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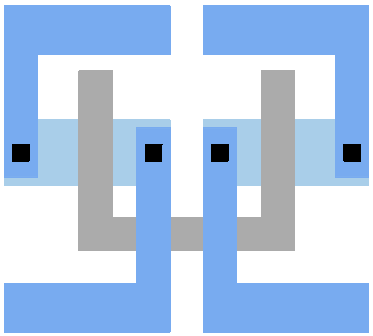
Design of the Ladder Balconies



Christian Kreidl

christian.kreidl@ziti.uni-heidelberg.de

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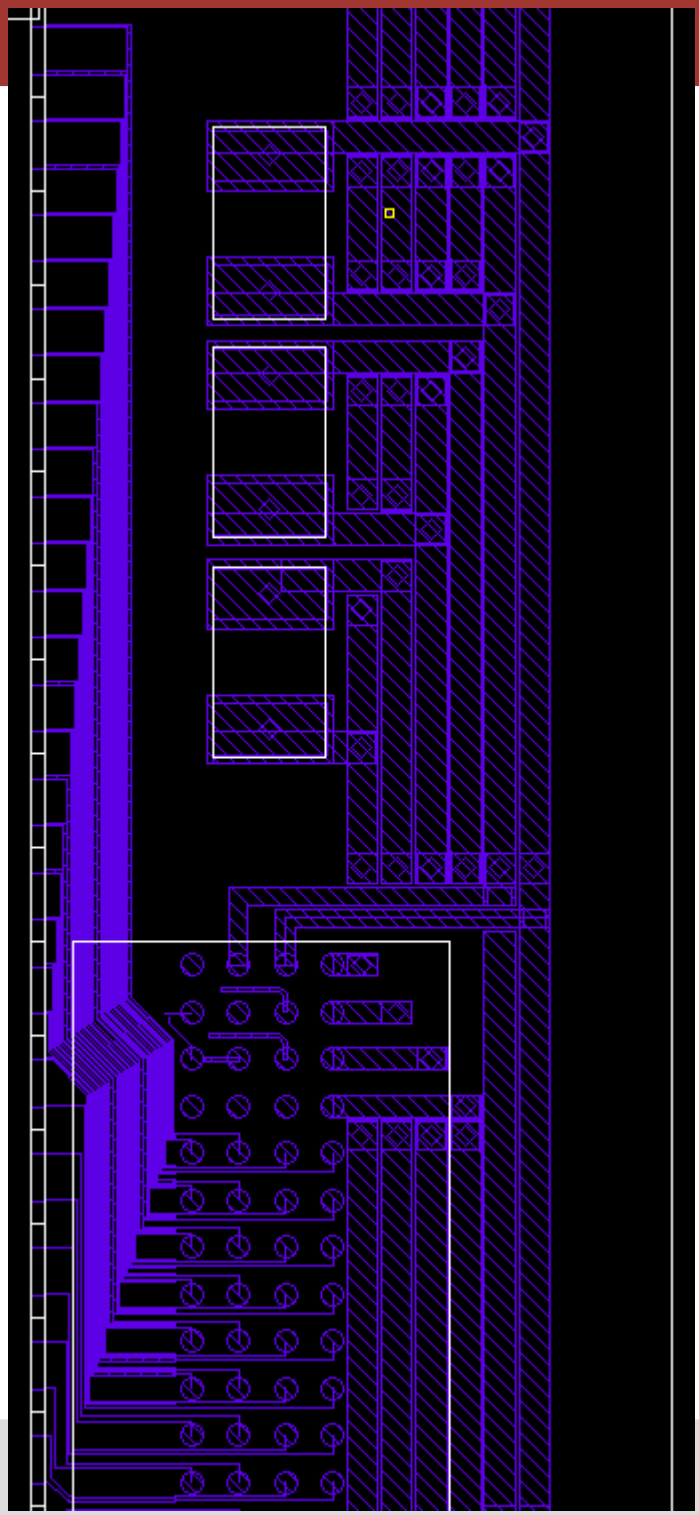
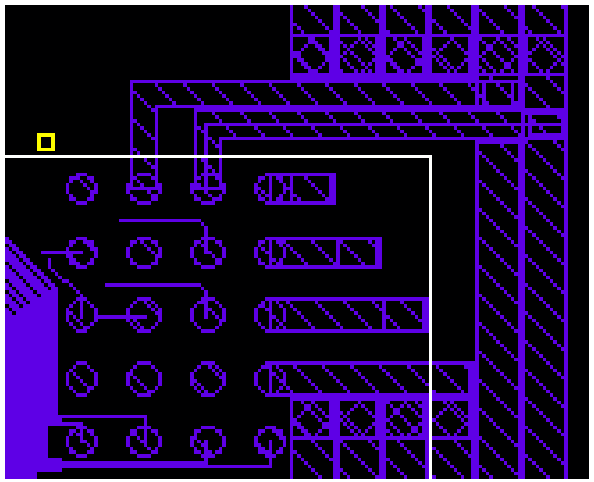
Switcher Fanout

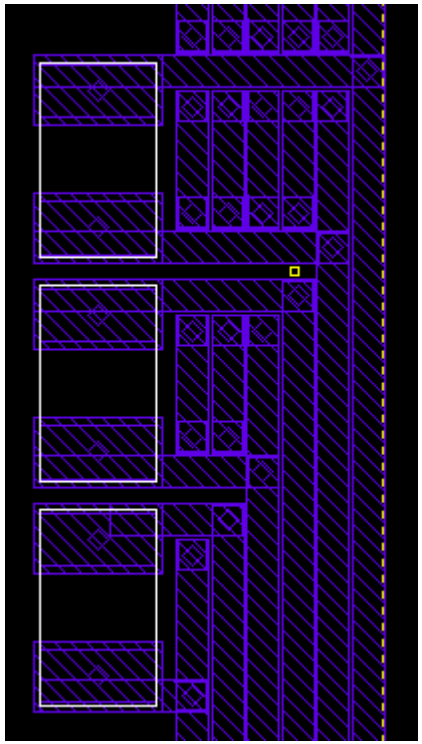
- 96 pads
  - 64 channels
  - 20 I/O Pads
  - 12 Power
- only metal1 used
- top part: 270µm width
- bottom: 405µm width
- blacony width (active<->power): 1610µm
- free balcony: 390µm
  - use for increased power trace width
  - width keepout???

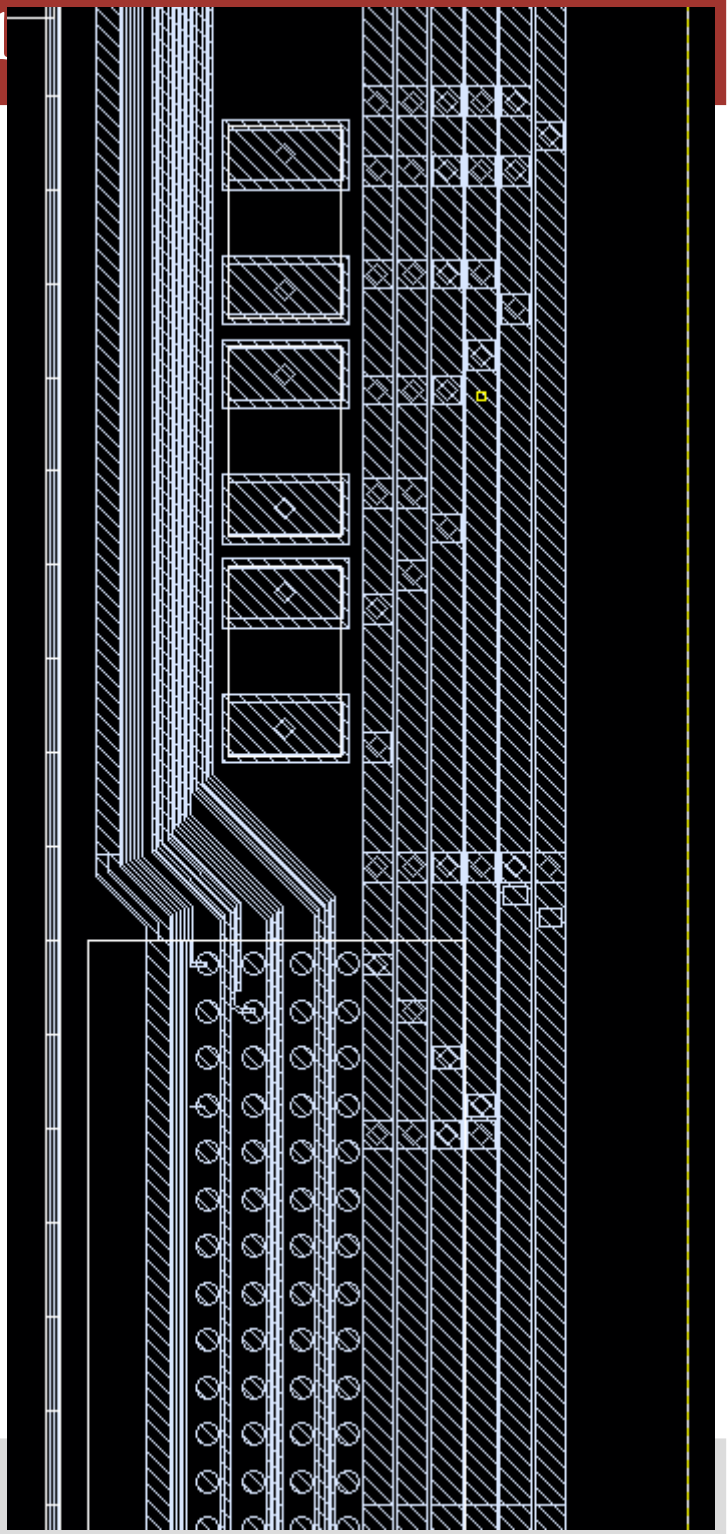


Switcher supply + decoupl

- supply traces 100µm
  - metal2 continuous
  - metal1 where possible
- 0201 capacitors
  - 2 for each supply per chip
  - 6,3V 100nF X5R
  - 10V 10nF X7R
  - 16V 3.3nF
  - 25V 100pF NP0

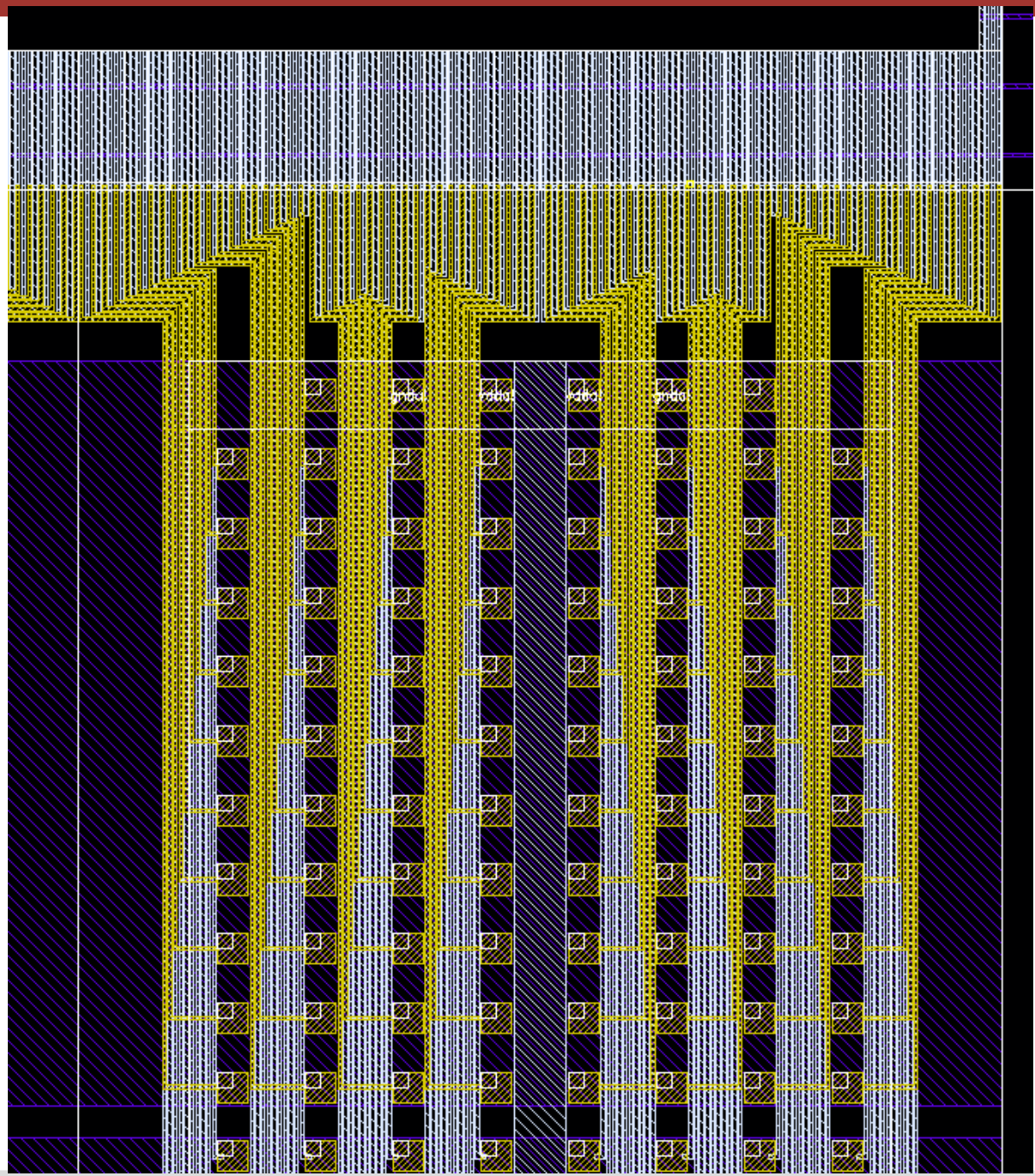






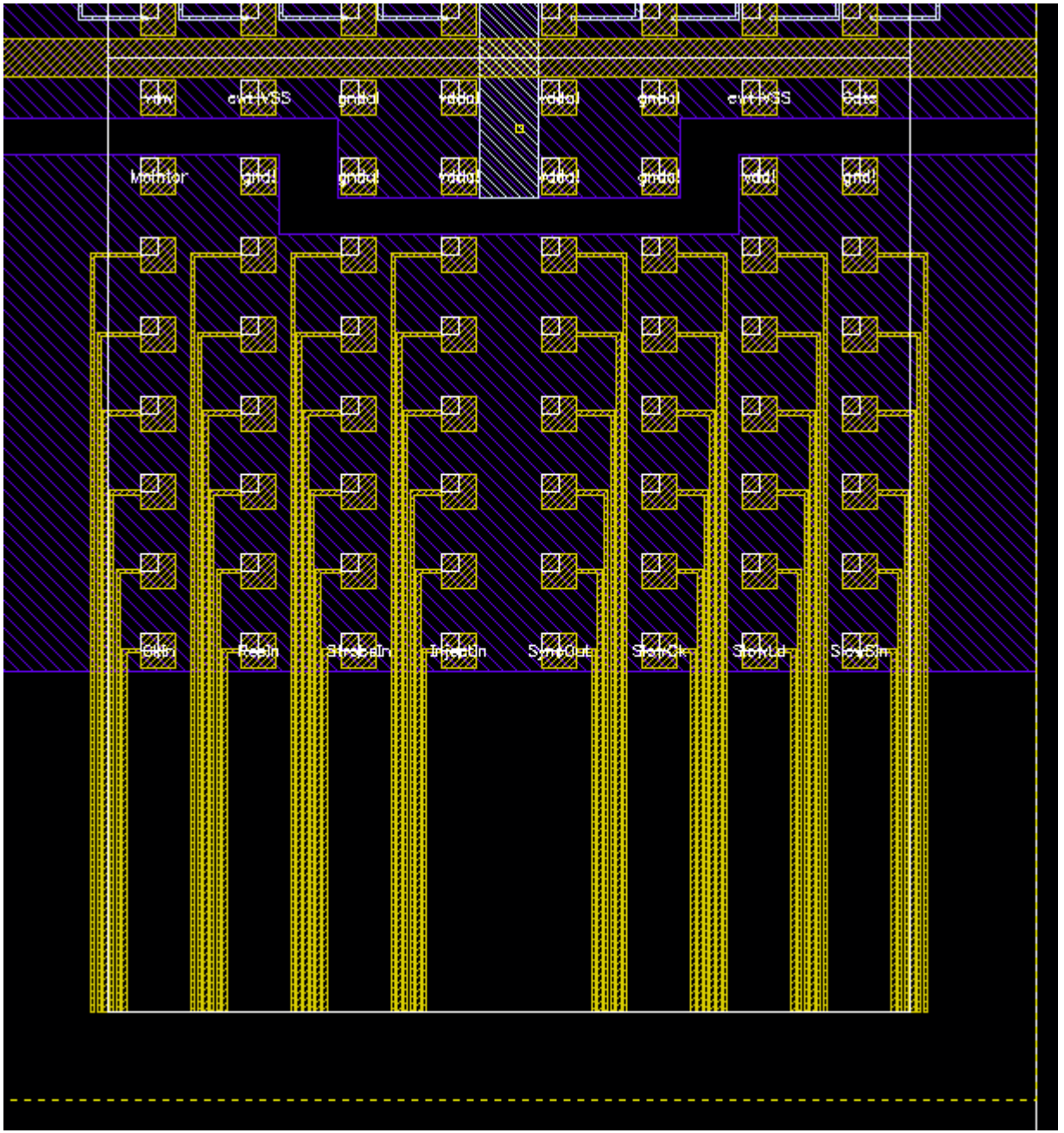
DCD Fanout

- 65µm pads
- 190µm pitch in x
- 150µm pitch in y
- 2 metal layer
- 12µm trace pitch
- 4,5mm x 1,5mm chip
- 2mm pitch



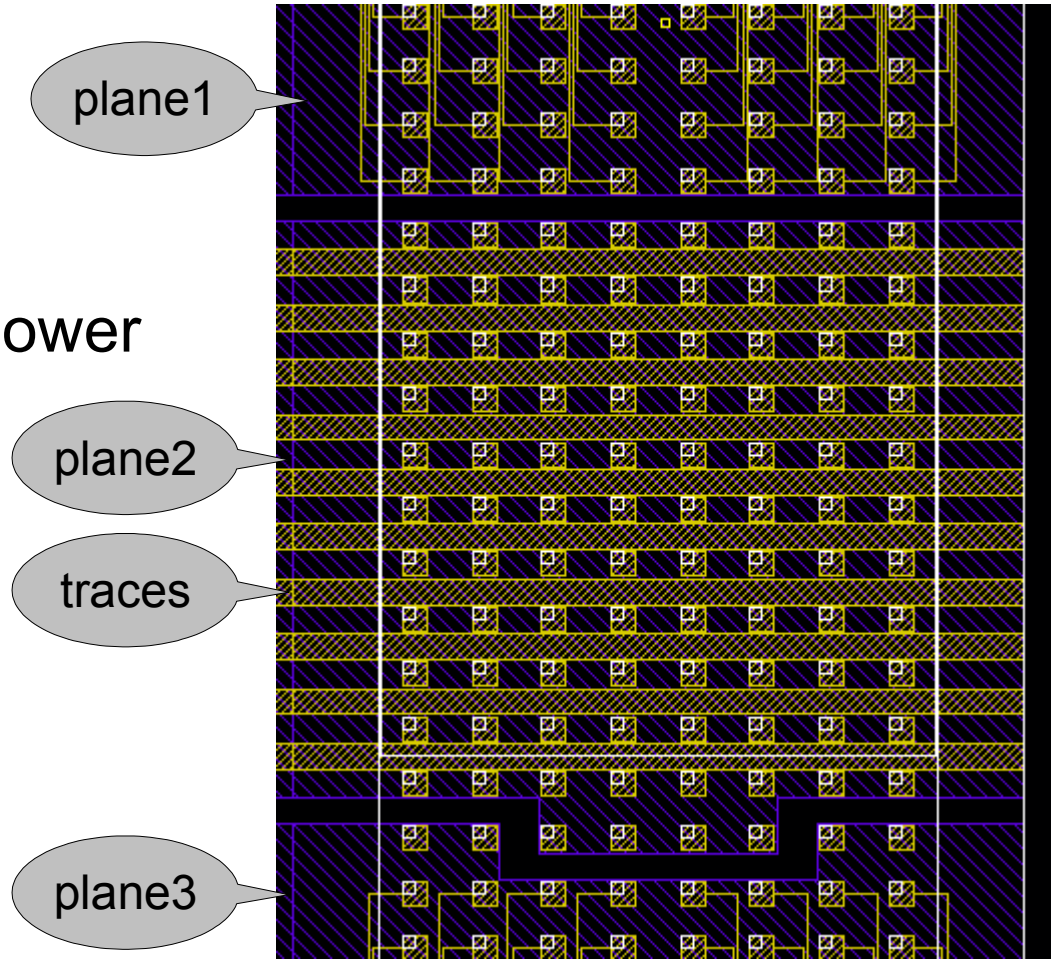
DCD - DHP

- 1 metal layer



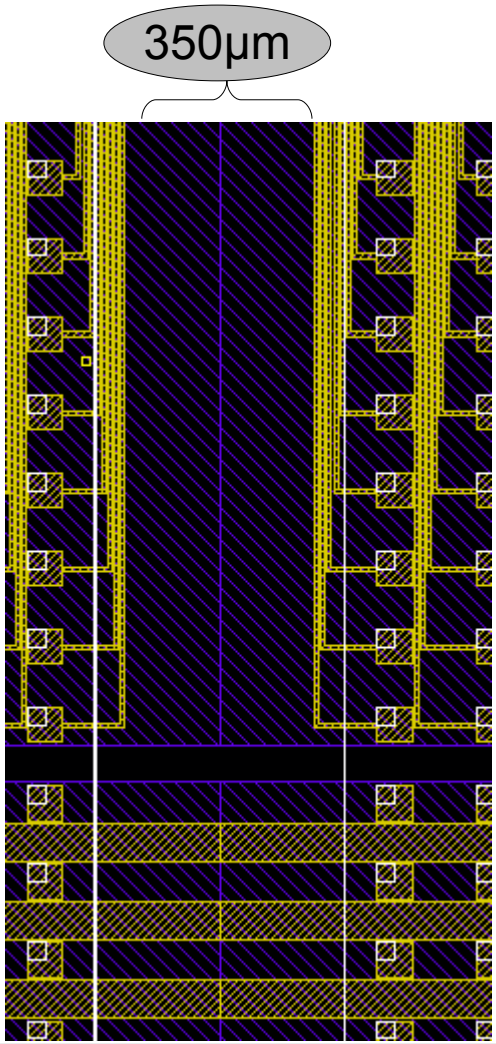
DCD Power

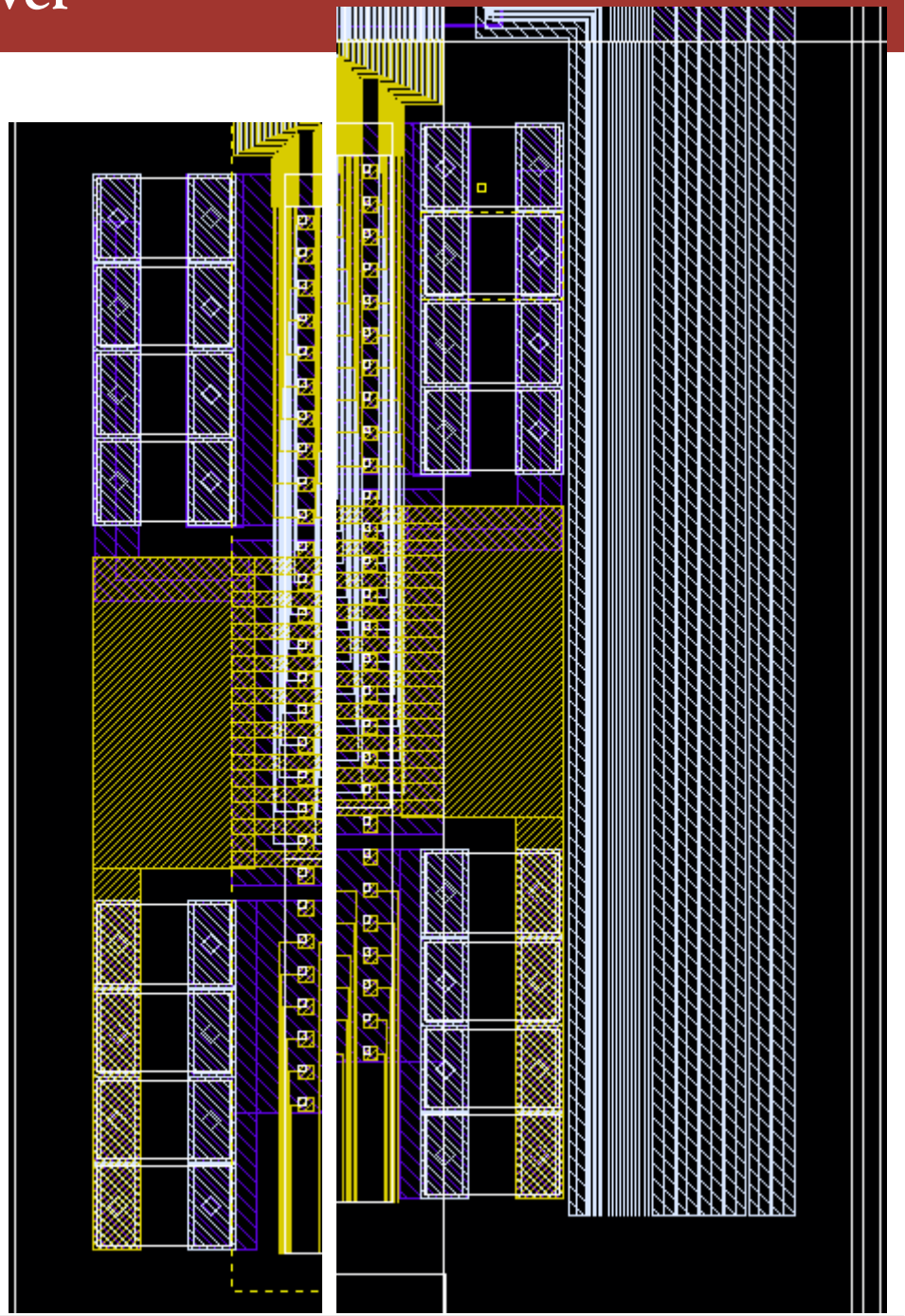
- 4 power rails
- high power consumption: 600mA
- 1mm width needed
- 3 metal1 planes
- metal2 + metal3 traces
- separated analog + digital power



DCD power

- use gap between fanout to wirebond supply
- area left of dcds for decoupling





Thank you!