

Freescale Semiconductor Application Note

Document Number: AN4780 Rev. 0, 11/2013

Using CodeWarrior TAP with CodeWarrior for mobileGT 9.2

by Freescale Semiconductor, Inc.

This application note provides the step-by-step procedure for manually updating CodeWarrior for mobileGT, version 9.2, to enable the use of CodeWarrior TAP.

After the release of CodeWarrior tools for mobileGT, version 9.2, Freescale developed a new debug probe called CodeWarrior TAP (CWTAP). CWTAP requires new USB drivers to be installed. Freescale distributes the new drivers with recent versions of the CodeWarrior Connection Server (CCS) component, which is part of the CodeWarrior tools.

NOTE

Before you begin, ensure you are familiar with the CodeWarrior TAP User Guide (CW_TAP_UG), which comes with the CWTAP box.

Benefits of CodeWarrior TAP

The CodeWarrior TAP enables Freescale target system debugging via a standard debug port (usually JTAG) while connected to a developer's workstation via Ethernet or USB. The CodeWarrior TAP may also be referred to by industry

Contents

1. Enable the use of CWTAP22. Revision history4



© 2013 Freescale Semiconductor, Inc. All rights reserved.



Enable the use of CWTAP

standard terms such as probe, JTAG probe, JTAG emulator or target probe.

Using the CodeWarrior TAP's Ethernet connection, developers can debug systems remotely or more effectively share a single system with multiple developers. When a shared system is not needed, CodeWarrior TAP connects directly to the developer's workstation with a single USB cable. Power is supplied by the USB port so that no additional cables are needed.

The CodeWarrior TAP is designed to work in conjunction with Freescale CodeWarrior development tools and Freescale processors. It is a critical debug tool in all phases of the project and is necessary for debugging systems prior to running a fully debugged operating system.

NOTE

You must order a companion probe tips with this base unit.

1 Enable the use of CWTAP

Follow these steps to manually update CodeWarrior for mobileGT, version 9.2, and enable the use of CWTAP:

- 1. Rename mobileGT9.2\ccs folder as ccs_old. Delete this folder after enabling the new ccs with the new CWTAP probe.
- Download ccs_bld369_win.zip by navigating to the link below and selecting CCS_GDB_BIN_CW_TAP_WIN: freescale.com/webapp/sps/site/prod_summary.jsp?code=CW_TAP&fpsp=1&tab=Design_Tools_ Tab.
- 3. Unzip ccs from ccs_bld369_win.zip and add the ccs directory to the mobileGT version 9.2 install directory in the following path: mobileGT9.2\ccs.
- 4. Open mobileGT9.2\ccs\drivers\usb\readme.txt with the following caption: CodeWarrior probes Device Driver Manual Installation and Uninstallation. Complete steps 1 through 7 in this document to remove old drivers and install new drivers.
- 5. Make the following changes to designate the use of either the Ethernet interface of CWTAP or the USB interface of CWTAP:
 - To update an existing connection, go to Edit\Preferences...\Debugger\RemoteConnections. Select the existing connection and click change. See the example in Figure 1, "IDE preferences dialog."
 - To choose a new connection and designate the use of the Ethernet interface of CWTAP, click Add. Note that you may enter any name in the Name field. From the Connection Type field dropdown menu, select Ethernet TAP. In the hostname field, enter the IP address of the CWTAP, or fsl<last digits of the CWTAP MAC address>. For details, see the example in Figure 2, "Ethernet interface of CWTAP dialog."
 - To choose a new connection and designate the use of the USB interface of CWTAP, click Add. Note that you may enter any name in the Name field. From the Connection Type field dropdown menu, select USBTAP. In the USB TAP Serial Number field, enter the last eight digits of the CWTAP MAC address. For details, see the example in Figure 3, "USB interface of CWTAP dialog," where 9f023aad is used as the USB TAP serial number.





This figure shows how to update the existing connection.

IDE Preferences	E	? ×
DE Preference Panels	Remote Connections	
General A	Name	Туре
Dull Settings IDE Extras IDE Startup Plugin Settings Shielded Folders Source Trees Editor Code Completion Code Formatting Editor Settings Font & Tabs Text Colors Debugger	AXE CodeWarrior Ethernet TAP AXE CodeWarrior USB TAP Abatron Serial Abatron Serial[1] Abatron TCP/IP Abatron TCP/IP[1] CodeWarrior Ethernet TAP[1] CodeWarrior USB TAP CodeWarrior USB TAP CodeWarrior USB TAP[1] CodeWarrior TRK EPPC Linux CodeWarriorTRK PowerTAP PR0 CCS	Ethernet TAP USBTAP Serial Serial TCP/IP TCP/IP CCS Remote Connection CCS Remote Connection CCS Remote Connection Serial TCP/IP CCS Remote Connection
Window Settings	PowerTAP PB0 CCS[1]	Ethernet TAP
Global Settings Global Settings Remote Connections		Add Change Remove
	Factory Settings Revert	Import Panel Export Panel
		OK Cancel Apply

Figure 1. IDE preferences dialog

This figure shows how to create a new connection to use the Ethernet interface of CWTAP.

CodeWarrior Ethernet TAP[1]	x			
Name: CodeWarrior Ethernet TAP[1]				
Debugger: CCS EPPC Protocol Plugin 👻				
Connection Type: Ethernet TAP				
Hostname fsl023aad				
Network timeout 15				
Interface Clock Frequency 16 MHz				
Mem Read Delay 0				
Mem Write Delay 0				
TAP Memory Buffer (hex)				
Reset Target on Launch 🔽 Do not use fast download				
🗖 Force Shell Download 👘 Enable Logging				
Asynchronous Multi-Core Control				
Use JTAG Configuration file				
Choose				
* -This frequency may work only with CCS.				
Factory Settings Revert Panel Cancel C	IK			

Figure 2. Ethernet interface of CWTAP dialog

Using CodeWarrior TAP with CodeWarrior for mobileGT 9.2, Rev. 0



Revision history

This figure shows an example of how to configure the USB TAP connection.

CodeWarrior Ethernet TAP[1]	X
Name: CodeWarrior Ethernet TAP[1]	
Debugger: CCS EPPC Protocol Plugin 💌	
Connection Type: USBTAP	•
Use default Serial Number	
USB TAP Serial Number (hex)	9f023aad
CCS timeout	10
Interface Clock Frequency	4.03 MHz
Mem Read Delay	0
Mem Write Delay	0
TAP Memory Buffer (hex)	0x00000000
Reset Target on Launch	🔲 Do not use fast download
Force Shell Download	Enable Logging
Asynchronous Multi-Core Control	
Use JTAG Configuration file	
	Choose
Factory Settings Revert Pane	Cancel OK

Figure 3. USB interface of CWTAP dialog

6. When using CWTAP with an Ethernet connection, you may connect a serial cable from the target board to the target side of the CWTAP to view the serial output from the board over the TCP/IP protocol. Use the following command to open a telnet on your PC: telnet <IP of CWTAP or name of CWTAP> 1082.

2 Revision history

This table provides a revision history for this document.

Table 1.	Document	revision	history
----------	----------	----------	---------

Rev. number	Date	Substantive change(s)	
0	11/2013	Initial public release.	



How to Reach Us:

Home Page: freescale.com

Web Support: freescale.com/support Information in this document is provided solely to enable system and software implementers to use Freescale products. There are no express or implied copyright licenses granted hereunder to design or fabricate any integrated circuits based on the information in this document.

Freescale reserves the right to make changes without further notice to any products herein. Freescale makes no warranty, representation, or guarantee regarding the suitability of its products for any particular purpose, nor does Freescale assume any liability arising out of the application or use of any product or circuit, and specifically disclaims any and all liability, including without limitation consequential or incidental damages. "Typical" parameters that may be provided in Freescale data sheets and/or specifications can and do vary in different applications, and actual performance may vary over time. All operating parameters, including "typicals," must be validated for each customer application by customer's technical experts. Freescale does not convey any license under its patent rights nor the rights of others. Freescale sells products pursuant to standard terms and conditions of sale, which can be found at the following address: freescale.com/SalesTermsandConditions.

Freescale, the Freescale logo, CodeWarrior, mobileGT, and PowerQUICC are trademarks of Freescale Semiconductor, Inc., Reg. U.S. Pat. & Tm. Off. QUICC Engine is a trademark of Freescale Semiconductor, Inc. All other product or service names are the property of their respective owners. The Power Architecture and Power.org word marks and the Power and Power.org logos and related marks are trademarks and service marks licensed by Power.org.

© 2013 Freescale Semiconductor, Inc.



Document Number: AN4780 Rev. 0 11/2013

