



APPLICATION NOTE

AN1382: Si83xx SPI Motherboard Quick Start Guide

This Quick-Start Guide provides a walkthrough for quickly bringing up one of the Si83408ADA-KIT, Si83418ADA-KIT, or Si8380S-KIT, which comes with the Si83xx SPI Motherboard and a daughtercard. The Si83xx SPI motherboard and accompanying daughtercards are designed to provide an accessible and flexible evaluation platform for the Si834x Isolated Smart Switch and the Si838x PLC Input devices. A more comprehensive guide to the Si83xx SPI Motherboard and Skyworks Industrial I/O Control Panel (IICP) can be found in [UG459: Si83xx SPI Motherboard User Guide](#).

Related Documents

- [UG459: Si83xx SPI Motherboard User Guide](#)
- [Si83xx SPI MB portfolio page](#)
- [Si834x Data Sheet](#)
- [Si838x Data Sheet](#)

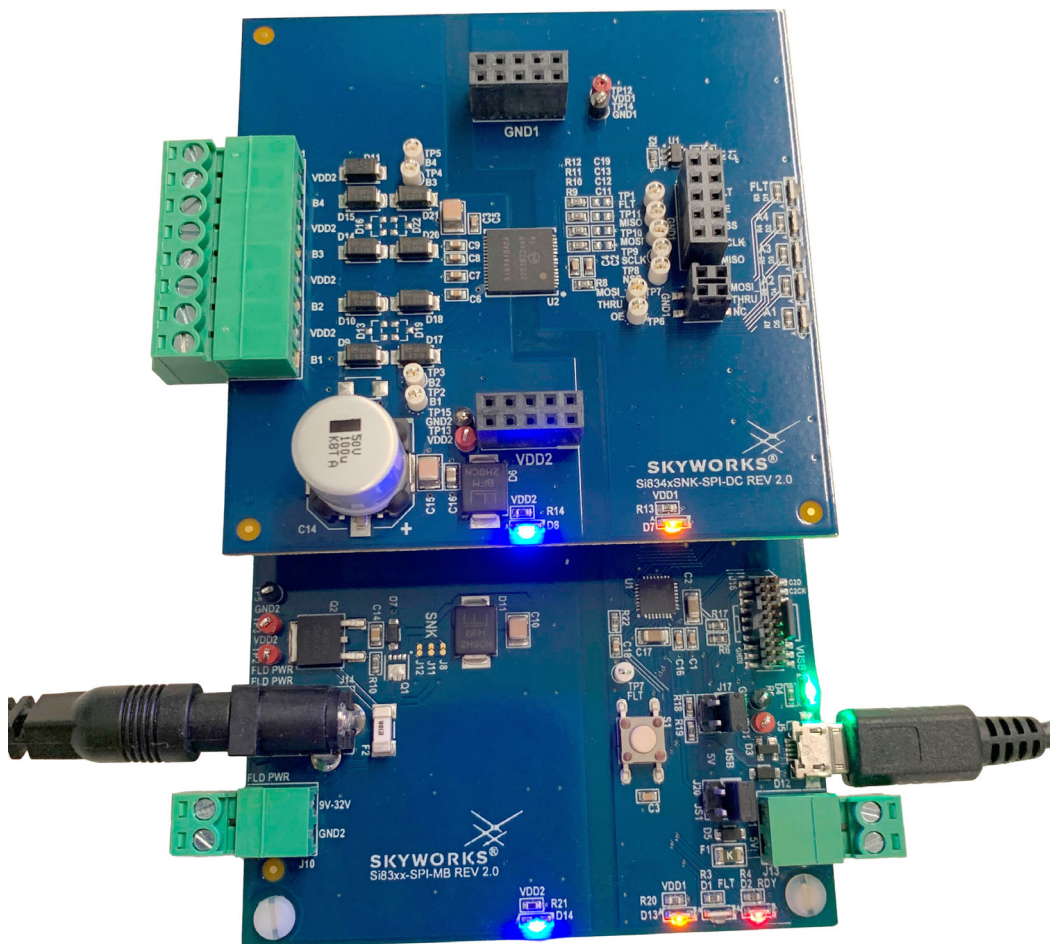


Figure 1. Si83xx SPI Motherboard and Daughtercard during Operation

1. Software Setup

In order to use the Si83xx SPI Motherboard and daughtercards, you must first install the Skyworks IICP:

1. Download and install the program from the [Si83xx SPI MB portfolio page](#) (also linked above).
2. If you do not have Windows Visual C++ runtime libraries installed, make sure to install them at the end of the installation wizard.
3. Navigate to the installation folder ('C:\Program Files (x86)\Skyworks' by default) and set the program to run as administrator by default:
 - a. Right click on the executable (.exe file) in the installation folder.
 - b. Click on "Properties" and navigate to the "Compatibility" tab.
 - c. Check the box for "Run this program as administrator", then click OK.
4. Create a desktop shortcut and pin the program to your task bar for easy access.

2. Hardware Setup

Once the Skyworks IICP has been successfully installed, configure your motherboard and daughtercard(s) as follows:

1. Plug the daughtercard(s) into the motherboard, using the three through-hole connectors on the DCs to plug into J1, J3, and J4. Ensure that any Si838x DCs are plugged in last (on top).
2. Move the jumpers on the J17 and J20 headers on the motherboard in line with "USB".
3. Plug the provided 24 V power supply into the wall and connect the barrel jack into J14 on the motherboard. D14 should light up blue.
4. Connect the MB to your PC using the USB cable. The micro-USB end should plug into J5 on the motherboard. D13 should light up yellow.
5. Once complete, your setup should look similar to the one in [Figure 1](#) above.

3. Verify Setup

After completing the hardware and software setup above, run the Skyworks IICP. Click the "Available Devices" dropdown at the bottom of the window, and select the "Silicon Labs CP210x USB to UART Bridge" option. If setup was executed correctly, then the program should automatically detect your connected daughtercards and populate the window with the correct device widgets and register values.

After the program has loaded with the proper device widgets, navigate to "Quick Start" in the toolbar and click on "Test Program". Run through the test program for the motherboard and all connected daughtercards to ensure that the evaluation system is working properly. For more information on how to use the Si83xx SPI Motherboard/Daughtercard combo and Skyworks Industrial I/O Control Panel, see the [UG459: Si83xx SPI Motherboard User Guide](#).

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