## Lab 01: SRIO Loopback Direct IO

### Purpose

The purpose of this lab is to demonstrate how to build and run a very basic SRIO loopback application on the C6678 EVM using the example code delivered with the MCSDK.

### Project Files

The following project files are used in this lab:

\pdk\_C6678\_1\_0\_0\_19\packages\ti\drv\exampleProjects\SRIO\_LoopbackDioIsrexampleproject

### TASK 1: Import the Example Project

1. Open CCS.
2. Set the Perspective to CCS Edit.
3. Import the project.
   * Project | Import Existing CCS/CCE Eclipse Project
   * Select search \_directory \pdk\_C6678\_1\_0\_0\_19\packages\ti\drv\exampleProjects
   * From the list of Discovered projects, choose SRIO\_LoopbackDioIsrexampleproject and then click Finish.
4. SRIO\_LoopbackDioIsrexampleproject should now appear in your Project Explorer.

### TASK 2: Set/Verify the Project Properties

1. Select the SRIO\_LoopbackDioIsrexampleproject.
2. Right click and select Properties.
3. Select General and choose the Main Tab.
4. Set the following Device Properties.
   * Device Family = C6000
   * Variant = Generic C66x Device
5. Under Build/C6000 Compiler, select Basic Options and set the following compiler debug properties:
   * Target processor version = 6600
   * Debugging model = Full symbolic debug
   * Optimization level = 0
   * Optimize for code size = 0
6. Click OK.

### TASK 3: Build the Project

1. Select SRIO\_LoopbackDioIsrexampleproject.
2. Build the project.
   * Project | Build Project  
     OR
   * Right Click and select Build Project
3. Verify that the build was successful.

Was the file SRIO\_LoopbackDioIsrexampleproject.out generated?

1. From the CCS Edit perspective, check the Binaries or Debug directory. From the CCS Debug perspective, check the Console.

### TASK 4: Connect to the Target EVM

1. Set the Perspective to CCS Debug.
2. Create a new User-Defined Target:
   * View | Target Configurations
   * Select User Defined
   * Click the New Target button or Right-click and select New Target Configuration
3. Define the C6678L/LE EVM as a new target:
   * File name = EVM6678L or EVM6678LE
   * Location = <local>\ti\CCSTargetConfigurations
   * Select the emulator type (XDS100 or XDS560v2) in the connection drop-down menu
   * Specify the Board or Device by checking the appropriate box (TMS320C6678)
   * Click Finish
4. Make sure the EVM is powered ON and connect your PC/laptop to the emulator port on the EVM using the provided USB cable.
5. Launch the target configuration (e.g., EVM6678LE.ccxml).
   * Select the target.
   * Right click and select Launch Selected Configuration.
6. Select Core 0, right click, and select Connect Target.

### TASK 5: Load and Run the Program

1. Select Core 0 and load the .out file created earlier in the lab.
   * Run | Load | Load Program
   * Click Browse Project
   * Select SRIO\_LoopbackDioIsrexampleproject.out and Click OK.
   * Click OK to load the application to the target (Core 0)
2. Run the application.

Did the application execute successfully?

1. Check the console.

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