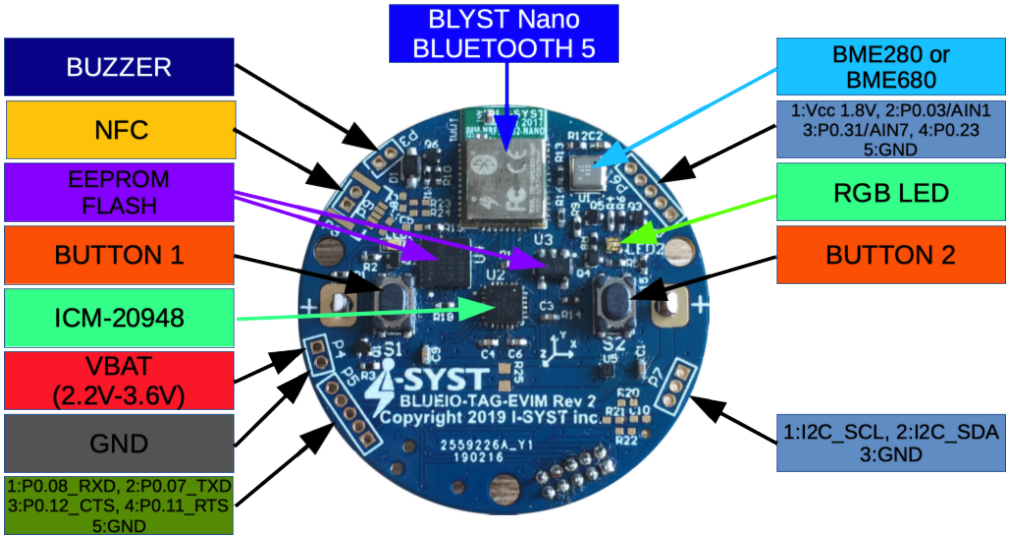
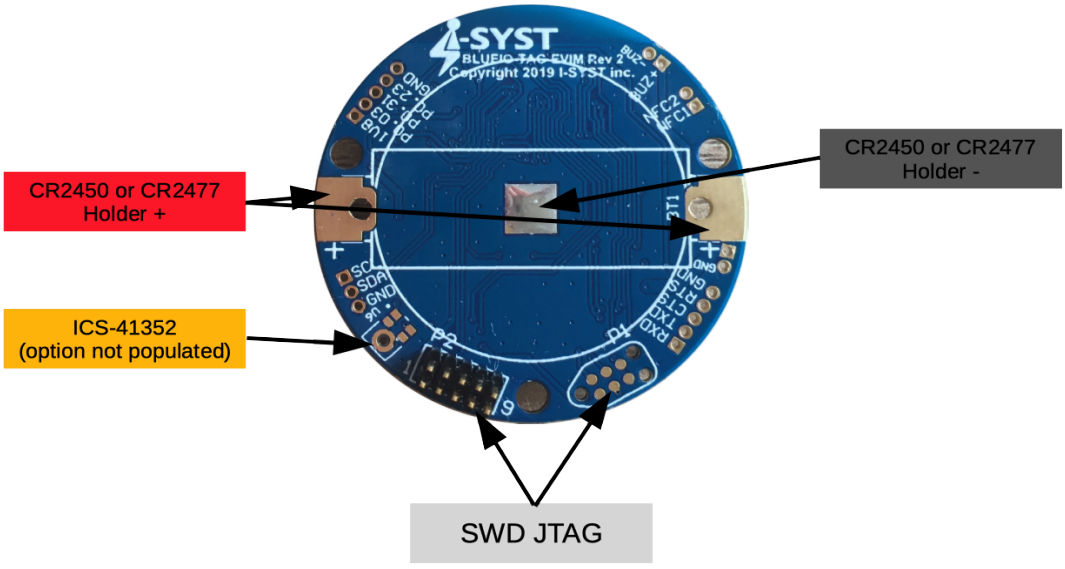
BLUEIO-TAG-EVIM

BLYST Nano Bluetooth 5 Sensor Board

BLUEIO-TAG-EVIM TOP



BLUEIO-TAG-EVIM BOTTOM



Flashing firmware

There are many precompiled firmware examples ready to flash in the Nordic SDK. To flash the .hex file to the board, connect the IDAP-Link™ to board and use the IDAPnRFProg command line utility. Download it from https://sourceforge.net/projects/idaplinkfirmware/files/

To flash firmware, execute the command : `IDAPnRFProg firmware.hex`
To flash softdevice + firmware + dfu : `IDAPnRFProg softdevice.hex firmware.hex dfu.hex`
More details about IDAP-Link : https://embeddedsoftdev.blogspot.com/p/idap-link.html

MicroPython

MycroPython ports for the BLYST Nano based boards https://github.com/I-SYST/micropython/tree/blystnano. Precompiled hex can be downloaded from https://sourceforge.net/projects/blyst-nano/files/fimrware/MicroPython/

Eclipse IDE

Follow this blog post for firmware development using Eclipse IDE & GCC. http://embeddedsoftdev.blogspot.com/p/ehal-nrf51.html

Arduino

Follow instruction from this github repo to setup Adruino environment https://github.com/sandeepmistry/arduino-nRF5

Pin Maps

GPIO

P0.30	LED1 : 0 – On, 1 - Off
P0.18	LED2 Red : 0 – Off, 1 - On
P0.19	LED2 Blue : 0 – Off, 1 - On
P0.20	LED2 Green : 0 – Off, 1 - On
P0.04	AIN2 : Analog input 2 for reading battery level. Divider resistors R1 = R2
P0.14	Buzzer, Connector P3

I2C (Conn P7, BME680, EEPROM)

P0.28	SDA
P0.29	SCL

SPI (ICM-20948, FLASH)

P0.15	MISO

P0.16	MOSI
P0.17	CLK
P0.05	CS of the ICM-20948
P0.26	CS of the FLASH

ICM-20948

P0.05	CS
P0.06	Interrupt

NFC (Conn P8, P9)

P0.09	NFC1 antenna
P0.10	NFC2 antenna

ICS-41352

P0.22	Power : 1 – On, 0 - Off
P0.24	PDM_CLK
P0.25	PDM_DIN

Connectors

Conn P5 (UART)

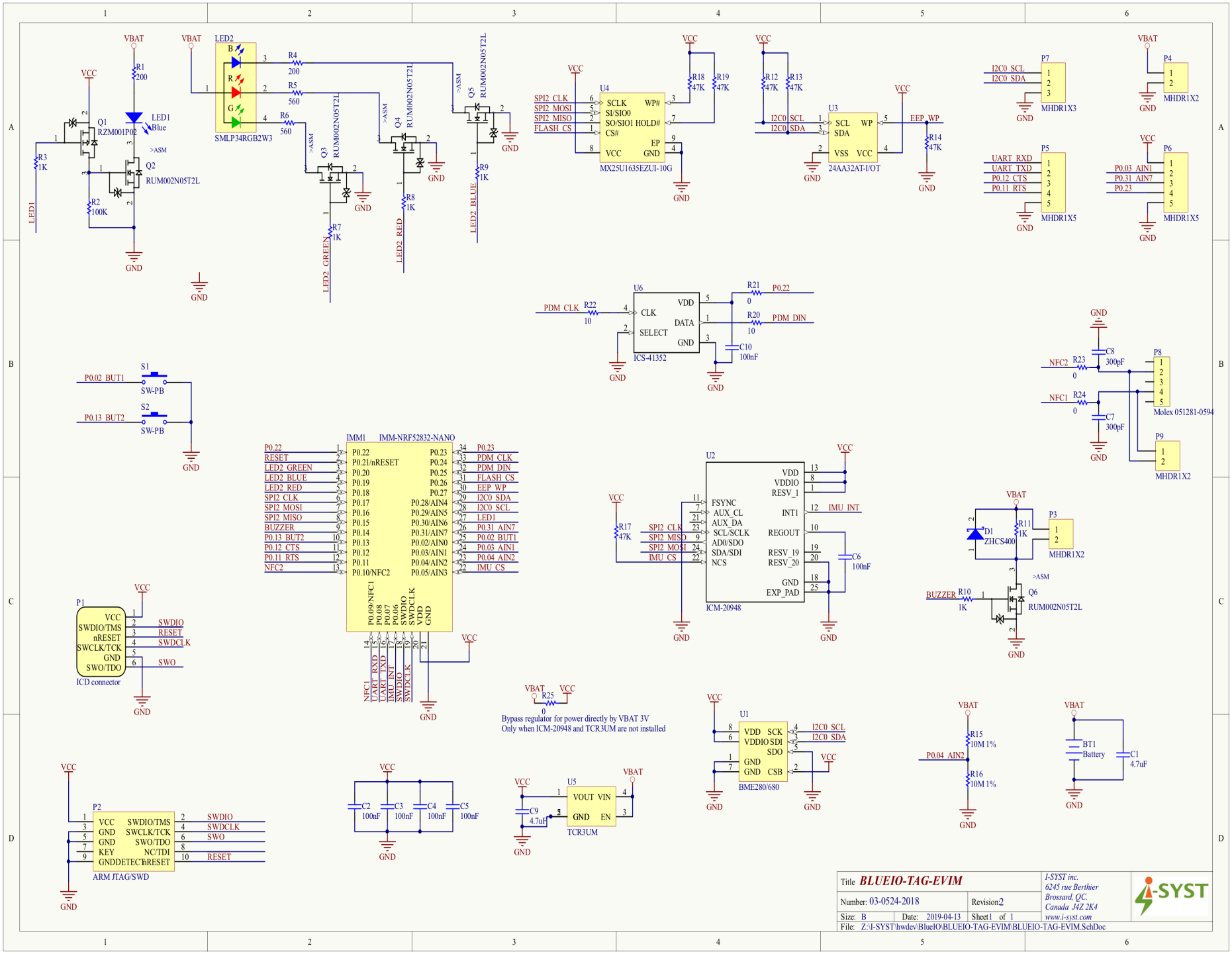
1	P0.08 : RXD
2	P0.07 : TXD
3	P0.12: CTS
4	P0.11 : RTS
5	GND

Conn P6

1	Vcc : 1.8V
2	P0.03/AIN1
3	P0.31/AIN7
4	P0.22
5	GND

Conn P7

1	I2C SCL
2	I2C SDA
3	GND


VBAT
VCC
GND
LED1
LED2
SMLP34RGB2W3
R1 200
R2 100K
R3 1K
R4 200
R5 560
R6 560
R7 1K
R8 1K
R9 1K
Q1 RZM001P02
Q2 RUM002N05T2L
Q3 RUM002N05T2L
Q4 RUM002N05T2L
Q5 RUM002N05T2L
>ASM
LED2_BLUE
LED2_RED
LED2_GREEN
U4
MX25U1635EZUI-10G
SPI2_CLK
SPI2_MOSI
SPI2_MISO
FLASH_CS
R18 47K
R19 47K
U3
24AA32AT-I/OT
I2C0_SCL
I2C0_SDA
EEP_WP
R12 47K
R13 47K
R14 47K
P7
MHDR1X3
P4
MHDR1X2
P5
MHDR1X5
P6
MHDR1X5
UART_RXD
UART_TXD
P0.12_CTS
P0.11_RTS
P0.03_AIN1
P0.31_AIN7
P0.23
U6
ICS-41352
PDM_CLK
PDM_DIN
R21 0
R22 10
R20 10
C10 100nF
P0.22
S1
S2
SW-PB
P0.02_BUT1
P0.13_BUT2
IMM1
IMM-NRF52832-NANO
P0.09/NFC1
P0.10/NFC2
P0.06
P0.07
SWDIO
SWDCLK
U2
ICM-20948
FSYNC
AUX_CL
AUX_DA
SCL/SCLK
AD0/SDO
SDA/SDI
NCS
VDD
VDDIO
RESV_1
INT1
REGOUT
RESV_19
RESV_20
GND
EXP_PAD
IMU_INT
IMU_CS
R17 47K
C6 100nF
C8 300pF
C7 300pF
NFC2
NFC1
R23 0
R24 0
P8
Molex 051281-0594
P9
MHDR1X2
D1 ZHCS400
R11 1K
P3
MHDR1X2
BUZZER
R10 1K
Q6 RUM002N05T2L
P1
ICD connector
SWDIO
RESET
SWDCLK
SWO
P2
ARM JTAG/SWD
SWDIO
SWDCLK
SWO
RESET
C2 100nF
C3 100nF
C4 100nF
C5 100nF
R25 0
Bypass regulator for power directly by VBAT 3V
Only when ICM-20948 and TCR3UM are not installed
U5
TCR3UM
VOUT
VIN
C9 4.7uF
U1
BME280/680
VDD
VDDIO
SCK
SDI
SDO
CSB
R15 10M 1%
R16 10M 1%
P0.04_AIN2
BT1
Battery
C1 4.7uF
Title BLUEIO-TAG-EVIM
Number: 03-0524-2018
Revision:2
Size: B
Date: 2019-04-13
Sheet1 of 1
File: Z:\I-SYST\hwdev\BlueIO\BLUEIO-TAG-EVIM\BLUEIO-TAG-EVIM.SchDoc
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