Windows 7: Using USB TAP on a Classic CodeWarrior Installation (MGT V9.2 – DSC V8.3)

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Certain classic CodeWarrior tools do not support the USB TAP run control interface when the host computer is running the Windows 7 64-bit operating system. This application note explains how to configure the USB TAP run control interface on Windows 7 64-bit for those using CodeWarrior development tools based on the Classic IDE rather than the Eclipse IDE. This workaround was tested on Windows 7 64-bit for CodeWarrior DSC V8.3 and CodeWarrior for MobileGT V9.2. The archive AN4338SW.zip is required to complete the configuration.

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1 Description of the Problem

Communications between the CodeWarrior debugger and the target board are handled by a command converter server (CCS) software module. When a CodeWarrior project starts a debug session, the IDE automatically launches the CCS module to establish communications between the debugger on the host computer and the target board. As its name implies, the CCS then manages debugger command and response transactions between the debugger and the target hardware. An icon in the Windows status bar indicates that the CCS is running (Figure 1).

Figure 1. The Status Bar icon that appears when CCS is active.

Unfortunately, the Classic CodeWarrior IDE and ancillary tools such as the CCS were designed for Windows XP/Windows Vista 32-bit only and do not support Windows 7.

NOTE

The Eclipse-based CodeWarrior tools support Windows 7 32-bit and Windows 7 64-bit. The CCS installed with these versions includes the latest Windows 7-compatible drivers and therefore supports the USB TAP properly.

This application note explains how to substitute a Windows 7-compatible CCS into either the CodeWarrior for DSC56800E v8.3 or the CodeWarrior for MobileGT V9.2 installations.

2 How to Install the New CCS

At a high level the process is simple. You install the CodeWarrior tools, and then replace the CCS executable with a Windows-7 compatible version. This process is described in the sections that follow.

2.1 Install CodeWarrior for DSC56800E v8.3 and/or CodeWarrior for MobileGT V9.2

The official release versions of these CodeWarrior tools must be installed.

2.1.1 DSC v8.3 Installation

If you are only working with the Mobile GT V9.2 tools, skip to **Section 2.1.2**

1. Install the CodeWarrior tools on a Windows 7 64-bit system.

At the end of installation, three or four error messages appear regarding a problem installing the USB drivers. Ignore these errors.

2. Launch the CodeWarrior IDE, create a project, and build it.

The project should build without errors.

3. Launch the debugger.

A `USB Open Failure` error message appears.

4. Open the CCS tool by right-clicking on its icon in the status bar.
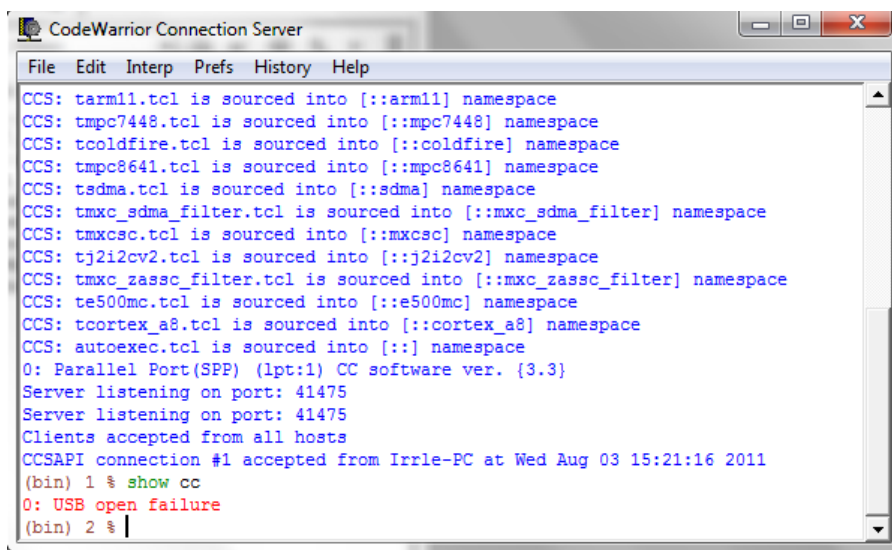
A CCS console window appears ([Figure 2](#)).

Figure 2. The CCS console window.

5. Enter the command: `show CC`

The message `USB Open failure` appears in the console window.

2.1.2   MobileGT v9.2 Installation

If you are only working with the DSC V8.3 tools, go to **Section 2.2**.

1. Install the CodeWarrior tools on a Windows 7 64-bit system.
2. Try to install the MPC5125 patch.

A patch not installed error message appears.

3. Restart the computer.
4. Launch the MPC5125 patch again.

The patch installs successfully.

5. Launch the CodeWarrior debugger.

A `USB Open Failure` error message appears.

2.2   Manually Install the Windows 7-Compatible CCS

Now that you have installed the tools and followed the directions in **Section 2.1**, you have learned that either CodeWarrior development tool can build an application, but cannot use the USB TAP under Windows 7 64-bit to debug the application.

In this step you correct that problem.

1. Go to the CodeWarrior installation folder and rename the `ccs` folder to `ccs_old`.
2. Unzip the app note software archive `AN4338SW.zip`.

   The archive `ccs_bld326_win.zip` appears.
3. Unzip the archive `ccs_bld326_win.zip`.

The folder `ccs` appears.

4. Copy this folder into the CodeWarrior installation folder. It replaces the original `ccs` folder.
5. Plug in the USB TAP.

 A Windows error message appears, stating that the driver is not installed. It must be installed manually.

6. Unplug the USB TAP.
7. Go into the `\ccs\drivers\usb` folder and execute the `setup.bat` file to install the driver.
8. The driver installation is launched (Figure 3).
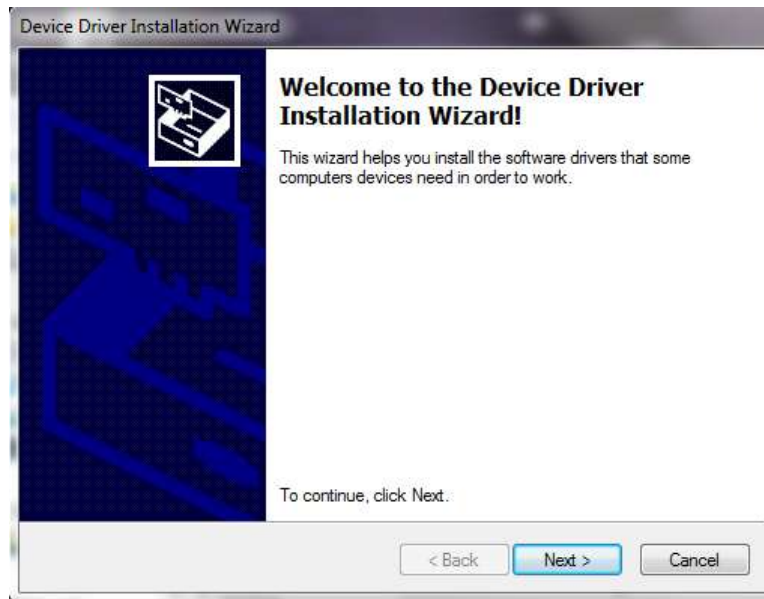
Figure 3. The Device Driver installer.

9. Click on **Next** to start the installation.

The installer runs and completes (Figure 4). Click **Finish**.
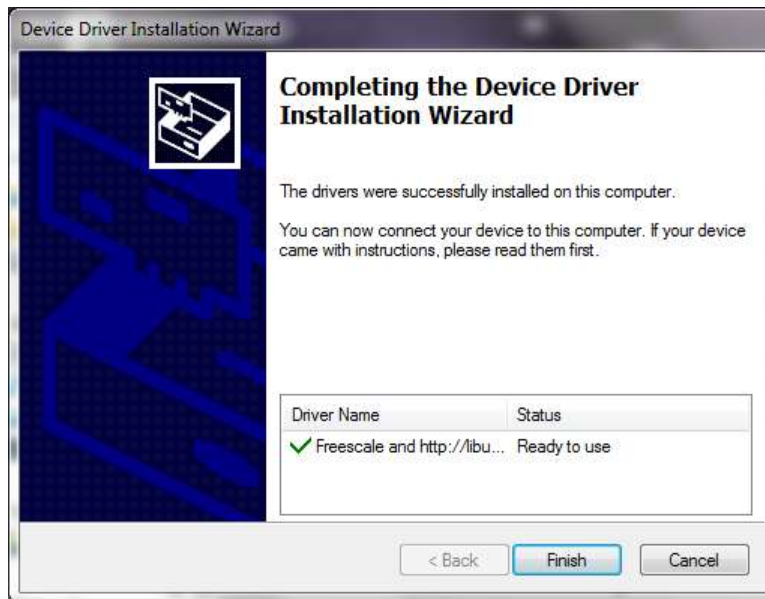
Figure 4. The Device Installer after a successful driver installation.

10. The first time the USB TAP is plugged in, a Windows message appears: `CodeWarrior USBTap driver installed`.

11. Check to see if the computer recognizes the USB TAP. Open the Device Manager.

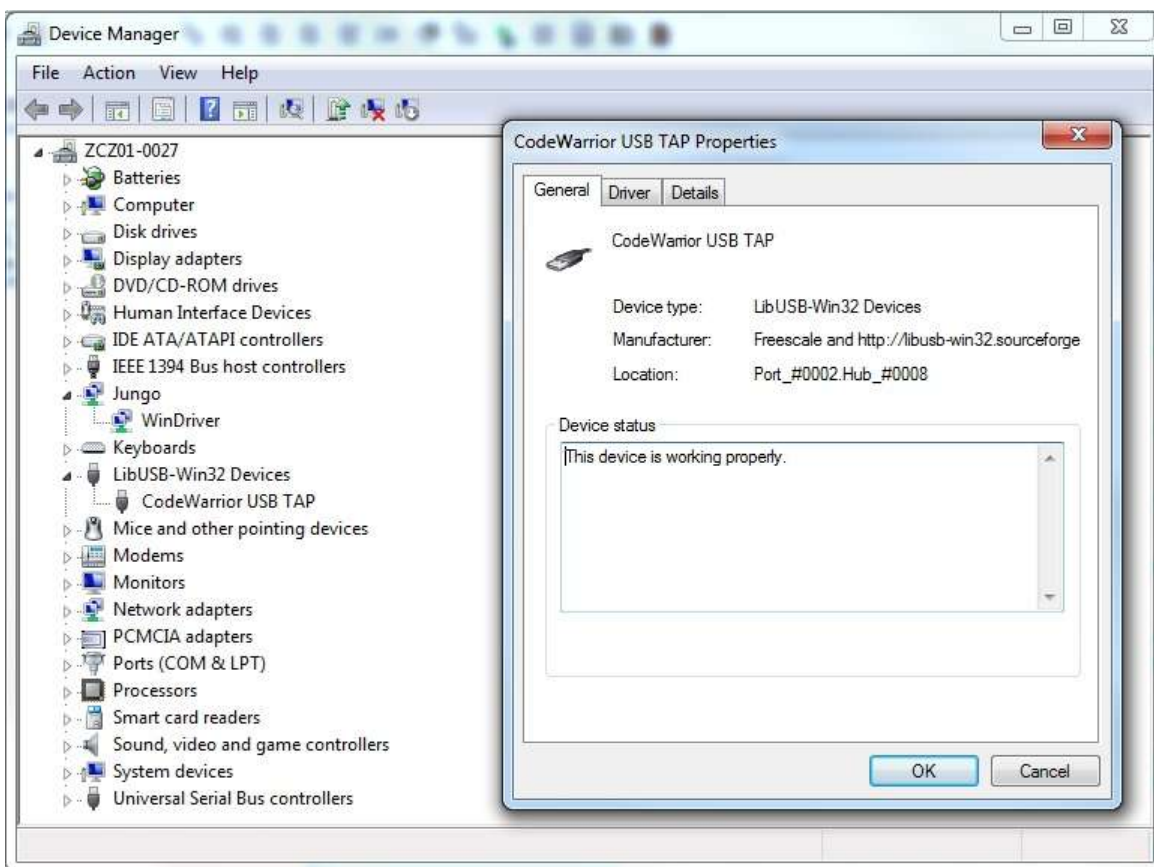`CodeWarrior USB TAP` must appear under `LibUSB-Win32 Devices` as shown in Figure 5.

Figure 5. The CodeWarrior USB driver, as recognized by Windows 7.

A `Readme.txt` file gives some information about the driver installation. The file is located at `\ccs\drivers\usb\readme.txt`.

3 Test the Connection

3.1 DSC V8.3

If you are only working with the Mobile GT V9.2 tools, skip to **Section 3.2**.

1. Plug in the USB TAP.

The USB TAP is recognized. If it is not, it is possible that the IDE does not recognize the new `ccs` folder. It might be necessary move to the contents of the new `css` folder into the `CCS_old` folder and rename it to `css`.

2. Launch the CodeWarrior IDE.
3. Start the debugger.
4. The test application should download to the board and execute under debugger control.

3.2   MGT v9.2

If you are only working with the DSC V8.3 tools, you are done. Otherwise,

1. Plug in the USB TAP.

The USB TAP is recognized. If it is not, it is possible that the IDE does not recognize and use the new `ccs` folder. It might be necessary move to the contents of the new `ccs` folder into the `CCS_old` folder and rename it to `ccs`.

2. Launch the CodeWarrior IDE.
3. Start the debugger.
4. The test application should download to the board and execute under debugger control.

4   Revision History

Table 1 provides a revision history for this application note.

Table 1. Revision History

Rev. Number	Date	Substantive Change
0	9/13/2011	Initial creation
1.0	12/6/2011	Edited for release

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