

PLUME Flex Cable

12 January 2010

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General

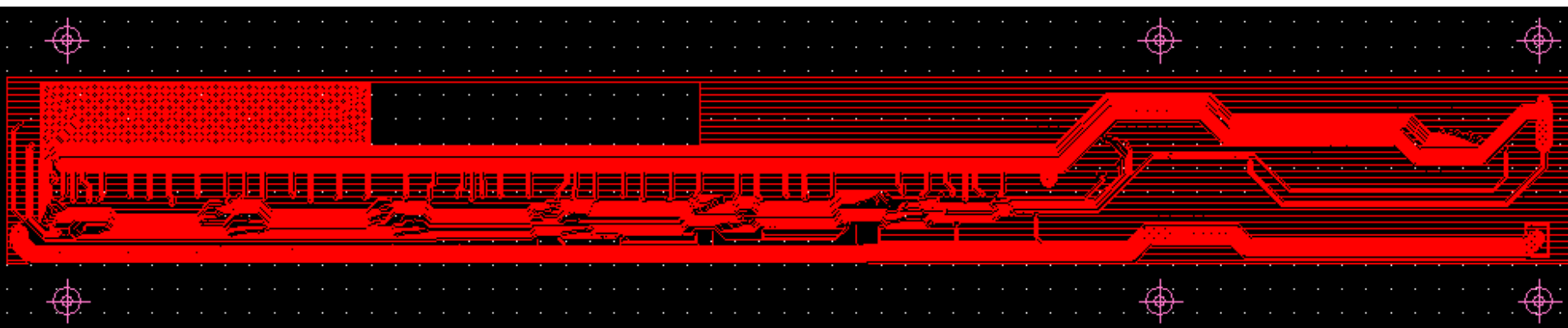
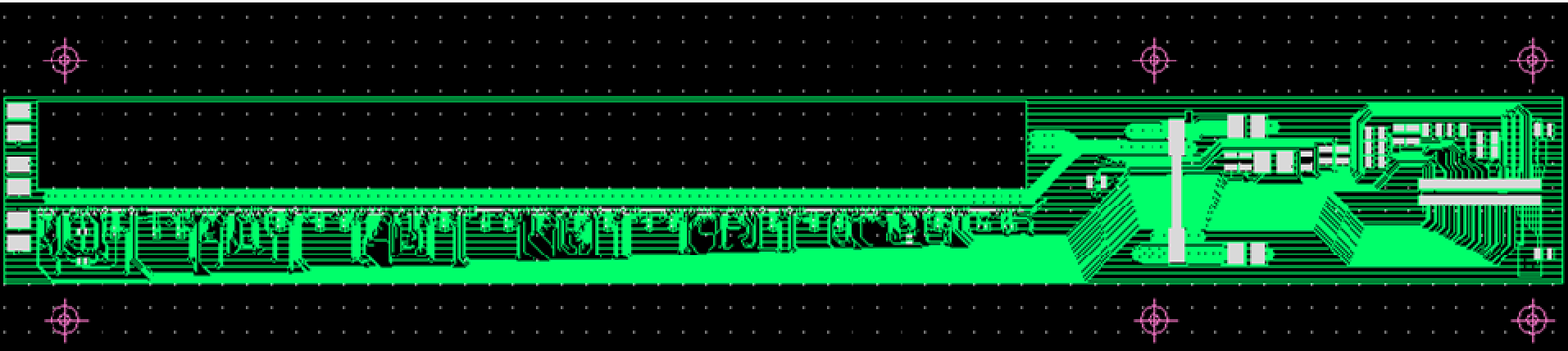
- Accommodates 6 sensors
- Two metal layers, top and bottom
- Kapton
- Connector: AVX 80 pins
- 6 ears for mechanical alignment

Since 4 Dec 2009 meeting:

- Phone meeting 10/12/09 to nail down last details
- Several iterations after
- Impedance studies
- Final version v75

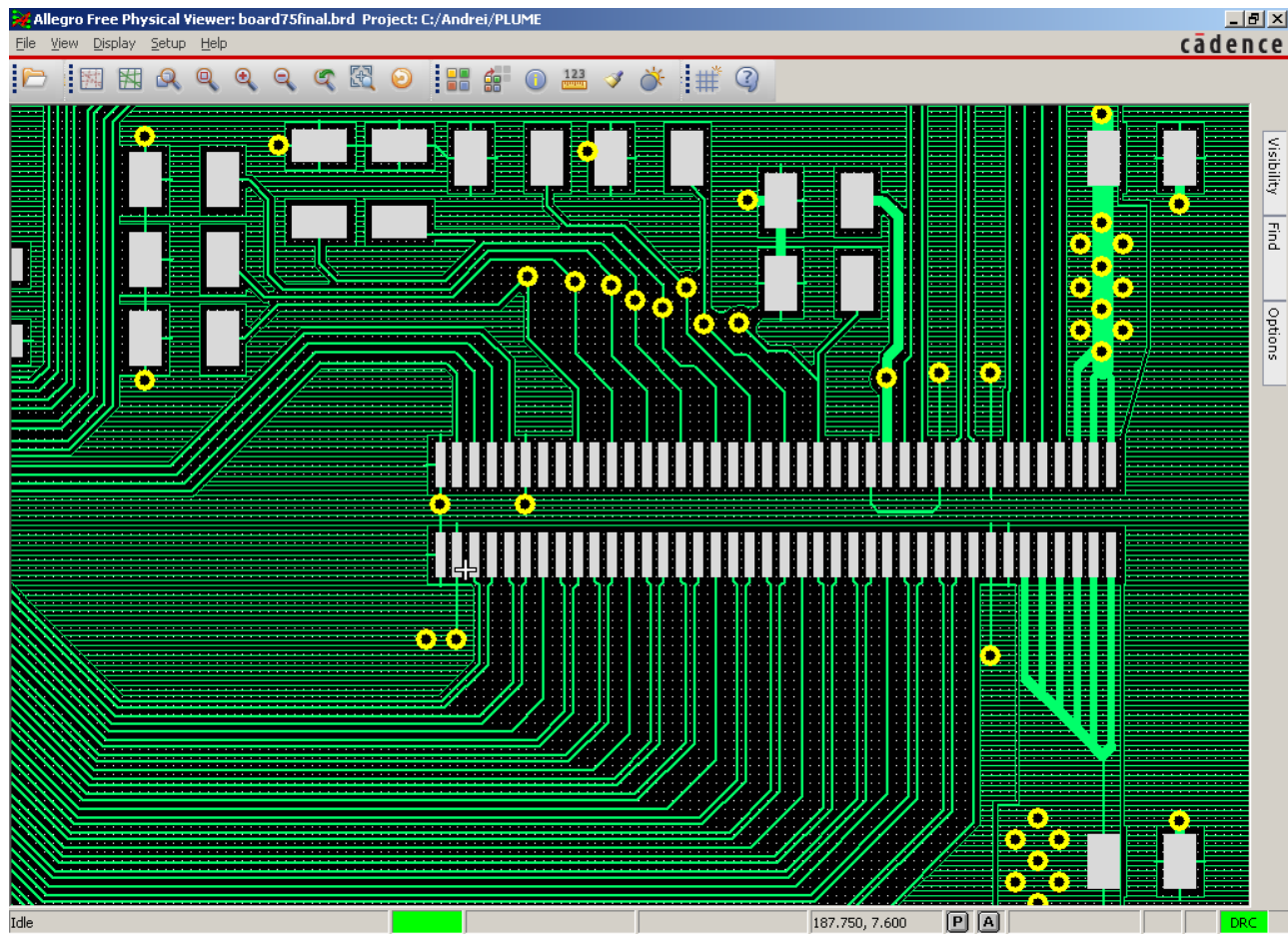
Top & Bottom Metals

- Final version: v75



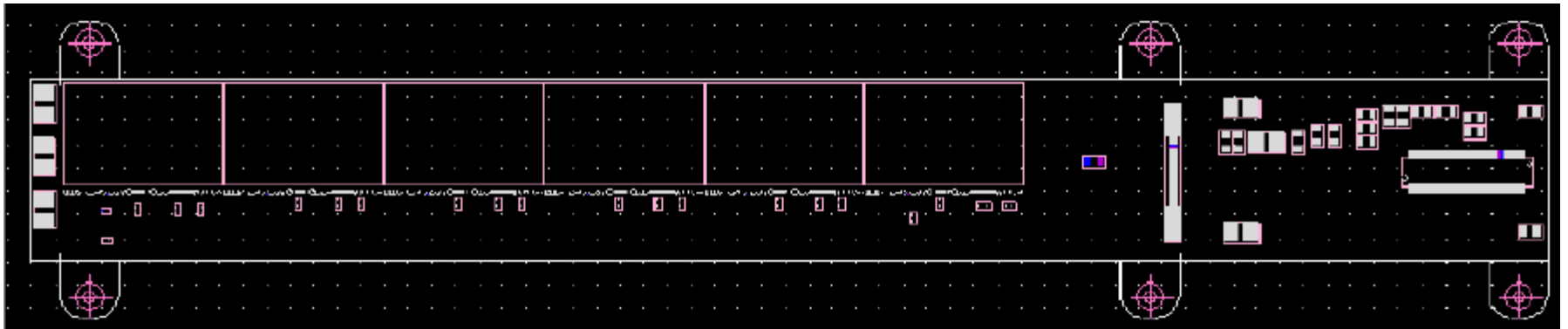
Connector

- 80-pin connector
- Added more pins for power



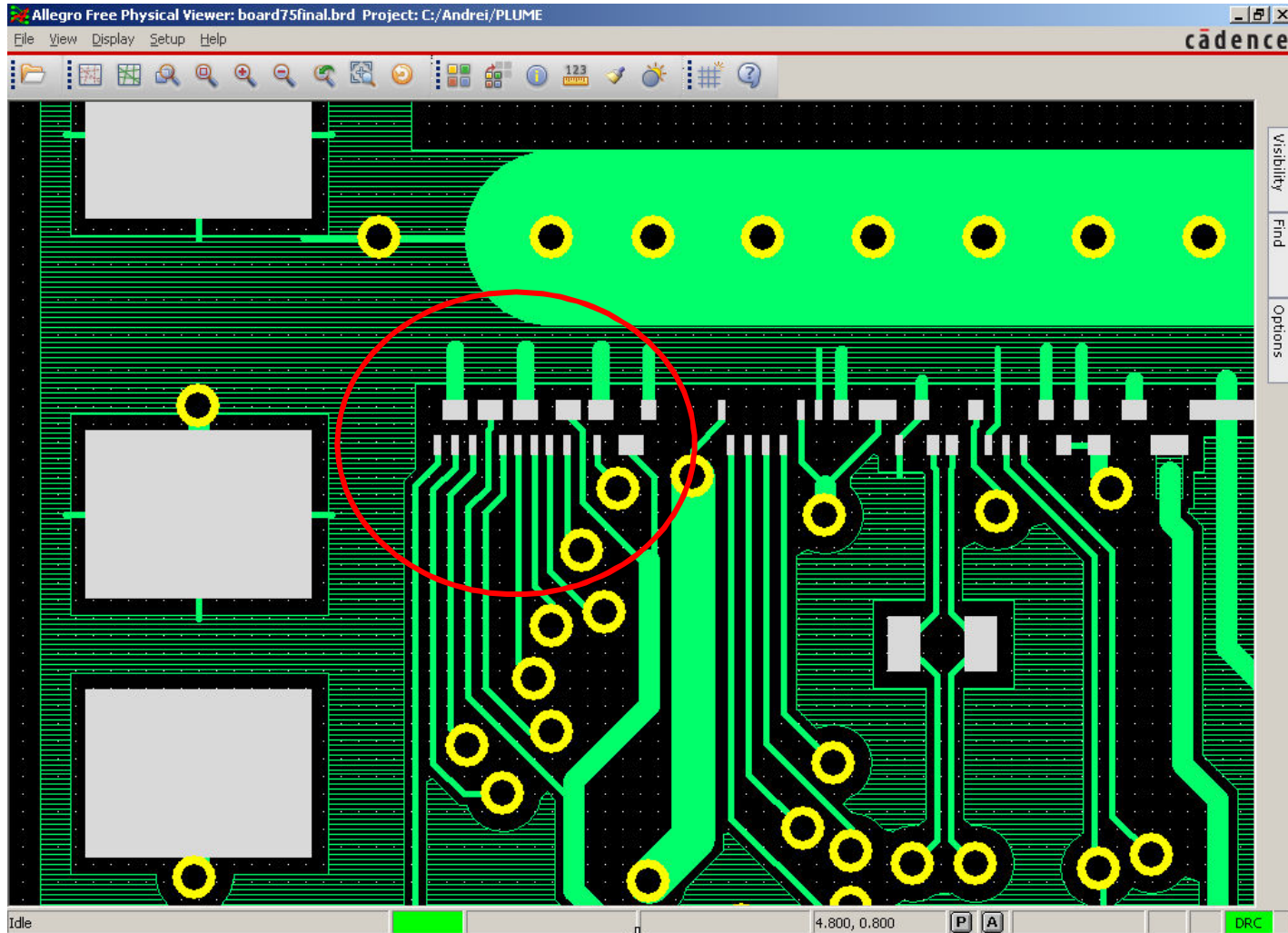
Components

- 0402 component size



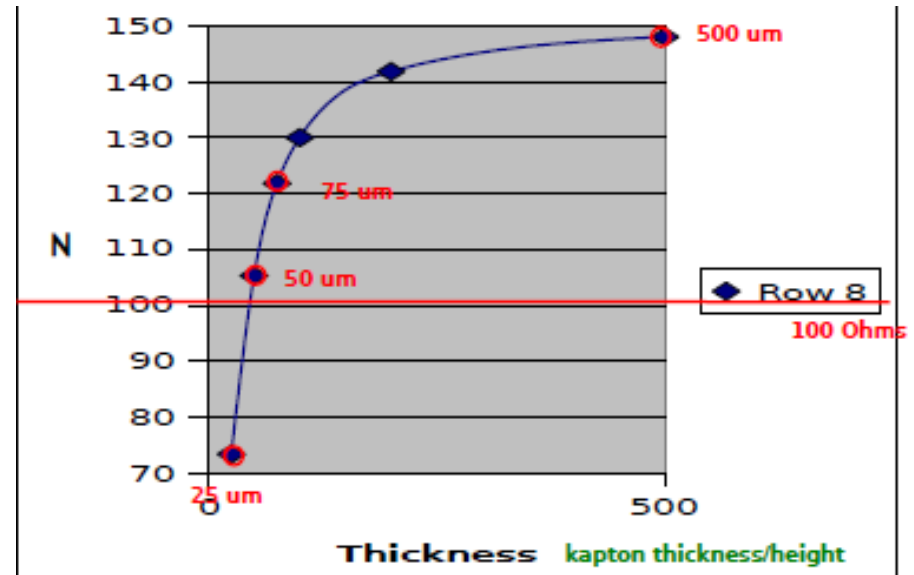
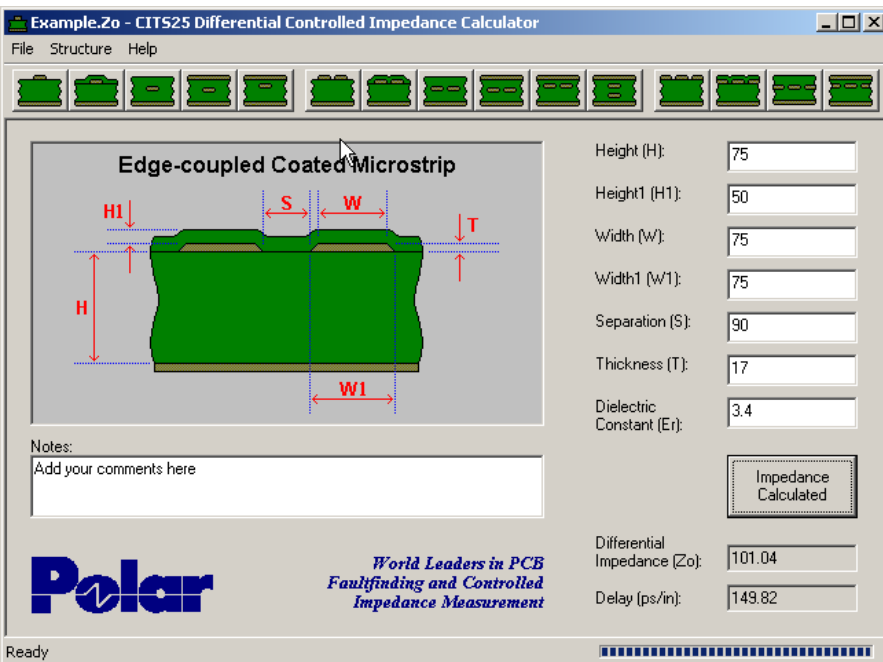
Bonding Pad Size

- Difficult to increase, left $200 \times 85 \text{ um}^2$, the tightest place circled below



Clock Impedance

- Used Polar for simulations
- Need 100 Ohm, should be feasible with 50 micron kapton, cover layers and reference gnd as close as possible
- Impedance for PCB could be different



Status & Plans

- v75 sent out for quotes to Graphic and Express Circuits
 - ◆ 4 PCB with minimum thickness (0.2 mm – need to confirm)
- Will be assembled and tested in Oxford (without M26)
 - ◆ Impedances and resistances
 - ◆ Connector
 - ◆ Ready to send to Strasbourg in February
- Flex
 - ◆ Get quotations from Graphic as initial PCB tests complete
 - ◆ Get quotations from Cicorel, OpticPrint, Datex Instruments
 - ◆ Order flexes in February