

Communicating with an Arium Emulator without using SourcePoint™

Overview

The SourcePoint debugger program is the normal method for communicating with Arium's line of emulators. In rare cases it may be useful to communicate with the emulator without using the SourcePoint debugger software, typically at the direction of an Arium FAE.

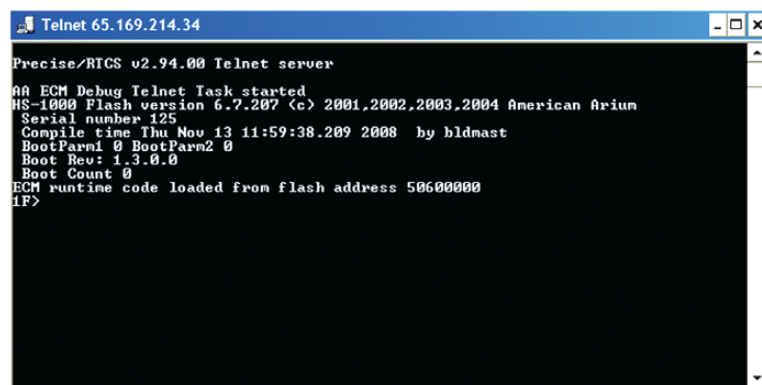
Arium's emulator products support two communication interfaces, TCP/IP (network) and USB. While the method of starting communications depends on the physical interface, the command interface and other operational considerations are independent of the physical interface. The telnet interface is used when communicating with an emulator over a TCP/IP connection. When using the USB connection, an Arium program, SBUtil.exe, is used.

This application note is designed as general guide for using this alternative communications interface. It is not a troubleshooting guide. All troubleshooting or information gathering steps will be done at the direction of the direction of Arium support personnel.

Starting a TELNET Session

To use this interface you will need to know the IP address of the emulator. Once you have that:

1. Click on the **Start** button on your desktop, then click the **Run** button.
2. Enter "telnet <IP address>" in the Run dialog, then click OK.

A screenshot of a Telnet window titled "Telnet 65.169.214.34". The window contains the following text:

```
Precise/RTCS v2.94.00 Telnet server
AA ECM Debug Telnet Task started
HS-1000 Flash version 6.7.207 (c) 2001,2002,2003,2004 American Arium
Serial number 125
Compile time Thu Nov 13 11:59:38.209 2008 by hldmast
BootParm1 0 BootParm2 0
Boot Rev: 1.3.0.0
Boot Count 0
ECM runtime code loaded from flash address 50600000
1F>
```

Sample TELNET window

The TELNET session opens with several valuable pieces of information, depending on the emulator to which you are attached. In the sample above, the session describes the current flash version, the serial number of the emulator, and some boot information. The prompt on the last line contains a 2-digit hex status code. This status code is the same status code that appears on the SourcePoint dialog bar at the bottom of the SourcePoint window.



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Starting an SBUtil Session

1. Start Windows Explorer and browse to the SourcePoint install directory.
2. Double-click on SBUtil.exe. This launches the SBUtil session.

The SBUtil window will look the telnet window shown above, except the title bar will contain the path of the SBUtil.exe program.

Using the telnet/SBUtil Interface

Typing “h” or “help” at the prompt will dump the list of commands. If the command takes additional arguments, then entering the command without arguments will dump the command syntax.

Commands may be abbreviated. Only enough letters to make the command unique are required.

The interface doesn't support a command history (there is no way to recall a previously entered command for execution).

To copy the entire session history to the clipboard, right-click in the title bar, then select Edit | Select All from the context menu, then hit the Enter key. You can then paste this text into a file or email.

Commonly Used Commands

Command	Comment
jtagtest loops rate	This command tests the JTAG circuit functionality. It can be used to exercise the JTAG signals, enabling scoping of the signals in troubleshooting efforts. Before running jtagtest , run the stalljtag command (see below). Loops is the number of times to repeat the test. Rate is the JTAG clock rate. The rate table is at the end of this document. Each successful pass of the test will result in a period being displayed. Each failed pass will result in a verbose error message.
stalljtag	This command stops runtime loops that continually use the JTAG chain. Initiating the command prevents normal JTAG operations by the emulator so the user can run other commands.
unstalljtag	This command restarts runtime loops that continually use the JTAG chain. Initiating the command frees the JTAG chain for use by the emulator for normal JTAG operations.
flashrev	This command displays flash code data. The emulator saves the current and previous version of flash. If, for some reason, you want to run WinDb with the previous version of the flash (if, for example, you find it more compatible), you can access it here.
ecmfg g/s num value	This command gets/sets non-volatile emulator configuration parameters. While most of these can be set in WinDb (under the Options/Parameters), there are additional parameters that are not available there.
enetstat type	This command displays ethernet statistics. If you find you're having multiple, seemingly unrelated communications problems and need detailed information about how the ethernet connection is working, using this command will give you a significant amount of data.

Communicating with an Arium Emulator without using SourcePoint™***JTAGTEST Rate Table***

Rate Value	JTAG TCK Speed in MHz
1	40
2	32
3	28
4	24
5	20
6	16
7	14
8	12
9	10
10	8
11	6
12	4
13	2
14	1
15	0.5
16	0.2
17	0.1

