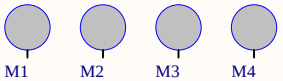
Rev	Description	Date	Author
1.0	Initial Release.	01/07/20	Yan C. de Azeredo

Revision History

Fiducials

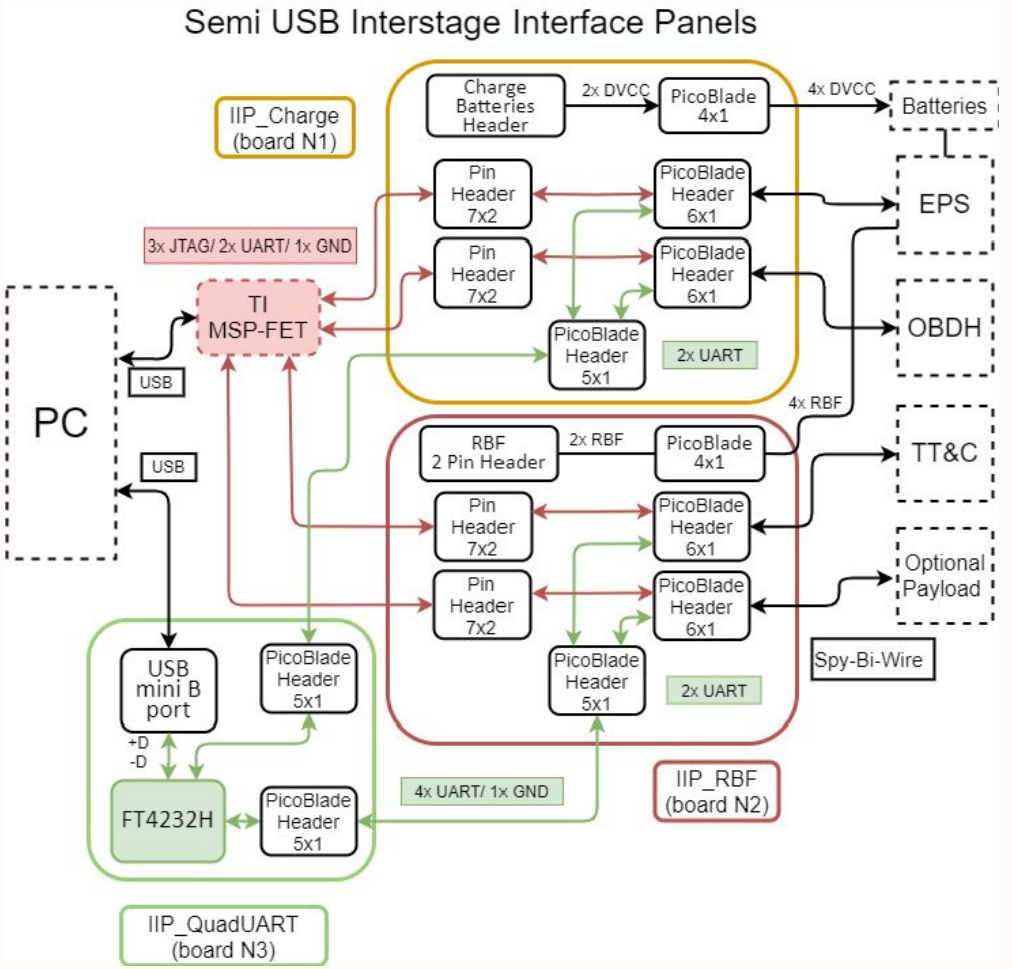
Mechanical Holes



PCB Elements

- Drawn by: Yan Castro de Azeredo
- Reviewers: Gabriel M. Marcelino and André M. P. Mattos
- Support: Gabriel M. Marcelino, André M. P. Mattos and Kleber Gouveia
- Mechanical validation: Edemar Morsch Filho

Project Information



Full System Block Diagram

Title: 0_Architecture.SchDoc			
Size: A4	Project: 2_IIP_RBF.PrjPCB		Revision: 1.0
Date: 19/07/2020	Time: 00:20:16	Sheet 1 of 2	
Drawn By: Yan Castro de Azeredo		Model: Engineering	

UFSC - SpaceLab
University Campus - Trindade
Dep. of Electrical Engineering - CTC
Florianópolis, Santa Catarina, Brazil
CEP: 88040 - 900

Remove Before Flight (RBF)

External pin header

+RBF
-RBF
1
2
CN1

Internal PicoBlade to EPS

-RBF
+RBF
-RBF
+RBF
0
1
2
3
4
CN5

FT4232H UART signals

5 pin PicoBlade

GND
5
4
3
2
1
0
UART_Rx4
UART_Tx4
UART_Rx3
UART_Tx3
CN4

JTAG and redundant UART headers

TP1
JTAG3_TDO_TDI
JTAG3_TCK
GND
JTAG3_VCC
UART_Tx3
UART_Rx3
CN2

TP2
JTAG4_TDO_TDI
JTAG4_TCK
GND
JTAG4_VCC
UART_Tx4
UART_Rx4
CN6

Debug and programming interfaces

6 pin Picoblade

GND
UART_Rx3
UART_Tx3
JTAG3_TCK
JTAG3_TDO_TDI
JTAG3_VCC
CN3

6 pin Picoblade

GND
UART_Rx4
UART_Tx4
JTAG4_TCK
JTAG4_TDO_TDI
JTAG4_VCC
CN7

Title: 2_IIP_RBF.SchDoc			
Size: A4	Project: 2_IIP_RBF.PrjPCB		Revision: 1.0
Date: 19/07/2020	Time: 00:20:16	Sheet 2 of 2	
Drawn By: Yan Castro de Azeredo		Model: Engineering	

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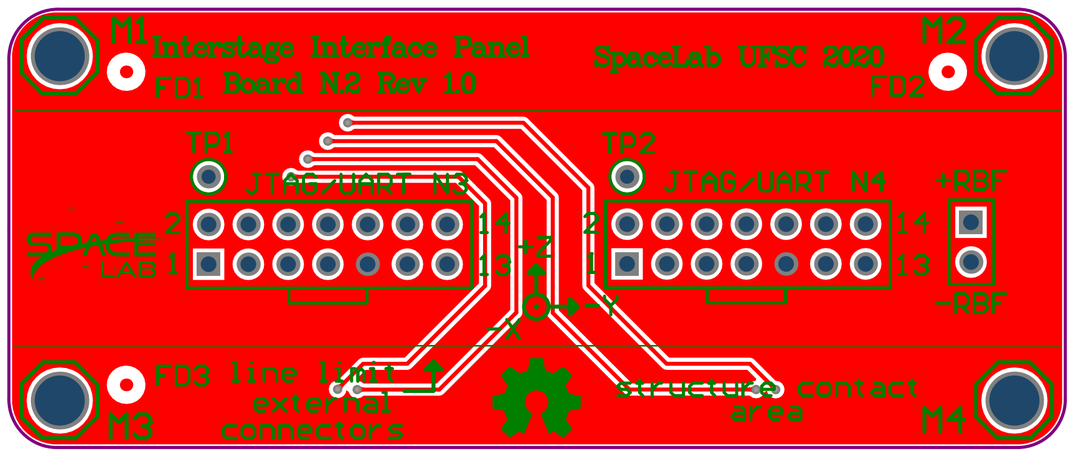
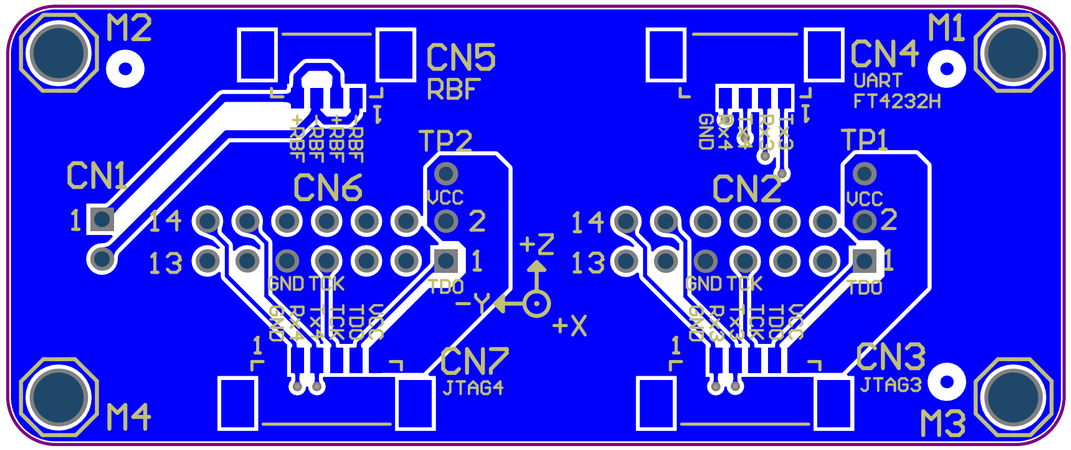
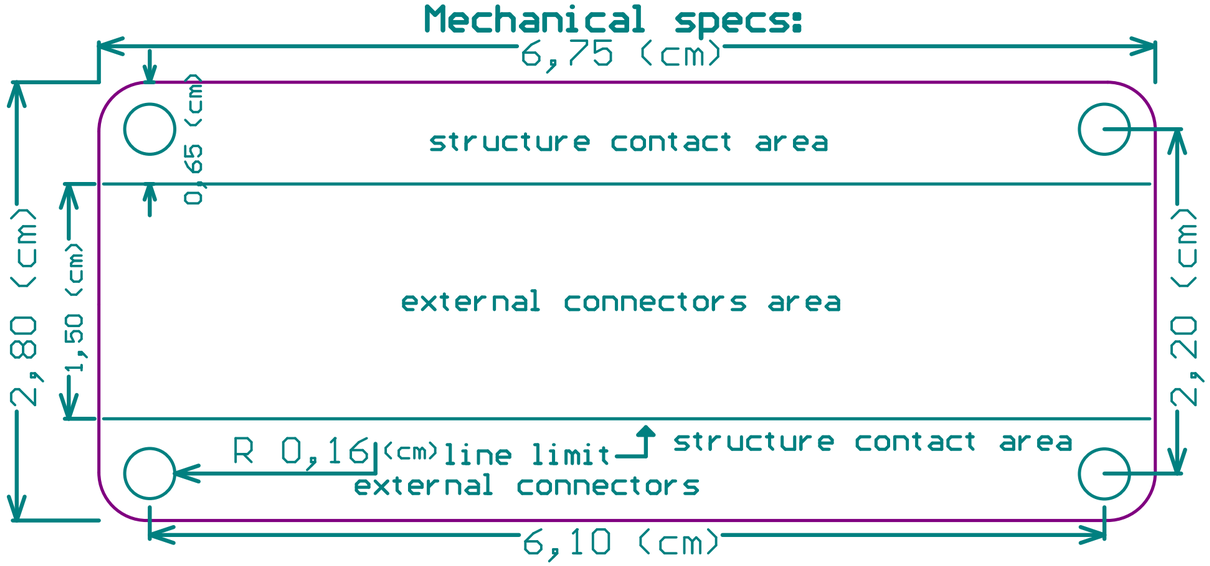
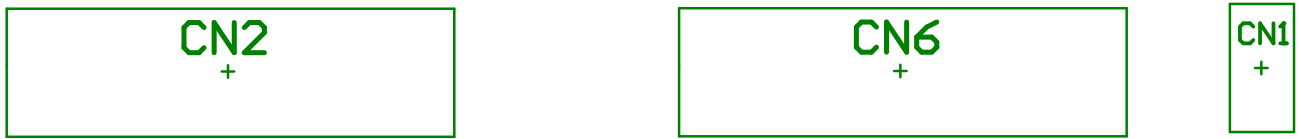
Layer	Name	Material	Thickness	Constant	Board Layer Stack
	Top Overlay				
	Top Solder	Solder Resist	0,010mm	3,5	
1	Top Layer	Copper	0,036mm		
	Dielectric 1	FR-4	1,500mm	4,8	
2	Bottom Layer	Copper	0,036mm		
	Bottom Solder	Solder Resist	0,010mm	3,5	
	Bottom Overlay				

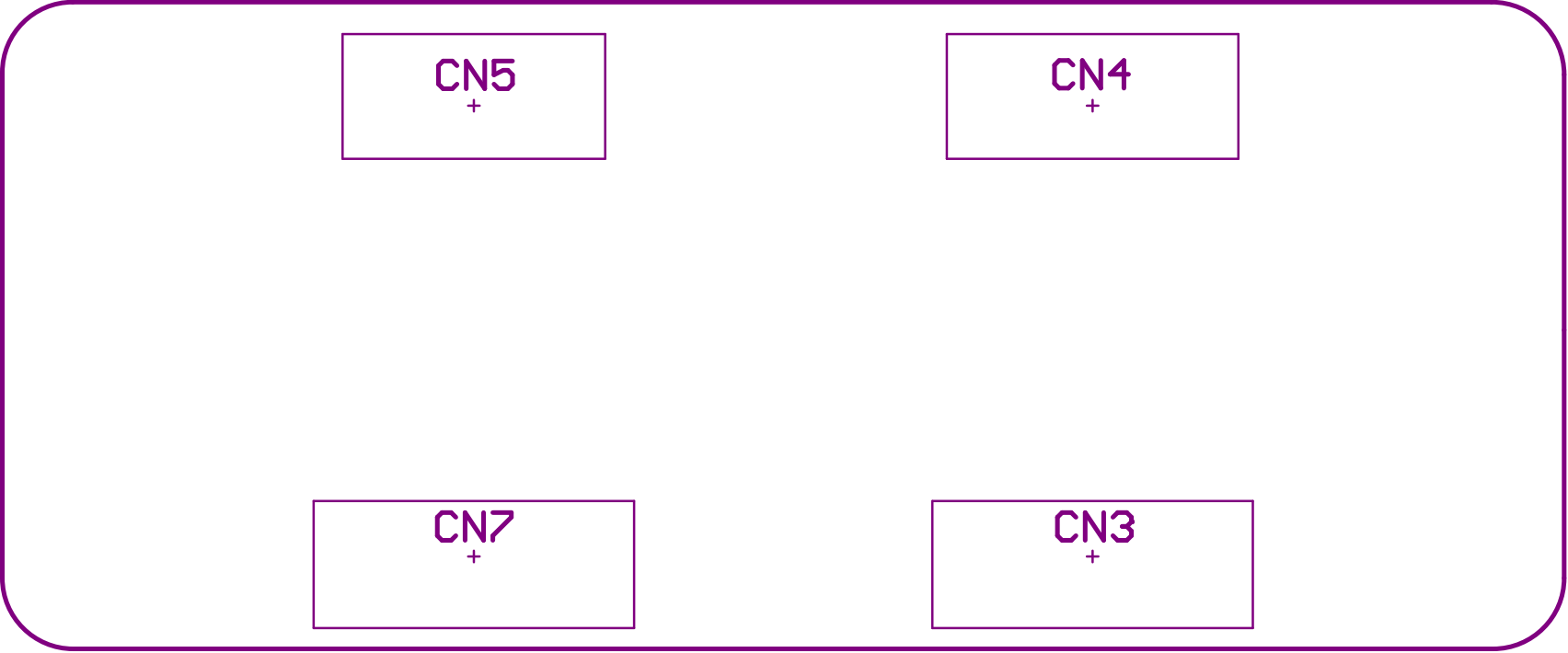


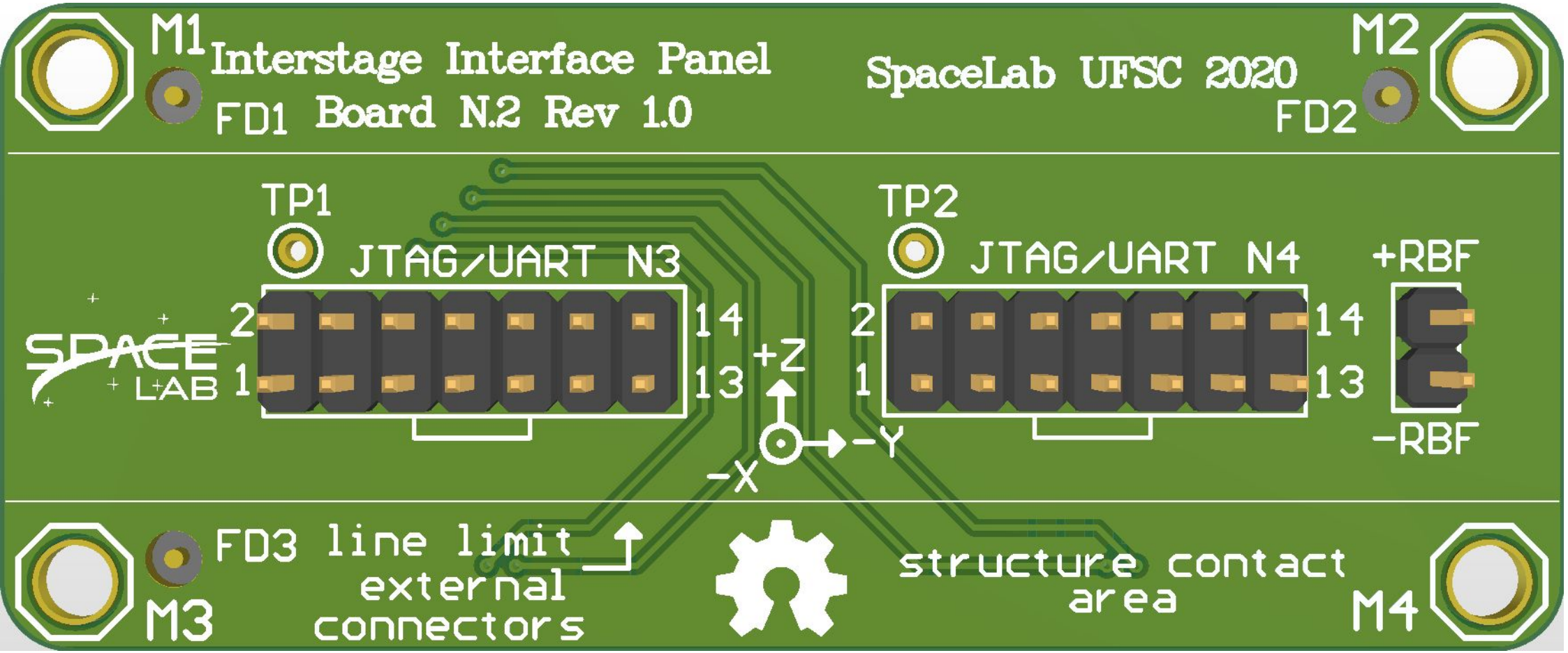
TITLE: IIP SEMI USB N.2 BOARD		REV: 1.0	DATE: 02/07/2020
MATERIAL: FR4	Silkscreen color: white	Project: IIP FloripaSat-2	
Board Thickness: 1.6mm	Layers: 02	Space Technology Research Laboratory Federal University of Santa Catarina **SpaceLab UFSC**	
PCB Surface: HASL	Drawing: Yan C. de Azeredo		

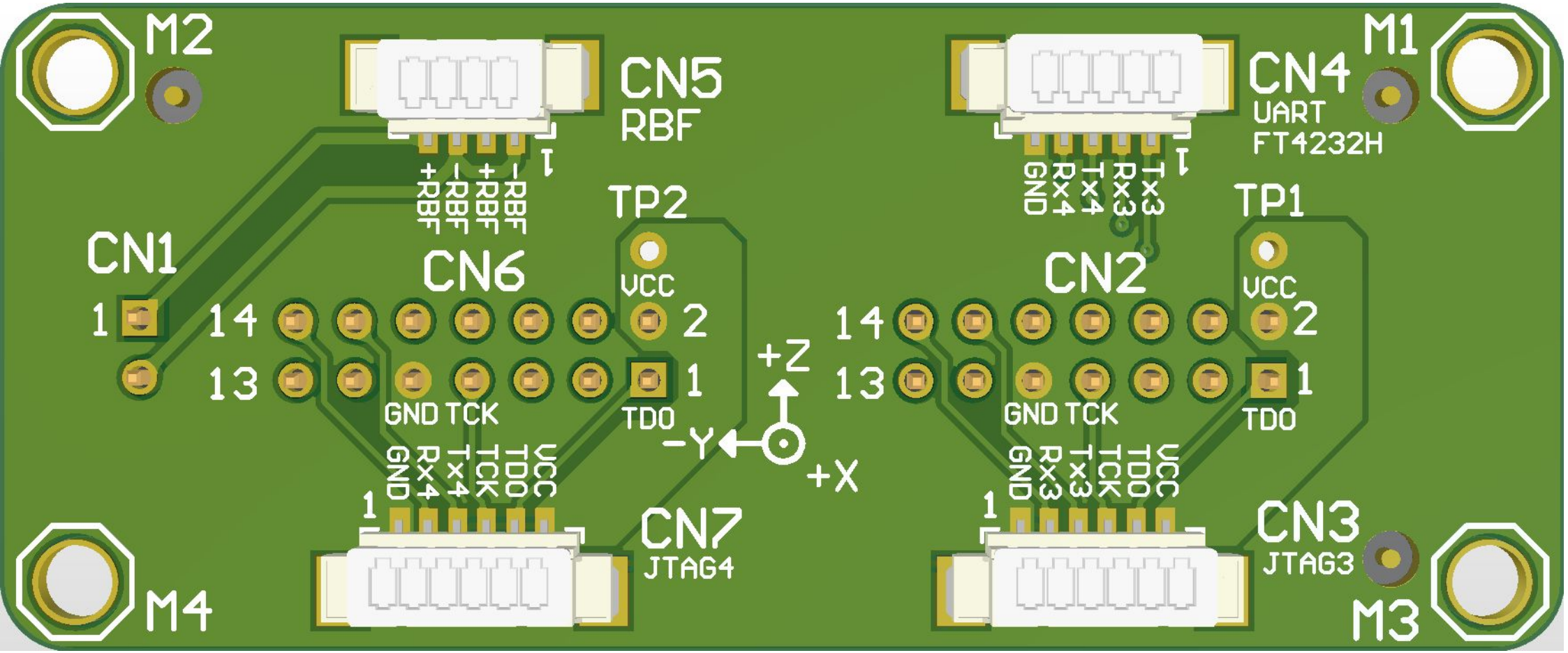

M2
CN5
RBF
1
RBF
RBF
RBF
TP2
CN1
CN6
VCC
2
1
14
13
GND TDI
TDO
+Z
-Y
+X
1
CN7
JTAG4
M4
M1
CN4
UART
FT4232H
GND
TP1
CN2
VCC
2
1
14
13
GND TDI
TDO
1
CN3
JTAG3
M3


Mechanical specs:
6,75 (cm)
0,65 (cm)
structure contact area
2,80 (cm)
1,50 (cm)
external connectors area
2,20 (cm)
R 0,16 (cm)
line limit
structure contact area
external connectors
6,10 (cm)


CN2
CN6
CN1


CN5
CN4
CN7
CN3


M1
Interstage Interface Panel
FD1 Board N.2 Rev 1.0
SpaceLab UFSC 2020
M2
FD2
TP1
JTAG/UART N3
2
1
14
13
TP2
JTAG/UART N4
+RBF
-RBF
+Z
-Y
-X
SPACE LAB
FD3 line limit
external
connectors
structure contact
area
M3
M4


M2
M1
M4
M3
CN5
RBF
+RBF
-RBF
+RBF
-RBF
1
CN4
UART
FT4232H
GND
RX4
TX4
RX3
TX3
1
CN1
1
CN6
14
13
GND
TCK
TP2
VCC
2
1
TDO
+Z
-Y
+X
CN2
14
13
GND
TCK
TP1
VCC
2
1
TDO
GND
RX4
TX4
TCK
TDO
VCC
1
CN7
JTAG4
GND
RX3
TX3
TCK
TDO
VCC
1
CN3
JTAG3

Quotation

Source Data From:	2_IIP_RBF.BomDoc		
Project:	2_IIP_RBF.PrjPCB		
Variant:	None		
Project Code:	<Parameter ProductCode not found>	1	
Report Date:	19/07/2020	00:20	
Print Date:	19/07/2020	00:20:43	
Date:	05/01/1900 07:45		
Dolar:	R$ 5,3260		

#	Supplier 1	Supplier Part Number 1	Manufacturer Part Number 1	Name	Description	Quantity	Designator	Supplier Unit Price 1	Percentage	Supplier Stock 1
1	Mouser	538-53398-0671	53398-0671	6 pin Picoblade	1.25mm Pitch PicoBlade™ Header, Surface Mount, Vertical, 6 Circuits	2	CN3, CN7	$ 1,15	40%	13184
2	Mouser	538-53398-0471	533980471	4 pin Picoblade	Connector Header Surface Mount 4 position 0.049" (1.25mm)	1	CN5	$ 0,98	17%	39356
3	Mouser	855-M20-9980745	M20-9980745	7 POS dual line Pin Header 2.54mm	Headers & Wire Housings 07+07 DIL VERTICAL PIN HEADER GOLD HT	2	CN2, CN6	$ 0,54	19%	1155
4	Mouser	855-M20-9990245	M20-9990245	2 POS Pin Header	M20 HDR, PIN, SIL, VERT, 2W	1	CN1	$ 0,14	2%	17310
5	Mouser	538-53398-0571	533980571	5 pin PicoBlade	Wire-To-Board Connector, Vertical, PicoBlade 53398 Series, Surface Mount, Header, 5, 1.25 mm	1	CN4	$ 1,32	23%	50576
							TOTAL	$ 5,82	100%	