

# 4 CCStudio Setup

## CCStudio v3.3

1. Run CCStudio Setup.
2. Find and select, **bh-usb510L emulator**, from the “platform” pull down menu located at the top of the middle CCSetup window. (this will list on only the **USB510L** controller imports)
3. You can narrow down the import options between all supported DSP families by using the “device” pull down. (i.e. select “C67xx” to list all TMS320C67xx device imports)
4. When you find your target, or an import that closely matches your target, highlight the entry and choose the option to “add it to your system”.
5. If this import setup does not completely match your target, you can edit the properties manually, such as to add a GEL file specific to your H/W.
6. When finished, save the setup and start CCStudio.

## CCStudio v4 and later

1. In the CCS v4 or v5 bring up the **New Target Configuration Window** from the File menu option. (see figure 2 below)
2. From the connection drop down list select the **Blackhawk USB510L Emulator**
3. Select your board or device that is connected to the emulator.
4. Save this setting and launch the TI Debugger.

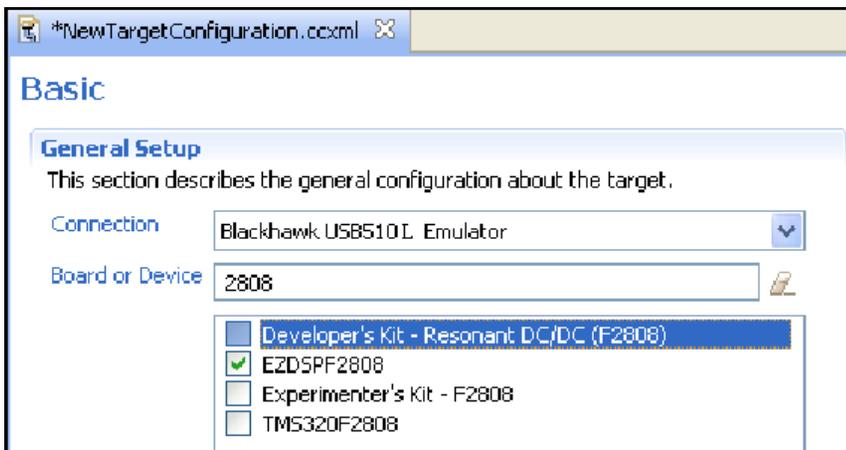


FIGURE 2 - USB510L Target Setup and Selection

# QUICK START GUIDE

# Blackhawk™ USB510L Rev F JTAG Emulator (USB510L)

## Installation Requirements

- PC or Notebook computer with at least one free USB v1.1 or v2.0 port.
- Windows® 2000/XP/Vista /7 and Linux† Operating Systems (32 or 64-bit versions).
- Texas Instruments Code Composer Studio Version 3.3 SR12†† or later.
- DVD Drive.

## Inventory of Items Included

1. Blackhawk **USB510L** Rev F Emulator
2. USB 2.0 Compliant Cable
3. 20-pin cTi to 14-pin TI Pin Converter
4. Blackhawk Driver Disc
5. Warranty and Product Registration Card
6. Quick Start Guide

## Other Items Required

1. Target Board System — a self-powered board with a TI DSP and compatible JTAG header connection conforming to IEEE 1149.1 Standard.
2. Copy of Code Composer Studio Version 3.3 SR12†† or later.

### IMPORTANT ENVIRONMENTAL CONSIDERATIONS

This equipment is designed to be operated under the following environmental conditions:

Temperature between 0°C – 55°C. Relative Humidity of 20% - 70% non-condensing.

Operation of the unit outside of the above range may affect structural and mechanical integrity and cause permanent damage.

Caution is necessary to minimize ESD (Electro-static Discharge) which can damage electronic components. Use in a controlled environment where ESD materials and practices are employed is highly recommended.

† Linux requires CCS v5.1 and later.

†† For CCStudio v3.3 you will need to have SR12 (service release 12) installed.

# 1 Emulation Driver Installation

- **CCS v3.3 with SR12 Installed:**

Update to Blackhawk CCS v3.3 Emulation Driver revision **3.3.300.9** or later. This can be installed from the supplied driver disc or downloaded from the Blackhawk Web Site.

- **CCStudio v4 and later:**

You can update to the latest Blackhawk Emulation pack using the eclipse menu option: **Help -> Check for Updates.**

Currently, the minimum Blackhawk version needed for installation is:

CCS v4.2:	version 4.2.1.207
CCS v5.1/5.2/5.3:	version 5.3.0.342
CCS v5.4:	version 5.4.0.342
CCS v5.5:	version 5.5.0.342
CCS v6.0:	version 6.0.0.342

If you have any questions about the driver version you have installed, please contact Blackhawk support

# 2 Hardware Installation

## WARNING

**Be careful to connect emulator cable with the correct orientation. Pin 1 on the emulator cable must mate to Pin 1 on the target board.**

**The JTAG cable assembly features a "keyed" connector to minimize the chance of error. Do not force cables into position. Forcing them may damage the cables or the interconnected boards and systems.**

1. Attach the USB cable to an available USB port on the PC.
2. Then attach the other end of the USB cable (mini-B connector) to the USB connector of the **USB510L** Emulator (see Figure 1).
3. The bi-color LED should now illuminate **RED**, indicating that the controller is powered.
4. Follow the Plug and Play installation for the Windows device driver (see step 3 on USB PnP Installation for more information).
5. After the Windows hardware driver installation completes, the LED will turn **GREEN** indicating that the drivers loaded properly.
6. Attach the emulator's JTAG cable with keyed 20-pin compact TI socket (see figure 1) to your target board's JTAG header.  
**Make sure the target board is not powered when connecting!**
7. If needed, pin converter is included for TI 14-pin JTAG connections.
8. Setup and start Code Composer Studio (see step 4 on CCStudio Setup).

# USB PnP Installation 3

## Windows 2000/XP/Vista/7

1. If not already connected, connect the USB cable to the computer and to the **USB510L** emulator.
2. Follow the Windows "Found New Hardware" wizard prompts.
3. You can select the "automatic" option for locating drivers.
4. If the automatic option did not locate them, you can manually specify the location: `\Program Files\Blackhawk\Emulation\drivers\USB-PCI`
5. If the drivers do not exist here, please update CCS to the latest Blackhawk Emulation updates. This will properly install the needed device driver files.
6. When completed, the Blackhawk Control Panel and Windows Device Manager will show the device. The Blackhawk Control Panel can be activated from its icon, located in the Windows Control Panel Dialog Box or desktop shortcut.
7. Now follow the Code Composer Studio Setup—Step 4

## Linux

1. If not already connected, connect the USB cable to the computer and to the **USB510L** controller.
2. In a terminal window, you can use the "lsusb" command to list the USB devices that are present. The **USB510L** will be listed as ID `0x0b1e`.  

```
user@linux-ubuntu:/home/user> lsusb
Bus 001 Device 001: ID 1d6b:0002 Linux Foundation 2.0 root hub
Bus 002 Device 001: ID 1d6b:0001 Linux Foundation 1.1 root hub
Bus 001 Device 002: ID 0b1e:0009 EWA Technologies, Inc. (EWA)
user@linux-ubuntu:/home/user>
```
3. Now follow the Code Composer Studio Setup - Step 4

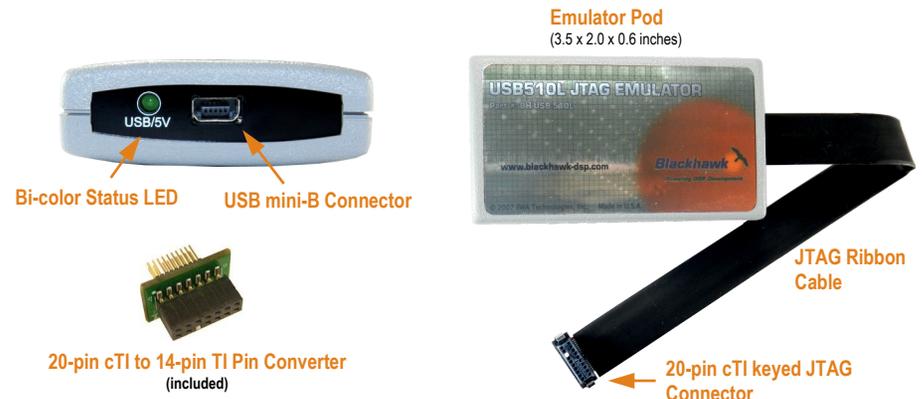


FIGURE 1—USB510L JTAG Emulator Views and Pin Converter