

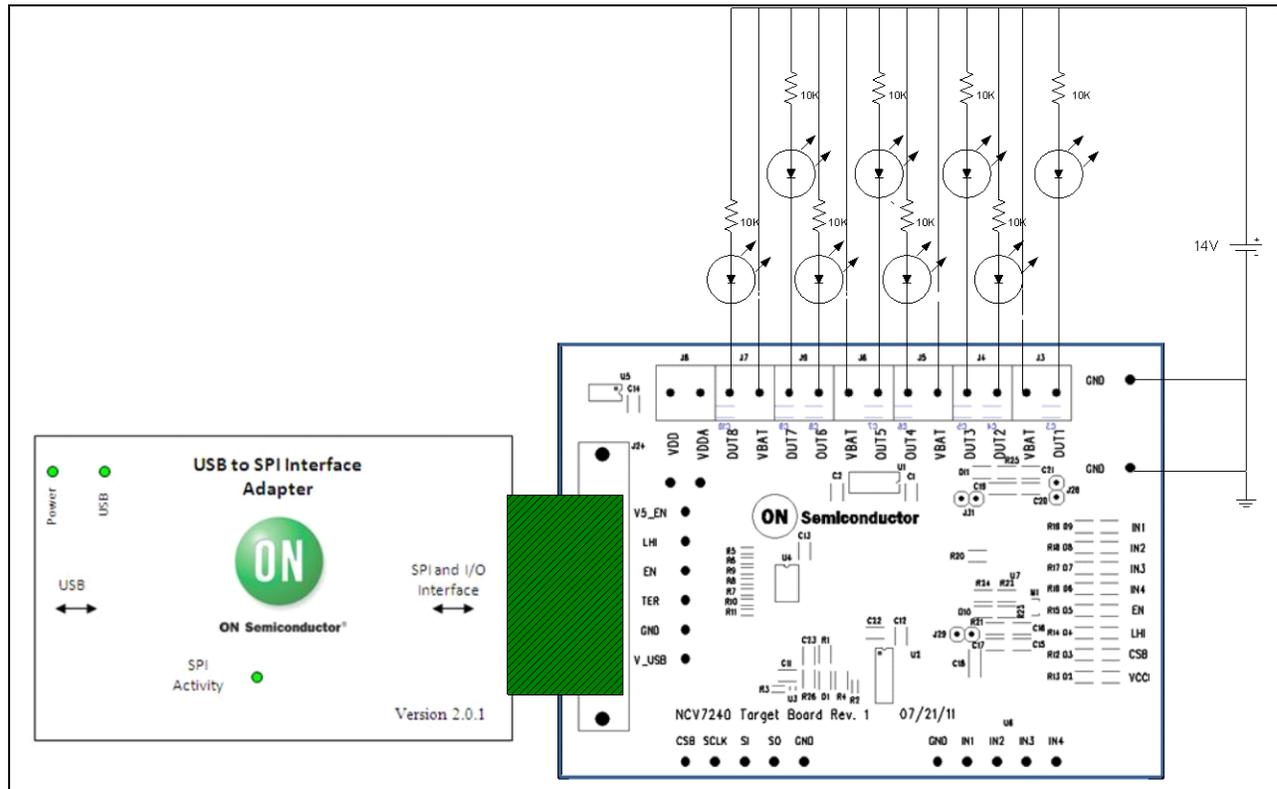


Test Procedure for the NCV7240GEVK Evaluation Board

Equipment:

The equipment to test the NCV7240 evaluation board is listed below:

Equipment	Quantity	Basic Specifications
Oscilloscope	1	Quad Channel Oscilloscope
DC Power Supply	1	14V, 1A
Resistive Load	8	1 kΩ
LEDs (optional)	8	Set up to be driven @ 1.4mA
PC with FlexMOS GUI installed	1	Windows XP or higher
USB to SPI interface Adapter	1	Version 2.0.1 or higher
USB Type A to Type B cable	1	-
24 Pin Ribbon Cable	1	-



A pure resistive load can be substituted for the LEDs. The LEDs are optional and provide visual indication of the outputs turning on and off. Adjust the current level of the LEDs (testers choice) as necessary by changing the series resistor value.

**Test Procedure:**

- 1) Connect jumpers J28, J29, and J31. These will connect the on board power supplies for VDD and VDDA.
- 2) Connect the 14V power supply as shown in the diagram.
 - a. D10 should be illuminated.
 - b. D11 should be illuminated.
 - c. VCC LED should be illuminated.
- 3) Measure the voltage of VDD, VDDA, and VCC both at the screw-in terminals and the test points.
 - a. VDD should be 3.3V.
 - b. VDDA should be 5V.
 - c. VCC should be 5V.
 - d. V_USB should be 5V.
- 4) Connect the USB to SPI Interface adapter to the target board using a 24-pin ribbon connector.
Start the custom GUI.
- 5) Select the Auto button in the Update mode box.
- 6) Select the 5V radio button in the VCC Mode box.
 - a. VDD should change from 3.3V to 5V.
 - b. Verify a level change on the V5_EN test point.
- 7) Click the Enable Device check box.
 - a. The EN LED should be illuminated.
 - b. Verify a logic level change on the EN test point.
- 8) Click the AllON button at the bottom of the GUI.
 - a. All the external LED loads should illuminate indicating all are on.
 - b. Verify activity on the CSB, SCLK, SI and SO test points of the board when the AllON button is pressed
 - c. Verify there is activity on the CSB LED when the AllON button is pressed.
- 9) Click the Global OFF button at the bottom of the GUI.
 - a. Verify all outputs turn off.
- 10) Select the Limp Home check box.
 - a. Verify the LHI LED is illuminated.
 - b. Verify there is a signal change on the LHI test point.
- 11) Click the IN1 check box.
 - a. Verify OUT1s associated LED external load is illuminated.
 - b. Verify the IN1 LED is illuminated on the board.
- 12) Click the IN2 check box.
 - a. Verify OUT2s associated LED external load is illuminated.
 - b. Verify the IN2 LED is illuminated on the board.
- 13) Click the IN3 check box.
 - a. Verify OUT3s associated LED external load is illuminated.
 - b. Verify the IN3 LED is illuminated on the board.
- 14) Click the IN4 check box.
 - a. Verify OUT4s associated LED external load is illuminated.
 - b. Verify the IN4 LED is illuminated on the board.
- 15) Remove the check from the Limp Home check box.
- 16) Click the TER button at the bottom of the GUI.
 - a. Verify the results of the Frame Detection Box do not show a frame detection error.