



CAUI-4 CHIP-TO-CHIP CHANNEL ROUTING IN SYSTEM

IEEE 802.3 bn
CAUI-4 Ad-hoc

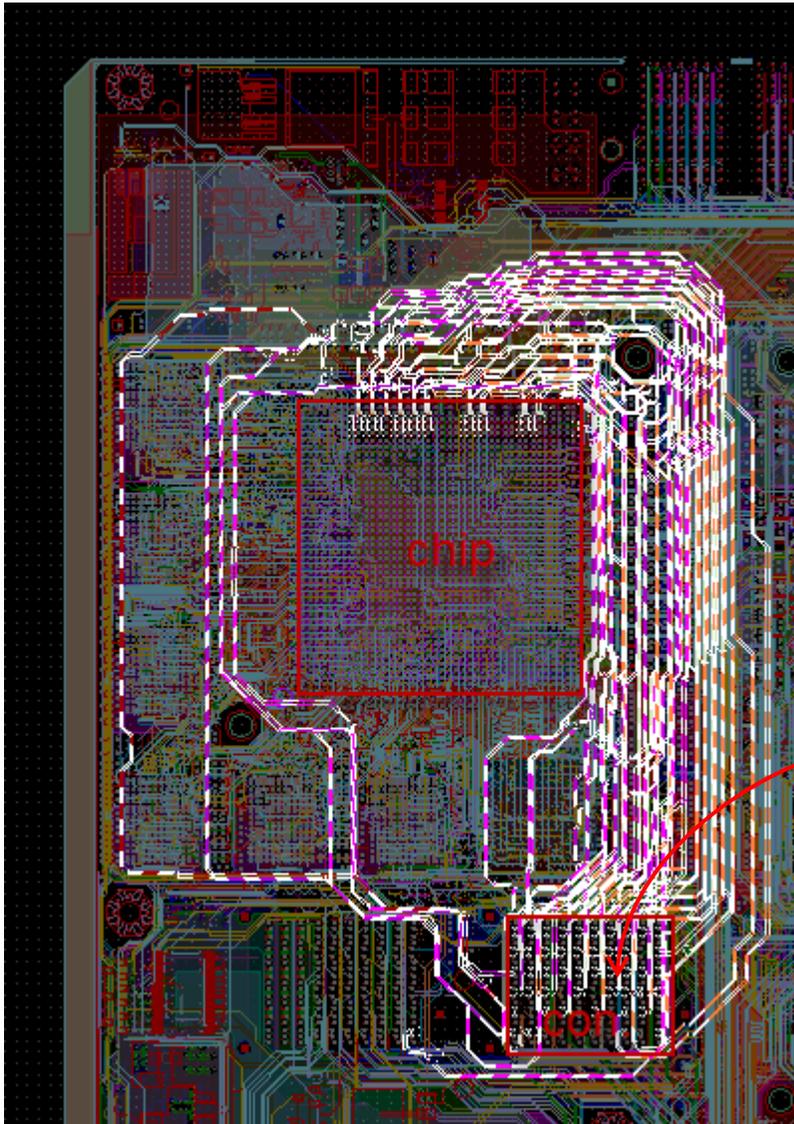
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Introduction

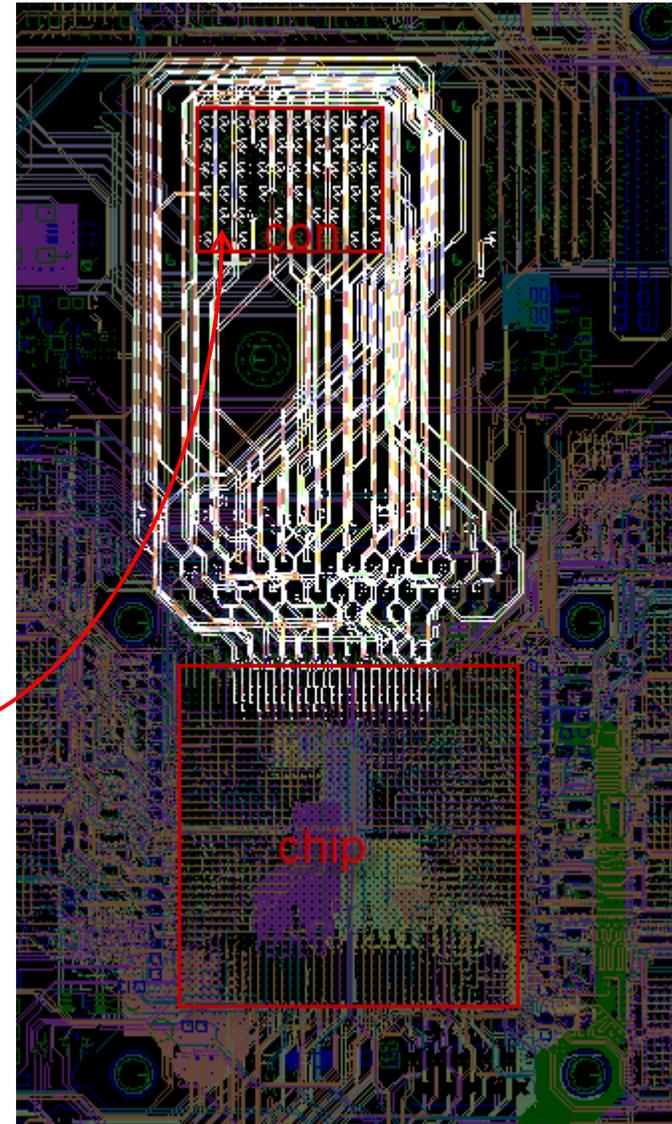
- In the Sept. York meeting, Altera proposed a specification method to support CAUI-4 C2C 20 dB channel. Then the discussion was on if 20 dB or 15 dB channel is needed for CAUI-4 C2C.
- This presentation is to show 20 dB channel is needed for system vendors. 15 dB is not enough for CAUI-4 C2C channel.



Typical channel routing for C-2-C

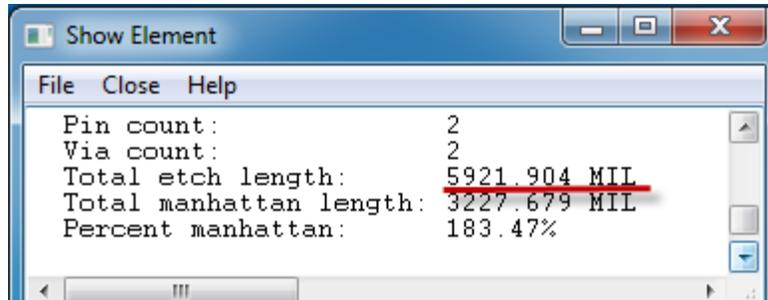


Mother board

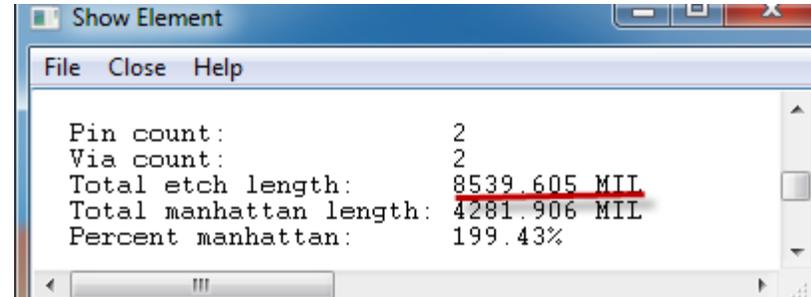


Daughter card

An Example of Signal length



One trace length from the chip to the connector on the mother board



One trace length from the chip to the connector on the daughter card

- The total channel length excluding the connector in this case can be 14.5”.
- At 12.8GHz, loss for IS415_RTf 1.34 dB/inch, TUC872_SLK_SP+E_U 1.14 dB/inch, N4000-13SI 0.97 dB/inch. With reasonable loss assumption 1.15 db/inch for good material at 12.8GHz, the loss on the trace itself on this board is 16.7 dB. If the connector loss is added, the channel loss in this case will be around 19 dB.

Conclusion

- 15dB CAUI-4 channel proposal will add difficulty and complexity to already dense and complicated routing in system.
- We strongly support 20 dB or even more CAUI-4 channel.





Thank You

