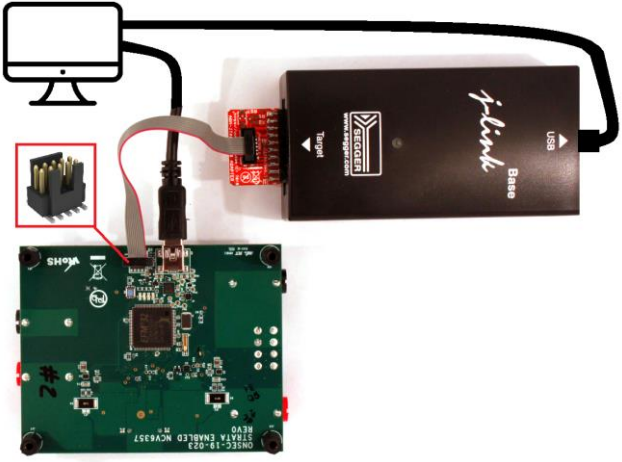
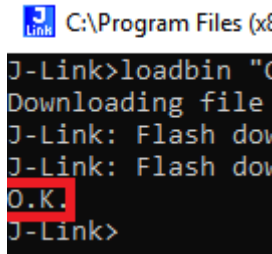
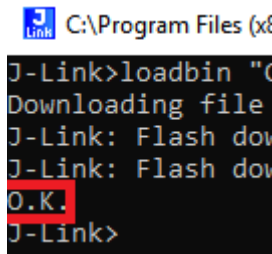

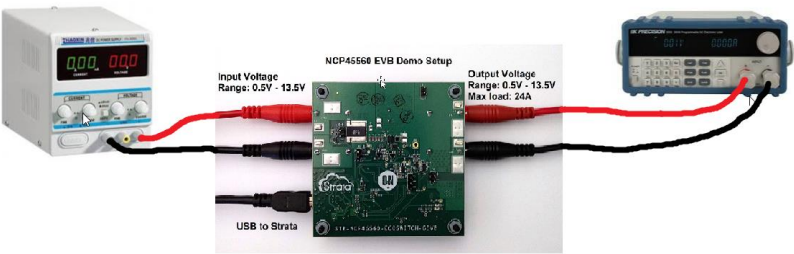


Each Strata platform requires validation before releasing to production. These tests can range from simply installing Strata and ensuring the evaluation board is detectable to using lab equipment to facilitate proper functionality.

Test	Instructions	Pass Condition	
One Time Tests	These tests only need to be done one time per OPN.		
Strata Platform Selector	<ol style="list-style-type: none"> 1) Download and install the newest Strata release, version <x.x.x> or later is required 2) Open Strata and Login 3) On "Platform Selection" tab find STR-NCP45560-ECOSWITCH-GEVB 4) Select "Browse Documentation" 	<input type="checkbox"/> Ensure OPN is in the "Platform Selection" list <input type="checkbox"/> At least one document is shown on "Platform Content" tab under "Platform Documents" and optionally documents displayed on "Part Datasheets" and "Downloads"	
Flash Setup	<ol style="list-style-type: none"> 1) Download SEGGER JLink software <ol style="list-style-type: none"> a) https://www.segger.com/downloads/jlink/JLink_Windows.exe 2) Connect JLink USB + mini USB to the computer. Then connect the 10pin debug header to from JLink to platform. (see image to right) 3) Run JLink.exe, path may change with software version <ol style="list-style-type: none"> a) For example = "C:\Program Files (x86)\SEGGER\JLink_Vxxx\JLink.exe" b) Type the following <ol style="list-style-type: none"> i) connect ii) EFM32GG380F1024 iii) S iv) 4000 kHz (default) v) loadbin "C:\<full_path_to_binary.bin>", 0x0 c) Download the .bin file from Strata's "Platform Documents" > "Downloads" section 		<input type="checkbox"/> Flash was successful with "O.K." indicator 
All Board Tests	Tests below this line must be done on every board. The tests should be completed in the order shown with the individual steps completed sequentially.		
Flash	<ol style="list-style-type: none"> 1) Ensure "Flash Setup" section was completed. Those instructions only need to be repeated if JLink.exe window was closed. 2) Type the following <ol style="list-style-type: none"> a) connect b) loadbin "C:\<full_path_to_binary.bin>", 0x0 	<input type="checkbox"/> Flash was successful with "O.K." indicator 	
Strata Detection	<ol style="list-style-type: none"> 1) Unplug mini USB cable from previous steps (see picture to right for reference to which USB cable). 2) Open Strata and Login, you should see Platform Selection list 3) Plug in board to computer using mini USB cable 		<input type="checkbox"/> Strata detects board and user interface is automatically shown on "Platform Controls" tab <input type="checkbox"/> "Board Temperature" gauge should read room temperature, approximately 21-26°C.
Input Voltage	<ol style="list-style-type: none"> 1) Using lab power supply (14V max output voltage or higher) and banana plugs provide evaluation board with 5V DC with at least 2A current limit (see image to right for polarity). 		<input type="checkbox"/> "Input Voltage" info box reads 5V within 5%

Enable/Power Good	<ol style="list-style-type: none"> 1) Set the “Enable” switch to the On position. Check pass condition 1. 2) Click OK for the warning popup. Read the output voltage. Check for pass condition 2. 3) Set the “Enable” switch to the Off position. Read the output voltage. Check for pass condition 3. 4) Check the “Override Enable Warning” box. Click OK at the warning popup. 	<ul style="list-style-type: none"> <input type="checkbox"/> 1. Warning popup comes up with correct input voltage and slew rate values. <input type="checkbox"/> 2. “Output Voltage” info box reads 5V within 5%. “Power Good” indicator is green. <input type="checkbox"/> 3. “Output Voltage” info box reads near zero . “Power Good” indicator is off.
Input Voltage Thresholds	<ol style="list-style-type: none"> 1) Remove input power connection to the board (either turn off, disconnect, set to zero, or disable output). Check pass condition 1. 2) Set the lab supply voltage to 5V and supply power to the board. Observe behavior/ and check pass condition 2. 3) Set the input voltage to 14V. Observe behavior/UI and check pass condition 3. 4) Set the input voltage to 5V and keep it there for all the remaining tests. 	<ul style="list-style-type: none"> <input type="checkbox"/> 1. The “Under Voltage” indicator is red. The “Over Voltage” indicator is off. <input type="checkbox"/> 2. The “Under Voltage” and “Over Voltage” indicators are both off. <input type="checkbox"/> 3. The “Over Voltage” indicator turns red. The “Under Voltage” indicator is off.
Input Current Reading	<ol style="list-style-type: none"> 1) Plug an external load into the banana plugs at the output. 2) Set the “Enable” switch to the On position. 3) Draw 1A through the load at the output (see picture in “Input Voltage” section for polarity). Check pass condition 1. 4) Set load current to zero and set the “Enable” switch to the Off position. Check pass condition 2. 	<ul style="list-style-type: none"> <input type="checkbox"/> 1. “Input Current” info box reads between 0.9A to 1.1A. <input type="checkbox"/> 2. “Input Current” info box reads between 0 to 0.1A.
VCC Selection	<ol style="list-style-type: none"> 1) Toggle the “VCC Selection” switch to “5V”. Check pass condition 1. 2) Toggle the “VCC Selection” switch to “3.3V”. Check pass condition 2. 	<ul style="list-style-type: none"> <input type="checkbox"/> 1. “VCC Voltage” box reads between 4.5V – 5.25V <input type="checkbox"/> 2. “VCC Voltage” box reads 3.3V within 5%
Voltage Drop/ Power Loss Gauges	<ol style="list-style-type: none"> 1) Observe “RDS Voltage Drop” gauge. Check pass condition 1. 2) Draw 1A through the load at the output. 3) Observe “RDS Voltage Drop” gauge. Check pass condition 2. 4) Observe “Power Loss” gauge. Check pass condition 3. 5) Set load to zero. 	<ul style="list-style-type: none"> <input type="checkbox"/> 1. Voltage drop gauge reads near zero within 1 mV. <input type="checkbox"/> 2. Voltage drop gauge reads 4 mV ± 2 mV. <input type="checkbox"/> 3. Power loss gauge reads between 0 to 0.01W
Short Circuit Load	<p>Note: This test may trigger OCP on your input power supply. Set the current limit of the supply to its highest possible setting.</p> <ol style="list-style-type: none"> 1) Click the “Trigger Short Circuit” button. Check pass condition. 2) Set the “Enable” switch to the Off position. 3) Turn off the load and power supply, disconnect power and USB cables. 	<ul style="list-style-type: none"> <input type="checkbox"/> 1. Output voltage reading is near zero. Power Good indicator is off.