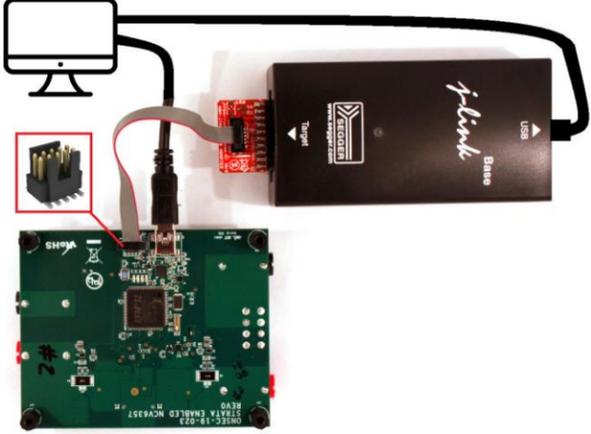
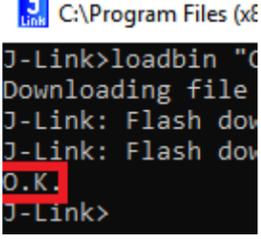
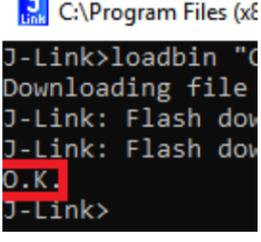
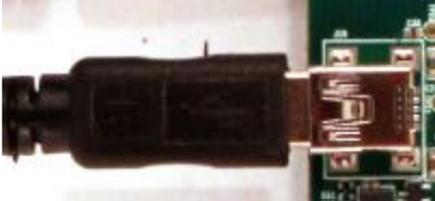
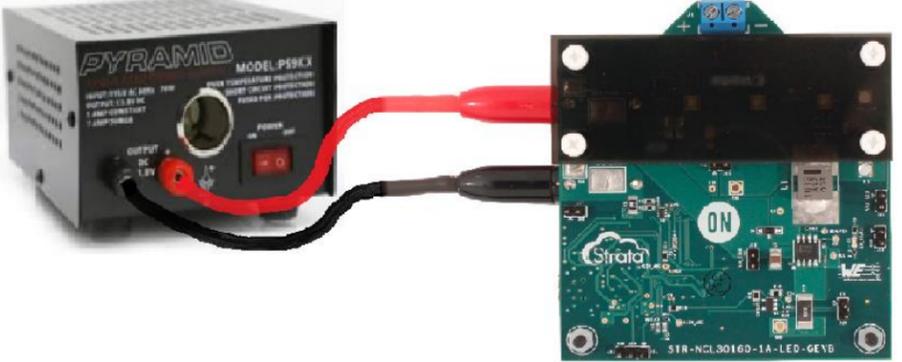


Each Strata platform requires validation before releasing to production. These tests can range from simply installing Strata and ensuring the evaluation board is detectable to using lab equipment to facilitate proper functionality.

| 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-NCL30160-1A-LED-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 type="checkbox"/> All voltage/current telemetry info boxes read near zero. <input type="checkbox"/> OS#/ALERT# indicator LED in UI is not red. |

| | | | |
|-----------------------------------|--|---|---|
| Input Voltage | 1) Provide evaluation board with 12V DC with at least 1A current limit (see image to right for polarity). |  | <input type="checkbox"/> "Input Voltage" info box reads 12V within 5%. <input type="checkbox"/> All other voltage/current info boxes read near zero. |
| Enable Switch | 1) Set the "Enable" switch to the "On" position. | | <input type="checkbox"/> 1. Green EN_STATUS LED on board turns on. |
| DIM#/EN Duty Cycle Setting | 1) Set DIM#/EN duty cycle to 100%. Check pass condition 1. 2) Set the DIM#/EN duty cycle to 50%. Check pass condition 2. | | <input type="checkbox"/> 1. Onboard LEDs turn on. <input type="checkbox"/> 2. Onboard LEDs dim. |
| DIM#/EN Frequency Setting | 1) Increase the DIM#/EN frequency to 10 kHz and observe LED brightness. Check pass condition 1. 2) Decrease the DIM#/EN frequency to 0.1 kHz and observe LED brightness. Check pass condition 2. 3) Change the DIM#/EN frequency back to 1 kHz. | | <input type="checkbox"/> 1. Onboard LEDs dim slightly. <input type="checkbox"/> 2. Onboard LEDs are slightly brighter. |
| LED Configuration | 1) Change the "LED Configuration" combo box to "Shorted" option. Check pass condition 1. 2) Change the "LED Configuration" combo box to "1 LED" option. Check pass condition 2. 3) Change the "LED Configuration" combo box to "2 LEDs" option. Check pass condition 3. 4) Check "External LEDs Connected?" checkbox. Check pass condition 4. 5) Uncheck "External LEDs Connected" checkbox and change the "LED Configuration" combo box option to "3 LEDs". | | <input type="checkbox"/> 1. All onboard LEDs are off. <input type="checkbox"/> 2. Only 3 rd onboard LED is on. <input type="checkbox"/> 3. Only 2 nd and 3 rd onboard LEDs are on. <input type="checkbox"/> 4. All onboard LEDs are off. "LED Configuration" combo box changes to "External LEDs" option. |
| OS#/ALERT# Foldback | 1) Set DIM#/EN duty cycle to 100%. 2) Change value in "Set OS#/ALERT# Temperature Threshold" input box to -55 and click "Apply" button. Check pass condition 1. 3) Click OK to exit the warning popup. Check pass condition 2. 4) If duty cycle slider value is still grayed out and decreasing, set the "Enable" switch to the "Off" position. Check pass condition 3. | | <input type="checkbox"/> 1. Warning popup comes up indicating that the duty cycle is automatically being reduced. <input type="checkbox"/> 2. Duty cycle slider value is decreasing. Slider is grayed out and value cannot be adjusted. <input type="checkbox"/> 3. Duty cycle slider value stops decreasing. Slider is no longer grayed out and value can be adjusted. |