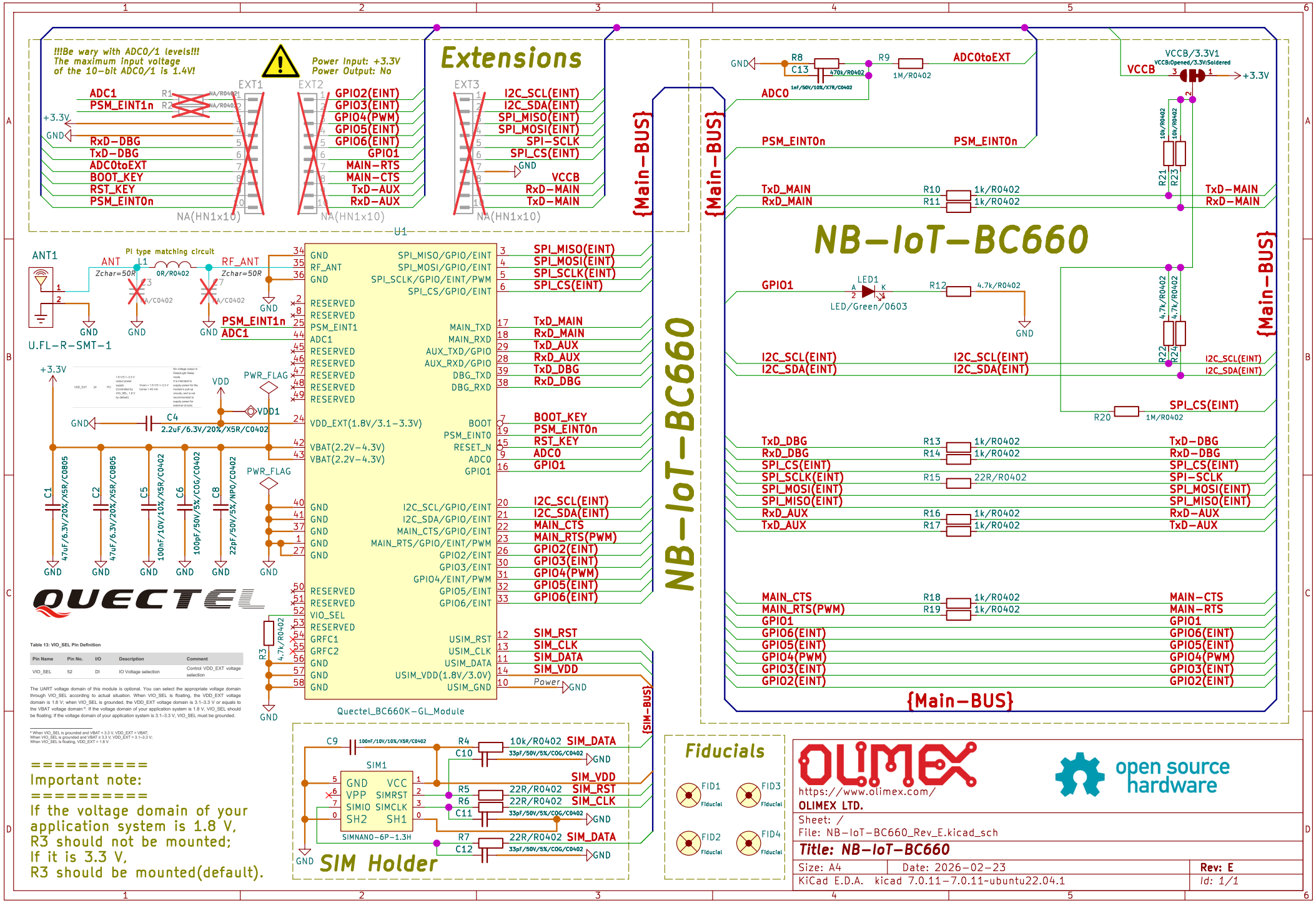
!!!Be wary with ADC0/1 levels!!!
The maximum input voltage
of the 10-bit ADC0/1 is 1.4V!
Power Input: +3.3V
Power Output: No
Extensions
EXT1
EXT2
EXT3
ADC1
PSM_EINT1n
+3.3V
GND
RxD-DBG
TxD-DBG
ADC0toEXT
BOOT_KEY
RST_KEY
PSM_EINT0n
NA(HN1x10)
GPIO2(EINT)
GPIO3(EINT)
GPIO4(PWM)
GPIO5(EINT)
GPIO6(EINT)
GPIO1
MAIN-RTS
MAIN-CTS
TxD-AUX
RxD-AUX
I2C_SCL(EINT)
I2C_SDA(EINT)
SPI_MISO(EINT)
SPI_MOSI(EINT)
SPI-SCLK
SPI_CS(EINT)
VCCB
RxD-MAIN
TxD-MAIN
{Main-BUS}
U1
ANT1
U.FL-R-SMT-1
PI type matching circuit
ANT
RF_ANT
Zchar=50R
0R/R0402
PSM_EINT1n
ADC1
+3.3V
VDD
PWR_FLAG
VDD1
C4
2.2uF/6.3V/20%/X5R/C0402
C1
47uF/6.3V/20%/X5R/C0805
C2
47uF/6.3V/20%/X5R/C0805
C5
100nF/10V/10%/X5R/C0402
C6
100pF/50V/5%/C0G/C0402
C8
22pF/50V/5%/NPO/C0402
R3
4.7k/R0402
VIO_SEL
Table 13: VIO_SEL Pin Definition
Pin Name | Pin No. | I/O | Description | Comment
VIO_SEL | 52 | DI | IO Voltage selection | Control VDD_EXT voltage selection
The UART voltage domain of this module is optional. You can select the appropriate voltage domain through VIO_SEL according to actual situation. When VIO_SEL is floating, the VDD_EXT voltage domain is 1.8 V; when VIO_SEL is grounded, the VDD_EXT voltage domain is 3.1~3.3 V or equals to the VBAT voltage domain [9]. If the voltage domain of your application system is 1.8 V, VIO_SEL should be floating; If the voltage domain of your application system is 3.1~3.3 V, VIO_SEL must be grounded.
[9] When VIO_SEL is grounded and VBAT < 3.3 V, VDD_EXT = VBAT;
When VIO_SEL is grounded and VBAT ≥ 3.3 V, VDD_EXT = 3.1~3.3 V;
When VIO_SEL is floating, VDD_EXT = 1.8 V.
==========
Important note:
==========
If the voltage domain of your
application system is 1.8 V,
R3 should not be mounted;
If it is 3.3 V,
R3 should be mounted(default).
Quectel_BC660K-GL_Module
SPI_MISO/GPIO/EINT
SPI_MOSI/GPIO/EINT
SPI_SCLK/GPIO/EINT/PWM
SPI_CS/GPIO/EINT
MAIN_TXD
MAIN_RXD
AUX_TXD/GPIO
AUX_RXD/GPIO
DBG_TXD
DBG_RXD
BOOT
PSM_EINT0
RESET_N
ADC0
GPIO1
I2C_SCL/GPIO/EINT
I2C_SDA/GPIO/EINT
MAIN_CTS/GPIO/EINT
MAIN_RTS/GPIO/EINT/PWM
GPIO2/EINT
GPIO3/EINT
GPIO4/EINT/PWM
GPIO5/EINT
GPIO6/EINT
USIM_RST
USIM_CLK
USIM_DATA
USIM_VDD(1.8V/3.0V)
USIM_GND
SIM_RST
SIM_CLK
SIM_DATA
SIM_VDD
Power
{SIM-BUS}
NB-IoT-BC660
C9
100nF/10V/10%/X5R/C0402
SIM1
GND
VPP
SIMIO
SH2
VCC
SIMRST
SIMCLK
SH1
SIMNANO-6P-1.3H
R4
10k/R0402
C10
33pF/50V/5%/C0G/C0402
R5
22R/R0402
R6
22R/R0402
C11
R7
22R/R0402
C12
SIM Holder
Fiducials
FID1
FID2
FID3
FID4
Fiducial
R8
C13
470k/R0402
1nF/50V/10%/X7R/C0402
R9
1M/R0402
ADC0toEXT
ADC0
PSM_EINT0n
VCCB/3.3V1
VCCB:Opened/3.3V:Soldered
VCCB
+3.3V
10k/R0402
R21
R23
TxD_MAIN
RxD_MAIN
R10
R11
1k/R0402
GPIO1
LED1
LED/Green/0603
R12
4.7k/R0402
4.7k/R0402
R22
R24
I2C_SCL(EINT)
I2C_SDA(EINT)
SPI_CS(EINT)
R20
1M/R0402
TxD_DBG
RxD_DBG
R13
R14
SPI_SCLK(EINT)
SPI_MOSI(EINT)
SPI_MISO(EINT)
R15
22R/R0402
RxD_AUX
TxD_AUX
R16
R17
MAIN_CTS
MAIN_RTS(PWM)
R18
R19
GPIO6(EINT)
GPIO5(EINT)
GPIO4(PWM)
GPIO3(EINT)
GPIO2(EINT)
{Main-BUS}
OLIMEX
https://www.olimex.com/
OLIMEX LTD.
open source hardware
Sheet: /
File: NB-IoT-BC660_Rev_E.kicad_sch
Title: NB-IoT-BC660
Size: A4
Date: 2026-02-23
Rev: E
KiCad E.D.A. kicad 7.0.11-7.0.11~ubuntu22.04.1
Id: 1/1