Flex Status

A.Nomerotski, 4 May 2010

Outline

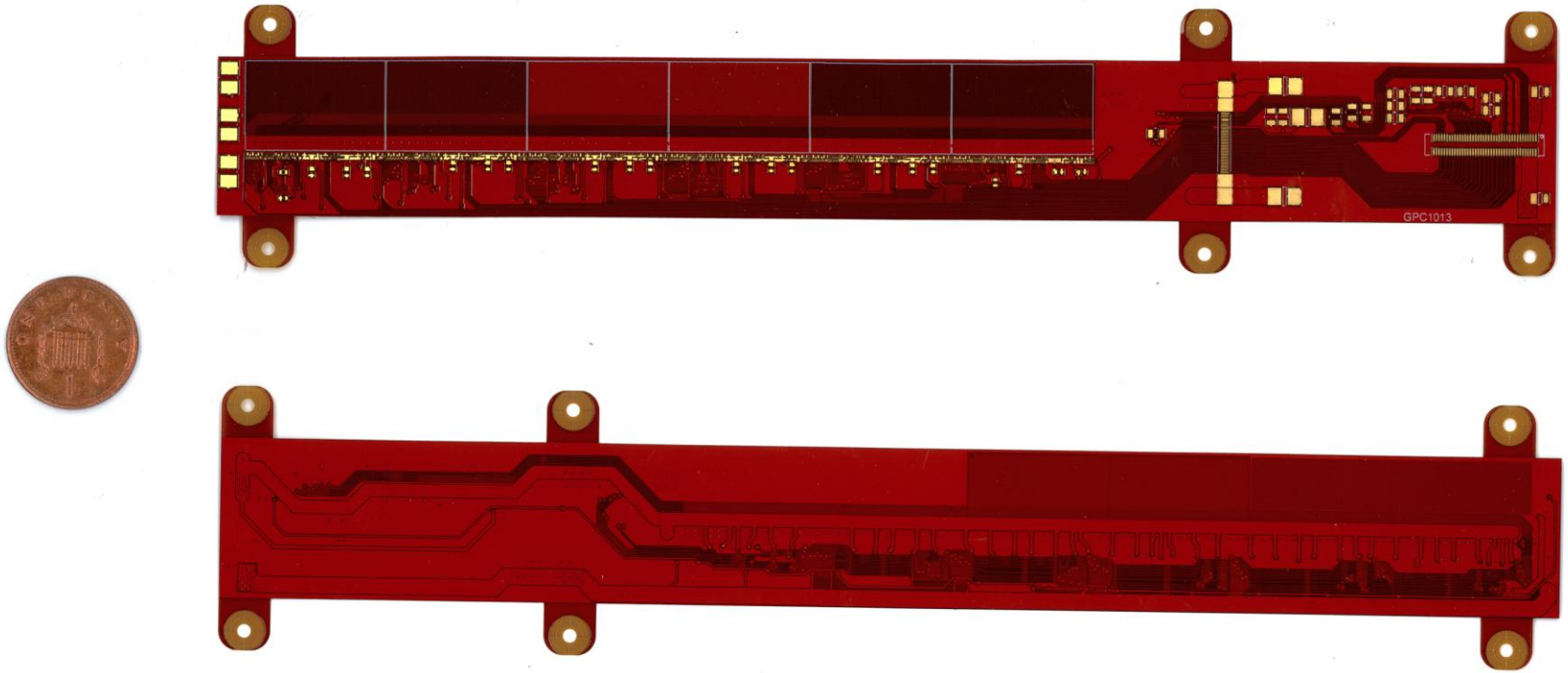
- Flex status
- Next steps

General Information

- Flex
  - Accommodates 6 sensors MIMOSA26
  - Dimensions 205.9 mm x 40.5 mm
  - Polyimide, 50 micron thick
  - Two metal layers, 17 um base copper
    - then plate another 25 um onto this surface copper and through the holes
    - Top: gold/nickel, wedge wire bonding compatible
  - Cover layer with total thickness of 50 um
    - 25 um polyimide film
    - 25 um acrylic adhesive
- Connector: MOLEX 80 pins
  - 0.4 mm pitch, 1 mm height (when plugged)
  - Flex part: plug Molex 502430-8010
  - Board part: receptacle Molex 502426-8010
- 6 ears for mechanical alignment, hole diameter 2 mm
- Stiffener under connector 25 mm x 24.8(?) mm

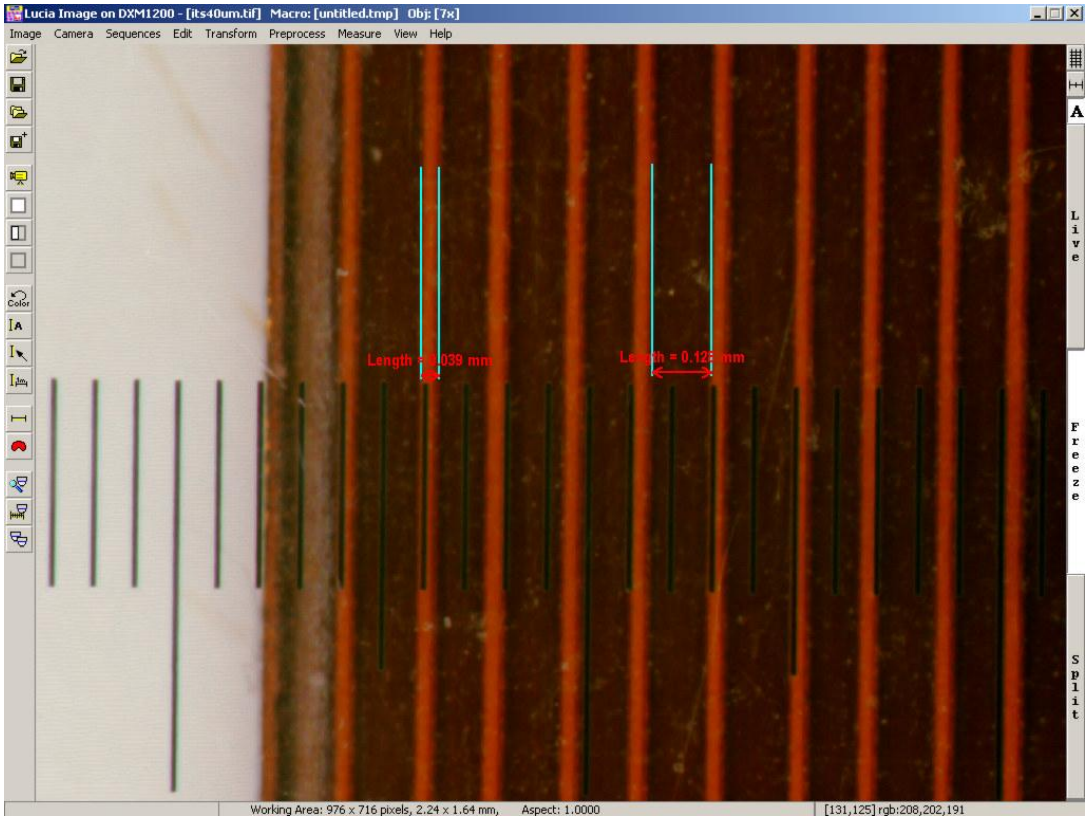
Flex Status

- 12 flexes received from Graphic
  - 10 in Oxford
  - 2 in Strasbourg



Issues with Flexes

- Overetching of lines
  - 75 → 40 micron, sent feedback to Graphic
- Assembly QA in Oxford

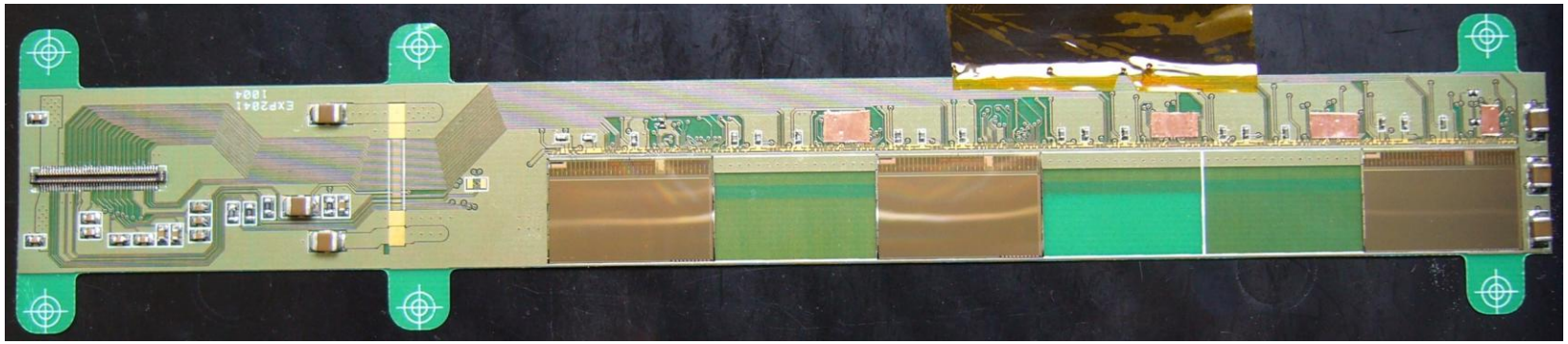


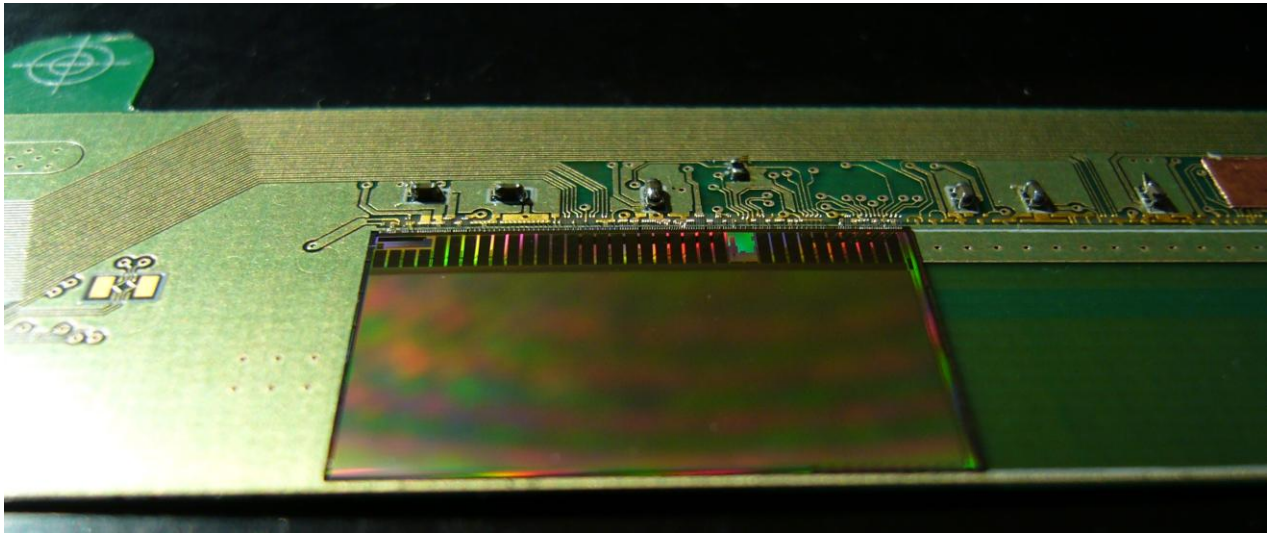
Other Flex Vendors

- Same design sent for quotation to
  - Cicorel (Switzerland)
  - OptiPrint (Switzerland)
  - Datex Instruments (US)
- Received quotation from OptiPrint
  - ~£2500 for 20 flexes – same as Graphic

PCB Flex

- 3 M26 mounted, one bonded
- Stiffener mounted





Next Steps

- PCB flex
  - Mount and bond another chip 6
  - Proper readout at Strasbourg
- Kapton flex
  - Check bonding
  - Check clock propagation
  - Decide how to proceed
- Flex layout
  - Investigate variations of layout (Pete)
    - Mirrored design
    - Traces under M26
    - Thinner traces(?)
  - Order from OptiPrint when PCB version is working (?)