Introduction

This application note shows how to connect two or more boards to form a single boundary scan chain using the Keysight Technologies, Inc. x1149 boundary scan analyzer.

The Keysight x1149 boundary scan software has a ‘merge device’ function that will enable users to connect the two boards together and create a jumper connection between the two boards.

![Figure 1: Boundary scan project involving two or more boards](image-url)
The following steps describe the procedure for merging these two boards:

Open a Keysight boundary scan project with two or more boards

Select the first board (Cherry-a)

– Click on “Device” > “Connector” > “Merge Device”
Select the device to merge

- Click on the Device selection box. A drop down menu will appear to select the device on.

Figure 4: The ‘merge devices’ table

Figure 5: Select board 1 device to merge
– Device “J3” selected on board 1 will show the pin and the node name

Figure 6: Select board 1 “J3” device to merge

– Upon clicking the 'Device' selection, a drop down menu will appear for the user to select the device to merge into the board 1 device “J3”.

Figure 7: The selected “J3” device on board 1 with node name and pin name
– The GUI for device “J1” selected on board 2 will show the pin and the node name.

![Figure 8: Selected “J1” device on board 2 with node name and pin name](image)

**Merging board 1 and board 2 devices**

– A jumper will be created in the PRJ to connect the board 1 and board 2 devices.

![Figure 9: Merge device jumper](image)