Application Note:
Troubleshooting Problems with
TivaC LaunchPad Board

This Application Note describes problems you might encounter while using the EK-TM4C123GXL board (TivaC LaunchPad).

This Application Note is companion to the video course **"Modern Embedded Systems Programming"** taught by Dr. Miro Samek, founder and CEO of Quantum Leaps.
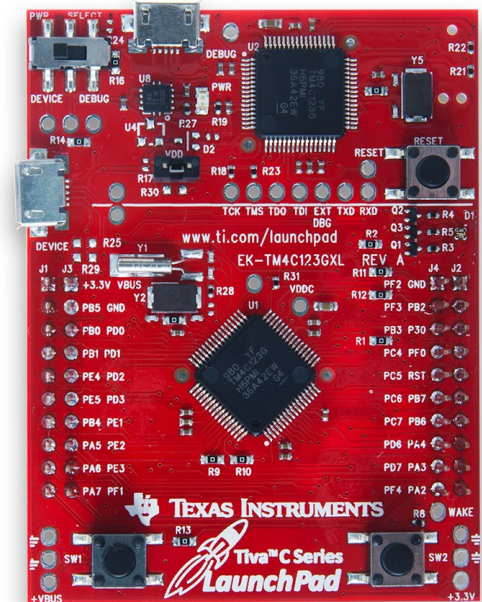
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1 TivaC LauchPad "Locks Up"

Occasionally, when the TivaC LauchPad board is programmed with faulty code, it might lock up and any attempts to re-program the board will fail. This section describes how to unlock the board using the **LMFlash utility from TI**.

1.1 Downloading the LMFlash Utility

The LMFlash utility can be freely downloaded from the Texas Instruments website. The recommended procedure is to point your browser to ti.com and type "LMFlash" into the search box. This will lead to the page "LMFLASHPROGRAMMER" or similar, from which you can download the utility.
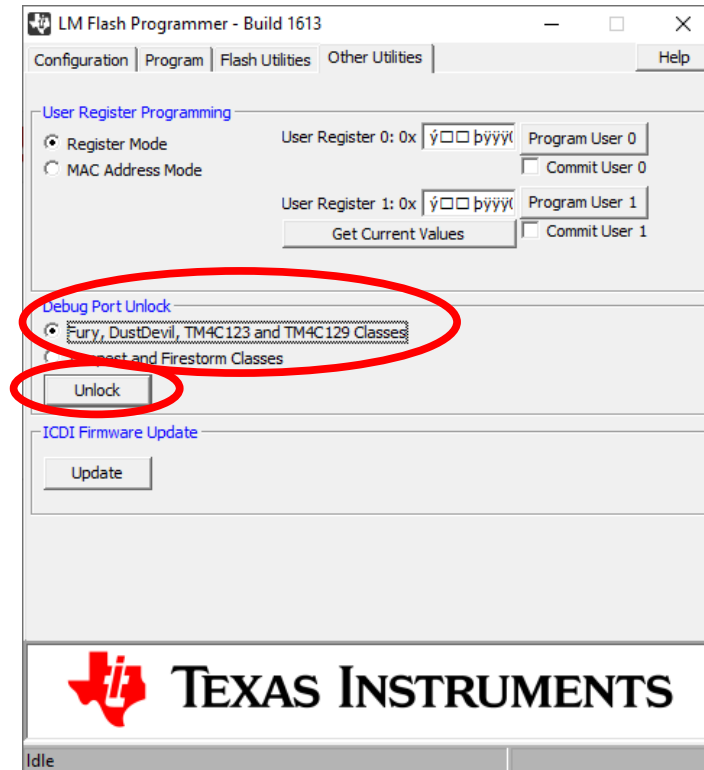
> **NOTE:** The LMFlash utility runs on Windows only.

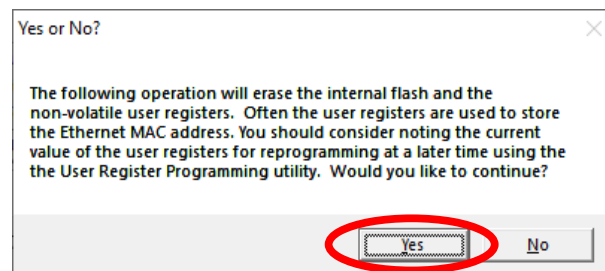## 1.2 Using LMFlash to Unlock the Board

Open the LMFlash utility and in the QuickSet area select "TivaC123G LaunchPad". Next, click on the "Other Utilities" tab:
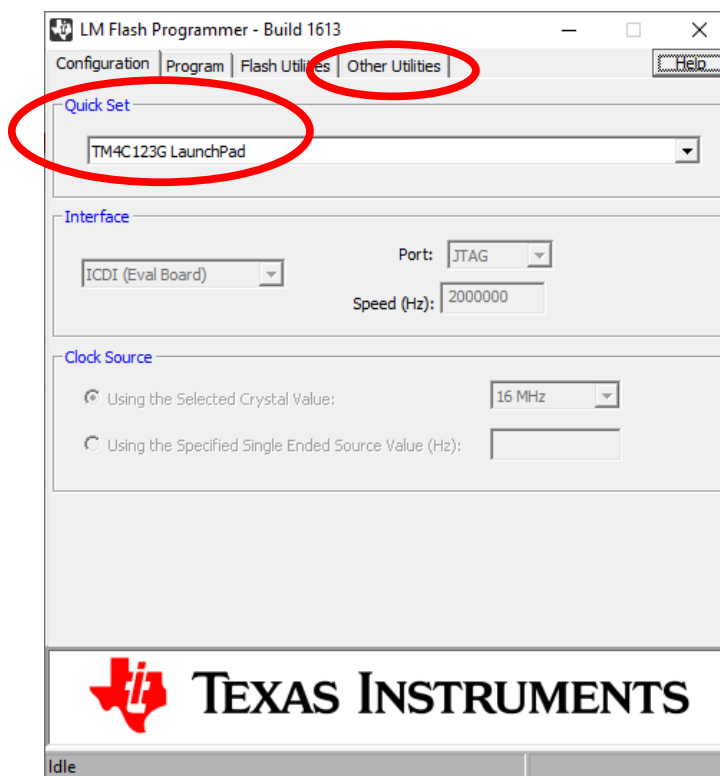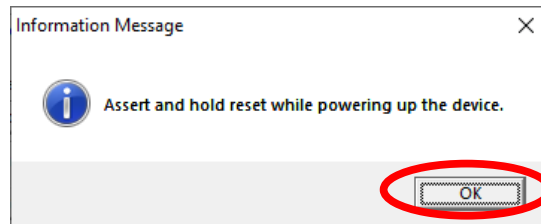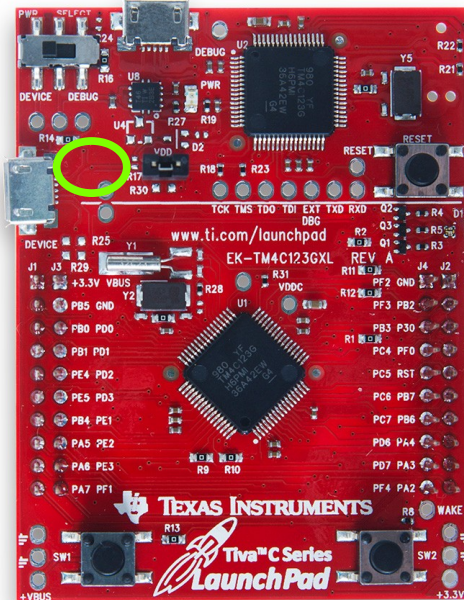
Next, inside the "Debug Port Unlock" area, select "Fury, DustDevil, TM4C123 and TM4C129 Classes" and then click the "Unlock" button:
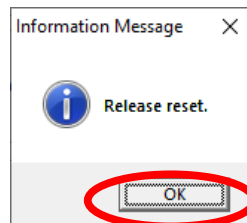

In the following message box click "Yes"

Make sure that the board is NOT connected to your computer and then **press and hold** the Reset button while plugging the USB cable from the board to your computer. Click OK in the message box:

After a few seconds you will see following the message box. Click OK in the message box:

Finally, you will see following message box. Disconnect the board from your computer and connect it again (power cycle). Click OK in the message box
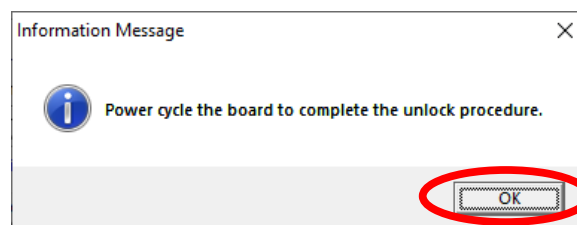
Close the LMFlash utility. You are done and your TivaC board should be unlocked

2 Keil uVision Debugger Stops Working

Occasionally, the Keil uVision debugger starts and downloads the code to the TivaC Lauchpad, but then it quits immediately. Any further attempts to start the debugger end up with the same result, so you no longer can debug the code.

2.1 Using Registry Editor to Fix the Problem

This problem turns out to be by the uVision application leaving an erroneous entry in the Windows registry. To fix the problem, you need to use the Windows Registry Editor.
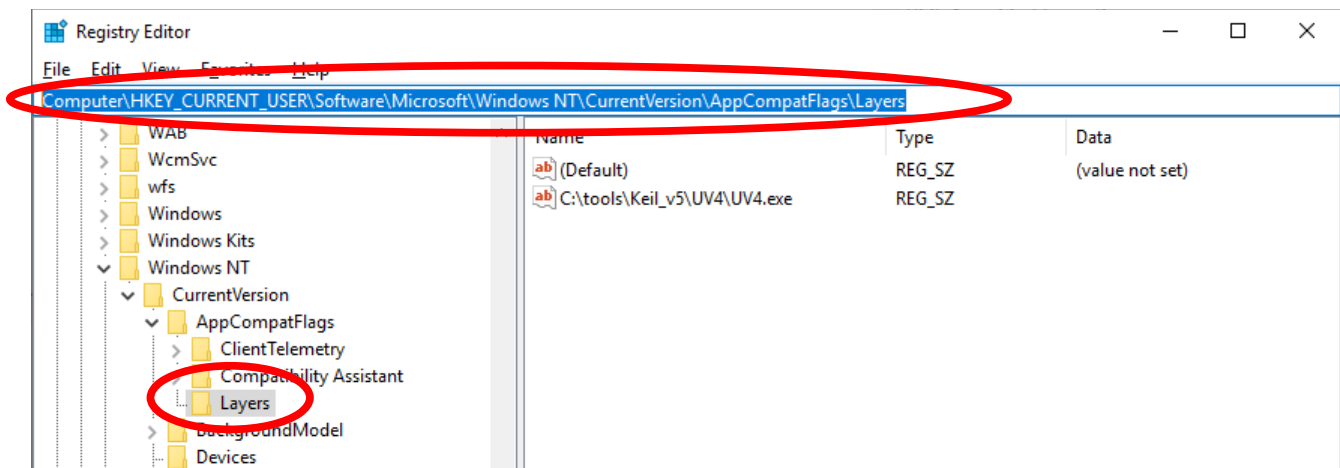
To open the Windows Registry Editor, click on the Start button and start typing "registry". The search box should complete your search to Registry Editor. Click Enter.
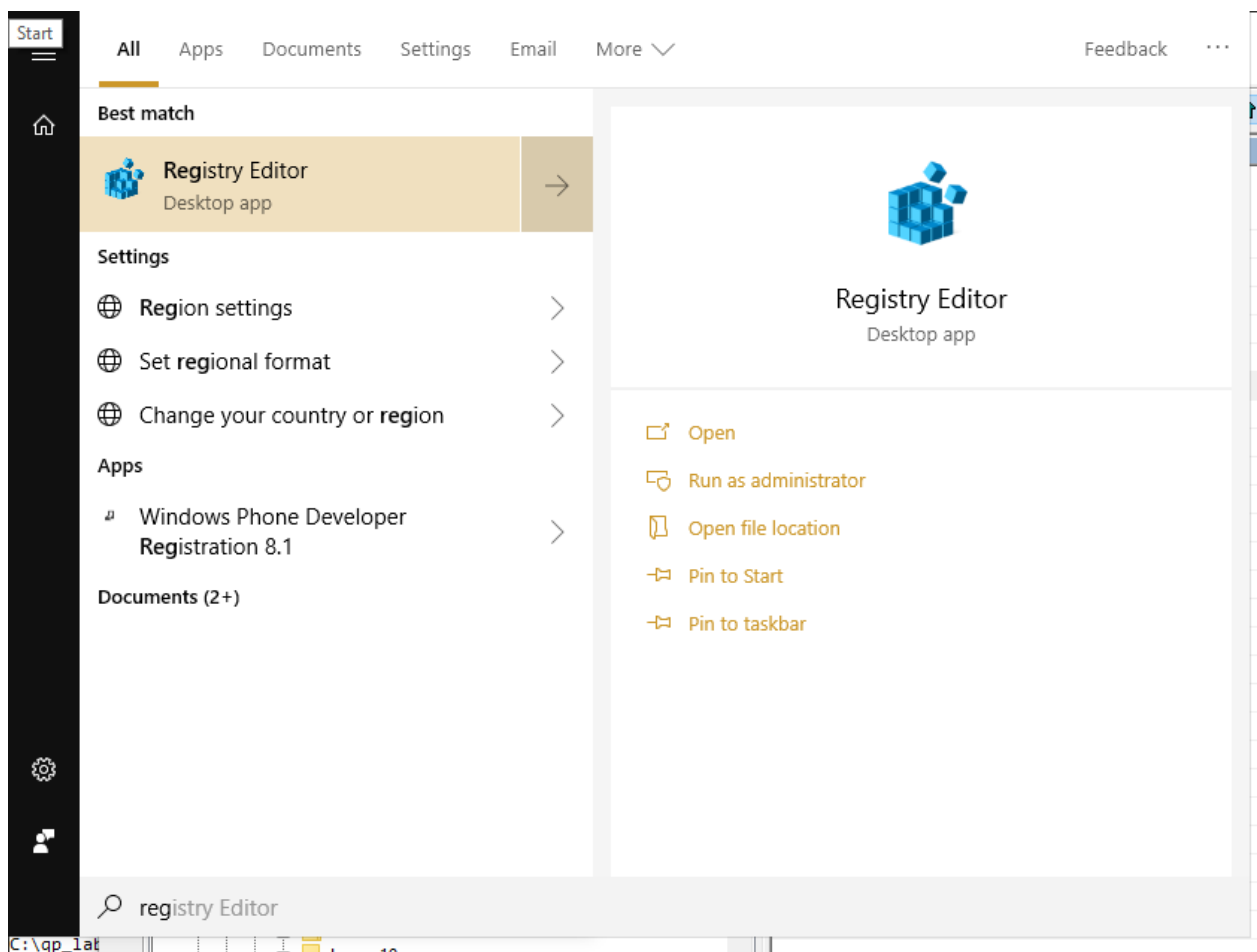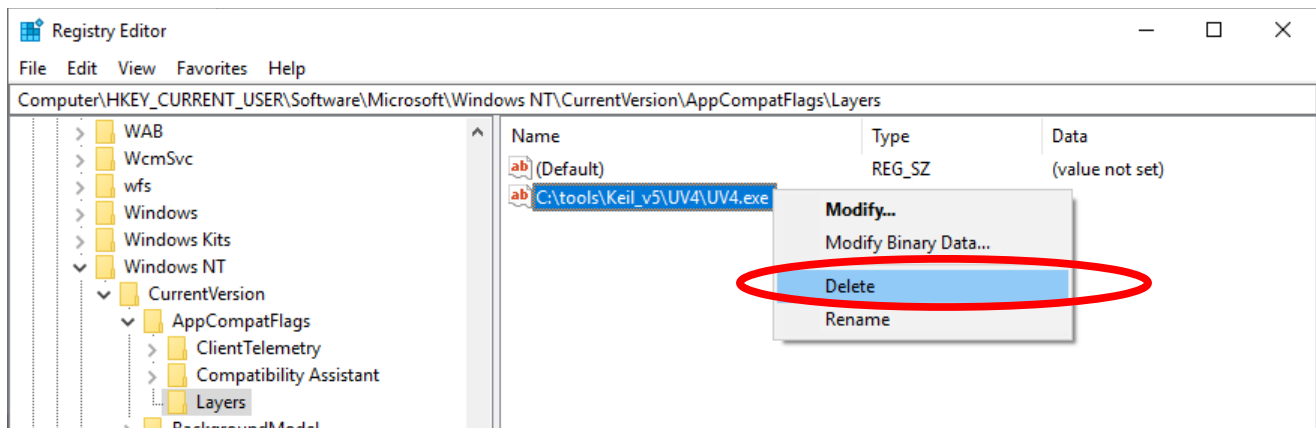
After you open Registry Editor you might see a similar to the following screen shot:
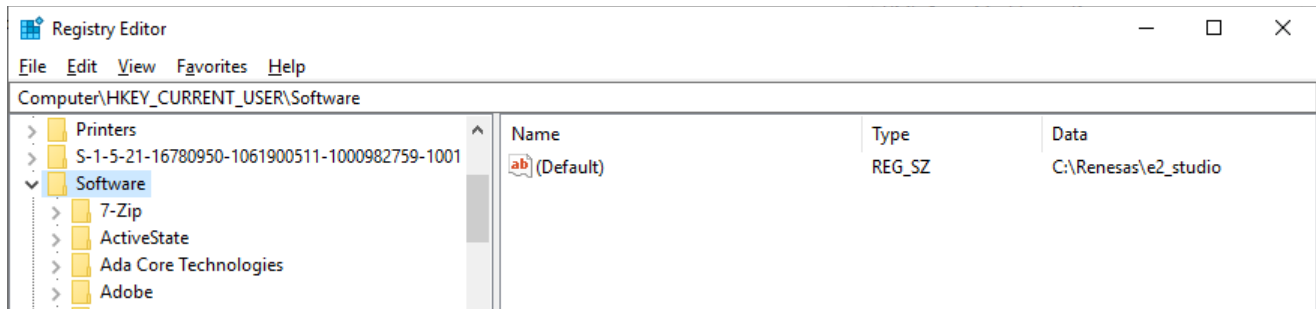
Now you need to search for the directory **Computer\HKEY_CURRENT_USER\Software\Microsoft\ Windows NT\CurrentVersion\AppCompatFlags\Layers** :

You need to DELETE the entry ending with **UV4.exe**:

After deleting the entry, close the Registry Editor and reboot your machine. The uVision debugger should work again.

3   Keil uVision Doesn't Support Stellaris ICDI

The newer releases of Keil uVision don't include the "Stellaris ICDI" debug adapter used by the TivaC LauchPad board. However, the support for Stellaris ICDI can be easily added by installing the following add-on software:

•   MDK_Stellaris_ICDI_AddOn.exe

In case the original link becomes broken, you can download the Stellaris-ICDI add-on from the mirror:

•   MDK_Stellaris_ICDI_AddOn.exe (mirror)
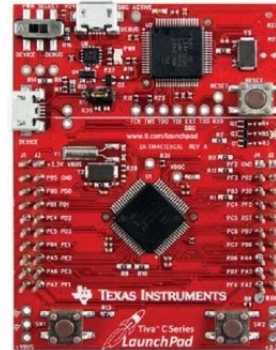
4   Contact and Resources

Companion website to the "Modern Embedded Systems Programming" video course:

https://www.state-machine.com/video-course

Quantum Leaps, LLC
https://www.state-machine.com

Code repository for the "Modern Embedded Systems Programming" video course:

https://github.com/QuantumLeaps/modern-embedded-programming-course