CBC Update

Bit Swapping on Nearest neighbour logic



Completed modifications to CBC3

- Invalid stubs Redesign the Stub Gathering Logic to reject any stubs with an invalid bend code of b1000.
- Bad Stub addresses and Bend codes Correct the errors & improve test bench to ensure full fault coverage.
- L1 Data Serialiser Improve timing robustness across 40MHz phase settings.
- Nearest Neighbour Logic Test Function Add I2C registers for stimulating and reading NNL signals.
- **Default settings for the bias currents** Change the default setting for the IPRE1 register to 0x0A.
- Burn33 tied off Add resistor to vdd
- Unreliable L1 counter reset signal Change clock edge used to synchronise the reset.
- Extra GND Bumps Change dummy bumps into proper grounded bumps that connect to gnd on the chip.
- Default settings for comparator thresholds Change bit 1 of Register Address 01010000 (page 1) from default of 1 to a default of 0, i.e. change the start-up value of the threshold to 0.





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Ongoing work

- **Top Level Functional Verification** Simulation of all data chain.
 - Found 1 issue with timing of the load of L1 Count into the L1 Data Serialiser
- **SEU improvements to I²C registers** Green light given to make changes
- Nearest Neighbour signal swapping Swap the bus on chip
- Re-timing registers for data outputs Improve alignment between L1 Data Serialiser output and Stub Data Outputs.
- **Design Readiness Review** December?