

Production Status

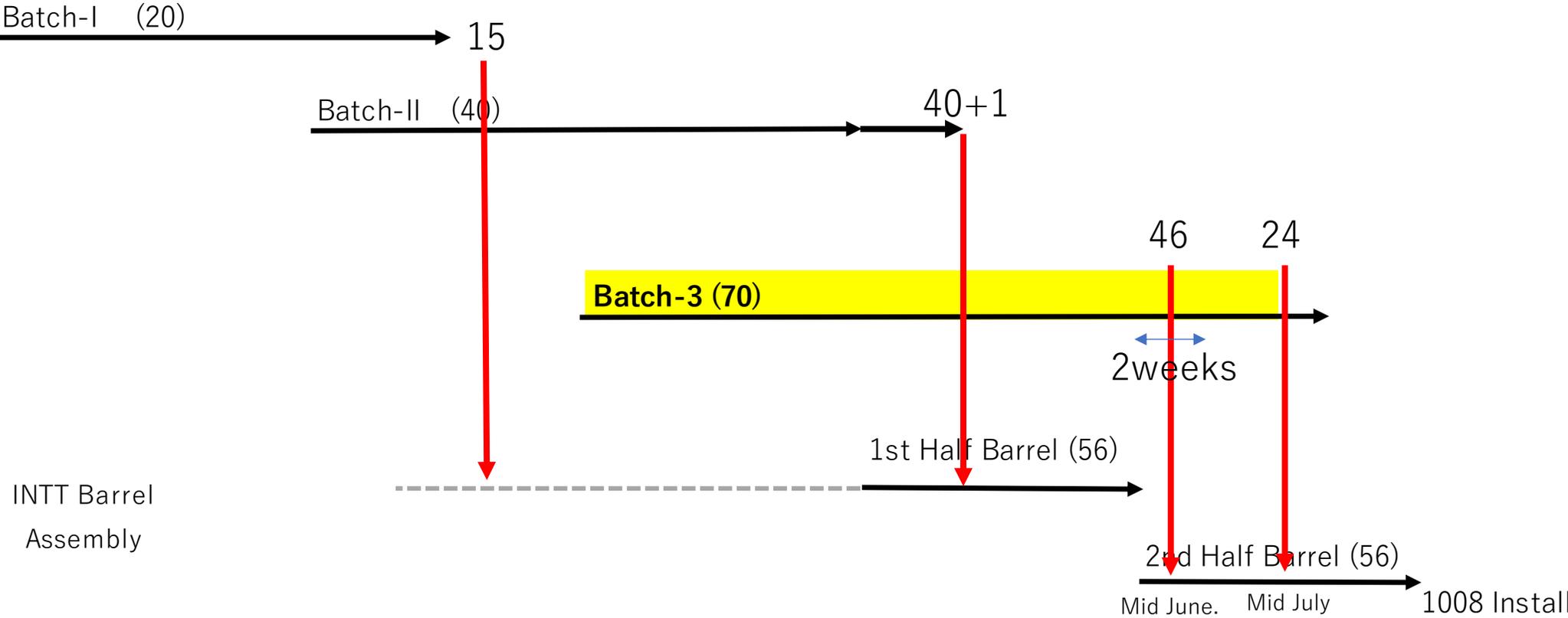
RIKEN/RBRC

Itaru Nakagawa

Bus Extender Production Batch-II, III

Schedule

2021 11 12 2022 1 2 3 4 5 6 7 8 9



Total Qty. in BNL	15	56	102	126
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INTT Production Status

Today

* Beyond 112 are spares

2022	1	2	3	4	5	6	7	8	Qty*	Status
Silicon									135	Done
HDI									176	Done
Stave									204	Done
Bus Extender		Batch-1(20)							130	Production
			Contract			Batch-2(40)				
								Batch-3(70)		
Conversion Cable	Prototype-1								130	Prototype
			Contract			Prototype-2				
						Test		Production (130)		
Beam Clock Board	Design		Public bid						20	Prototype
						Preproduction(2)		Test		
				Parts procurement		fabrication		Production(18)		
Barrel Assembly										

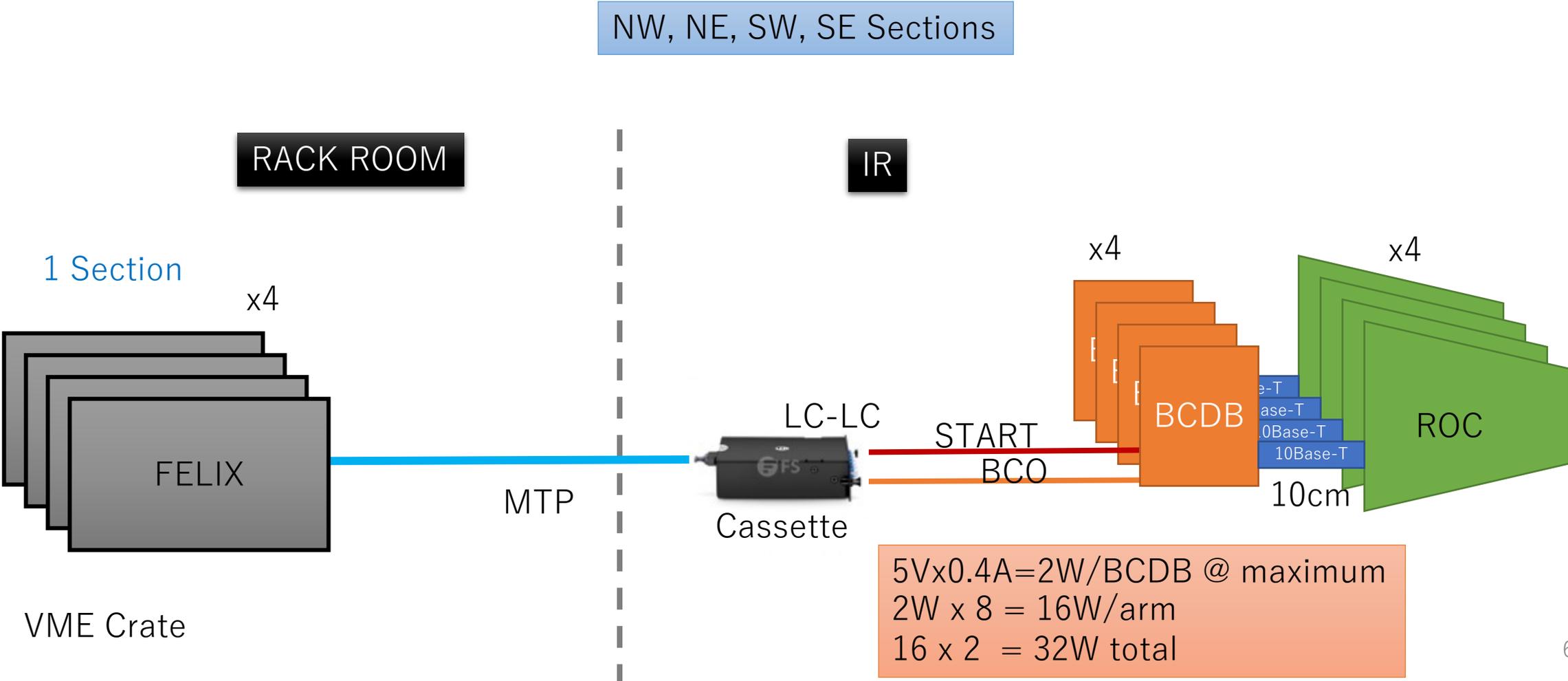
Exporting μ -Coax Prototype-II to BNL



BCDB Update

FELIX BCLK Configuration

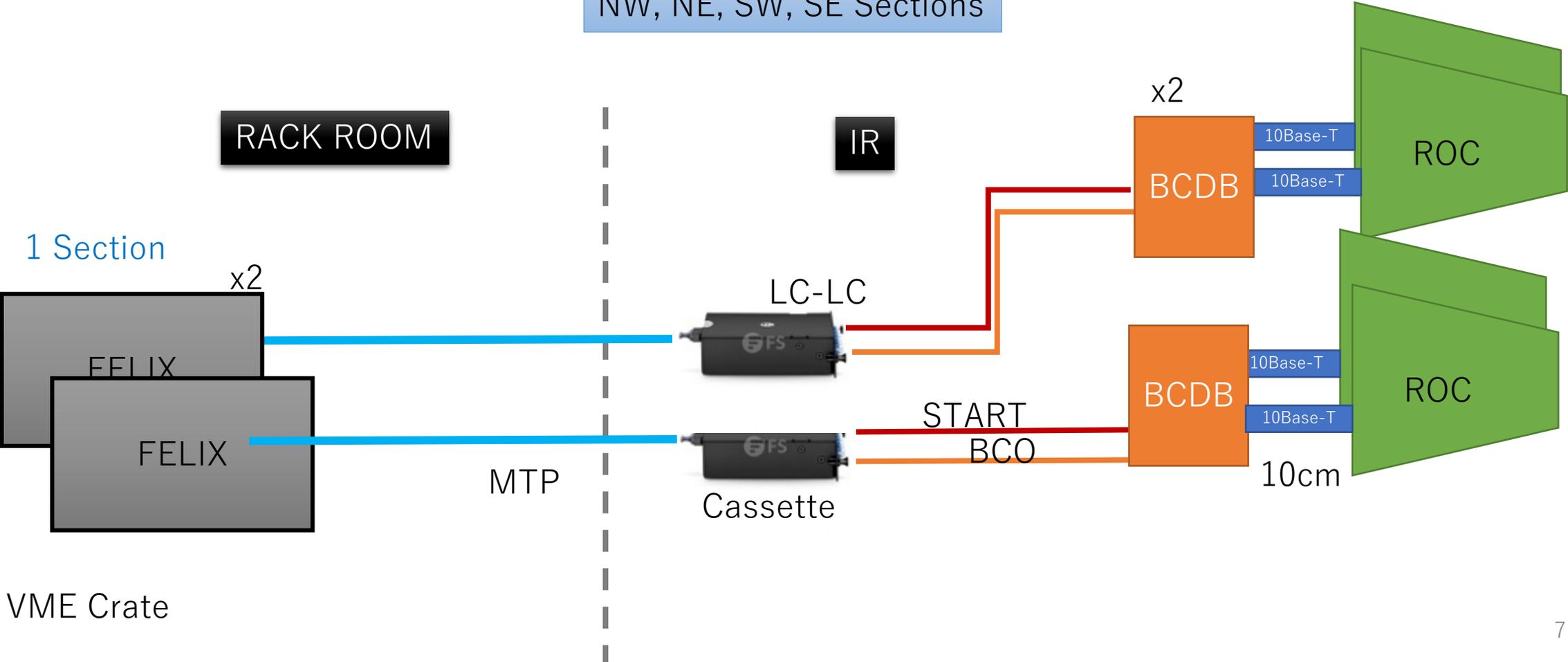
- Assuming 1 FELIX is assigned to each ROC (confirmed by Sioan).



FELIX BCLK Configuration

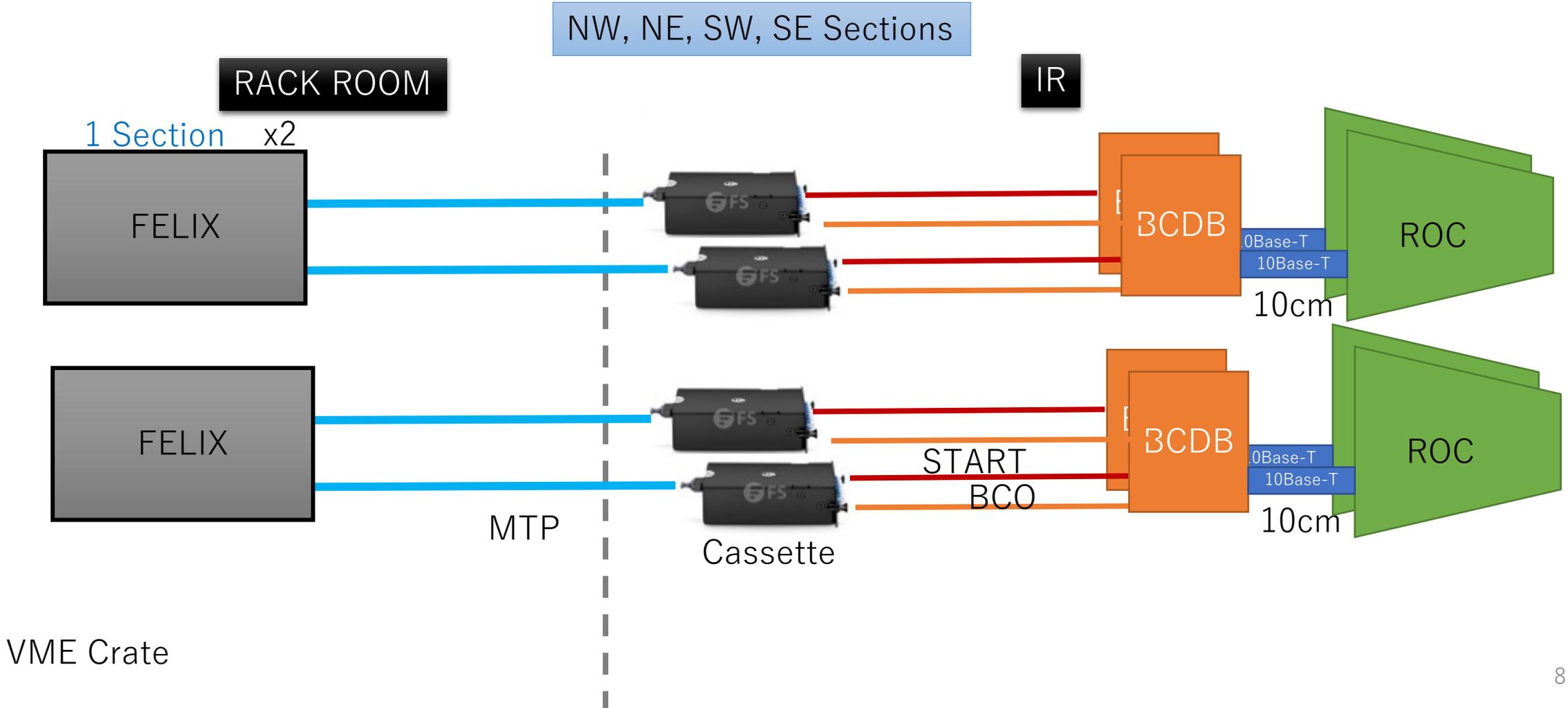
- The latest configuration is 2ROC boards/1 Felix = 2ROC boards/1BCDB.
- We will end up with 8 BCDB boards (Production is 20).

NW, NE, SW, SE Sections

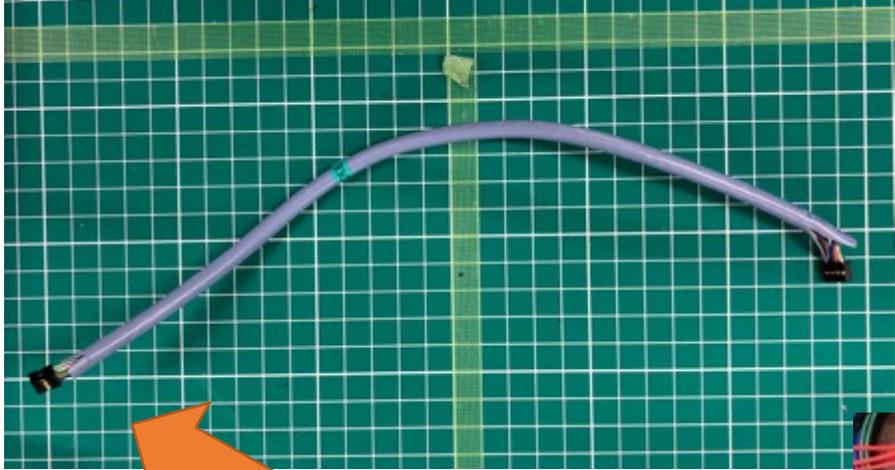


FELIX BCLK Configuration

- Not sure if it is worthy to have 2 BCDB/1 Felix.



Custom Made Beam Clock Cable



16+8spare (24 total) cables are to be made by Hayashi REPIC co.



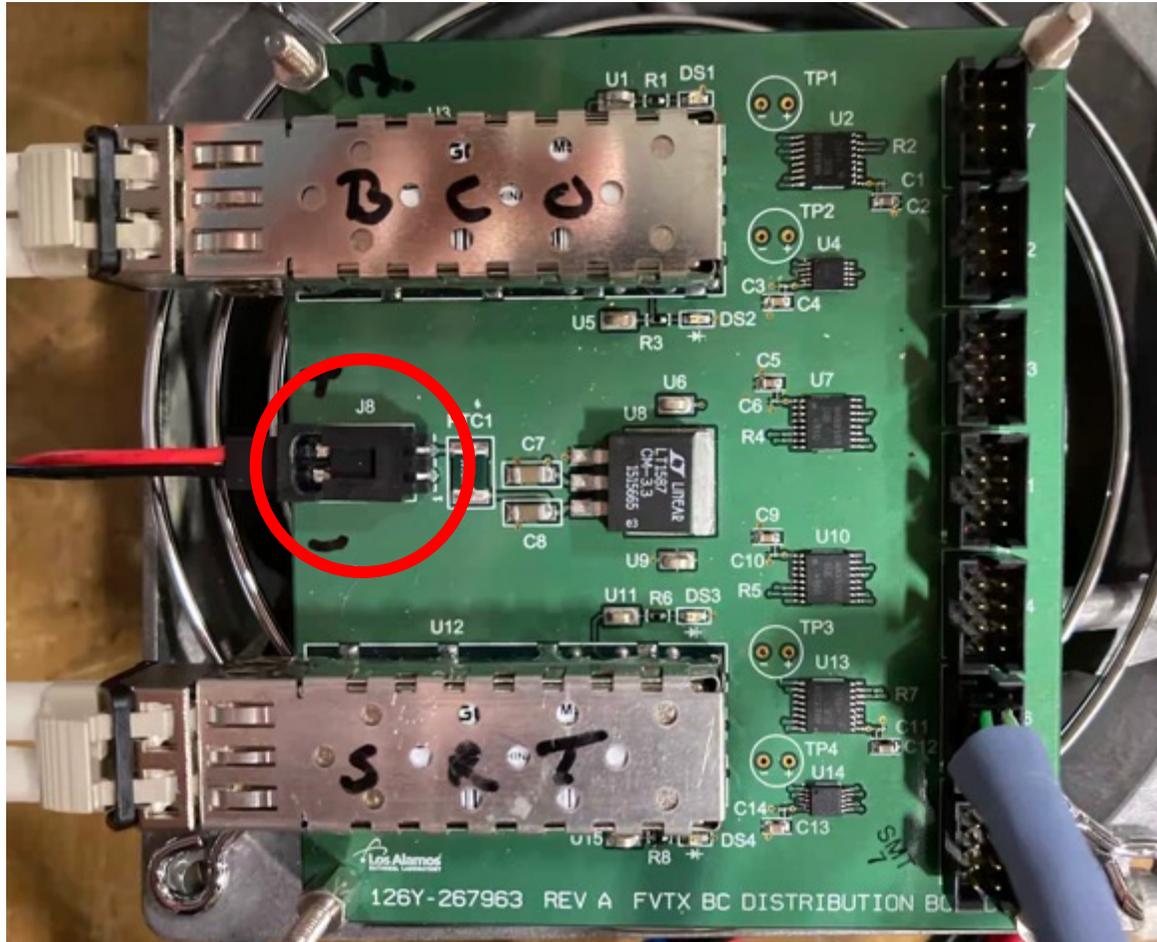
x2



RJ45 Category >5 LAN Connector (female)



Issues in parts procurement



- The parts procurement is completed except for the power connector.
- The connector model is 70553-0106 (MOLEX) and no longer available in the market.
- Asked Rob and Cheng-Wei if they can find them in US/Taiwan. However, the product is not available in neither markets nor the rest of world.
- On June 2nd, the company found 70553-0001 model available in the market.

Model	Gold Plating
70553-0106	0.76 μm
70553-0001	0.38 μm

Finally Rob found 30 pieces of 70553-106 in a local vendor. 1-2 weeks delivery and unlikely to be in time for June 20th time limit. Make first 2 BCLKs with 70553-0001 and rests are 70553-0106. Replace first 2BCLKs with 70553-0106 later if necessary.

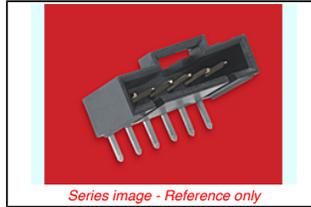
Candidate



This document was generated on 02/02/2022

PLEASE CHECK WWW.MOLEX.COM FOR LATEST PART INFORMATION

Part Number: [0705530001](#)
Status: **Active**
Overview: [SL Modular Connectors](#)
Description: 2.54mm Pitch SL Header, Low Profile, Single Row, Right Angle, 3.05mm Pocket, Shrouded, 2 Circuits, 0.38µm Gold (Au) Selective Plating, Tin (Sn) PC Tail Plating



Documents:
 3D Model [Packaging Specification PK-70873-0015-001 \(PDF\)](#)
 Drawing (PDF) [Test Summary TS-70541-100-001 \(PDF\)](#)
 Product Specification PS-70400-001 (PDF) [RoHS Certificate of Compliance \(PDF\)](#)
 Product Specification PS-70541-001 (PDF)

Agency Certification
 CSA LR19980
 UL E29179

General
 Product Family PCB Headers
 Series Z0553
 Application Signal, Wire-to-Board
 Overview [SL Modular Connectors](#)
 Product Name SL
 UPC 800754319775

Physical
 Breakaway No
 Circuits (Loaded) 2
 Circuits (maximum) 2
 Color - Resin Black
 Durability (mating cycles max) 50
 Flammability 94V-0
 Glow-Wire Capable No
 Guide to Mating Part Yes
 Lock to Mating Part Yes
 Material - Metal Brass, Phosphor Bronze
 Material - Plating Mating Gold
 Material - Plating Termination Tin
 Material - Resin High Temperature Thermoplastic
 Net Weight 0.527/g
 Number of Rows 1
 Orientation Right Angle
 PC Tail Length 3.30mm
 PCB Locator No
 PCB Retention None
 PCB Thickness - Recommended 1.60mm
 Packaging Type Tube
 Pitch - Mating Interface 2.54mm
 Plating min - Mating 0.381µm
 Plating min - Termination 1.905µm
 Polarized to Mating Part Yes
 Shrouded Fully
 Stackable No
 Temperature Range - Operating -40° to +105°C
 Termination Interface: Style Through Hole

Electrical
 Current - Maximum per Contact 3.0A

EU ELV
 Not Relevant

EU RoHS [China RoHS](#)
 Compliant

REACH SVHC
 Not Contained Per -
 D(2021)4569-DC (8
 July 2021)

Halogen-Free
 Status

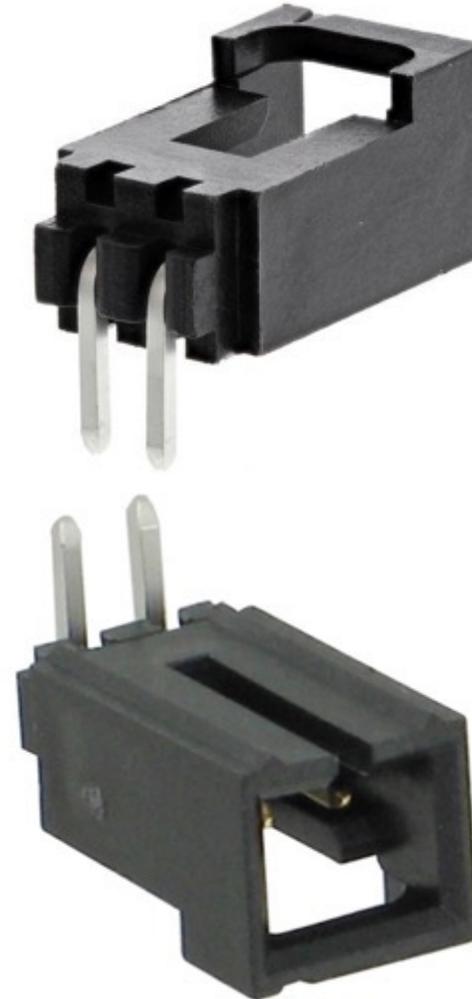
Not Low-Halogen
 For more information, please visit [Contact US](#)

China ROHS Green Image
 ELV Not Relevant
 RoHS Phthalates Not Contained

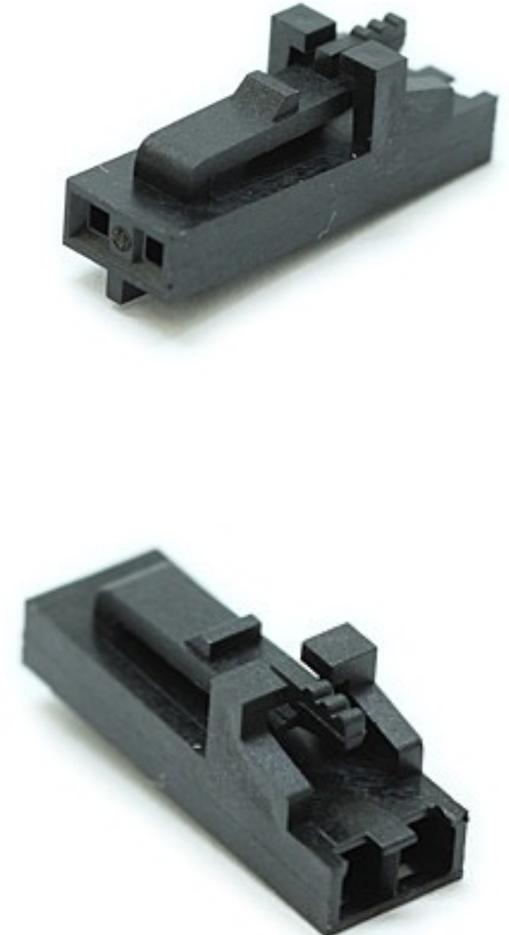
Search Parts in this Series
[Z0553 Series](#)

Mates With
 SL Crimp Housing [Z0066](#) Option N, [Z0066](#)
 Option G, [Z0430](#) Option G, [Z0400](#) Option G

Housing



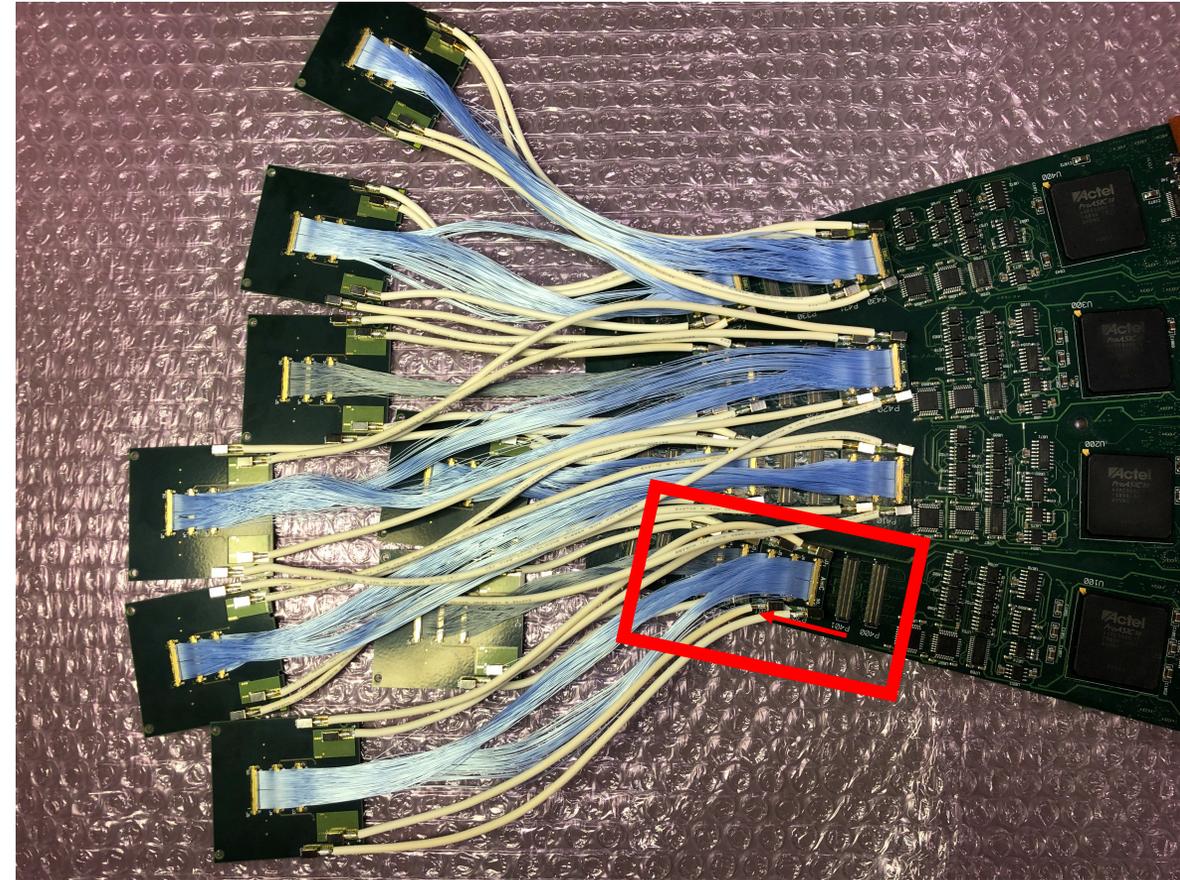
Receptacle



Model 50-57-9402

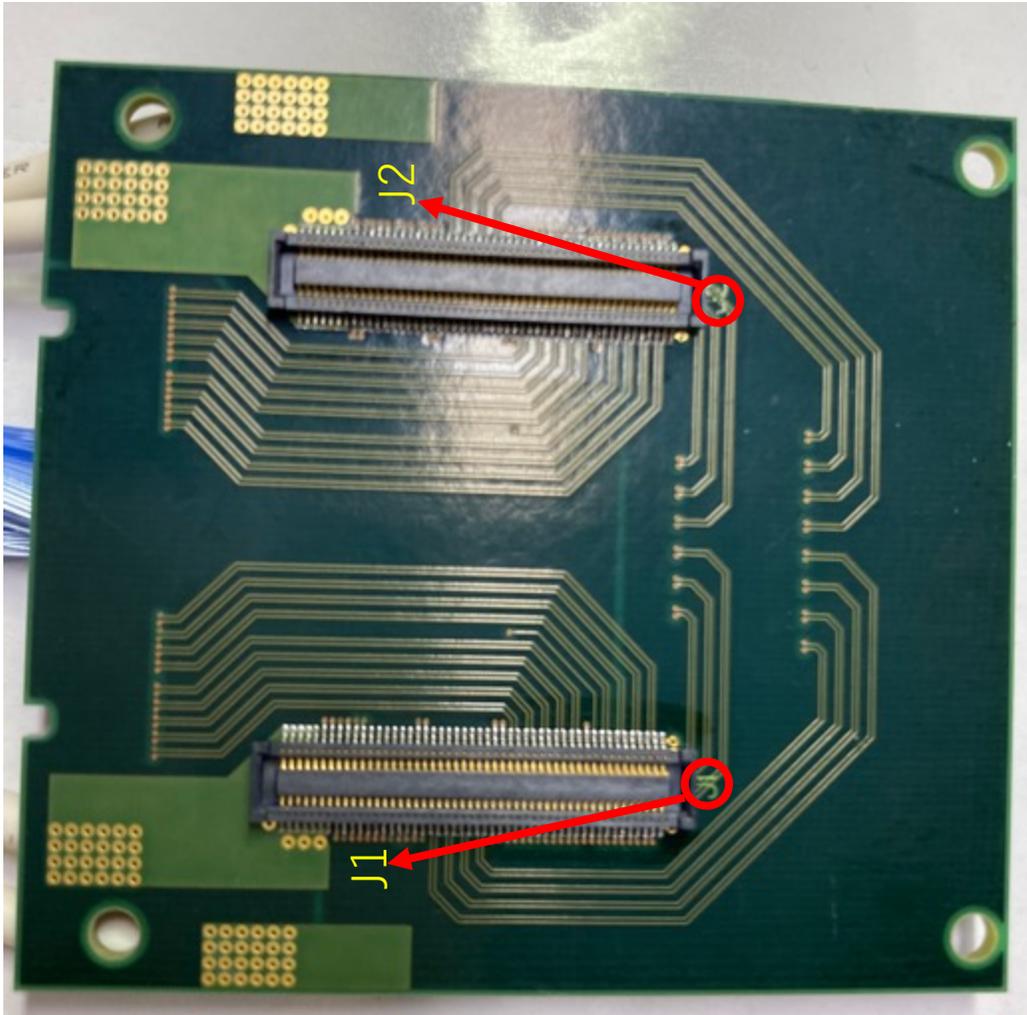
Towards Production of μ -Coax
Conversion Cable

Full Configuration at ROC

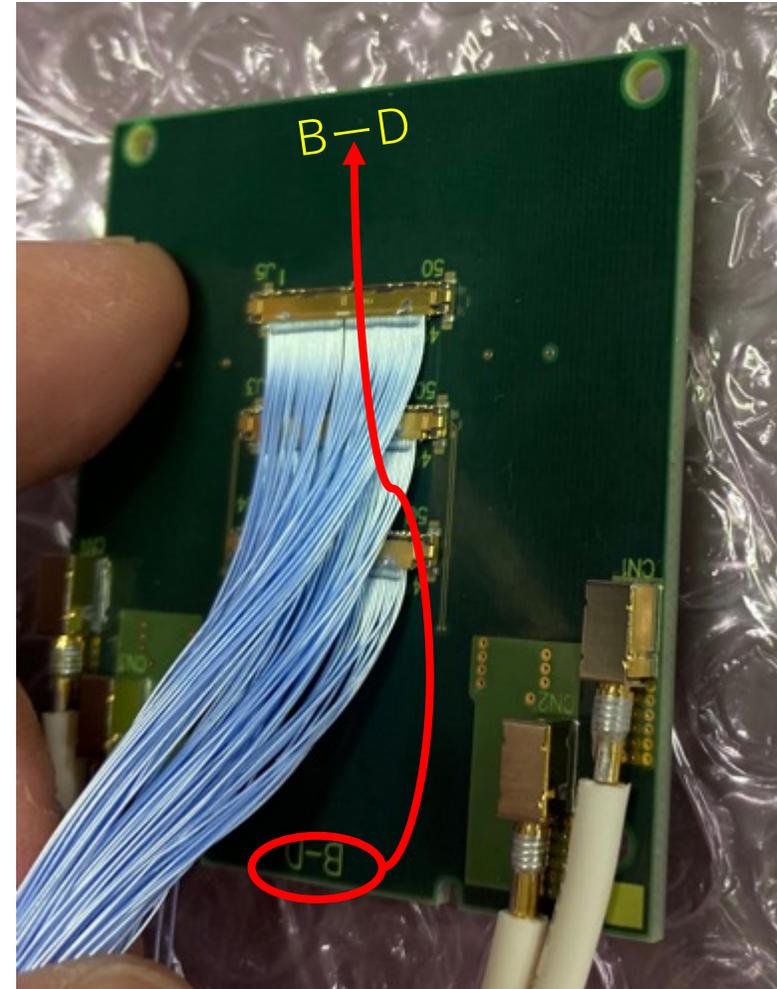


Quite messy, but connectors/cables are not interfering each other. Bundling each cables will clean up a bit. So far no necessity of further modification in the ROC connector board design. I am inclined to go for the production with the current design of the ROC side connector.

ROC Side Connector Board



Relocate J1/J2 symbols to the sides of DF18 connectors



AC/BD Symbols are hidden by the harness. Relocate to the top of the board

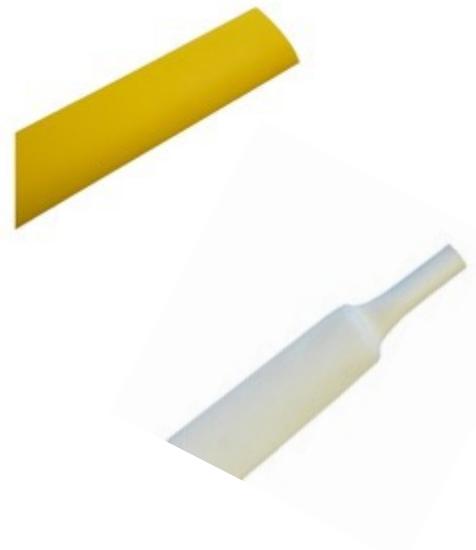
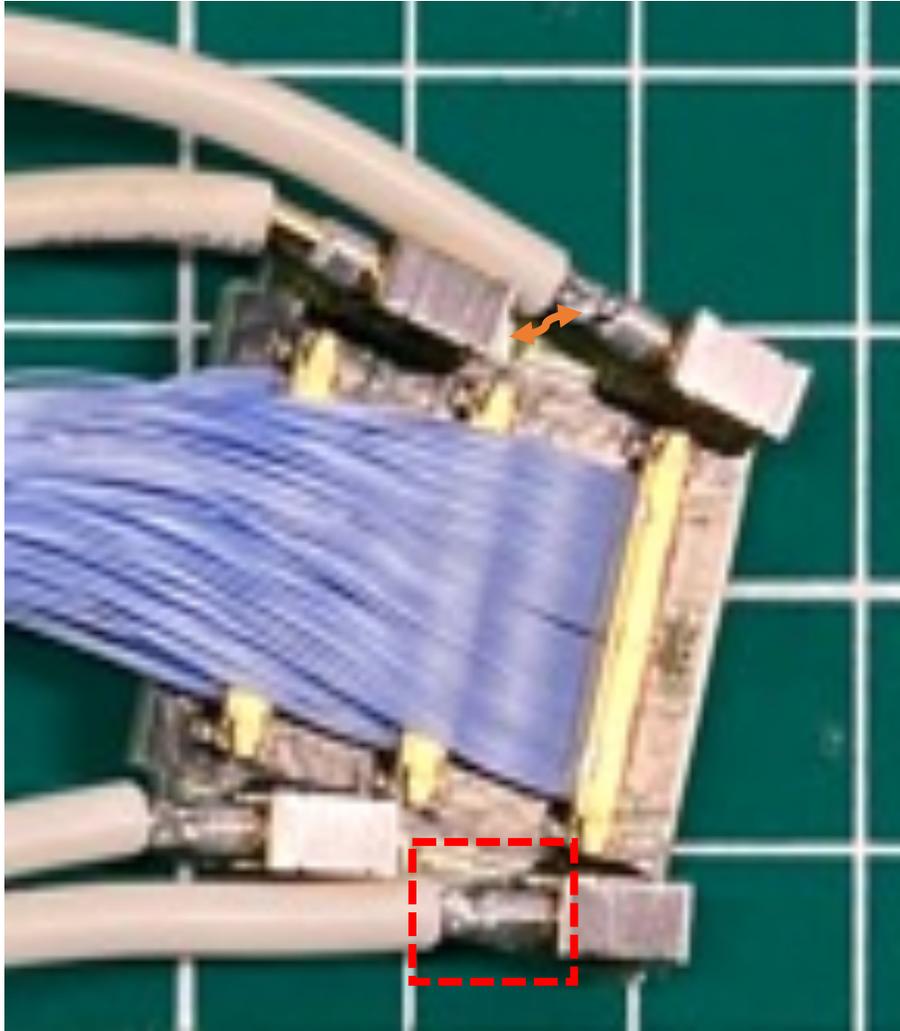
Cable Bundling



- Cables are better be bundled.
- Bundle μ -coax harness seems mandatory
- Shall we bundle GND/Power cables altogether?

Exposed Metal of Power/GND cables

- Possible short risk between power cable and GND socket
- The male pin suppose to be covered by a heat shrink
- Use different color for AC type (white) and BD type (Yellow)



Quantities

On 2022/03/24 4:27, Dan Cacace wrote:

Hi Itaru,

We have come to the conclusion that we want to use 15cm (6") long micro-coax cables as the default and have a number of 25cm (10") long micro-coax cables as a backup, should we need to switch the location of the connection on the ROC. I will leave it to you and Rachid to determine exactly how many cables of each type to be ordered. We require $56 \times 2 = 112 \times 3 = 336$ micro-coax cables 15cm long at minimum, plus spares.

	Conversion Cable	Harness	GND/Power Cable
Type	15cm	25cm	25cm
AC	56 + 10 spares	3sets x 1port x 16ROCs	4 x 1port x 16ROCs
BD	56 + 10 spares	3sets x 1port x 16ROCs	4 x 1port x 16ROCs
Total	112 + 20 spares	96 sets	128 Cables
Cost Estimate	~ \$0.1M	~ \$10k	