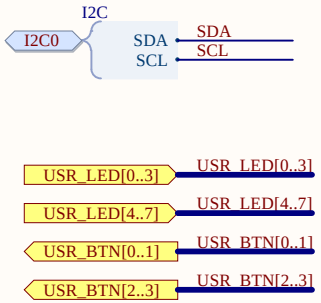
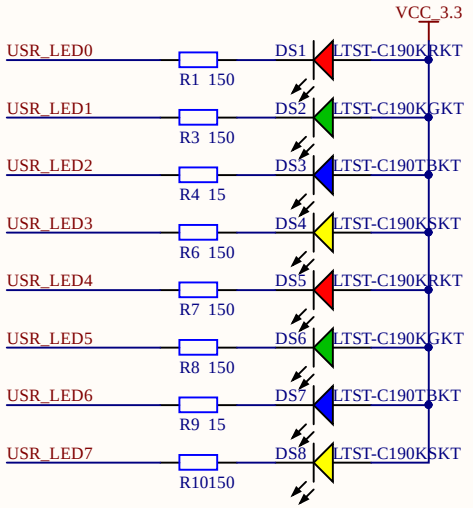
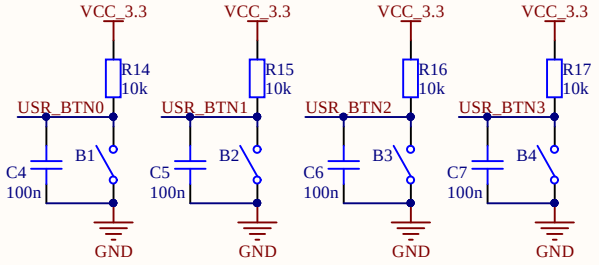


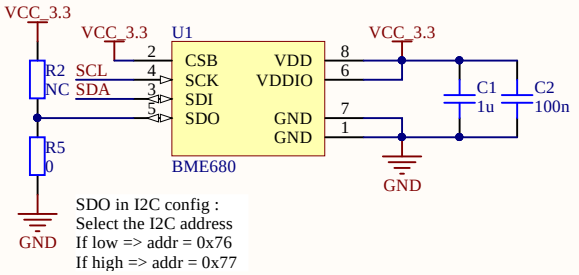


Leds controlled by the user
Half from the LoRa MCU, the other half from the bluetooth MCU

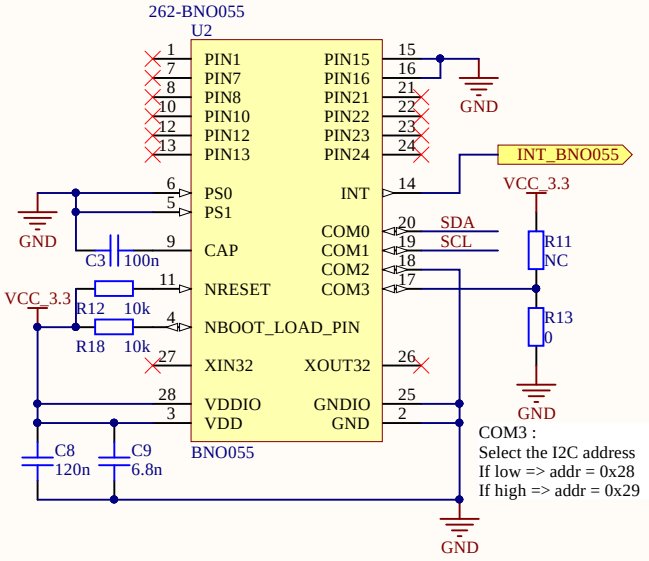


Buttons read by the user
Half from the LoRa MCU, the other half from the bluetooth MCU

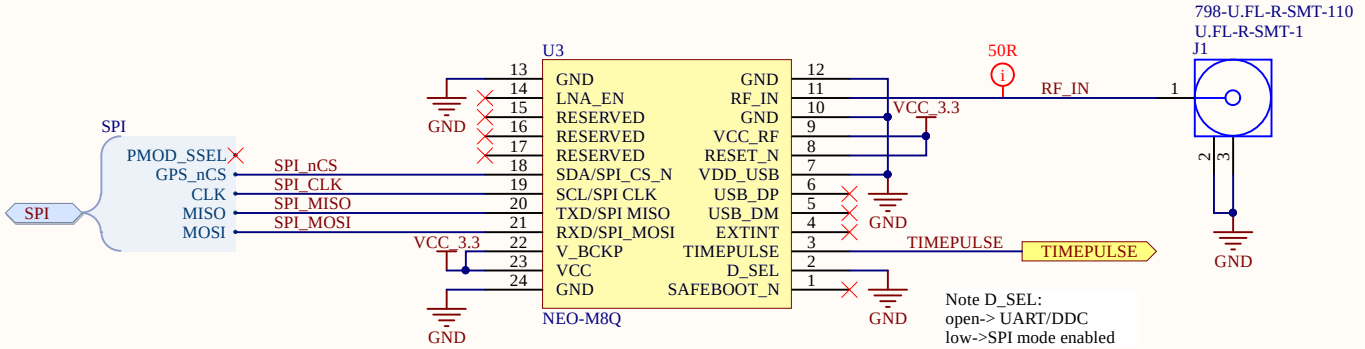
Combined humidity, pressure, temp and gas sensor



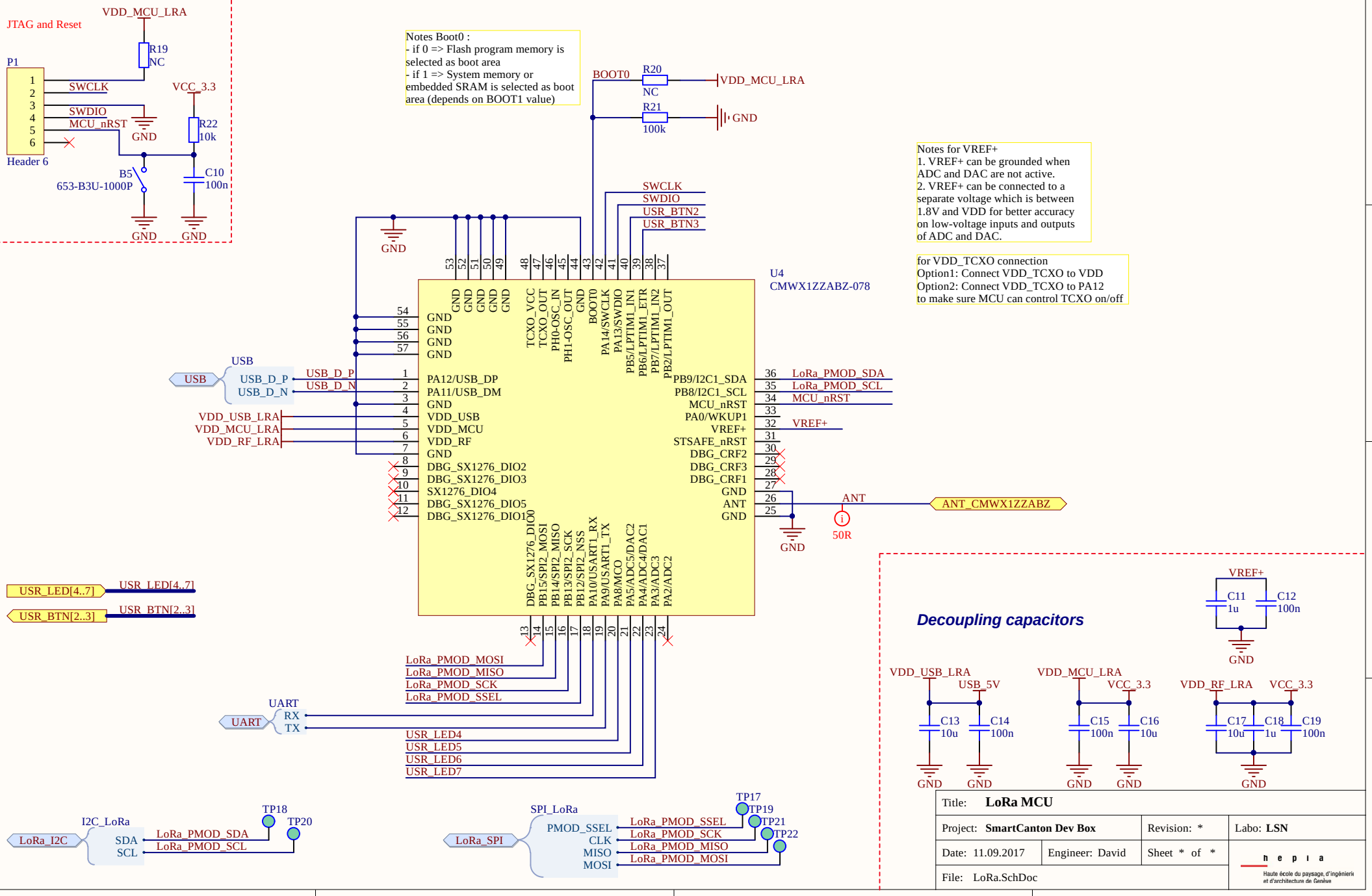
Inertial platform 9Axis

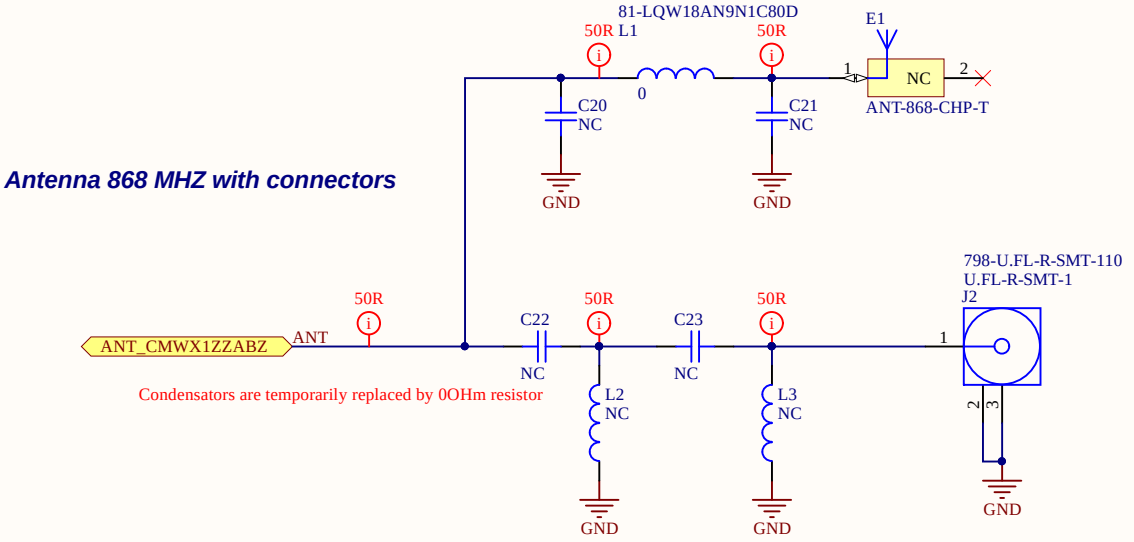


Title: **Embedded Sensors**			
Project: **SmartCanton Dev Box**		Revision: *	Labo: **LSN**
Date: 11.09.2017	Engineer: David	Sheet * of *	hepia Haute école du paysage, d'ingénierie et d'architecture de Genève
File: EmbeddedPeripherals.SchDoc			

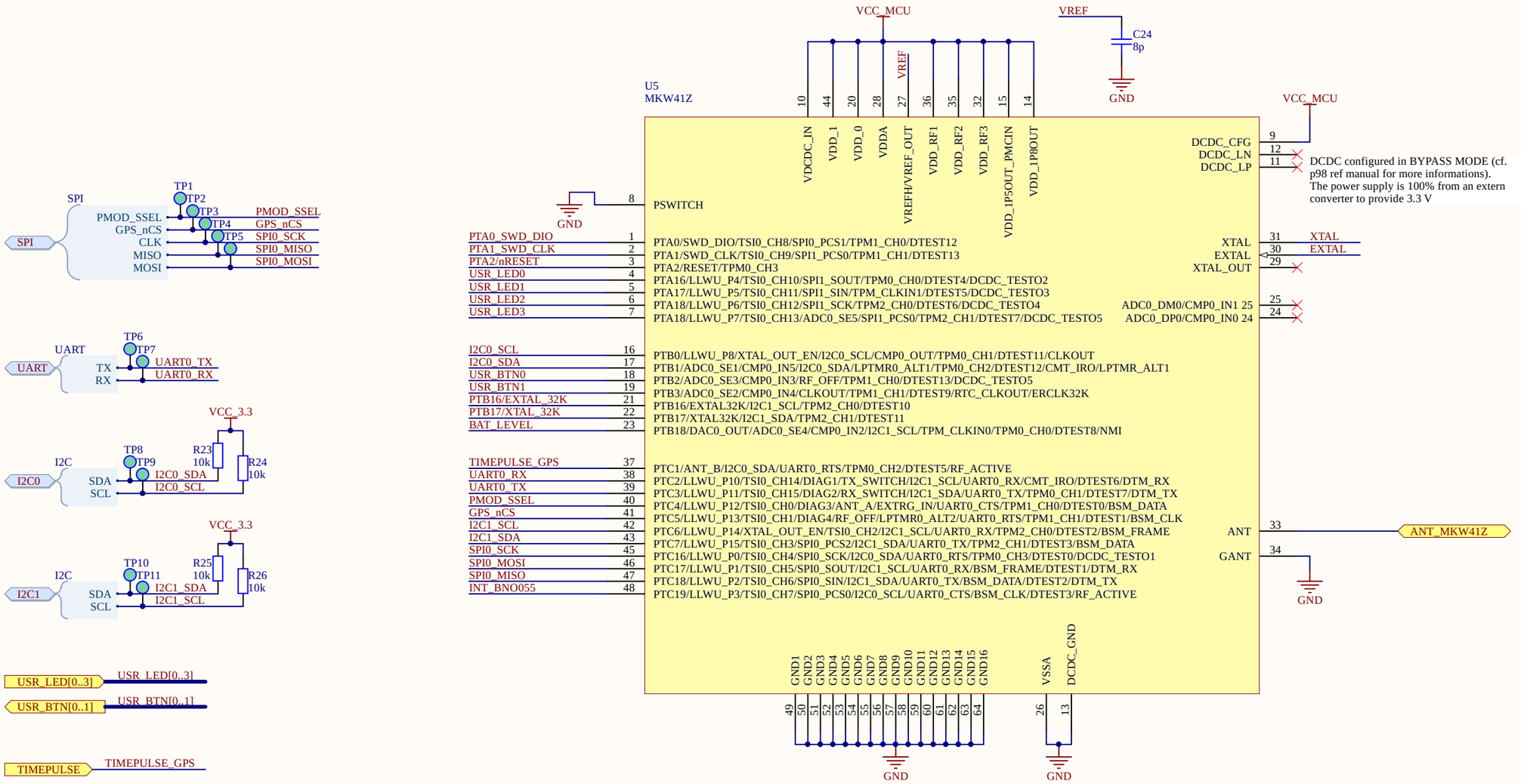


Title: **GPS**			
Project: **SmartCanton Dev Box**		Revision: *	Labo: **LSN**
Date: 11.09.2017	Engineer: David	Sheet * of *	hepia Haute école du paysage, d'ingénierie et d'architecture de Genève
File: GPS.SchDoc			

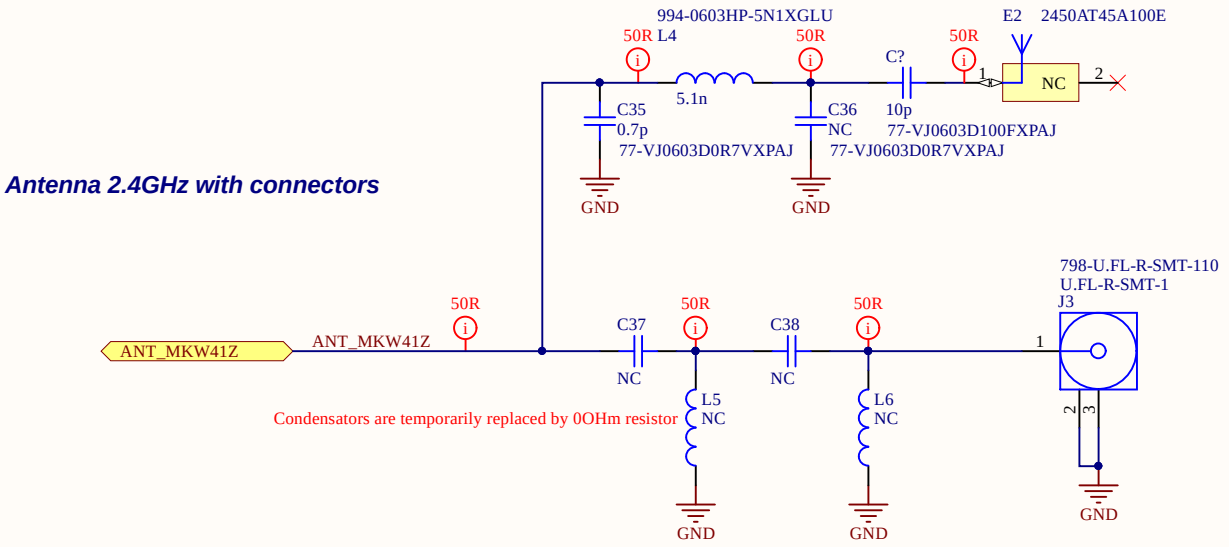

JTAG and Reset
VDD_MCU_LRA
R19
NC
P1
SWCLK
SWDIO
MCU_nRST
VCC_3.3
R22
10k
GND
Header 6
B5
653-B3U-1000P
C10
100n
Notes Boot0 :
- if 0 => Flash program memory is selected as boot area
- if 1 => System memory or embedded SRAM is selected as boot area (depends on BOOT1 value)
BOOT0
R20
NC
R21
100k
Notes for VREF+
1. VREF+ can be grounded when ADC and DAC are not active.
2. VREF+ can be connected to a separate voltage which is between 1.8V and VDD for better accuracy on low-voltage inputs and outputs of ADC and DAC.
for VDD_TCXO connection
Option1: Connect VDD_TCXO to VDD
Option2: Connect VDD_TCXO to PA12
to make sure MCU can control TCXO on/off
U4
CMWX1ZZABZ-078
USB
USB_D_P
USB_D_N
VDD_USB_LRA
VDD_MCU_LRA
VDD_RF_LRA
PA12/USB_DP
PA11/USB_DM
VDD_USB
VDD_MCU
VDD_RF
DBG_SX1276_DIO2
DBG_SX1276_DIO3
SX1276_DIO4
DBG_SX1276_DIO5
DBG_SX1276_DIO1
PB9/I2C1_SDA
PB8/I2C1_SCL
MCU_nRST
PA0/WKUP1
VREF+
STSAFE_nRST
DBG_CRF2
DBG_CRF3
DBG_CRF1
ANT
LoRa_PMOD_SDA
LoRa_PMOD_SCL
VREF+
ANT_CMWX1ZZABZ
50R
USR_LED[4..7]
USR_BTN[2..3]
LoRa_PMOD_MOSI
LoRa_PMOD_MISO
LoRa_PMOD_SCK
LoRa_PMOD_SSEL
UART
RX
TX
USR_LED4
USR_LED5
USR_LED6
USR_LED7
Decoupling capacitors
C11
1u
C12
100n
C13
10u
C14
100n
C15
100n
C16
10u
C17
10u
C18
1u
C19
100n
USB_5V
I2C_LoRa
LoRa_I2C
SDA
SCL
TP18
TP20
SPI_LoRa
LoRa_SPI
PMOD_SSEL
CLK
MISO
MOSI
TP17
TP19
TP21
TP22
Title: LoRa MCU
Project: SmartCanton Dev Box
Revision: *
Labo: LSN
Date: 11.09.2017
Engineer: David
Sheet * of *
File: LoRa.SchDoc
hepia
Haute école du paysage, d'ingénierie et d'architecture de Genève



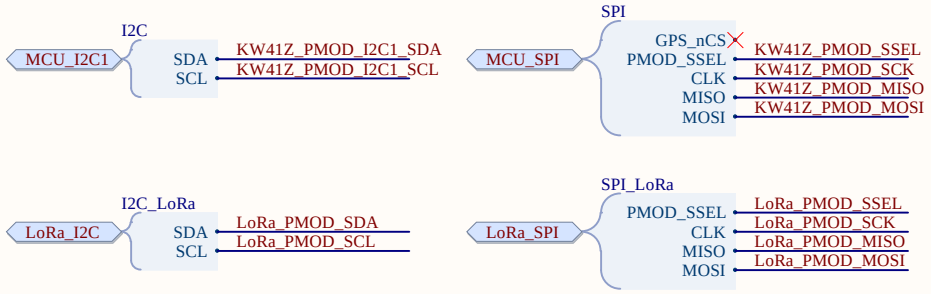
Title: **LoRa Antenna**			
Project: **SmartCanton Dev Box**		Revision: *	Labo: **LSN**
Date: 11.09.2017	Engineer: David	Sheet * of *	hepia Haute école du paysage, d'ingénierie et d'architecture de Genève
File: LoRaAntenna.SchDoc			

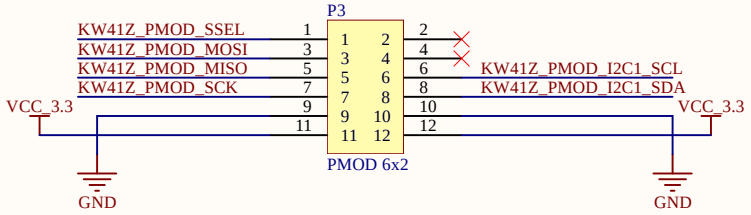


Title: **Bluetooth MCU**			
Project: **SmartCanton Dev Box**		Revision: *	Labo: **LSN**
Date: 11.09.2017	Engineer: David	Sheet * of *	hepia Haute école du paysage, d'ingénierie et d'architecture de Genève
File: MCU.SchDoc			

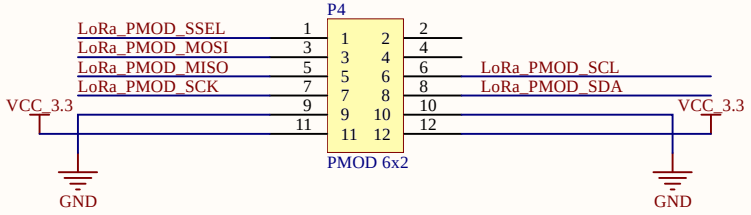


Title: **Bluetooth MCU Antenna**			
Project: **SmartCanton Dev Box**		Revision: *	Labo: **LSN**
Date: 11.09.2017	Engineer: David	Sheet * of *	hepia Haute école du paysage, d'ingénierie et d'architecture de Genève
File: MCUAntenna.SchDoc			



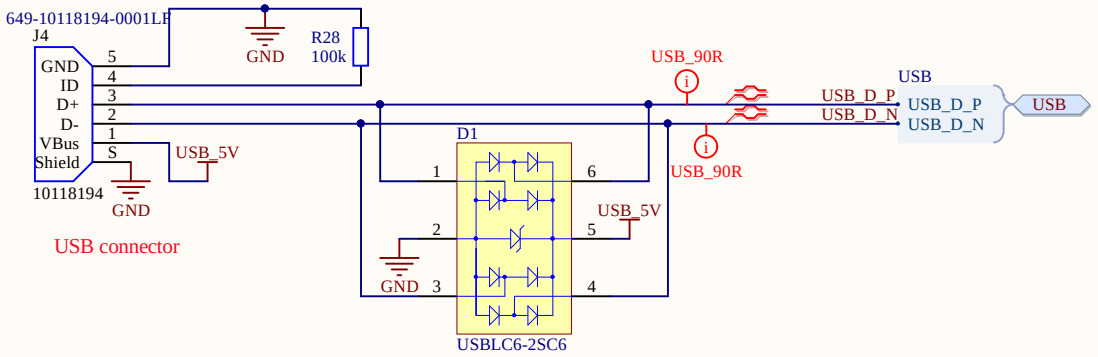


Connector Pmod I2C and SPI connected to the KW41Z

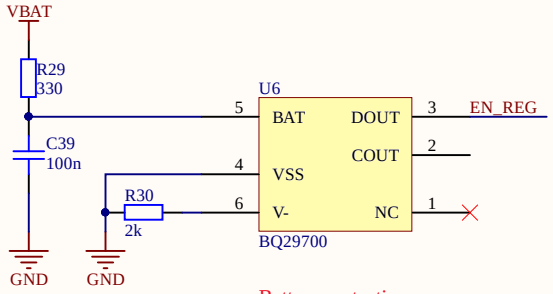


Connector Pmod I2C and SPI connected to the LoRa module

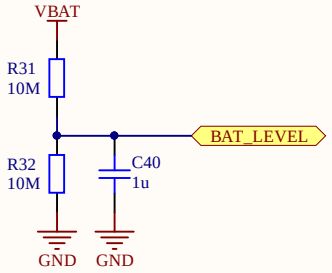
Title: *			
Project: **Project name**		Revision: *	Labo: **LSN**
Date: 05.09.2017	Engineer: *	Sheet * of *	hepia Haute école du paysage, d'ingénierie et d'architecture de Genève
File: PMOD.SchDoc			



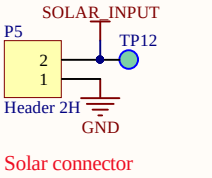
USB connector



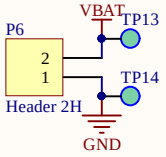
Battery protection



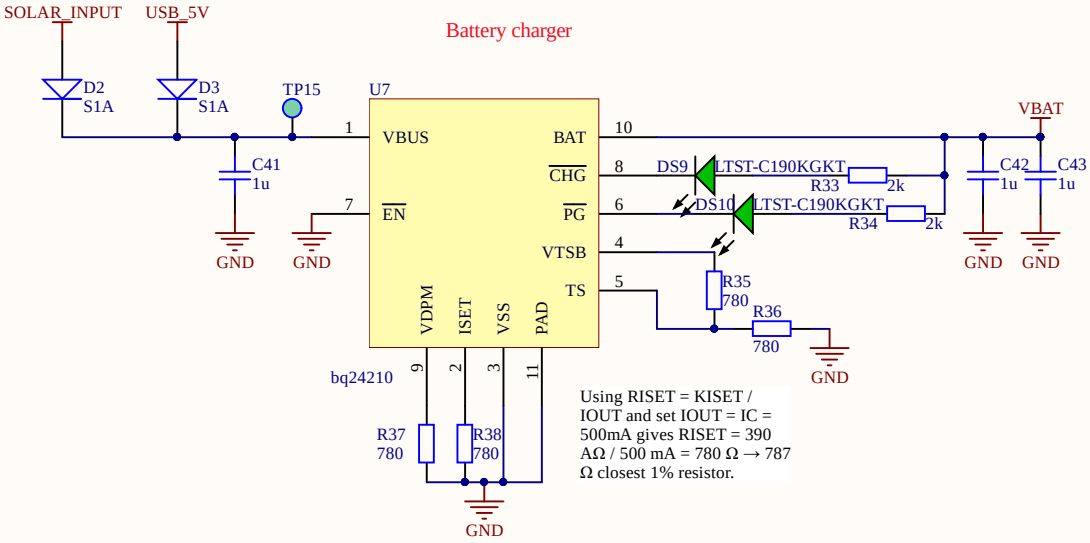
Battery level measure



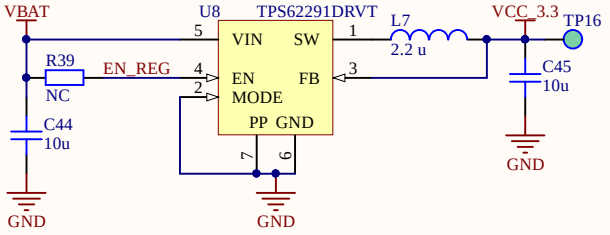
Solar connector



Battery Connectors

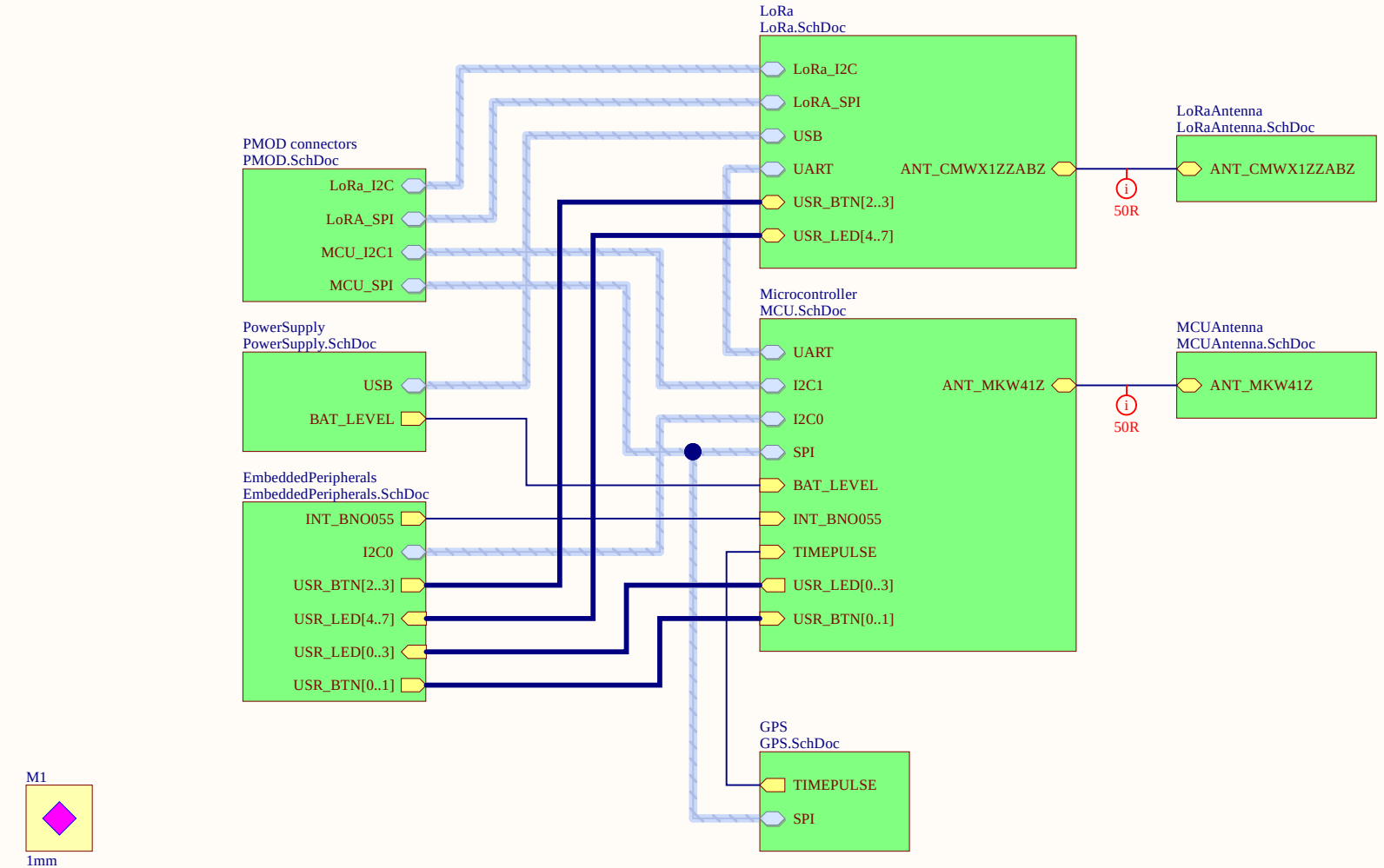


Battery charger



Voltage regulator

Title: **Power Supply**			
Project: **SmartCanton Dev Box**		Revision: *	Labo: **LSN**
Date: 11.09.2017	Engineer: David	Sheet * of *	hepia Haute école du paysage, d'ingénierie et d'architecture de Genève
File: PowerSupply.SchDoc			



Title: **Top View**			
Project: **SmartCanton Dev Box**		Revision: *	Labo: **LSN**
Date: 11.09.2017	Engineer: David	Sheet * of *	hepia Haute école du paysage, d'ingénierie et d'architecture de Genève
File: SmartCantonDevBox_TopPage.SchDoc			