



# Reference Cases



EVM / Characterization boards



# Theme

- This section will show samples from our Evaluation Module designs and Characterization board designs.
- Tested placement and routing strategies to support effective characterization.
- Also this document will show the level of complexity which we are used to in EVM/Characterization boards.



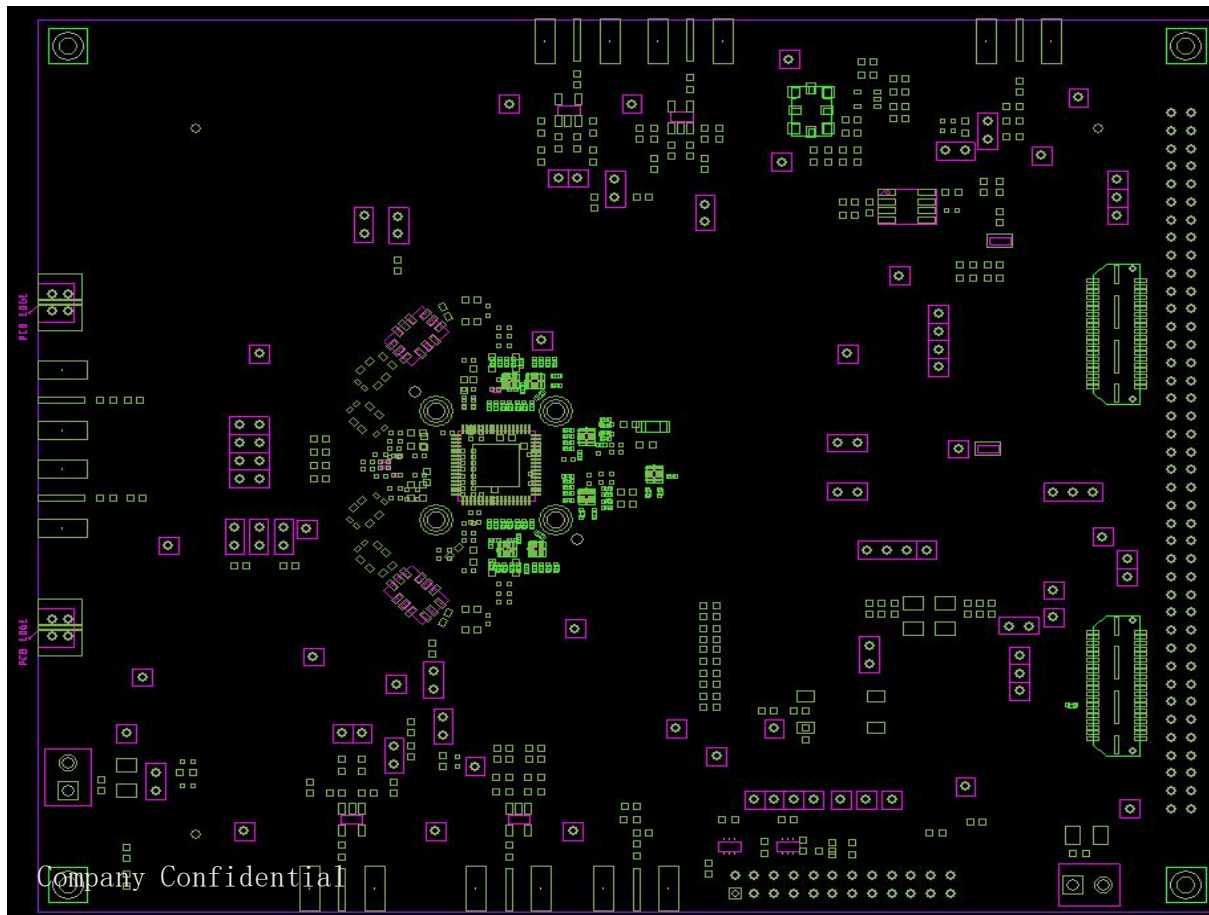
# Sample CARD-1

- Net count : 289
- Layers : 8 in Stripline configuration
  - 2 inner signal layers
  - 1 Power layer
- Component count : 421
- Highlights :
  - Noise isolated design
  - Connectors used (QSE, RF Edge and Headers)
- Scope : Placement to completed brd
- Timeline : 6 days (includes: Placement to Completed brd  
excludes : Customer review days)



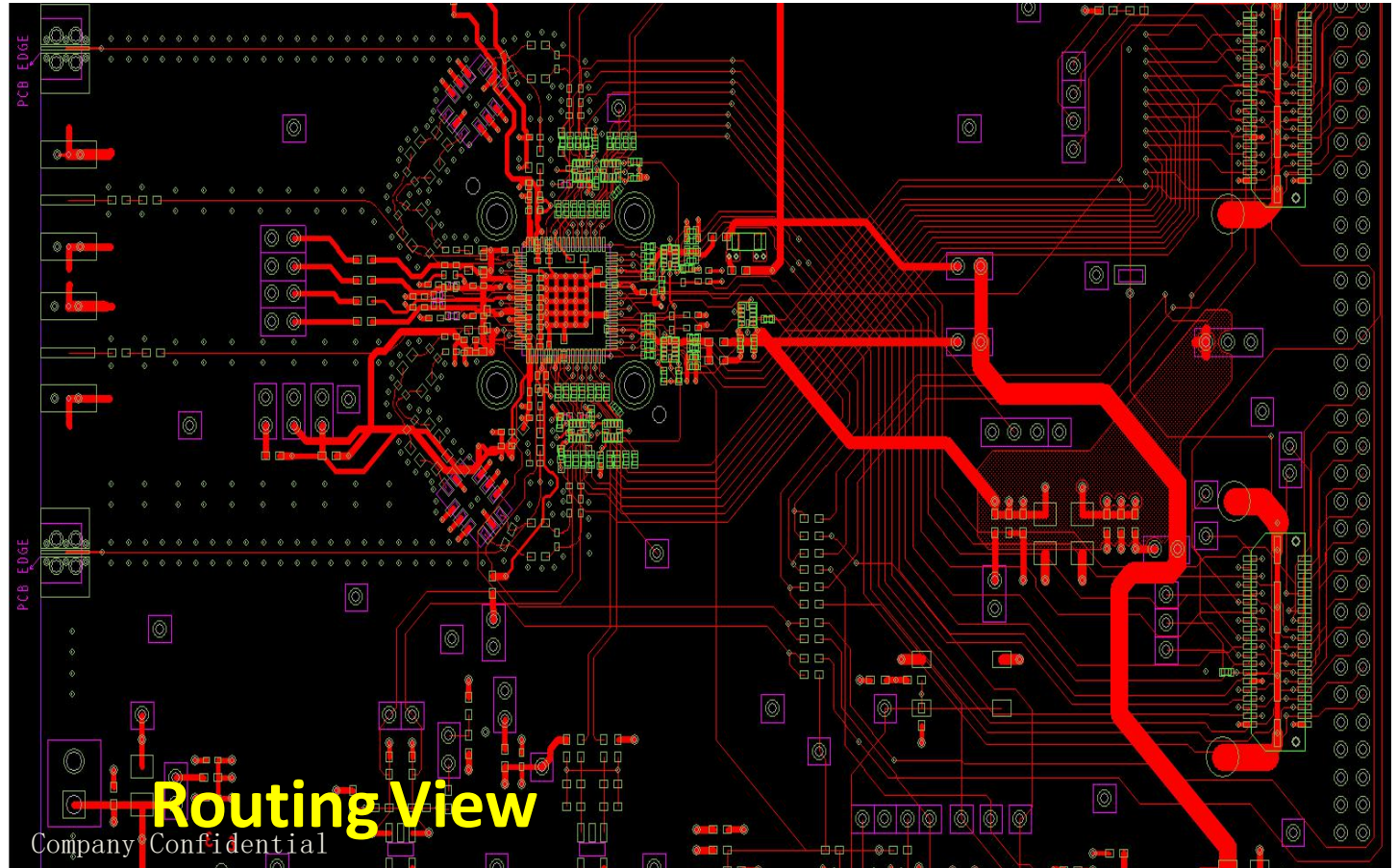
# Sample CARD-1

## Component placement view



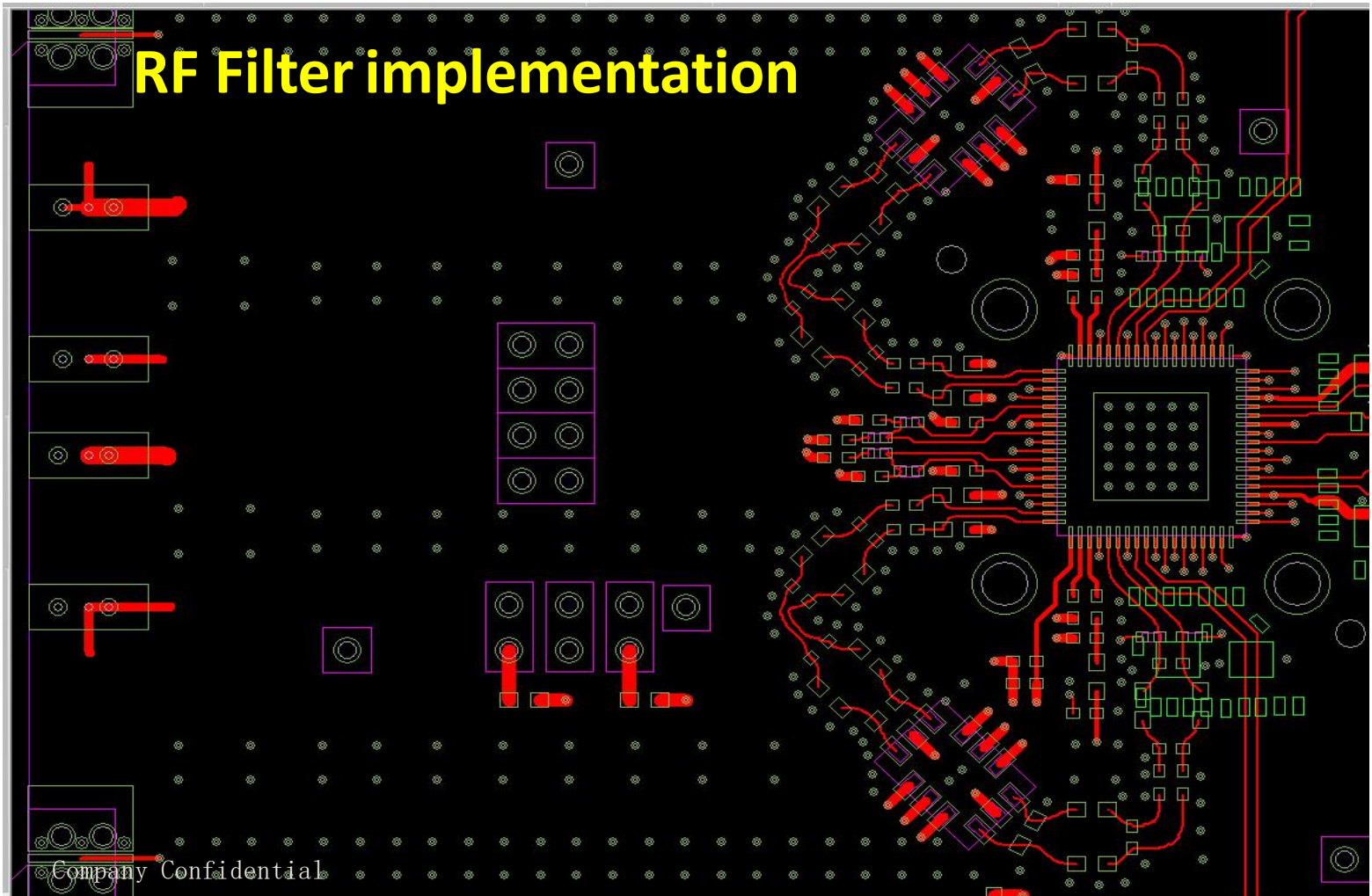


# Sample CARD-1





# Sample CARD-1



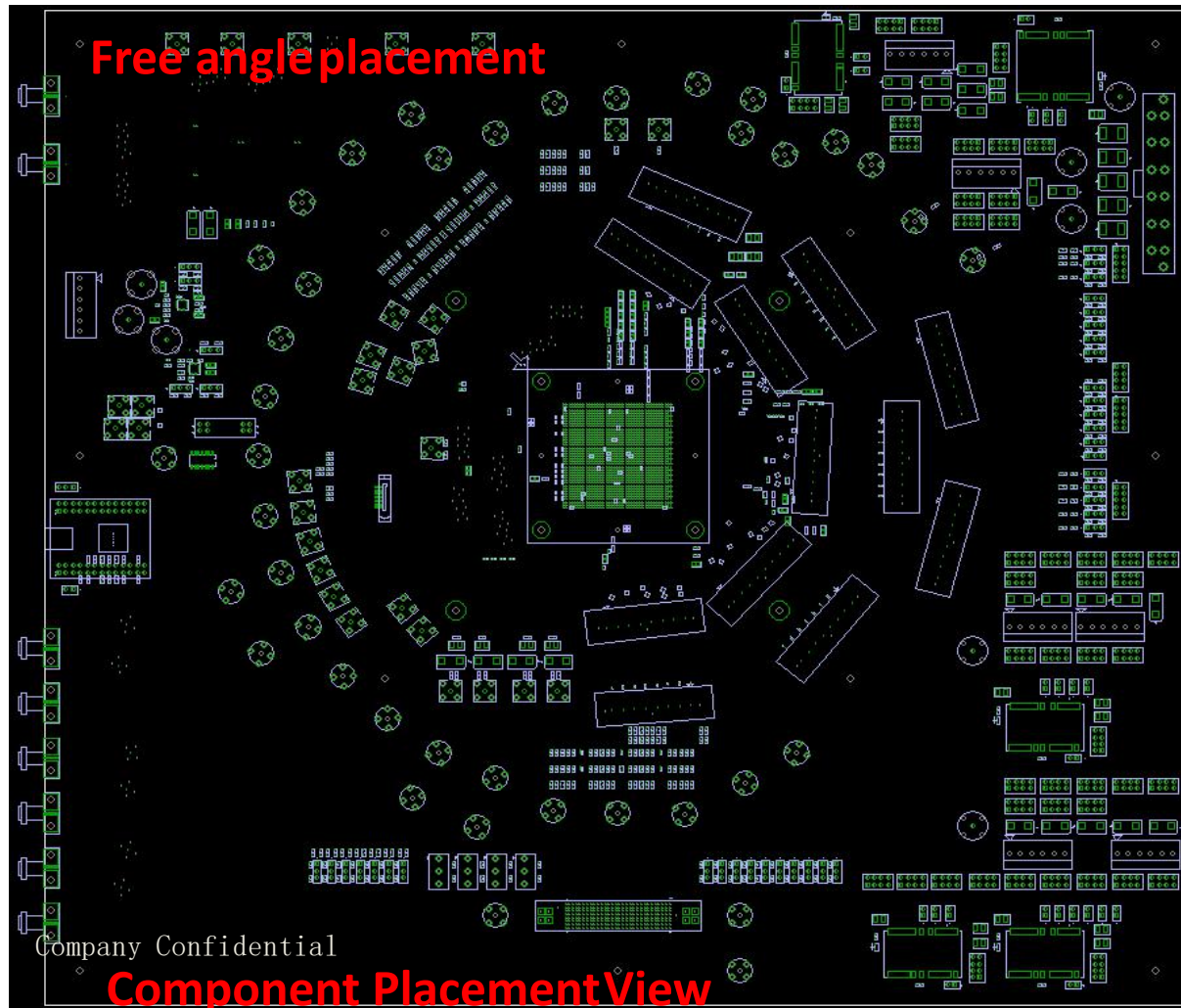


# Sample CARD-2

- Net/Connection count : 808/3340
- Layers : 24 in Stripline configuration
  - 5 inner signal layers
  - 6 Power layers
- Component count : 1008
- Highlights :
  - High speed design (free hand routing with exacttunning)
  - Connectors used (MXP, MCP, SMA and Headers)
- Scope : Placement to completed brd
- Timeline : 14 days (includes: Placement to Completed brd  
excludes : Customer review days)

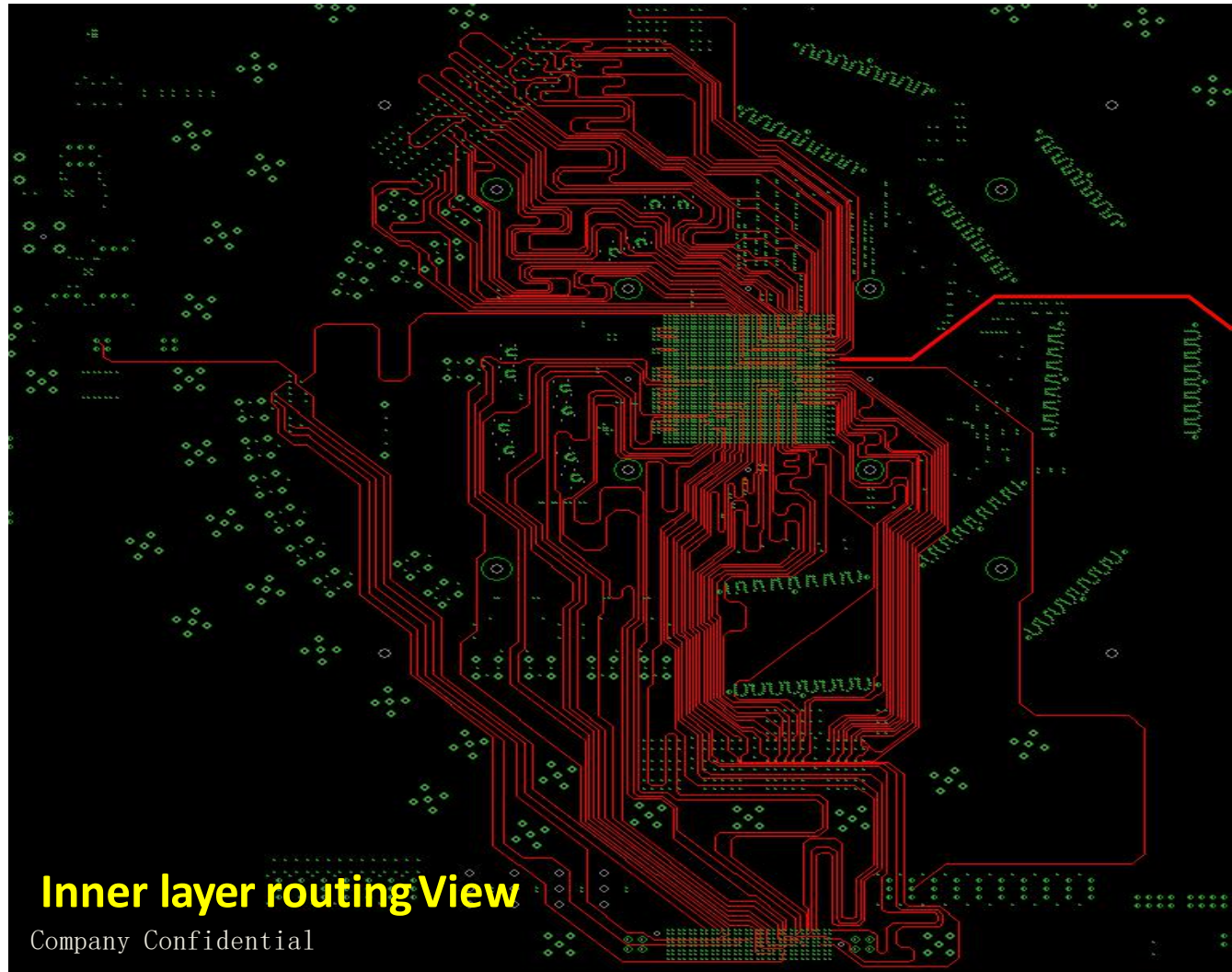


# Sample CARD-2





## Sample CARD-2

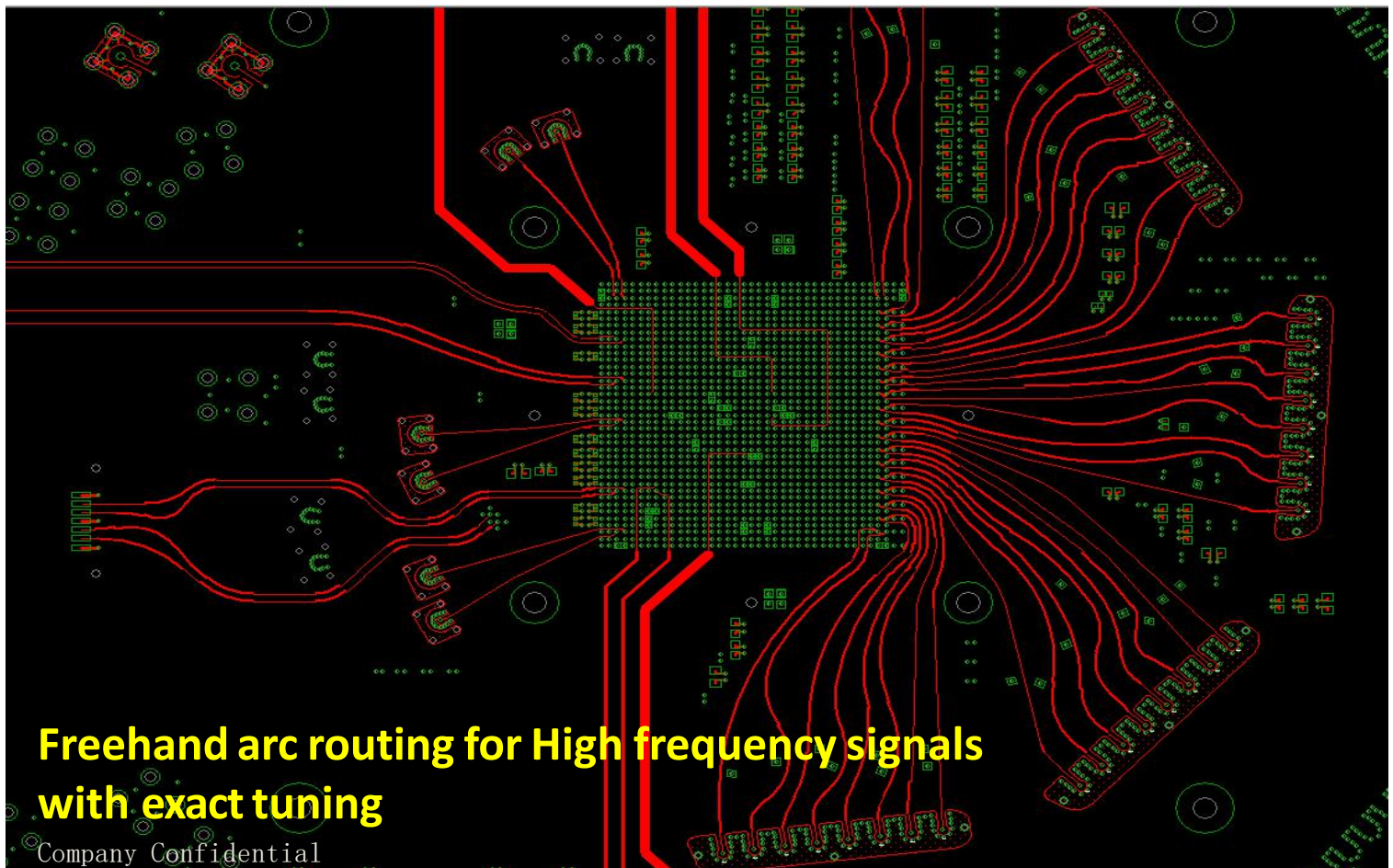


**Inner layer routing View**

Company Confidential



# Sample CARD-2



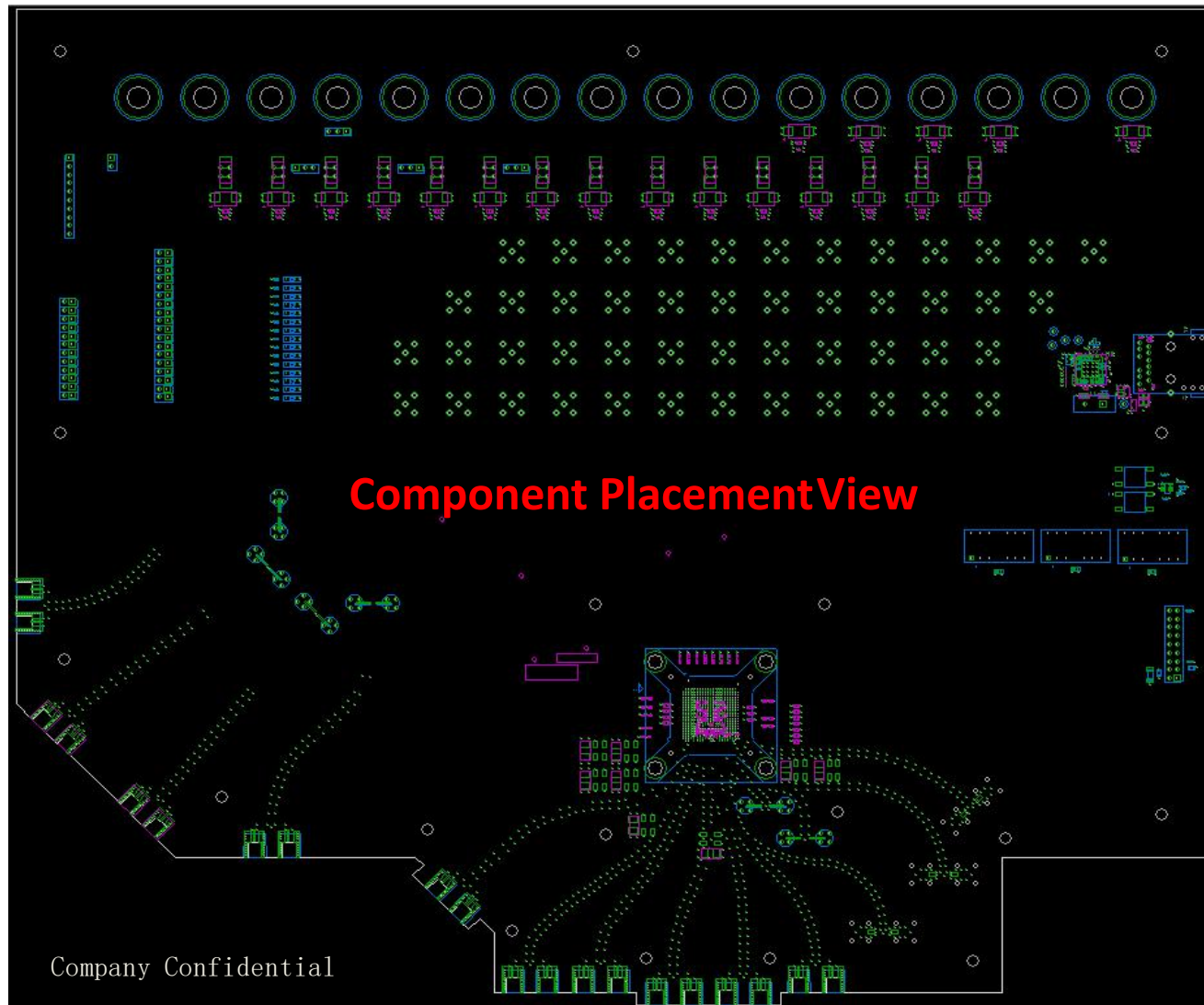


# Sample CARD-3

- Net/Connection count : 287/1305
- Layers : 16 in Stripline configuration
  - 3 inner signal layers
  - 3 Power layers
  - 4 different GND systems
- Component count : 437
- Highlights :
  - High speed design (arc routing with exact tuning)
  - Connectors used (SMA, BNC and Headers)
- Scope : Placement to completed brd
- Timeline : 5 days (includes: Placement to Completed brd  
excludes : Customer review days)

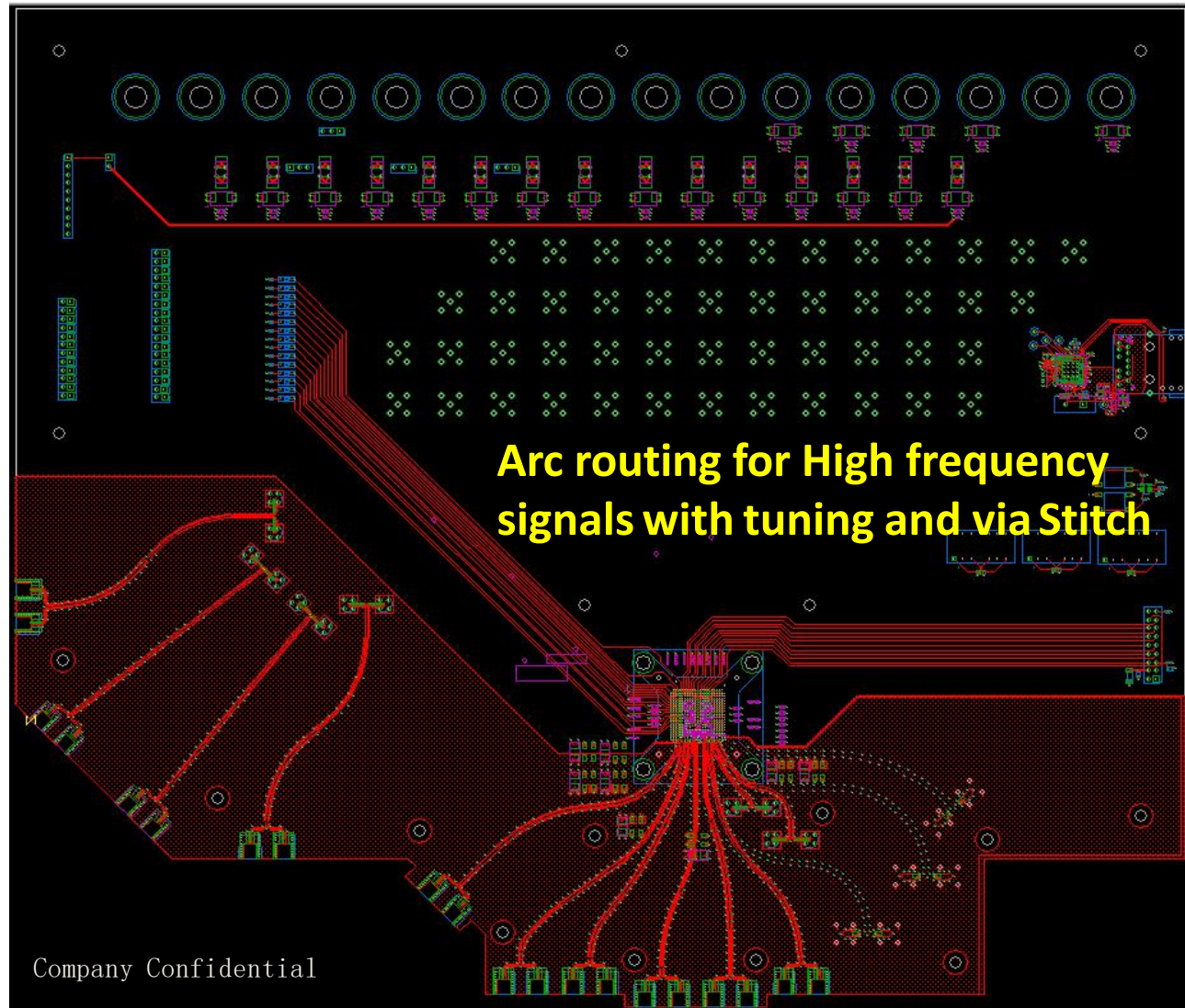


# Sample CARD-3





# Sample CARD-3





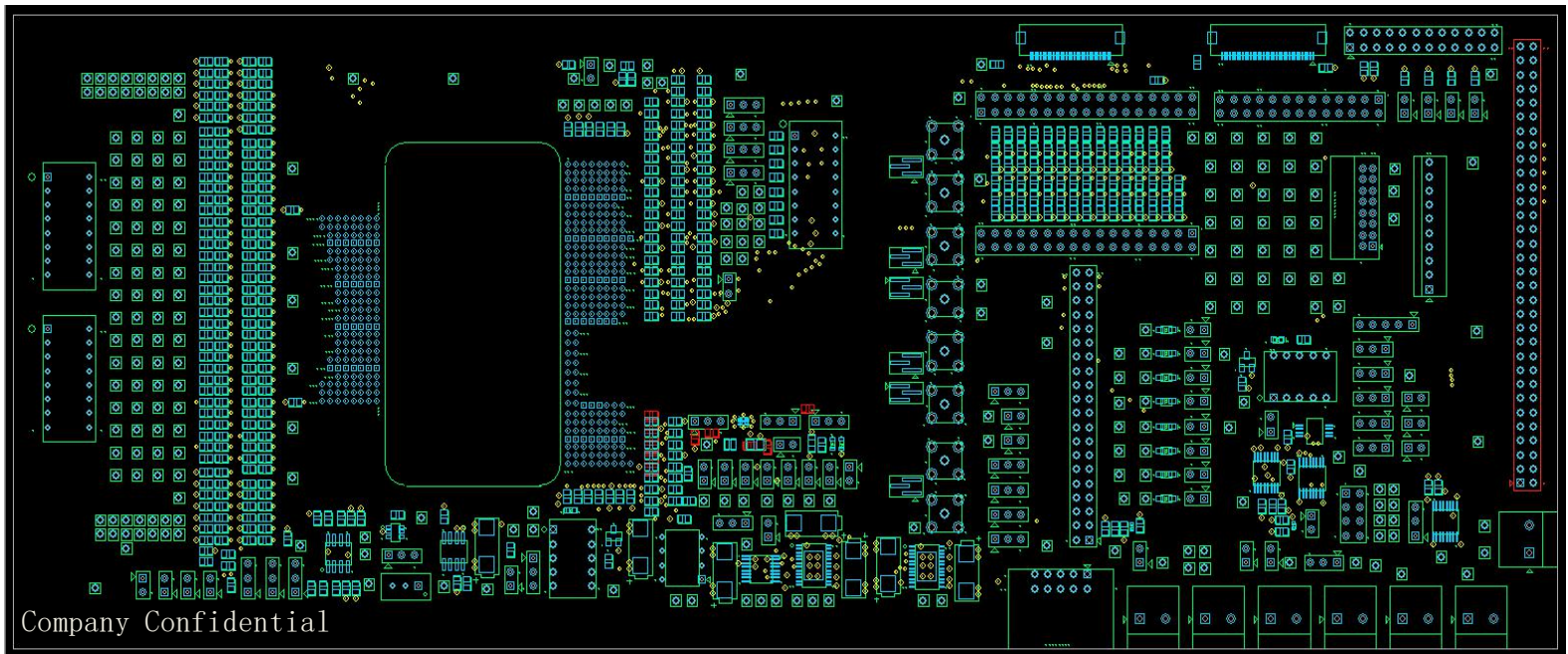
# Sample CARD-4

- Net/Connection count : 688/1669
- Layers : 12 in Stripline configuration
  - 4 inner signal layers
  - 2 Power layers
- Component count : 862
- Highlights :
  - Card compatible to characterize DIE as well as PACKAGE
  - Connectors used (ZIF, SMA and Headers)
- Scope : Schematic to Gerbers
- Timeline : 9 days (includes: Schematic capture to Gerber validation  
excludes : Customer review days)



# Sample CARD-4

## Component Placement View

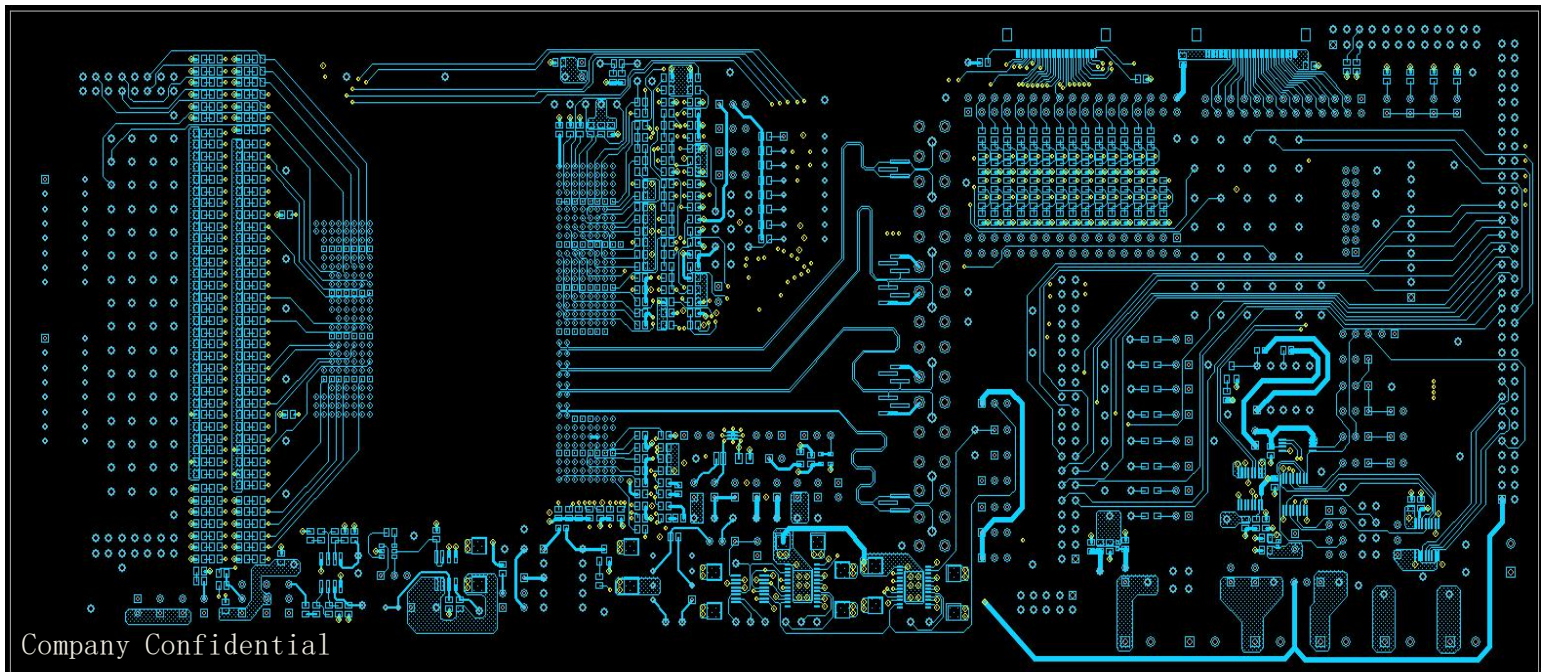


Company Confidential



# Sample CARD-4

## External Layer routing View





# Sample CARD-4

## Internal Layer routing View

