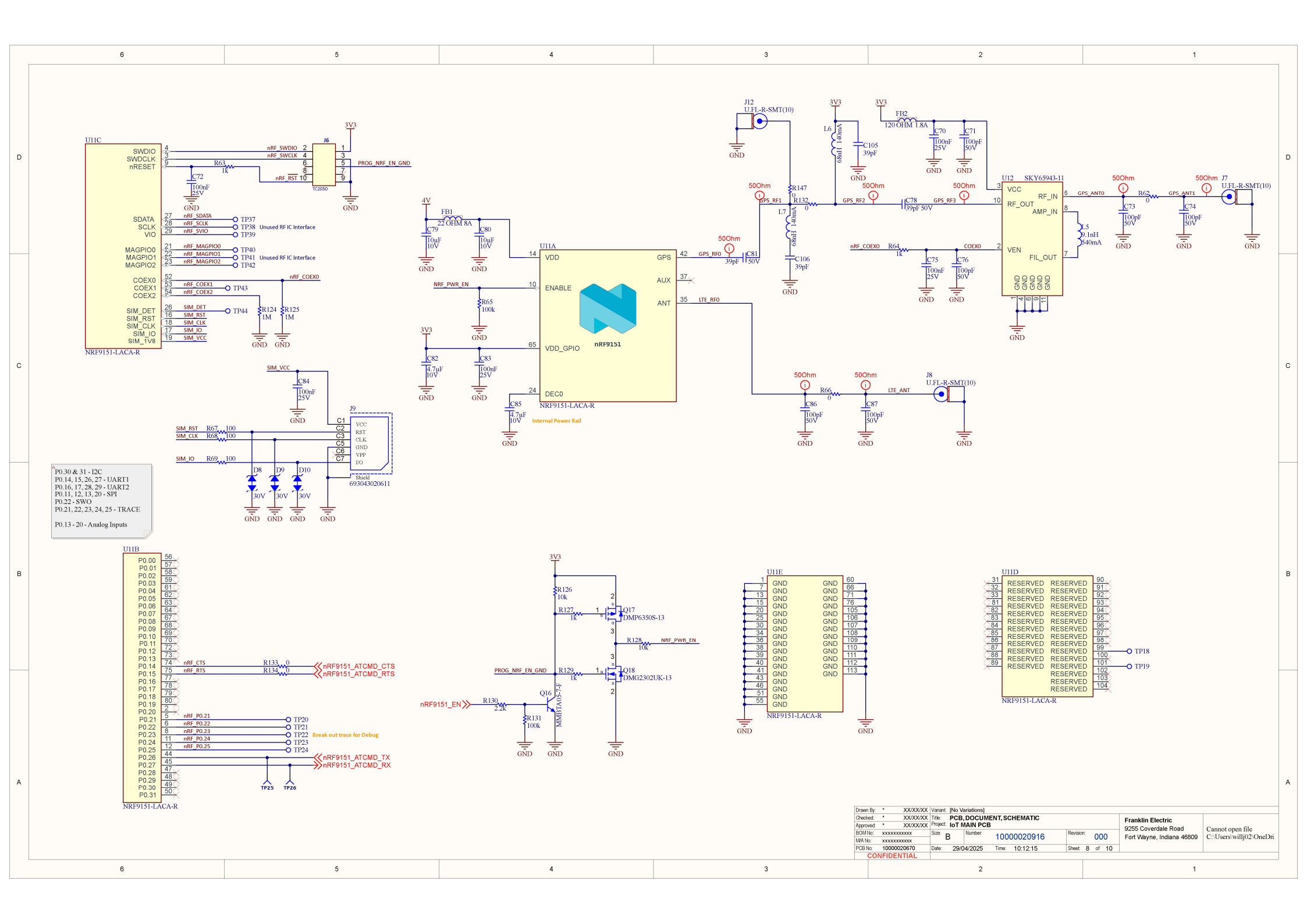
U11C
SWDIO
SWDCLK
nRESET
SDATA
SCLK
VIO
MAGPIO0
MAGPIO1
MAGPIO2
COEX0
COEX1
COEX2
SIM_DET
SIM_RST
SIM_CLK
SIM_IO
SIM_1V8
NRF9151-LACA-R
nRF_SWDIO
nRF_SWCLK
nRF_RST
J6
TC2050
R63 1K
C72 100nF 25V
PROG_NRF_EN_GND
nRF_SDATA
nRF_SCLK
nRF_SVIO
TP37
TP38
TP39
Unused RF IC Interface
nRF_MAGPIO0
nRF_MAGPIO1
nRF_MAGPIO2
TP40
TP41
TP42
Unused RF IC Interface
nRF_COEX0
nRF_COEX1
nRF_COEX2
TP43
SIM_DET
SIM_RST
SIM_CLK
SIM_IO
SIM_VCC
TP44
R124 1M
R125 1M
3V3
GND
U11A
VDD
ENABLE
VDD_GPIO
DEC0
GPS
AUX
ANT
nRF9151
NRF9151-LACA-R
FB1 22 OHM 8A
C79 10uF 10V
C80 10uF 10V
NRF_PWR_EN
R65 100k
C82 4.7uF 10V
C83 100nF 25V
C84 100nF 25V
C85 4.7uF 10V
Internal Power Rail
GPS_RF0
LTE_RF0
C81 39pF 50V
J9
SIM_RST R67 100
SIM_CLK R68 100
SIM_IO R69 100
D8
D9
D10
30V
Shield
693043020611
J12
U.FL-R-SMT(10)
L6 68nH 140mA
C105 39pF
FB2 120 OHM 1.8A
C70 100pF 25V
C71 100pF 50V
50Ohm
GPS_RF1
GPS_RF2
GPS_RF3
R147 0
R132 0
L7 68nH 140mA
C106 39pF
C78 39pF 50V
U12 SKY65943-11
VCC
RF_IN
RF_OUT
AMP_IN
VEN
FIL_OUT
L5 9.1nH 540mA
GPS_ANT0
GPS_ANT1
R62 0
C73 100pF 50V
C74 100pF 50V
J7
U.FL-R-SMT(10)
nRF_COEX0
R64 1K
COEX0
C75 100nF 25V
C76 100pF 50V
R66 0
LTE_ANT
C86 100pF 50V
C87 100pF 50V
J8
U.FL-R-SMT(10)
P0.30 & 31 - I2C
P0.14, 15, 26, 27 - UART1
P0.16, 17, 28, 29 - UART2
P0.11, 12, 13, 20 - SPI
P0.22 - SWO
P0.21, 22, 23, 24, 25 - TRACE
P0.13 - 20 - Analog Inputs
U11B
P0.00
P0.01
P0.02
P0.03
P0.04
P0.05
P0.06
P0.07
P0.08
P0.09
P0.10
P0.11
P0.12
P0.13
P0.14
P0.15
P0.16
P0.17
P0.18
P0.19
P0.20
P0.21
P0.22
P0.23
P0.24
P0.25
P0.26
P0.27
P0.28
P0.29
P0.30
P0.31
NRF9151-LACA-R
nRF_CTS
nRF_RTS
R133 0
R134 0
nRF9151_ATCMD_CTS
nRF9151_ATCMD_RTS
nRF_P0.21
nRF_P0.22
nRF_P0.23
nRF_P0.24
nRF_P0.25
TP20
TP21
TP22
TP23
TP24
Break out trace for Debug
nRF9151_ATCMD_TX
nRF9151_ATCMD_RX
TP25
TP26
R126 10k
R127 1k
Q17
DMP6350S-13
R128 10k
NRF_PWR_EN
PROG_NRF_EN_GND
R129 1k
Q18
DMG2302UK-13
nRF9151_EN
R130 2.2k
Q16
MMBT3A05-7-F
R131 100k
U11E
GND
NRF9151-LACA-R
U11D
RESERVED
NRF9151-LACA-R
TP18
TP19
Drawn By: * XX/XX/XX
Checked: * XX/XX/XX
Approved: * XX/XX/XX
BOM No: xxxxxxxxxxx
MA No: xxxxxxxxxxx
PCB No: 10000020670
CONFIDENTIAL
Variant: [No Variations]
Title: PCB, DOCUMENT, SCHEMATIC
Project: IoT MAIN PCB
Size: B
Number: 10000020916
Revision: 000
Date: 29/04/2025
Time: 10:12:15
Sheet: 8 of 10
Franklin Electric
9255 Coverdale Road
Fort Wayne, Indiana 46809
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C:\Users\willj02\OneDri