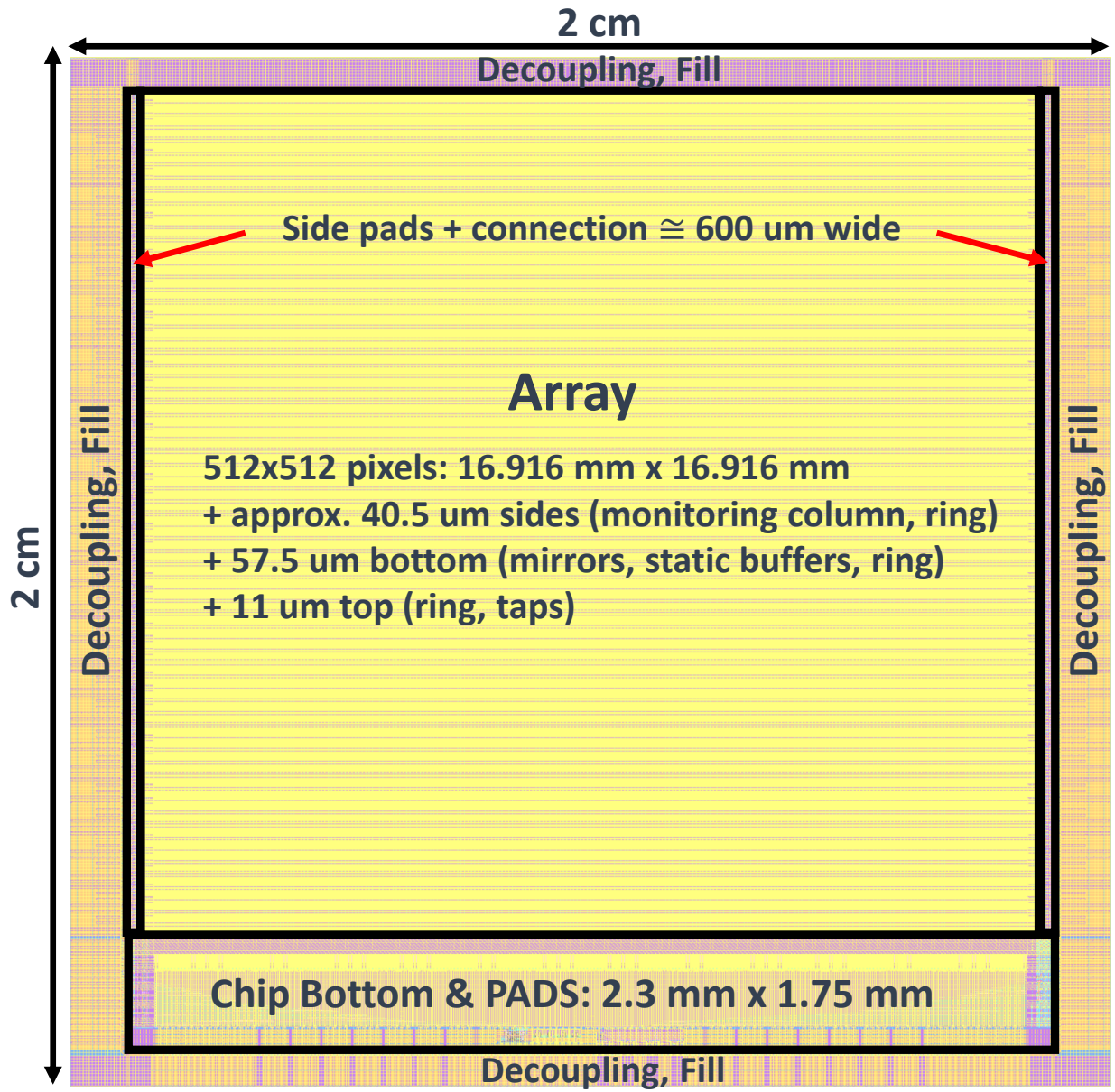
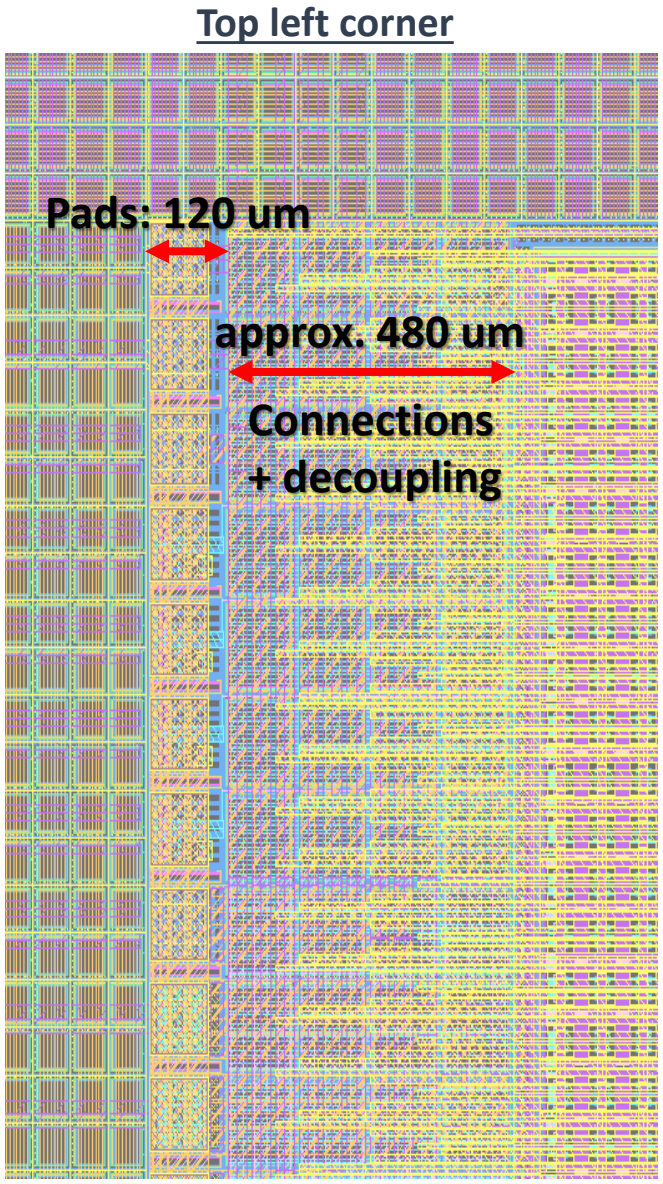
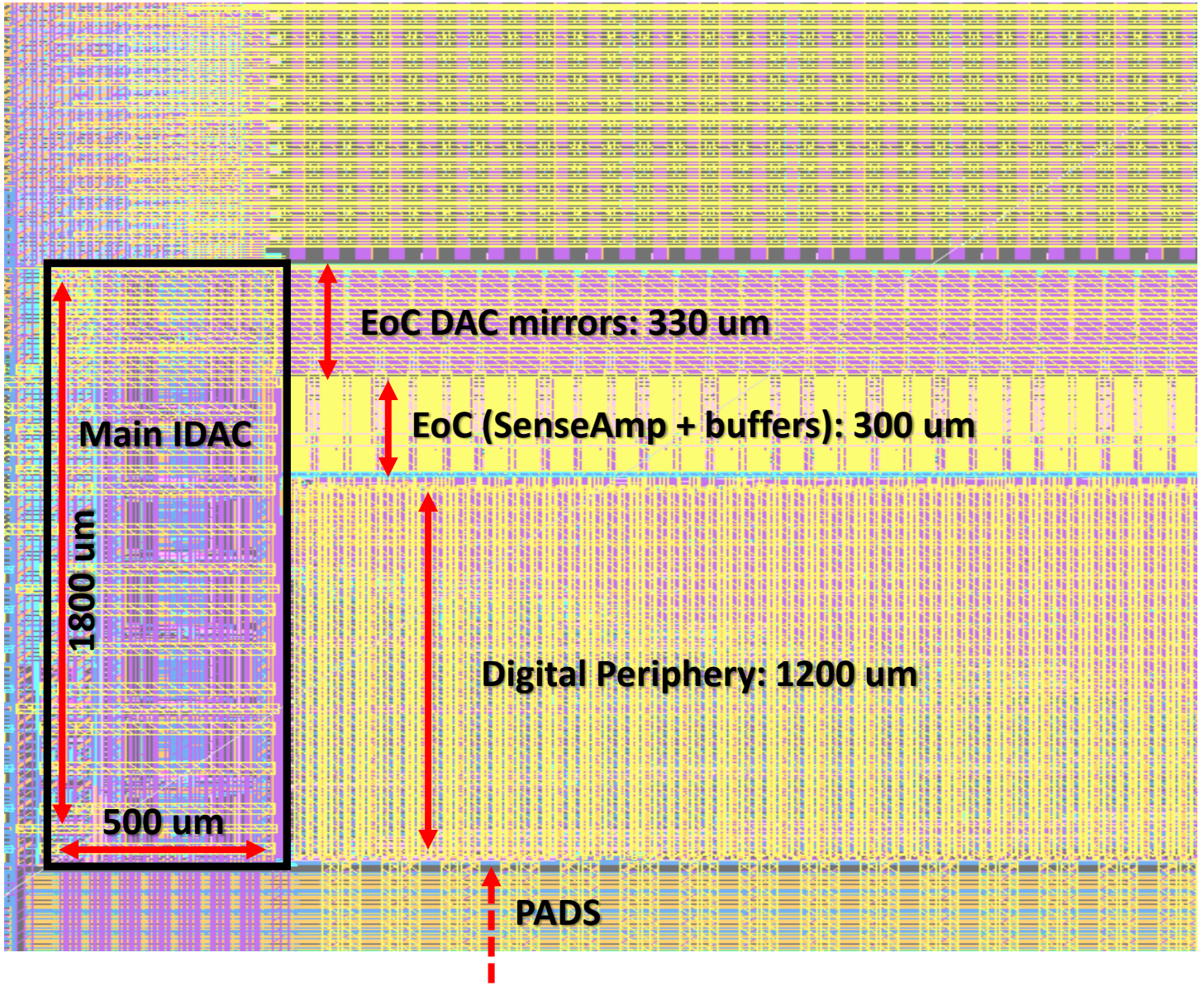
TJ-Monopix2 layout



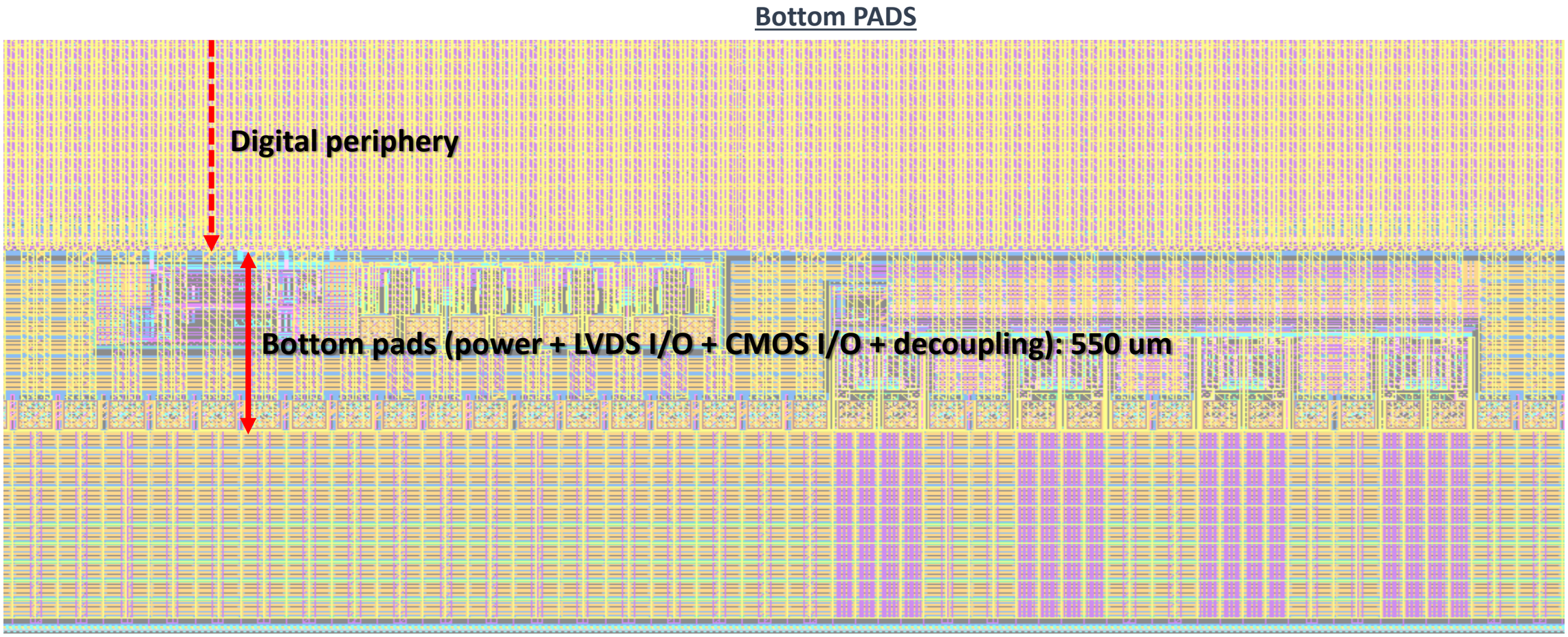


TJ-Monopix2 layout

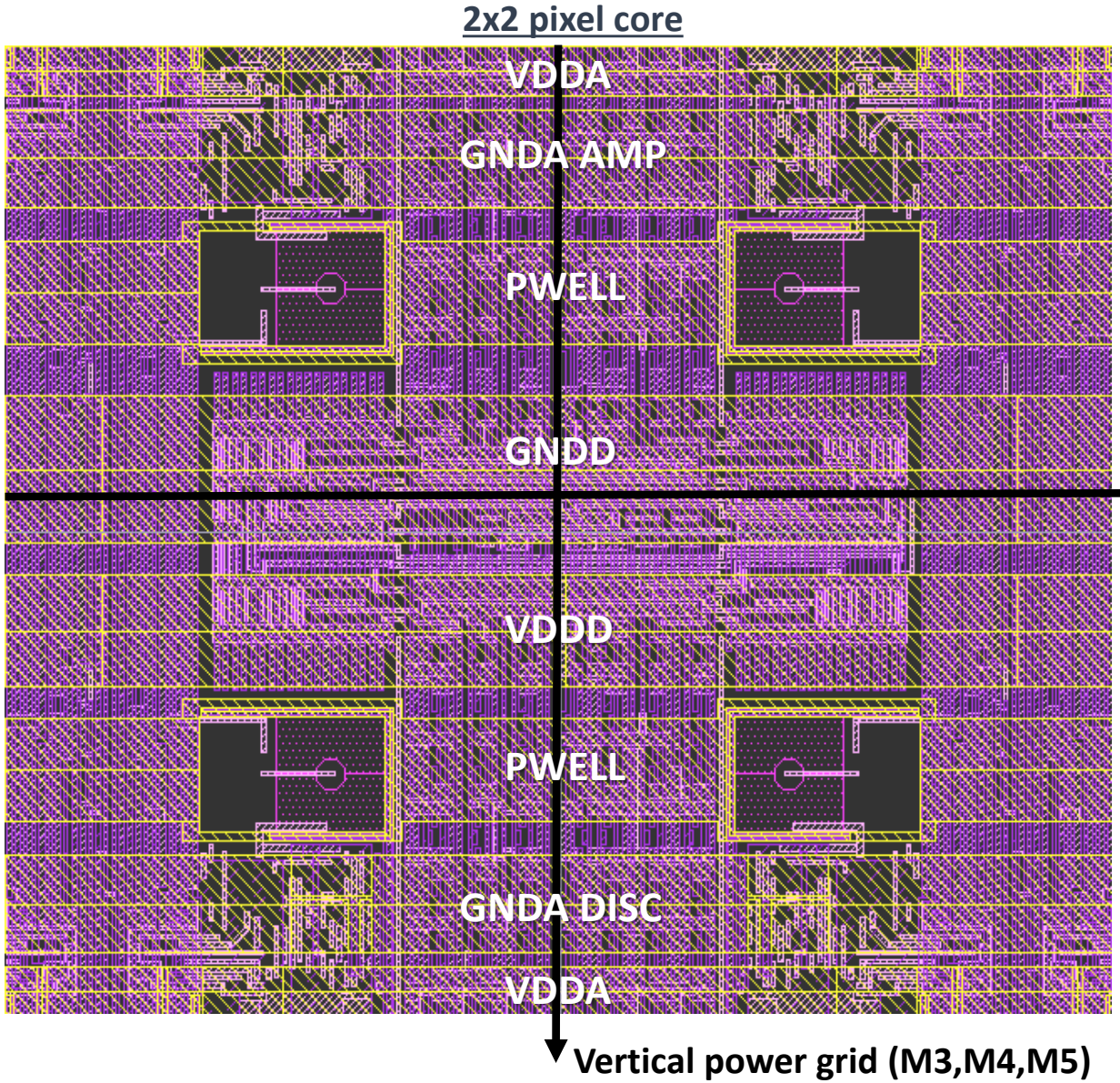
Bottom left corner



TJ-Monopix2 layout

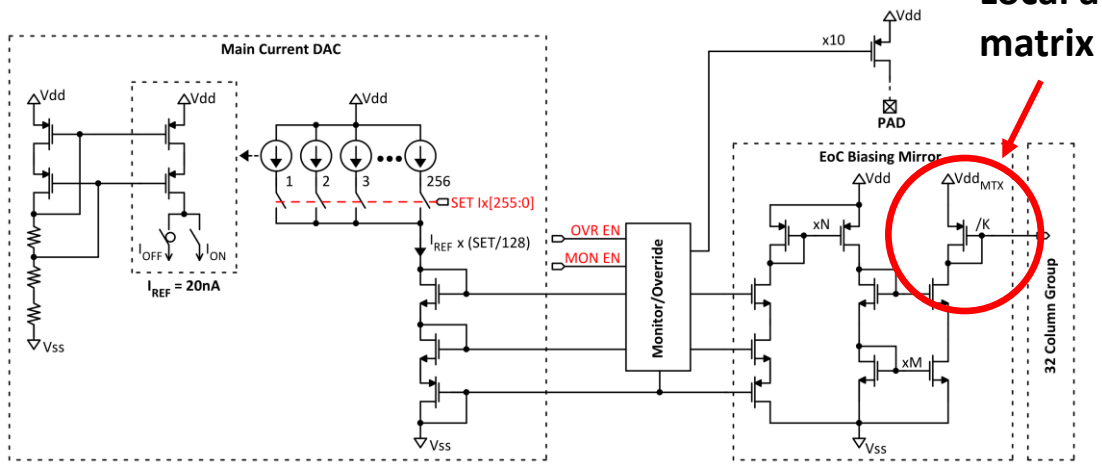


TJ-Monopix2 pixel



- Matrix power pads on both sides
- Horizontal distribution with TOP metal
- Voltage drop compensation (use local VDDA for the final IDAC mirror)
- Challenges for vertical distribution:
  - 5 matrix potentials have to pass through digital periphery + EoC + DAC mirrors (quite limited area + extra cross-coupling)
  - Pixel metal redesign + DAC EoC routing redesign (power also horizontal)
  - No voltage drop compensation (higher threshold dispersion)

Local analog matrix VDD



IDAC Mirror EoC

OBELIX power distribiution

- **TOP**
  - **Requires connection form both sides**
  - **Requires redesign of the pixel (powering)**
  - **Systematic threshold spread (ideas…)**

- **BOTTOM**
  - **Requires 7th metal and/or possibly RDL**
  - **Smaller pixel changes**
  - **Extra coupling, other ….**

General:

- **We can make pixel bit bigger (now is ~33x33um^2)**
- **We should use 7th metal**

FE is sensitive to voltage drop