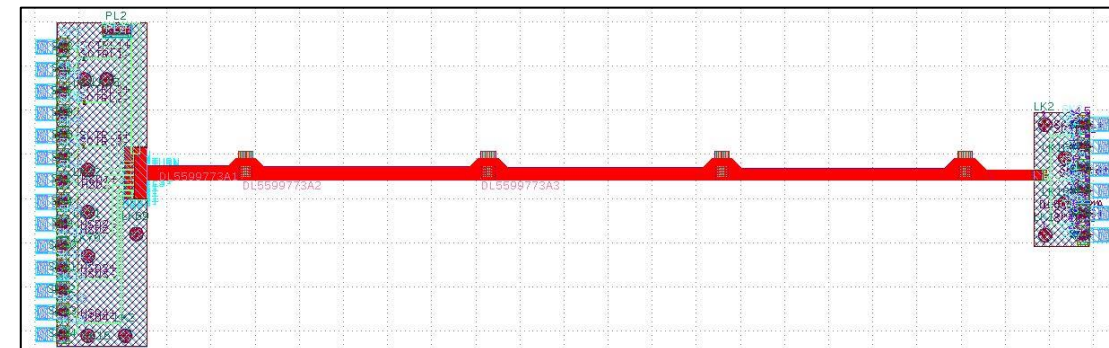
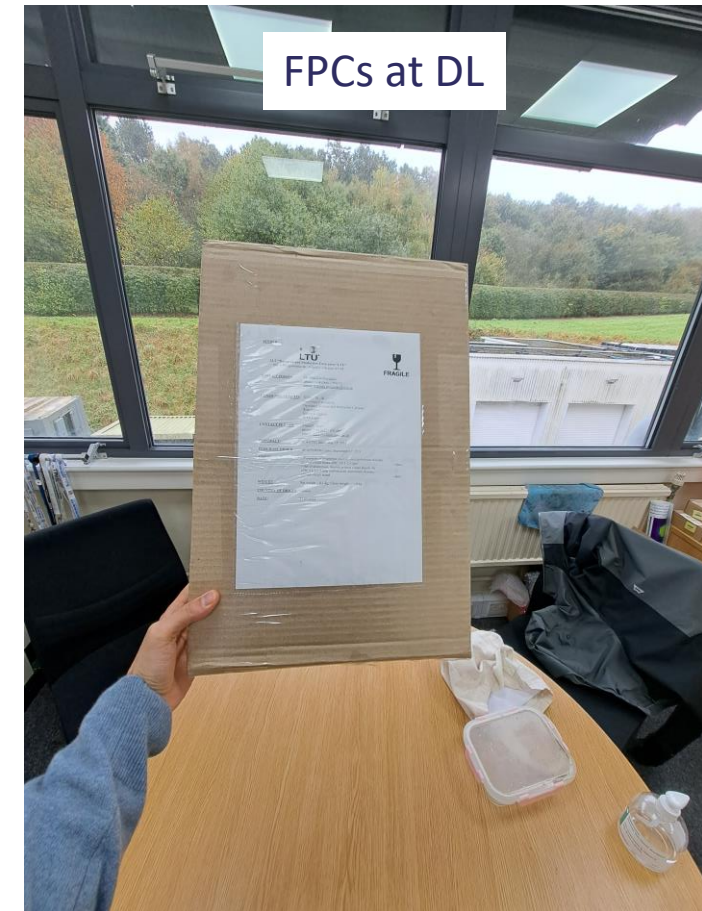


Update on FPC testing

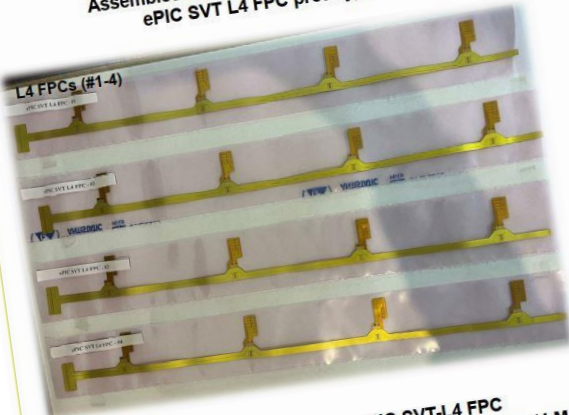
20241016 M.Borri

- Low TRL OB prototypes were delivered to DL on 08/10/2024.
- Ihor T. at RPE LTU gave a presentation on how to interconnect at WP3 meeting on 10/10/2024 .
- Interconnection of FPCs:
 - Waiting for feedback from the wedge supplier (SPT).
 - Decided to send samples to UoB;
 - Need dedicated meeting when wedge becomes available;
- Contacted the supplier of test equipment asking to deliver the oscilloscope and TDR in Jan. 2025
 - (hopefully, they will keep offering free usage for 1 month)
- Tests before Christmas will be performed with KCU105
 - First we will test M-FPC with interface cards (simplest option)

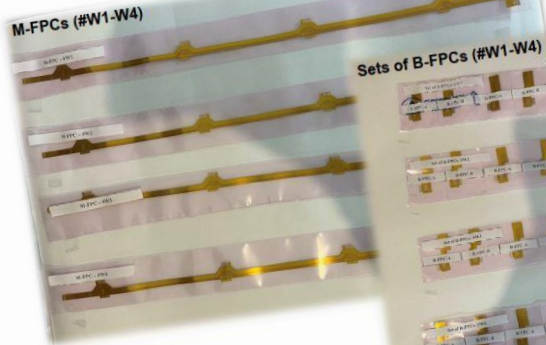


ePIC SVT L4 FPC prototypes and sets of FPCs shipped to STFC DIL

Assembled multilayered multicomponent ePIC SVT L4 FPC prototypes



Sets FPCs for ePIC SVT L4 FPC prototypes



Delivered FPCs:
 > 4 prototypes of assembled ePIC SVT-L4 FPC
 > 4 sets of FPC prototypes for ePIC SVT-L4 FPCs (4 M-FPCs+ 16 B-FPCs)

Note: all FPCs are packed in ESD protective film packages

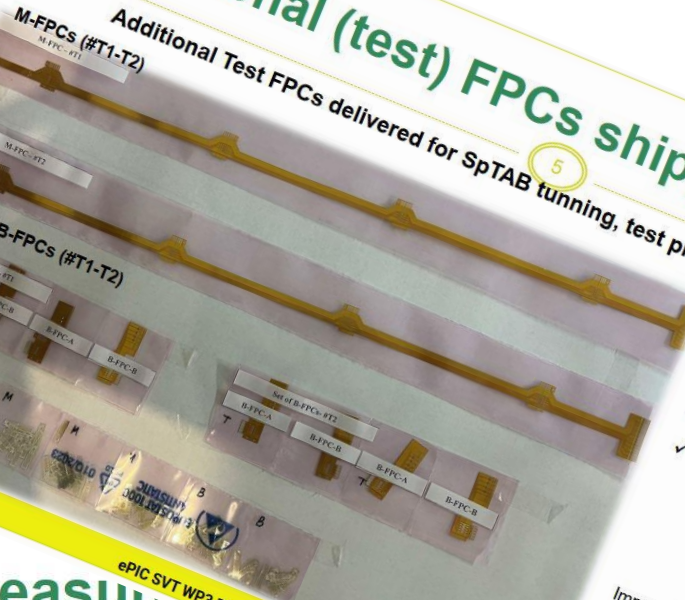
viatcheslav.borshchov@cern.ch, ihor.tymchuk@cern.ch

October 10, 2024

ePIC SVT WP3 Electrical Interfaces Meeting

October 10, 2024

Additional (test) FPCs shipped to STFC DIL



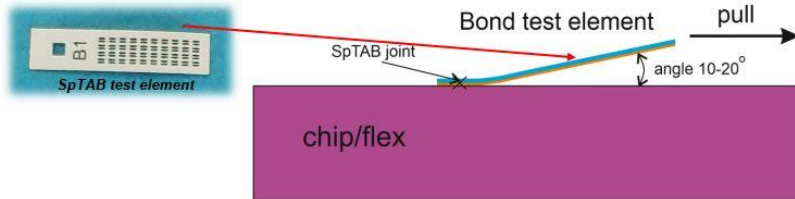
Additionally delivered:

- ✓ M-FPC - 2pcs
- ✓ B-FPCs - 2 sets (4x2 B-FPCs)
- ✓ SpTAB test elements - (~70pcs)

Important notes:
 ✓ M-FPC - OK (only a bit imperfectness in interlayer aligning presents)
 ✓ B-FPCs - 6 pcs are OK, only 2pcs are NOK (marked by letter T)

SpTAB: pull-strength measuring approach

❖ Pull-strength for SpTAB joins measuring approach

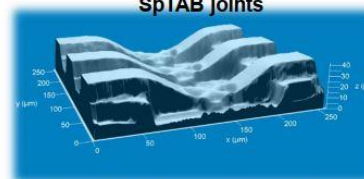


SpTABed traces



SpTAB joints are good quality when small pieces of aluminium are remaining on contact pads after pull tests

SpTAB joints



Note: figs are from ALICE ITS1 project (HIP, Helsinki)

❖ For measuring pull-strength of SpTAB joins can be used:

- > Manual tester (grammometer)
- > Portable tester
- > Industrial wire pull-tester (Delvotec, Bondtec, EMEA etc.)

pull-strength testers



October 10, 2024

ePIC SVT WP3 Electrical Interfaces Meeting

viatcheslav.borshchov@cern.ch,

ihor.tymchuk@cern.ch

