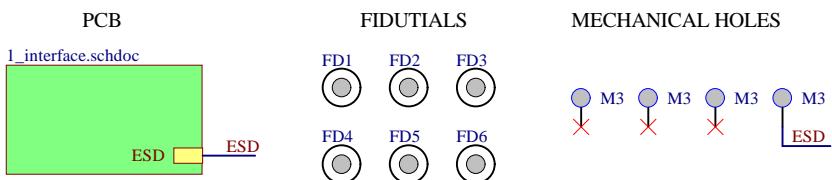


Rev	Description	Date	Author
0.1	- Initial release	01-Apr-2021	Andre M. P. Mattos

Revision History

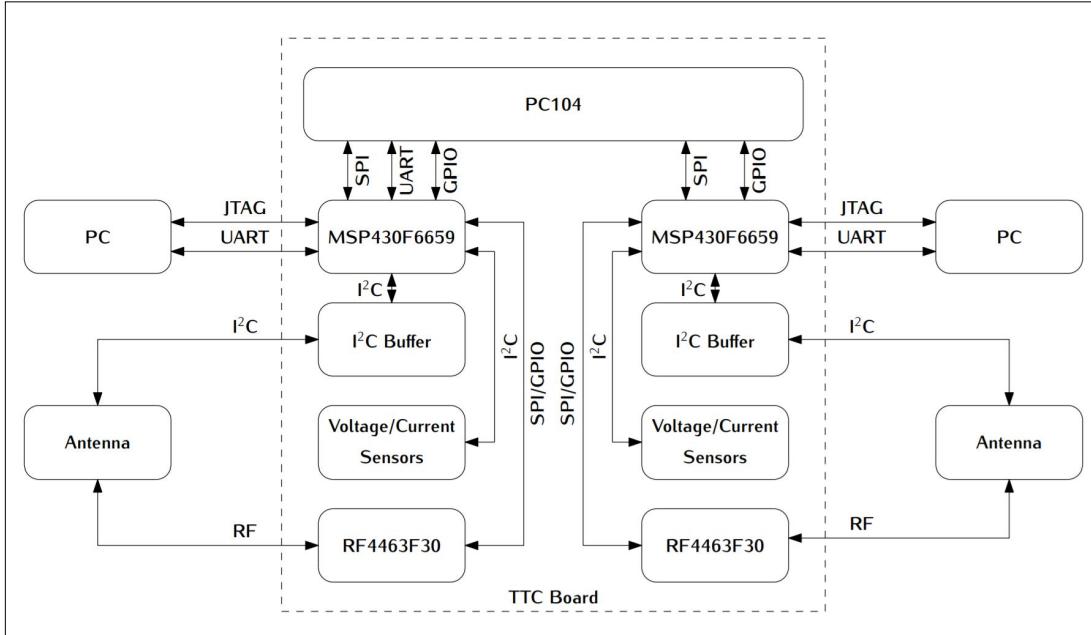


PCB Elements

TTC2 Hardware:

- Drawn by: André M. P. Mattos
- Reviewers: Yan C. Azeredo
- Based on FloripaSat-I TTC designed by: Sara V. Martinez
- Support: Gabriel M. Marcelino

Project Contributions



Block Diagram

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TTC2 Hardware
Based on the FloripaSat-I TTC

This work is licensed under CERN Open Hardware License, version 2.

To view a copy of this license, visit

<https://github.com/spacelab-ufsc/ttc2/blob/master/hardware/LICENSE>

Github repository: <https://github.com/spacelab-ufsc/ttc2>

More info about SpaceLab: <https://spacelab.ufsc.br/>

Project Information

SpaceLab - Federal University of Santa Catarina

Project: [ttc2.prjpcb](https://github.com/spacelab-ufsc/ttc2/blob/master/hardware/TTCC2.prjpcb) / [No Variations]

Title: *Hardware Architecture*

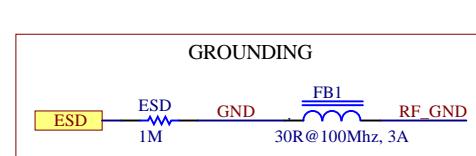
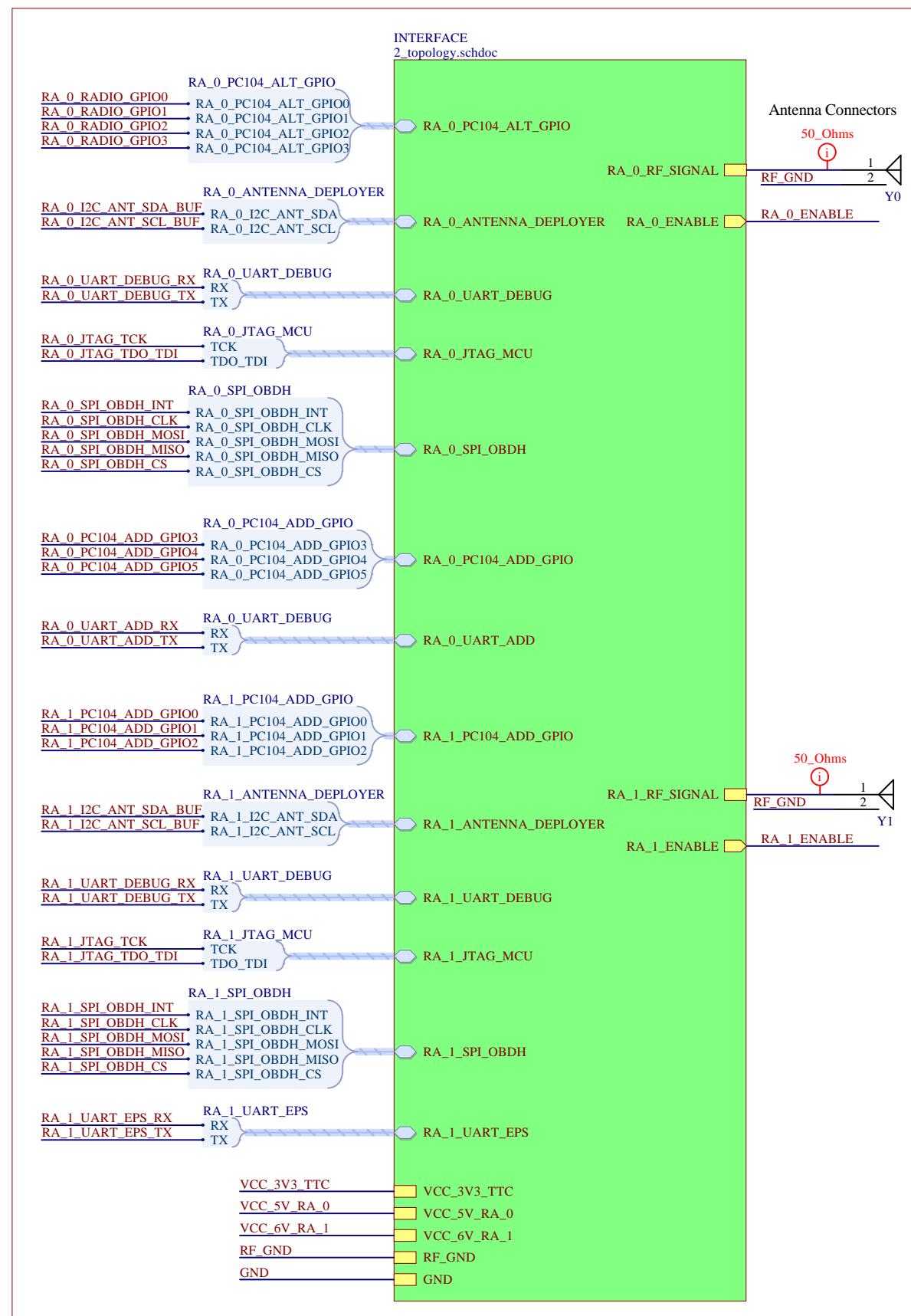
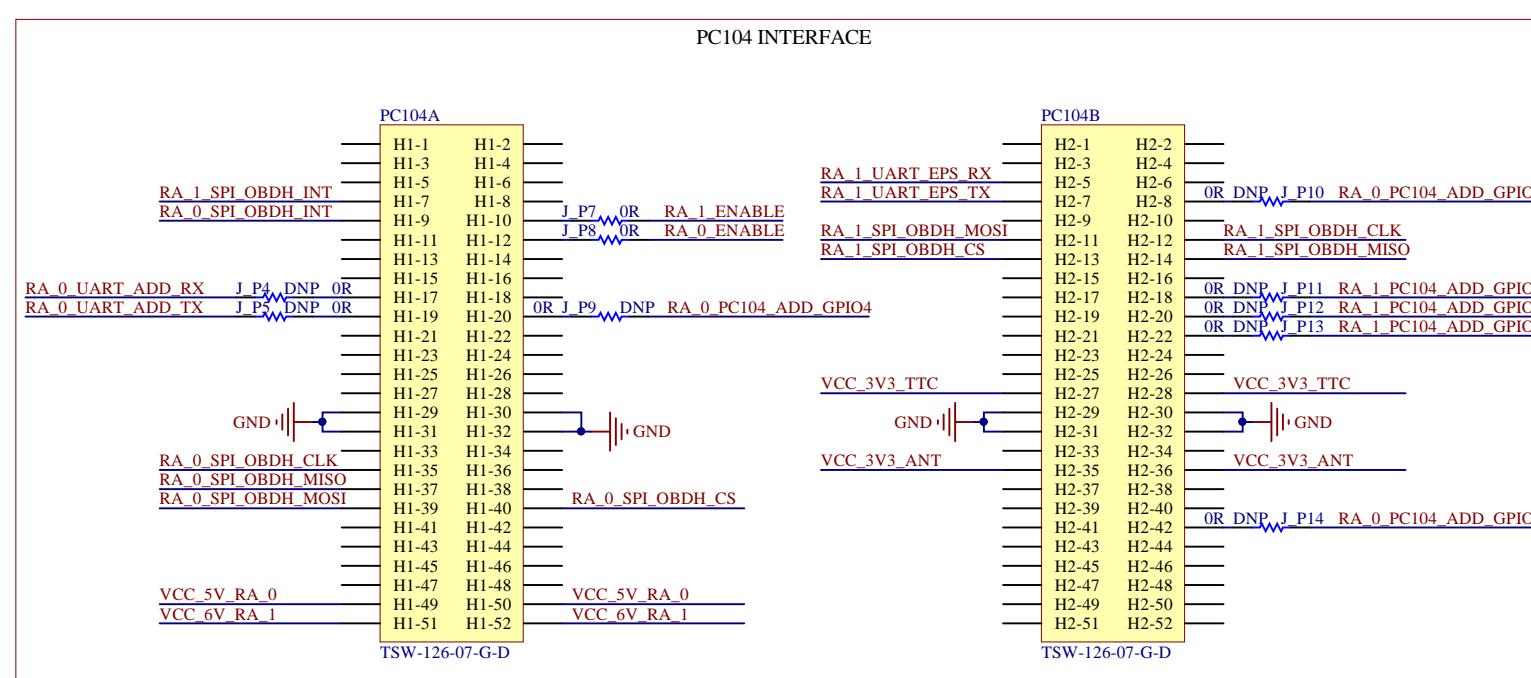
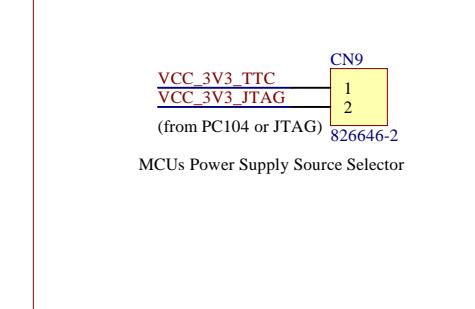
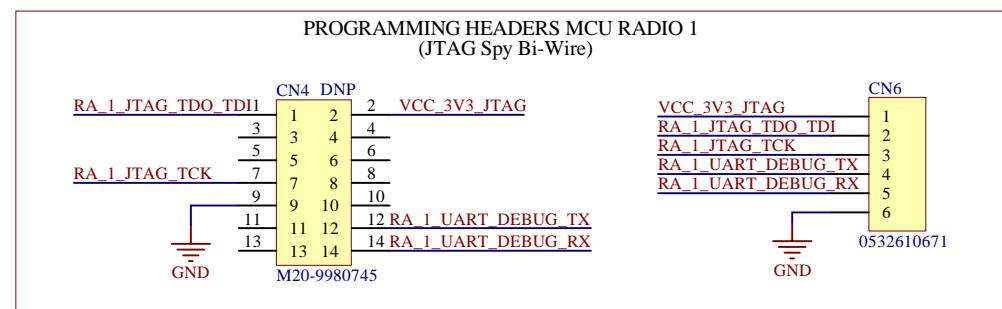
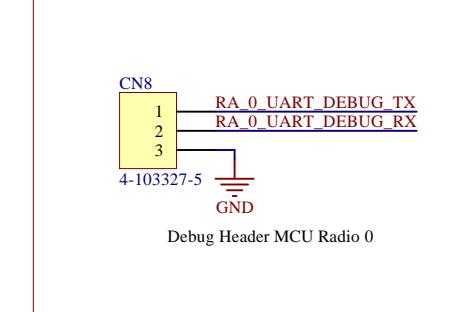
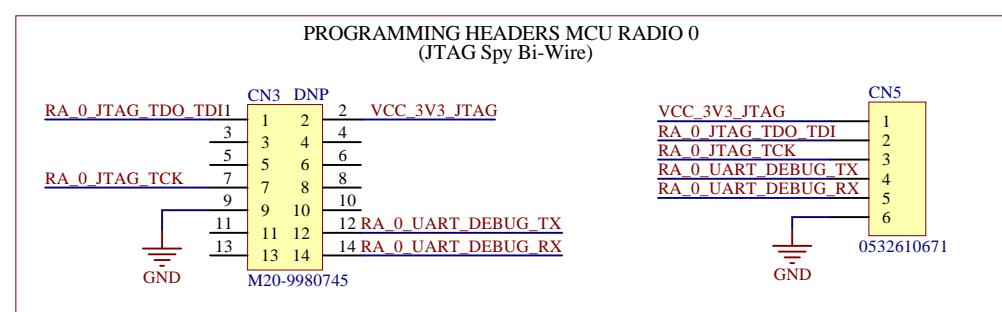
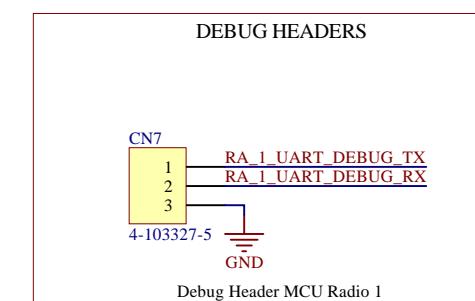
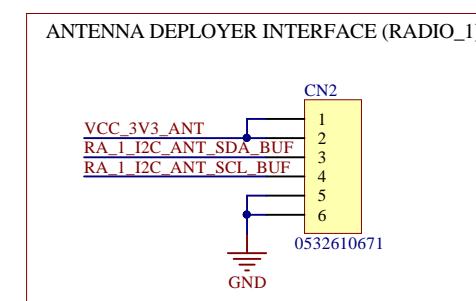
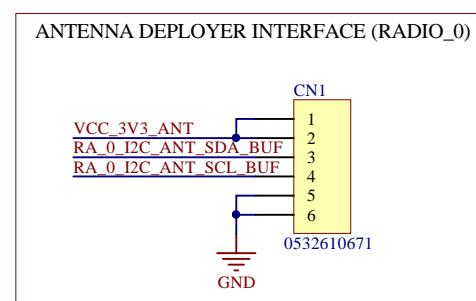
Designed by: [André M. P. Mattos](#)

Date: [02/05/2021](#) Revision: [v0.1](#) Sheet [0](#) of [6](#)



Project Code: [TTC2](#)

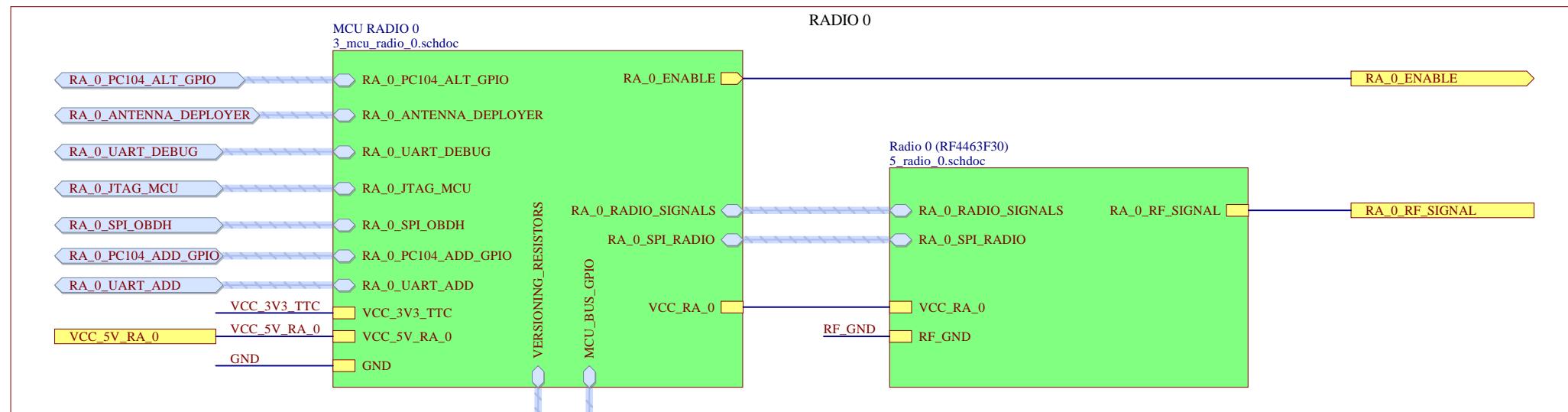
Size: [A4](#)



SpaceLab - Federal University of Santa Catarina	
Project: <i>ttc2_project.prjpcb</i> / [No Variations]	
Title: <i>Interface</i>	
Engineer: <i>André M. P. Mattos</i>	Project Code: <i>TTC2</i>
Date: 02/05/2021	Revision: v0.1
Sheet 1	of 6
	Size: A3

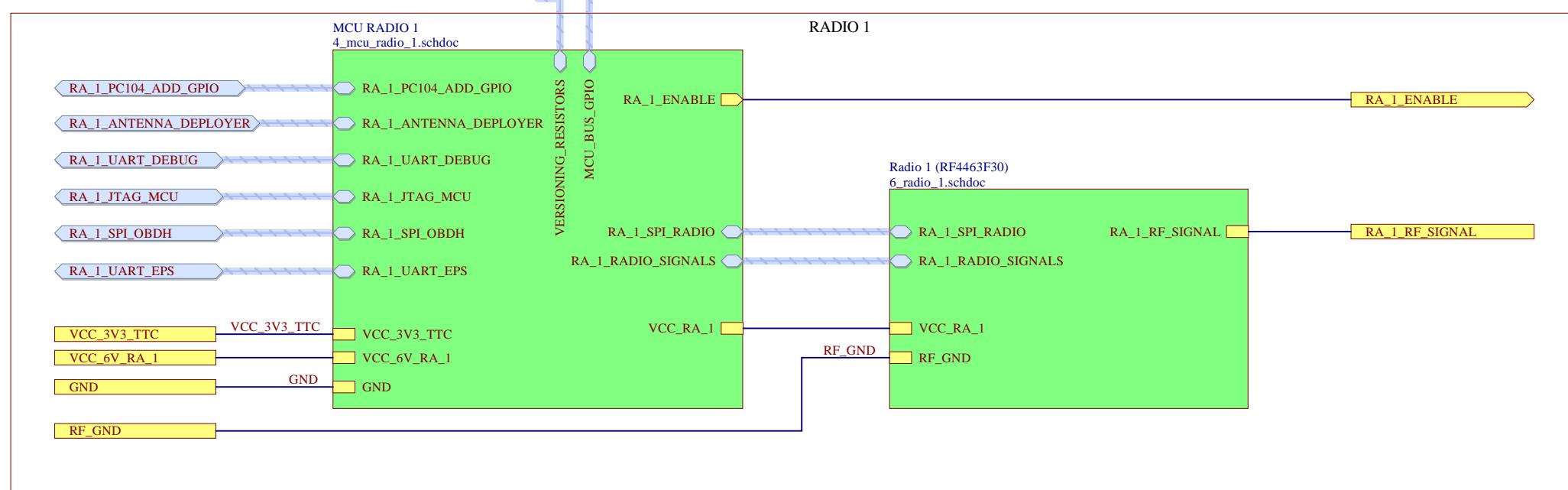
A

A



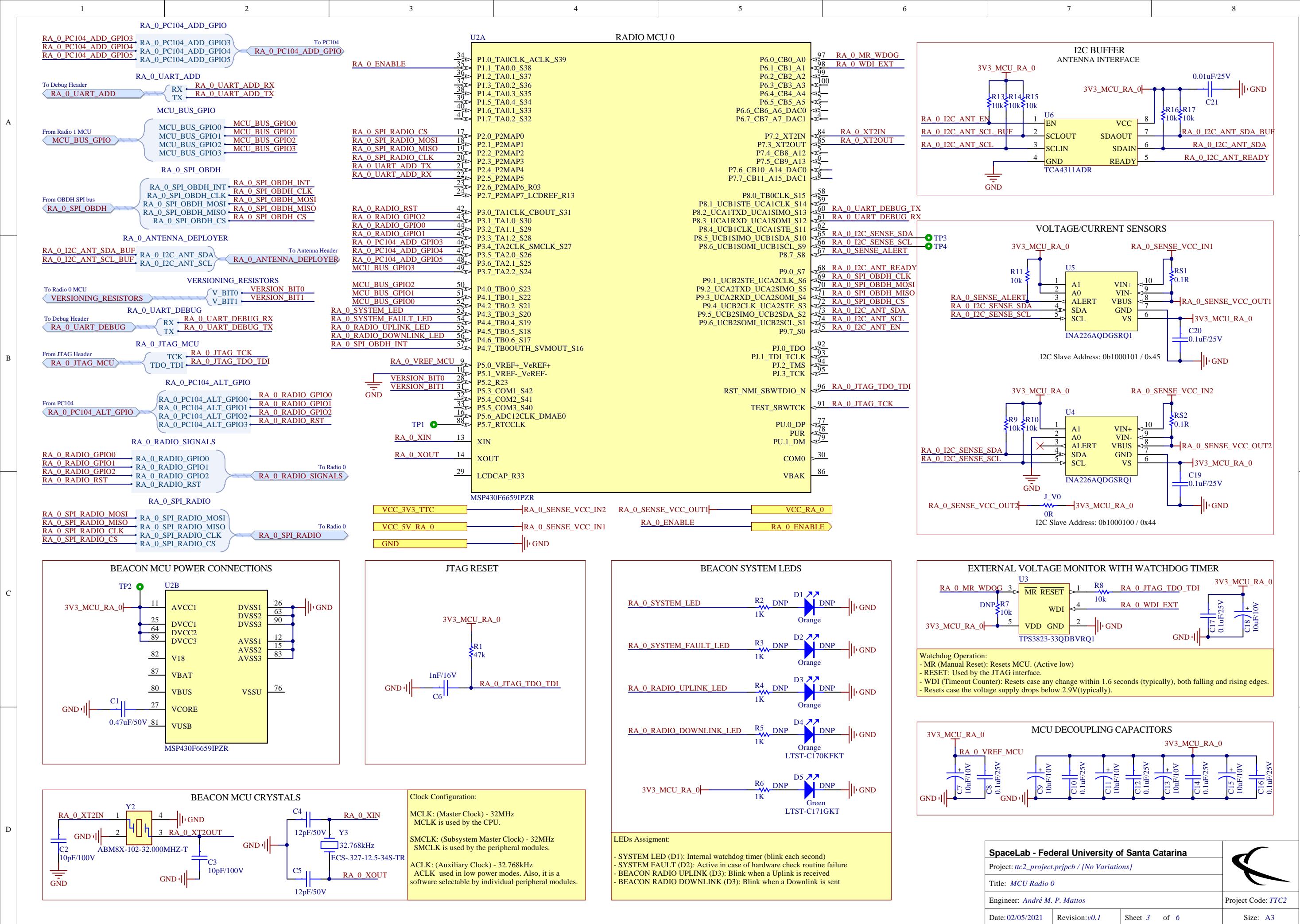
B

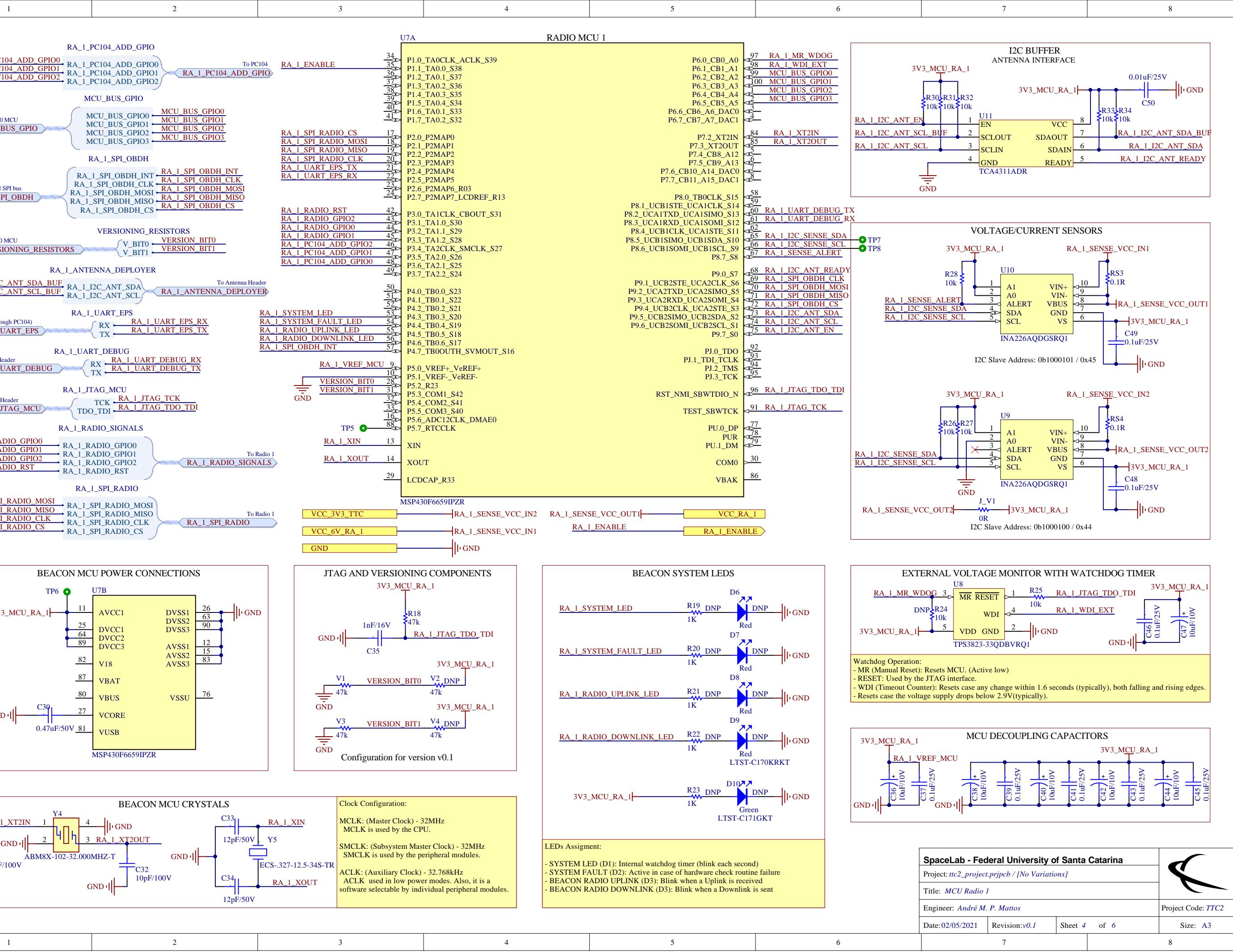
B



C

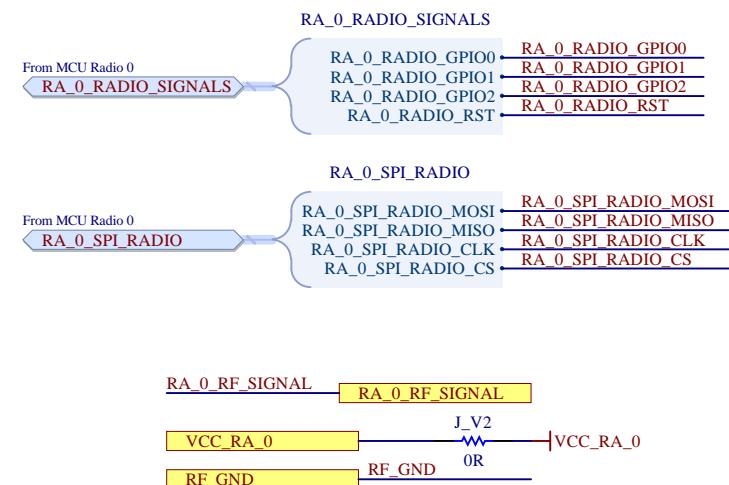
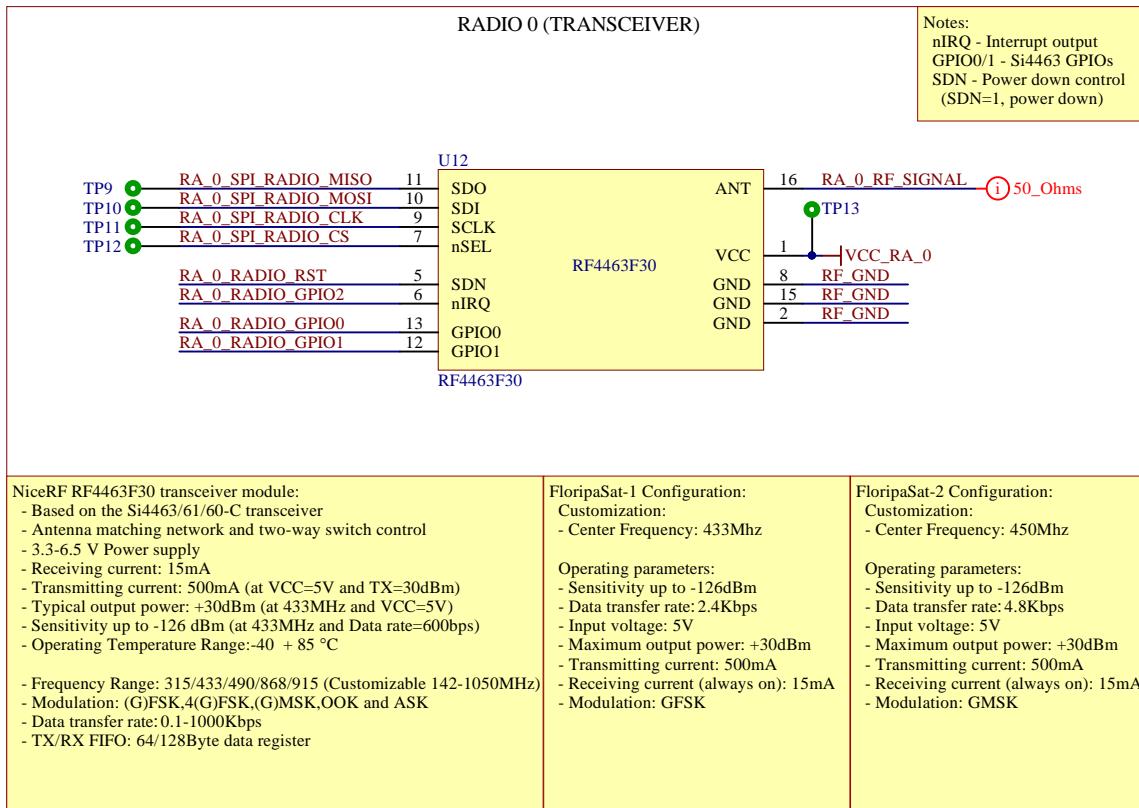
C





A

A



B

B

C

C

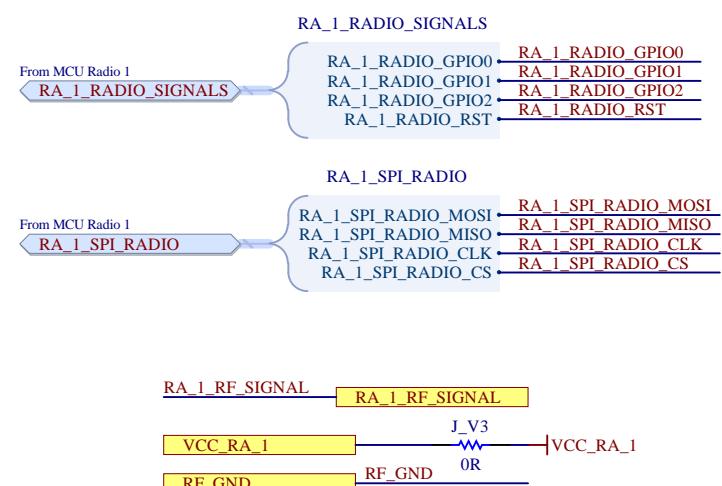
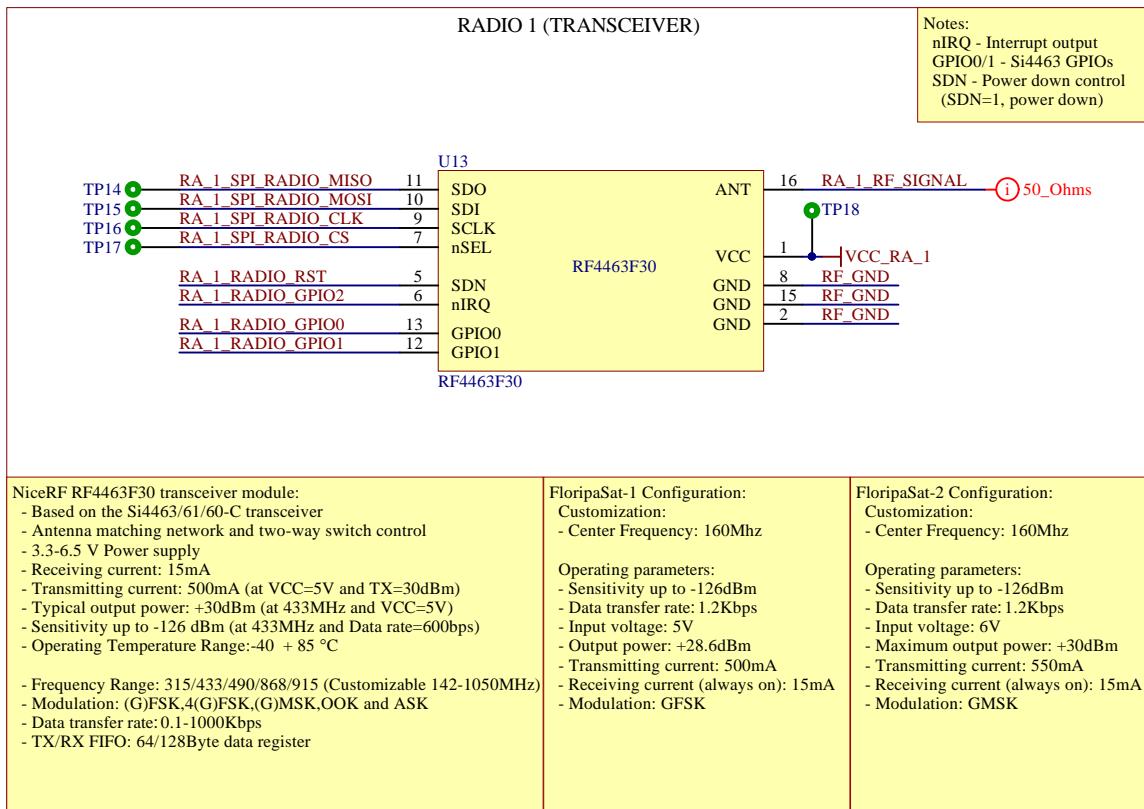
D

D

SpaceLab - Federal University of Santa CatarinaProject: [ttc2_project.prjpcb / \[No Variations\]](#)Title: *Radio 0*Designed by: *André M. P. Mattos*Date: *02/05/2021* | Revision: *v0.1* | Sheet *5* of *6*Project Code: *TTCA*

A

A

**SpaceLab - Federal University of Santa Catarina**Project: [ttc2_project.prjpcb / \[No Variations\]](#)Title: *Radio 1*Designed by: *André M. P. Mattos*Date: *02/05/2021* | Revision: *v0.1* | Sheet *6* of *6*Project Code: *TTCA*Size: *A4*

A

A

B

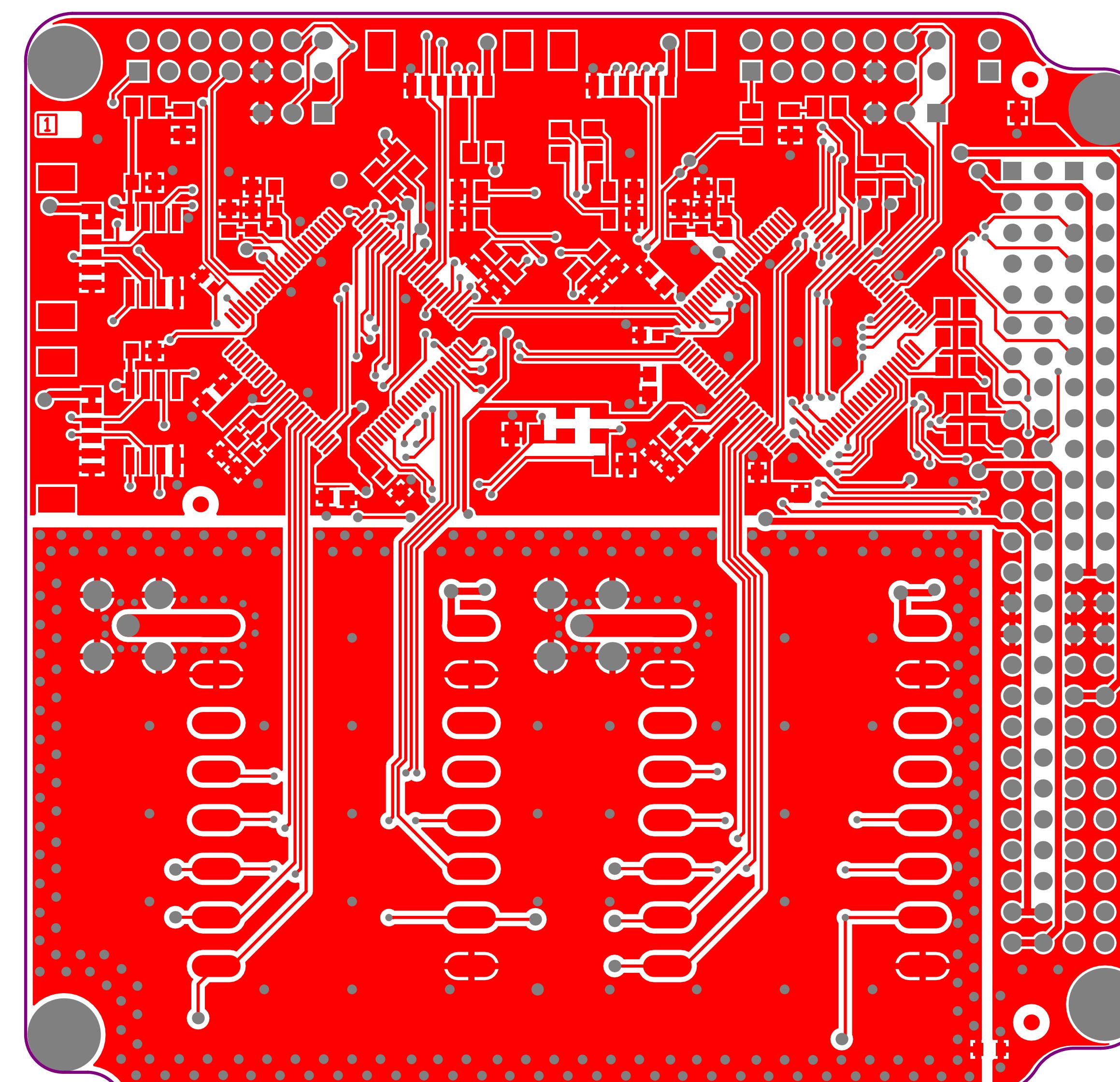
B

C

C

D

D



Layer	Name	Material	Thickness	Constant	Board Layer Stack
1	Top Overlay				
2	Top Solder	Solder Resist	0,010mm	3,5	
3	Top Layer	Copper	0,035mm		
4	Dielectric		1,620mm	4,2	
5	Bottom Layer	Copper	0,035mm		
6	Bottom Solder	Solder Resist	0,010mm	3,5	
7	Bottom Overlay				

Fabrication specifications:

- Copper base 10Z:
- PCB Material: Prepeg FR4—Standard
- PCB Thickness: 1.6mm
- PCB Surface: HASL (with lead)
- Silkscreen Color: White (top and bottom)
- Soldermask Color: Blue
- Vias: Force Complete Tenting
- Special: Stack-up (herein included)

Assembly specifications:

- Solder composition: Include lead
- Fiducials: 3 top and 3 bottom available
- Check BOM for not placed components

SpaceLab - Federal University of Santa Catarina	
Project: TTC2	
Layer: Top Layer	
Designed by: Andre M. P. Mattos	
Date: 02/05/2021	Project Code: TTC2
Version: v0.1	Size: A4

A

A

B

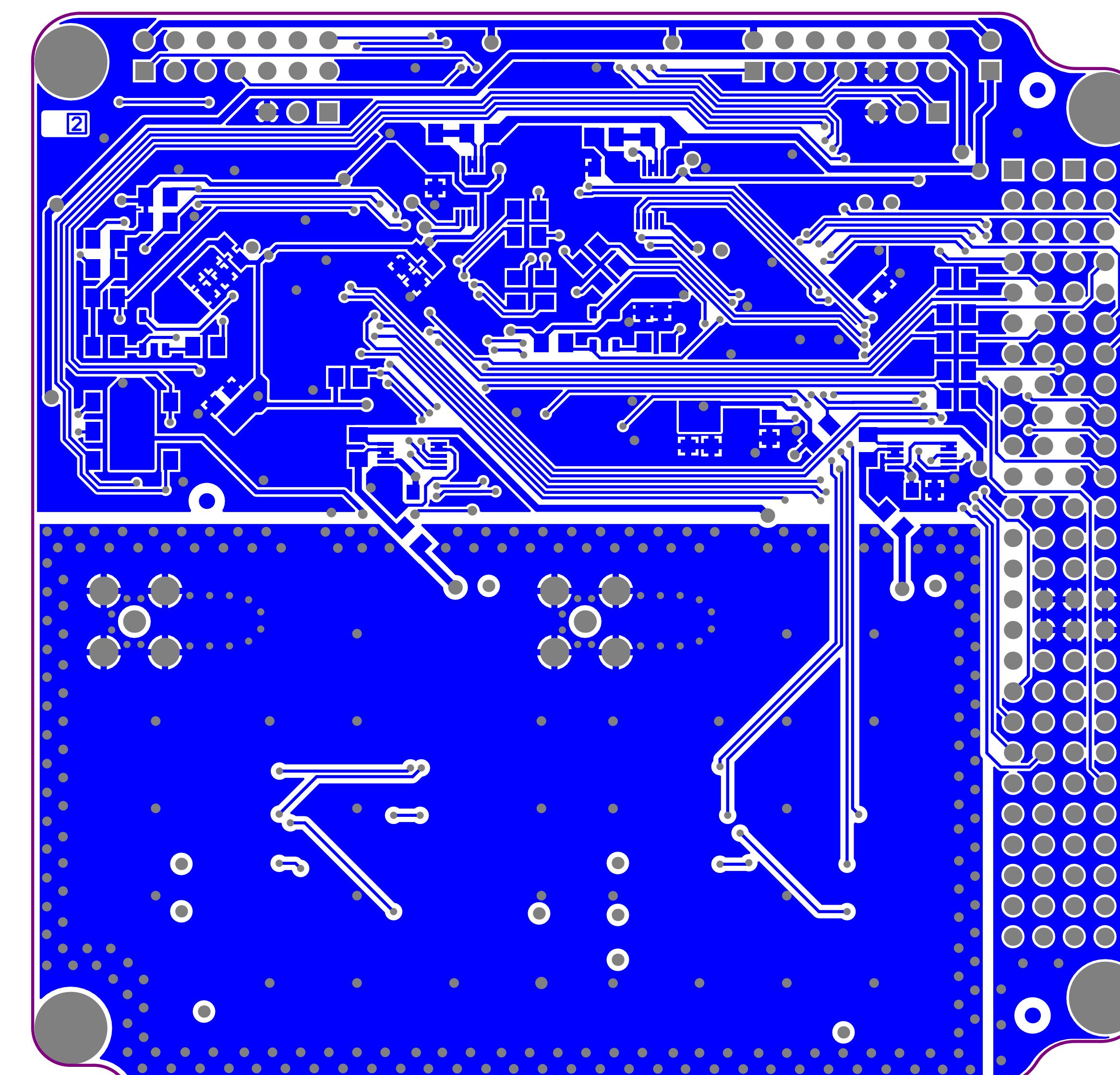
B

C

C

D

D



Layer	Name	Material	Thickness	Constant	Board Layer Stack
1	Top Overlay				
2	Top Solder	Solder Resist	0,010mm	3,5	
3	Top Layer	Copper	0,035mm		
4	Dielectric		1,620mm	4,2	
5	Bottom Layer	Copper	0,035mm		
6	Bottom Solder	Solder Resist	0,010mm	3,5	
7	Bottom Overlay				

Fabrication specifications:

- Copper base 10Z:
- PCB Material: Prepeg FR4—Standard
- PCB Thickness: 1.6mm
- PCB Surface: HASL (with lead)
- Silkscreen Color: White (top and bottom)
- Soldermask Color: Blue
- Vias: Force Complete Tenting
- Special: Stack-up (herein included)

Assembly specifications:

- Solder composition: Include lead
- Fiducials: 3 top and 3 bottom available
- Check BOM for not placed components

SpaceLab - Federal University of Santa Catarina	 + LAB
Project: TTC2	
Layer: Bottom Layer	
Designed by: Andre M. P. Mattos	
Date: 02/05/2021	Project Code: TTC2
Version: v0.1	Size: A4

A

A

B

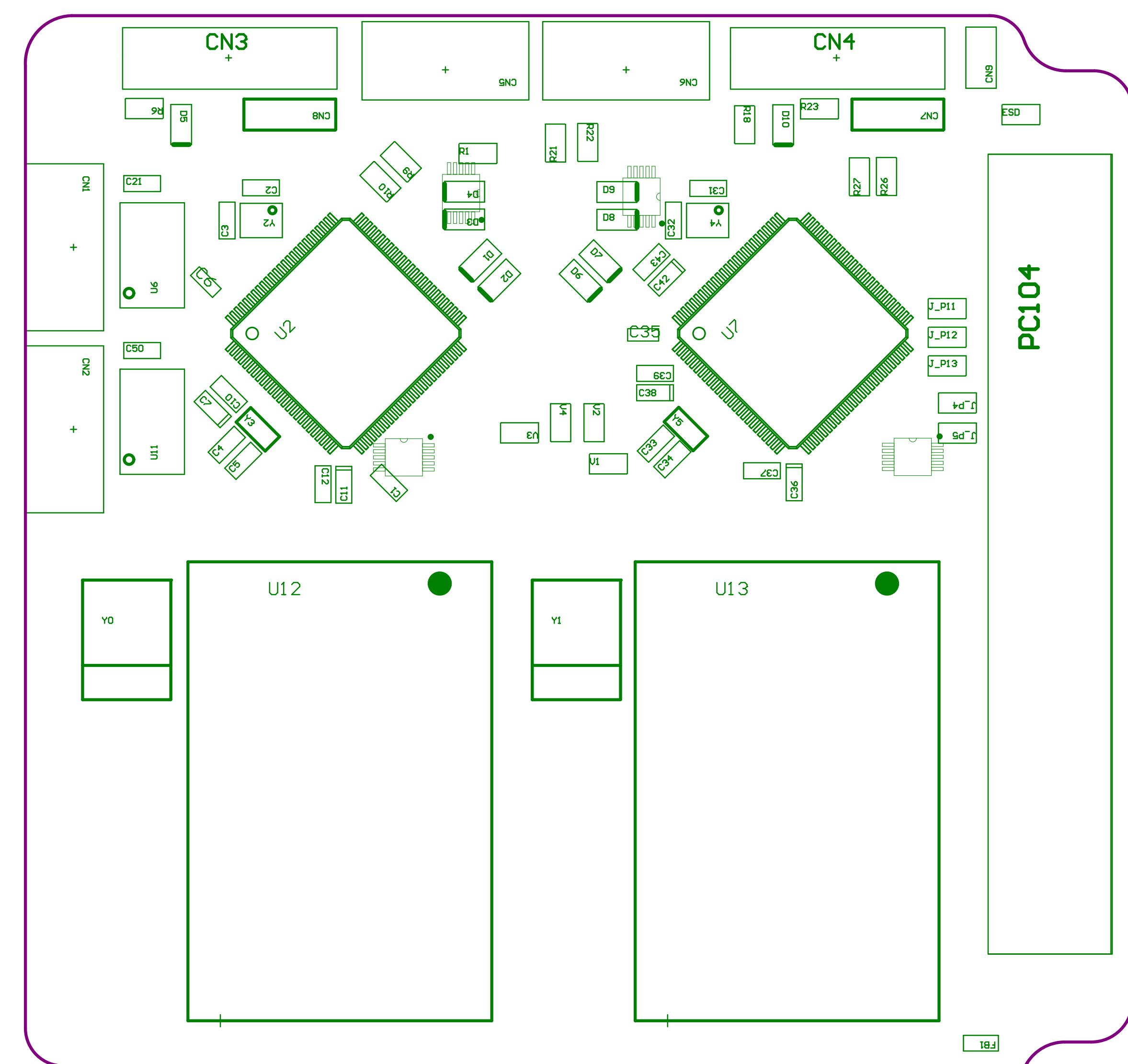
B

C

C

D

D



PC104

Layer	Name	Material	Thickness	Constant	Board Layer Stack
1	Top Overlay				
2	Top Solder	Solder Resist	0,010mm	3,5	
3	Top Layer	Copper	0,035mm		
4	Dielectric		1,620mm	4,2	
5	Bottom Layer	Copper	0,035mm		
6	Bottom Solder	Solder Resist	0,010mm	3,5	
7	Bottom Overlay				

Fabrication specifications:

- Copper base 10Z:
- PCB Material: Prepeg FR4—Standard
- PCB Thickness: 1.6mm
- PCB Surface: HASL (with lead)
- Silkscreen Color: White (top and bottom)
- Soldermask Color: Blue
- Vias: Force Complete Tenting
- Special: Stack-up (herein included)

Assembly specifications:

- Solder composition: Include lead
- Fiducials: 3 top and 3 bottom available
- Check BOM for not placed components

SpaceLab - Federal University of Santa Catarina	+ SPACE + LAB
Project: TTC2	
Layer: ASM Top	
Designed by: Andre M. P. Mattos	
Date: 02/05/2021	Project Code: TTC2
Version: v0.1	Size: A4

A

A

B

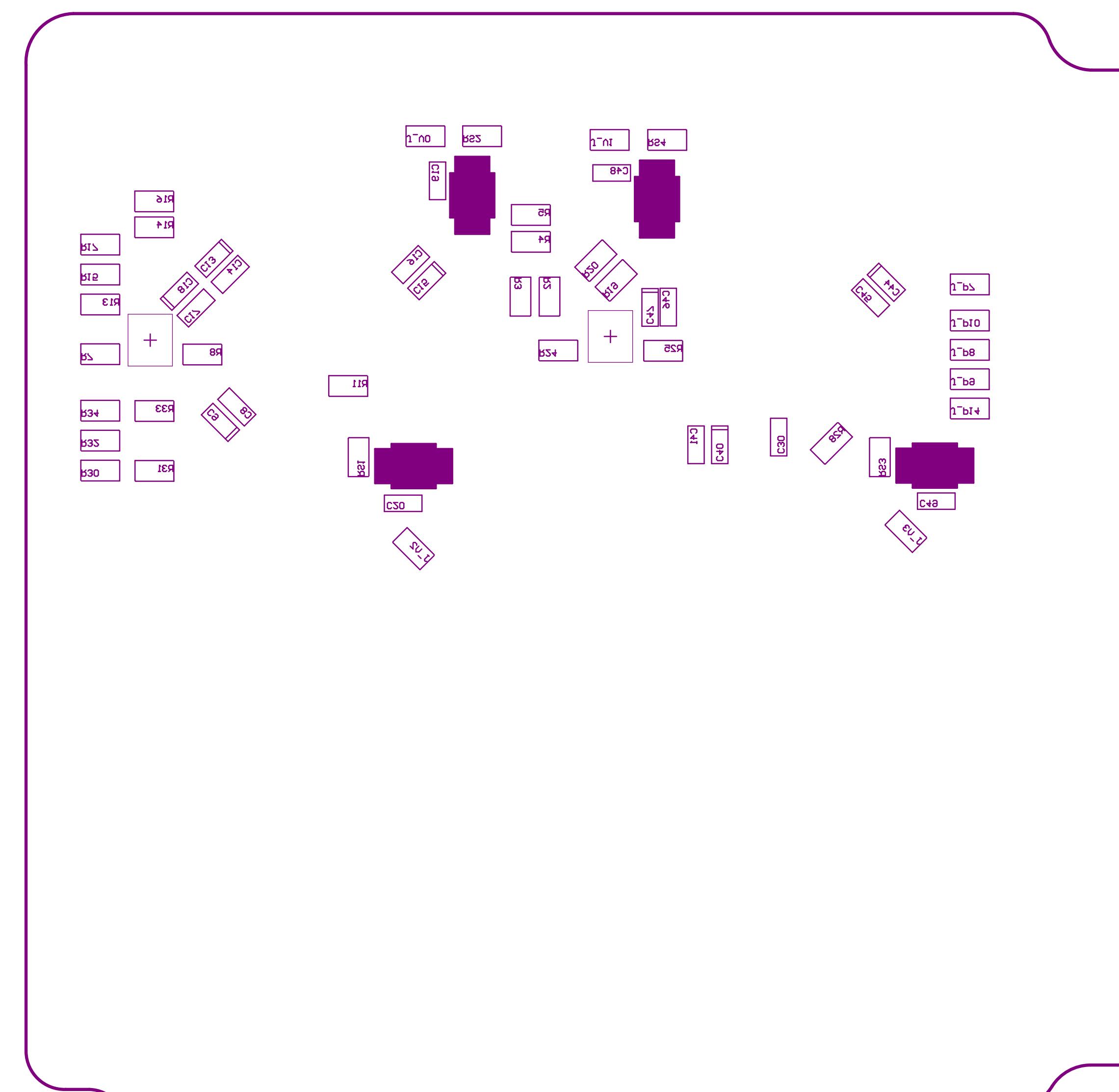
B

C

C

D

D



Layer	Name	Material	Thickness	Constant	Board Layer Stack
1	Top Overlay				
2	Top Solder	Solder Resist	0,010mm	3,5	
3	Top Layer	Copper	0,035mm		
4	Dielectric		1,620mm	4,2	
5	Bottom Layer	Copper	0,035mm		
6	Bottom Solder	Solder Resist	0,010mm	3,5	
7	Bottom Overlay				

Fabrication specifications:

- Copper base 10Z:
- PCB Material: Prepeg FR4—Standard
- PCB Thickness: 1.6mm
- PCB Surface: HASL (with lead)
- Silkscreen Color: White (top and bottom)
- Soldermask Color: Blue
- Vias: Force Complete Tenting
- Special: Stack-up (herein included)

Assembly specifications:

- Solder composition: Include lead
- Fiducials: 3 top and 3 bottom available
- Check BOM for not placed components

SpaceLab - Federal University of Santa Catarina	 + LAB
Project: TTC2	
Layer: ASM Bottom	
Designed by: Andre M. P. Mattos	
Date: 02/05/2021	Project Code: TTC2
Version: v0.1	Size: A4

