

# ADAS - ECU

Scope: Clean Up with Length Matching

Application: ADAS

ADAS stands for Advanced Driver Assistance Systems, which are technologies that help drivers improve their safety and comfort on the road. An ADAS-ECU specifically manages the functions of ADAS, such as adaptive cruise control, lane keeping assist, blind spot detection, and so on. An ADAS-ECU receives inputs from various sensors and cameras, processes them using algorithms and software, and sends outputs to actuators and displays to perform the desired actions.



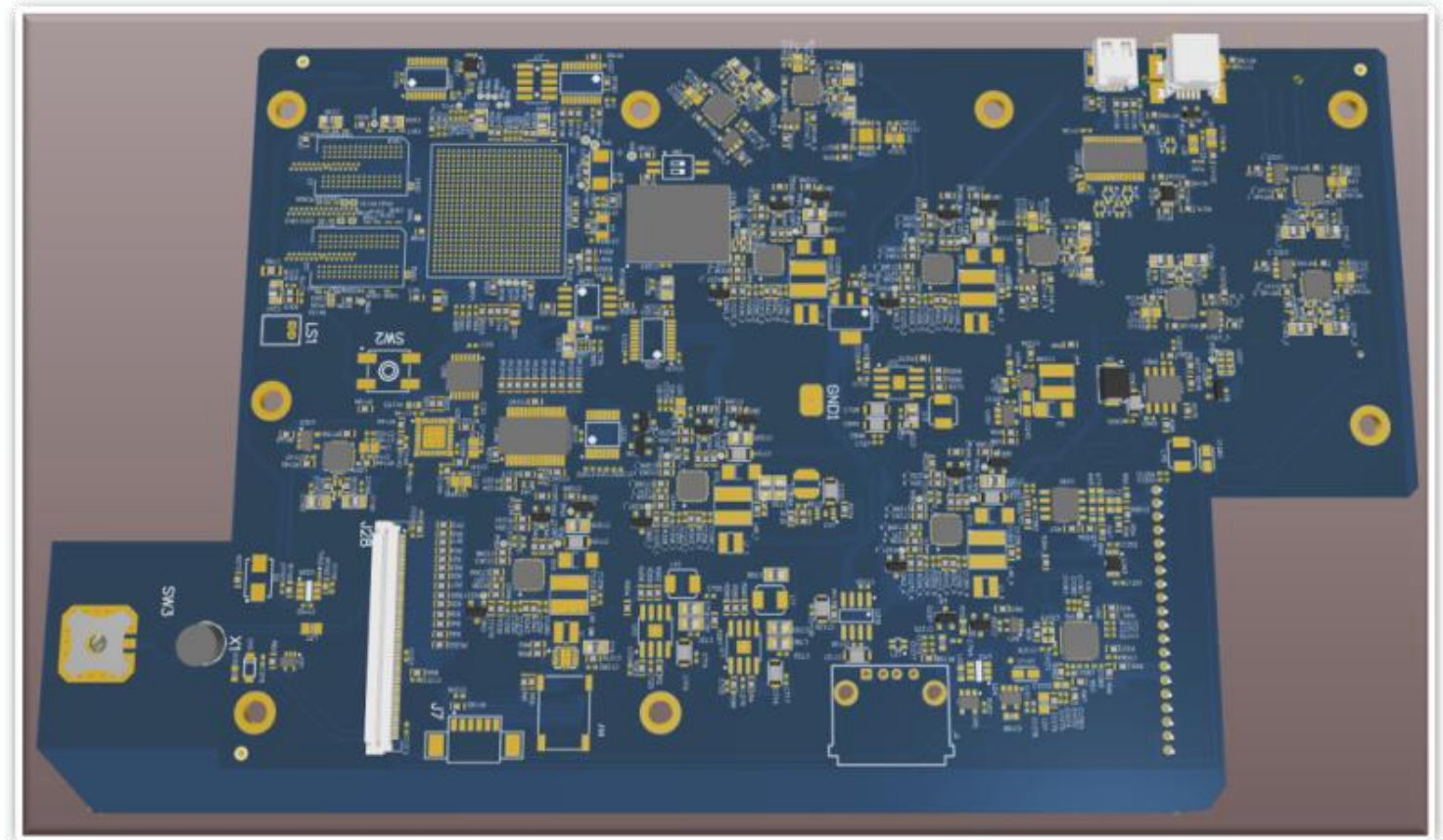


## Challenges:

- Increase Clearance to 4 mils
- Increase width of all non-impedance-controlled signals to 4 mils.
- Keep the same component placement

## Current Design:

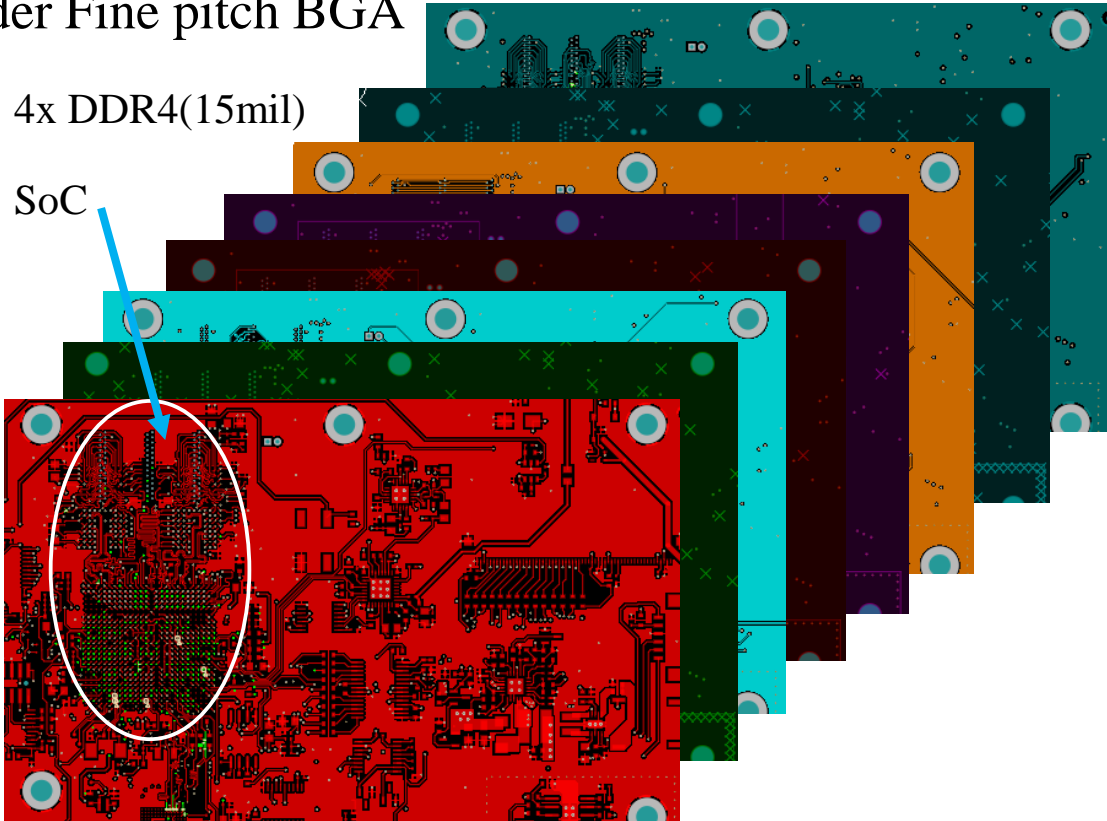
- width < 3 mils
- clearance < 3 mils



## Most impacted area

- Under Fine pitch BGA

- 4x DDR4(15mil)
- SoC



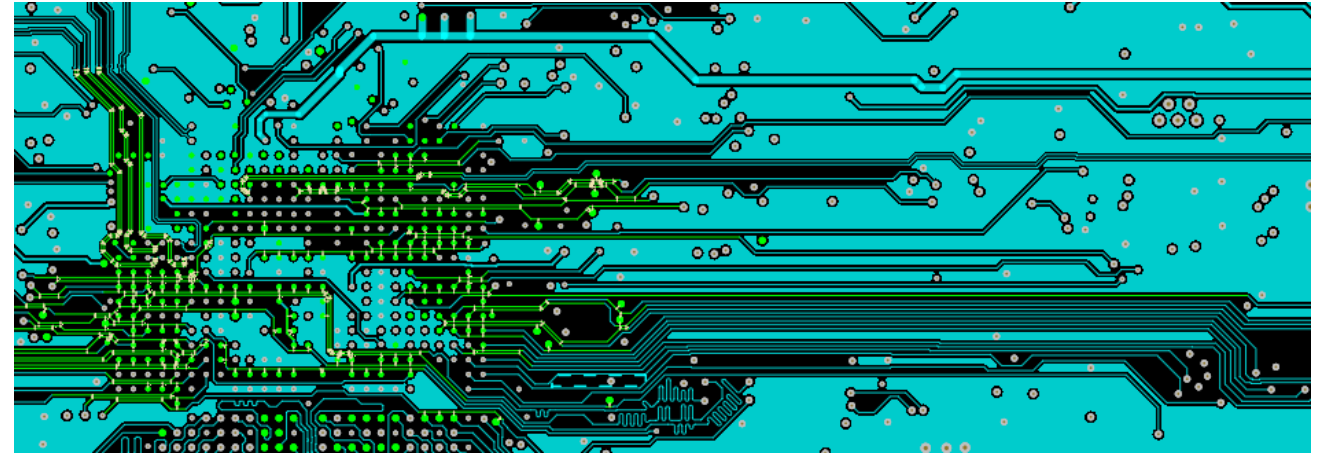
## PCB

- Total components → 1111
- Layer count → 8
- Total connection → 2064
- Pin count: 2571
- 9 different powers

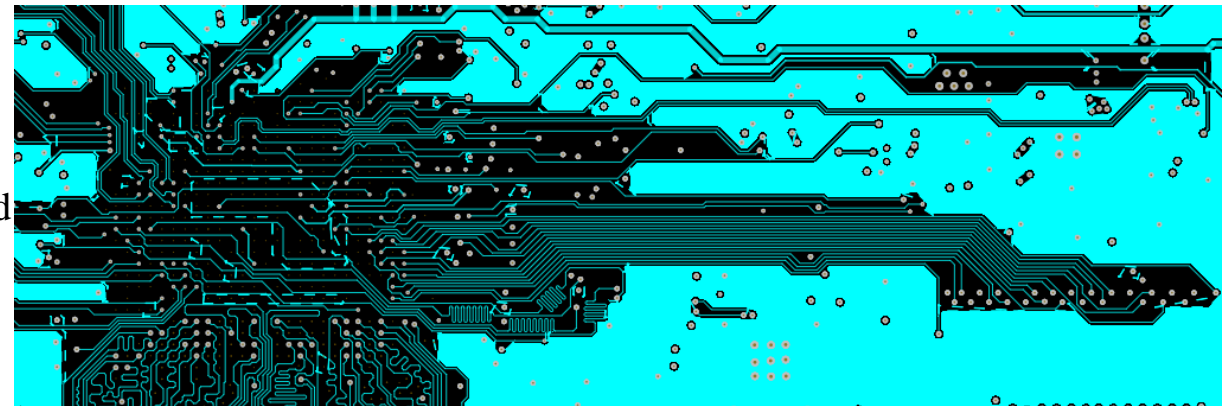


## Solution:

- Deep analysis of the given board
- Brainstorm the possibilities
- Proposed removal unused pads
- Modified the given board
  - In short time
  - By meet the Client's requirement



**Before - Layer 3**



**After Clean Up**



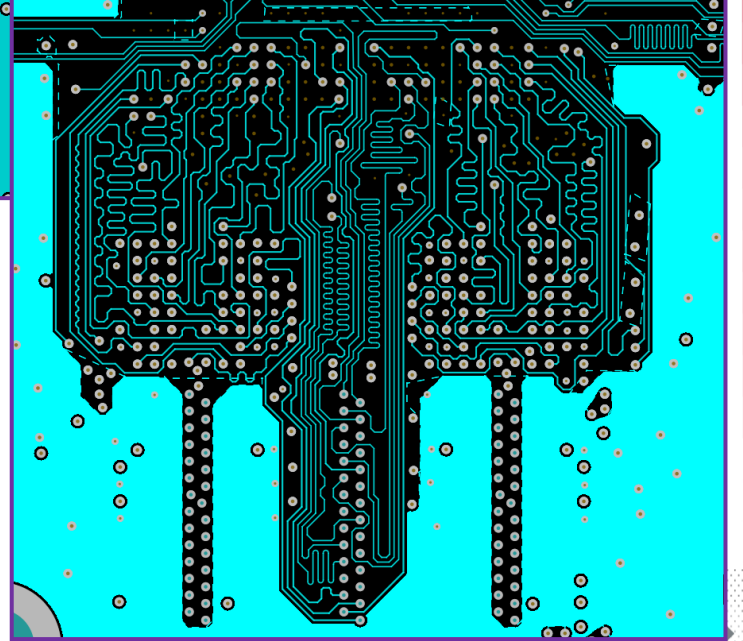
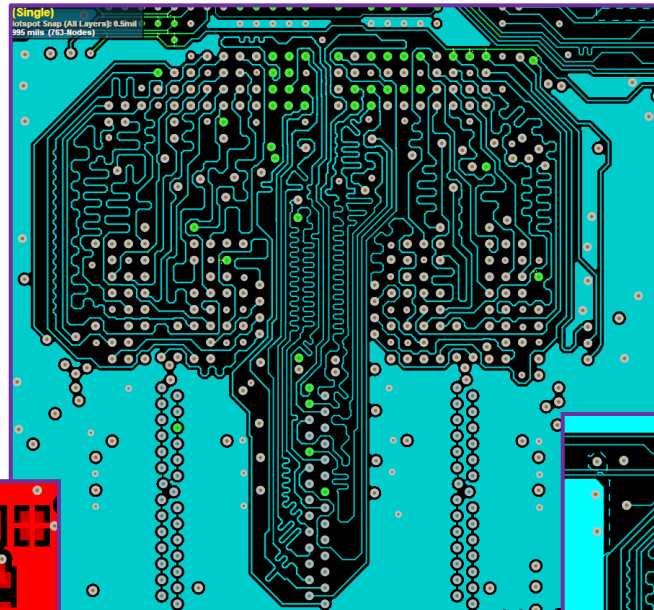
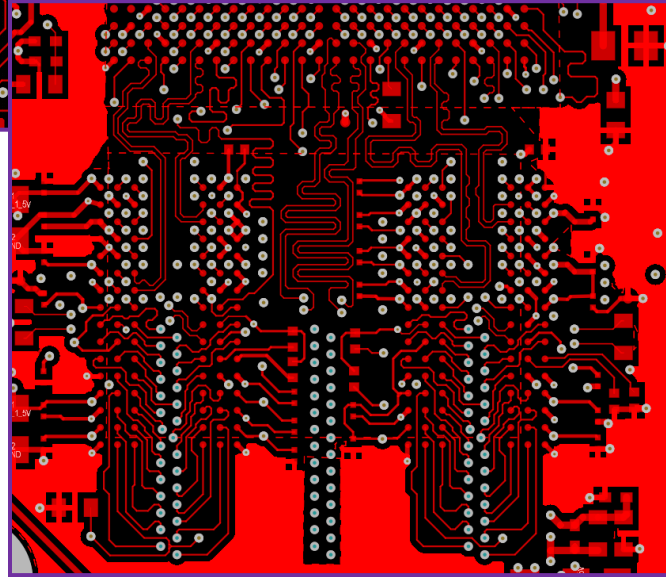
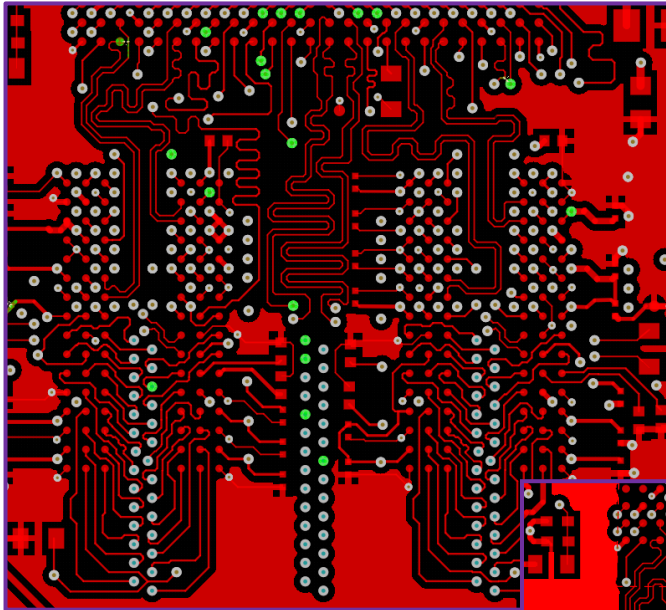
# High Speed Signal Clean Up 4x DDR4 and SoC

Top Layer

Layer 3

Before

After



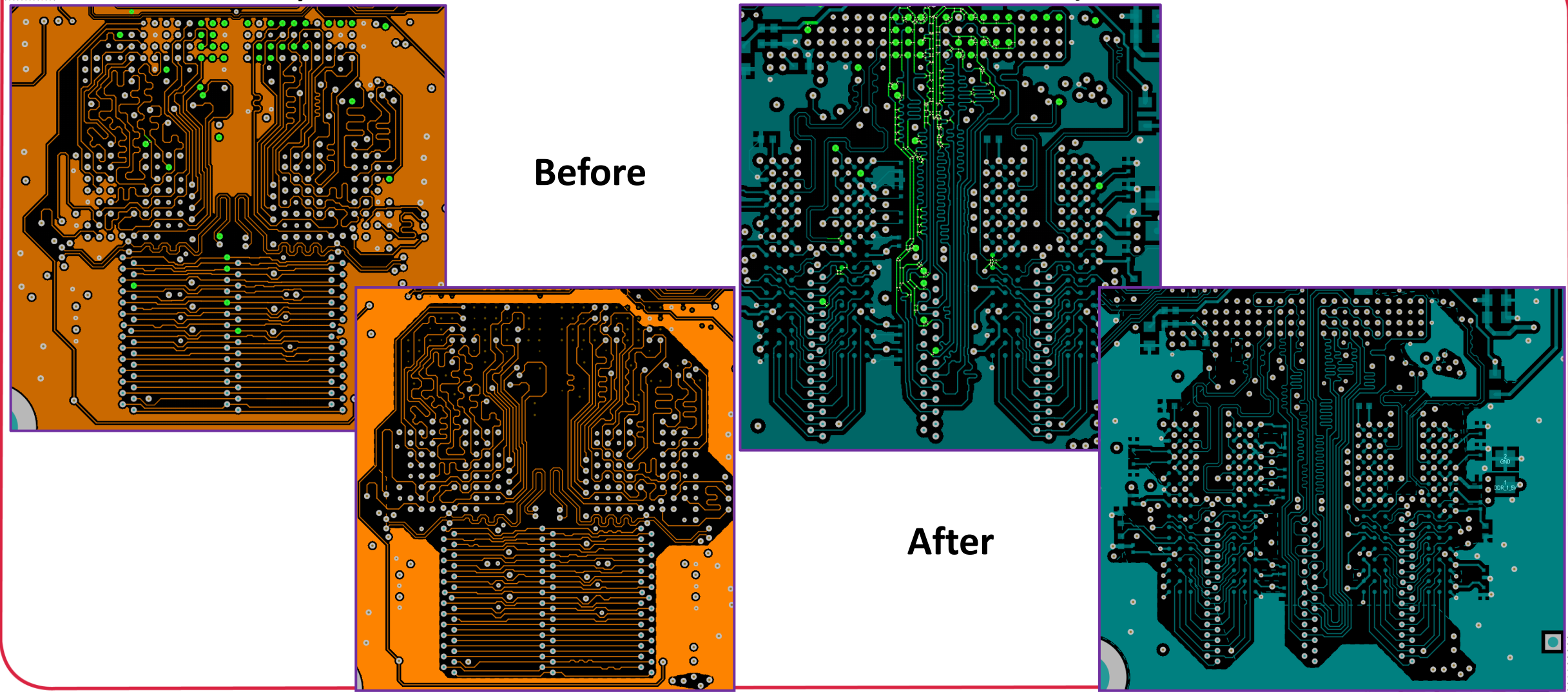
# High Speed Signal Clean Up 4x DDR4 and SoC

Layer 6

Bottom Layer

Before

After



# Customer Testimonial

Presented is a testimonial from a contented client, offering compelling proof of the effectiveness of outsourced PCB design,

*“ We entrusted our imperfect PCB design to this company for refinement. They not only made it perfect but even better than we hoped. Their skills turned our idea into reality, and we're amazed by the quality they delivered. Additionally, their commitment to on-time delivery has solidified our confidence in their ability to handle tough projects. We now trust them completely. ”*



# Conclusion

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By successfully delivering PCB design that met client's precise requirements, we showcased our commitment to excellence and technical proficiency.

Beyond the technical, our partnership highlighted personalized service, merging proficiency with understanding.

Our dedication is to providing top-tier PCB design services, standing as evidence of our capability and reliability in delivering exceptional results.

