GETTING STARTED

ECM-50

Before You Start

System requirements

The following system features are required at a minimum to run SourcePoint™:

- Intel® Pentium®-based processor or compatible computer
- Microsoft® Windows® 2000/XP
- 128 MB RAM
- 60 MB disk space
- CD-ROM drive
- 10/100Base-T LAN connection port, or
- USB connection port

Hardware Installation

Step 1: Unpack the equipment

The following equipment should be in your box. If it is not, contact American Arium immediately.

ECM-50 – ITP base unit
One of the following personality modules:

- **PBD-PC** – for use with Intel® Pentium® II/III, Pentium® III Xeon™, Mobile Pentium® III, Mobile Pentium® III Processor M, and Celeron® processors
- **PBDS-700** – for use with Intel® Xeon™, Pentium® 4, and certain other not-yet-announced Intel processors
- **PBDS-700M** - for use with Intel® Pentium® M and certain other not-yet-announced mobile processors
- **PBD-XDP** - for use with XDP-type connections
- **PBD-AJ** - for use with AMD Opteron™ and Althon™64 processors

SourcePoint CD – Interface software
Direct crossover cable (orange) – for direct TCP/IP connection
Ethernet patch cable (blue) – for network TCP/IP connection
USB cable (beige) – for USB connection
Reset adapter cable (black and yellow) - for target system reset. (If necessary, this will provide a momentary reset signal from the personality module to the target.)
Documentation – manuals, etc.

Step 2: Determine connection type to the host computer

Determine the type of connection you want.

A direct TCP/IP or USB connection is the simplest way to connect the host computer and the base unit. Only a single host PC can use the American Arium debugger with this type of connection.

An network TCP/IP connection may be your best choice if you already have a network in place. It will allow users from different locations to make use of the debugger if your network security allows such access.

Step 3: Connect the base unit to the host computer

For a USB connection, use the *beige* USB cable. Connect one end to the base unit at the connector port labeled USB. Connect the other end to the host computer's USB port.

For a direct TCP/IP connection, use the *orange* direct crossover cable. Connect one end to the base unit at the connector port labeled NETWORK. Connect the other end to the host computer at the 10/100Base-T network connector (also known as the RJ-45 connector).

For a network TCP/IP connection, use the *blue* ethernet patch cable. Connect one end to the base unit at the connector port labeled NETWORK. Connect the other end to your network hub.

Step 4: Connect the personality module

To prepare the personality module, see instructions provided separately in this box.

1. Connect the personality module to the target's debug/ITP port connector using the short 30-pin cable or 25-pin circuit board assembly.
2. Connect the personality module to the base unit at the connector on the front of the unit labeled JTAG, using the wider 68-pin cable.

   Note: Make sure the voltage setting is correct for the target system.

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Step 5: Complete hardware connections

1. Connect the power supply to the coaxial power connector on the back of the emulator.
2. Connect the other end to your power source.
3. Turn on the emulator by flipping the switch on the front of the emulator to the "On" position. If emulator power is on, the bottom status indicator light on the front panel, labeled PWR, is lit. Allow at least 15 seconds for the unit to initialize.
4. Turn on the power to the target.

Software Installation

Loading the SourcePoint Software

Please read the following before setting up a USB or TCP/IP connection.

Note: If you have set up the hardware for a USB connection, you are first asked to load the USB driver. See "USB Connection and Configuration" below for further instructions.

1. Insert the SourcePoint CD-ROM into your CD-ROM drive. The SourcePoint setup program window appears. The setup program starts automatically and guides you through the installation process.

   Note: If your operating system is Microsoft Windows 2000 or XP, you may need to contact your systems administrator to gain administrator privileges.

   *Note: If the setup program does not run automatically, you can start it manually. Choose **Run** from the **Start** menu, type the following command, and click **OK**.*
   <CD-ROM drive>:\disk1\setup.exe
   The setup program installs the SourcePoint software on your computer. If necessary, you can rerun the setup program to install additional features.

2. During setup, you will be asked for the SourcePoint certificate or license file. This file resides on a floppy disk that shipped with your unit. Insert the file diskette when prompted.

   Note: SourcePoint requires that a certificate or license file be present in the SourcePoint directory to run SourcePoint; you will want to copy the file to the SourcePoint working directory.

3. Select **Yes, I want to launch SourcePoint** from the last screen of the installation wizard.

USB Connection and Configuration

Note: If you do not want to set up a USB connection, go to the next section, "TCP/IP Connection and Configuration."

Note: If you have set up the hardware for a USB connection, you should install the Arium USB driver prior to setting up the connection. The driver is located on the SourcePoint CD.

Step 1: Installing the USB Driver

1. At the time that you connect the ECM-50 to the host computer via USB, you are notified via a standard Microsoft Windows dialog box that you need to load a USB driver.
2. Insert the SourcePoint CD into your CD-ROM drive.
3. Follow the instructions on your screen. The driver file you need to load is "AriumUsb.inf", located in the root directory of the CD-ROM or the "USB" subdirectory of your SourcePoint installation.

Step 2: Configuring the USB Connection

You do not have to configure a USB connection from the SourcePoint interface. It is a "plug and play" connection.

TCP/IP Connection and Configuration

Step 1: Load SourcePoint

Follow the directions under "Information on Loading the SourcePoint Software" found in the previous column.

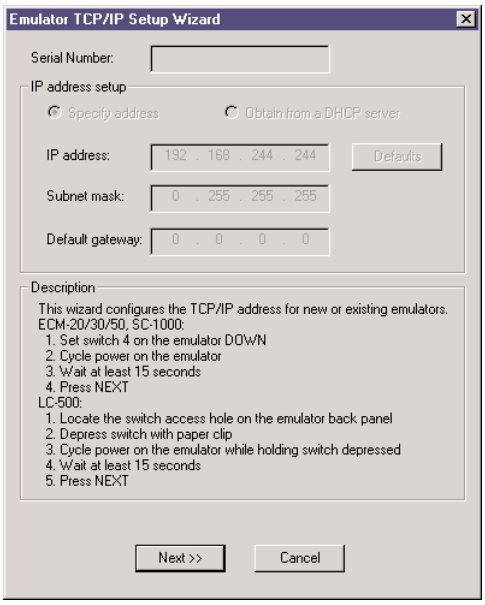
Step 2: Gather Connection Information

Note: You may need to know the serial number of your emulator. It can be found on the bottom of the unit. You may need some or all of the values listed below in order to connect the emulator with the debugger, depending on your connection type. In some instances you can use the default values. In others, you may need to contact your network administrator for this information.

Direct TCP/IP Connection
Host PC TCP/IP Address*: 192.168.000.002
Emulator Base Unit TCP/IP Address: 192.168.000.001
Emulator Base Unit Network Mask: 255.255.255.000
Emulator Base Unit Network Gateway: 192.168.000.002

Network TCP/IP Connection
Host PC TCP/IP Address*: N/A
Emulator Base Unit TCP/IP Address: Determined automatically by wizard
Emulator Base Unit Network Mask: Determined automatically by wizard
Emulator Base Unit Network Gateway: Determined automatically by wizard

*This value is set on the network card of your host computer.



*The first screen of the **Emulator TCP/IP Setup Wizard***

Step 3: Execute the Emulator TCP/IP Setup Wizard

The wizard will display automatically the first time you start SourcePoint. Follow the on-screen instructions to properly configure the emulator TCP/IP settings.

Caution: Arium recommends you do not configure a dynamic IP address at initial configuration. Once you have made an initial connection, you may be able to establish a dynamic IP address, depending on your server. Details are provided in the manual/online help file under "Using Microsoft Windows 2000 DDNS for Addressing Emulators by Hostname."

BKPT In/Out

BKPT In
- Input logic levels (TTL): Vil=0.8V, Vih=2.0V
- Recommended input voltage limits: Low: -0.5V, High: 3.6V
- Active level is selectable (High=trigger, or Low=trigger)
- If High=trigger, then internal termination is 64 ohms to 0.64 V
- If Low=trigger, then internal termination is 64 ohms to 2.4 V

BKPT Out
- Active level is selectable (High=running, or Low=running)
- Output High characteristics: 60 ohms (max) to 3.3V
- Output Low characteristics: 26 ohms (max) to GND.

BKPT In
J10 sets BKPT In sense.
J13 sets BKPT In termination level.

J10 Jumpered 1-2 J13 Jumpered 2-3	Running level = high Stopped level = low
J10 Jumpered 2-3 J13 Jumpered 1-2	Running level = low Stopped level = high

BKPT Out

J12 Jumpered 1-2	Running level = high stopped level = low
J12 Jumpered 2-3	Running level = low Stopped level = high

Options in gray = default

Hints and Tips

Flash firmware: When SourcePoint is first installed, it may prompt you to update the ECM-50 flash firmware. You should proceed with the flash update using the latest version of the flash firmware that SourcePoint presents to you during this process. The version number is embedded in the name of the flash file. You can also initiate a flash update in SourcePoint by clicking on **Files|Update Emulator Flash**.

Reset problems: To function properly, SourcePoint and the ECM-50 must be able to initiate a reset of not only the processor but of the target hardware, as well. This can be done through the debug/ITP port (DBR#) or by the reset adapter when it is connected to the target system's reset connector. Ensure that the target it being fully reset by at least one of these two signals.

Target debug/ITP port problems: Some target systems have signal quality problems when TCK is set at the rate of 16 MHz. You can verify that the ECM-50 is reliably communicating with the JTAG scan chain by running 1,000 trials of the JTAG pattern tests located under **Options|Confidence Tests** in SourcePoint. If problems occur at the 16 MHz TCK rate, try lowering the rate under via the **JTAG Config...** button in the **Confidence Tests** window.

American Arium support: If you need assistance, please contact American Arium Technical Support at 877-508-3970 toll free in the US; 714-731-1661 in North America or send an email to support@arium.com. If you bought your unit outside North America, please contact your distributor.