

# ADSP-SC584 EZ-Board Quick Start Guide

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The ADSP-SC584 contains SHARC+™ core dual processor with ARM® Cortex-A5™ which enables fast floating point DSP computations.

This user guide assumes that you have the latest [CCES](#) ( Cross Core Embedded Studio) IDE installed on your system. This document demonstrates how to set up the ADSP-SC584 with an ICE-1000 JTAG emulator and run a project using CCES.

## 1. Default board configuration check

Before beginning to set up the board for use, ensure the board is in it's default configuration which is described in **section 2.3** of the [ADSP-SC584 EZ-Board®Evaluation System Manual](#). It describes the default jumper settings, connector locations, and LEDs used in installation.

## 2. EZ-Board Installation

### Powering up the EZ Board

1. Attach the provided power cord to the provided power adaptor and plug the jack end to **P27** of the ADSP-SC584 EZ board (labelled 12V and **NOT** 5V).
2. Plug the other side of the power adaptor into a power outlet. The power LED **LED9** (labeled POWER) should light green when power is applied to the board.
3. In case there is some problem in the connection, the **SYSTEM FAULT LED LED1** will turn red and the board should be immediately powered off.

### Connecting an emulator to the EZ-Board

1. Attach the ICE-1000 emulator with a PC through a USB cable.
  2. The status LED (LED1) lights up green if the connection with the PC is working.
  3. If the status LED does not turn on, it can be due to a number of issues including absence of correct windows driver. Refer to this document for troubleshooting the emulator - [Engineer-to-Engineer Note \(EE-356\) - Emulator and Evaluation Hardware Troubleshooting Guide for CCES Users](#)
  4. Attach the emulator header **J1** of the ICE-1000 to the Debug (**P1**) connector on the EZBoard via a JTAG connector.
- Below image shows the connections for the above mentioned steps:



### 3. EZ-Board session start-up in CCES

1. Follow the steps provided in section 2.5 of the [ADSP-SC584 EZ-Board® Evaluation System Manual](#).

2. After following the instructions in the above point, you be able to successfully set up the different configurations in CCES to program and debug the SHARC family DSP processor ADSP-SC584 with an ICE-1000 emulator.

#### 4. Running an example program (POST - Power On Self Test) provided by Analog Devices

1. Go to the following link on the Analog Devices website and under the category **Products Download** , download the **Board Support Package** for the ADSP-SC584 EZ Board -

<https://www.analog.com/en/design-center/evaluation-hardware-and-software/evaluation-boards-kits/eval-adsp-sc584.html#eb-documentation>

2. Once you download and install the SC58x BSP, the example code can be found in the below path:

**C:\Analog  
Devices\ADSP-SC5xx\_EZ-KIT\_Lite-Rel2.0.2\ADSP-SC5xx\_EZ-KIT\Examples\Power\_On\_Self\_Test\EZ-Board\sc584**

3. Go to the following path and inside the **Readme** folder open the html file for sc584 board.

**C:\Analog  
Devices\ADSP-SC5xx\_EZ-KIT\_Lite-Rel2.0.2\ADSP-SC5xx\_EZ-KIT\Examples\Power\_On\_Self\_Test\Readme**

In the html document, refer to the section on Running POST and follow any one of the two methods to run the POST- as a normal example project using the CCES environment by creating an executable file (.dxe) or a loader file (.ldr) and programming it into flash memory.

4. The example folder in the Board Support Package contains all the necessary functions in different include, common, header and source files which are referenced by the main.c

file for the POST. Following the steps in 3, one should be able to run the POST program without error and check if different board components are working correctly.

5. The POST example contains sample codes for all the different components on the ADSSC584 board. Depending on which components will be in use for a future program, one can use the codelets from the POST code.

6. Apart from the resources necessary to run the POST, other necessary resources to execute programs on the EZ board are present in the device programmer, driver, services (Examples), include and src folders in the path: **C:\Analog Devices\ADSP-SC5xx\_EZ-KIT\_Lite-Rel2.0.2\ADSP-SC5xx\_EZ-KIT**

7. If a particular file (eg. library file or linker) is not found in the path prompted on debugging, one should refer to the documents in the following path **C:\Analog Devices\ADSP-SC5xx\_EZ-KIT\_Lite-Rel2.0.2\Docs** and contact the [Engineers Zone](#) for further support.