

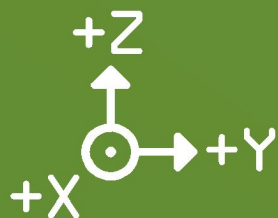
M1

SpaceLab UFSC 2021

M2

Interstage Interface Panel Board N.4 Rev 2.0 Camera Variant

Ready
for
launch



line limit ↗
external connectors

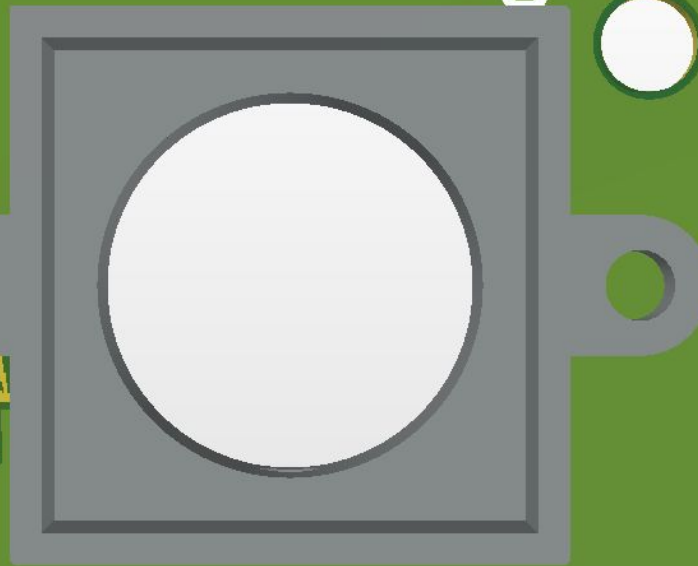


structure contact
area

M3

M4

From the ilha da magia to space.



Say cheese



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

| 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 Tickness: 1.6mm

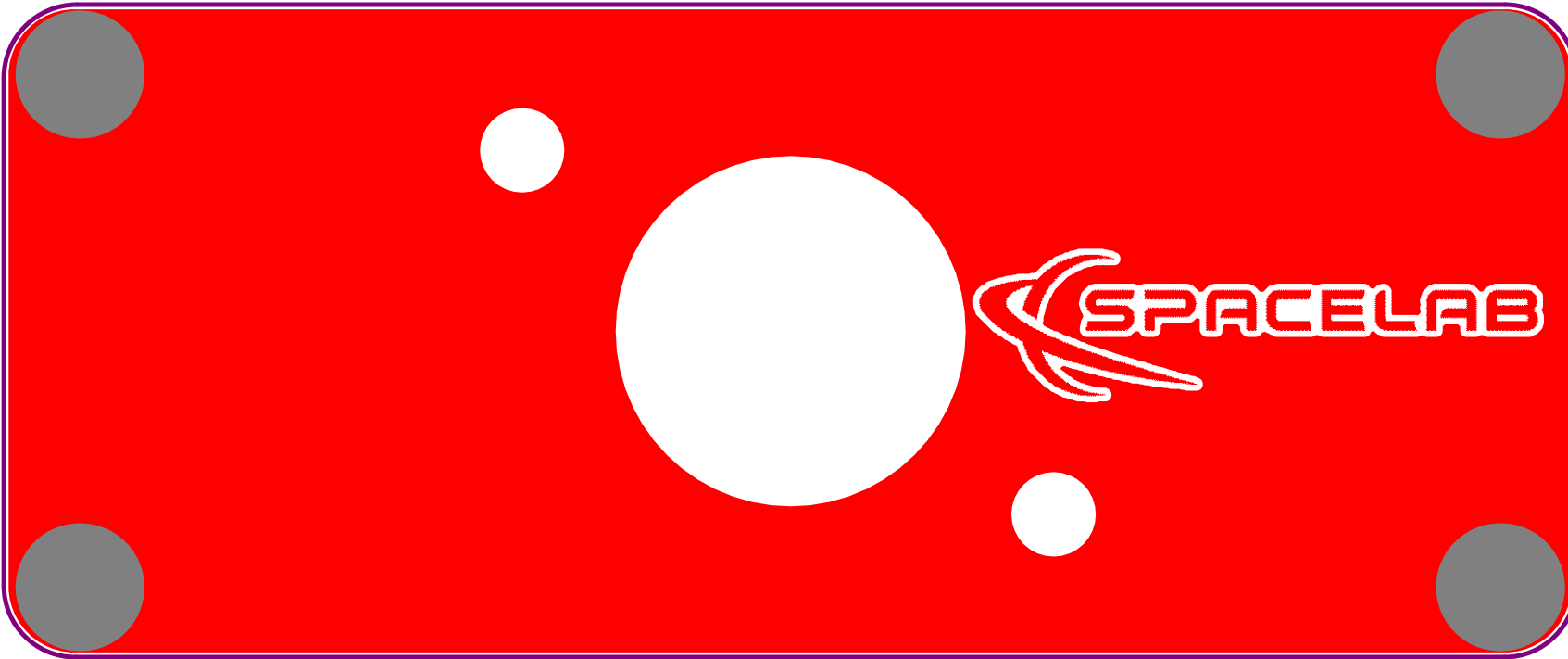
– PCB Surface: HASL (with lead)


– Silkscreen Color: White (top and bottom)

– Soldermask Color: Green

– 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 Layer Board Edge | | |
| Designed by: Yan C. de Azeredo | | Project Code: IIP4 |
| Date: 7/4/2021 | 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 Tickness: 1.6mm

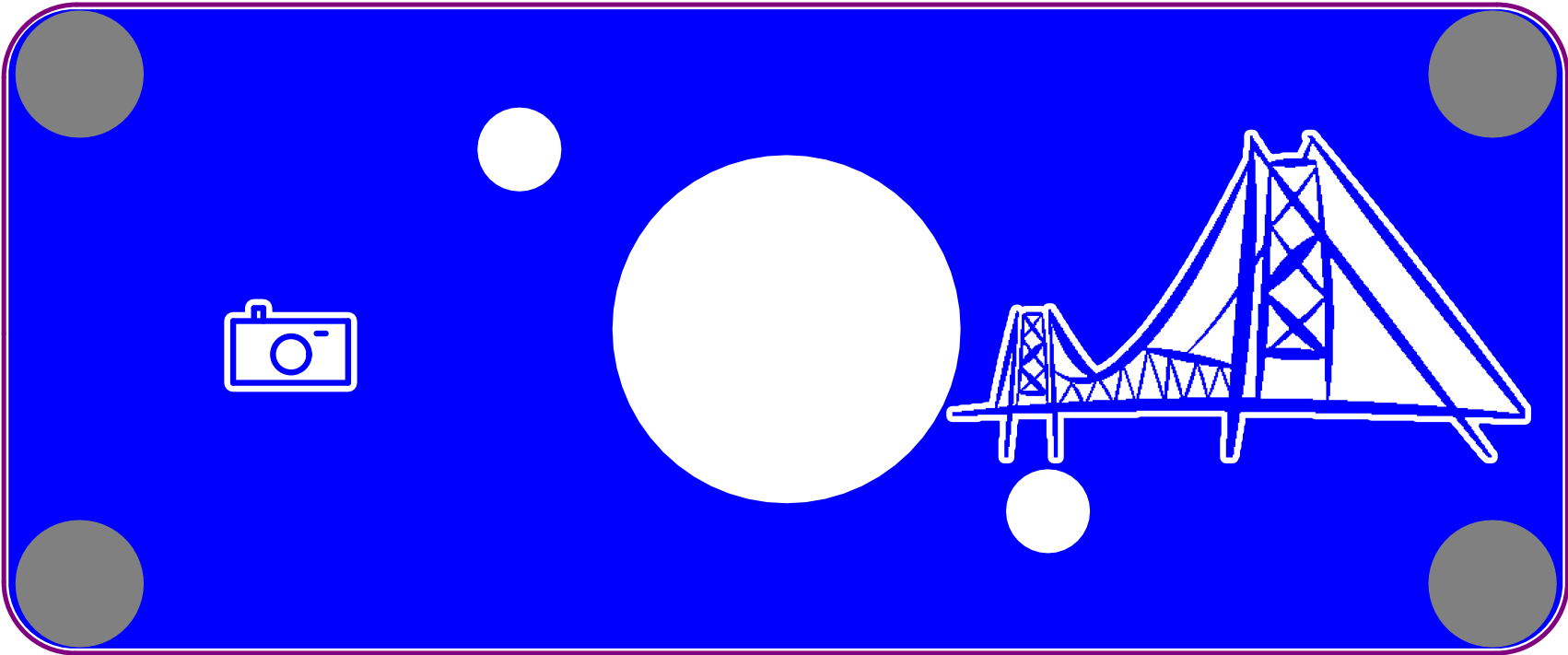
– PCB Surface: HASL (with lead)


– Silkscreen Color: White (top and bottom)

– Soldermask Color: Green

– 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: 7/4/2021 | Version: v2.0 | Size: A4 |

A

B

C

D

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 Tickness: 1.6mm
 - PCB Surface: HASL (with lead)
- Silkscreen Color: White (top and bottom)
 - Soldermask Color: Green
 - Stack—up: Standard 2 layer 1.6mm thickness
 - Special requirements: None

M1

SpaceLab UFSC 2021
Interstage Interface Panel Board N.4 Rev 2.0 Camera Variant

M2

Ready
for
launch


+Z

+X

+Y


M3

line limit
external connectors



structure contact
area

M4

| | | |
|---|---------------|---|
| SpaceLab - Federal University of Santa Catarina | |  |
| Project: Interstage Interface Panel N°4 | | |
| Layer: Top Overlay Board Edge | | |
| Designed by: Yan C. de Azeredo | | Project Code: IIP4 |
| Date: 7/4/2021 | 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 Tickness: 1.6mm

– PCB Surface: HASL (with lead)

– Silkscreen Color: White (top and bottom)

– Soldermask Color: Green


– Stack—up: Standard 2 layer 1.6mm thickness

– Special requirements: None

From the ilha da magia to space

Say cheese

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

| | | |
|---|---------------|---|
| SpaceLab - Federal University of Santa Catarina | |  |
| Project: Interstage Interface Panel N°4 | | |
| Layer: Bottom Overlay Board Edge | | |
| Designed by: Yan C. de Azeredo | | Project Code: IIP4 |
| Date: 7/4/2021 | 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 Tickness: 1.6mm

– PCB Surface: HASL (with lead)


– Silkscreen Color: White (top and bottom)

– Soldermask Color: Green

– 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: 7/4/2021 | 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 Tickness: 1.6mm

– PCB Surface: HASL (with lead)


– Silkscreen Color: White (top and bottom)

– Soldermask Color: Green

– 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 Paste Board Edge | | |
| Designed by: Yan C. de Azeredo | | Project Code: IIP4 |
| Date: 7/4/2021 | 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 Tickness: 1.6mm

– PCB Surface: HASL (with lead)


– Silkscreen Color: White (top and bottom)

– Soldermask Color: Green

– 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 Solder Board Edge | | |
| Designed by: Yan C. de Azeredo | | Project Code: IIP4 |
| Date: 7/4/2021 | 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 Tickness: 1.6mm

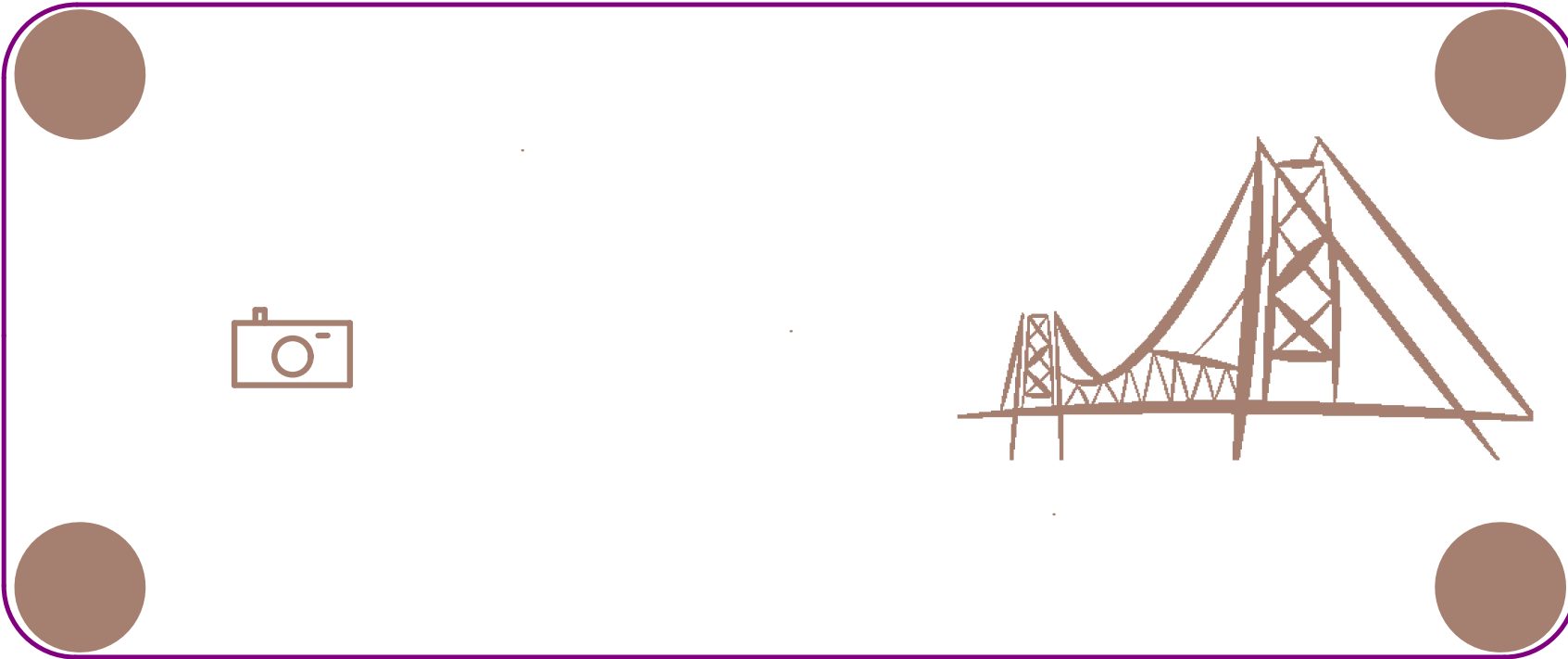
– PCB Surface: HASL (with lead)


– Silkscreen Color: White (top and bottom)

– Soldermask Color: Green

– 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 Solder Board Edge | | |
| Designed by: Yan C. de Azeredo | | Project Code: IIP4 |
| Date: 7/4/2021 | Version: v2.0 | Size: A4 |

A

B

C

D

A

B

C

D

1

2

3

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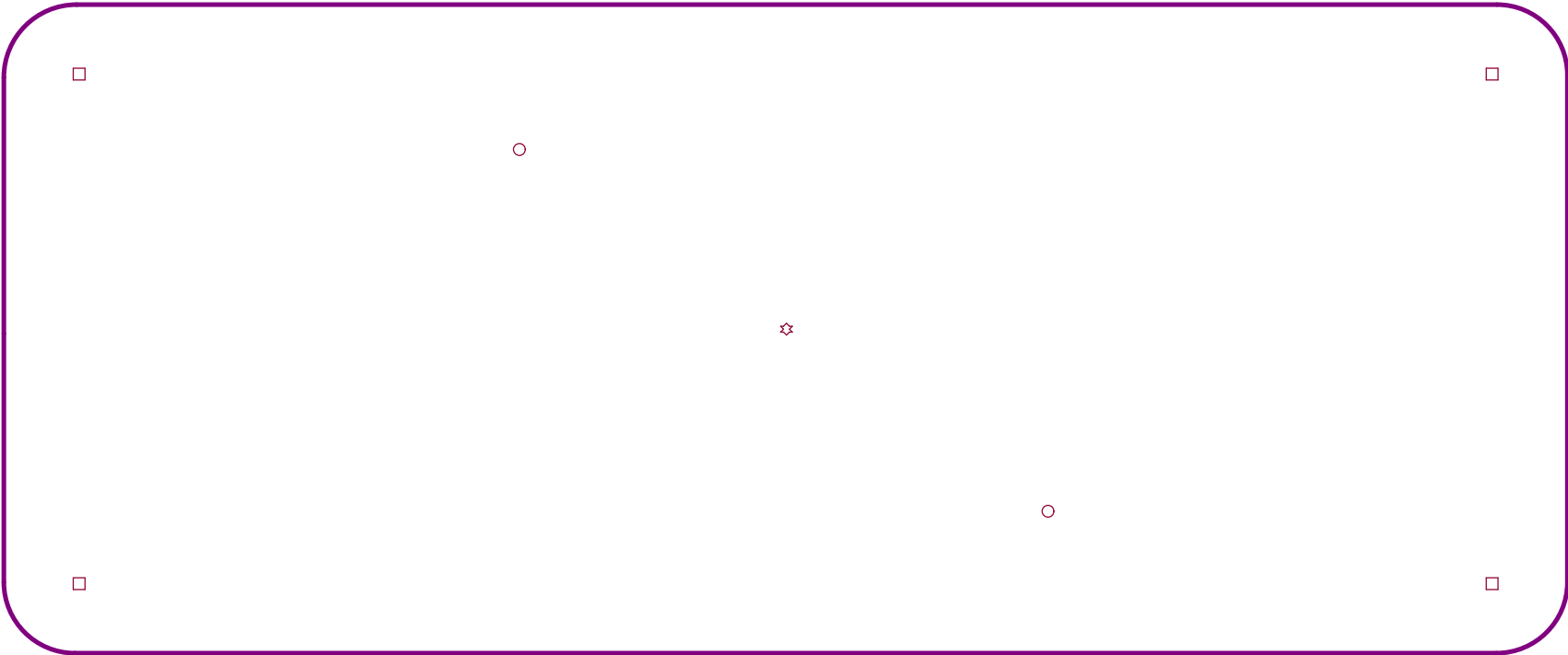
2

3

4


| 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 |
|--------|---------|----------------------|--------|-----------|--------------------------|---------|-----------|----------|
| ○ | 2 | 3.100mm (122.05mil) | PTH | Round | Top Layer - Bottom Layer | Pad | Rounded | c0h310 |
| □ | 4 | 3.200mm (125.98mil) | PTH | Round | Top Layer - Bottom Layer | Pad | Rounded | c550h320 |
| ☆ | 1 | 14.500mm (570.87mil) | PTH | Round | Top Layer - Bottom Layer | Pad | Rounded | c0h1450 |
| | 7 Total | | | | | | | |



Fabrication specifications:

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

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

1

2

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4

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 Tickness: 1.6mm

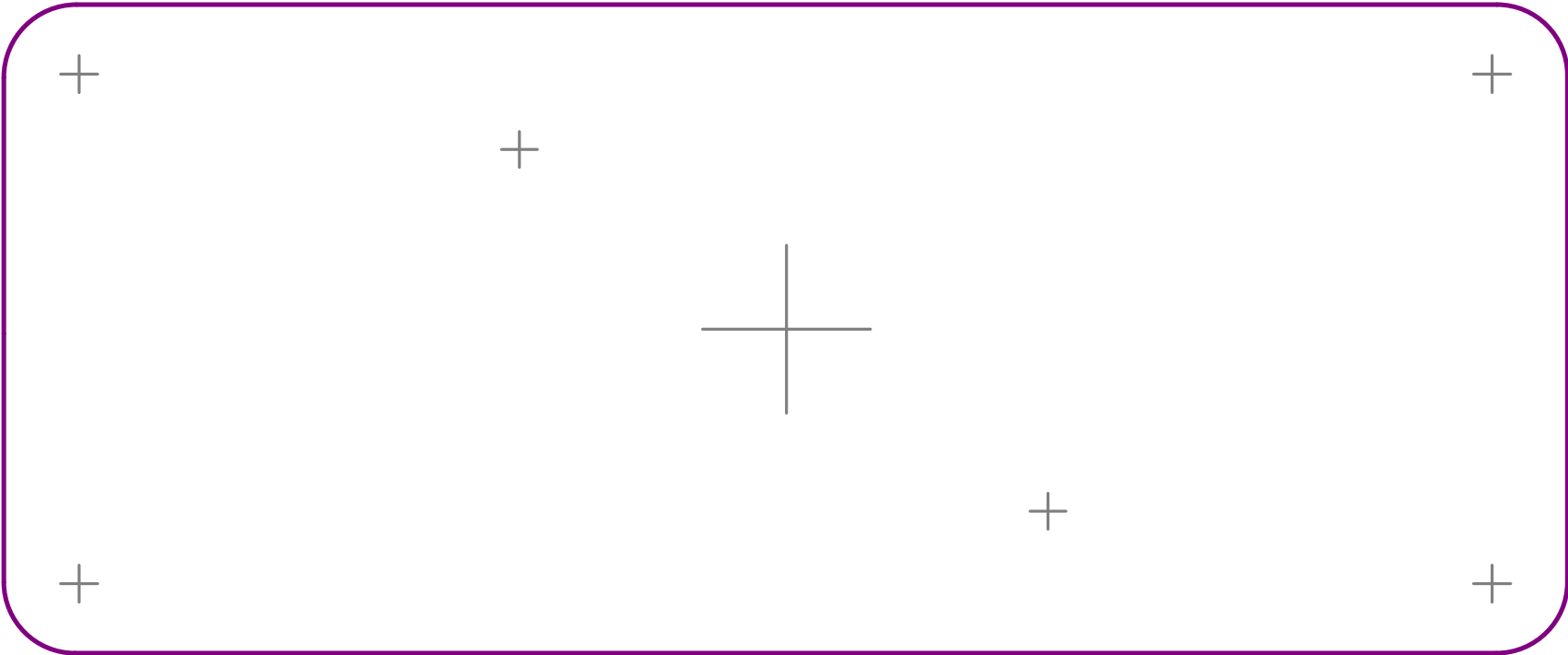
– PCB Surface: HASL (with lead)


– Silkscreen Color: White (top and bottom)

– Soldermask Color: Green

– Stack—up: Standard 2 layer 1.6mm thickness

– Special requirements: None



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

1

2

3

4