PAC55xx Code Protection Debugger Configuration

Power Application Controller®

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1 Introduction

When running the Code Protection example code on a PAC55xx device, it's desirable to connect a debugger after the various security levels of code protection have been enabled.   But, to do this, the debugger settings must be configured properly to connect.   This document describes these settings for various IDEs and debuggers

2 Debugger Settings

If code protection is enabled, but the device is still at Security Level 0, then the debugger should function normally, and no special settings are required for debugging.

But, if Security Level 1 or 2 has been set, then the debugger should be configured so it does NOT perform the following functions:
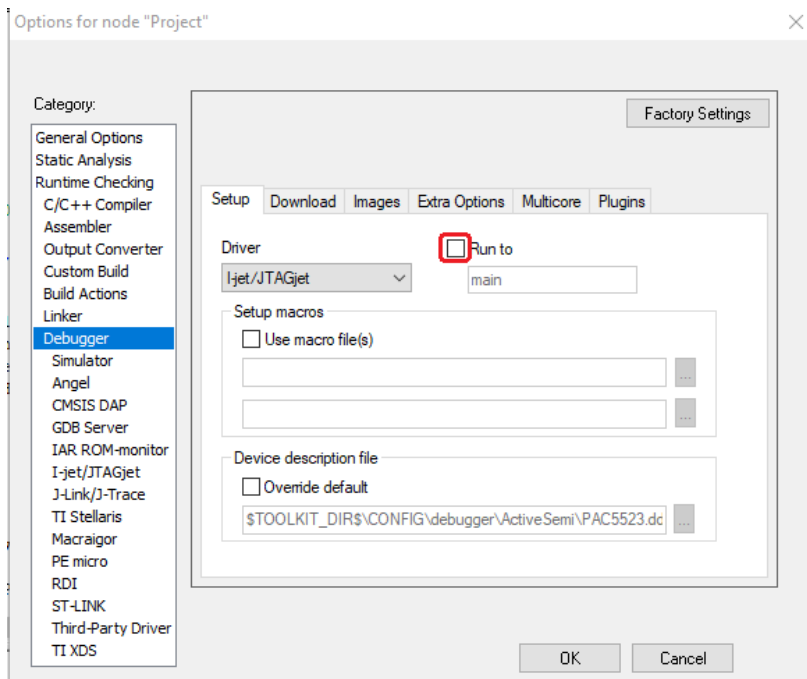
1) Reset (If this can't be avoided, choose reset signal not present on a PAC55xx)
2) Erase Flash
3) Program Flash
4) Verify Flash
5) Run to Main

The next several sections will describe the settings for various IDEs and debuggers.

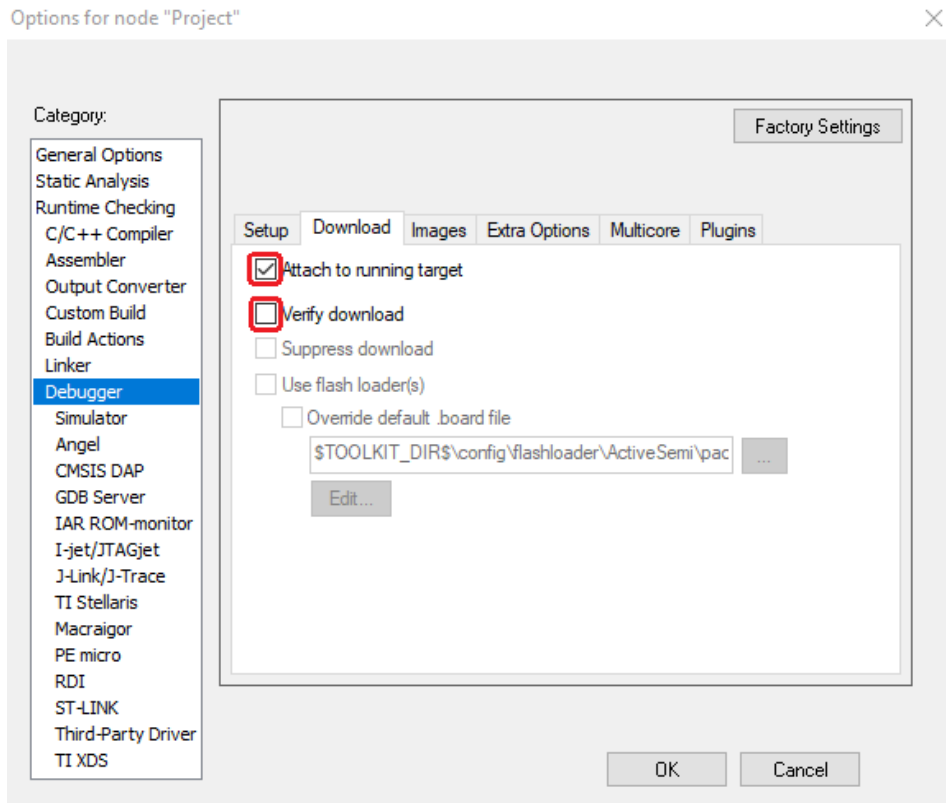## 2.1 IAR – i-jet

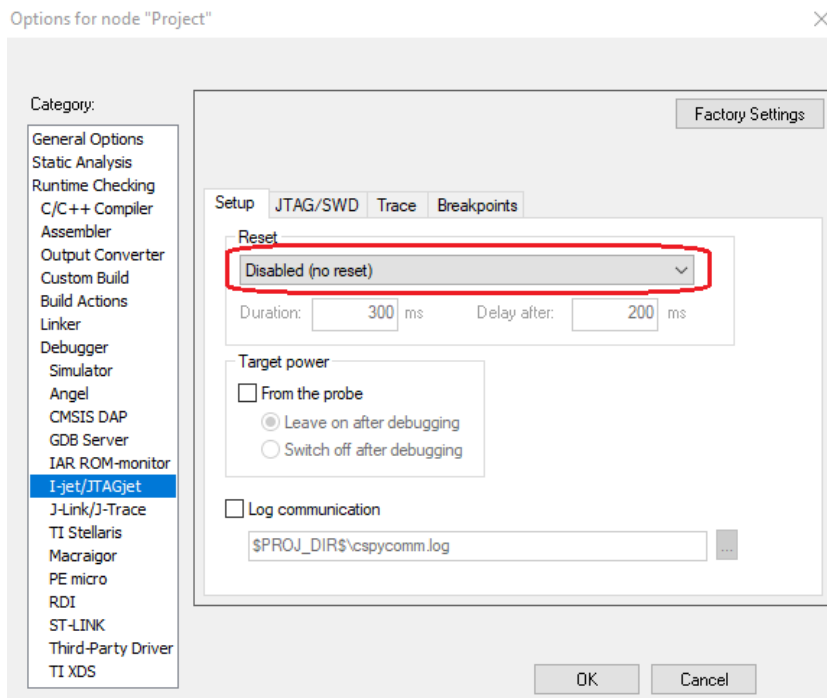For IAR and the i-jet debugger, make the following settings:

In Options->Debugger->Setup, uncheck the Run to main box:

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In Options->Debugger-Download, check "Attach to running target" and uncheck "Verify download".

In Options->Debugger->I-jet/JTAGjet->Setup configure reset to Disabled.
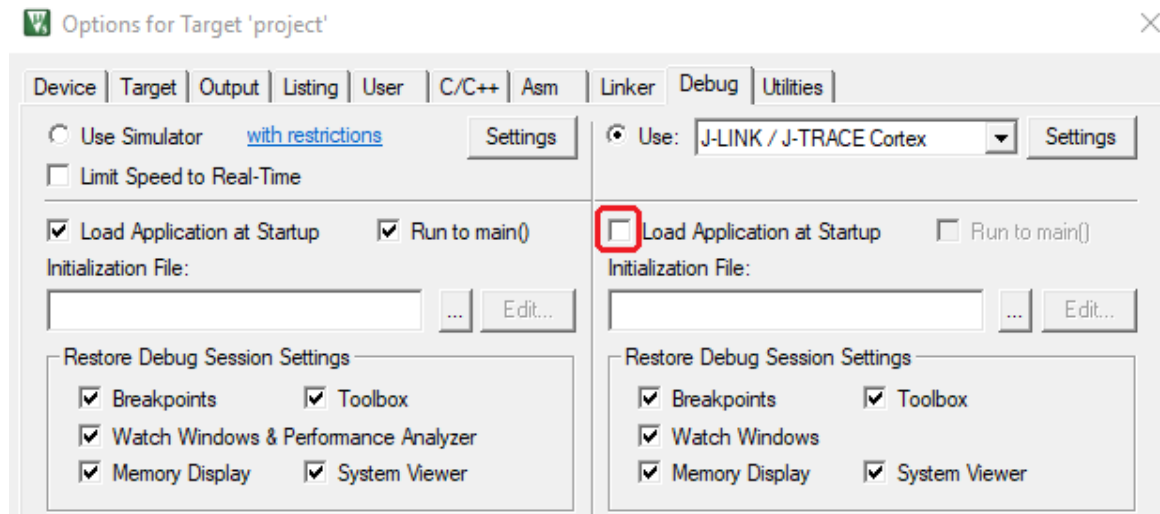
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After these settings have been made, the IAR and the i-jet debugger can connect to a target PAC55xx that has Code Protection configured with Security Level 1 or Security Level 2 after correct SWDUNLOCK procedure.

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2.2 Keil – J-Link

For Keil and a J-Link debugger, configure the following settings:

In Options->Debug, uncheck the box "Load Application at Startup"

In Options->Debug->Settings->Debug Tab uncheck the box "Reset after Connect"

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In Options->Debug->Settings->Flash Download Tab check "Do not Erase" and uncheck the three boxes 1) Program, 2) Verify, and 3) Reset and Run.

After these settings have been made, Keil and the J-Link debugger can connect to a target PAC55xx that has Code Protection configured with Security Level 1 or Security Level 2 after correct SWDUNLOCK procedure.
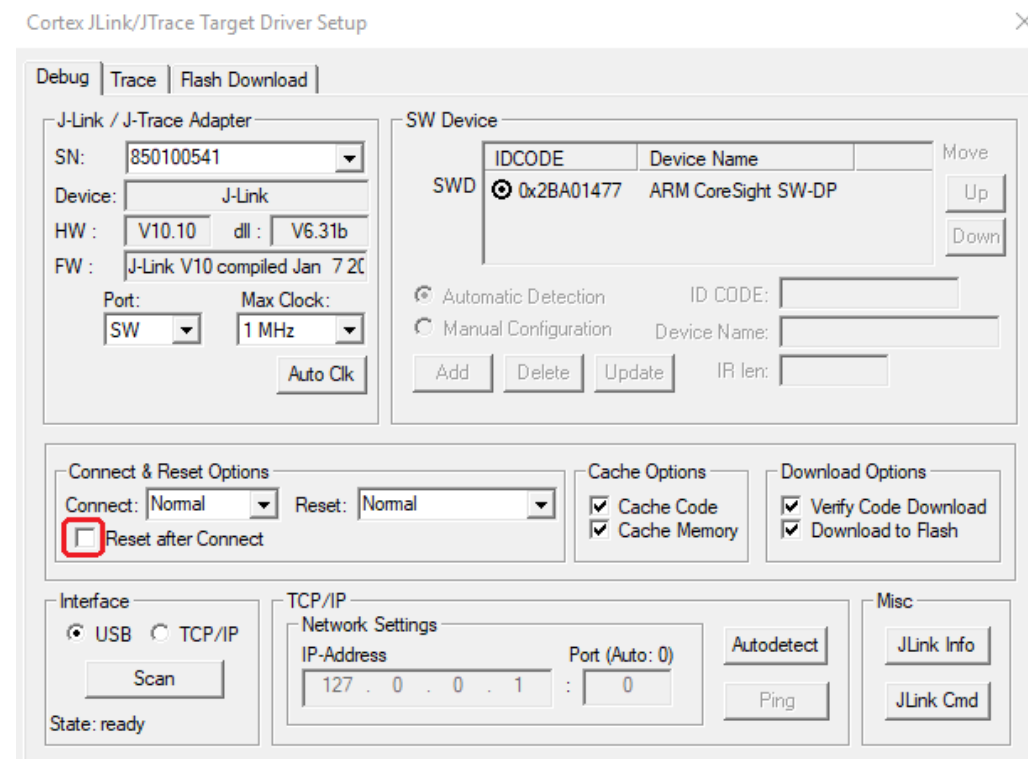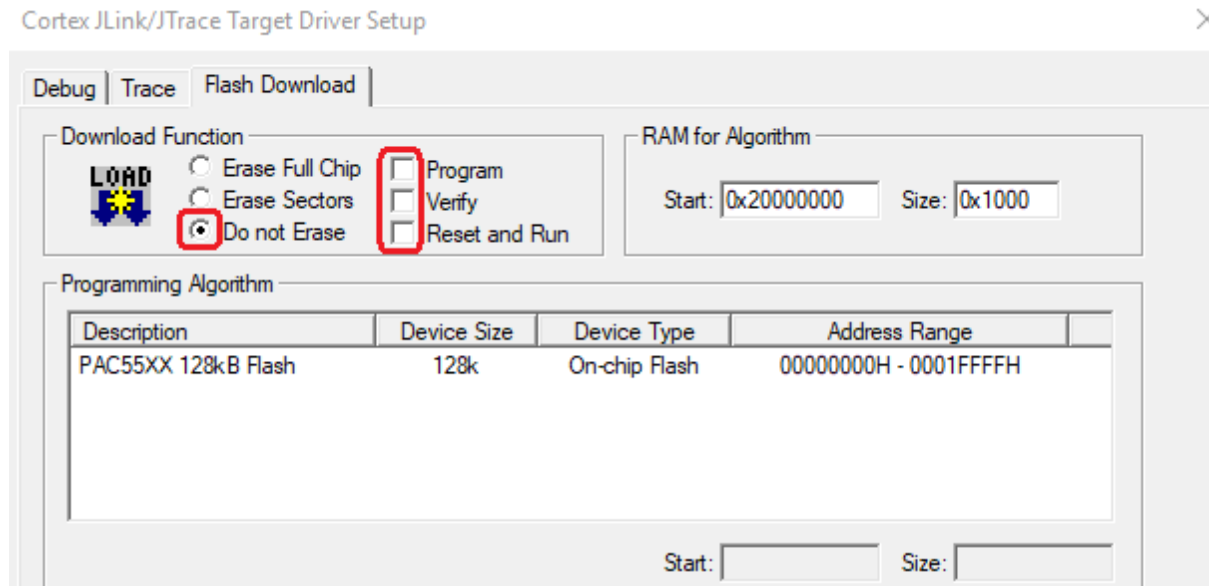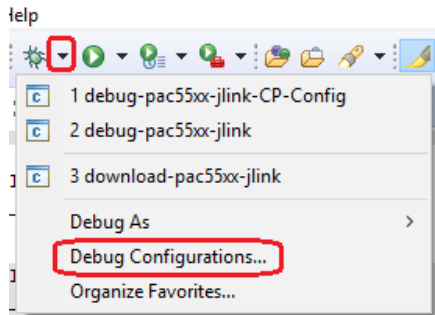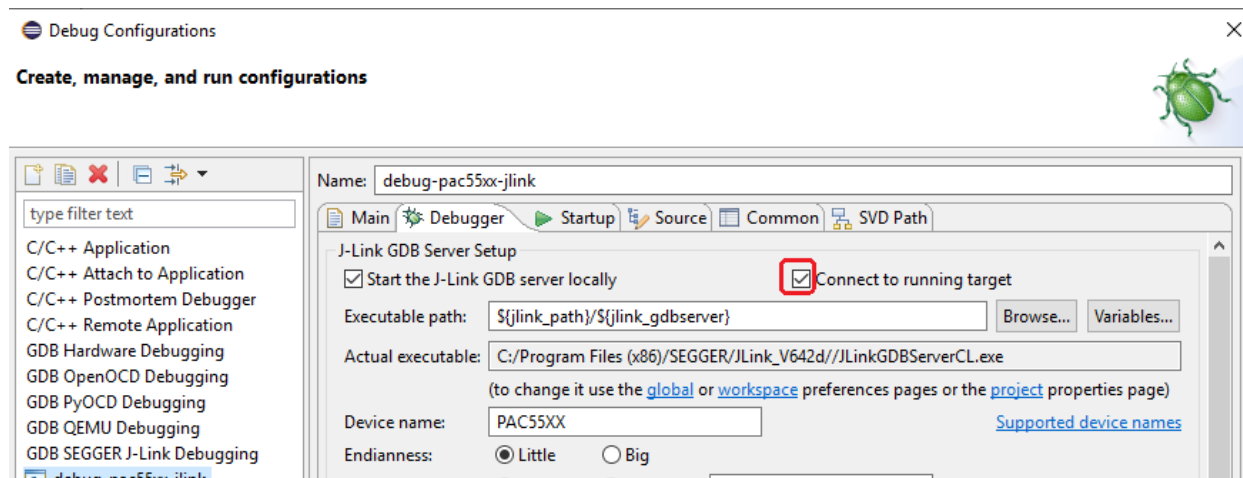
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2.3 Eclipse – J-Link

For Eclipse and a J-link debugger, configure the debug launch by performing the following:

Click the down arrow next to the Debug symbol; then, click on "Debug Configurations".

Choose debug-pac55xx-jlink and then go to the Debugger tab. Check the boxe shown in red below "Connect to running target".

Save the settings.   With this change, Eclipse and the J-Link debugger can connect to a target PAC55xx that has Code Protection configured with Security Level 1 or Security Level 2 after correct SWDUNLOCK procedure.

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