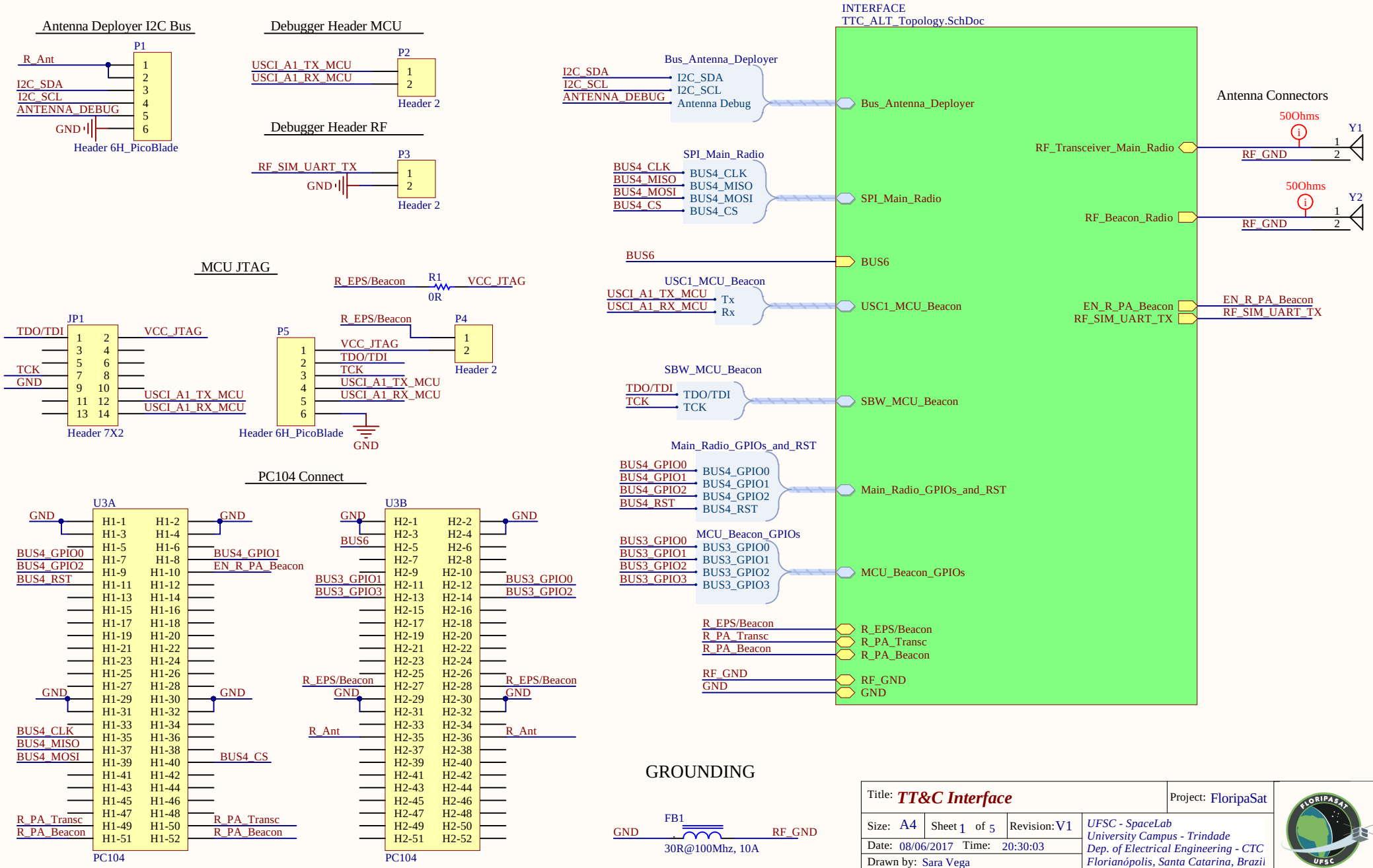
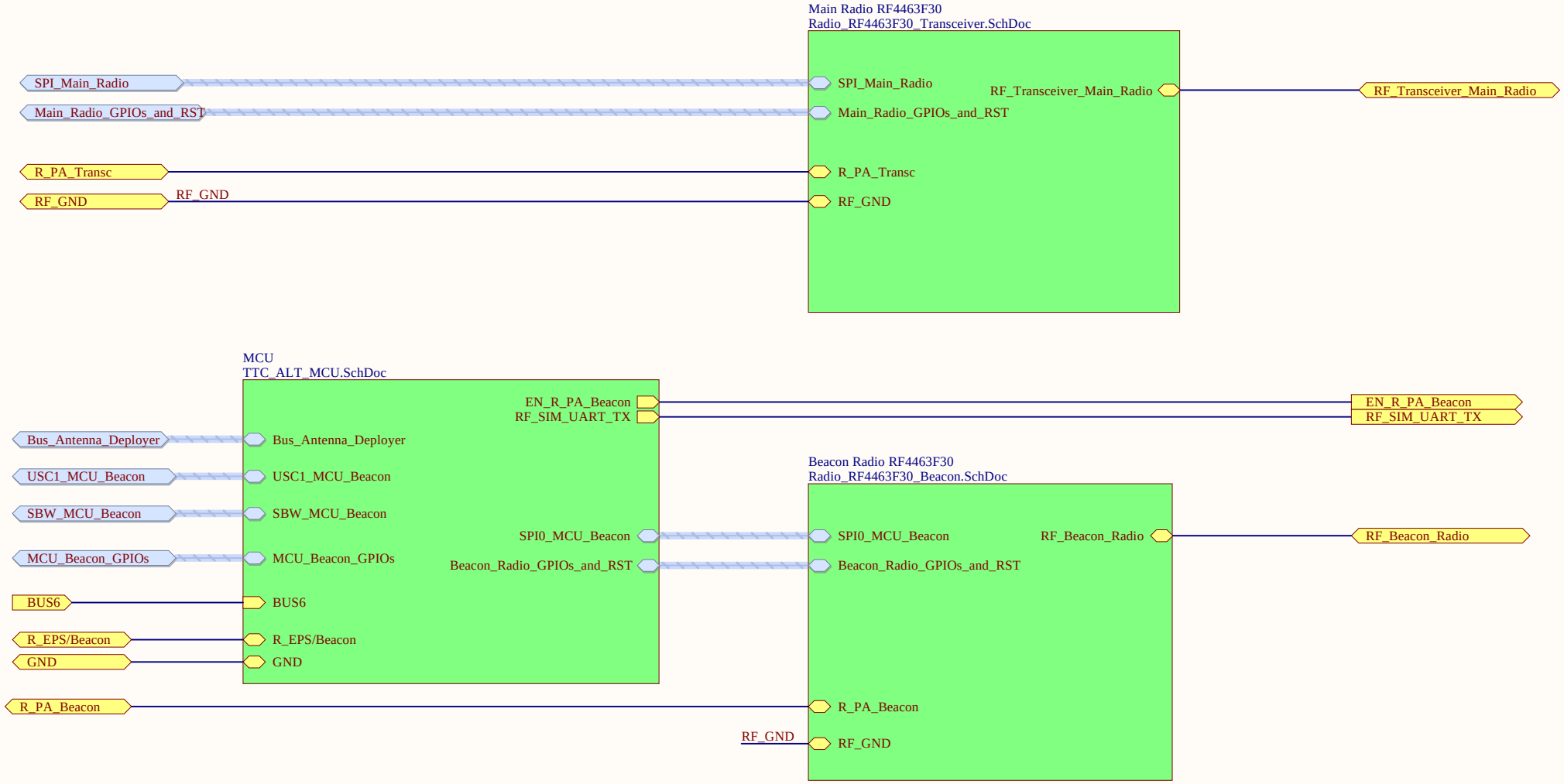
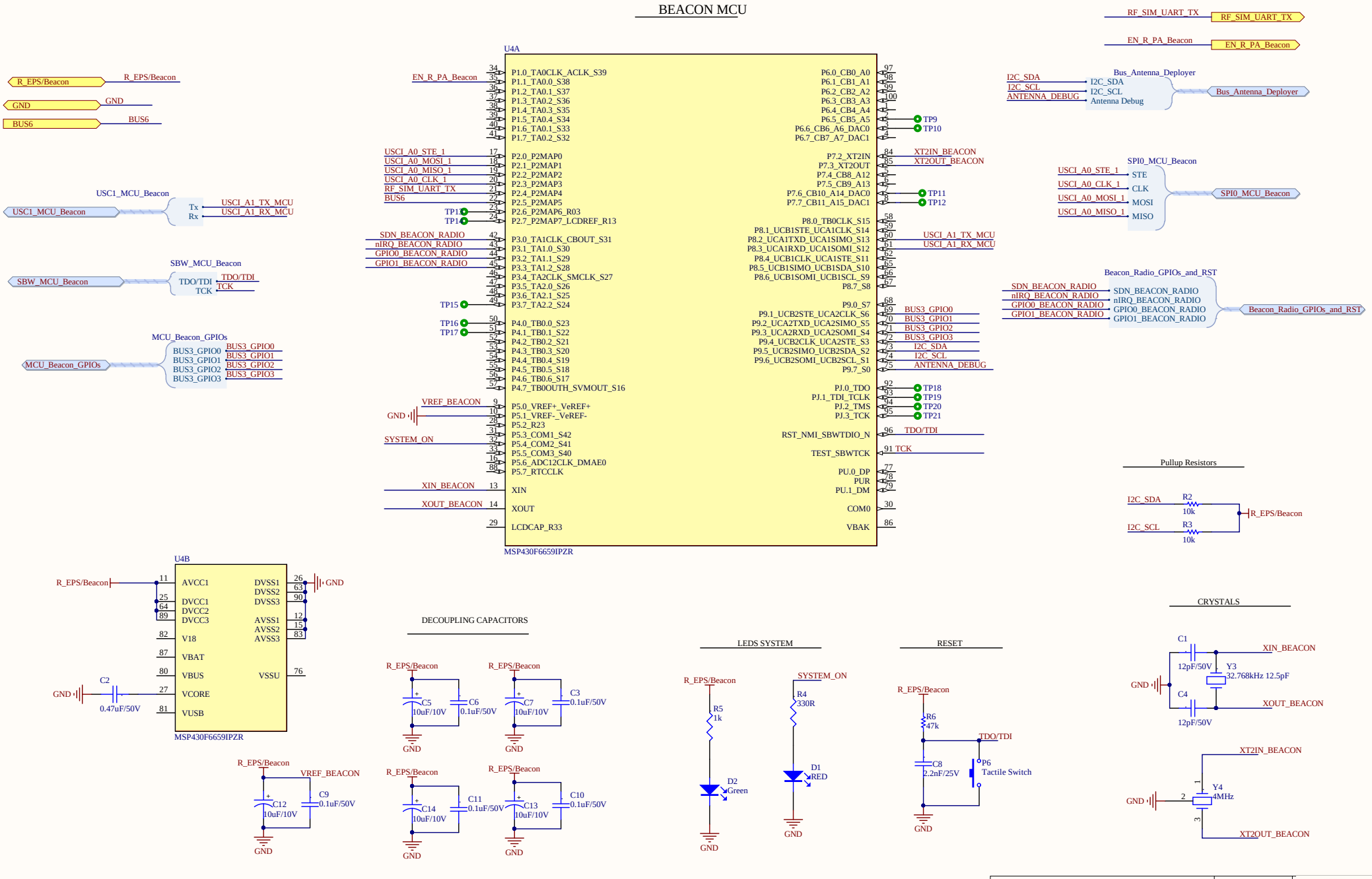

Antenna Deployer I2C Bus
P1
R_Ant
I2C_SDA
I2C_SCL
ANTENNA_DEBUG
GND
Header 6H_PicoBlade
Debugger Header MCU
P2
USCI_A1_TX_MCU
USCI_A1_RX_MCU
Header 2
Debugger Header RF
P3
RF_SIM_UART_TX
GND
Header 2
MCU JTAG
JP1
TDO/TDI
TCK
GND
VCC_JTAG
USCI_A1_TX_MCU
USCI_A1_RX_MCU
Header 7X2
R_EPS/Beacon
R1
0R
VCC_JTAG
P5
P4
TDO/TDI
TCK
USCI_A1_TX_MCU
USCI_A1_RX_MCU
Header 6H_PicoBlade
Header 2
GND
PC104 Connect
U3A
U3B
BUS4_GPIO0
BUS4_GPIO2
BUS4_RST
BUS4_GPIO1
EN_R_PA_Beacon
BUS4_CLK
BUS4_MISO
BUS4_MOSI
BUS4_CS
R_PA_Transc
R_PA_Beacon
BUS6
BUS3_GPIO1
BUS3_GPIO3
BUS3_GPIO0
BUS3_GPIO2
R_EPS/Beacon
R_Ant
PC104
INTERFACE
TTC_ALT_Topology.SchDoc
Bus_Antenna_Deployer
I2C_SDA
I2C_SCL
Antenna Debug
SPI_Main_Radio
BUS4_CLK
BUS4_MISO
BUS4_MOSI
BUS4_CS
BUS6
USC1_MCU_Beacon
USCI_A1_TX_MCU
USCI_A1_RX_MCU
Tx
Rx
SBW_MCU_Beacon
TDO/TDI
TCK
Main_Radio_GPIOs_and_RST
BUS4_GPIO0
BUS4_GPIO1
BUS4_GPIO2
BUS4_RST
MCU_Beacon_GPIOs
BUS3_GPIO0
BUS3_GPIO1
BUS3_GPIO2
BUS3_GPIO3
R_EPS/Beacon
R_PA_Transc
R_PA_Beacon
RF_GND
GND
Antenna Connectors
RF_Transceiver_Main_Radio
RF_Beacon_Radio
50Ohms
Y1
Y2
RF_GND
EN_R_PA_Beacon
RF_SIM_UART_TX
GROUNDING
FB1
30R@100Mhz, 10A
Title: TT&C Interface
Project: FloripaSat
Size: A4
Sheet 1 of 5
Revision: V1
Date: 08/06/2017 Time: 20:30:03
Drawn by: Sara Vega
File: TT_C_Interface.SchDoc
UFSC - SpaceLab
University Campus - Trindade
Dep. of Electrical Engineering - CTC
Florianópolis, Santa Catarina, Brazil

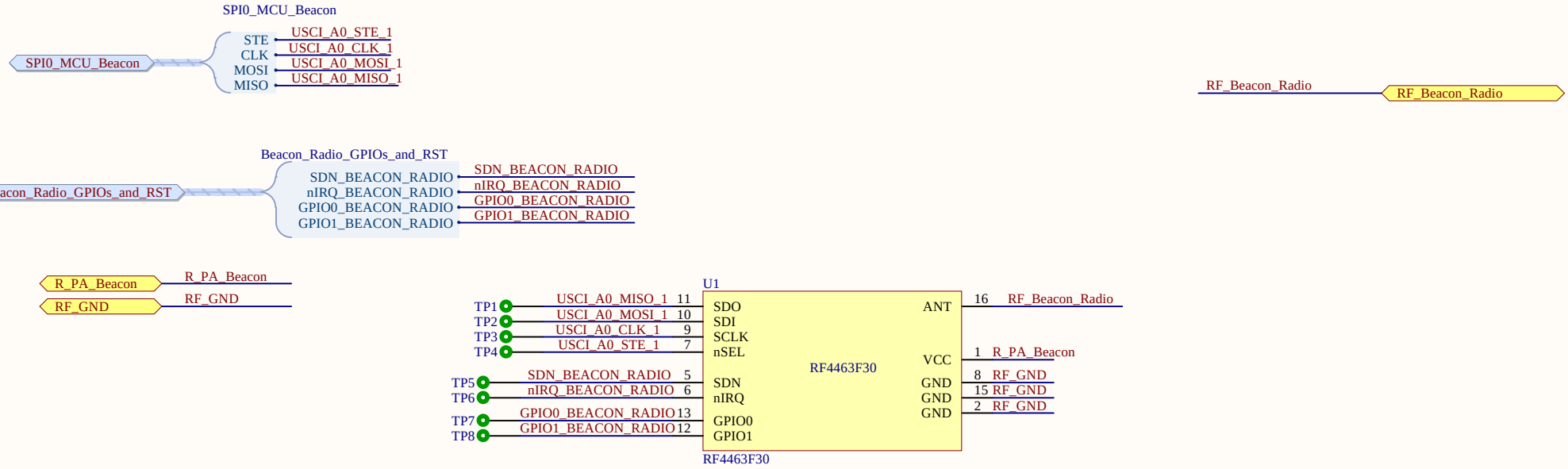


Title: ***TT&C Alt Topology***			Project: FloripaSat
Size: A4	Sheet 2 of 5	Revision: V1	*UFSC - SpaceLab* *University Campus - Trindade* *Dep. of Electrical Engineering - CTC* *Florianópolis, Santa Catarina, Brazil*
Date: 08/06/2017 Time: 20:30:03			
Drawn by: Sara Vega			
File: TTC_ALT_Topology.SchDoc			

BEACON MCU



Title: **TT&C MCU**			Project: FloripaSat
Size: A4	Sheet 3 of 5	Revision: V1	*UFSC - SpaceLab*
Date: 08/06/2017	Time: 20:30:03		*University Campus - Trindade*
Drawn by: Sara Vega			*Dep. of Electrical Engineering - CTC*
File: TTC_ALT_MCU.SchDoc			*Florianópolis, Santa Catarina, Brazil*



Title:	***Radio RF4463F30 Beacon***	Project:	FloripaSat
Size: A4	Sheet 4 of 5	Revision: V1	*UFSC - SpaceLab*
Date: 08/06/2017	Time: 20:30:03		*University Campus - Trindade*
Drawn by: Sara Vega			*Dep. of Electrical Engineering - CTC*
File: Radio_RF4463F30_Beacon.SchDoc			*Florianópolis, Santa Catarina, Brazil*

SPI_Main_Radio

SPI_Main_Radio
BUS4_MOSI
BUS4_MISO
BUS4_CS
BUS4_CLK
BUS4_MOSI
BUS4_MISO
BUS4_CS
BUS4_CLK

Main_Radio_GPIOs_and_RST

Main_Radio_GPIOs_and_RST
BUS4_GPIO0
BUS4_GPIO1
BUS4_GPIO2
BUS4_RST
BUS4_GPIO0
BUS4_GPIO1
BUS4_GPIO2
BUS4_RST

R_PA_Transc
RF_GND
R_PA_Transc
RF_GND

RF_Transceiver_Main_Radio
RF_Transceiver_Main_Radio

Note:
Bus4_Rst is BUS4_SDN
(Power down control)

U2

BUS4_MISO 11
BUS4_MOSI 10
BUS4_CLK 9
BUS4_CS 7
BUS4_RST 5
BUS4_GPIO2 6
BUS4_GPIO0 13
BUS4_GPIO1 12

SDO
SDI
SCLK
nSEL
SDN
nIRQ
GPIO0
GPIO1

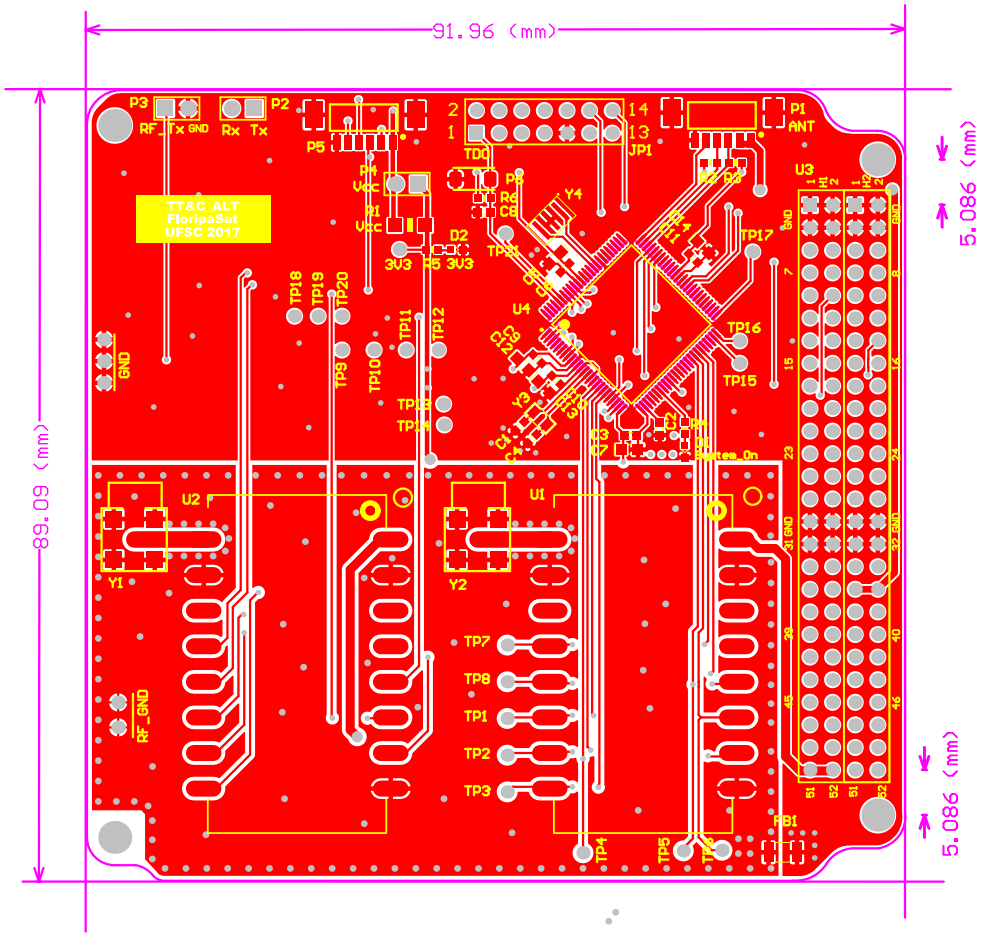
RF4463F30

ANT
VCC
GND
GND
GND

16 RF_Transceiver_Main_Radio
1 R_PA_Transc
8 RF_GND
15 RF_GND
2 RF_GND

RF4463F30

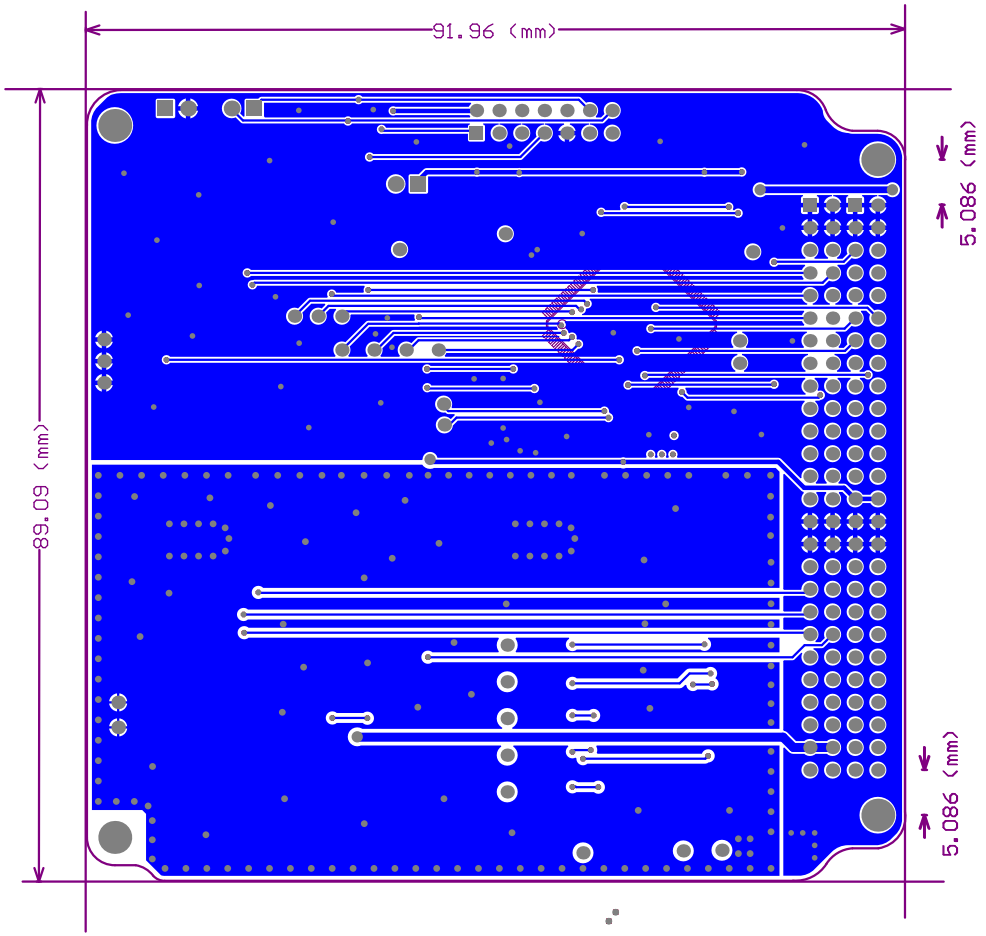
Title: ***Radio RF4463F30 Transceiver***			Project: FloripaSat
Size: A4	Sheet 5 of 5	Revision: V1	*UFSC - SpaceLab* *University Campus - Trindade* *Dep. of Electrical Engineering - CTC* *Florianópolis, Santa Catarina, Brazil*
Date: 08/06/2017 Time: 20:30:03			
Drawn by: Sara Vega			
File: Radio_RF4463F30_Transceiver.SchDoc			



General SPEC:

Cupper base 1OZ:
PCB Material: FR4
PCB Tickness: 1.6mm
PCB Surface: HAL
Vias: Force Complete Tenting

TITULO: TT&C ALT 2017 Engineering Model 2 UFSC		**REV.** 01	**VER.** V1
MATERIAL: FR4	**Silkscreen color: white**		
Board Tickness: 1.6mm	**Layers: 02**	**Drawing**	**DATE**
PCB Surface: HAL		Sara Vega	08/06/2017

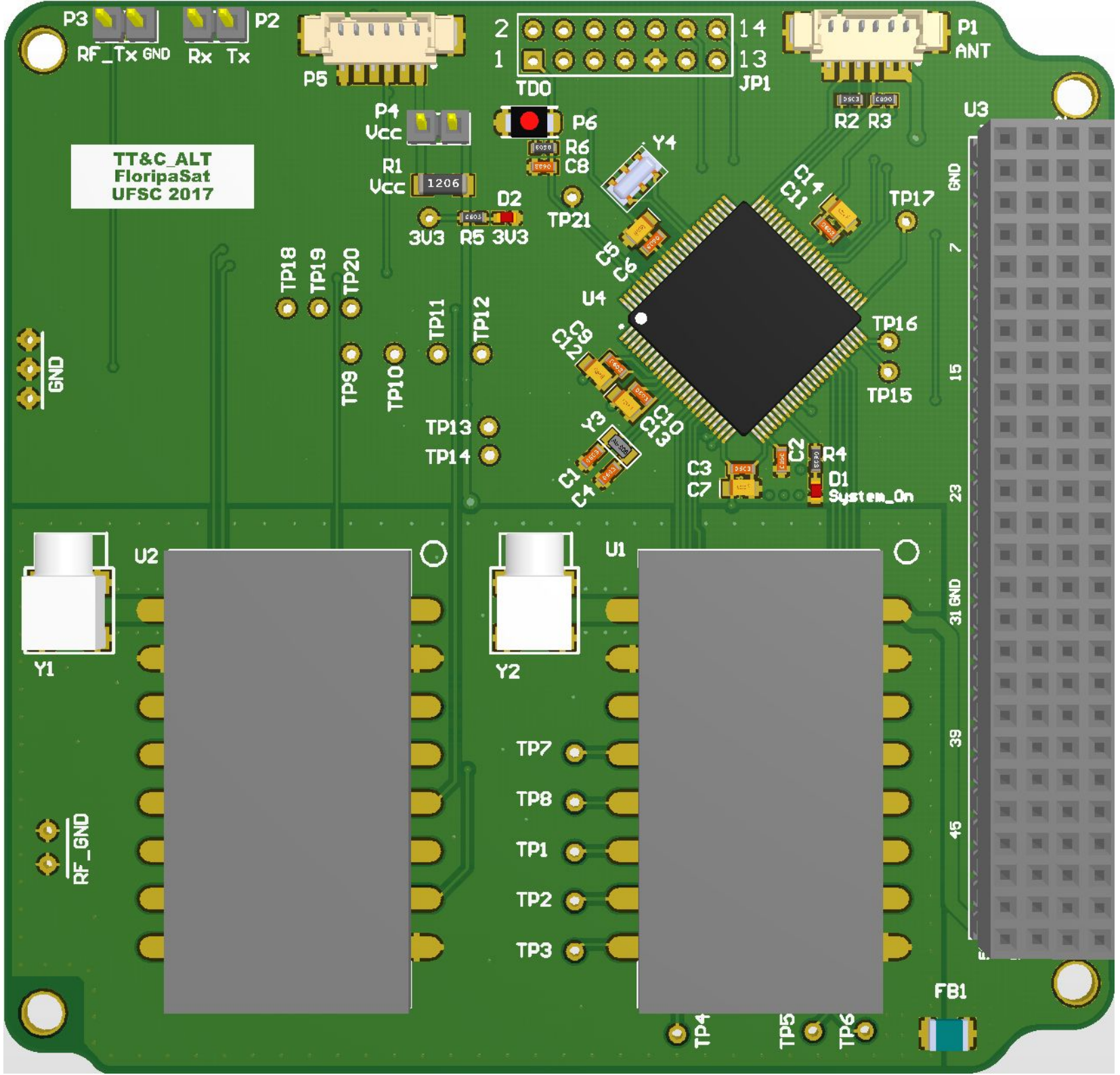


General SPEC:

Cupper base 1OZ:
PCB Material: FR4
PCB Tickness: 1.6mm
PCB Surface: HAL
Vias: Force Complete Tenting

TITULO: TT&C ALT 2017 Engineering Model 2 UFSC		**REV.** 01	**VER.** V1
MATERIAL: FR4	**Silkscreen color: white**		
Board Tickness: 1.6mm	**Layers: 02**	**Drawing**	**DATE**
PCB Surface: HAL		Sara Vega	08/06/2017

JP1
U1
U2
U3
U4
5.086 (mm)
5.086 (mm)


P3
RF_Tx GND
P2
Rx Tx
P5
2
1
14
13
TDO
JP1
P1
ANT
P4
Vcc
P6
R6
C8
R1
Vcc
1206
D2
3V3
R5
3V3
TP21
Y4
R2 R3
U3
TT&C_ALT
FloripaSat
UFSC 2017
C14
C11
TP17
GND
7
C5
C6
U4
TP18
TP19
TP20
TP11
TP12
TP16
C9
C12
TP9
TP10
TP15
15
C10
C13
TP13
TP14
Y3
C2
R4
C1
C4
C3
C7
D1
System_On
23
GND
U2
U1
Y1
Y2
31
39
TP7
TP8
TP1
TP2
TP3
45
RF_GND
FB1
TP4
TP5
TP6