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Radxa VMARC-Q9075 Schematic

V1.11

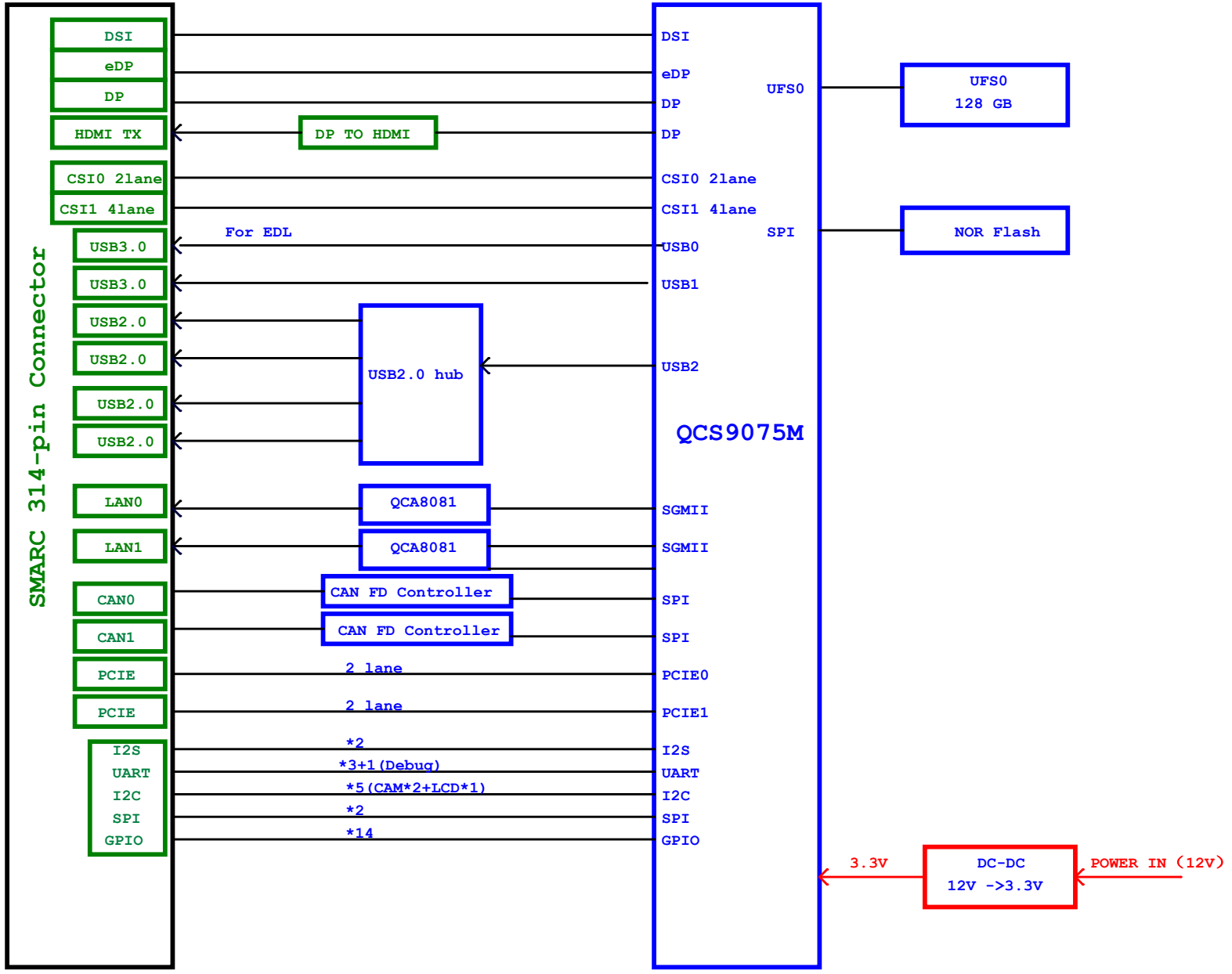
Index

Page 1	01.Cover
Page 2	02.Index
Page 3	03.Block
Page 4	04 QCS9075M I/F
Page 5	05 QCS9075M GND
Page 6	06 UFS0
Page 7	07_CAN
Page 8	08 USB_HUB
Page 9	09 DP to HDMI
Page 10	10_NOR_Flash
Page 11	11 ETHERNET_SGMII_1
Page 12	12 ETHERNET_SGMII_2
Page 13	13 POWER IN
Page 14	14.EEPROM
Page 15	15 PWRON_OFF
Page 16	16 BOOT_CONFIG
Page 17	17_314-pin Connector

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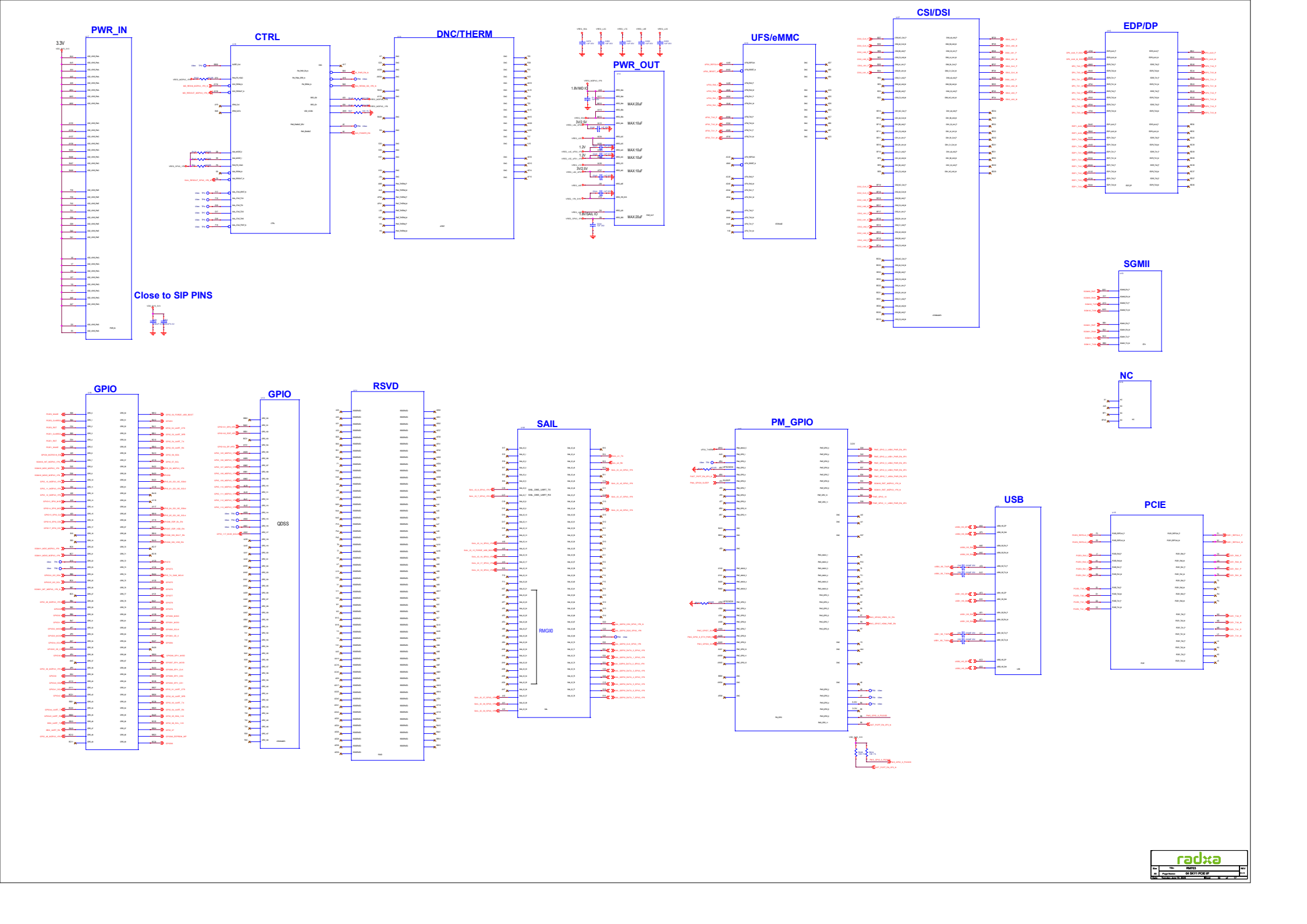
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A4	Page Name: 02.INDEX	V1.11
Date: Thursday, August 27, 2026	Sheet 02 of 17	

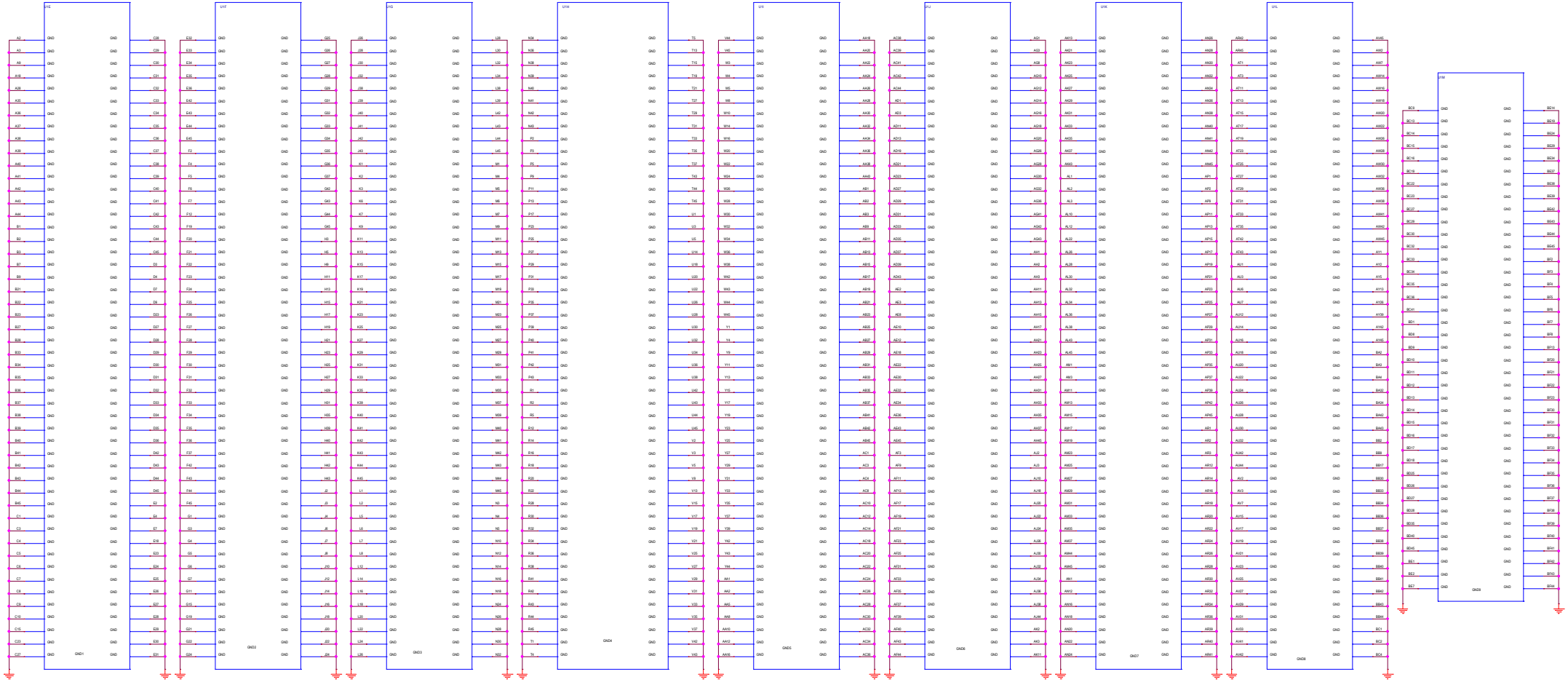
RM703 Block Diagram



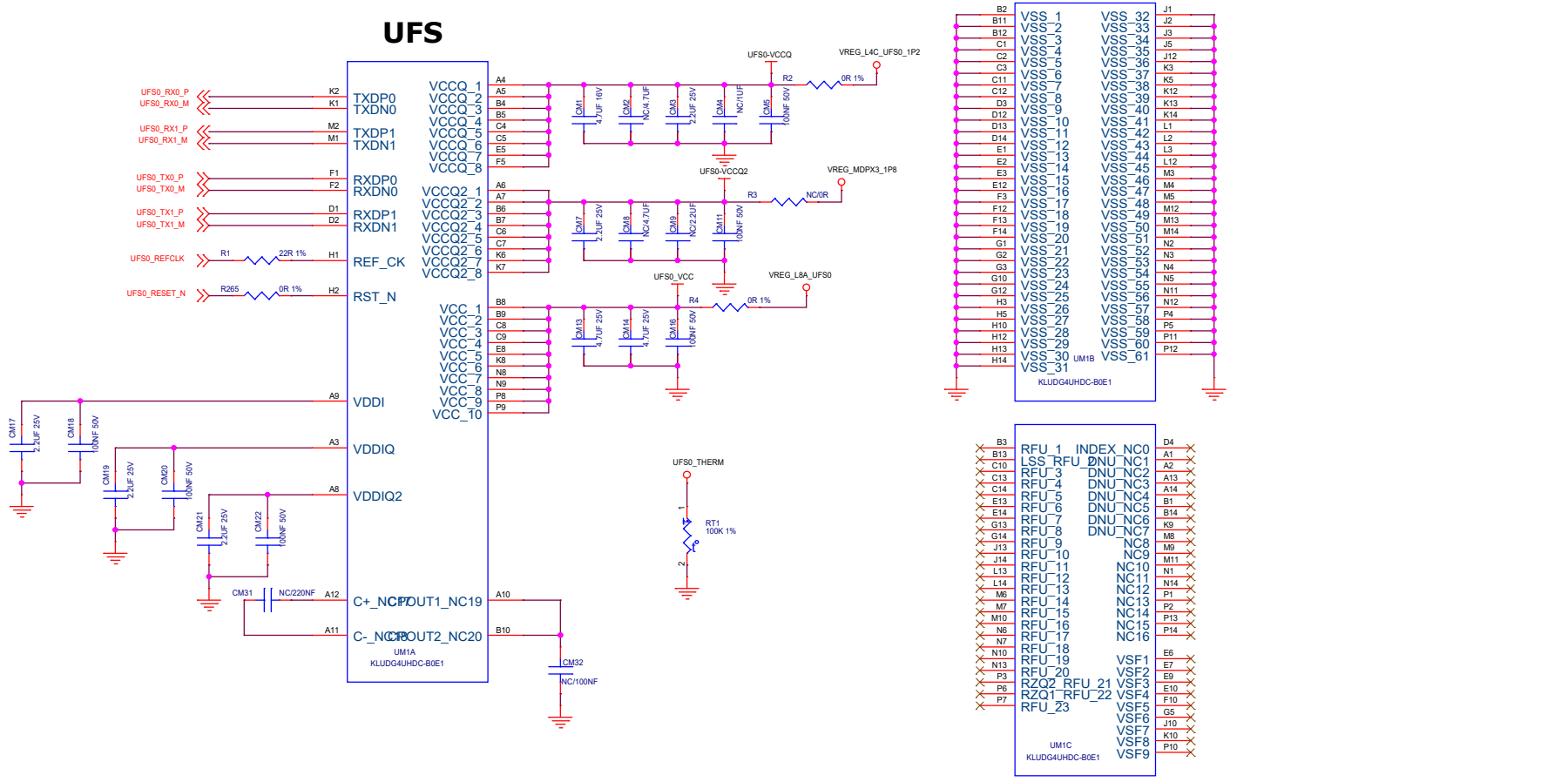
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Size	Title:	REV
A2	RM703	V1.11
	Page Name: 03 BLOCK DIAGRAM	
Date: Tuesday, June 16, 2026	Sheet 03 of 17	


PWR_IN
CTRL
DNC/THERM
PWR_OUT
UFS/eMMC
CSI/DSI
EDP/DP
Close to SIP PINS
SGMII
GPIO
GPIO
RSVD
NC
SAIL
PM_GPIO
USB
PCIE
QDSS
RMII0
radxa
ROCK 5B
06 SKY1 PCIE 2F

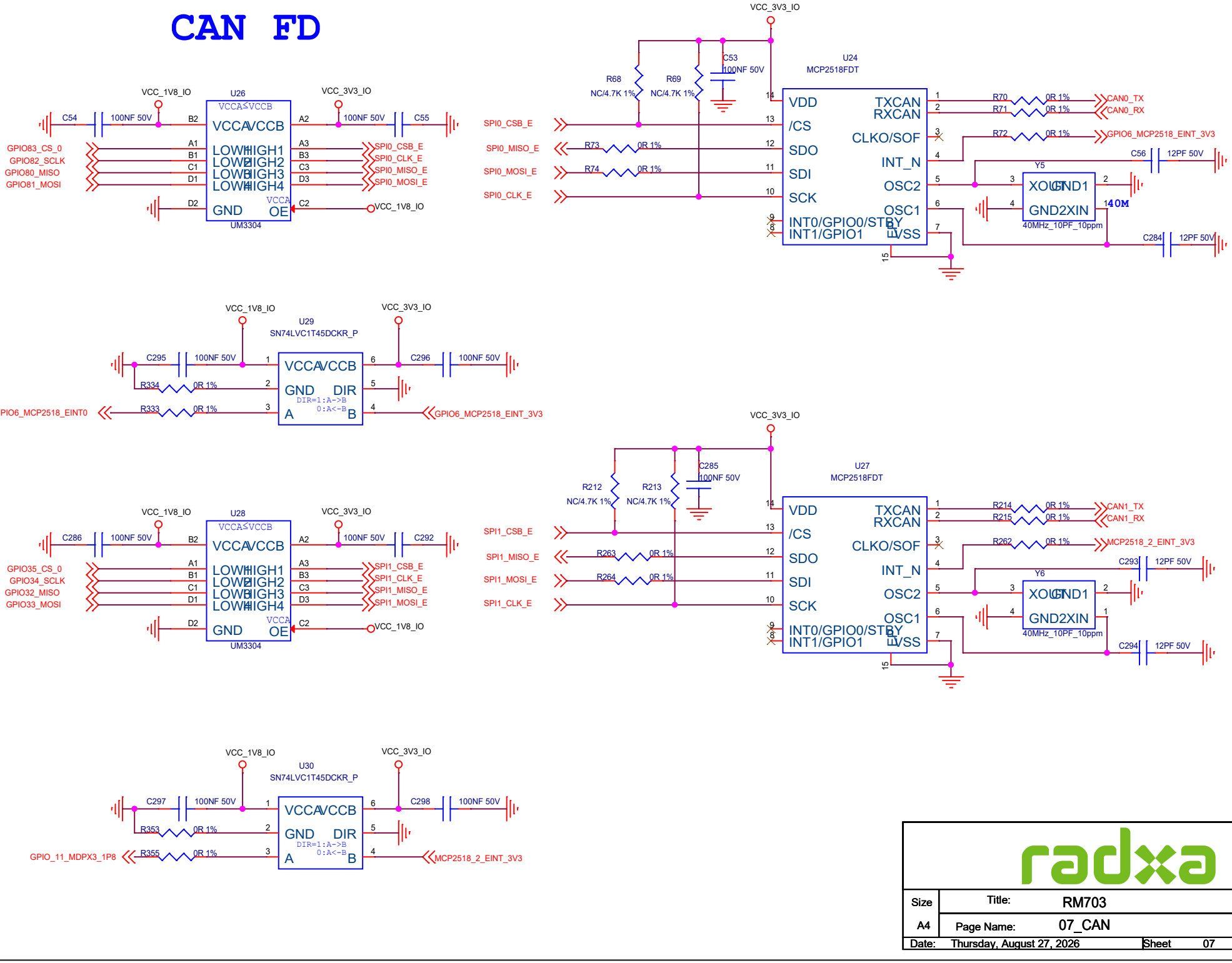


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D	Page Name:	05 QCS9100M_GND	v1.11
Date:	Tuesday, June 16, 2020	Sheet 05 of 17	

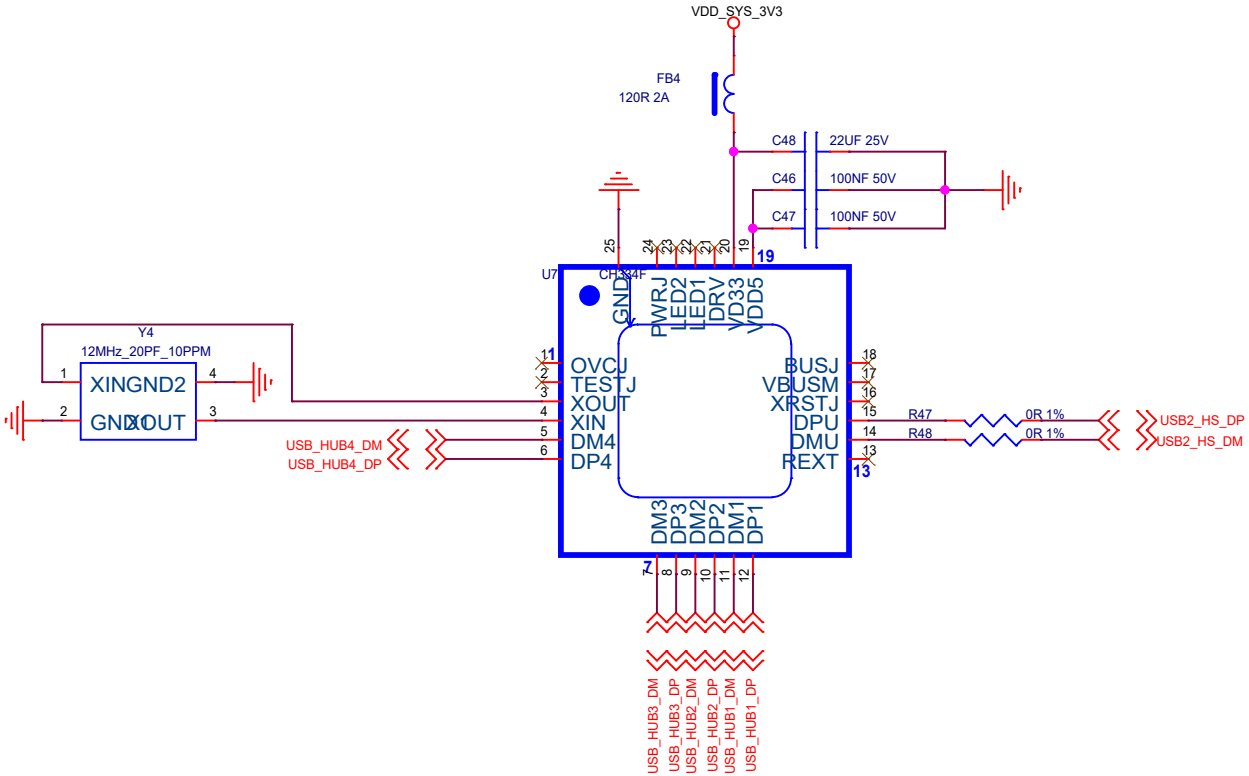


Size	Title: RM703	REV
A3	Page Name: 06 UFS0	V1.11
Date: Tuesday, June 16, 2026	Sheet 06 of 17	

CAN FD

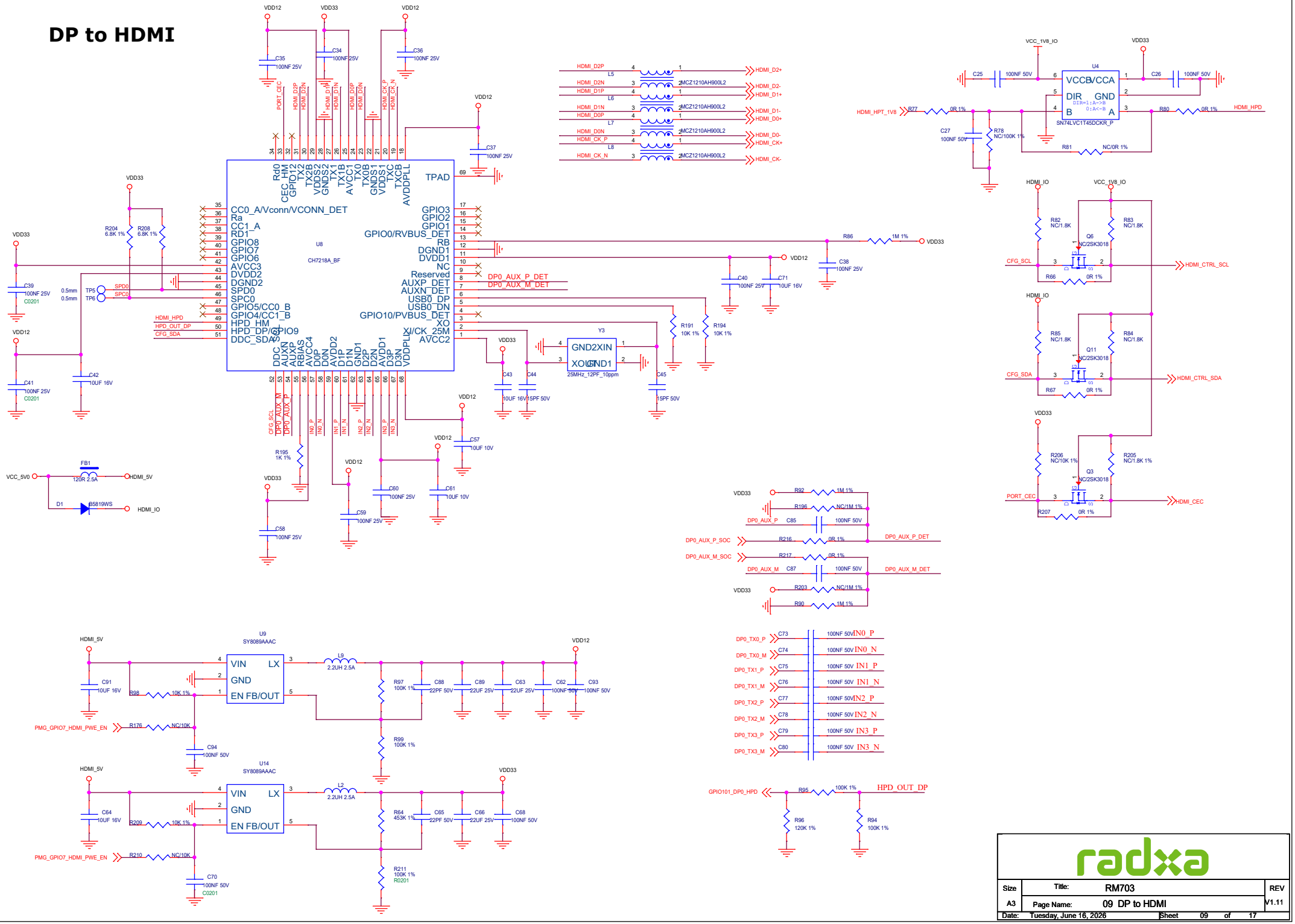


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Date: Thursday, August 27, 2026	Sheet 07 of 17	



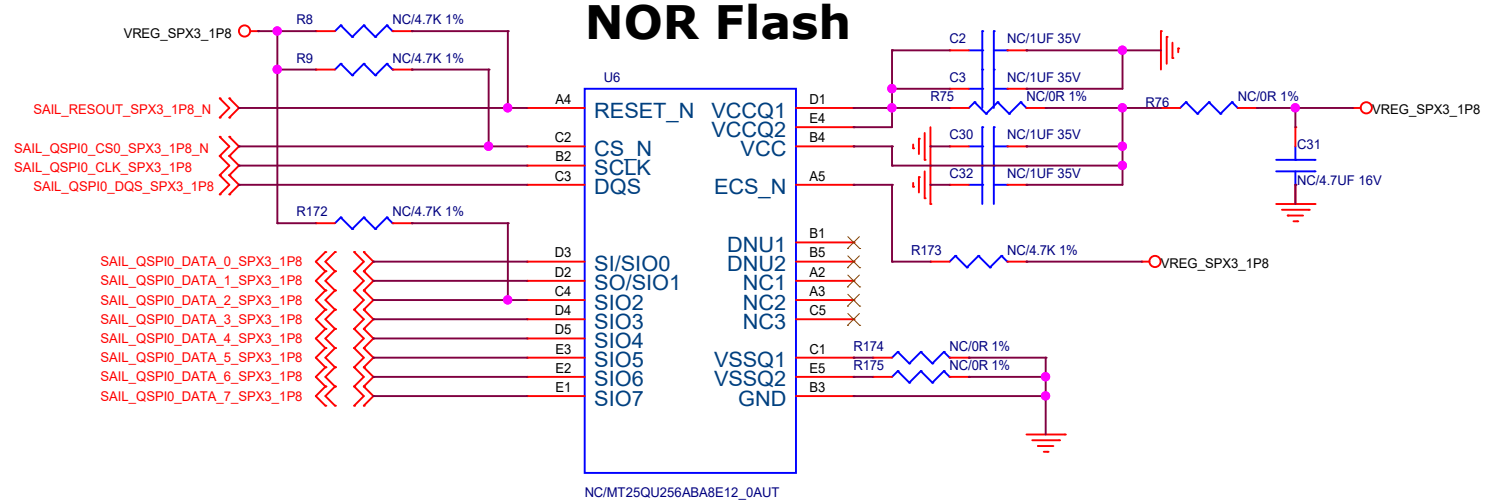
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Date:	Tuesday, June 16, 2026	Sheet 08 of 17	

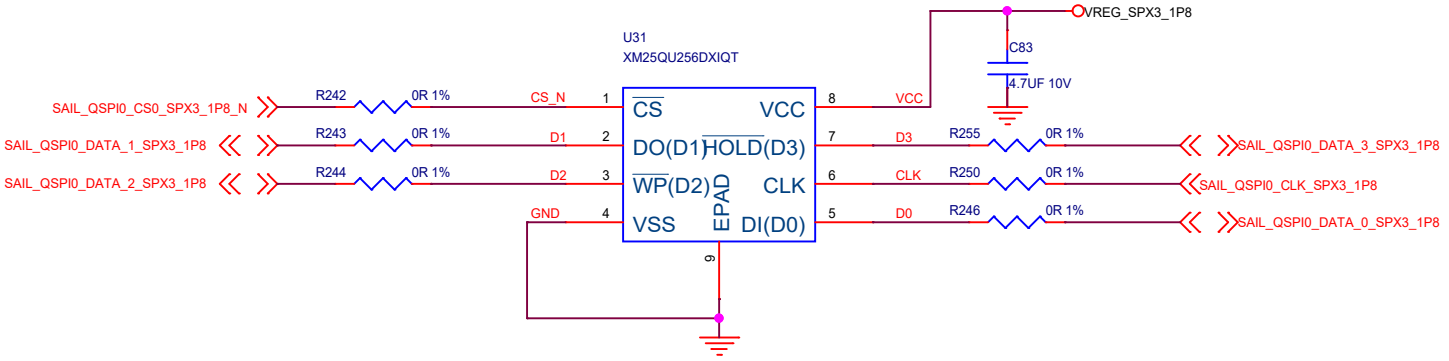
DP to HDMI

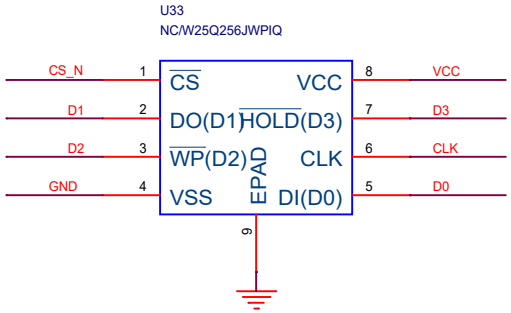


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	Page Name: 09 DP to HDMI	
Date: Tuesday, June 16, 2026	Sheet 09 of 17	

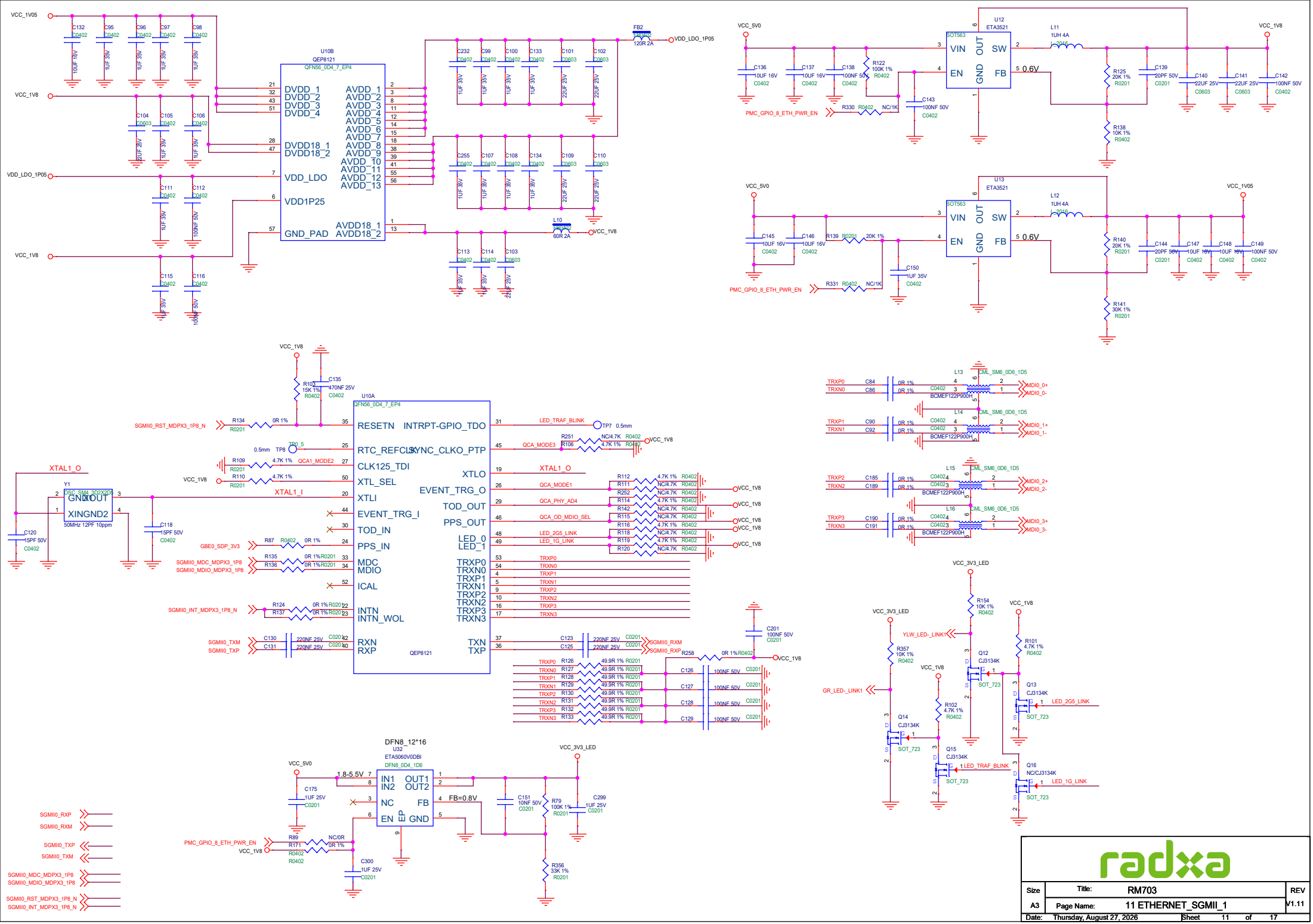
NOR Flash



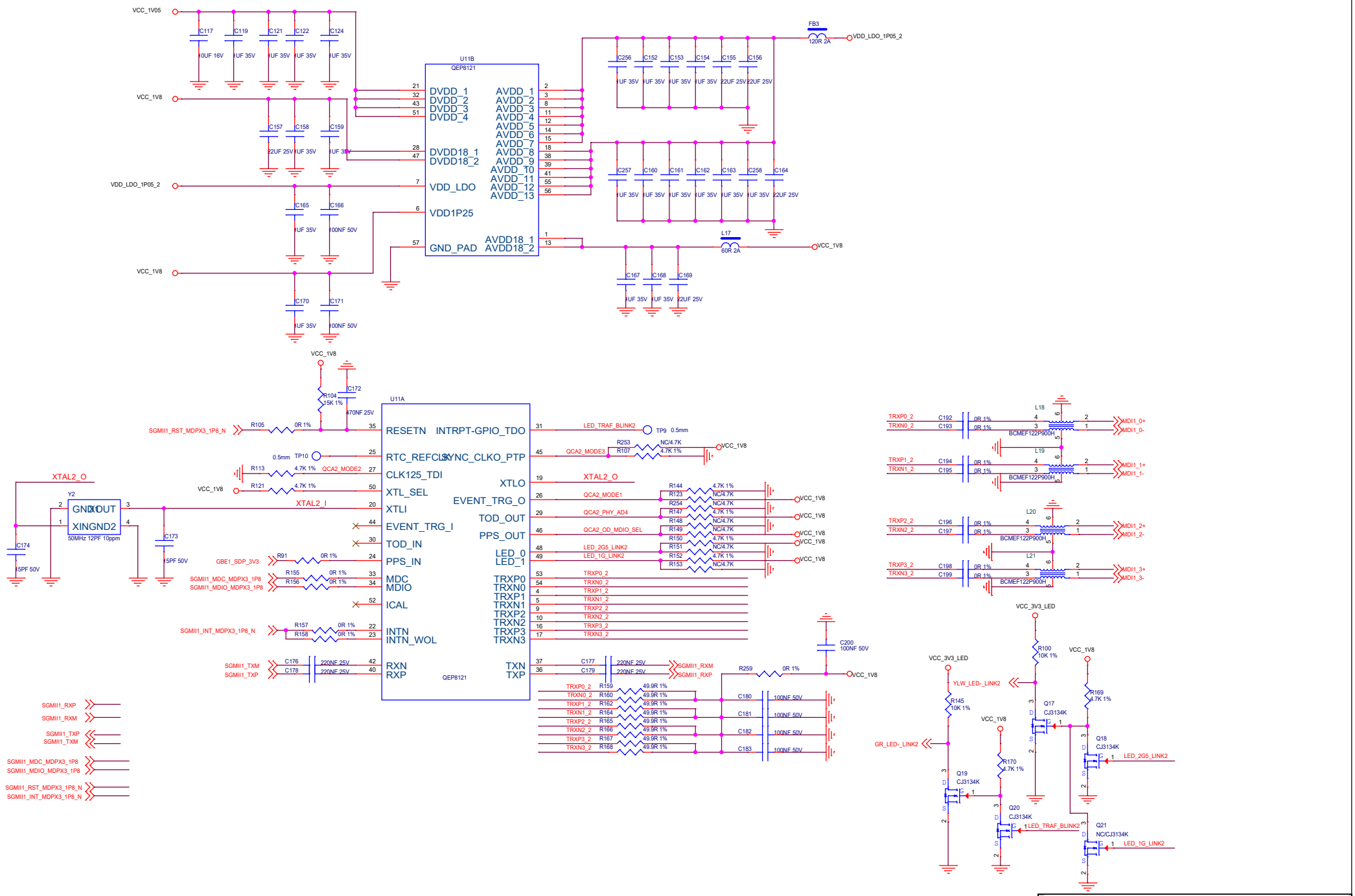




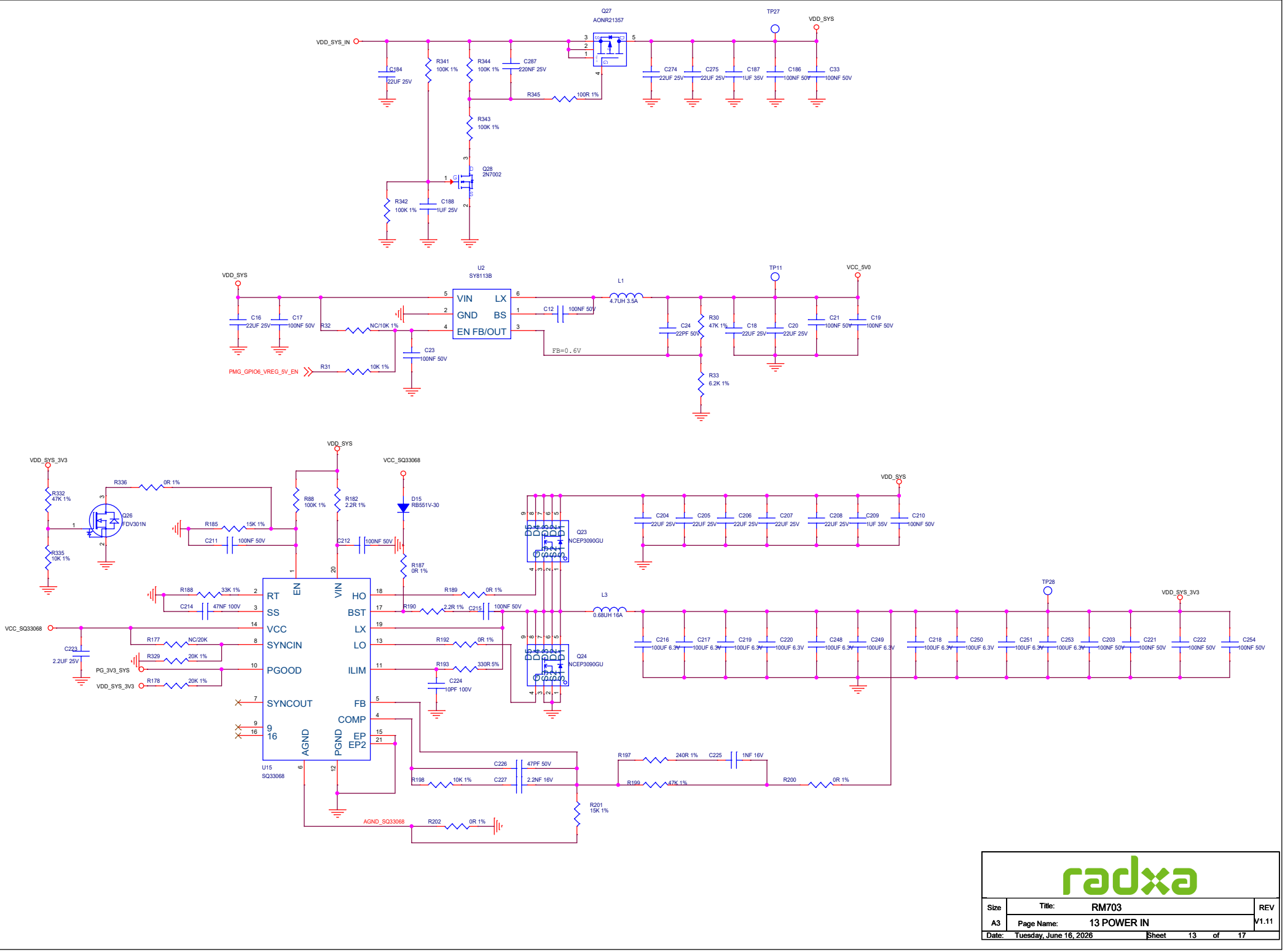
Size A4	Title: RM703	REV V1.11
	Page Name: 10.NOR Flash	
Date: Tuesday, June 16, 2026	Sheet 10 of 17	



Size	Title: RM703		REV
A3	Page Name: 11 ETHERNET_SGMII_1		V1.11
Date: Thursday, August 27, 2026	Sheet 11 of 17		



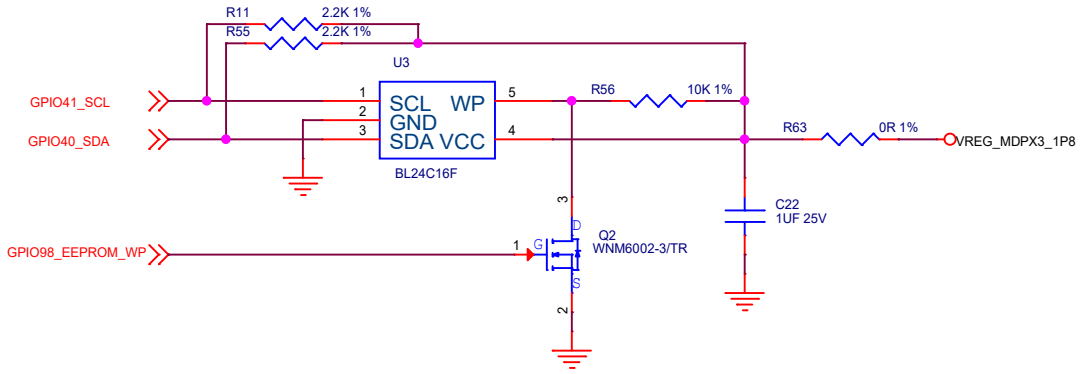
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A3	Page Name: 12 ETHERNET_SGMII_2		V1.11
Date: Thursday, August 27, 2026	Sheet 12 of 17		



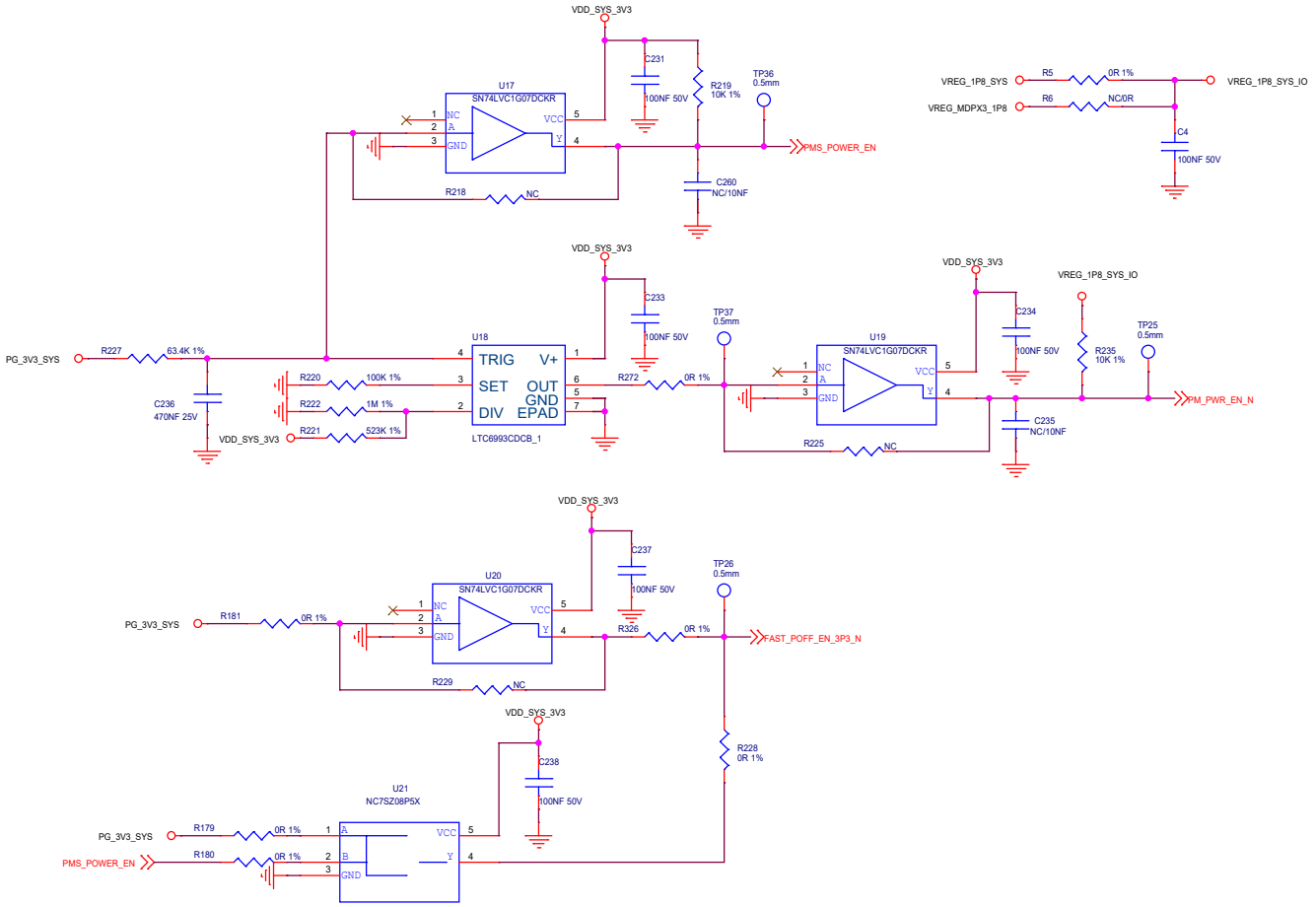
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Size	Title:	REV
A3	RM703	V1.11
	Page Name: 13 POWER IN	
Date: Tuesday, June 16, 2026	Sheet 13 of 17	

EEPROM

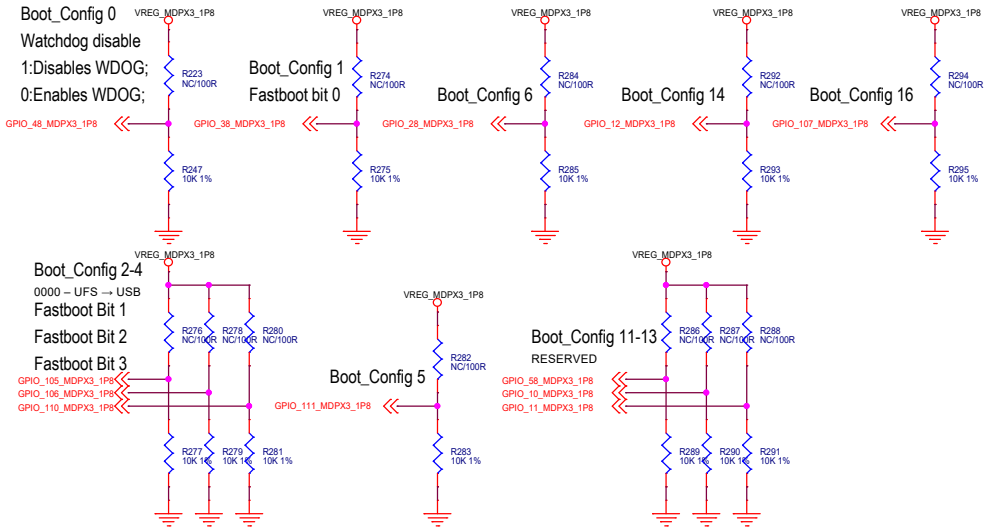


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	Page Name: 14.EEPROM	
Date: Tuesday, June 16, 2026	Sheet 14 of 17	

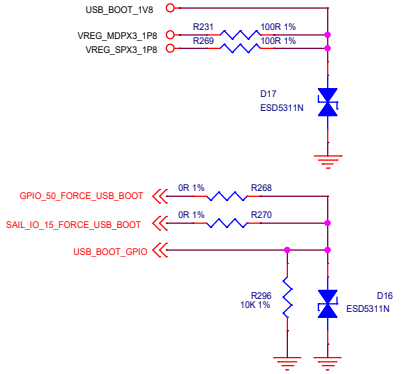


Size	Title:	RM703	REV
A3	Page Name:	15 PWRON_OFF	V1.11
Date:	Tuesday, June 16, 2026	Sheet 15 of 17	

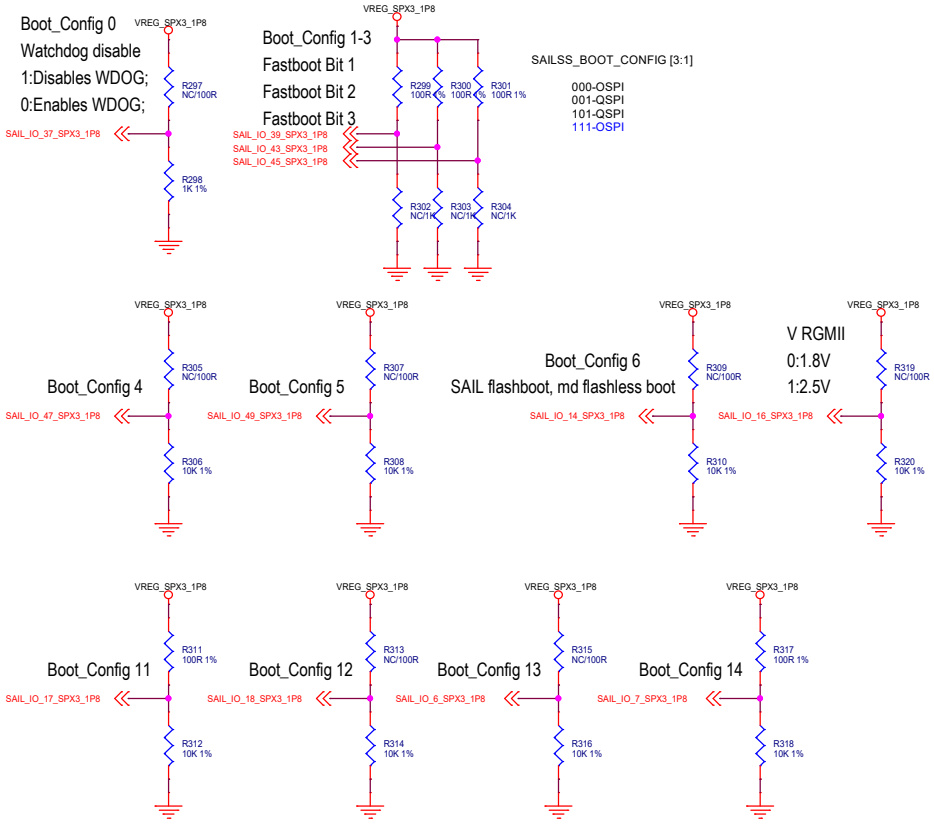
MD Boot Config



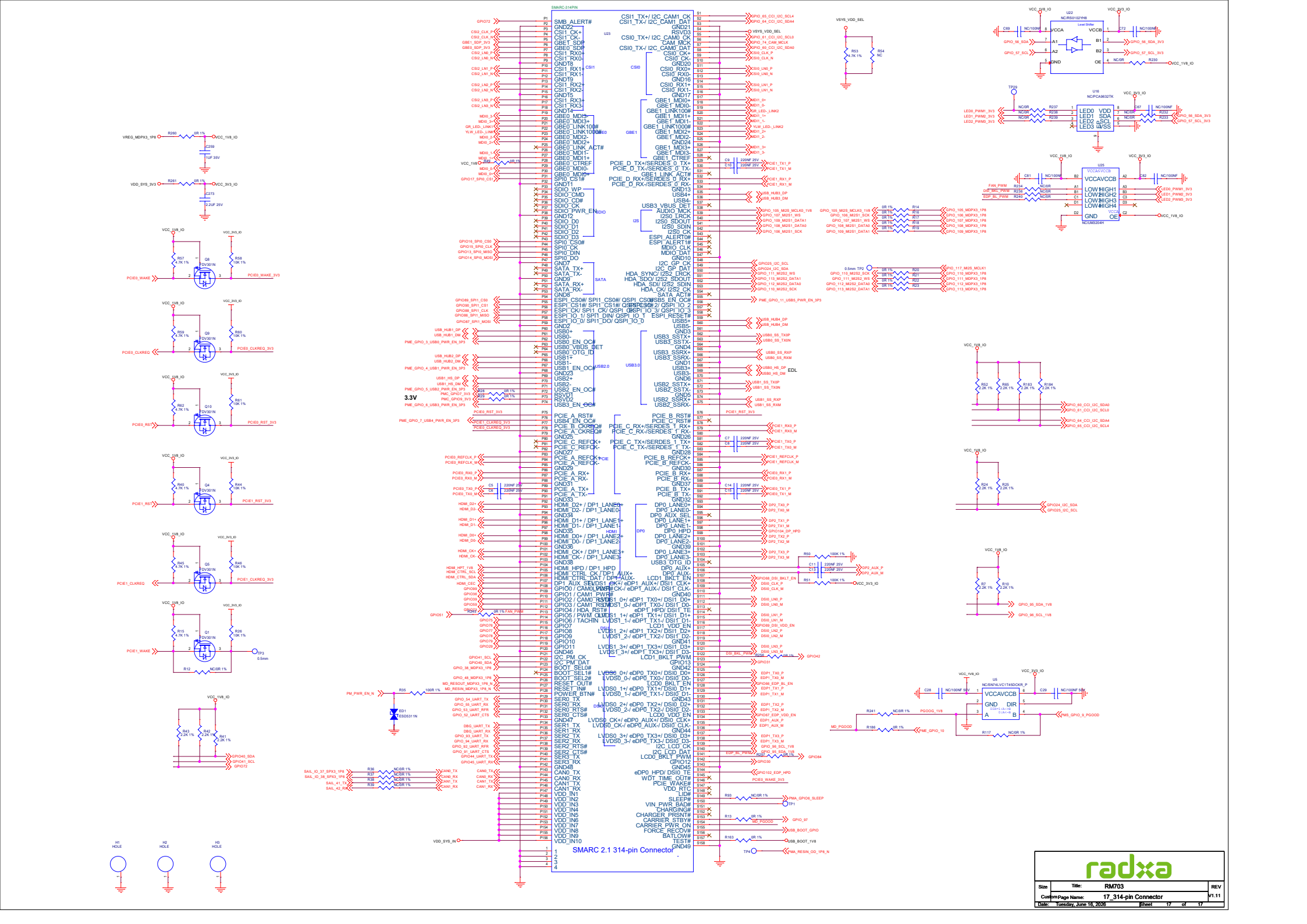
Force USB boot



SAIL Boot Config



Size	Title: RM703	REV
A3	Page Name: 16 BOOT_CONFIG	V1.11
Date: Tuesday, June 16, 2026	Sheet 16 of 17	


SMARC-314PIN
SMARC 2.1 314-pin Connector
3.3V
VCC_1V8_IO
VCC_3V3_IO
VSYS_VDD_SEL
PCIE0_WAKE
PCIE0_CLKREQ
PCIE0_RST
PCIE1_RST
PCIE1_CLKREQ
PCIE1_WAKE
PM_PWR_EN_N
VDD_SYS_IN
SMB_ALERT#
GND22
CSI1_CK+
CSI1_CK-
GBE1_SDP
GBE0_SDP
GBE0_SDP_3V3
CSI1_RX0+
CSI1_RX0-
GND18
CSI1_RX1+
CSI1_RX1-
GND19
CSI1_RX2+
CSI1_RX2-
GND15
CSI1_RX3+
CSI1_RX3-
GND14
GBE0_MDI3-
GBE0_MDI3+
GBE0_LINK100#
GBE0_LINK1000#
GBE0_MDI2-
GBE0_MDI2+
GBE0_LINK_ACT#
GBE0_MDI1-
GBE0_MDI1+
GBE0_CTREF
GBE0_MDI0-
GBE0_MDI0+
SPI0_CS1#
GND11
SDIO_WP
SDIO_CMD
SDIO_CD#
SDIO_CK
SDIO_PWR_EN
GND12
SDIO_D0
SDIO_D1
SDIO_D2
SDIO_D3
SPI0_CS0#
SPI0_CK
SPI0_DIN
SPI0_DO
GND7
SATA_TX+
SATA_TX-
GND9
SATA_RX+
SATA_RX-
GND8
ESPI_CS0#/ SPI1_CS0#/ QSPI_CS0#
ESPI_CS1#/ SPI1_CS1#/ QSPI_CS1#
ESPI_CK/ SPI1_CK/ QSPI_CLK
ESPI_IO_1/ SPI1_DIN/ QSPI_IO_1
ESPI_IO_0/ SPI1_DO/ QSPI_IO_0
GND2
USB0+
USB0-
USB0_EN_OC#
USB0_VBUS_DET
USB0_OTG_ID
USB1+
USB1-
USB1_EN_OC#
GND23
USB2+
USB2-
USB2_EN_OC#
RSVD1
RSVD2
USB3_EN_OC#
PCIE_A_RST#
USB4_EN_OC#
PCIE_B_CKREQ#
PCIE_A_CKREQ#
GND25
PCIE_C_REFCK+
PCIE_C_REFCK-
GND27
PCIE_A_REFCK+
PCIE_A_REFCK-
GND29
PCIE_A_RX+
PCIE_A_RX-
GND31
PCIE_A_TX+
PCIE_A_TX-
GND33
HDMI_D2+ / DP1_LANE0+
HDMI_D2- / DP1_LANE0-
GND34
HDMI_D1+ / DP1_LANE1+
HDMI_D1- / DP1_LANE1-
GND35
HDMI_D0+ / DP1_LANE2+
HDMI_D0- / DP1_LANE2-
GND36
HDMI_CK+ / DP1_LANE3+
HDMI_CK- / DP1_LANE3-
GND38
HDMI_HPD / DP1_HPD
HDMI_CTRL_CK / DP1_AUX+
HDMI_CTRL_DAT / DP1_AUX-
DP1_AUX_SEL
GPIO0 / CAM0_PWR#
GPIO1 / CAM1_PWR#
GPIO2 / CAM0_RST#
GPIO3 / CAM1_RST#
GPIO4 / HDA_RST#
GPIO5 / PWM_OUT
GPIO6 / TACHIN
GPIO7
GPIO8
GPIO9
GPIO10
GPIO11
GND46
I2C_PM_CK
I2C_PM_DAT
BOOT_SEL0#
BOOT_SEL1#
BOOT_SEL2#
RESET_OUT#
RESET_IN#
POWER_BTN#
SER0_TX
SER0_RX
SER0_RTS#
SER0_CTS#
GND47
SER1_TX
SER1_RX
SER2_TX
SER2_RX
SER2_RTS#
SER2_CTS#
SER3_TX
SER3_RX
GND48
CAN0_TX
CAN0_RX
CAN1_TX
CAN1_RX
VDD_IN1
VDD_IN2
VDD_IN3
VDD_IN4
VDD_IN5
VDD_IN6
VDD_IN7
VDD_IN8
VDD_IN9
VDD_IN10
CSI1_TX+/ I2C_CAM1_CK
CSI1_TX-/ I2C_CAM1_DAT
GND21
RSVD3
CSI0_TX+/ I2C_CAM0_CK
CSI0_TX-/ I2C_CAM0_DAT
CSI0_CK+
CSI0_CK-
GND20
CSI0_RX0+
CSI0_RX0-
GND16
CSI0_RX1+
CSI0_RX1-
GND17
GBE1_MDI0+
GBE1_MDI0-
GBE1_LINK100#
GBE1_MDI1+
GBE1_MDI1-
GBE1_LINK1000#
GBE1_MDI2+
GBE1_MDI2-
GND24
GBE1_MDI3+
GBE1_MDI3-
GBE1_CTREF
PCIE_D_TX+/SERDES_0_TX+
PCIE_D_TX-/SERDES_0_TX-
GBE1_LINK_ACT#
PCIE_D_RX+/SERDES_0_RX+
PCIE_D_RX-/SERDES_0_RX-
GND13
USB4+
USB4-
USB3_VBUS_DET
AUDIO_MCK
I2S0_LRCK
I2S0_SDOUT
I2S0_SDIN
I2S0_CK
ESPI_ALERT0#
ESPI_ALERT1#
MDIO_CLK
MDIO_DAT
GND10
I2C_GP_CK
I2C_GP_DAT
HDA_SYNC/ I2S2_LRCK
HDA_SDO/ I2S2_SDOUT
HDA_SDI/ I2S2_SDIN
HDA_CK/ I2S2_CK
SATA_ACT#
USB5_EN_OC#
ESPI_RESET#
USB5+
USB5-
GND3
USB3_SSTX+
USB3_SSTX-
GND4
USB3_SSRX+
USB3_SSRX-
GND1
USB3+
USB3-
GND6
USB2_SSTX+
USB2_SSTX-
GND5
USB2_SSRX+
USB2_SSRX-
GND28
PCIE_B_RST#
PCIE_C_RST#
PCIE_C_RX+/SERDES_1_RX+
PCIE_C_RX-/SERDES_1_RX-
GND26
PCIE_C_TX+/SERDES_1_TX+
PCIE_C_TX-/SERDES_1_TX-
GND28
PCIE_B_REFCK+
PCIE_B_REFCK-
GND30
PCIE_B_RX+
PCIE_B_RX-
GND37
PCIE_B_TX+
PCIE_B_TX-
GND32
DP0_LANE0+
DP0_LANE0-
DP0_AUX_SEL
DP0_LANE1+
DP0_LANE1-
DP0_HPD
DP0_LANE2+
DP0_LANE2-
GND39
DP0_LANE3+
DP0_LANE3-
USB3_OTG_ID
DP0_AUX+
DP0_AUX-
LCD1_BKLT_EN
LCD1_VDD_EN
GND40
LVDS1_0+/ eDP1_TX0+/ DSI1_D0+
LVDS1_0-/ eDP1_TX0-/ DSI1_D0-
LVDS1_1+/ eDP1_TX1+/ DSI1_D1+
LVDS1_1-/ eDP1_TX1-/ DSI1_D1-
LCD1_VDD_EN
LVDS1_2+/ eDP1_TX2+/ DSI1_D2+
LVDS1_2-/ eDP1_TX2-/ DSI1_D2-
GND41
LVDS1_3+/ eDP1_TX3+/ DSI1_D3+
LVDS1_3+/ eDP1_TX3+/ DSI1_D3-
LCD1_BKLT_PWM
GPIO13
GND42
LVDS0_0+/ eDP0_TX0+/ DSI0_D0+
LVDS0_0-/ eDP0_TX0-/ DSI0_D0-
LCD0_BKLT_EN
LVDS0_1+/ eDP0_TX1+/ DSI0_D1+
LVDS0_1-/ eDP0_TX1-/ DSI0_D1-
GND43
LVDS0_2+/ eDP0_TX2+/ DSI0_D2+
LVDS0_2-/ eDP0_TX2-/ DSI0_D2-
LCD0_VDD_EN
LVDS0_CK+/ eDP0_AUX+/ DSI0_CLK+
LVDS0_CK-/ eDP0_AUX-/ DSI0_CLK-
GND44
LVDS0_3+/ eDP0_TX3+/ DSI0_D3+
LVDS0_3-/ eDP0_TX3-/ DSI0_D3-
I2C_LCD_CK
I2C_LCD_DAT
LCD0_BKLT_PWM
GPIO12
GND45
eDP0_HPD/ DSI0_TE
WDT_TIME_OUT#
PCIE_WAKE#
VDD_RTC
LID#
SLEEP#
VIN_PWR_BAD#
CHARGING#
CHARGER_PRSNT#
CARRIER_STBY#
CARRIER_PWR_ON
FORCE_RECOV#
BATLOW#
TEST#
GND49
GPIO72
CSI2_CLK_P
CSI2_CLK_N
GBE1_SDP_3V3
GBE0_SDP_3V3
CSI2_LN0_P
CSI2_LN0_N
CSI2_LN1_P
CSI2_LN1_N
CSI2_LN2_P
CSI2_LN2_N
CSI2_LN3_P
CSI2_LN3_N
MDI0_3-
MDI0_3+
GR_LED-_LINK1
YLW_LED-_LINK2
MDI0_2-
MDI0_2+
MDI0_1-
MDI0_1+
MDI0_0-
MDI0_0+
GPIO17_SPI0_CS1
GPIO18_SPI0_CS0
GPIO15_SPI0_CLK
GPIO13_SPI0_MISO
GPIO14_SPI0_MOSI
GPIO89_SPI1_CS0
GPIO90_SPI1_CS1
GPIO86_SPI1_CLK
GPIO88_SPI1_MISO
GPIO87_SPI1_MOSI
USB_HUB1_DP
USB_HUB1_DM
PME_GPIO_3_USB5_PWR_EN_3P3
USB_HUB2_DP
USB_HUB2_DM
PME_GPIO_4_USB1_PWR_EN_3P3
USB1_HS_DP
USB1_HS_DM
PME_GPIO_5_USB2_PWR_EN_3P3
PMC_GPIO7_3V3
PMC_GPIO9_3V3
PME_GPIO_6_USB3_PWR_EN_3P3
PCIE0_RST_3V3
PME_GPIO_7_USB4_PWR_EN_3P3
PCIE1_CLKREQ_3V3
PCIE0_CLKREQ_3V3
PCIE0_REFCLK_P
PCIE0_REFCLK_M
PCIE0_RX0_P
PCIE0_RX0_M
PCIE0_TX0_P
PCIE0_TX0_M
HDMI_D2+
HDMI_D2-
HDMI_D1+
HDMI_D1-
HDMI_D0+
HDMI_D0-
HDMI_CK+
HDMI_CK-
HDMI_HPT_1V8
HDMI_CTRL_SCL
HDMI_CTRL_SDA
HDMI_CEC
GPIO99
GPIO98
GPIO97
GPIO96
GPIO95
GPIO51
FAN_PWM
GPIO75
GPIO76
GPIO77
GPIO78
GPIO79
GPIO80
GPIO41_SCL
GPIO40_SDA
GPIO_38_MDPX3_1P8
GPIO_48_MDPX3_1P8
MD_RESOUT_MDPX3_1P8_N
MD_RESIN_MDPX3_1P8_N
GPIO_54_UART_TX
GPIO_55_UART_RX
GPIO_53_UART_RFR
GPIO_52_UART_CTS
DBG_UART_TX
DBG_UART_RX
GPIO_93_UART_TX
GPIO_94_UART_RX
GPIO_92_UART_RFR
GPIO_91_UART_CTS
GPIO44_UART_TX
GPIO45_UART_RX
SAIL_ID_37_SPX3_1P8
SAIL_ID_38_SPX3_1P8
SAIL_41_TX
SAIL_42_RX
CAN0_TX
CAN0_RX
CAN1_TX
CAN1_RX
GPIO_65_CCI_I2C_SCL4
GPIO_64_CCI_I2C_SDA4
GPIO_61_CCI_I2C_SCL0
GPIO_60_CCI_I2C_SDA0
VSYS_VDD_SEL
GPIO_61_CCI_I2C_SCL0
GPIO_74_CAM_MCLK
GPIO_60_CCI_I2C_SDA0
CSI0_CLK_P
CSI0_CLK_N
CSI0_LN0_P
CSI0_LN0_N
CSI0_LN1_P
CSI0_LN1_N
MDI1_0+
MDI1_0-
GR_LED-_LINK2
MDI1_1+
MDI1_1-
YLW_LED-_LINK2
MDI1_2+
MDI1_2-
MDI1_3+
MDI1_3-
PCIE1_TX1_P
PCIE1_TX1_M
PCIE1_RX1_P
PCIE1_RX1_M
USB_HUB3_DP
USB_HUB3_DM
GPIO_105_M2S_MCLK0_1V8
GPIO_106_M2S1_SCK
GPIO_107_M2S1_WS
GPIO_109_M2S1_DATA1
GPIO_108_M2S1_DATA0
GPIO_106_M2S1_SCK
PME_GPIO_11_USB5_PWR_EN_3P3
USB_HUB4_DP
USB_HUB4_DM
USB0_SS_TXDP
USB0_SS_TXDN
USB0_SS_RXDP
USB0_SS_RXM
USB0_HS_DP
USB0_HS_DM
USB1_SS_TXDP
USB1_SS_TXDN
USB1_SS_RXDP
USB1_SS_RXM
PCIE1_RST_3V3
PCIE1_RX0_P
PCIE1_RX0_M
PCIE1_TX0_P
PCIE1_TX0_M
PCIE1_REFCLK_P
PCIE1_REFCLK_M
PCIE0_RX1_P
PCIE0_RX1_M
PCIE0_TX1_P
PCIE0_TX1_M
DP2_TX0_P
DP2_TX0_M
DP2_TX1_P
DP2_TX1_M
GPIO104_DP_HPD
DP2_TX2_P
DP2_TX2_M
DP2_TX3_P
DP2_TX3_M
DP2_AUX_P
DP2_AUX_M
GPIO68_DSI_BKLT_EN
DSI0_CLK_P
DSI0_CLK_M
DSI0_LN0_P
DSI0_LN0_M
DSI0_LN1_P
DSI0_LN1_M
GPIO69_DSI_VDD_EN
DSI0_LN2_P
DSI0_LN2_M
DSI0_LN3_P
DSI0_LN3_M
DSI_BKL_PWM
GPIO42
EDP1_TX0_P
EDP1_TX0_M
GPIO106_EDP_BL_EN
EDP1_TX1_P
EDP1_TX1_M
EDP1_TX2_P
EDP1_TX2_M
GPIO107_EDP_VDD_EN
EDP1_AUX_P
EDP1_AUX_M
EDP1_TX3_P
EDP1_TX3_M
GPIO_96_SCL_1V8
GPIO_95_SDA_1V8
EDP_BL_PWM
GPIO84
GPIO30
GPIO102_EDP_HPD
PCIE0_WAKE_3V3
PMA_GPIO6_SLEEP
TP1
MD_PGOOD
GPIO_97
USB_BOOT_GPIO
USB_BOOT_1V8
PMA_RESIN_OD_1P8_N
TP4
GPIO_117_M2S_MCLK1
GPIO_110_MDPX3_1P8
GPIO_111_MDPX3_1P8
GPIO_112_MDPX3_1P8
GPIO_113_MDPX3_1P8
GPIO_110_M2S2_SCK
GPIO_111_M2S2_WS
GPIO_112_M2S2_DATA0
GPIO_113_M2S2_DATA1
GPIO_105_MDPX3_1P8
GPIO_106_MDPX3_1P8
GPIO_107_MDPX3_1P8
GPIO_108_MDPX3_1P8
GPIO_109_MDPX3_1P8
GPIO_105_M2S_MCLK0_1V8
GPIO_106_M2S1_SCK
GPIO_107_M2S1_WS
GPIO_108_M2S1_DATA0
GPIO_109_M2S1_DATA1
GPIO_56_SDA
GPIO_57_SCL
GPIO_56_SDA_3V3
GPIO_57_SCL_3V3
GPIO40_SDA
GPIO41_SCL
GPIO72
GPIO_95_SDA_1V8
GPIO_96_SCL_1V8
GPIO24_I2C_SDA
GPIO25_I2C_SCL
GPIO_56_SDA_3V3
GPIO_57_SCL_3V3
LED0_PWM1_3V3
LED1_PWM2_3V3
LED2_PWM3_3V3
FAN_PWM
DSI_BKL_PWM
EDP_BL_PWM
PGOOG_1V8
PME_GPIO_10
PMS_GPIO_9_PGOOD
VREG_MDPX3_1P8
VDD_SYS_3V3
R260
R261
C259
1UF 35V
C273
2.2UF 25V
Q8
Q9
Q10
Q4
Q5
Q1
FDV301N
R57
R58
R59
R60
R62
R61
R40
R44
R45
R46
R15
R26
R12
R43
R42
R41
R35
ED1
ESD5311N
TP3
0.5mm
H1
HOLE
H2
HOLE
H3
HOLE
U22
NC/RS01021H8
VCCA
VCCB
A1
A2
B1
B2
GND
OE
U16
NCPCA9632TK
LED0
LED1
LED2
LED3
VDD
SDA
SCL
VSS
U25
VCCAVCCB
LOW1HIGH1
LOW2HIGH2
LOW3HIGH3
LOW4HIGH4
U5
NC/SN74LVC1T45DCKR_P
VCCAVCCB
GND
DIR
A
B
U23
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Size
Title: RM703
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Date: Tuesday, June 16, 2026
Sheet 17 of 17