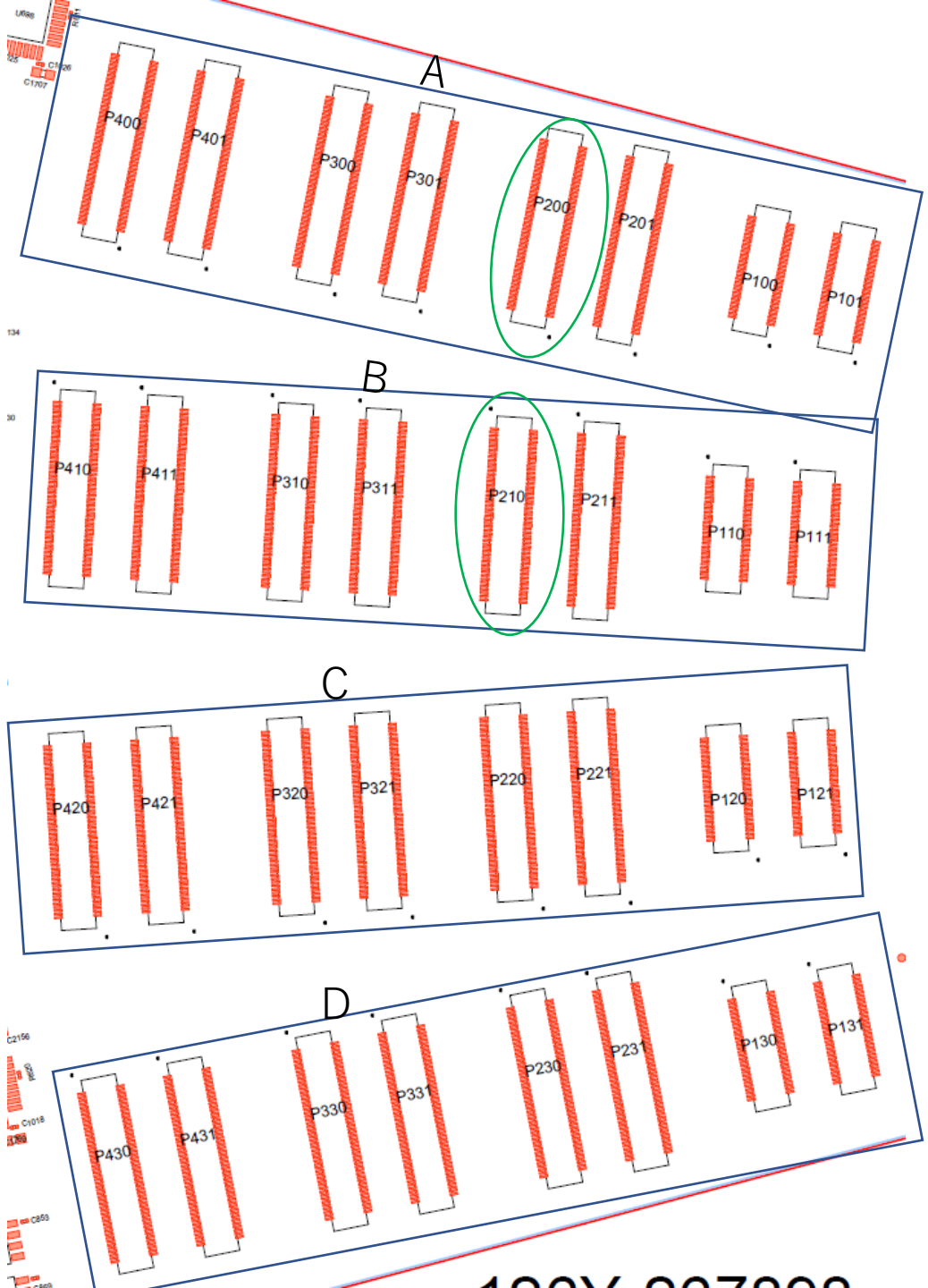

Connector orientation on ROC

- 2 different type of connector orientation for A/C and B/D
  - Dot(•) around the connector indicates 1st pin of the connector
  - Connectors for B/D are 180° rotated
  - The conversion cables we have are made for A/C.

- Check if the conversion cable for A/C is compatible with that for B/C in the next page
  - Name of lines for A/C is the same to that for HDI.
  - Compare the name of lines for A with that for B.
    - If all the lines in the conversion board (A) are same with that for B, the current conversion board is used for B

- 比較図の赤字は、FPGA変更で対応できない部分

200 (A)

DGND	51	50	AGND
Data_Sta1_Wedge0_Side0_Chip01_Out1p	52	49	Data_Sta1_Wedge0_Side0_Chip01_Out1p
Data_Sta1_Wedge0_Side0_Chip01_Out1n	53	48	Data_Sta1_Wedge0_Side0_Chip01_Out1n
Data_Sta1_Wedge0_Side0_Chip02_Out1p	54	47	Data_Sta1_Wedge0_Side0_Chip02_Out1p
Data_Sta1_Wedge0_Side0_Chip02_Out1n	55	46	Data_Sta1_Wedge0_Side0_Chip02_Out1n
Data_Sta1_Wedge0_Side0_Chip03_Out1p	56	45	Data_Sta1_Wedge0_Side0_Chip03_Out1p
Data_Sta1_Wedge0_Side0_Chip03_Out1n	57	44	Data_Sta1_Wedge0_Side0_Chip03_Out1n
Data_Sta1_Wedge0_Side0_Chip04_Out1p	58	43	Data_Sta1_Wedge0_Side0_Chip04_Out1p
Data_Sta1_Wedge0_Side0_Chip04_Out1n	59	42	Data_Sta1_Wedge0_Side0_Chip04_Out1n
DGND	60	41	Cal_Inject_Sta1_Wedge0_Side0
DGND	61	40	AGND
Data_Sta1_Wedge0_Side0_Chip05_Out1p	62	39	Data_Sta1_Wedge0_Side0_Chip05_Out0p
Data_Sta1_Wedge0_Side0_Chip05_Out1n	63	38	Data_Sta1_Wedge0_Side0_Chip05_Out0n
Data_Sta1_Wedge0_Side0_Chip07_Out1p	64	37	Data_Sta1_Wedge0_Side0_Chip07_Out0p
Data_Sta1_Wedge0_Side0_Chip07_Out1n	65	36	Data_Sta1_Wedge0_Side0_Chip07_Out0n
Data_Sta1_Wedge0_Side0_Chip09_Out1p	66	35	Data_Sta1_Wedge0_Side0_Chip09_Out0p
Data_Sta1_Wedge0_Side0_Chip09_Out1n	67	34	Data_Sta1_Wedge0_Side0_Chip09_Out0n
Data_Sta1_Wedge0_Side0_Chip11_Out1p	68	33	Data_Sta1_Wedge0_Side0_Chip11_Out0p
Data_Sta1_Wedge0_Side0_Chip11_Out1n	69	32	Data_Sta1_Wedge0_Side0_Chip11_Out0n
Data_Sta1_Wedge0_Side0_Chip13_Out1p	70	31	Data_Sta1_Wedge0_Side0_Chip13_Out0p
Data_Sta1_Wedge0_Side0_Chip13_Out1n	71	30	Data_Sta1_Wedge0_Side0_Chip13_Out0n
DGND	72	29	AGND
DGND	73	28	AGND
V2.5_D	74	27	V2.5_A
V2.5_D	75	26	V2.5_A
V2.5_D	76	25	V2.5_A
V2.5_D	77	24	V2.5_A
DGND	78	23	AGND
DGND	79	22	AGND
Data_Sta1_Wedge0_Side1_Chip13_Out0n	80	21	Data_Sta1_Wedge0_Side1_Chip13_Out1n
Data_Sta1_Wedge0_Side1_Chip13_Out0p	81	20	Data_Sta1_Wedge0_Side1_Chip13_Out1p
Data_Sta1_Wedge0_Side1_Chip11_Out0n	82	19	Data_Sta1_Wedge0_Side1_Chip11_Out1n
Data_Sta1_Wedge0_Side1_Chip11_Out0p	83	18	Data_Sta1_Wedge0_Side1_Chip11_Out1p
Data_Sta1_Wedge0_Side1_Chip09_Out0n	84	17	Data_Sta1_Wedge0_Side1_Chip09_Out1n
Data_Sta1_Wedge0_Side1_Chip09_Out0p	85	16	Data_Sta1_Wedge0_Side1_Chip09_Out1p
Data_Sta1_Wedge0_Side1_Chip07_Out0n	86	15	Data_Sta1_Wedge0_Side1_Chip07_Out1n
Data_Sta1_Wedge0_Side1_Chip07_Out0p	87	14	Data_Sta1_Wedge0_Side1_Chip07_Out1p
Data_Sta1_Wedge0_Side1_Chip05_Out0n	88	13	Data_Sta1_Wedge0_Side1_Chip05_Out1n
Data_Sta1_Wedge0_Side1_Chip05_Out0p	89	12	Data_Sta1_Wedge0_Side1_Chip05_Out1p
DGND	90	11	AGND
DGND	91	10	Cal_Inject_Sta1_Wedge0_Side1
Data_Sta1_Wedge0_Side1_Chip04_Out1n	92	9	Data_Sta1_Wedge0_Side1_Chip04_Out1n
Data_Sta1_Wedge0_Side1_Chip04_Out1p	93	8	Data_Sta1_Wedge0_Side1_Chip04_Out1p
Data_Sta1_Wedge0_Side1_Chip03_Out1n	94	7	Data_Sta1_Wedge0_Side1_Chip03_Out1n
Data_Sta1_Wedge0_Side1_Chip03_Out1p	95	6	Data_Sta1_Wedge0_Side1_Chip03_Out1p
Data_Sta1_Wedge0_Side1_Chip02_Out1n	96	5	Data_Sta1_Wedge0_Side1_Chip02_Out1n
Data_Sta1_Wedge0_Side1_Chip02_Out1p	97	4	Data_Sta1_Wedge0_Side1_Chip02_Out1p
Data_Sta1_Wedge0_Side1_Chip01_Out1n	98	3	Data_Sta1_Wedge0_Side1_Chip01_Out1n
Data_Sta1_Wedge0_Side1_Chip01_Out1p	99	2	Data_Sta1_Wedge0_Side1_Chip01_Out1p
DGND	100	1	AGND

210 (B)

AGND	1	100	DGND
Data_Sta1_Wedge1_Side1_Chip01_Out1p	2	99	Data_Sta1_Wedge1_Side1_Chip01_Out1p
Data_Sta1_Wedge1_Side1_Chip01_Out1n	3	98	Data_Sta1_Wedge1_Side1_Chip01_Out1n
Data_Sta1_Wedge1_Side1_Chip02_Out1p	4	97	Data_Sta1_Wedge1_Side1_Chip02_Out1p
Data_Sta1_Wedge1_Side1_Chip02_Out1n	5	96	Data_Sta1_Wedge1_Side1_Chip02_Out1n
Data_Sta1_Wedge1_Side1_Chip03_Out1p	6	95	Data_Sta1_Wedge1_Side1_Chip03_Out1p
Data_Sta1_Wedge1_Side1_Chip03_Out1n	7	94	Data_Sta1_Wedge1_Side1_Chip03_Out1n
Data_Sta1_Wedge1_Side1_Chip04_Out1p	8	93	Data_Sta1_Wedge1_Side1_Chip04_Out1p
Data_Sta1_Wedge1_Side1_Chip04_Out1n	9	92	Data_Sta1_Wedge1_Side1_Chip04_Out1n
Cal_Inject_Sta1_Wedge1_Side1	10	91	DGND
AGND	11	90	DGND
Data_Sta1_Wedge1_Side1_Chip05_Out1p	12	89	Data_Sta1_Wedge1_Side1_Chip05_Out0p
Data_Sta1_Wedge1_Side1_Chip05_Out1n	13	88	Data_Sta1_Wedge1_Side1_Chip05_Out0n
Data_Sta1_Wedge1_Side1_Chip07_Out1p	14	87	Data_Sta1_Wedge1_Side1_Chip07_Out0p
Data_Sta1_Wedge1_Side1_Chip07_Out1n	15	86	Data_Sta1_Wedge1_Side1_Chip07_Out0n
Data_Sta1_Wedge1_Side1_Chip09_Out1p	16	85	Data_Sta1_Wedge1_Side1_Chip09_Out0p
Data_Sta1_Wedge1_Side1_Chip09_Out1n	17	84	Data_Sta1_Wedge1_Side1_Chip09_Out0n
Data_Sta1_Wedge1_Side1_Chip11_Out1p	18	83	Data_Sta1_Wedge1_Side1_Chip11_Out0p
Data_Sta1_Wedge1_Side1_Chip11_Out1n	19	82	Data_Sta1_Wedge1_Side1_Chip11_Out0n
Data_Sta1_Wedge1_Side1_Chip13_Out1p	20	81	Data_Sta1_Wedge1_Side1_Chip13_Out0p
Data_Sta1_Wedge1_Side1_Chip13_Out1n	21	80	Data_Sta1_Wedge1_Side1_Chip13_Out0n
AGND	22	79	DGND
AGND	23	78	DGND
V2.5_A	24	77	V2.5_D
V2.5_A	25	76	V2.5_D
V2.5_A	26	75	V2.5_D
V2.5_A	27	74	V2.5_D
AGND	28	73	DGND
AGND	29	72	DGND
Data_Sta1_Wedge1_Side0_Chip13_Out0n	30	71	Data_Sta1_Wedge1_Side0_Chip13_Out1n
Data_Sta1_Wedge1_Side0_Chip13_Out0p	31	70	Data_Sta1_Wedge1_Side0_Chip13_Out1p
Data_Sta1_Wedge1_Side0_Chip11_Out0n	32	69	Data_Sta1_Wedge1_Side0_Chip11_Out1n
Data_Sta1_Wedge1_Side0_Chip11_Out0p	33	68	Data_Sta1_Wedge1_Side0_Chip11_Out1p
Data_Sta1_Wedge1_Side0_Chip09_Out0n	34	67	Data_Sta1_Wedge1_Side0_Chip09_Out1n
Data_Sta1_Wedge1_Side0_Chip09_Out0p	35	66	Data_Sta1_Wedge1_Side0_Chip09_Out1p
Data_Sta1_Wedge1_Side0_Chip07_Out0n	36	65	Data_Sta1_Wedge1_Side0_Chip07_Out1n
Data_Sta1_Wedge1_Side0_Chip07_Out0p	37	64	Data_Sta1_Wedge1_Side0_Chip07_Out1p
Data_Sta1_Wedge1_Side0_Chip05_Out0n	38	63	Data_Sta1_Wedge1_Side0_Chip05_Out1n
Data_Sta1_Wedge1_Side0_Chip05_Out0p	39	62	Data_Sta1_Wedge1_Side0_Chip05_Out1p
AGND	40	61	DGND
Cal_Inject_Sta1_Wedge1_Side0	41	60	DGND
Data_Sta1_Wedge1_Side0_Chip04_Out1n	42	59	Data_Sta1_Wedge1_Side0_Chip04_Out1n
Data_Sta1_Wedge1_Side0_Chip04_Out1p	43	58	Data_Sta1_Wedge1_Side0_Chip04_Out1p
Data_Sta1_Wedge1_Side0_Chip03_Out1n	44	57	Data_Sta1_Wedge1_Side0_Chip03_Out1n
Data_Sta1_Wedge1_Side0_Chip03_Out1p	45	56	Data_Sta1_Wedge1_Side0_Chip03_Out1p
Data_Sta1_Wedge1_Side0_Chip02_Out1n	46	55	Data_Sta1_Wedge1_Side0_Chip02_Out1n
Data_Sta1_Wedge1_Side0_Chip02_Out1p	47	54	Data_Sta1_Wedge1_Side0_Chip02_Out1p
Data_Sta1_Wedge1_Side0_Chip01_Out1n	48	53	Data_Sta1_Wedge1_Side0_Chip01_Out1n
Data_Sta1_Wedge1_Side0_Chip01_Out1p	49	52	Data_Sta1_Wedge1_Side0_Chip01_Out1p
AGND	50	51	DGND

From the comparison

- Results:
  - Analog power in A is connected to the digital power line in B.
    - Analog and digital powers are supplied by their own regulators on ROC.
  - Analog GND in A is connected to the digital GND line in B.
  - A line for the test pulse is connected to D-GND

- Summary
  - We need to make new conversion cable for B/D