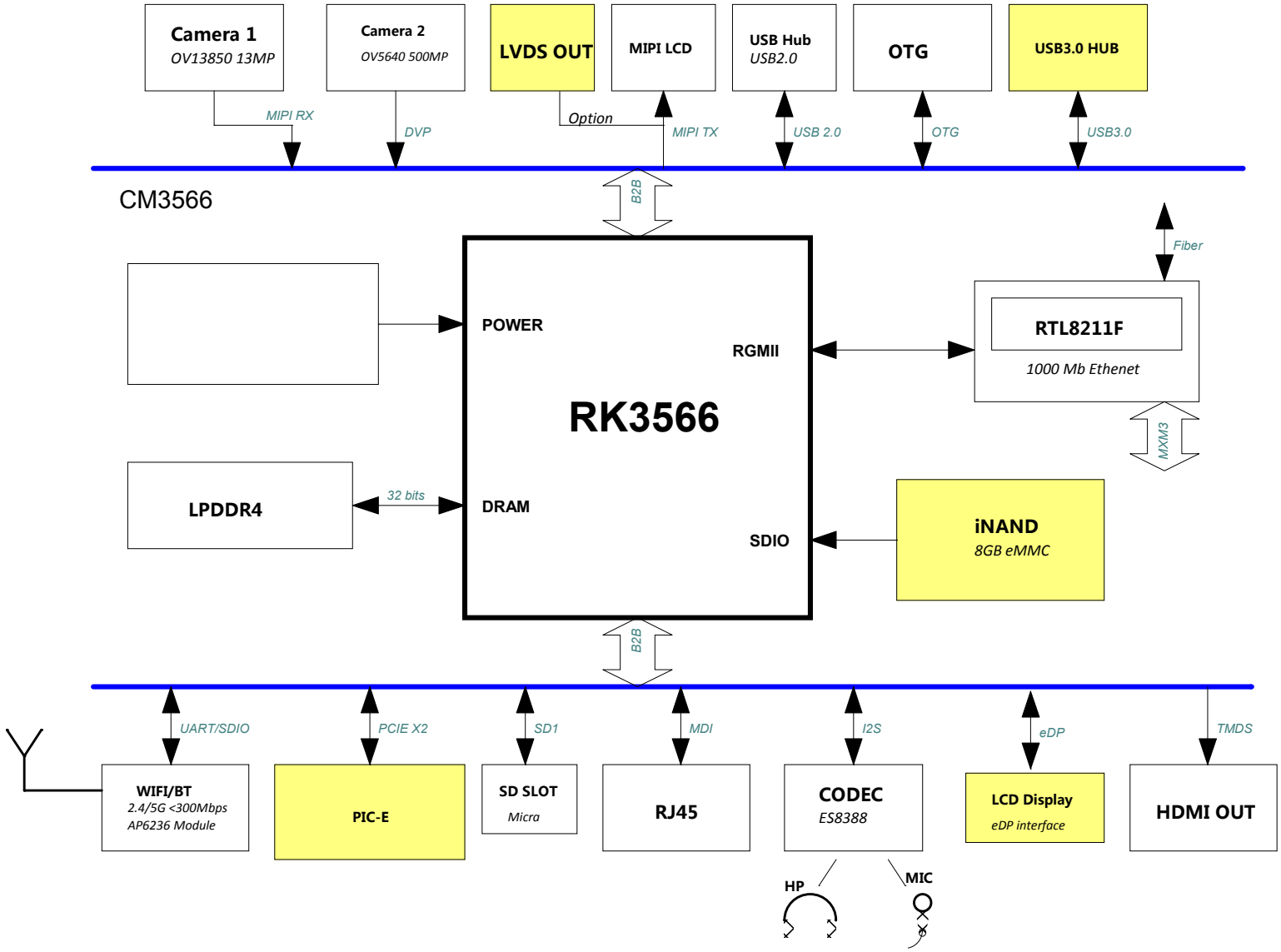
EM3566 Block Diagram



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Title: block diagram

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RK3566I2C MAP

Port	Pin name	Domain	Bus name	Pull-up voltage	Slave Device	Slave Addr (MS 7Bits)	Note	Slave Bus Capability
			I2C_SDA_HDMI I2C_SCL_HDMI				HDMI	
I2C2				VCC1V8_DVP			Camera	
I2C1				3V3			Touch	

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Title: I2C Map

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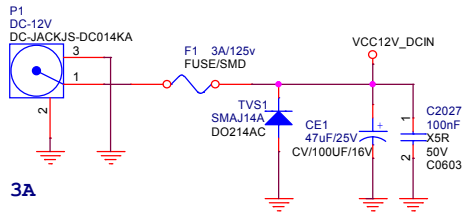
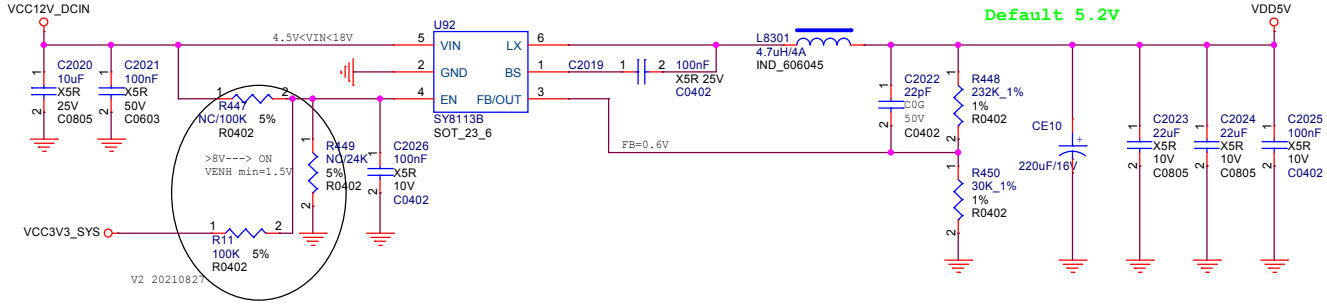
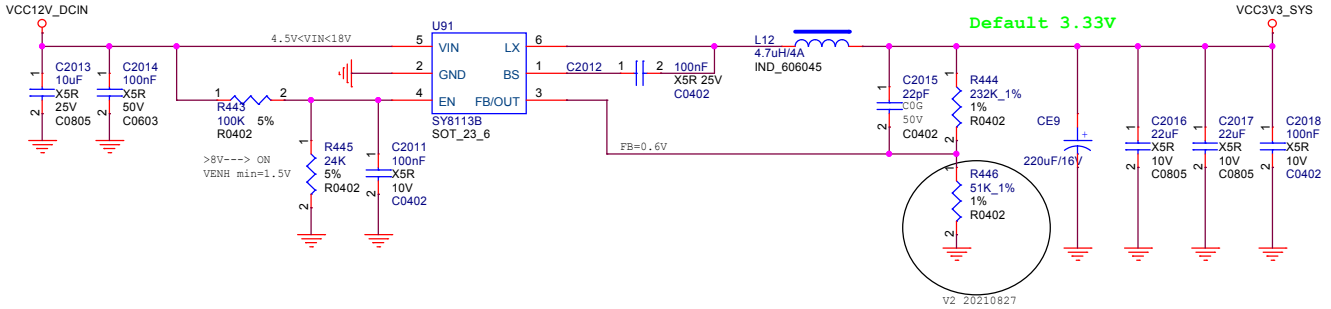
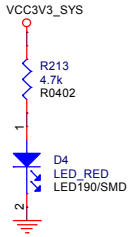
Main Power



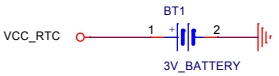
DC=12V 3A





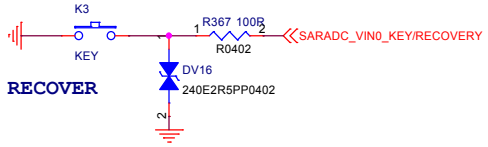


Vout=0.6*(1+R444/R446)



RTC Power

KEY



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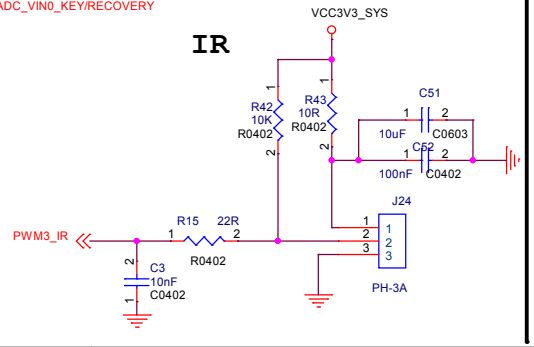

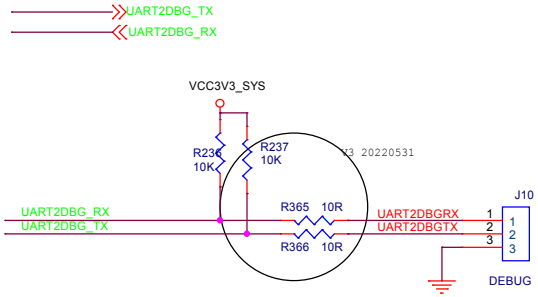

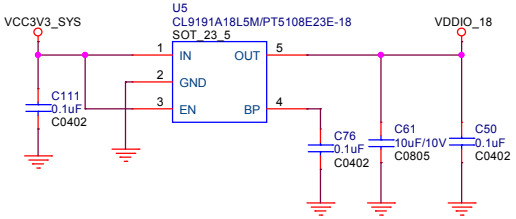

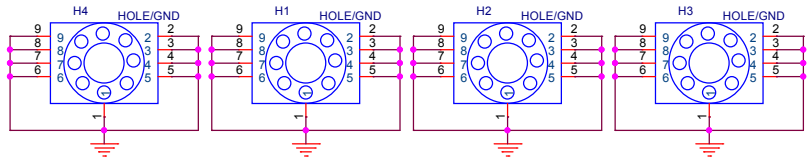

Mark Hole

M1 M2 M3

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Title: Power/Micro SD/KEY			
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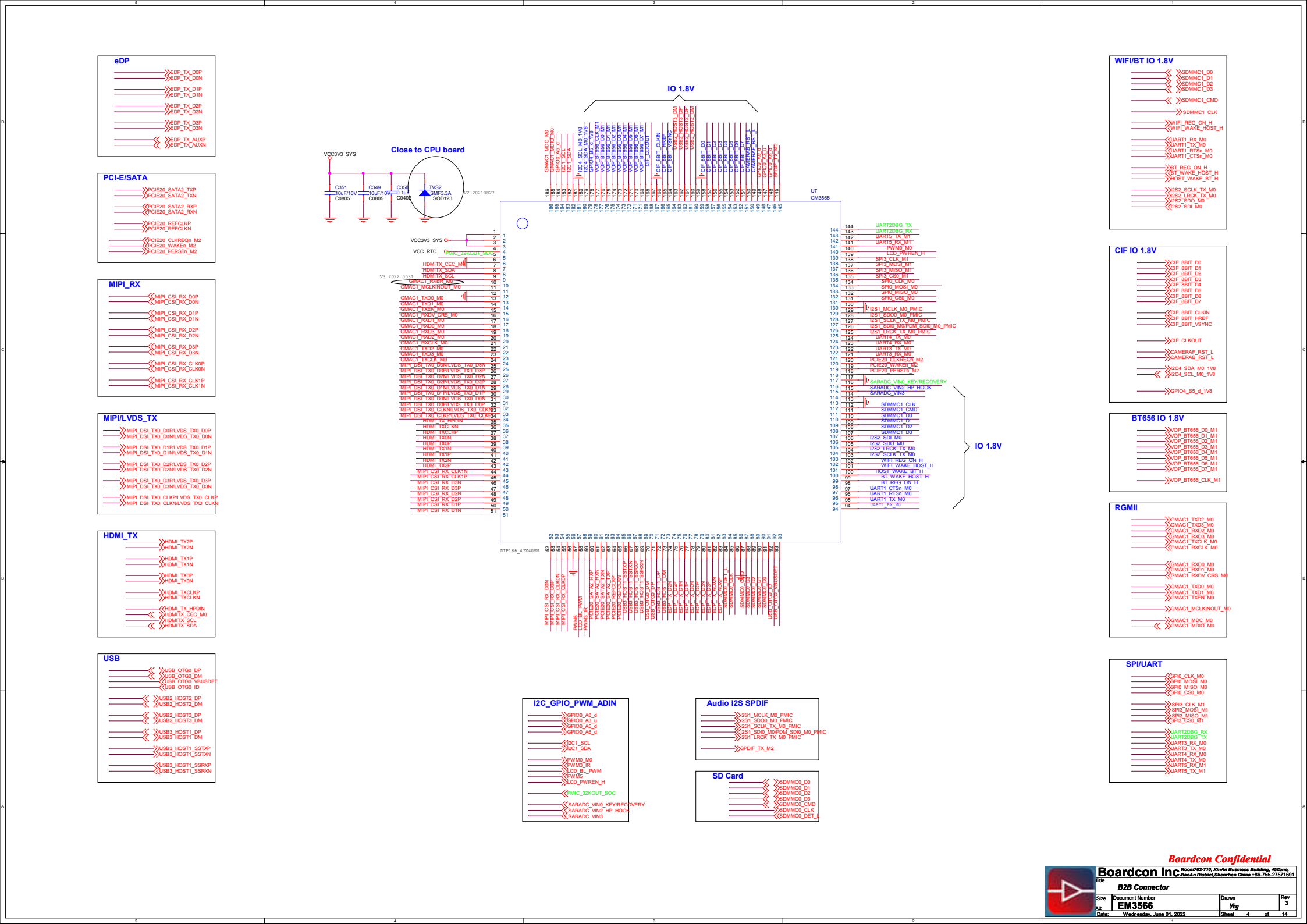
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EDP_TX_D0P
EDP_TX_D0N
EDP_TX_D1P
EDP_TX_D1N
EDP_TX_D2P
EDP_TX_D2N
EDP_TX_D3P
EDP_TX_D3N
EDP_TX_AUXP
EDP_TX_AUXN
PCI-E/SATA
PCIE20_SATA2_TXP
PCIE20_SATA2_TXN
PCIE20_SATA2_RXP
PCIE20_SATA2_RXN
PCIE20_REFCLKP
PCIE20_REFCLKN
PCIE20_CLKREQn_M2
PCIE20_WAKEn_M2
PCIE20_PERSTn_M2
MIPI_RX
MIPI_CSI_RX_D0P
MIPI_CSI_RX_D0N
MIPI_CSI_RX_D1P
MIPI_CSI_RX_D1N
MIPI_CSI_RX_D2P
MIPI_CSI_RX_D2N
MIPI_CSI_RX_D3P
MIPI_CSI_RX_D3N
MIPI_CSI_RX_CLK0P
MIPI_CSI_RX_CLK0N
MIPI_CSI_RX_CLK1P
MIPI_CSI_RX_CLK1N
MIPI/LVDS_TX
MIPI_DSI_TX0_D0P/LVDS_TX0_D0P
MIPI_DSI_TX0_D0N/LVDS_TX0_D0N
MIPI_DSI_TX0_D1P/LVDS_TX0_D1P
MIPI_DSI_TX0_D1N/LVDS_TX0_D1N
MIPI_DSI_TX0_D2P/LVDS_TX0_D2P
MIPI_DSI_TX0_D2N/LVDS_TX0_D2N
MIPI_DSI_TX0_D3P/LVDS_TX0_D3P
MIPI_DSI_TX0_D3N/LVDS_TX0_D3N
MIPI_DSI_TX0_CLKP/LVDS_TX0_CLKP
MIPI_DSI_TX0_CLKN/LVDS_TX0_CLKN
HDMI_TX
HDMI_TX2P
HDMI_TX2N
HDMI_TX1P
HDMI_TX1N
HDMI_TX0P
HDMI_TX0N
HDMI_TXCLKP
HDMI_TXCLKN
HDMI_TX_HPDIN
HDMITX_CEC_M0
HDMITX_SCL
HDMITX_SDA
USB
USB_OTG0_DP
USB_OTG0_DM
USB_OTG0_VBUSDET
USB_OTG0_ID
USB2_HOST2_DP
USB2_HOST2_DM
USB2_HOST3_DP
USB2_HOST3_DM
USB3_HOST1_DP
USB3_HOST1_DM
USB3_HOST1_SSTXP
USB3_HOST1_SSTXN
USB3_HOST1_SSRXP
USB3_HOST1_SSRXN
Close to CPU board
VCC3V3_SYS
C351
10uF/10V
C0805
C349
10uF/10V
C0805
C350
0.1uF
C0402
TVS2
SMF3.3A
SOD123
V2 20210827
V3 2022 0531
IO 1.8V
U7
CM3566
DIP186_47X40MM
VCC3V3_SYS
VCC_RTC
PMIC_32KOUT_SOC
HDMITX_CEC_M0
HDMITX_SDA
HDMITX_SCL
GMAC1_RXER_M0
GMAC1_MCLKINOUT_M0
GMAC1_TXD0_M0
GMAC1_TXD1_M0
GMAC1_TXEN_M0
GMAC1_RXDV_CRS_M0
GMAC1_RXD1_M0
GMAC1_RXD0_M0
GMAC1_TXD3_M0
GMAC1_TXD2_M0
GMAC1_RXCLK_M0
GMAC1_TXD2_M0
GMAC1_TXD3_M0
GMAC1_TXCLK_M0
HDMI_TX_HPDIN
HDMI_TXCLKN
HDMI_TXCLKP
HDMI_TX0N
HDMI_TX0P
HDMI_TX1N
HDMI_TX1P
HDMI_TX2N
HDMI_TX2P
MIPI_CSI_RX_CLK1N
MIPI_CSI_RX_CLK1P
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MIPI_CSI_RX_D3P
MIPI_CSI_RX_D2N
MIPI_CSI_RX_D2P
MIPI_CSI_RX_D1N
MIPI_CSI_RX_D1P
UART2DBG_TX
UART2DBG_RX
UART5_TX_M1
UART5_RX_M1
PWM0_M0
LCD_PWREN_H
SPI3_CLK_M1
SPI3_MOSI_M1
SPI3_MISO_M1
SPI3_CS0_M1
SPI0_CLK_M0
SPI0_MOSI_M0
SPI0_MISO_M0
SPI0_CS0_M0
I2S1_MCLK_M0_PMIC
I2S1_SDO0_M0_PMIC
I2S1_SCLK_TX_M0_PMIC
I2S1_SDI0_M0/PDM_SDI0_M0_PMIC
I2S1_LRCK_TX_M0_PMIC
UART4_TX_M0
UART4_RX_M0
UART3_TX_M0
UART3_RX_M0
PCIE20_CLKREQn_M2
PCIE20_WAKEn_M2
PCIE20_PERSTn_M2
SARADC_VIN0_KEY/RECOVERY
SARADC_VIN2_HP_HOOK
SARADC_VIN3
SDMMC1_CLK
SDMMC1_CMD
SDMMC1_D0
SDMMC1_D1
SDMMC1_D2
SDMMC1_D3
I2S2_SDI_M0
I2S2_SDO_M0
I2S2_LRCK_TX_M0
I2S2_SCLK_TX_M0
WIFI_REG_ON_H
WIFI_WAKE_HOST_H
HOST_WAKE_BT_H
BT_REG_ON_H
UART1_CTSn_M0
UART1_RTSn_M0
UART1_TX_M0
UART1_RX_M0
IO 1.8V
WIFI/BT IO 1.8V
SDMMC1_D0
SDMMC1_D1
SDMMC1_D2
SDMMC1_D3
SDMMC1_CMD
SDMMC1_CLK
WIFI_REG_ON_H
WIFI_WAKE_HOST_H
UART1_RX_M0
UART1_TX_M0
UART1_RTSn_M0
UART1_CTSn_M0
BT_REG_ON_H
BT_WAKE_HOST_H
HOST_WAKE_BT_H
I2S2_SCLK_TX_M0
I2S2_LRCK_TX_M0
I2S2_SDO_M0
I2S2_SDI_M0
CIF IO 1.8V
CIF_8BIT_D0
CIF_8BIT_D1
CIF_8BIT_D2
CIF_8BIT_D3
CIF_8BIT_D4
CIF_8BIT_D5
CIF_8BIT_D6
CIF_8BIT_D7
CIF_8BIT_CLKIN
CIF_8BIT_HREF
CIF_8BIT_VSYNC
CIF_CLKOUT
CAMERAF_RST_L
CAMERAB_RST_L
I2C4_SDA_M0_1V8
I2C4_SCL_M0_1V8
GPIO4_B5_d_1V8
BT656 IO 1.8V
VOP_BT656_D0_M1
VOP_BT656_D1_M1
VOP_BT656_D2_M1
VOP_BT656_D3_M1
VOP_BT656_D4_M1
VOP_BT656_D5_M1
VOP_BT656_D6_M1
VOP_BT656_D7_M1
VOP_BT656_CLK_M1
RGMII
GMAC1_TXD2_M0
GMAC1_TXD3_M0
GMAC1_RXD2_M0
GMAC1_RXD3_M0
GMAC1_TXCLK_M0
GMAC1_RXCLK_M0
GMAC1_RXD0_M0
GMAC1_RXD1_M0
GMAC1_RXDV_CRS_M0
GMAC1_TXD0_M0
GMAC1_TXD1_M0
GMAC1_TXEN_M0
GMAC1_MCLKINOUT_M0
GMAC1_MDC_M0
GMAC1_MDIO_M0
SPI/UART
SPI0_CLK_M0
SPI0_MOSI_M0
SPI0_MISO_M0
SPI0_CS0_M0
SPI3_CLK_M1
SPI3_MOSI_M1
SPI3_MISO_M1
SPI3_CS0_M1
UART2DBG_RX
UART2DBG_TX
UART3_RX_M0
UART3_TX_M0
UART4_RX_M0
UART4_TX_M0
UART5_RX_M1
UART5_TX_M1
I2C_GPIO_PWM_ADIN
GPIO0_A0_d
GPIO0_A3_u
GPIO0_A5_d
GPIO0_A6_d
I2C1_SCL
I2C1_SDA
PWM0_M0
PWM5_IR
LCD_BL_PWM
PWM5
LCD_PWREN_H
PMIC_32KOUT_SOC
SARADC_VIN0_KEY/RECOVERY
SARADC_VIN2_HP_HOOK
SARADC_VIN3
Audio I2S SPDIF
I2S1_MCLK_M0_PMIC
I2S1_SDO0_M0_PMIC
I2S1_SCLK_TX_M0_PMIC
I2S1_SDI0_M0/PDM_SDI0_M0_PMIC
I2S1_LRCK_TX_M0_PMIC
SPDIF_TX_M2
SD Card
SDMMC0_D0
SDMMC0_D1
SDMMC0_D2
SDMMC0_D3
SDMMC0_CMD
SDMMC0_CLK
SDMMC0_DET_L
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Title
B2B Connector
Size
A2
Document Number
EM3566
Drawn
Yhg
Rev
3
Date:
Wednesday, June 01, 2022
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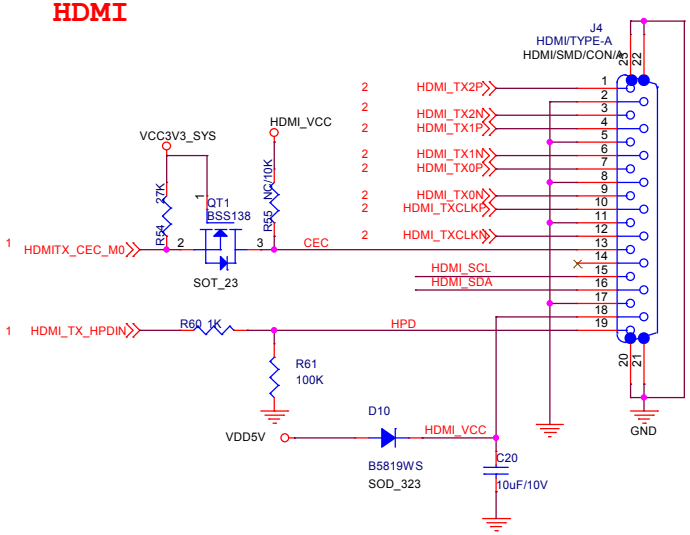
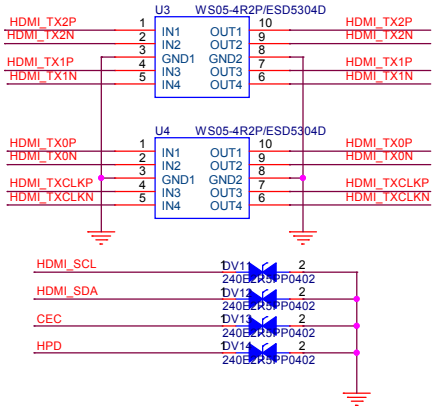
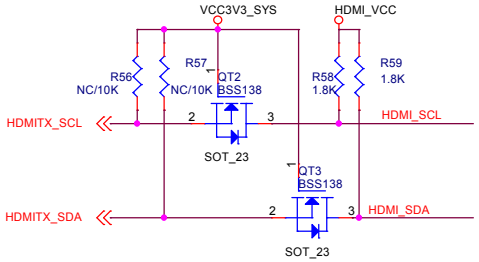
HDMI



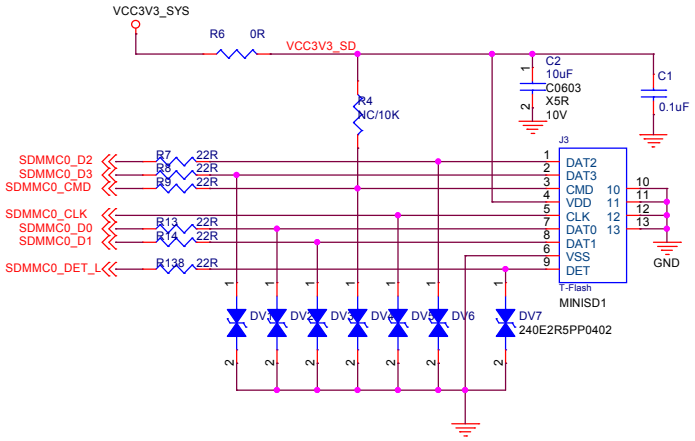
HDMI OUTPUT





I2C Level Shift

Micro SD



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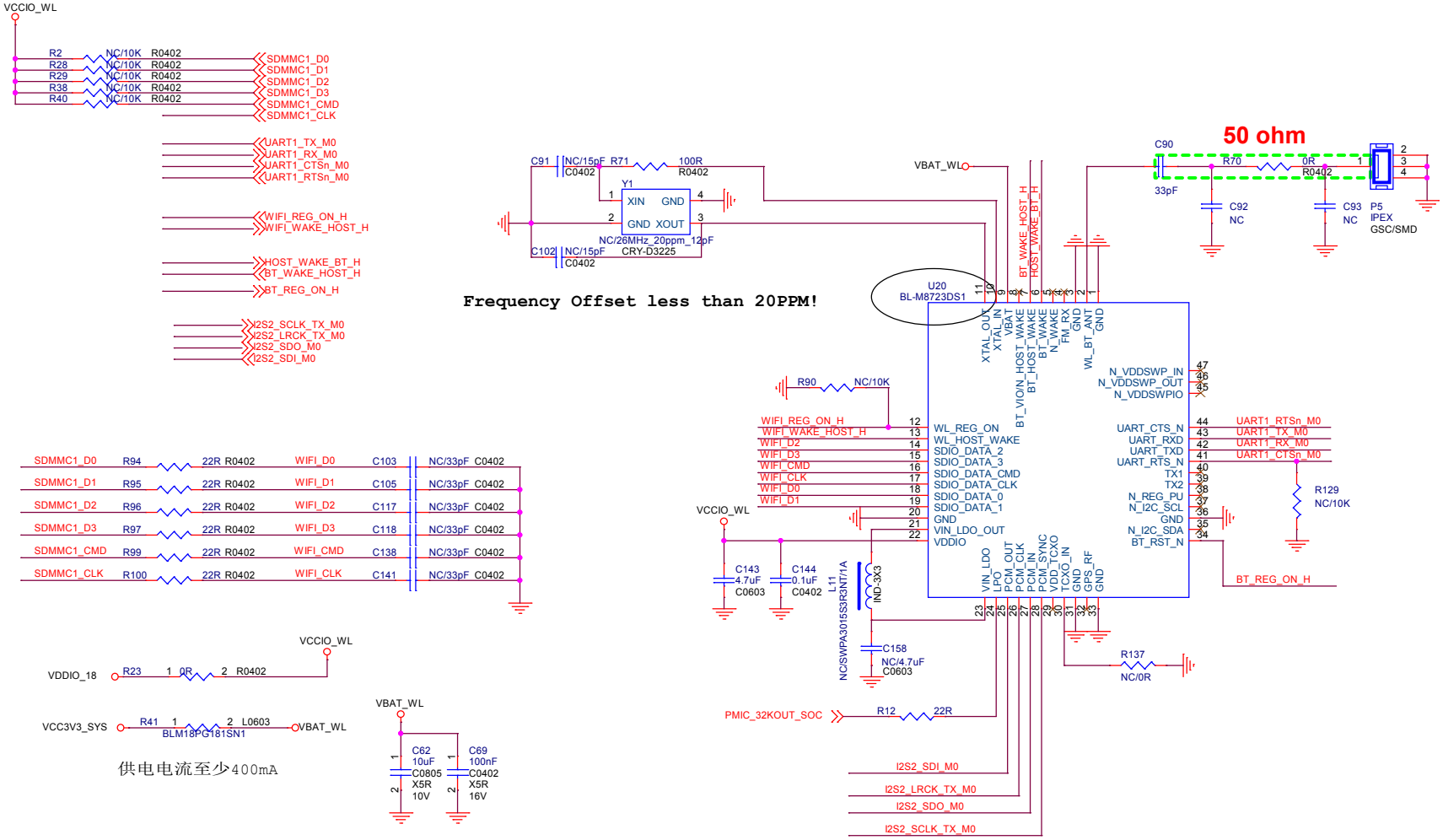
WIFI/BT MODULE



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Title: WIFI/BT			
Size: A3	Document Number: EM3566	Drawn: Yhg	Rev: 3
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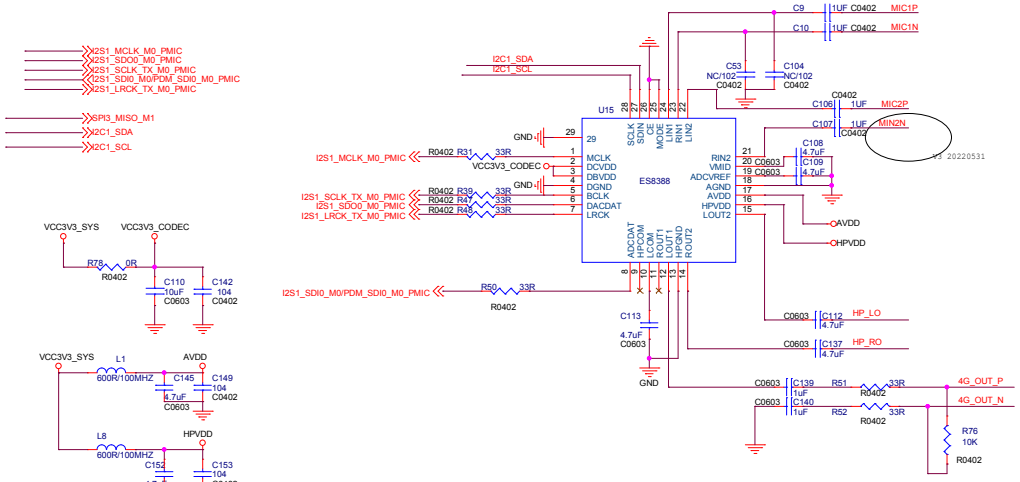
Audio Codec



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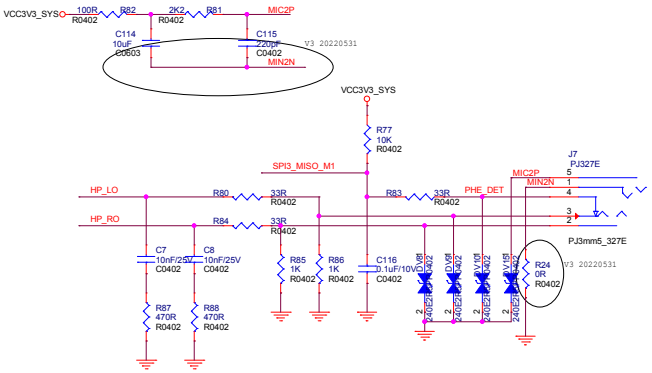
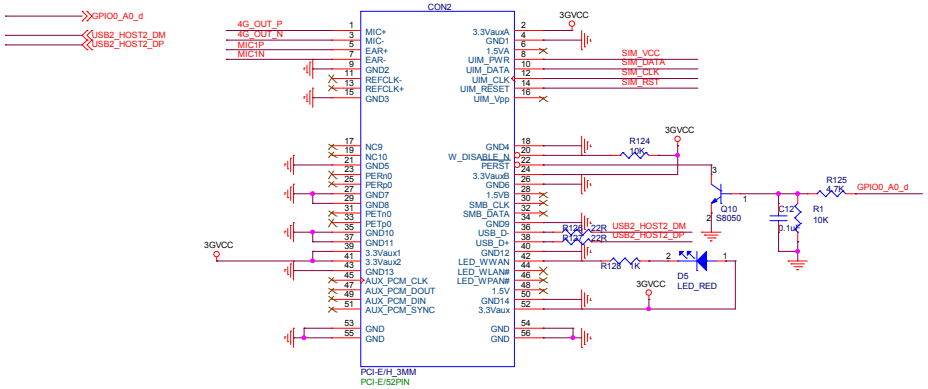


Mobile Module

MINI PCI-E CON



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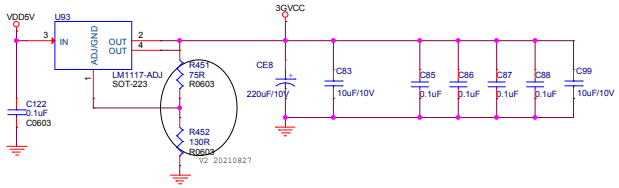

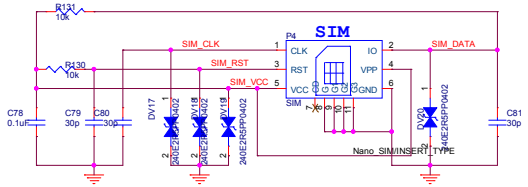

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Title: 4G/Audio Codec			
Size: A2	Document Number: EM3566	Drawn: Yhg	Rev: 3
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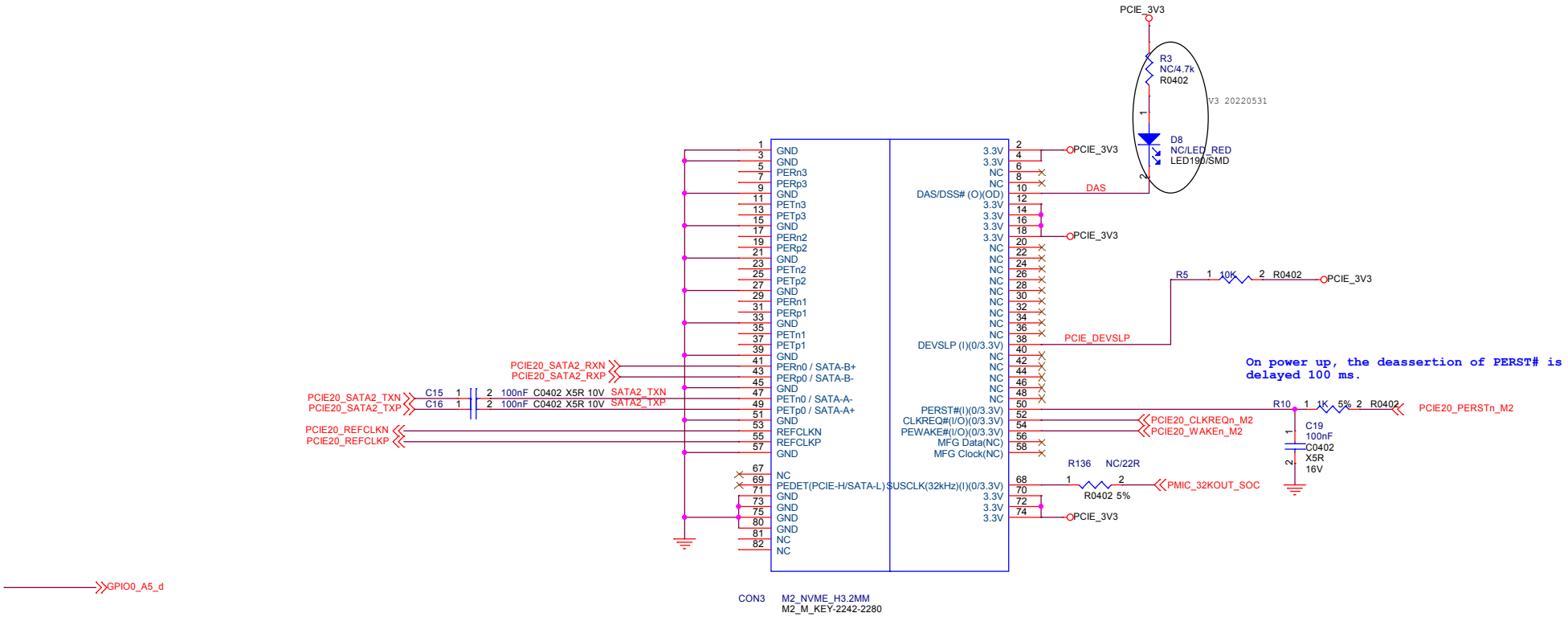
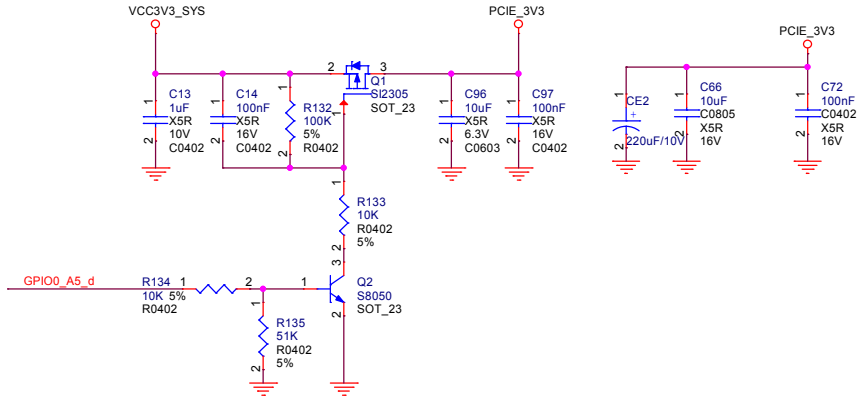
PCI.Express





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Title: PCI-E NVME			
Size: A3	Document Number: EM3566	Drawn: Yhg	Rev: 3
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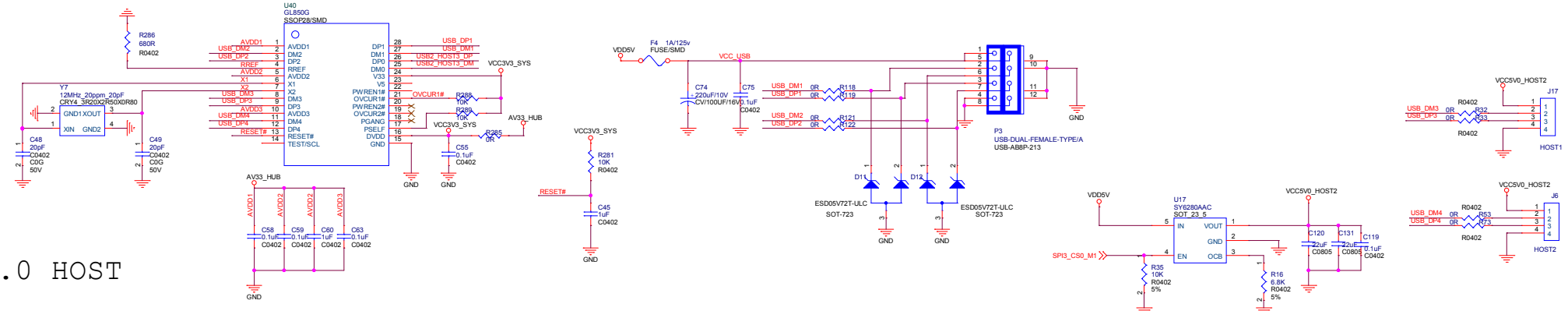
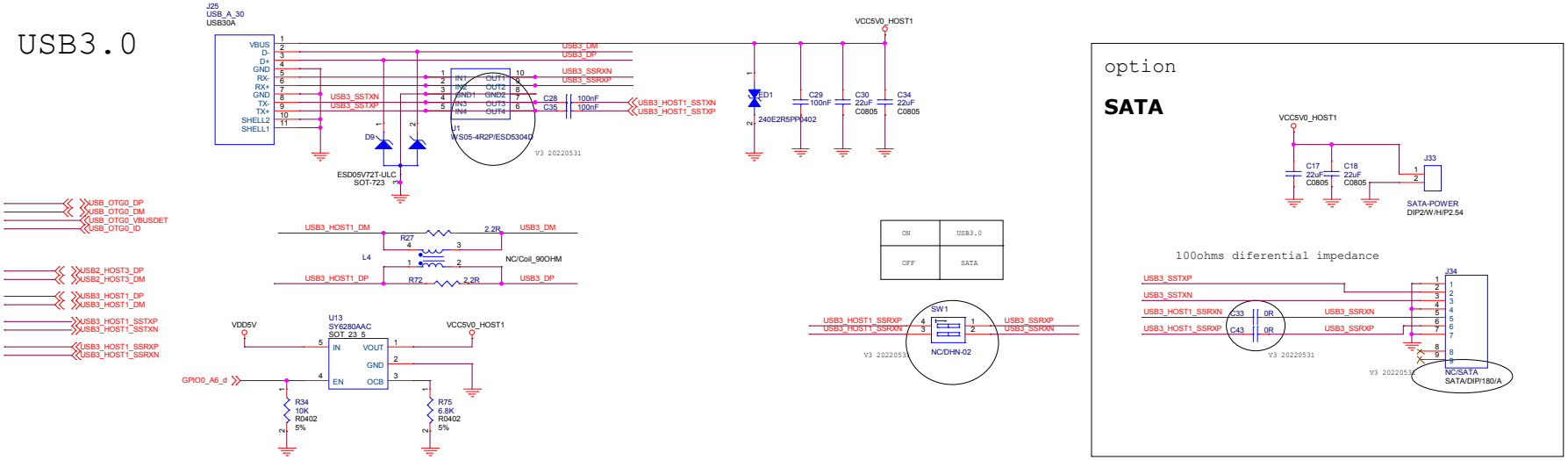
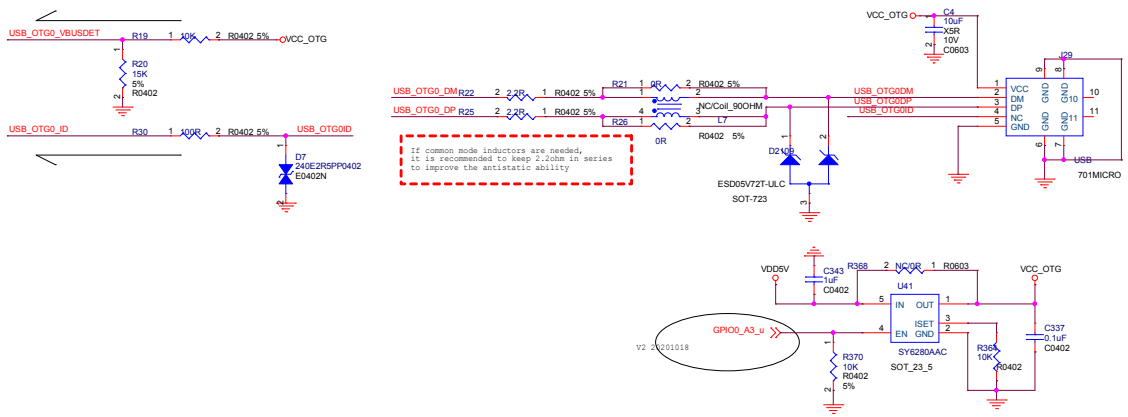
USB2.0 HOST



USB3.0



USB2.0 OTG



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Title	USB HOST/USB3.0		
Size A2	Document Number EM3566	Drawn Yhg	Rev 3
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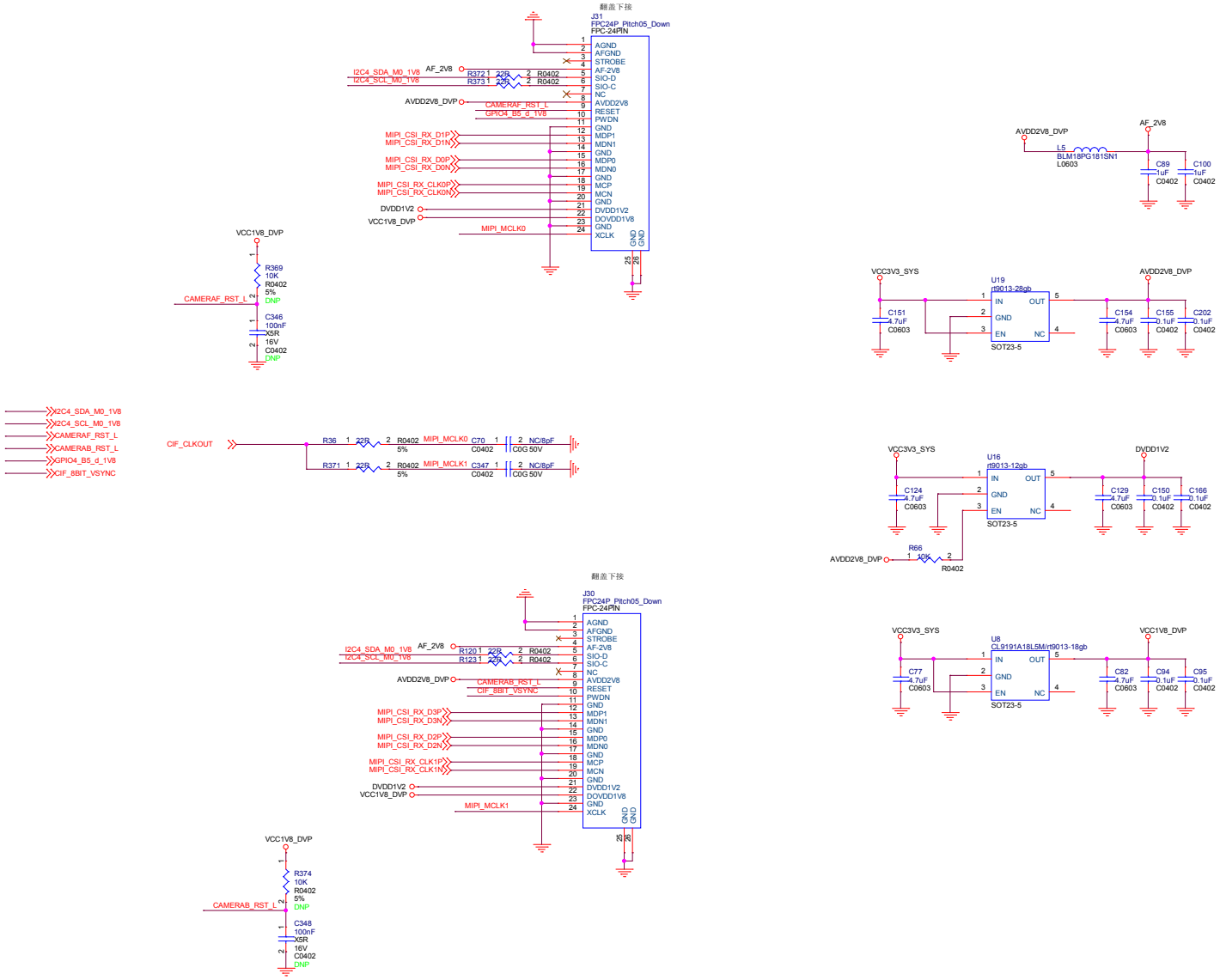
MIPI Camera



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Title: MIPI/DVP Camera			
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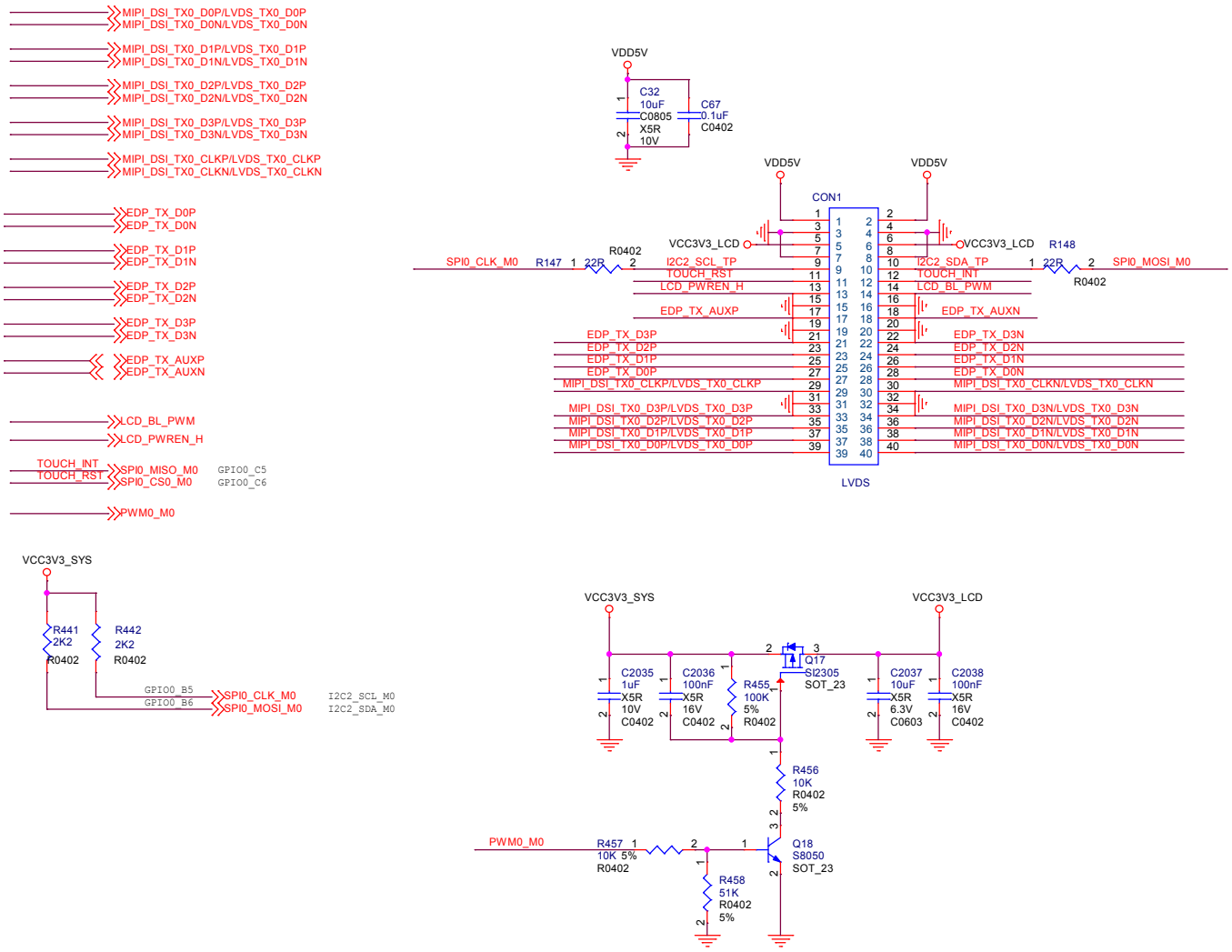

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Title: MIPI&LVDS/EDP			
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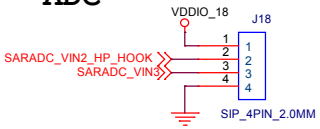
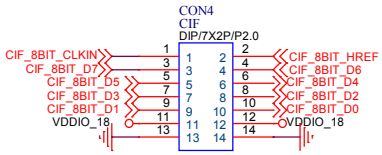
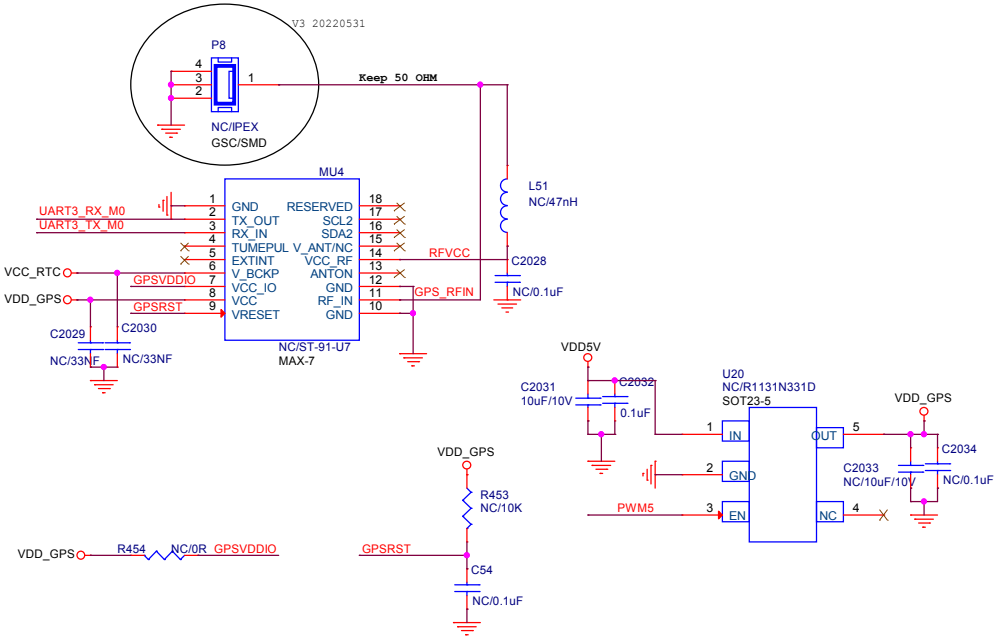
ADC



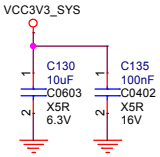
1V8 GPIO



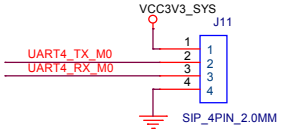
GPS



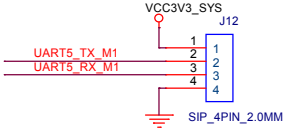
UART



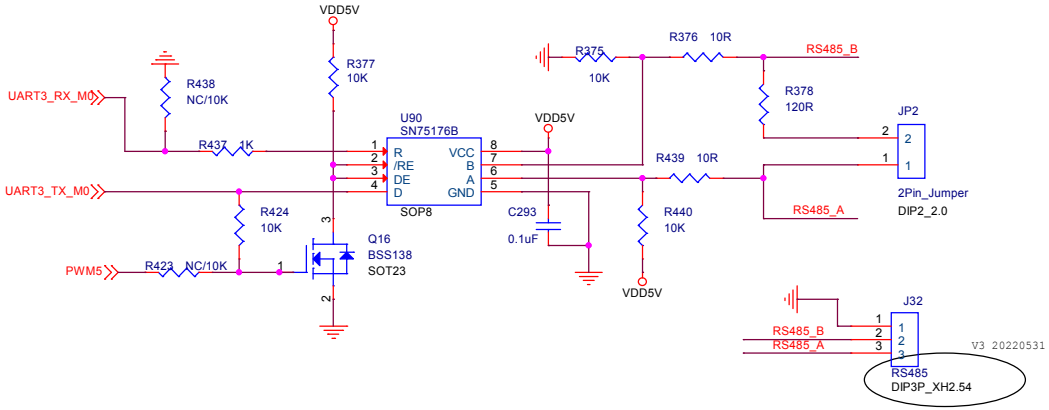
UART1



UART2



RS485



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Title: GPIO/UART			
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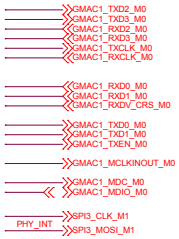
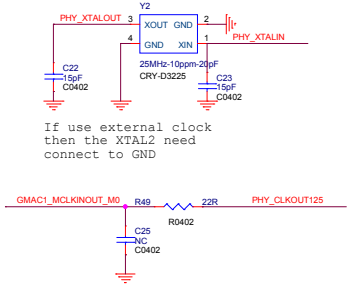
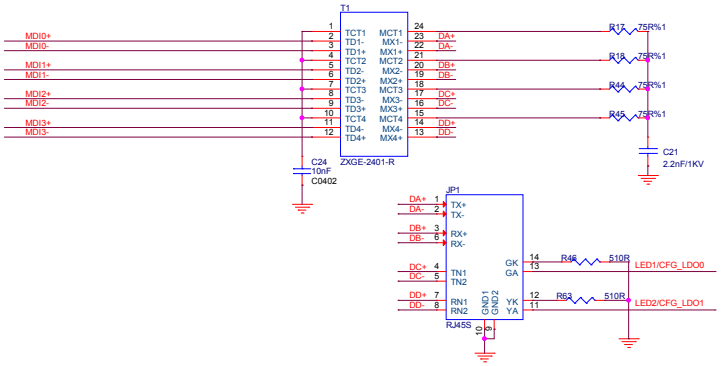
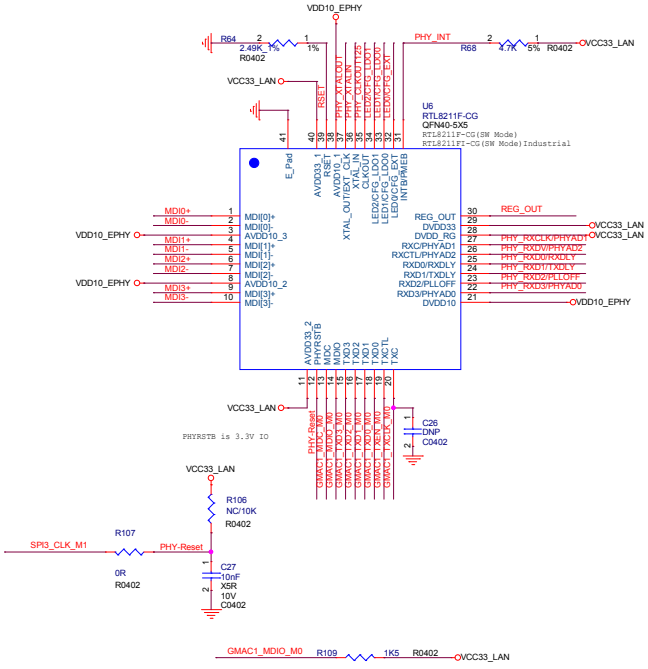
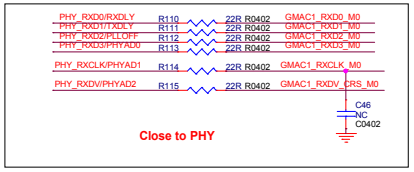








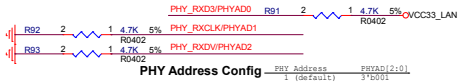


CFG_EXT=1:Use the external power source for the IO pad.
CFG_LDO1=1, CFG_LDO0=0: IO pad 1.8V
CFG_LDO1=0,CFG_LDO0=0: IO pad 3.3V

Default: IO pad=3.3V

RGMII Power Source	CFG_EXT	CFG_LDO[1:0]
External 3.3V(default)	1'b1	2'b00
External 1.8V	1'b1	2'b10
Internal 1.8V	1'b0	2'b10

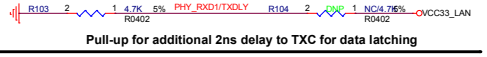
VCCIO_PHY Voltage Config



PHY Address Config

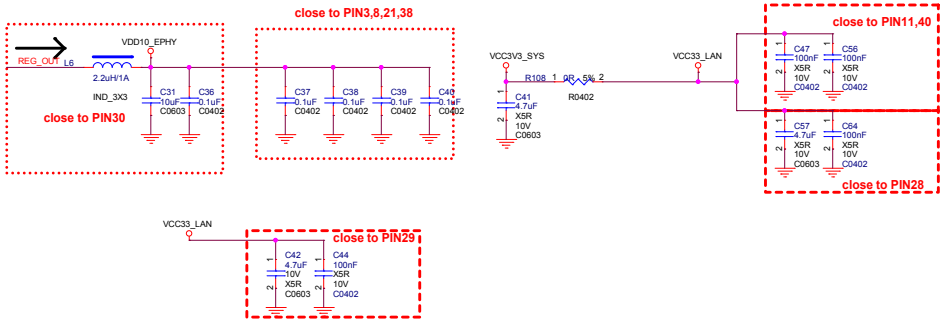
PHY Address	PHYAD[2:0]
1 (default)	3'b001

Pull-up for additional 2ns delay to RXC for data latching



Pull-up for additional 2ns delay to TXC for data latching

Pull-up to disable PLL @ ALDPS mode



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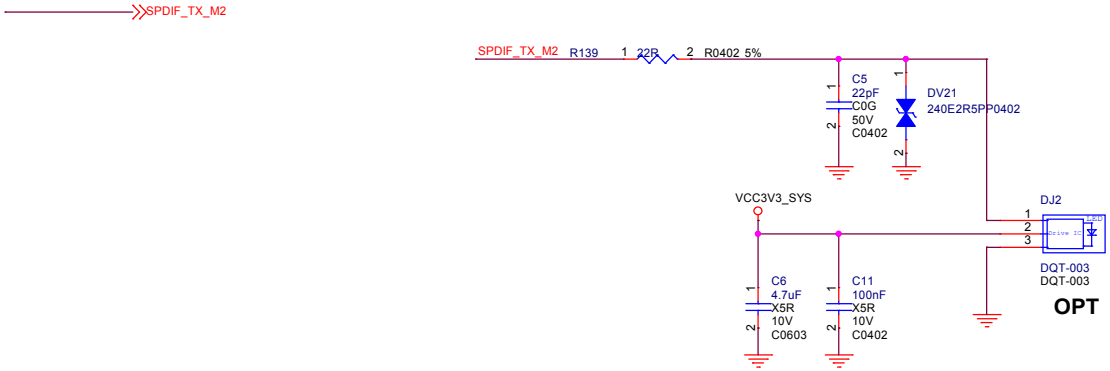
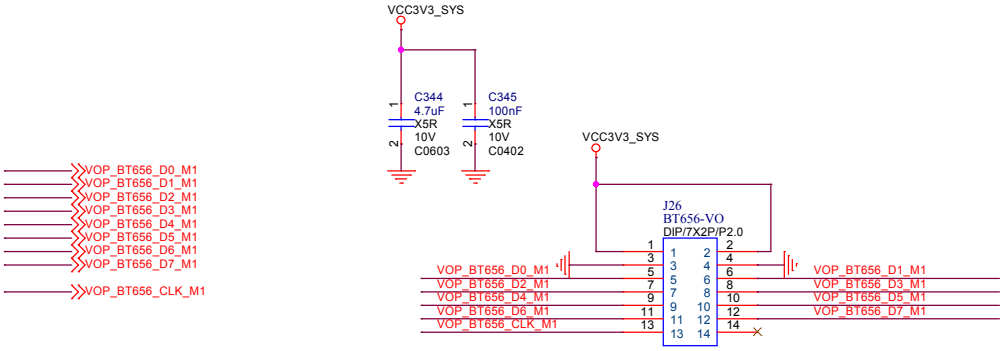
SPDIF-OUT





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