Replacement jlink debugger script for connectcore9p9215 modules Containing 16 MB RAM

1 Document History

Date	Version	Change Description	
3/17/2011	V1.0	Initial Entry	

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3 Introduction

This paper describes a problem with the jlink debugger scripts, when used with the Multi Green Hills development environment and debugging Digi ns9215-based modules configured with 16 MB RAM. An updated debugger script is provided to address the problem.

3.1 Problem Solved

The gnu-based jlink debugger scripts for Digi International ns9215-based modules have the ability to sense the amount of RAM housed on a module and set up the chip selects for that amount of RAM. The debugger script shipped with the Multi Green Hills NET+OS development environment does not have this capability. In addition, NET+OS kits were shipped with a debugger script that supports the 4MB FLASH and 8MB RAM configured connectcore9p9215 modules only. Customers receiving modules supporting 8MB FLASH and 16MB RAM will not be able to debug their modules. This paper contains a link to a second debugger script that can be used with the module containing the larger amount of RAM.

3.2 Audience

This paper is aimed at an audience of developers familiar with debugging Digi International modules in the Multi Green Hills NET+OS-based development environment.

3.3 Scope

- The scope of this paper is quite narrow. It provides a solution for debugging ns9215-based modules containing RAM configurations of 8MB.

3.4 Theory of Operation

This paper provides a link to a replacement jlink debugger script to be used when debugging NET+OS (V7.4.2) applications within the Multi Green Hills environment.

4 Basics

Within the distribution directory for NET+OS V7.4.2 is the directory debugger_files. This directory contains debugger scripts for use when debugging Digi chips and modules. Debugger scripts used with the Multi Green Hills development environment have the extension of ".mbs". You should look for the file entitled "cc9p9215_jlink.mbs". This is the file that the Multi green Hills development environment uses when debugging Digi connectcore9p9215 modules for NET+OS. The currently shipping file, "cc9p9215_jlink.mbs", supports the 4MB FLASH/8MB Ram connectcore9p9215 module configuration. Use of this debug script with the 8MB FLASH/16MB RAM connectcore9p9215 module configuration will fail. The dialog will show the module having 8MB of RAM only and in most cases will not complete booting up in the debugger.

This paper includes a link to an alternate “cc9p9215_jlink.mbs” file that references 16 MB of RAM and will successfully boot a connectcore9p9215 module containing the 8MB FLASH and 16MB RAM configuration. This file is not compatible with the connectcore9p9215 module configured with 4MB FLASH and 8MB RAM. If you are in an environment where you are developing with both module configurations, you will need to keep copies of both debugger scripts available.

5 Conclusion

This paper has discussed a missing capability in debugger scripts used with the connectcore9p9215 module configured with 8MB FLASH/16MB RAM in a MULTI Green Hills NET+OS development environment. This paper contains an alternate “cc9p9215_jlink.mbs” file that is compatible with this module. Customer developing with the connectcore9p9215 module configured with 4MB FLASH/8MB RAM should continue using the debugger script that was shipped with their kit. Customers developing with connectcore9p9215 modules with 8MB RAM and 16 MB RAM will need to plan procedures for switching between the two debugger scripts. Developers using the NET+OS gnu-based development environment are not affected by this issue as the gnu-based development environment is capable of sensing the module’s RAM size and setting up chip selects as needed.

Debugger Script here