power

File: power.kicad_sch

Pin-10

File: Pin-10.kicad_sch

Processor

File: MIMX8ML8CVNKZAB.kicad_sch

Sheet: /
File: IMX8ML_plus.kicad_sch

Title:

Size: A4	Date:	**Rev:**
KiCad E.D.A. 8.0.9		Id: 1/14

up_power

File: up_power.kicad_sch

Up_memorie_lpddr4

File: up_memorie_lpddr4.kicad_sch

wireless

File: wireless_module.kicad_sch

storage

File: storage.kicad_sch

io-interface

File: io-interface.kicad_sch

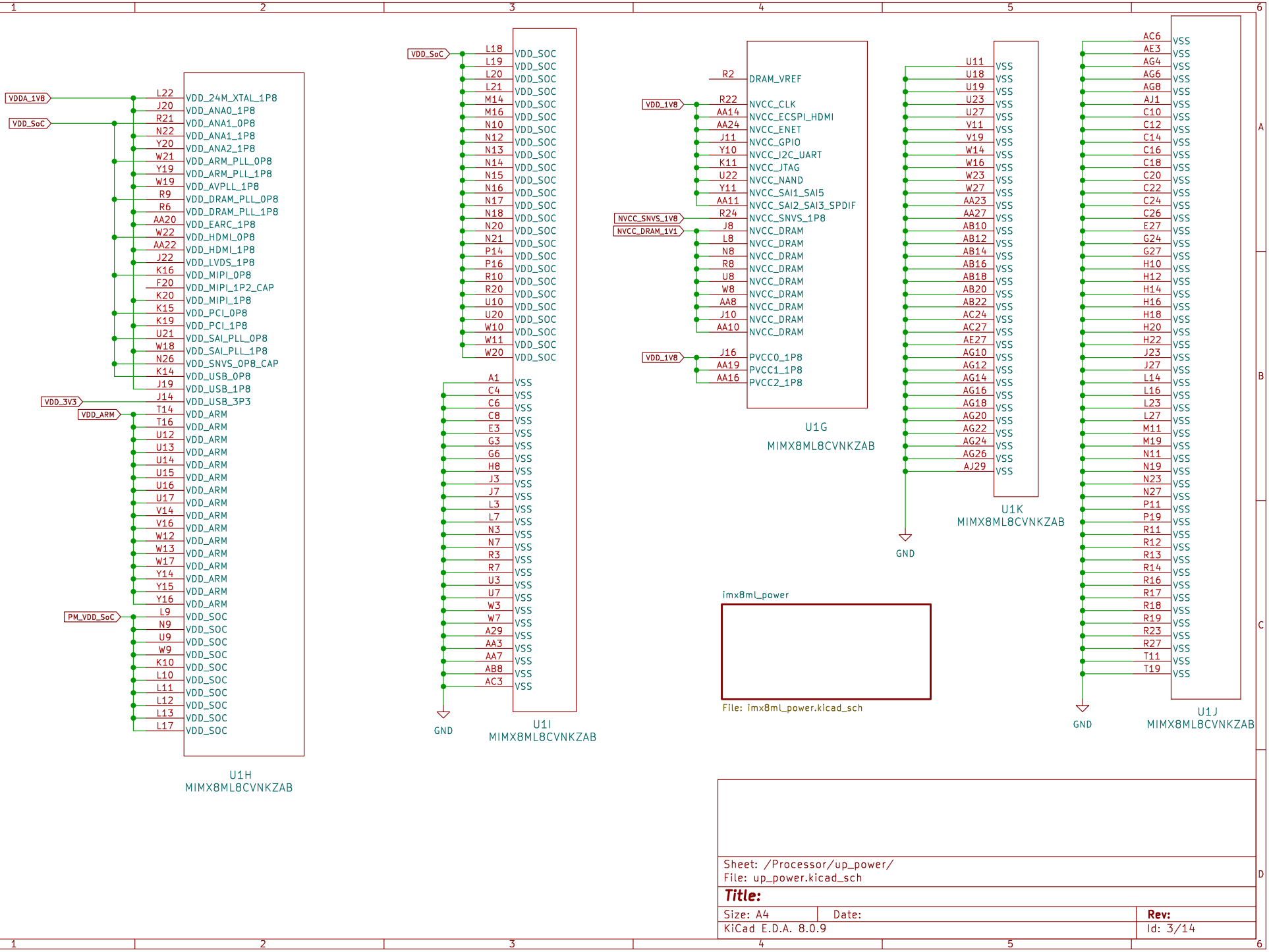
up_config

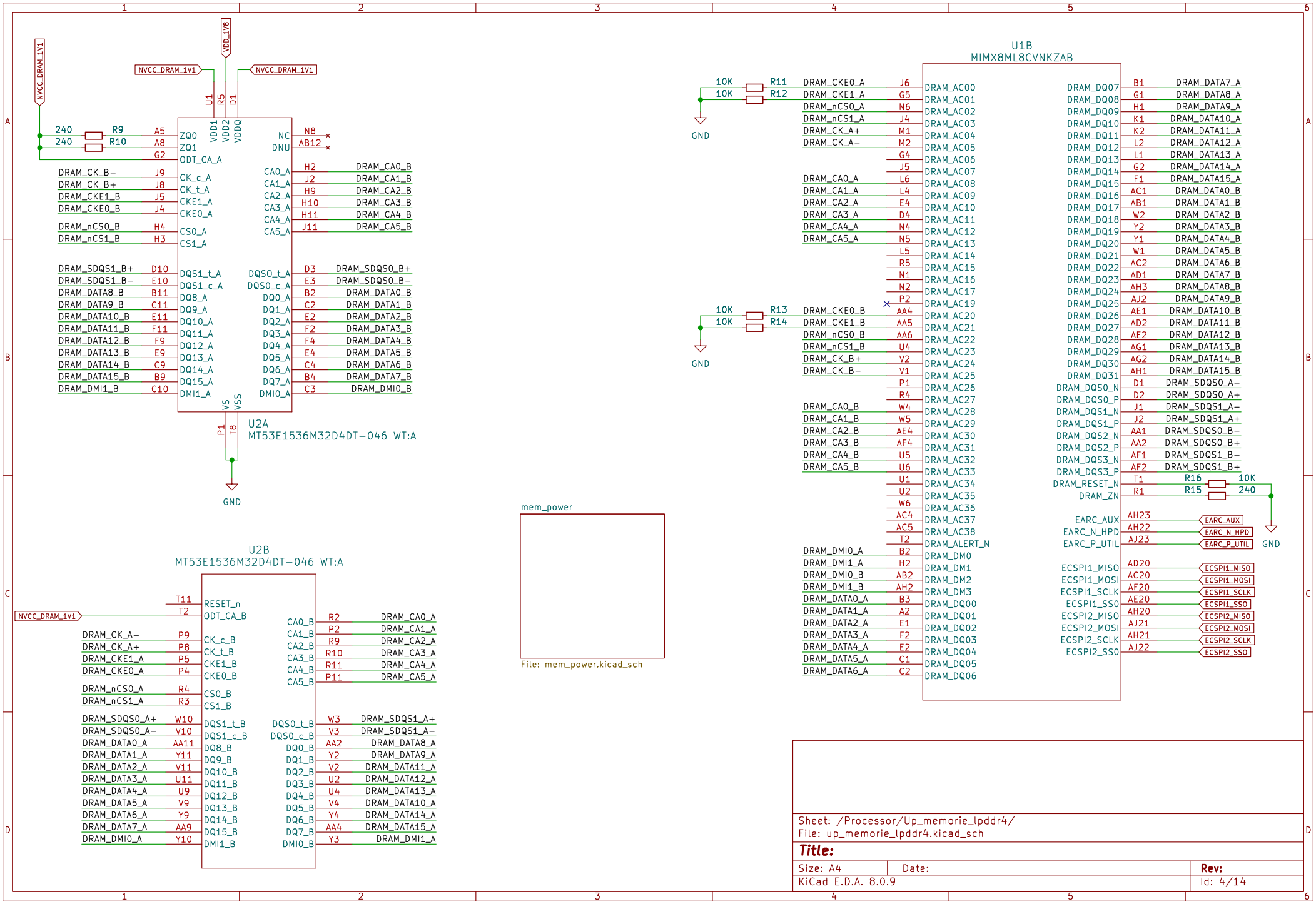
File: up_config.kicad_sch

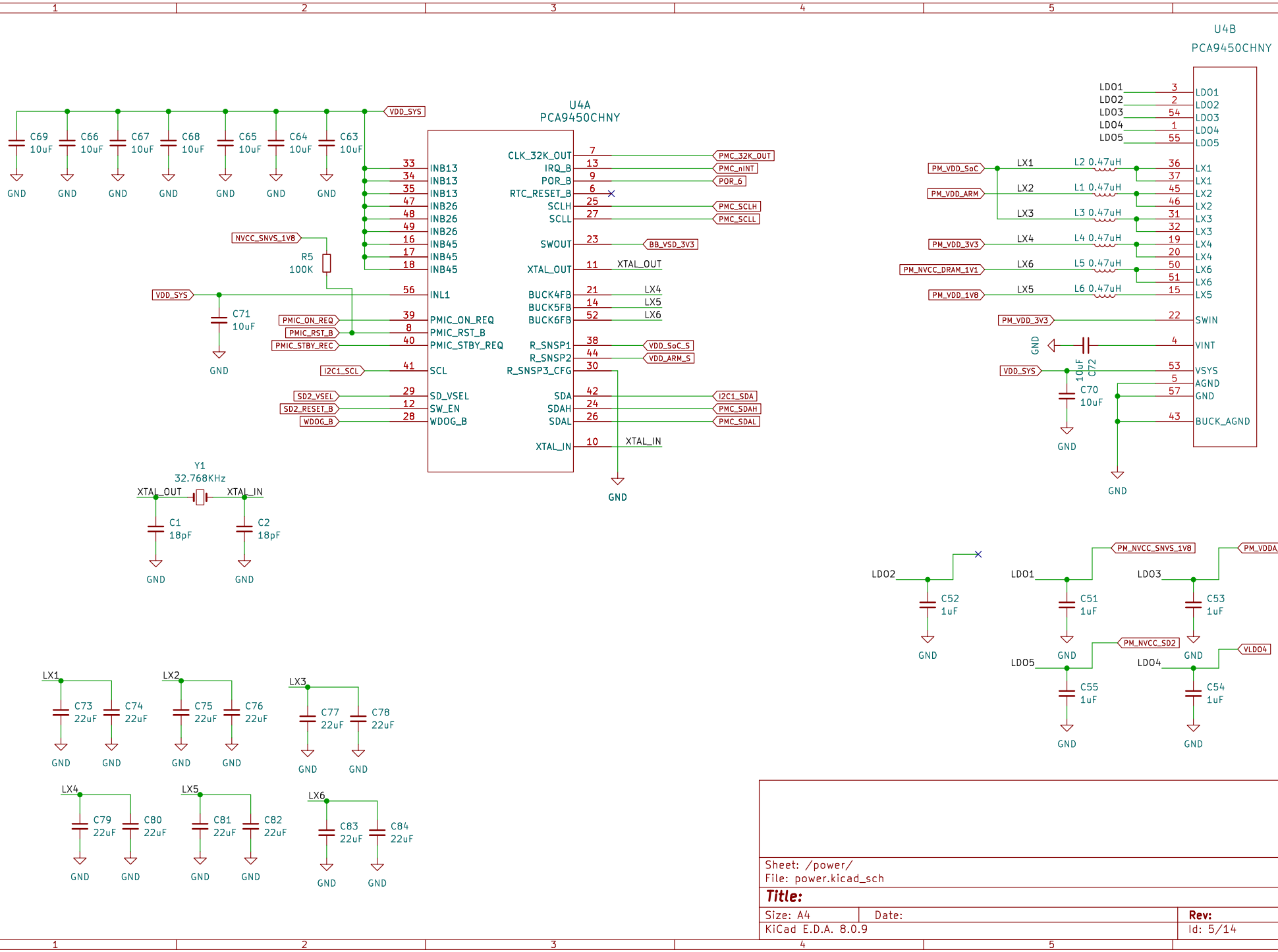
Sheet: /Processor/
File: MIMX8ML8CVNKZAB.kicad_sch

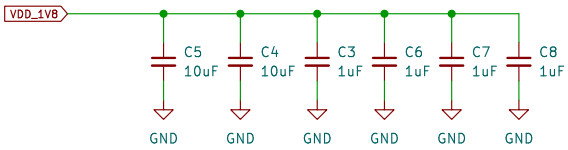
Title:

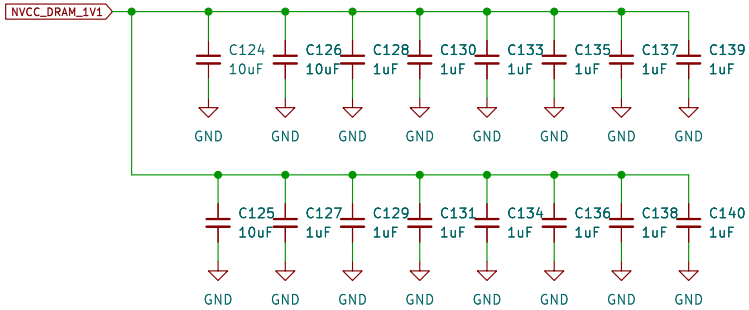
Size: A4	Date:	**Rev:**
KiCad E.D.A. 8.0.9		Id: 2/14


VDDA_1V8
VDD_SoC
VDD_3V3
VDD_ARM
PM_VDD_SoC
L22 VDD_24M_XTAL_1P8
J20 VDD_ANA0_1P8
R21 VDD_ANA1_0P8
N22 VDD_ANA1_1P8
Y20 VDD_ANA2_1P8
W21 VDD_ARM_PLL_0P8
Y19 VDD_ARM_PLL_1P8
W19 VDD_AVPLL_1P8
R9 VDD_DRAM_PLL_0P8
R6 VDD_DRAM_PLL_1P8
AA20 VDD_EARC_1P8
W22 VDD_HDMI_0P8
AA22 VDD_HDMI_1P8
J22 VDD_LVDS_1P8
K16 VDD_MIPI_0P8
F20 VDD_MIPI_1P2_CAP
K20 VDD_MIPI_1P8
K15 VDD_PCI_0P8
K19 VDD_PCI_1P8
U21 VDD_SAI_PLL_0P8
W18 VDD_SAI_PLL_1P8
N26 VDD_SNVS_0P8_CAP
K14 VDD_USB_0P8
J19 VDD_USB_1P8
J14 VDD_USB_3P3
T14 VDD_ARM
T16 VDD_ARM
U12 VDD_ARM
U13 VDD_ARM
U14 VDD_ARM
U15 VDD_ARM
U16 VDD_ARM
U17 VDD_ARM
V14 VDD_ARM
V16 VDD_ARM
W12 VDD_ARM
W13 VDD_ARM
W17 VDD_ARM
Y14 VDD_ARM
Y15 VDD_ARM
Y16 VDD_ARM
L9 VDD_SOC
N9 VDD_SOC
U9 VDD_SOC
W9 VDD_SOC
K10 VDD_SOC
L10 VDD_SOC
L11 VDD_SOC
L12 VDD_SOC
L13 VDD_SOC
L17 VDD_SOC
U1H
MIMX8ML8CVNKZAB
VDD_SoC
L18 VDD_SOC
L19 VDD_SOC
L20 VDD_SOC
L21 VDD_SOC
M14 VDD_SOC
M16 VDD_SOC
N10 VDD_SOC
N12 VDD_SOC
N13 VDD_SOC
N14 VDD_SOC
N15 VDD_SOC
N16 VDD_SOC
N17 VDD_SOC
N18 VDD_SOC
N20 VDD_SOC
N21 VDD_SOC
P14 VDD_SOC
P16 VDD_SOC
R10 VDD_SOC
R20 VDD_SOC
U10 VDD_SOC
U20 VDD_SOC
W10 VDD_SOC
W11 VDD_SOC
W20 VDD_SOC
A1 VSS
C4 VSS
C6 VSS
C8 VSS
E3 VSS
G3 VSS
G6 VSS
H8 VSS
J3 VSS
J7 VSS
L3 VSS
L7 VSS
N3 VSS
N7 VSS
R3 VSS
R7 VSS
U3 VSS
U7 VSS
W3 VSS
W7 VSS
A29 VSS
AA3 VSS
AA7 VSS
AB8 VSS
AC3 VSS
GND
U1I
MIMX8ML8CVNKZAB
R2 DRAM_VREF
VDD_1V8
R22 NVCC_CLK
AA14 NVCC_ECSPI_HDMI
AA24 NVCC_ENET
J11 NVCC_GPIO
Y10 NVCC_I2C_UART
K11 NVCC_JTAG
U22 NVCC_NAND
Y11 NVCC_SAI1_SAI5
AA11 NVCC_SAI2_SAI3_SPDIF
NVCC_SNVS_1V8
R24 NVCC_SNVS_1P8
NVCC_DRAM_1V1
J8 NVCC_DRAM
L8 NVCC_DRAM
N8 NVCC_DRAM
R8 NVCC_DRAM
U8 NVCC_DRAM
W8 NVCC_DRAM
AA8 NVCC_DRAM
J10 NVCC_DRAM
AA10 NVCC_DRAM
VDD_1V8
J16 PVCC0_1P8
AA19 PVCC1_1P8
AA16 PVCC2_1P8
U1G
MIMX8ML8CVNKZAB
U11 VSS
U18 VSS
U19 VSS
U23 VSS
U27 VSS
V11 VSS
V19 VSS
W14 VSS
W16 VSS
W23 VSS
W27 VSS
AA23 VSS
AA27 VSS
AB10 VSS
AB12 VSS
AB14 VSS
AB16 VSS
AB18 VSS
AB20 VSS
AB22 VSS
AC24 VSS
AC27 VSS
AE27 VSS
AG10 VSS
AG12 VSS
AG14 VSS
AG16 VSS
AG18 VSS
AG20 VSS
AG22 VSS
AG24 VSS
AG26 VSS
AJ29 VSS
GND
U1K
MIMX8ML8CVNKZAB
imx8ml_power
File: imx8ml_power.kicad_sch
AC6 VSS
AE3 VSS
AG4 VSS
AG6 VSS
AG8 VSS
AJ1 VSS
C10 VSS
C12 VSS
C14 VSS
C16 VSS
C18 VSS
C20 VSS
C22 VSS
C24 VSS
C26 VSS
E27 VSS
G24 VSS
G27 VSS
H10 VSS
H12 VSS
H14 VSS
H16 VSS
H18 VSS
H20 VSS
H22 VSS
J23 VSS
J27 VSS
L14 VSS
L16 VSS
L23 VSS
L27 VSS
M11 VSS
M19 VSS
N11 VSS
N19 VSS
N23 VSS
N27 VSS
P11 VSS
P19 VSS
R11 VSS
R12 VSS
R13 VSS
R14 VSS
R16 VSS
R17 VSS
R18 VSS
R19 VSS
R23 VSS
R27 VSS
T11 VSS
T19 VSS
GND
U1J
MIMX8ML8CVNKZAB
Sheet: /Processor/up_power/
File: up_power.kicad_sch
Title:
Size: A4
Date:
Rev:
KiCad E.D.A. 8.0.9
Id: 3/14


NVCC_DRAM_1V1
VDD_1V8
U1
R5
D1
240
R9
240
R10
ZQ0
ZQ1
ODT_CA_A
VDD1
VDD2
VDDQ
NC
DNU
N8
AB12
DRAM_CK_B−
DRAM_CK_B+
DRAM_CKE1_B
DRAM_CKE0_B
CK_c_A
CK_t_A
CKE1_A
CKE0_A
CA0_A
CA1_A
CA2_A
CA3_A
CA4_A
CA5_A
DRAM_CA0_B
DRAM_CA1_B
DRAM_CA2_B
DRAM_CA3_B
DRAM_CA4_B
DRAM_CA5_B
DRAM_nCS0_B
DRAM_nCS1_B
CS0_A
CS1_A
DRAM_SDQS1_B+
DRAM_SDQS1_B−
DRAM_DATA8_B
DRAM_DATA9_B
DRAM_DATA10_B
DRAM_DATA11_B
DRAM_DATA12_B
DRAM_DATA13_B
DRAM_DATA14_B
DRAM_DATA15_B
DRAM_DMI1_B
DQS1_t_A
DQS1_c_A
DQ8_A
DQ9_A
DQ10_A
DQ11_A
DQ12_A
DQ13_A
DQ14_A
DQ15_A
DMI1_A
DQS0_t_A
DQS0_c_A
DQ0_A
DQ1_A
DQ2_A
DQ3_A
DQ4_A
DQ5_A
DQ6_A
DQ7_A
DMI0_A
DRAM_SDQS0_B+
DRAM_SDQS0_B−
DRAM_DATA0_B
DRAM_DATA1_B
DRAM_DATA2_B
DRAM_DATA3_B
DRAM_DATA4_B
DRAM_DATA5_B
DRAM_DATA6_B
DRAM_DATA7_B
DRAM_DMI0_B
VS
VSS
P1
T8
U2A
MT53E1536M32D4DT−046 WT:A
GND
U2B
MT53E1536M32D4DT−046 WT:A
RESET_n
ODT_CA_B
CK_c_B
CK_t_B
CKE1_B
CKE0_B
CS0_B
CS1_B
DQS1_t_B
DQS1_c_B
DQ8_B
DQ9_B
DQ10_B
DQ11_B
DQ12_B
DQ13_B
DQ14_B
DQ15_B
DMI1_B
DQS0_t_B
DQS0_c_B
DQ0_B
DQ1_B
DQ2_B
DQ3_B
DQ4_B
DQ5_B
DQ6_B
DQ7_B
DMI0_B
mem_power
File: mem_power.kicad_sch
U1B
MIMX8ML8CVNKZAB
10K
R11
R12
DRAM_CKE0_A
DRAM_CKE1_A
DRAM_nCS0_A
DRAM_nCS1_A
DRAM_CK_A+
DRAM_CK_A−
DRAM_CA0_A
DRAM_CA1_A
DRAM_CA2_A
DRAM_CA3_A
DRAM_CA4_A
DRAM_CA5_A
R13
R14
DRAM_CKE0_B
DRAM_CKE1_B
DRAM_nCS0_B
DRAM_nCS1_B
DRAM_CK_B+
DRAM_CK_B−
DRAM_CA0_B
DRAM_CA1_B
DRAM_CA2_B
DRAM_CA3_B
DRAM_CA4_B
DRAM_CA5_B
DRAM_DMI0_A
DRAM_DMI1_A
DRAM_DMI0_B
DRAM_DMI1_B
DRAM_DATA0_A
DRAM_DATA1_A
DRAM_DATA2_A
DRAM_DATA3_A
DRAM_DATA4_A
DRAM_DATA5_A
DRAM_DATA6_A
DRAM_AC00
DRAM_AC01
DRAM_AC02
DRAM_AC03
DRAM_AC04
DRAM_AC05
DRAM_AC06
DRAM_AC07
DRAM_AC08
DRAM_AC09
DRAM_AC10
DRAM_AC11
DRAM_AC12
DRAM_AC13
DRAM_AC14
DRAM_AC15
DRAM_AC16
DRAM_AC17
DRAM_AC19
DRAM_AC20
DRAM_AC21
DRAM_AC22
DRAM_AC23
DRAM_AC24
DRAM_AC25
DRAM_AC26
DRAM_AC27
DRAM_AC28
DRAM_AC29
DRAM_AC30
DRAM_AC31
DRAM_AC32
DRAM_AC33
DRAM_AC34
DRAM_AC35
DRAM_AC36
DRAM_AC37
DRAM_AC38
DRAM_ALERT_N
DRAM_DM0
DRAM_DM1
DRAM_DM2
DRAM_DM3
DRAM_DQ00
DRAM_DQ01
DRAM_DQ02
DRAM_DQ03
DRAM_DQ04
DRAM_DQ05
DRAM_DQ06
DRAM_DQ07
DRAM_DQ08
DRAM_DQ09
DRAM_DQ10
DRAM_DQ11
DRAM_DQ12
DRAM_DQ13
DRAM_DQ14
DRAM_DQ15
DRAM_DQ16
DRAM_DQ17
DRAM_DQ18
DRAM_DQ19
DRAM_DQ20
DRAM_DQ21
DRAM_DQ22
DRAM_DQ23
DRAM_DQ24
DRAM_DQ25
DRAM_DQ26
DRAM_DQ27
DRAM_DQ28
DRAM_DQ29
DRAM_DQ30
DRAM_DQ31
DRAM_DQS0_N
DRAM_DQS0_P
DRAM_DQS1_N
DRAM_DQS1_P
DRAM_DQS2_N
DRAM_DQS2_P
DRAM_DQS3_N
DRAM_DQS3_P
DRAM_RESET_N
DRAM_ZN
R16
10K
R15
240
EARC_AUX
EARC_N_HPD
EARC_P_UTIL
ECSPI1_MISO
ECSPI1_MOSI
ECSPI1_SCLK
ECSPI1_SS0
ECSPI2_MISO
ECSPI2_MOSI
ECSPI2_SCLK
ECSPI2_SS0
Sheet: /Processor/Up_memorie_lpddr4/
File: up_memorie_lpddr4.kicad_sch
Title:
Size: A4
Date:
Rev:
KiCad E.D.A. 8.0.9
Id: 4/14


U4A
PCA9450CHNY
U4B
PCA9450CHNY
VDD_SYS
C69 10uF
C66 10uF
C67 10uF
C68 10uF
C65 10uF
C64 10uF
C63 10uF
GND
NVCC_SNVS_1V8
R5
100K
C71
10uF
INB13
INB13
INB13
INB26
INB26
INB26
INB45
INB45
INB45
INL1
PMIC_ON_REQ
PMIC_RST_B
PMIC_STBY_REQ
SCL
SD_VSEL
SW_EN
WDOG_B
CLK_32K_OUT
IRQ_B
POR_B
RTC_RESET_B
SCLH
SCLL
SWOUT
XTAL_OUT
BUCK4FB
BUCK5FB
BUCK6FB
R_SNSP1
R_SNSP2
R_SNSP3_CFG
SDA
SDAH
SDAL
XTAL_IN
PMC_32K_OUT
PMC_nINT
POR_6
PMC_SCLH
PMC_SCLL
BB_VSD_3V3
LX4
LX5
LX6
VDD_SoC_S
VDD_ARM_S
I2C1_SCL
I2C1_SDA
PMC_SDAH
PMC_SDAL
Y1
32.768KHz
C1
18pF
C2
18pF
LDO1
LDO2
LDO3
LDO4
LDO5
PM_VDD_SoC
PM_VDD_ARM
PM_VDD_3V3
PM_NVCC_DRAM_1V1
PM_VDD_1V8
L2 0.47uH
L1 0.47uH
L3 0.47uH
L4 0.47uH
L5 0.47uH
L6 0.47uH
SWIN
VINT
VSYS
AGND
BUCK_AGND
C72 10uF
C70 10uF
LX1
LX2
LX3
C73 22uF
C74 22uF
C75 22uF
C76 22uF
C77 22uF
C78 22uF
LX4
LX5
LX6
C79 22uF
C80 22uF
C81 22uF
C82 22uF
C83 22uF
C84 22uF
C52 1uF
C51 1uF
C53 1uF
C55 1uF
C54 1uF
PM_NVCC_SNVS_1V8
PM_VDDA_1V8
PM_NVCC_SD2
VLDO4
Sheet: /power/
File: power.kicad_sch
Title:
Size: A4
Date:
Rev:
KiCad E.D.A. 8.0.9
Id: 5/14

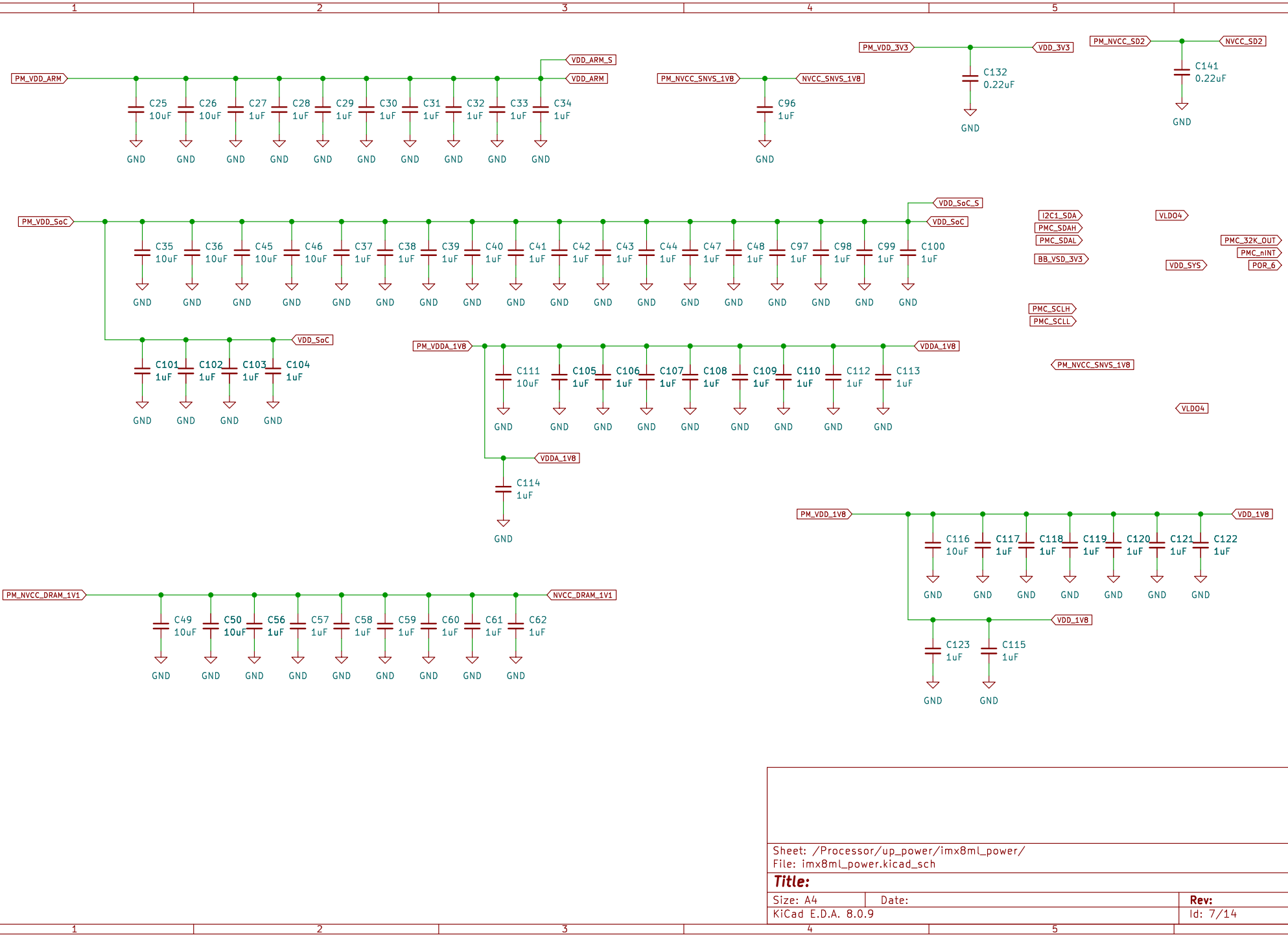




Sheet: /Processor/Up_memorie_lpddr4/mem_power/
File: mem_power.kicad_sch

Title:

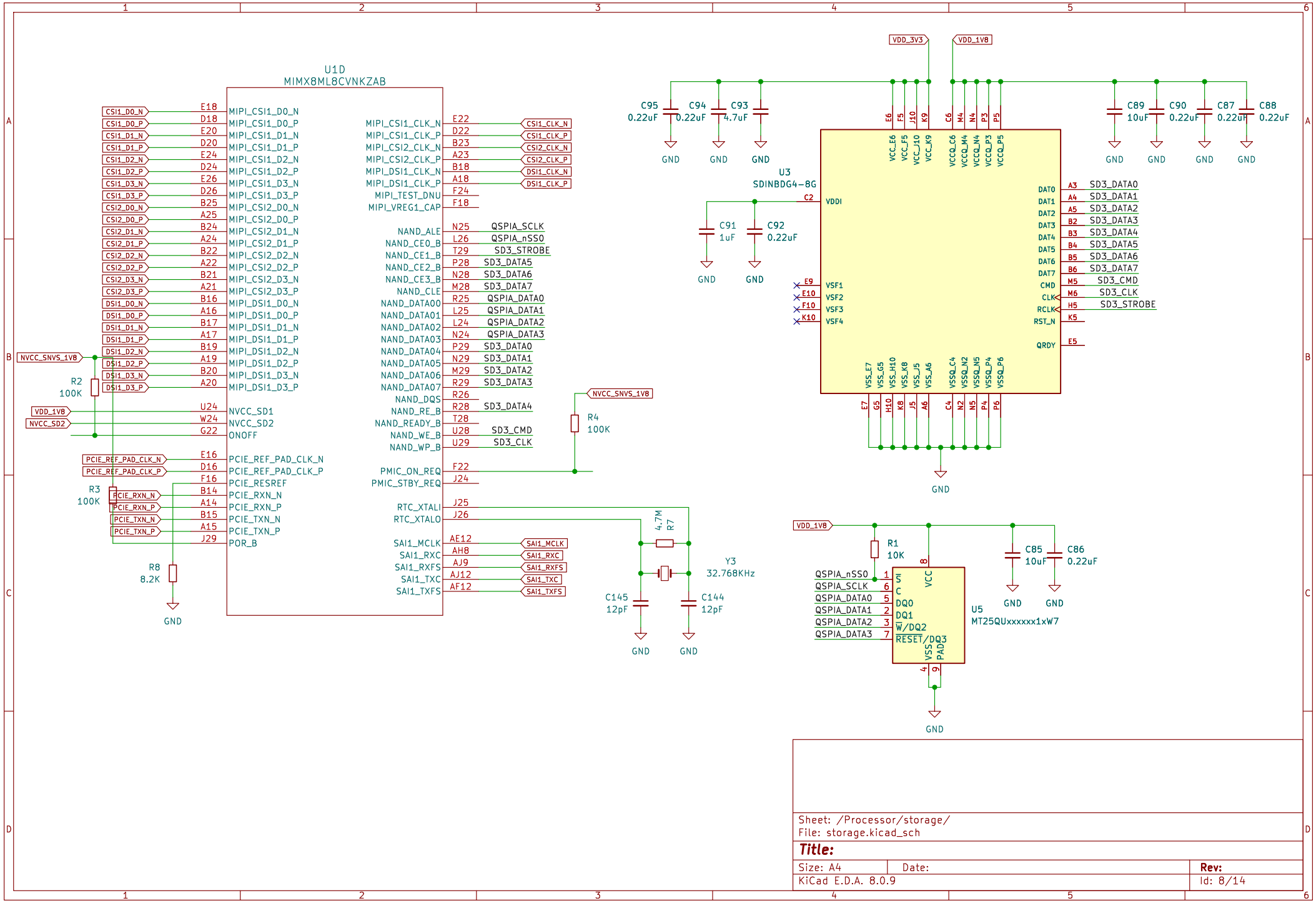
Size: A4	Date:	**Rev:**
KiCad E.D.A. 8.0.9		Id: 6/14



Sheet: /Processor/up_power/imx8ml_power/
File: imx8ml_power.kicad_sch

Title:

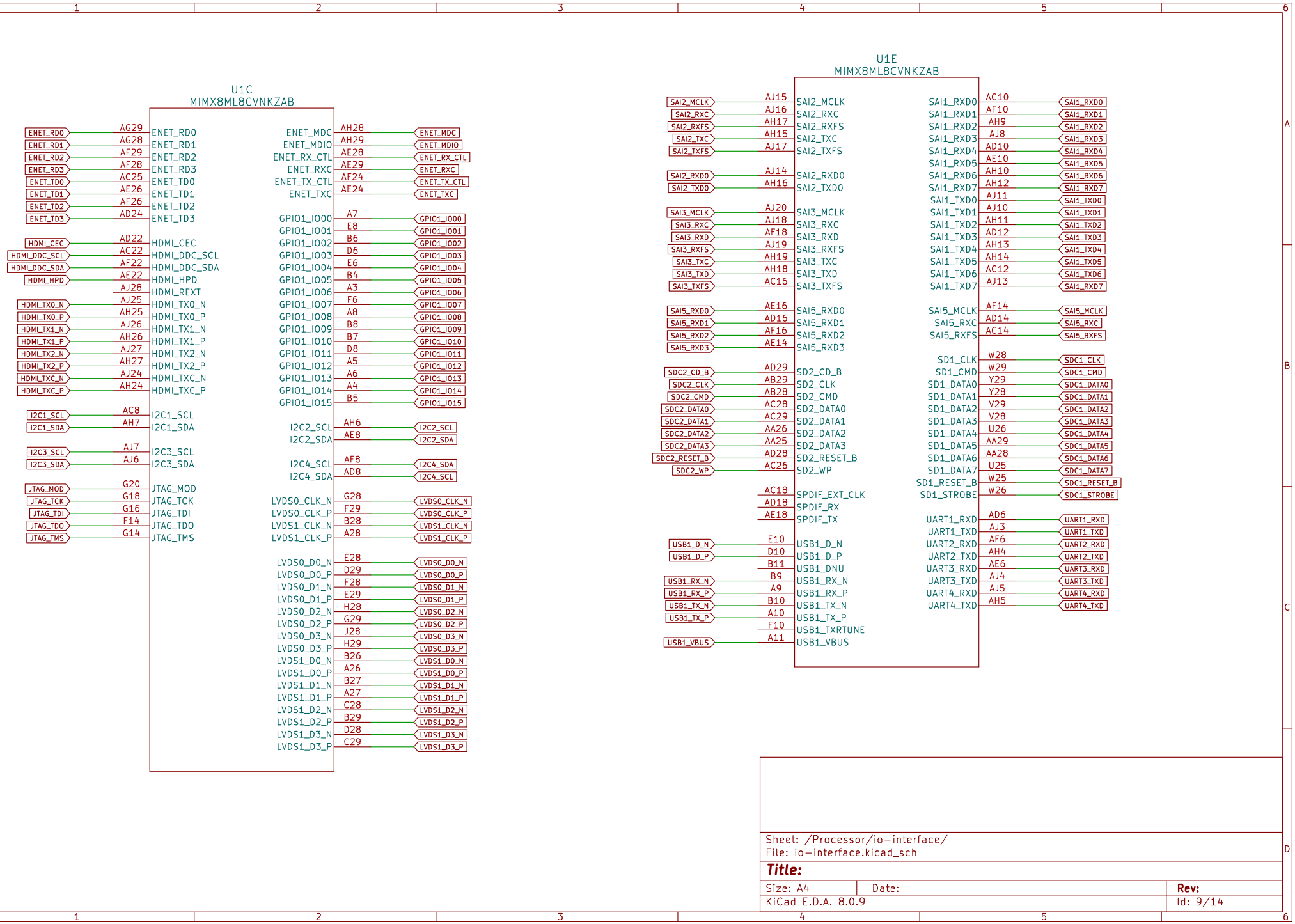
Size: A4	Date:	**Rev:**
KiCad E.D.A. 8.0.9		Id: 7/14

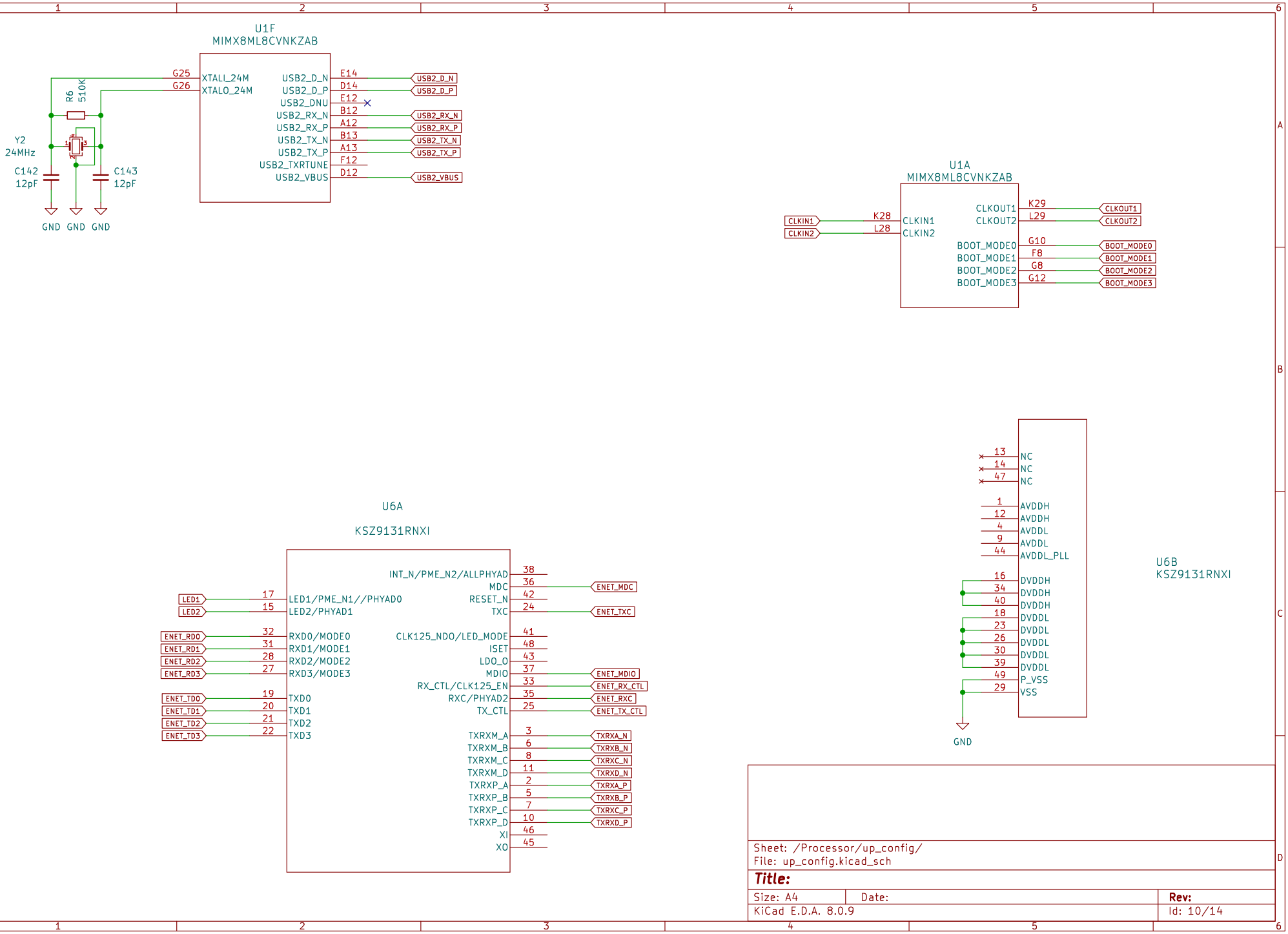


Sheet: /Processor/storage/
File: storage.kicad_sch

Title:

Size: A4	Date:	**Rev:**
KiCad E.D.A. 8.0.9		Id: 8/14

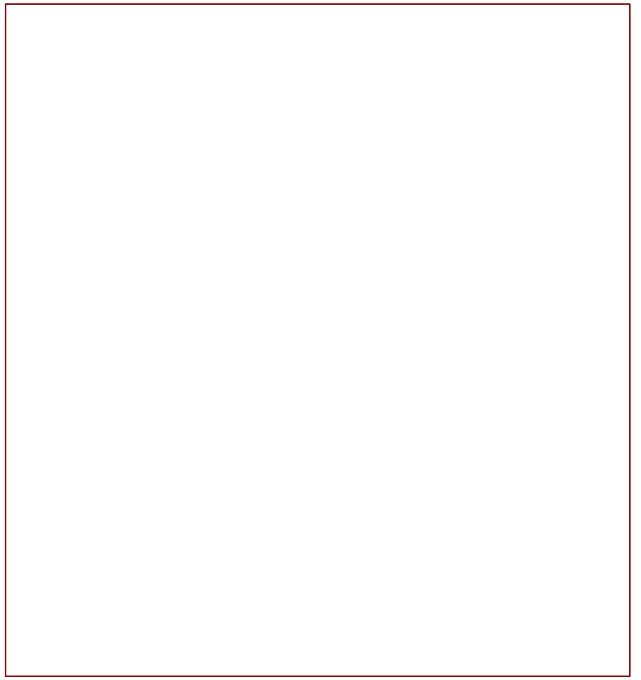

U1C
MIMX8ML8CVNKZAB
ENET_RD0
ENET_RD1
ENET_RD2
ENET_RD3
ENET_TD0
ENET_TD1
ENET_TD2
ENET_TD3
HDMI_CEC
HDMI_DDC_SCL
HDMI_DDC_SDA
HDMI_HPD
HDMI_REXT
HDMI_TX0_N
HDMI_TX0_P
HDMI_TX1_N
HDMI_TX1_P
HDMI_TX2_N
HDMI_TX2_P
HDMI_TXC_N
HDMI_TXC_P
I2C1_SCL
I2C1_SDA
I2C3_SCL
I2C3_SDA
JTAG_MOD
JTAG_TCK
JTAG_TDI
JTAG_TDO
JTAG_TMS
ENET_MDC
ENET_MDIO
ENET_RX_CTL
ENET_RXC
ENET_TX_CTL
ENET_TXC
GPIO1_IO00
GPIO1_IO01
GPIO1_IO02
GPIO1_IO03
GPIO1_IO04
GPIO1_IO05
GPIO1_IO06
GPIO1_IO07
GPIO1_IO08
GPIO1_IO09
GPIO1_IO10
GPIO1_IO11
GPIO1_IO12
GPIO1_IO13
GPIO1_IO14
GPIO1_IO15
I2C2_SCL
I2C2_SDA
I2C4_SCL
I2C4_SDA
LVDS0_CLK_N
LVDS0_CLK_P
LVDS1_CLK_N
LVDS1_CLK_P
LVDS0_D0_N
LVDS0_D0_P
LVDS0_D1_N
LVDS0_D1_P
LVDS0_D2_N
LVDS0_D2_P
LVDS0_D3_N
LVDS0_D3_P
LVDS1_D0_N
LVDS1_D0_P
LVDS1_D1_N
LVDS1_D1_P
LVDS1_D2_N
LVDS1_D2_P
LVDS1_D3_N
LVDS1_D3_P
U1E
MIMX8ML8CVNKZAB
SAI2_MCLK
SAI2_RXC
SAI2_RXFS
SAI2_TXC
SAI2_TXFS
SAI2_RXD0
SAI2_TXD0
SAI3_MCLK
SAI3_RXC
SAI3_RXD
SAI3_RXFS
SAI3_TXC
SAI3_TXD
SAI3_TXFS
SAI5_RXD0
SAI5_RXD1
SAI5_RXD2
SAI5_RXD3
SD2_CD_B
SD2_CLK
SD2_CMD
SD2_DATA0
SD2_DATA1
SD2_DATA2
SD2_DATA3
SD2_RESET_B
SD2_WP
SPDIF_EXT_CLK
SPDIF_RX
SPDIF_TX
USB1_D_N
USB1_D_P
USB1_DNU
USB1_RX_N
USB1_RX_P
USB1_TX_N
USB1_TX_P
USB1_TXRTUNE
USB1_VBUS
SAI1_RXD0
SAI1_RXD1
SAI1_RXD2
SAI1_RXD3
SAI1_RXD4
SAI1_RXD5
SAI1_RXD6
SAI1_RXD7
SAI1_TXD0
SAI1_TXD1
SAI1_TXD2
SAI1_TXD3
SAI1_TXD4
SAI1_TXD5
SAI1_TXD6
SAI1_TXD7
SAI5_MCLK
SAI5_RXC
SAI5_RXFS
SD1_CLK
SD1_CMD
SD1_DATA0
SD1_DATA1
SD1_DATA2
SD1_DATA3
SD1_DATA4
SD1_DATA5
SD1_DATA6
SD1_DATA7
SD1_RESET_B
SD1_STROBE
UART1_RXD
UART1_TXD
UART2_RXD
UART2_TXD
UART3_RXD
UART3_TXD
UART4_RXD
UART4_TXD
Sheet: /Processor/io-interface/
File: io-interface.kicad_sch
Title:
Size: A4
Date:
Rev:
KiCad E.D.A. 8.0.9
Id: 9/14


U1F
MIMX8ML8CVNKZAB
G25
G26
XTALI_24M
XTALO_24M
R6
510K
Y2
24MHz
C142
12pF
C143
12pF
GND GND GND
USB2_D_N
USB2_D_P
USB2_DNU
USB2_RX_N
USB2_RX_P
USB2_TX_N
USB2_TX_P
USB2_TXRTUNE
USB2_VBUS
E14
D14
E12
B12
A12
B13
A13
F12
D12
USB2_D_N
USB2_D_P
USB2_RX_N
USB2_RX_P
USB2_TX_N
USB2_TX_P
USB2_VBUS
U1A
MIMX8ML8CVNKZAB
CLKIN1
CLKIN2
K28
L28
CLKOUT1
CLKOUT2
BOOT_MODE0
BOOT_MODE1
BOOT_MODE2
BOOT_MODE3
K29
L29
G10
F8
G8
G12
CLKOUT1
CLKOUT2
BOOT_MODE0
BOOT_MODE1
BOOT_MODE2
BOOT_MODE3
U6A
KSZ9131RNXI
LED1
LED2
ENET_RD0
ENET_RD1
ENET_RD2
ENET_RD3
ENET_TD0
ENET_TD1
ENET_TD2
ENET_TD3
17
15
32
31
28
27
19
20
21
22
LED1/PME_N1//PHYAD0
LED2/PHYAD1
RXD0/MODE0
RXD1/MODE1
RXD2/MODE2
RXD3/MODE3
TXD0
TXD1
TXD2
TXD3
INT_N/PME_N2/ALLPHYAD
MDC
RESET_N
TXC
CLK125_NDO/LED_MODE
ISET
LDO_O
MDIO
RX_CTL/CLK125_EN
RXC/PHYAD2
TX_CTL
TXRXM_A
TXRXM_B
TXRXM_C
TXRXM_D
TXRXP_A
TXRXP_B
TXRXP_C
TXRXP_D
XI
XO
38
36
42
24
41
48
43
37
33
35
25
3
6
8
11
2
5
7
10
46
45
ENET_MDC
ENET_TXC
ENET_MDIO
ENET_RX_CTL
ENET_RXC
ENET_TX_CTL
TXRXA_N
TXRXB_N
TXRXC_N
TXRXD_N
TXRXA_P
TXRXB_P
TXRXC_P
TXRXD_P
U6B
KSZ9131RNXI
13
14
47
1
12
4
9
44
16
34
40
18
23
26
30
39
49
29
NC
NC
NC
AVDDH
AVDDH
AVDDL
AVDDL
AVDDL_PLL
DVDDH
DVDDH
DVDDH
DVDDL
DVDDL
DVDDL
DVDDL
DVDDL
P_VSS
VSS
GND
Sheet: /Processor/up_config/
File: up_config.kicad_sch
Title:
Size: A4
Date:
Rev:
KiCad E.D.A. 8.0.9
Id: 10/14

pin_io_left

File: pin_io_left.kicad_sch

pin_io_rigth

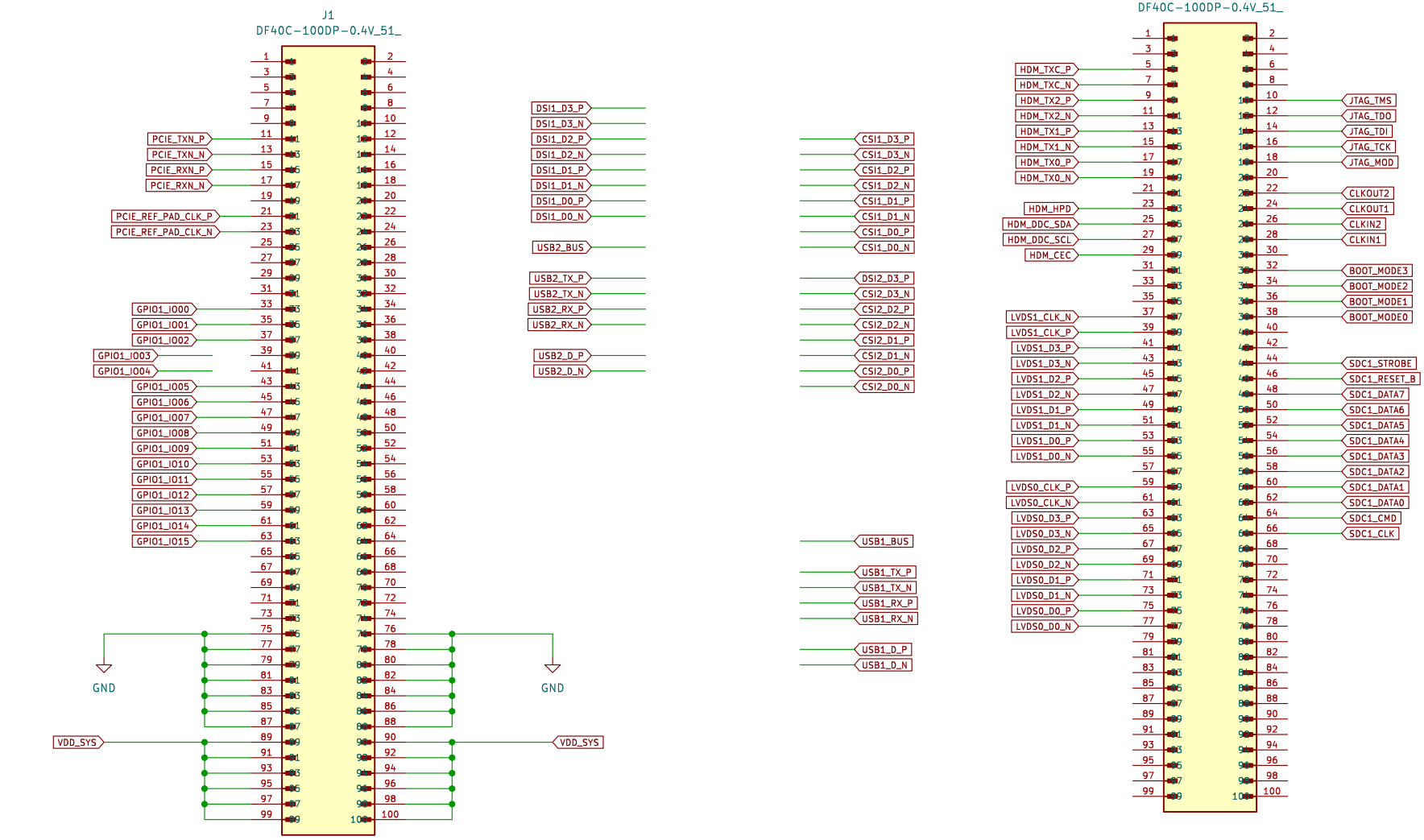


File: pin_io_rigth.kicad_sch

Sheet: /Pin-IO/
File: Pin-IO.kicad_sch

Title:

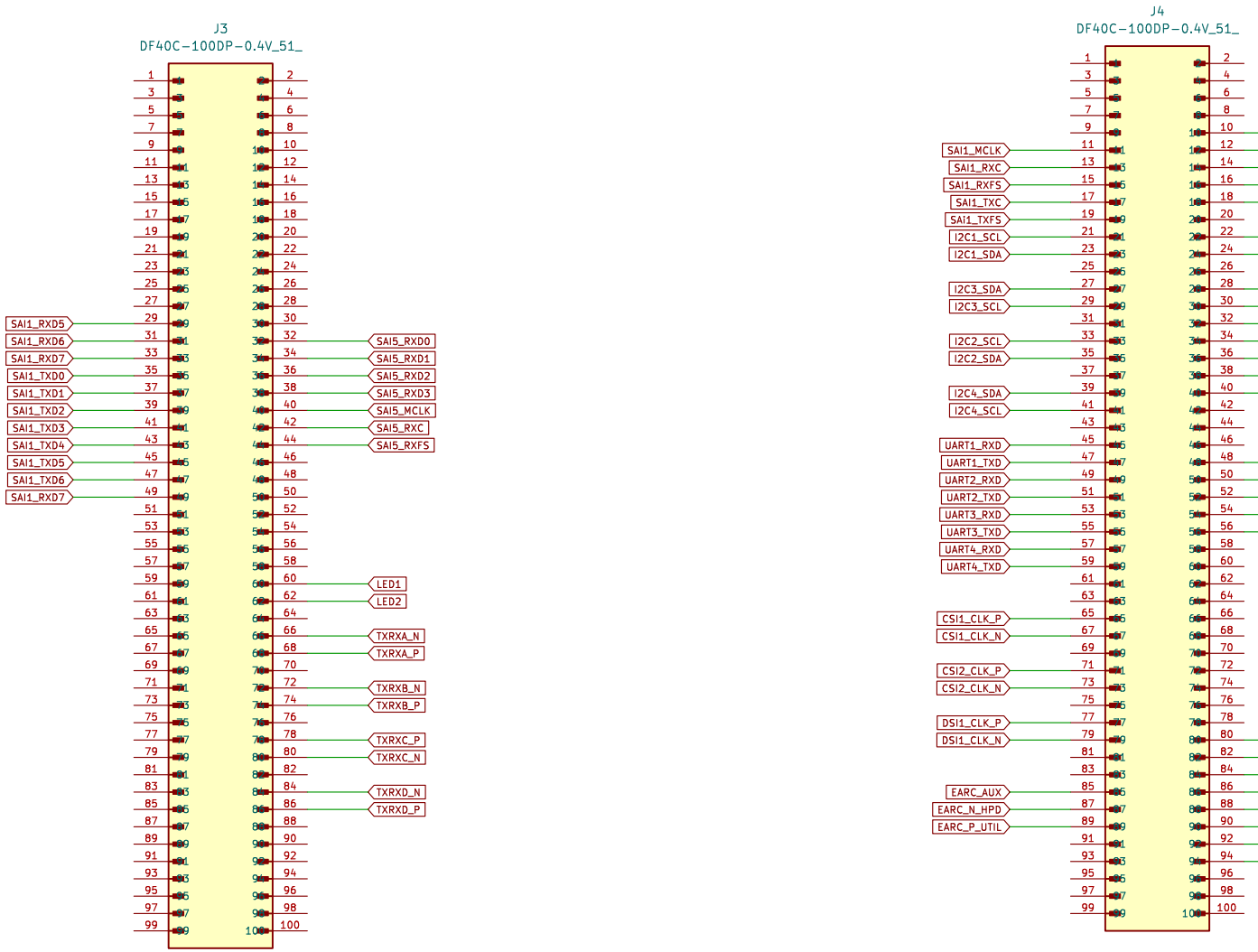
Size: A4	Date:	**Rev:**
KiCad E.D.A. 8.0.9		Id: 11/14



Sheet: /Pin-IO/pin_io_left/
File: pin_io_left.kicad_sch

Title:

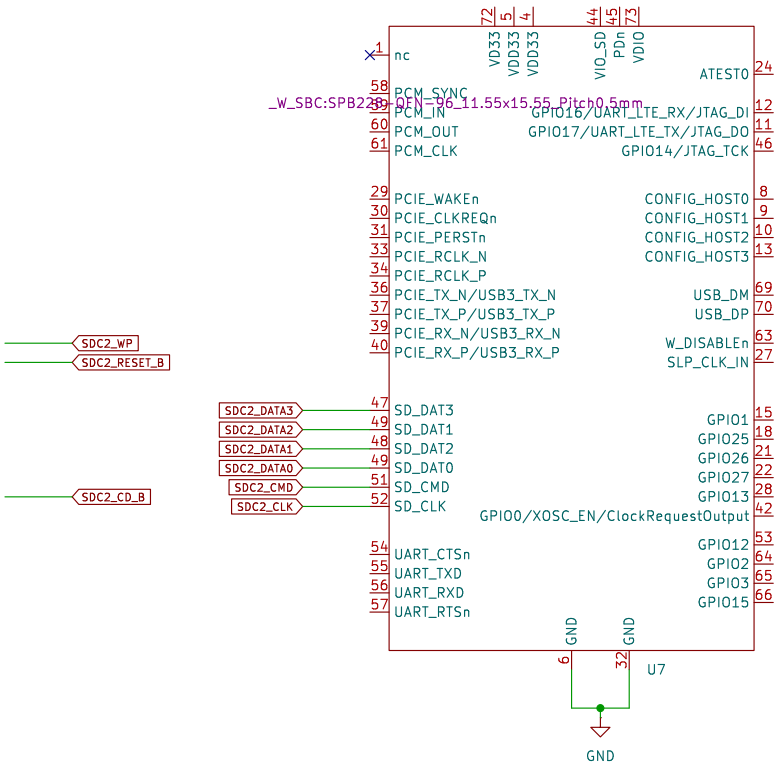
Size: A4	Date:	**Rev:**
KiCad E.D.A. 8.0.9		Id: 12/14



Sheet: /Pin-IO/pin_io_rigth/
File: pin_io_rigth.kicad_sch

Title:

Size: A4	Date:	**Rev:**
KiCad E.D.A. 8.0.9		Id: 13/14



Sheet: /Processor/wireless/		
File: wireless_module.kicad_sch		
Title:		
Size: A4	Date:	**Rev:**
KiCad E.D.A. 8.0.9		Id: 14/14