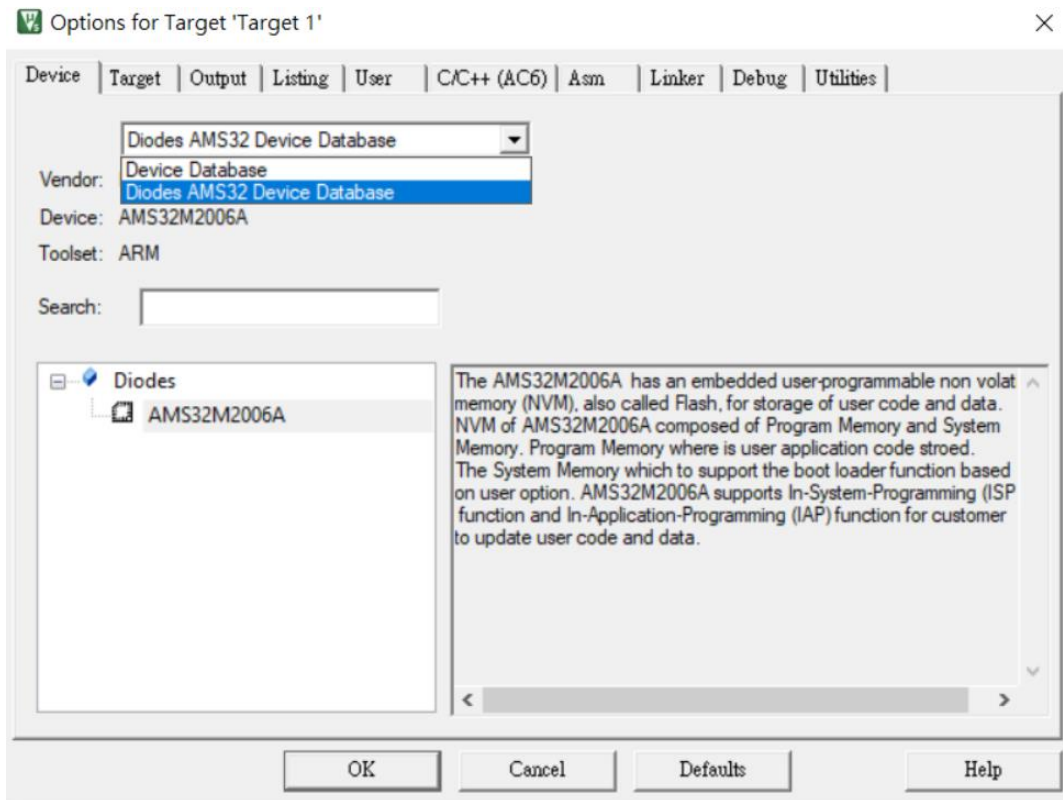
Chapter 3   Setting

1. Select "Options for Target 'Project name'".
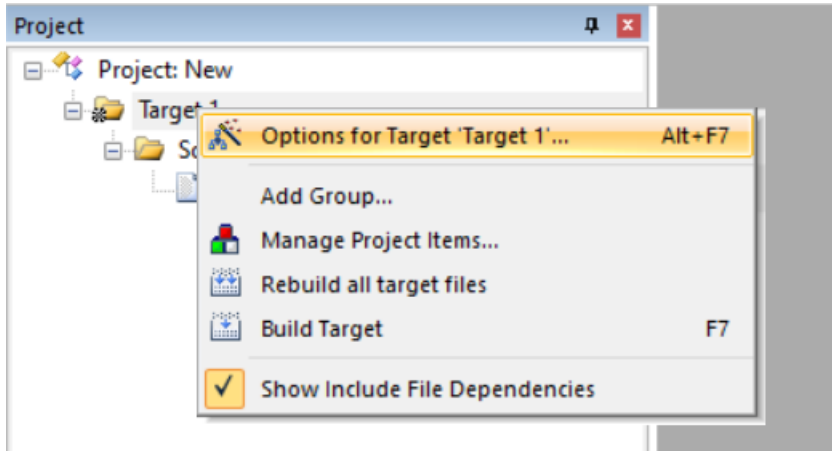
2. Click the "Device" tab to check and change the microcontroller type to "Diodes AMS32 Device Database".

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Click the "Debug" tab, from the combo box, then select "Diodes AMS32 Driver" to connect to the debug hardware.

Make sure that the "Use" radio button is checked. Once those items are selected, the dialog box should look like this:
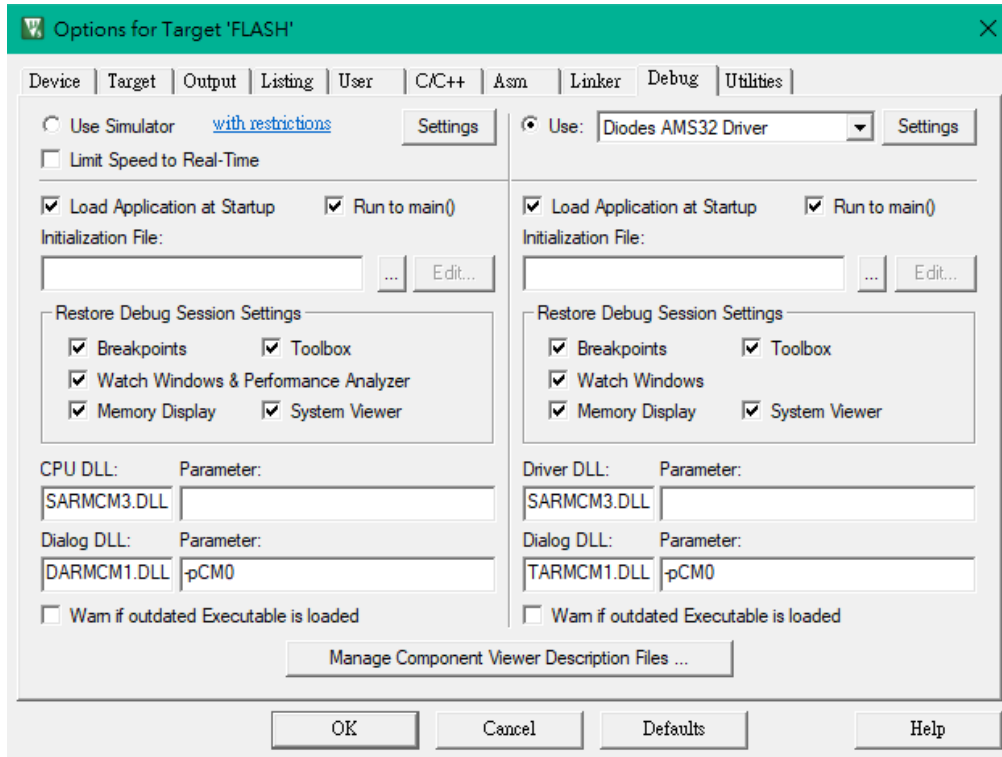
Debug Tab Step Actions:

1. Enable Load Application at Startup so that the µVision Debugger loads the symbolic information for your program.
2. Enable Run to main() so that program can run main process by diodes debugger
3. Click **Settings** to open the MDK Driver Settings dialog and configure the Options.
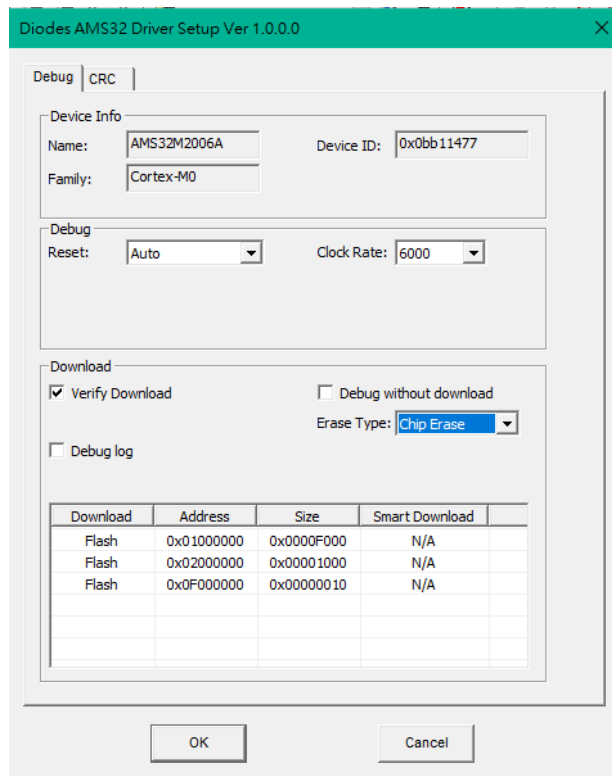
Device Info group is used to show the current device information:

- **Name** – The device name
- **Family** – The device family
- **Device ID** – The ID read from device

Debug group is used to configure the current debug

- **Reset** – Whether to automatically reset the MCU
- **Clock rate** – Communication speed with MCU is in KHz, up to 6000KHz

Download group is used to properly configure the driver work with memories. The following settings can be specified:

- **Verify Download** – check this option to enable the verify function. It will verify the file downloaded to the ICE with the source file automatically, if there is a difference, it will prompt you.
- **Debug without download** – check this option to enable the debug without download function. It will directly enter debug section without downloading the code to memory.
- **Debug Log**
- **Erase Type**

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