SRDP2™
Quick Start Guide

Formal Status

April 5, 2012

About this Document

The *Serial RapidIO Development Platform Gen2 (SRDP2) Quick Start Guide* outlines the first steps to complete in order to get the board to a powered on state. This documents serves two purposes:

- Provides a brief explanation of how to power up the SRPD2 platform
- Identifies any default configuration changes for a specific assembly revision (for example, overrides what is stated in the *SRDP2 User Manual*)

Related Information

The following related resources are available on the mySites area of www.idt.com:

- *SRDP2 User Manual*
- *SRDP2 Schematic*
- *CPS-1848 User Manual*
- *SPS-1616 User Manual*

Revision History

April 5, 2012, Formal Status

Updated to support Revisions B and C of the CPS-1848 and SPS-1616 devices.

February 15, 2011, Formal Status

Updated to support changes to SRDP2 Assembly Revision 3.

SRDP2 Quick Start Guide

Kit Contents

Part Number	Components	Description
SRDP2KITA	SRDP2 – Kit A	• Evaluation Board with CPS-1848 and SPS-1616 S-RIO switches • *SRDP2 Quick Start Guide*
	RapidFET JTAG - Standard[a]	• RapidFET USB to JTAG/I2C Module • RapidFET JTAG USB Key • USB Cable, 1 m • *RapidFET JTAG Quick Start Installation Guide*
SRDP2	SRDP2	• Evaluation Board with CPS-1848 and SPS-1616 S-RIO switches

a. For more information about the RapidFET JTAG - Standard register debug tool, go to the Fabric Embedded Tools at www.fetcorp.com.

Handling Procedure

Components on the SRDP2 are sensitive to electrostatic discharge (ESD). Use standard ESD protection when handling the board.

The SRDP2 is fragile. Excessive force will cause the SRDP2 to flex and possibly break the thin solder joint between the component and the SRDP2. Severe flex may also break internal connections in the SRDP2. When handling the SRDP2, adhere to the following guidelines:

- Support the SRDP2 when inserting or removing the ATX connectors.
- Do not push the AMC modules with excessive force.
- Do not push with excessive force on the JTAG, I2C, USB, and SMA connectors.

ATX Supply Specification

Use a standard ATX supply with a 20-pin main power connector. The SRDP2 does not support 24-pin main power connector. Although most ATX supplies function below their minimum current requirement, it is preferable to use an ATX supply that does not have a minimum current requirement.

The SRDP2 uses +12V, +3.3V, and 5VSB. The current draw for each voltage is outlined in following table.

Voltage	Current Draw
+12 V	0.1A
+3.3V	4A
5VSB	0.03A

ATX 12V Connector

The 4-pin 12V ATX connector is optional. It should be used when high-power AMC cards are plugged into the SRDP2.

Inserting an ATX Connector

The ATX connector is keyed. It will insert into the SRDP2 in one way only, therefore, check proper orientation before inserting.

When inserting and removing the ATX connector, support the SRDP2 to prevent flex. Excessive flex can damage the SRDP2 or break solder joints of nearby components.

Apply Power

Use the power ON/OFF push button to enable the ATX supply. If using a different method to activate the ATX supply, put the FORCE_ON jumper in J54. This will permanently activate the ATX supply.

LED Status

The two orange LEDs, D4 and D5, should be ON and steady. This indicates the ATX supply is supplying 12V and 3.3V.

The two blue LEDs, D7, D15, should be ON and steady. This indicates the on-board voltages are correct and the devices are out-of-reset.

If the status LEDs are not ON and steady, there may be a problem with the ATX supply. Ensure that all voltages of the ATX supply are within the expected operating range before contacting IDT (see table).

Voltage	SRDP2 Expected Operating Range
+12 V	4.5V to 14V
+3.3V	2.9V to 3.7V
5VSB	4.5V to 5.5V

Connecting AMCs

Slide AMC modules in the card guide assembly right-side-up. Push the module in the AMC connector gently until the faceplate of the module hits the card guide shoulders.

The SRDP2 uses a Hot Swap controller to control current flow to the AMC module. Current will be applied to the module only when the Presence Detect pins (PS0 and PS1) of the module make contact. Green LEDs (D8, D9, D11) indicate power has been applied to the modules and the AMC ENABLE signal is asserted.

If the LED does not turn on after the module is inserted, verify that the module is fully inserted.

The current limit per AMC connector is 6.25A for the 12V rail, and 165mA for the 3.3V management power pin.

The SRDP2 does not have an IPMI (Intelligent Platform Management Controller). AMC modules that require IPMI control to come out of reset may not work with the SRDP2.

Serial EEPROM

The EEPROMs attached to the CPS-1848 and SPS-1616 are not programmed.

Default Configuration

In order to work around the device erratum, “JTAG 1149.1 chaining does not support register access”, the JTAG configuration jumpers are set such that only the CPS-1848 is available on the JTAG chain. To access the SPS-1616, the JTAG configuration jumpers must be changed as indicated on the PCB.

Using JTAG and I2C Debuggers

It is possible that an external JTAG pod drives the CPS-1848 and SPS-1616 JTAG reset (TRST#) high during reset. This is known to occasionally cause the switches to malfunction. To prevent this problem from occurring, disconnect all JTAG debuggers before powering up.

It is possible that an external I2C pod drives the I2C bus and prevents the CPS-1848 and SPS-1616 from loading their Serial EEPROMs. To prevent this problem from occurring, disconnect all I2C based debugger before powering up and reset.

The SRDP2 contains an on-board USB to JTAG/I2C converter. This device is powered up as soon as the USB cable is plugged in a PC. This device is also connected in parallel with the JTAG and I2C headers. Avoid using the on-board USB converter when an external pod is connected.

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