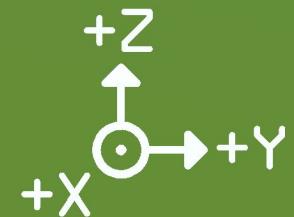


M1 Interstage Interface Panel  
Board N.4 Rev 2.0

SpaceLab UFSC 2021

M2

Ready  
for  
launch



M3

line limit  
external  
connectors



structure contact  
area

M4

From the ilha da magia to space.



Space Technology Research Laboratory  
of the Federal University of Santa Catarina, Florianopolis, Brazil.

A

B

C

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	0.036mm		
4	Dielectric 1	FR-4	1.500mm	4.8	
5	Bottom Layer	Copper	0.036mm		
6	Bottom Solder	Solder Resist	0.010mm	3.5	
7	Bottom Overlay				

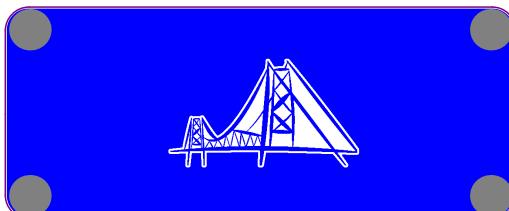


### Fabrication specifications:

- Copper base: 1oz
- PCB Material: Prepeg FR4—Standard
- PCB Thickness: 1.6mm
- PCB Surface: HASL (with lead)
- Silkscreen Color: White (top and bottom)
- Soldermask Color: Green
- Vias: Force Complete Tenting
- Stack-up: Standard 2 layer 1.6mm thickness
- Special requirements: None

SpaceLab - Federal University of Santa Catarina	
Project: Interstage Interface Panel Nº4	
Layer: Top Layer      Board Edge	
Designed by: Yan C. de Azeredo	Project Code: IIP4
Date: 7/1/2021	Version: v2.0
	Size: A4

Layer	Name	Material	Thickness	Constant	Board Layer Stack
1	Top Overlay				
2	Top Solder	Solder Resist	0.010mm	3.5	
3	Top Layer	Copper	0.036mm		
4	Dielectric 1	FR-4	1.500mm	4.8	
5	Bottom Layer	Copper	0.036mm		
6	Bottom Solder	Solder Resist	0.010mm	3.5	
7	Bottom Overlay				

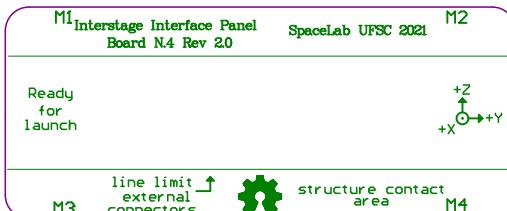


### Fabrication specifications:

- Copper base: 1oz
- PCB Material: Prepeg FR4—Standard
- PCB Thickness: 1.6mm
- PCB Surface: HASL (with lead)
- Silkscreen Color: White (top and bottom)
- Soldermask Color: Green
- Vias: Force Complete Tenting
- Stack-up: Standard 2 layer 1.6mm thickness
- Special requirements: None

SpaceLab - Federal University of Santa Catarina	
Project: Interstage Interface Panel N°4	
Layer: Bottom Layer Board Edge	
Designed by: Yan C. de Azeredo	Project Code: IIP4
Date: 7/1/2021	Version: v2.0
	Size: A4

Layer	Name	Material	Thickness	Constant	Board Layer Stack
1	Top Overlay				
2	Top Solder	Solder Resist	0.010mm	3.5	
3	Top Layer	Copper	0.036mm		
4	Dielectric 1	FR-4	1.500mm	4.8	
5	Bottom Layer	Copper	0.036mm		
6	Bottom Solder	Solder Resist	0.010mm	3.5	
7	Bottom Overlay				



### Fabrication specifications:

- Copper base: 1oz
- PCB Material: Prepeg FR4—Standard
- PCB Thickness: 1.6mm
- PCB Surface: HASL (with lead)
- Silkscreen Color: White (top and bottom)
- Soldermask Color: Green
- Vias: Force Complete Tenting
- Stack-up: Standard 2 layer 1.6mm thickness
- Special requirements: None

SpaceLab - Federal University of Santa Catarina	
Project: Interstage Interface Panel N°4	
Layer: Top Overlay Board Edge	
Designed by: Yan C. de Azeredo	
Date: 7/1/2021	Project Code: IIP4
Version: v2.0	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	0.036mm		
4	Dielectric 1	FR-4	1.500mm	4.8	
5	Bottom Layer	Copper	0.036mm		
6	Bottom Solder	Solder Resist	0.010mm	3.5	
7	Bottom Overlay				

From the left side to the right side of space.

SpaceLab - Federal University of Santa Catarina  
Project: Interstage Interface Panel Nº4  
Layer: Bottom Overlay Board Edge  
Designed by: Yan C. de Azeredo  
Date: 7/1/2021 Version: v2.0 Size: A4

### Fabrication specifications:

- Copper base: 1oz
- PCB Material: Prepeg FR4—Standard
- PCB Thickness: 1.6mm
- PCB Surface: HASL (with lead)
- Silkscreen Color: White (top and bottom)
- Soldermask Color: Green
- Vias: Force Complete Tenting
- Stack-up: Standard 2 layer 1.6mm thickness
- Special requirements: None

A

A

B

B

C

C

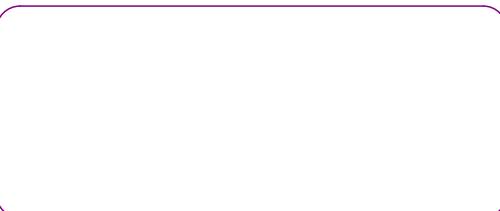
D

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	0.036mm		
4	Dielectric 1	FR-4	1.500mm	4.8	
5	Bottom Layer	Copper	0.036mm		
6	Bottom Solder	Solder Resist	0.010mm	3.5	
7	Bottom Overlay				

### Fabrication specifications:

- Copper base: 1oz
- PCB Material: Prepeg FR4—Standard
- PCB Thickness: 1.6mm
- PCB Surface: HASL (with lead)
- Silkscreen Color: White (top and bottom)
- Soldermask Color: Green
- Vias: Force Complete Tenting
- Stack-up: Standard 2 layer 1.6mm thickness
- Special requirements: None



SpaceLab - Federal University of Santa Catarina	
Project: Interstage Interface Panel N°4	
Layer: Top Paste      Board Edge	
Designed by: Yan C. de Azeredo	Project Code: IIP4
Date: 7/1/2021	Version: v2.0
	Size: A4

A

A

B

B

C

C

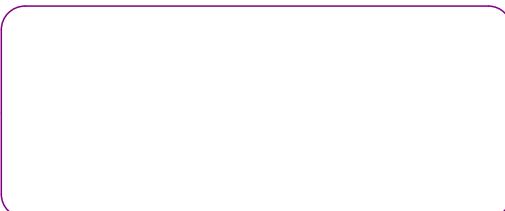
D

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	0.036mm		
4	Dielectric 1	FR-4	1.500mm	4.8	
5	Bottom Layer	Copper	0.036mm		
6	Bottom Solder	Solder Resist	0.010mm	3.5	
7	Bottom Overlay				

### Fabrication specifications:

- Copper base: 1oz
- PCB Material: Prepeg FR4—Standard
- PCB Thickness: 1.6mm
- PCB Surface: HASL (with lead)
- Silkscreen Color: White (top and bottom)
- Soldermask Color: Green
- Vias: Force Complete Tenting
- Stack-up: Standard 2 layer 1.6mm thickness
- Special requirements: None



SpaceLab - Federal University of Santa Catarina	
Project: Interstage Interface Panel Nº4	
Layer: Bottom Paste    Board Edge	
Designed by: Yan C. de Azeredo	Project Code: IIP4
Date: 7/1/2021	Version: v2.0
	Size: A4

Layer	Name	Material	Thickness	Constant	Board Layer Stack
1	Top Overlay				
2	Top Solder	Solder Resist	0.010mm	3.5	
3	Top Layer	Copper	0.036mm		
4	Dielectric 1	FR-4	1.500mm	4.8	
5	Bottom Layer	Copper	0.036mm		
6	Bottom Solder	Solder Resist	0.010mm	3.5	
7	Bottom Overlay				

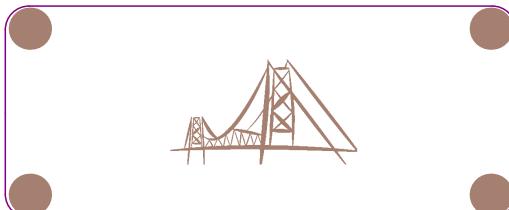


#### Fabrication specifications:

- Copper base: 1oz
- PCB Material: Prepeg FR4—Standard
- PCB Thickness: 1.6mm
- PCB Surface: HASL (with lead)
- Silkscreen Color: White (top and bottom)
- Soldermask Color: Green
- Vias: Force Complete Tenting
- Stack-up: Standard 2 layer 1.6mm thickness
- Special requirements: None

SpaceLab - Federal University of Santa Catarina	
Project: Interstage Interface Panel Nº4	
Layer: Top Solder      Board Edge	
Designed by: Yan C. de Azeredo	Project Code: IIP4
Date: 7/1/2021	Version: v2.0
	Size: A4

Layer	Name	Material	Thickness	Constant	Board Layer Stack
1	Top Overlay				
2	Top Solder	Solder Resist	0.010mm	3.5	
3	Top Layer	Copper	0.036mm		
4	Dielectric 1	FR-4	1.500mm	4.8	
5	Bottom Layer	Copper	0.036mm		
6	Bottom Solder	Solder Resist	0.010mm	3.5	
7	Bottom Overlay				

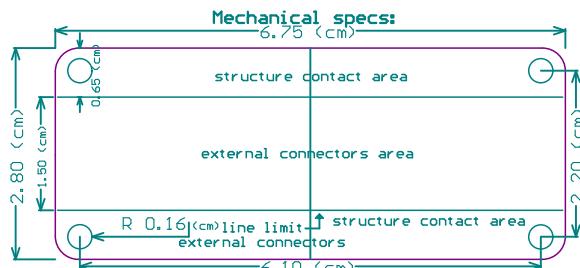


### Fabrication specifications:

- Copper base: 1oz
- PCB Material: Prepeg FR4—Standard
- PCB Thickness: 1.6mm
- PCB Surface: HASL (with lead)
- Silkscreen Color: White (top and bottom)
- Soldermask Color: Green
- Vias: Force Complete Tenting
- Stack-up: Standard 2 layer 1.6mm thickness
- Special requirements: None

SpaceLab - Federal University of Santa Catarina	
Project: Interstage Interface Panel Nº4	
Layer: Bottom Solder Board Edge	
Designed by: Yan C. de Azeredo	Project Code: IIP4
Date: 7/1/2021	Version: v2.0
	Size: A4

Layer	Name	Material	Thickness	Constant	Board Layer Stack
1	Top Overlay				
2	Top Solder	Solder Resist	0.010mm	3.5	
3	Top Layer	Copper	0.036mm		
4	Dielectric 1	FR-4	1.500mm	4.8	
5	Bottom Layer	Copper	0.036mm		
6	Bottom Solder	Solder Resist	0.010mm	3.5	
7	Bottom Overlay				



### Fabrication specifications:

- Copper base: 1oz
- PCB Material: Prepeg FR4—Standard
- PCB Thickness: 1.6mm
- PCB Surface: HASL (with lead)
- Silkscreen Color: White (top and bottom)
- Soldermask Color: Green
- Vias: Force Complete Tenting
- Stack-up: Standard 2 layer 1.6mm thickness
- Special requirements: None

SpaceLab - Federal University of Santa Catarina	
Project: Interstage Interface Panel N°4	
Layer: Dimensions	Board Edge
Designed by: Yan C. de Azeredo	Project Code: IIP4
Date: 7/1/2021	Version: v2.0
	Size: A4

A

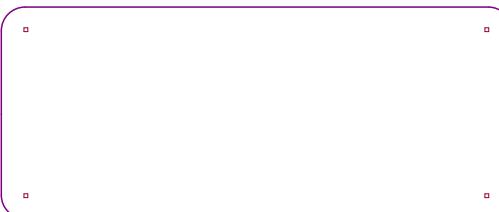
A

B

B

Layer	Name	Material	Thickness	Constant	Board Layer Stack
1	Top Overlay				
2	Top Solder	Solder Resist	0.010mm	3.5	
3	Top Layer	Copper	0.036mm		
4	Dielectric 1	FR-4	1.500mm	4.8	
5	Bottom Layer	Copper	0.036mm		
6	Bottom Solder	Solder Resist	0.010mm	3.5	
7	Bottom Overlay				

Symbol	Count	Hole Size	Plated	Hole Type	Drill Layer Pair	Via/Pad	Pad Shape	Template
<input type="checkbox"/>	4	3.200mm (125.98mil)	PTH	Round	Top Layer - Bottom Layer	Pad	Rounded	c550h320
	4 Total							



### Fabrication specifications:

- Copper base: 1oz
- PCB Material: Prepeg FR4—Standard
- PCB Thickness: 1.6mm
- PCB Surface: HASL (with lead)
- Silkscreen Color: White (top and bottom)
- Soldermask Color: Green
- Vias: Force Complete Tenting
- Stack-up: Standard 2 layer 1.6mm thickness
- Special requirements: None

D

D

SpaceLab - Federal University of Santa Catarina	
Project: Interstage Interface Panel Nº4	
Layer: Drill Drawing    Board Edge	
Designed by: Yan C. de Azeredo	
Date: 7/1/2021	Project Code: IIP4
Version: v2.0	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	0.036mm		
4	Dielectric 1	FR-4	1.500mm	4.8	
5	Bottom Layer	Copper	0.036mm		
6	Bottom Solder	Solder Resist	0.010mm	3.5	
7	Bottom Overlay				



### Fabrication specifications:

- Copper base: 1oz
- PCB Material: Prepeg FR4—Standard
- PCB Thickness: 1.6mm
- PCB Surface: HASL (with lead)
- Silkscreen Color: White (top and bottom)
- Soldermask Color: Green
- Vias: Force Complete Tenting
- Stack-up: Standard 2 layer 1.6mm thickness
- Special requirements: None

SpaceLab - Federal University of Santa Catarina	
Project: Interstage Interface Panel Nº4	
Layer: Drill Guide      Board Edge	
Designed by: Yan C. de Azeredo	Project Code: IIP4
Date: 7/1/2021	Version: v2.0
	Size: A4