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Backplane Mapping Results & Documentation

EDMS: <https://edms.cern.ch/document/1889222/1>; Contact: Zishuo Yang
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Introduction

- This page includes documentation, mapping results, error-checking, as well as other files related to the Backplane mapping.
- The scope of mapping includes both **Pigtail(SEAF8) - DCB(SEAM) connection** and **DCB - DCB connection**, for both **true** and **mirror types** of Backplane.
- The documentation describes all **3 versions** of the Backplane, reflecting the mapping process of building up from the **UTa-Outer** to **Middle** to (most-populated) **Inner** version.

Documentation

- The documentation describes mapping methodology/design rules, as well as error-checking script.
- The documentation should be viewed along with the .xlsb spreadsheets below.
- The DCB SEAM connector (400-pin) pinout is attached.

Mapping results

- Mapping results for true and mirrored type backplanes are separately listed below. (For each type, there are 2 spreadsheet files and 1 netlist file.)

true type (Finalized)

- - ◆ From DCB to Pigtail&DCB: This .xlsb contains the complete mapping.
 - ◆ From Pigtail to DCB: This .xlsb contains only DCB-Pigtail mapping. Use as reference.
 - ◆ Netlist: CSV file for true-type complete connections.

mirror type (Finalized)

- - ◆ From DCB to Pigtail&DCB: This .xlsb contains the complete mapping.
 - ◆ From Pigtail to DCB: This .xlsb contains only Pigtail-DCB mapping. Use as reference.
 - ◆ Netlist: CSV file for mirror-type complete connections (from DCB to PT&DCB).

Error-checking

- A python script was written for extensive error-checking on the netlists. No error was found.
- Documentation for error-checking python script.
 - ◆ The script runs over two csv files: the complete netlist file (DCB) attached above, and the DCB-Pigtail file (PT.csv) below.

true type

- - ◆ Script
 - ◆ PT_trueType.csv

mirror type

- ♦ Script
- ♦ PT_mirrorType.csv

Relevant info

* Additional files with relevant info are attached to this page:

- ♦ SEAF8_footprint_forSEAM8Reference.pdf
- ♦ SEAF8_Orientation_forLayout + pigtail flowchart [↗](#)

-- ZishuoYang - 2018-07-30

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