

# XDS510 USB JTAG Emulator

## Set-up Instructions

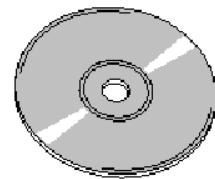
The XDS510 USB contains:



XDS510 USB



USB Cable



Driver CD ROM

### System Hardware and Software Requirements

These operating platform requirements are necessary to install the Code Composer Studio (CCS) integrated Development Environment and support the XDS510-USB emulator. The requirements for the operating platform are:

#### Minimum Configuration

- 500 MHz. or faster Pentium or compatible
- 600MB of free hard disk space
- SVGA (640x480) color display
- Local CD-ROM Drive

#### Recommended

- 500MB of RAM
- SVGA (1024 x 768) color display
- 2GHz. or faster Pentium or compatible

#### Supported Operating System CCS 3.x

- Windows 2000 Service Pack 4
- Windows XP Pro Service Pack 1&2
- Windows XP Home Service Pack 1&2

#### Supported Operating System CCS 2.2x

- Same as CCS 3.x, plus
- Windows 98SE/ME (not recommended)

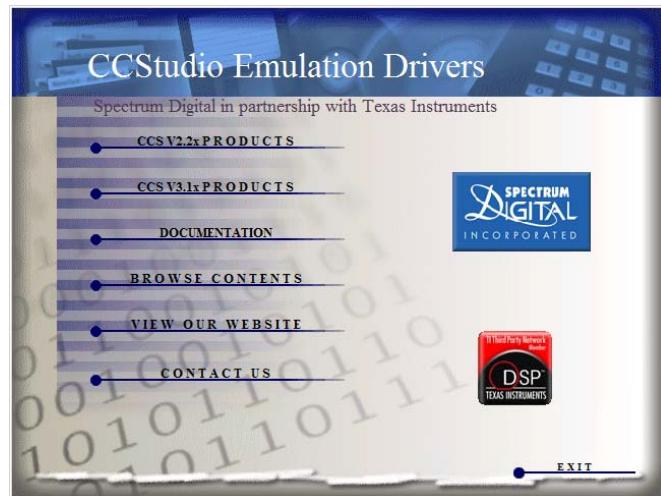
**Note:** For Windows 2000 and XP you must install Code Composer Studio using Administrator privileges. To run CCS on these systems requires write permission on the registry.

*The install CD contains emulation drivers for both CCS 2.2x and CCS 3.1x environments along with legacy driver support, SDFlash algos for C2000, and assorted manuals. To install any of the legacy support you must browse the CD and install by selecting the appropriate install program.*

The CCS 2.2x and CCS 3.1x driver install supports all Spectrum Digital emulators. Emulation drivers are updated on a regular basis so check the Spectrum Digital web site at [support.spectrumdigital.com](http://support.spectrumdigital.com).

## Installing Emulation Drivers

1. Insert the installation CD into the CD-ROM Drive. An install screen should appear; if not, go to Windows Explorer and run launch.exe from the CD-ROM.



2. Select the CCStudio product version and then the processor of interest. For CCS 2.2x drivers you have the choice of C2000, C6000 and OMAP(C54/C55/ARM). For CCS 3.1x platinum there is only one choice and it includes all processors in one install. When installing emulation drivers the default install should be changed to same directory as you targeted CCStudio install. For CCS 2.2x this is normally "c:\ti" and for CCS 3.1x this is normally "c:\CCStudio\_v3.1".
3. Plug the supplied USB cable into an available port on your PC or HUB. Use of a USB HUB is recommended as it provides added isolation between your debug environment and PC.

4. Plug the XDS510-USB emulator into the other end of the supplied USB cable. Windows will recognize a new USB device and pop-up the new hardware found wizard. Follow the instructions and let Windows find the USB drivers located on the install CD (sdusbsm.sys and sd510u2.inf). If properly installed Windows will create a new device class named "SD USB Based Debug Tools". The XDS510-USB device will show up as a "Spectrum Digital XDS510 USB" under this class. You can view this information under Windows Device Manager.

## Setting Up Code Composer

1. Select the Code Composer Setup icon from the desktop.
2. From CC Setup you can either import a new configuration or select from an existing one. From the filters pane select the platform "xds510usb". This will give you a list of predefined configurations for the XDS510USB emulator. If one of these configurations does not exactly match your target then select the closest configuration. You can then modify this configuration to meet your needs. Setup between CCS 2.2x and 3.x has changed dramatically so see your CCStudio docs for more details.
3. If you want to change the configuration of your setup simply right mouse click on the configuration under **System Configuration** then select **Properties**. You can modify the individual properties for your setup. The I/O Port under Board Properties should be set to 0x510 for the XDS510-USB emulator.
4. Save your configuration and exit CC Setup.

## Running Code Composer

You can now start Code Composer by double-clicking on the appropriate CCS icon. When CCS starts the XDS510-USB application loader will download the emulation driver application. Once the emulation application is loaded, the XDS510-USB emulator will enumerate and CCS will start. If there is a problem during the load or enumerate phase then the loader app will display an error/status message.

If you are running CCS 3.1, once CCS has started select **Debug->Connect** from the menu bar. Target **Connect/Disconnect** is a new feature in CCS 3.1, for more details go to your CCS online help.

## Support

1. Always check the Spectrum Digital web site at [support.spectrumdigital.com](http://support.spectrumdigital.com) for latest drivers, release notes, and tech support. If you are using CCS 3.1 then you can also go directly to the CCS 3.1 page at [support.spectrumdigital.com/ccs31](http://support.spectrumdigital.com/ccs31). The CCS 3.1 page contains CC setup configurations for many popular Spectrum Digital target boards along with CCS 3.1 specific support information.

## Trouble Shooting XDS510USB

1. Windows install message that there is not enough power for the XDS510-USB. This may occur if you are using an unpowered USB HUB. Solution is to use powered USB HUB.
2. The XDS510-USB application loader will report error/status messages. Check these messages to resolve setup or connection issues.
3. CCS will not start. XDS510-USB drivers will create a diagnostic file in the CCS drivers' directory named "Pid1\_Xds510UsbLog.txt". Open this file and check the error messages. The "Pidx\_" prefix identifies the internal processor id. There is one log per processor. You can disable logs by deleting or renaming the file "SdDoUsbLog".

## XDS510USB Hardware Revision B

Spectrum Digital will migrate the XDS510USB emulator to revision B in July of 2005. Revision B is an emulation processor upgrade. As a side effect users must upgrade to CCS emulation driver release 2.21.00 or higher with revision B XDS510USB to ensure full compatibility. Emulation driver version 2.21.00 and higher fully support both revision A and B of the XDS510USB emulator. XDS510USB revision B is easily identified by (B) in the lower left corner of the product label.



If you cannot visually determine if you have a Rev A or Rev B XDS510USB emulator then you can use the SdConfig utility to determine the version.

In SdConfig do: "Configuration->Ports Available->Printer,USB"

### Results for Rev A XDS510USB

\*\* Checking for available USB ports

```
$$ XDS510USB connected on:  
$$ EmuPortAddr=0x510  
$$ EmuSerialNumber=S071537725020422
```

The last 4 digits of "0422" indicate a Rev A emulation processor.

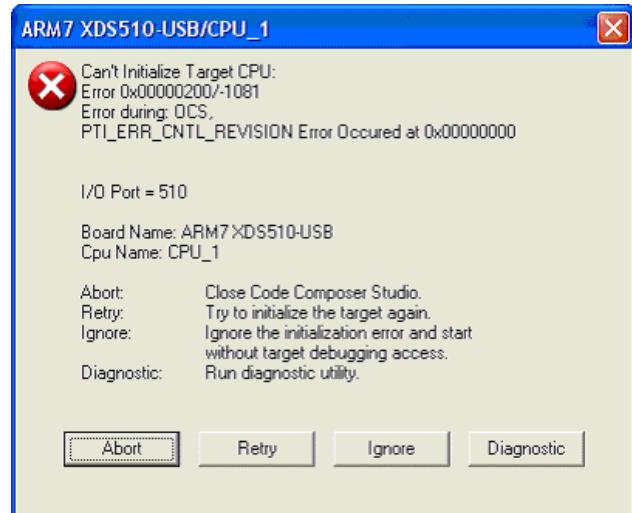
### Results for Rev B XDS510USB

\*\* Checking for available USB ports

```
$$ XDS510USB connected on:  
$$ EmuPortAddr=0x510  
$$ EmuSerialNumber=S064407522112522
```

The last 4 digits of "2522" indicate a Rev B emulation processor.

There is a possibility that you have an emulation driver release between 2.20.00 and 2.21.00 that supports the XDS510USB revision B emulator. In that case you can continue using your emulation driver with the XDS510USB revision B. If your emulation driver does NOT support XDS510USB revision B then when you start CCS you should get an error dialog similar to the screen below. This indicates that the emulation driver software is unaware of the underlying emulation controller version. If this occurs and you have verified your emulator is a revision B then you will have to upgrade your emulation drivers to 2.21.00 or higher.



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