

## Testing 50-pin Data Sharing Cables – Cable \_\_\_\_\_

### Bits:

Use 2 RC cards in slots 2 and 3 of the RCT crate. Connect a 68-pin cable to each of the J5 (bottom) connectors on each card. Boot the crate and zero the LUTs with **rctCrateTest -t 1**. In vmedia, execute the script **cable\_pin50\_bits.txt**. This will step through each of the bits coming over the cable. Check both parts of the differential signal (2 pins listed). If they both appear – place a check in the first box. Reverse the cable and repeat the test for the other half of the wires in the cable, placing a check in the second box.

| Bit     | Region 0           | Okay?                    |                          |
|---------|--------------------|--------------------------|--------------------------|
| 0       | U445 pin 6 and 7   | <input type="checkbox"/> | <input type="checkbox"/> |
| 1       | U445 pin 8 and 9   | <input type="checkbox"/> | <input type="checkbox"/> |
| 2       | U445 pin 20 and 21 | <input type="checkbox"/> | <input type="checkbox"/> |
| 3       | U445 pin 22 and 23 | <input type="checkbox"/> | <input type="checkbox"/> |
| 4       | U445 pin 24 and 25 | <input type="checkbox"/> | <input type="checkbox"/> |
| 5       | U446 pin 4 and 5   | <input type="checkbox"/> | <input type="checkbox"/> |
| 6       | U446 pin 6 and 7   | <input type="checkbox"/> | <input type="checkbox"/> |
| 7 (FG)* | U445 pin 4 and 5   | <input type="checkbox"/> | <input type="checkbox"/> |

\*Due to the sharing of corners – bit 7 is out of order on the pins.

### Timing:

Fill a crate with RC cards and put an EIC in slot 1 and the cable in the J5 connectors of RC1 and RC5. Boot the crate and zero the LUTs with **rctCrateTest -t 1**. In vmedia, execute the script **cable\_pin50\_timing.txt**. This is very similar to the EIC and backplane validation scripts so probe on U125 (pins 8,11,14,17) and U126 (pins 8,11,14). You will need to reverse the cable and repeat this to test the other half of the wires:

| Bit Checked: | Expected Pattern:        | Okay?                    |                          |
|--------------|--------------------------|--------------------------|--------------------------|
| Bit 7 (FG)   | 7F and 7F (double pulse) | <input type="checkbox"/> | <input type="checkbox"/> |
| Bits 0-5     | 7F (single pulse)        | <input type="checkbox"/> | <input type="checkbox"/> |
| Bit 6        | 00 (ECL Low)             | <input type="checkbox"/> | <input type="checkbox"/> |