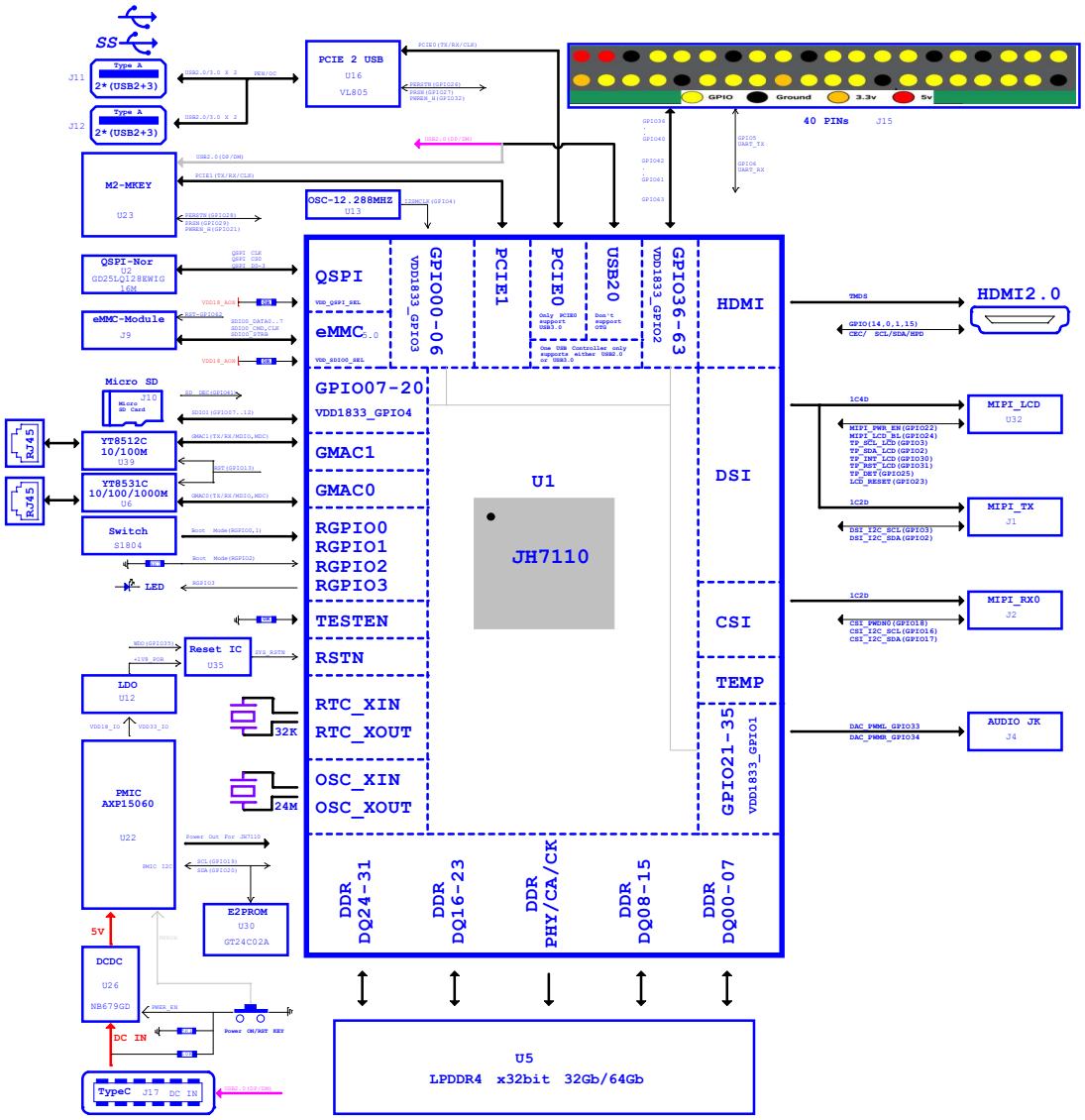
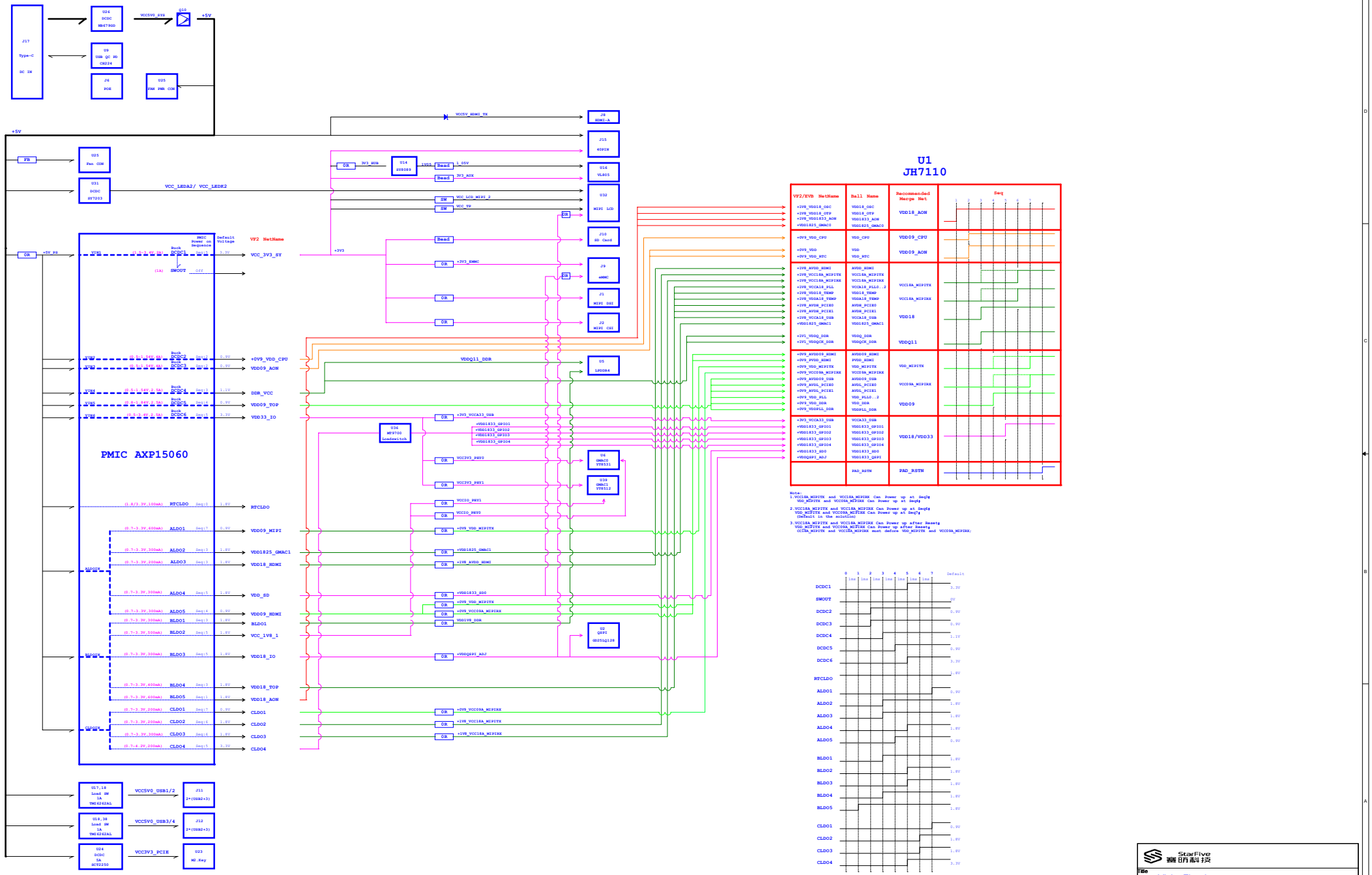


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Size	Document Number	Rev
Custom	System Diagram	V1.2A

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PMIC AXP15060
U1
JH7110
VF2/EVB NetName
Ball Name
Recommanded Merge Net
Seq
VF2 NetName
VCC_3V3_SY
+0V9_VDD_CPU
VDD09_AON
DDR_VCC
VDD09_TOP
VDD33_IO
RTCLDO
VDD09_MIPI
VDD1825_GMAC1
VDD18_HDMI
VDD_SD
VDD09_HDMI
BLDO1
VCC_1V8_1
VDD18_IO
VDD18_TOP
VDD18_AON
CLDO1
CLDO2
CLDO3
CLDO4
VDDQ11_DDR
VCCSV_HDMI_TX
VCC_LEDA2/ VCC_LEDK2
VCCSV0_USB1/2
VCCSV0_USB3/4
VCC3V3_PCIE
Note:
1.VCC18A_MIPITX and VCC18A_MIPIRX Can Power up at Seq4&
VDD_MIPITX and VCC09A_MIPIRX Can Power up at Seq4&
2.VCC18A_MIPITX and VCC18A_MIPIRX Can Power up at Seq4&
VDD_MIPITX and VCC09A_MIPIRX Can Power up at Seq7&
(Default is the existing)
3.VCC18A_MIPITX and VCC18A_MIPIRX Can Power up after Reset&
VDD_MIPITX and VCC09A_MIPIRX Can Power up after Reset&
(c18a_MIPITX and VCC18A_MIPIRX must defore VDD_MIPITX and VCC09A_MIPIRX;
StarFive
赛昉科技
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VisionFive 2
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Custom
Power Diagram
V1.2A
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23

Vision Five 2 JH7110 GPIO List

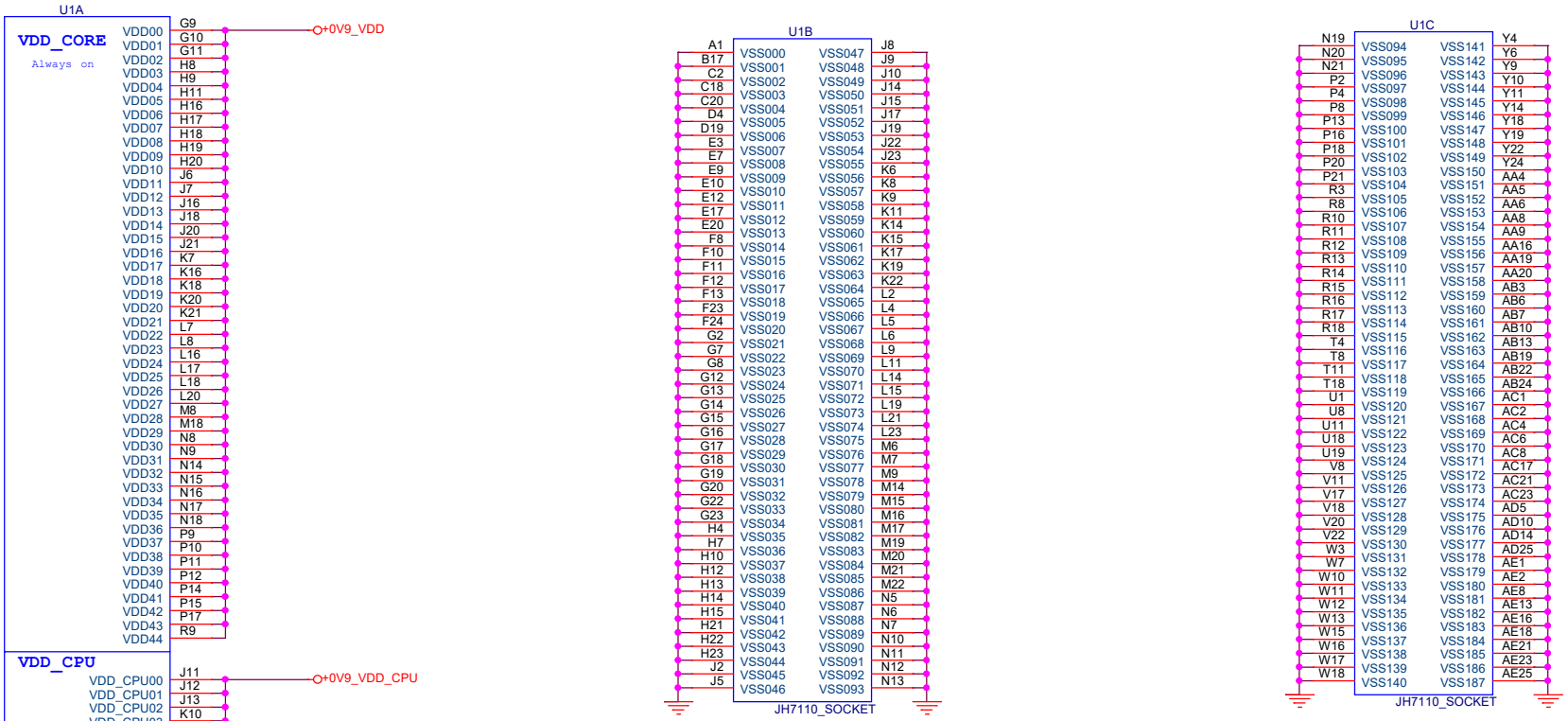
Power Group	GPIO Name	Default FUN	Devices	Notes
VDD1833_GPIO3	GPIO00	HDMI_I2C_SCL_GPIO0	HDMI:J8	
	GPIO01	HDMI_I2C_SDA_GPIO1	HDMI:J8	
	GPIO02	DSI_I2C_SDA_GPIO2	LCD_TP:U32 & MIPI_TX_J1	
	GPIO03	DSI_I2C_SCL_GPIO3	LCD_TP:U32 & MIPI_TX_J1	
	GPIO04	I2SMCLK	OSC:U13	
	GPIO05	UART0_TX_GPIO5	40PIN:J15	
	GPIO06	UART0_RX_GPIO6	40PIN:J15	
VDD1833_GPIO4	GPIO07	SD_SDIO1_D2_GPIO7	Micro SD:J10	
	GPIO08	SD_SDIO1_D3_GPIO8	Micro SD:J10	
	GPIO09	SD_SDIO1_CMD_GPIO9	Micro SD:J10	
	GPIO10	SD_SDIO1_CLK_GPIO10	Micro SD:J10	
	GPIO11	SD_SDIO1_D0_GPIO11	Micro SD:J10	
	GPIO12	SD_SDIO1_D1_GPIO12	Micro SD:J10	
	GPIO13	GMAC_PHYRSTN_GPIO13	GMAC0:U6 & GMAC1 U9	
	GPIO14	HDMI_CEC_GPIO14	HDMI:J8	
	GPIO15	HDMI_HPD_GPIO15	HDMI:J8	
	GPIO16	CSI_I2C_SCL_GPIO16	MIPI RX:J2	
	GPIO17	CSI_I2C_SDA_GPIO17	MIPI RX:J2	
	GPIO18	CSI_PWDN0_GPIO18	MIPI RX:J2	
	GPIO19	PMIC_I2C_SCL_GPIO19	PMIC:U22 & EEPROM : U30	
	GPIO20	PMIC_I2C_SDA_GPIO20	PMIC:U22 & EEPROM : U30	
VDD1833_GPIO1	GPIO21	PCIE1_PWREN_H_GPIO21	Mkey:U23-U24	
	GPIO22	MIPI_PWR_EN	LCD TP:U32	
	GPIO23	LCD_RESET	LCD TP:U32	
	GPIO24	MIPI_LCD_BL	LCD TP:U32	
	GPIO25	TP_DET_GPIO25	LCD TP:U32	
	GPIO26	PCIE0_PERSTN_GPIO26	VL805:U16	
	GPIO27	PCIE0_PRSN_GPIO27	VL805:U16	
	GPIO28	PCIE1_PERSTN_GPIO28	Mkey:U23	
	GPIO29	PCIE1_PRSN_GPIO29	Mkey:U23	
	GPIO30	TP_INT_L	LCD TP:U32	
	GPIO31	TP_RST_L	LCD TP:U32	
	GPIO32	PCIE0_PWREN_H_GPIO32	VL805:U16	
	GPIO33	DAC_PWML_GPIO33	AUDIO JK:J4	
	GPIO34	DAC_PWMR_GPIO34	AUDIO JK:J4	
	GPIO35	WDO_GPIO35	RSET IC:U35	
VDD1833_GPIO2	GPIO36	GPIO36	40PIN:J15	
	GPIO37	GPIO37	40PIN:J15	
	GPIO38	GPIO38	40PIN:J15	
	GPIO39	GPIO39	40PIN:J15	
	GPIO40	GPIO40	40PIN:J15	
	GPIO41	SD_SDIO0_CD_GPIO41	Micro SD:J10	
	GPIO42	GPIO42	40PIN:J15	
	GPIO43	GPIO43	40PIN:J15	
	GPIO44	GPIO44	40PIN:J15	
	GPIO45	GPIO45	40PIN:J15	
	GPIO46	GPIO46	40PIN:J15	
	GPIO47	GPIO47	40PIN:J15	
	GPIO48	GPIO48	40PIN:J15	
	GPIO49	GPIO49	40PIN:J15	
	GPIO50	GPIO50	40PIN:J15	
	GPIO51	GPIO51	40PIN:J15	
	GPIO52	GPIO52	40PIN:J15	
	GPIO53	GPIO53	40PIN:J15	
	GPIO54	GPIO54	40PIN:J15	
	GPIO55	GPIO55	40PIN:J15	
	GPIO56	GPIO56	40PIN:J15	
	GPIO57	GPIO57	40PIN:J15	
	GPIO58	GPIO58	40PIN:J15	
	GPIO59	GPIO59	40PIN:J15	
	GPIO60	GPIO60	40PIN:J15	
	GPIO61	GPIO61	40PIN:J15	
	GPIO62	SDIO0_RSTN_GPIO62	eMMC:J9	
	GPIO63	GPIO63	40PIN:J15	
VDD18_AON	RGPIO0	Boot Mode		
	RGPIO1	Boot Mode	SW:S1804	
	RGPIO2	Boot Mode	SW:S1804	
	RGPIO3	STS_PWR	LED3	

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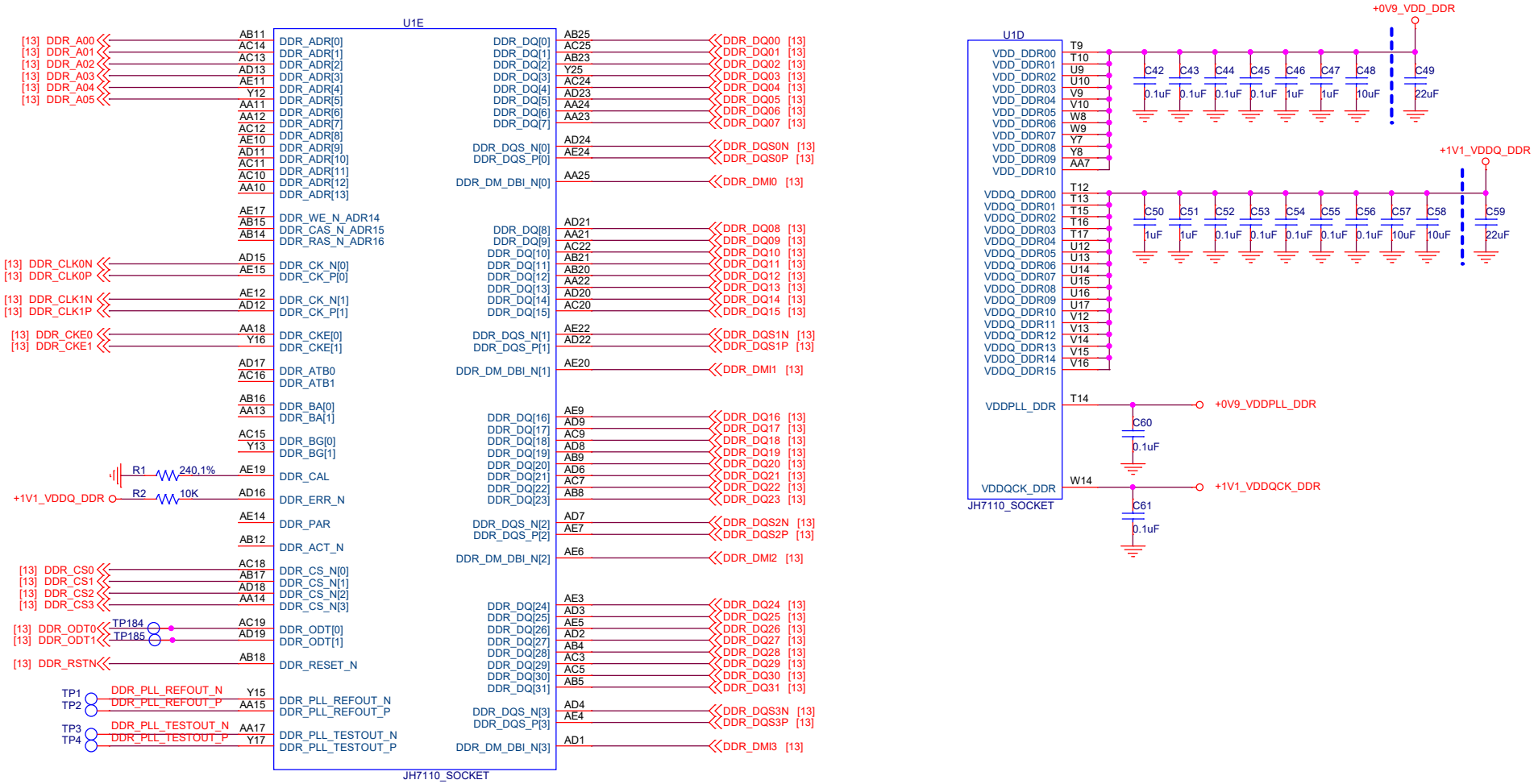


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Size	Document Number	Rev
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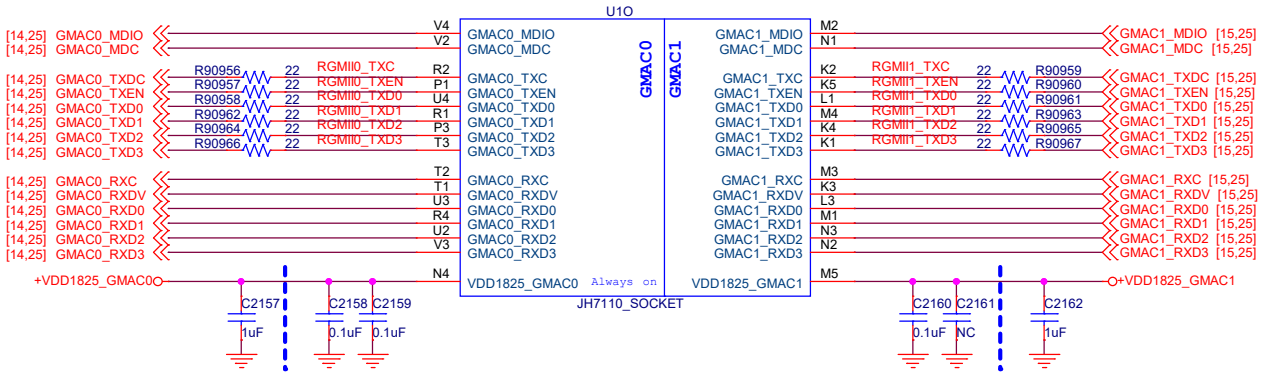


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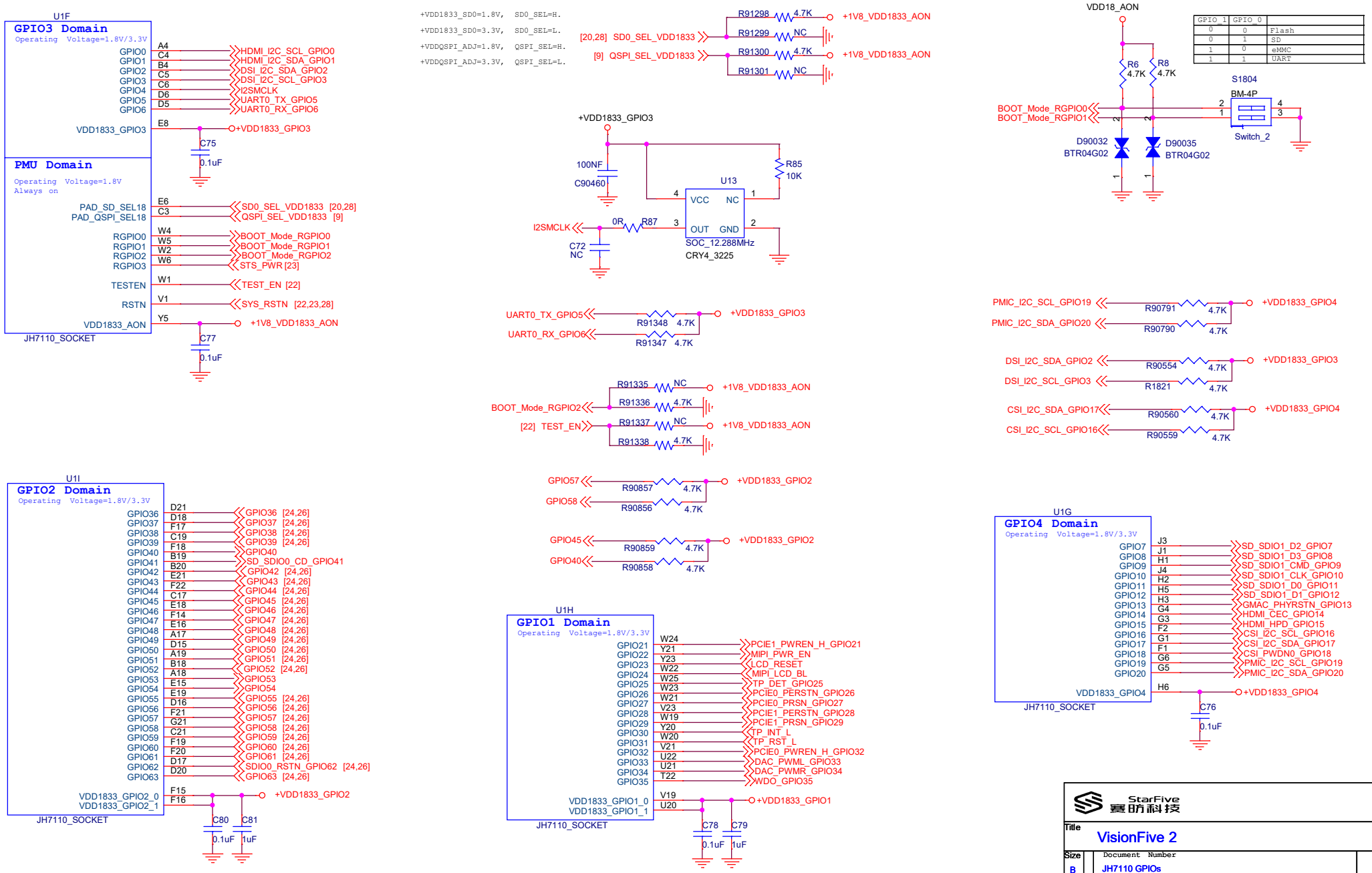
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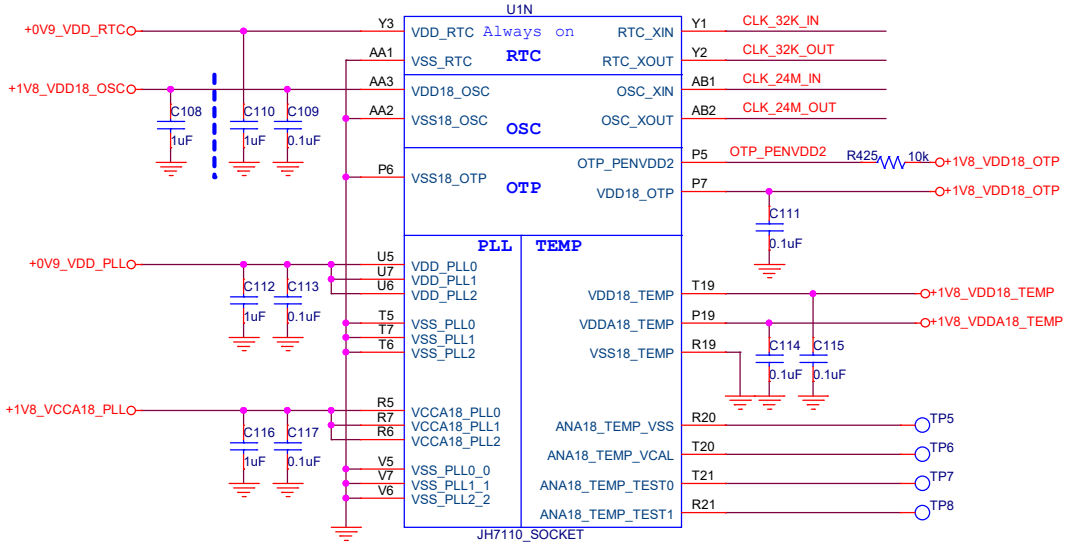
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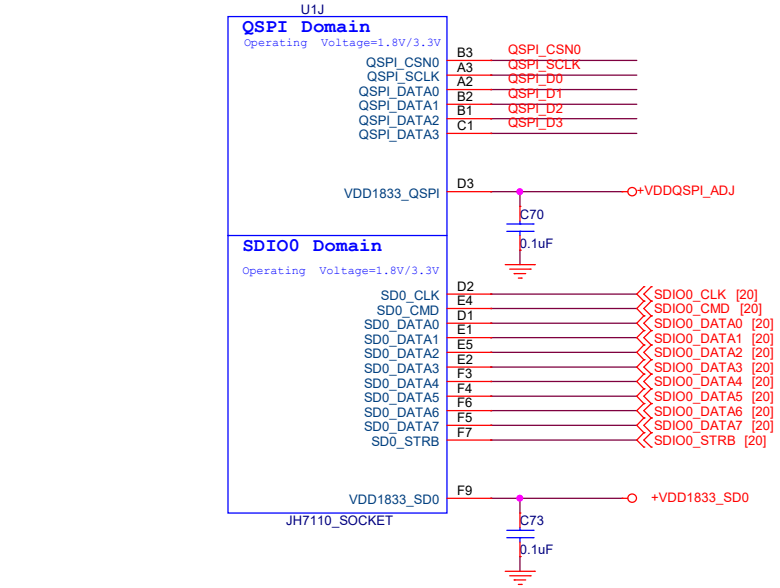


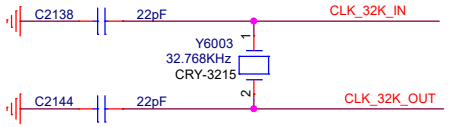
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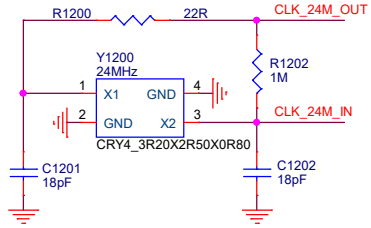
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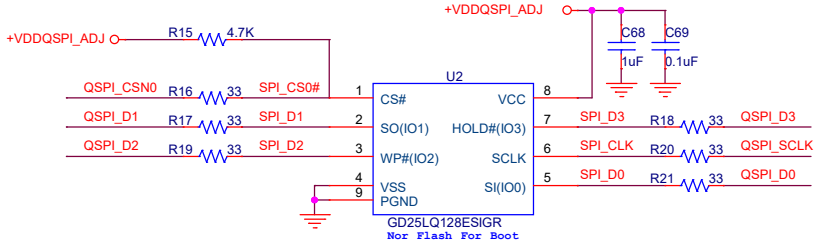

U1F
GPIO3 Domain
Operating Voltage=1.8V/3.3V
GPIO0 A4 HDMI_I2C_SCL_GPIO0
GPIO1 C4 HDMI_I2C_SDA_GPIO1
GPIO2 B4 DSI_I2C_SDA_GPIO2
GPIO3 C5 DSI_I2C_SCL_GPIO3
GPIO4 C6 I2SMCLK
GPIO5 D6 UART0_TX_GPIO5
GPIO6 D5 UART0_RX_GPIO6
VDD1833_GPIO3 E8 +VDD1833_GPIO3
C75 0.1uF
PMU Domain
Operating Voltage=1.8V
Always on
PAD_SD_SEL18 E6 SD0_SEL_VDD1833 [20,28]
PAD_QSPI_SEL18 C3 QSPI_SEL_VDD1833 [9]
RGPIO0 W4 BOOT_Mode_RGPIO0
RGPIO1 W5 BOOT_Mode_RGPIO1
RGPIO2 W2 BOOT_Mode_RGPIO2
RGPIO3 W6 STS_PWR [23]
TESTEN W1 TEST_EN [22]
RSTN V1 SYS_RSTN [22,23,28]
VDD1833_AON Y5 +1V8_VDD1833_AON
C77 0.1uF
JH7110_SOCKET
+VDD1833_SD0=1.8V, SD0_SEL=H.
+VDD1833_SD0=3.3V, SD0_SEL=L.
+VDDQSPI_ADJ=1.8V, QSPI_SEL=H.
+VDDQSPI_ADJ=3.3V, QSPI_SEL=L.
[20,28] SD0_SEL_VDD1833
[9] QSPI_SEL_VDD1833
R91298 4.7K +1V8_VDD1833_AON
R91299 NC
R91300 4.7K +1V8_VDD1833_AON
R91301 NC
+VDD1833_GPIO3
100NF C90460
U13
VCC NC OUT GND
SOC_12.288MHz
CRY4_3225
R85 10K
I2SMCLK 0R R87
C72 NC
UART0_TX_GPIO5 R91348 4.7K +VDD1833_GPIO3
UART0_RX_GPIO6 R91347 4.7K
R91335 NC +1V8_VDD1833_AON
BOOT_Mode_RGPIO2 R91336 4.7K
[22] TEST_EN R91337 NC +1V8_VDD1833_AON
R91338 4.7K
GPIO57 R90857 4.7K +VDD1833_GPIO2
GPIO58 R90856 4.7K
GPIO45 R90859 4.7K +VDD1833_GPIO2
GPIO40 R90858 4.7K
U1I
GPIO2 Domain
Operating Voltage=1.8V/3.3V
GPIO36 D21 GPIO36 [24,26]
GPIO37 D18 GPIO37 [24,26]
GPIO38 F17 GPIO38 [24,26]
GPIO39 C19 GPIO39 [24,26]
GPIO40 F18 GPIO40
GPIO41 B19 SD_SDIO0_CD_GPIO41
GPIO42 B20 GPIO42 [24,26]
GPIO43 E21 GPIO43 [24,26]
GPIO44 F22 GPIO44 [24,26]
GPIO45 C17 GPIO45 [24,26]
GPIO46 E18 GPIO46 [24,26]
GPIO47 F14 GPIO47 [24,26]
GPIO48 E16 GPIO48 [24,26]
GPIO49 A17 GPIO49 [24,26]
GPIO50 D15 GPIO50 [24,26]
GPIO51 A19 GPIO51 [24,26]
GPIO52 B18 GPIO52 [24,26]
GPIO53 A18 GPIO53
GPIO54 E15 GPIO54
GPIO55 E19 GPIO55 [24,26]
GPIO56 D16 GPIO56 [24,26]
GPIO57 F21 GPIO57 [24,26]
GPIO58 G21 GPIO58 [24,26]
GPIO59 C21 GPIO59 [24,26]
GPIO60 F19 GPIO60 [24,26]
GPIO61 F20 GPIO61 [24,26]
GPIO62 D17 SDIO0_RSTN_GPIO62 [24,26]
GPIO63 D20 GPIO63 [24,26]
VDD1833_GPIO2_0 F15
VDD1833_GPIO2_1 F16 +VDD1833_GPIO2
C80 0.1uF C81 1uF
JH7110_SOCKET
U1H
GPIO1 Domain
Operating Voltage=1.8V/3.3V
GPIO21 W24 PCIE1_PWREN_H_GPIO21
GPIO22 Y21 MIPI_PWR_EN
GPIO23 Y23 LCD_RESET
GPIO24 W22 MIPI_LCD_BL
GPIO25 W25 TP_DET_GPIO25
GPIO26 W23 PCIE0_PERSTN_GPIO26
GPIO27 W21 PCIE0_PRSN_GPIO27
GPIO28 V23 PCIE1_PERSTN_GPIO28
GPIO29 W19 PCIE1_PRSN_GPIO29
GPIO30 Y20 TP_INT_L
GPIO31 W20 TP_RST_L
GPIO32 V21 PCIE0_PWREN_H_GPIO32
GPIO33 U22 DAC_PWML_GPIO33
GPIO34 U21 DAC_PWMR_GPIO34
GPIO35 T22 WDO_GPIO35
VDD1833_GPIO1_0 V19
VDD1833_GPIO1_1 U20 +VDD1833_GPIO1
C78 0.1uF C79 1uF
JH7110_SOCKET
VDD18_AON
R6 4.7K R8 4.7K
GPIO_1 GPIO_0
0 0 Flash
0 1 SD
1 0 eMMC
1 1 UART
S1804
BM-4P
BOOT_Mode_RGPIO0
BOOT_Mode_RGPIO1
Switch_2
D90032 BTR04G02
D90035 BTR04G02
PMIC_I2C_SCL_GPIO19 R90791 4.7K +VDD1833_GPIO4
PMIC_I2C_SDA_GPIO20 R90790 4.7K
DSI_I2C_SDA_GPIO2 R90554 4.7K +VDD1833_GPIO3
DSI_I2C_SCL_GPIO3 R1821 4.7K
CSI_I2C_SDA_GPIO17 R90560 4.7K +VDD1833_GPIO4
CSI_I2C_SCL_GPIO16 R90559 4.7K
U1G
GPIO4 Domain
Operating Voltage=1.8V/3.3V
GPIO7 J3 SD_SDIO1_D2_GPIO7
GPIO8 J1 SD_SDIO1_D3_GPIO8
GPIO9 H1 SD_SDIO1_CMD_GPIO9
GPIO10 J4 SD_SDIO1_CLK_GPIO10
GPIO11 H2 SD_SDIO1_D0_GPIO11
GPIO12 H5 SD_SDIO1_D1_GPIO12
GPIO13 H3 GMAC_PHYRSTN_GPIO13
GPIO14 G4 HDMI_CEC_GPIO14
GPIO15 G3 HDMI_HPD_GPIO15
GPIO16 F2 CSI_I2C_SCL_GPIO16
GPIO17 G1 CSI_I2C_SDA_GPIO17
GPIO18 F1 CSI_PWDN0_GPIO18
GPIO19 G6 PMIC_I2C_SCL_GPIO19
GPIO20 G5 PMIC_I2C_SDA_GPIO20
VDD1833_GPIO4 H6 +VDD1833_GPIO4
C76 0.1uF
JH7110_SOCKET
StarFive 赛昉科技
Title VisionFive 2
Size B
Document Number JH7110 GPIOs
Rev V1.2A
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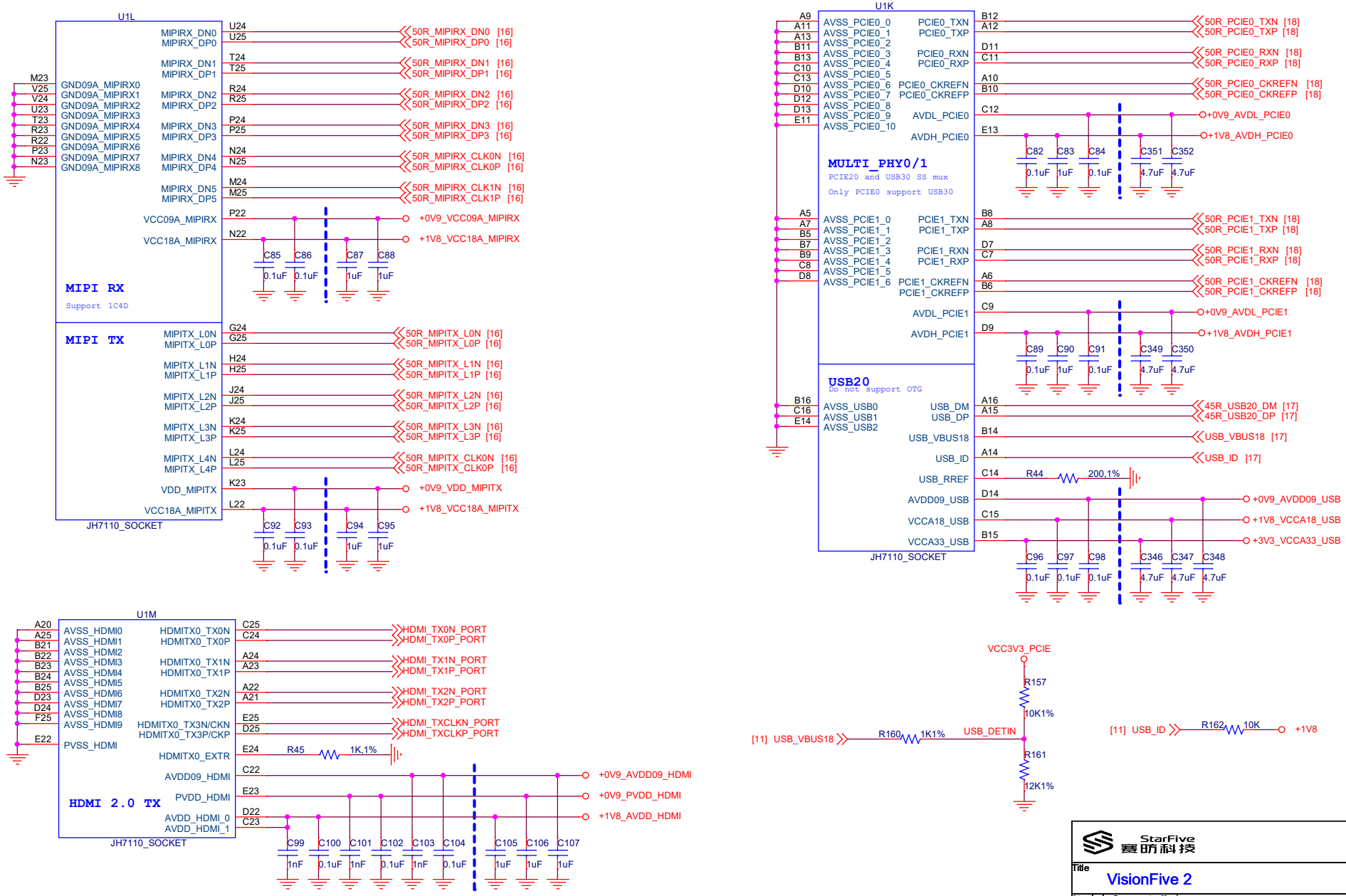


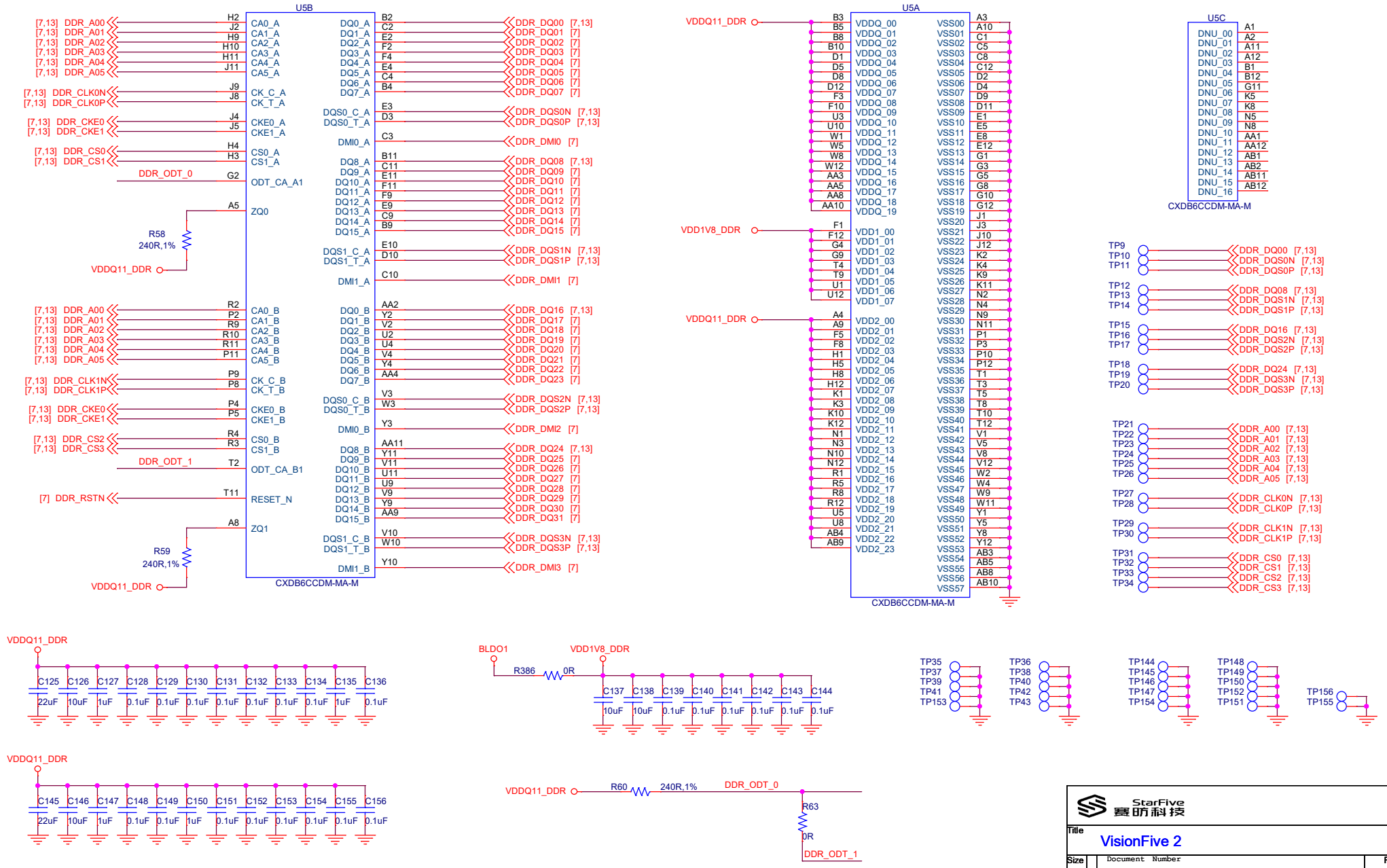
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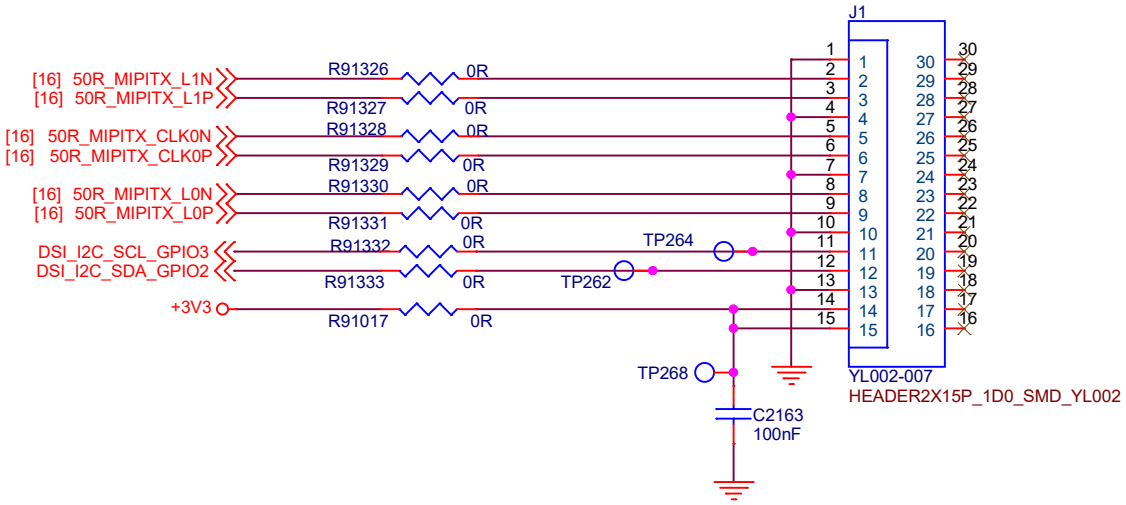
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U1L
MIPIRX_DN0
MIPIRX_DP0
MIPIRX_DN1
MIPIRX_DP1
MIPIRX_DN2
MIPIRX_DP2
MIPIRX_DN3
MIPIRX_DP3
MIPIRX_DN4
MIPIRX_DP4
MIPIRX_DN5
MIPIRX_DP5
GND09A_MIPIRX0
GND09A_MIPIRX1
GND09A_MIPIRX2
GND09A_MIPIRX3
GND09A_MIPIRX4
GND09A_MIPIRX5
GND09A_MIPIRX6
GND09A_MIPIRX7
GND09A_MIPIRX8
VCC09A_MIPIRX
VCC18A_MIPIRX
MIPI RX
Support 1C4D
MIPI TX
MIPITX_L0N
MIPITX_L0P
MIPITX_L1N
MIPITX_L1P
MIPITX_L2N
MIPITX_L2P
MIPITX_L3N
MIPITX_L3P
MIPITX_L4N
MIPITX_L4P
VDD_MIPITX
VCC18A_MIPITX
JH7110_SOCKET
50R_MIPIRX_DN0 [16]
50R_MIPIRX_DP0 [16]
50R_MIPIRX_DN1 [16]
50R_MIPIRX_DP1 [16]
50R_MIPIRX_DN2 [16]
50R_MIPIRX_DP2 [16]
50R_MIPIRX_DN3 [16]
50R_MIPIRX_DP3 [16]
50R_MIPIRX_CLK0N [16]
50R_MIPIRX_CLK0P [16]
50R_MIPIRX_CLK1N [16]
50R_MIPIRX_CLK1P [16]
+0V9_VCC09A_MIPIRX
+1V8_VCC18A_MIPIRX
C85 C86 C87 C88
0.1uF 0.1uF 1uF 1uF
50R_MIPITX_L0N [16]
50R_MIPITX_L0P [16]
50R_MIPITX_L1N [16]
50R_MIPITX_L1P [16]
50R_MIPITX_L2N [16]
50R_MIPITX_L2P [16]
50R_MIPITX_L3N [16]
50R_MIPITX_L3P [16]
50R_MIPITX_CLK0N [16]
50R_MIPITX_CLK0P [16]
+0V9_VDD_MIPITX
+1V8_VCC18A_MIPITX
C92 C93 C94 C95
0.1uF 0.1uF 1uF 1uF
U1K
AVSS_PCIE0_0
AVSS_PCIE0_1
AVSS_PCIE0_2
AVSS_PCIE0_3
AVSS_PCIE0_4
AVSS_PCIE0_5
AVSS_PCIE0_6
AVSS_PCIE0_7
AVSS_PCIE0_8
AVSS_PCIE0_9
AVSS_PCIE0_10
PCIE0_TXN
PCIE0_TXP
PCIE0_RXN
PCIE0_RXP
PCIE0_CKREFN
PCIE0_CKREFP
AVDL_PCIE0
AVDH_PCIE0
MULTI_PHY0/1
PCIE20 and USB30 SS mux
Only PCIE0 support USB30
AVSS_PCIE1_0
AVSS_PCIE1_1
AVSS_PCIE1_2
AVSS_PCIE1_3
AVSS_PCIE1_4
AVSS_PCIE1_5
AVSS_PCIE1_6
PCIE1_TXN
PCIE1_TXP
PCIE1_RXN
PCIE1_RXP
PCIE1_CKREFN
PCIE1_CKREFP
AVDL_PCIE1
AVDH_PCIE1
USB20
Do not support OTG
AVSS_USB0
AVSS_USB1
AVSS_USB2
USB_DM
USB_DP
USB_VBUS18
USB_ID
USB_RREF
AVDD09_USB
VCCA18_USB
VCCA33_USB
JH7110_SOCKET
50R_PCIE0_TXN [18]
50R_PCIE0_TXP [18]
50R_PCIE0_RXN [18]
50R_PCIE0_RXP [18]
50R_PCIE0_CKREFN [18]
50R_PCIE0_CKREFP [18]
+0V9_AVDL_PCIE0
+1V8_AVDH_PCIE0
C82 C83 C84 C351 C352
0.1uF 1uF 0.1uF 4.7uF 4.7uF
50R_PCIE1_TXN [18]
50R_PCIE1_TXP [18]
50R_PCIE1_RXN [18]
50R_PCIE1_RXP [18]
50R_PCIE1_CKREFN [18]
50R_PCIE1_CKREFP [18]
+0V9_AVDL_PCIE1
+1V8_AVDH_PCIE1
C89 C90 C91 C349 C350
0.1uF 1uF 0.1uF 4.7uF 4.7uF
45R_USB20_DM [17]
45R_USB20_DP [17]
USB_VBUS18 [17]
USB_ID [17]
R44 200,1%
+0V9_AVDD09_USB
+1V8_VCCA18_USB
+3V3_VCCA33_USB
C96 C97 C98 C346 C347 C348
0.1uF 0.1uF 0.1uF 4.7uF 4.7uF 4.7uF
U1M
AVSS_HDMI0
AVSS_HDMI1
AVSS_HDMI2
AVSS_HDMI3
AVSS_HDMI4
AVSS_HDMI5
AVSS_HDMI6
AVSS_HDMI7
AVSS_HDMI8
AVSS_HDMI9
PVSS_HDMI
HDMITX0_TX0N
HDMITX0_TX0P
HDMITX0_TX1N
HDMITX0_TX1P
HDMITX0_TX2N
HDMITX0_TX2P
HDMITX0_TX3N/CKN
HDMITX0_TX3P/CKP
HDMITX0_EXTR
AVDD09_HDMI
PVDD_HDMI
AVDD_HDMI_0
AVDD_HDMI_1
HDMI 2.0 TX
JH7110_SOCKET
HDMI_TX0N_PORT
HDMI_TX0P_PORT
HDMI_TX1N_PORT
HDMI_TX1P_PORT
HDMI_TX2N_PORT
HDMI_TX2P_PORT
HDMI_TXCLKN_PORT
HDMI_TXCLKP_PORT
R45 1K,1%
+0V9_AVDD09_HDMI
+0V9_PVDD_HDMI
+1V8_AVDD_HDMI
C99 C100 C101 C102 C103 C104 C105 C106 C107
1nF 0.1uF 1nF 0.1uF 1nF 0.1uF 1uF 1uF 1uF
VCC3V3_PCIE
R157
10K1%
R161
12K1%
[11] USB_VBUS18
R160 1K1%
USB_DETIN
[11] USB_ID
R162 10K
+1V8
StarFive
赛昉科技
Title
VisionFive 2
Size
B
Document Number
JH7110_HDMI_PCIE_MIPI_USB
Rev
V1.2A
Date:
Tuesday, December 13, 2022
Sheet
09
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23

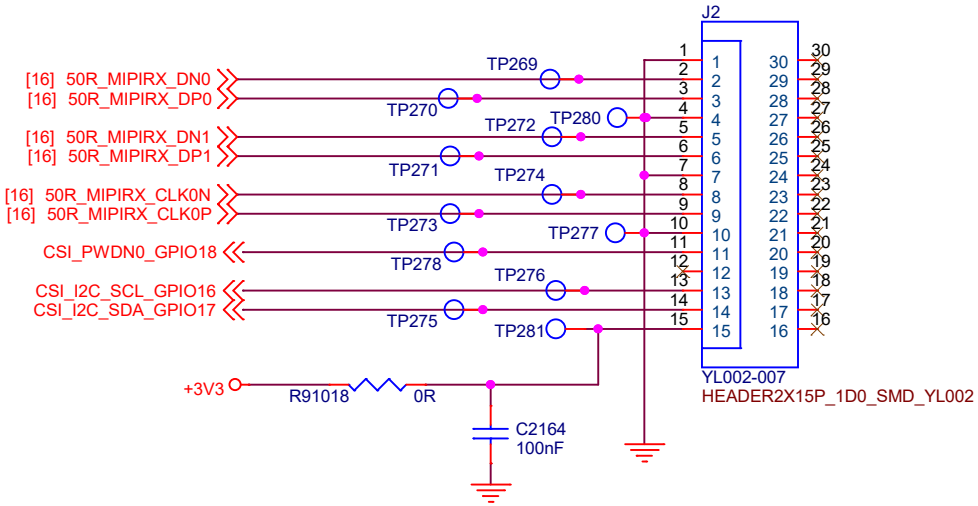


Title	VisionFive 2
Size	B
Document Number	LPDDR4 RAM
Rev	V1.2A
Date:	Tuesday, December 13, 2022
Sheet	10 of 23

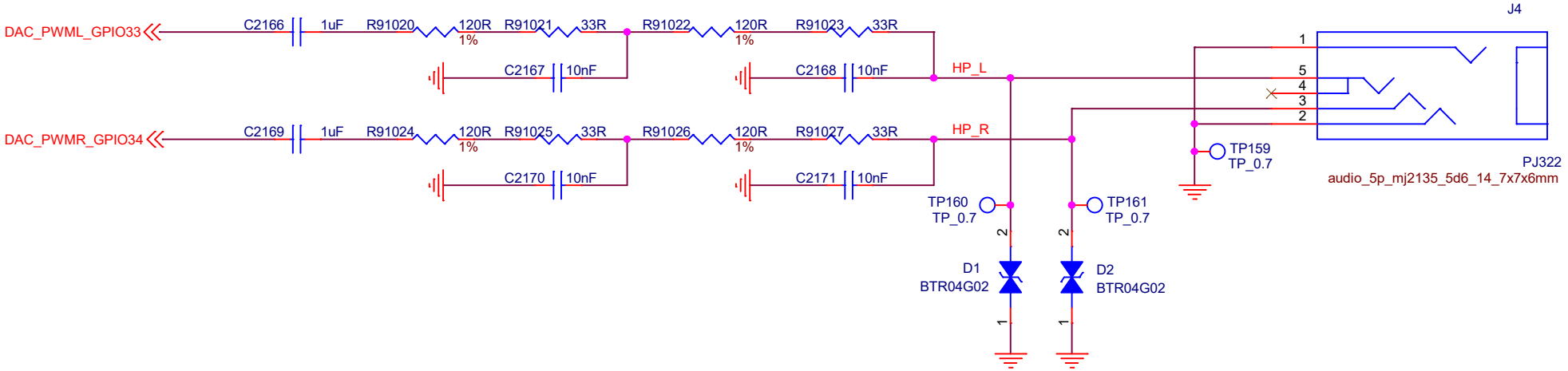
MIPI_TX



MIPI_RX0



AUDIO



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Title: VisionFive 2

Size	Document Number	Rev
A4	MIPI_TX/RX&AUDIO	V1.2A

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Giga PHY0

GMAC0_TXD0
GMAC0_TXD1
GMAC0_TXD2
GMAC0_TXD3
GMAC0_TXEN
GMAC0_TXDC
GMAC0_RXD0
GMAC0_RXD1
GMAC0_RXD2
GMAC0_RXD3
GMAC0_RXDV
GMAC0_RXC
GMAC0_MDC
GMAC0_MDIO
GMAC_PHYRSTN_GPIO13

PHY0_XTALOUT
Y6004
X1 GND
GND X2
25MHz
CRY4_3R20X2R50X0R80
PHY0_XTALIN
R91028 22R
C2172 8.2pF
C2173 8.2pF
R91029 NC
R91030 NC
PHY0_XTALOUT1

R91031 NC PHY0_CLKOUT125
R91032 NC

MDI0+_0 MDI0-_0 FB260 BCMEF122P900H PHY0_MDI0+ PHY0_MDI0-
MDI1+_0 MDI1-_0 FB2 BCMEF122P900H PHY0_MDI1+ PHY0_MDI1-
MDI2+_0 MDI2-_0 FB3 BCMEF122P900H PHY0_MDI2+ PHY0_MDI2-
MDI3+_0 MDI3-_0 FB4 BCMEF122P900H PHY0_MDI3+ PHY0_MDI3-

J5
FC-111Q280
RJ45_HRK1
TP186 PHY0_MDI0+ MDI0+
TP187 TP188 PHY0_MDI0- PHY0_MDI1+ MDI0- MDI1+
TP189 TP190 PHY0_MDI1- PHY0_MDI2+ MDI1- MDI2+
TP191 TP192 PHY0_MDI2- PHY0_MDI3+ MDI2- MDI3+
TP205 PHY0_MDI3- MDI3-
TCT
TCT1
C2174 100nF 16V
PHY0_LED_G+ PHY0_G_LED- PHY0_Y_LED+ PHY0_Y_LED- G+ G- Y+ Y-
VC1 VC2 VC3 VC4
J6
CON4A
TP193 TP194 TP195 TP196
TR0_0 TR1_0 TR2_0 TR3_0

VDD10_PHY0
R91038 2.49K 1%
VCC3V3_PHY0
R91046 4.7K VCC3V3_PHY0
RSET
PHY0_XTALOUT1
PHY0_XTALIN
PHY0_CLKOUT125
PHY0_LED2/CFG_LDO1
PHY0_LED1/CFG_LDO0
PHY0_LED0/CFG_EXT
U6
E_Pad
AVDD33
RSET
AVDD10
XTAL_OUT/EXT_CLK
XTAL_IN
CLKOUT
LED2/CFG_LDO1
LED1/CFG_LDO0
LED0/CFG_EXT
INTB/PMEB
MDI0+_0 MDI0-_0 MDI[0]+ MDI[0]-
MDI1+_0 MDI1-_0 MDI[1]+ MDI[1]-
MDI2+_0 MDI2-_0 MDI[2]+ MDI[2]-
MDI3+_0 MDI3-_0 MDI[3]+ MDI[3]-
AVDD10
REG_OUT PHY0_REG_OUT
DVDD33 VCC3V3_PHY0
DVDD_RG VCCIO_PHY0
RXC/PHYAD1 PHY0_RXCLK/PHYAD1
RXCTL/PHYAD2 GMAC0_RXDV
RXD0/RXDLY GMAC0_RXD0
RXD1/TXDLY GMAC0_RXD1
RXD2/PLLOFF GMAC0_RXD2
RXD3/PHYAD0 GMAC0_RXD3
DVDD10 VDD10_PHY0
AVDD33 PHYRSTB MDC MDIO TXD3 TXD2 TXD1 TXD0 TXCTL TXC
YT8531C
QFN40_5R00X5R00X0R90_T
PHY0_RSTn GMAC0_MDC GMAC0_MDIO GMAC0_TXD3 GMAC0_TXD2 GMAC0_TXD1 GMAC0_TXD0 GMAC0_TXEN GMAC0_TXCLK
VCC3V3_PHY0
R91063 NC/10K
GMAC_PHYRSTN_GPIO13
R91065 0R
R91064 1.8K VCCIO_PHY0
PHYRSTB is 3.3V IO
C2188 100nF

GMAC0_TXCLK R91066 22R GMAC0_TXDC
C2194 NC
PHY0_RXCLK/PHYAD1 R91067 22R GMAC0_RXC
C2195 NC
Close to PHY

R91033 NC/4.7K PHY0_LED0/CFG_EXT R91034 4.7K VCC3V3_PHY0
R91035 NC/4.7K PHY0_LED2/CFG_LDO1 R91036 4.7K
R91037 4.7K PHY0_LED1/CFG_LDO0

VCC_PHY0_IO Voltage Config

GMAC0_RXD3 R91042 4.7K VCCIO_PHY0
R91044 4.7K PHY0_RXCLK/PHYAD1 R91045 NC/4.7K VCCIO_PHY0
R91048 4.7K GMAC0_RXDV

PHY Address Config

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

GMAC0_RXD0
R91052 NC/4.7K R91053 4.7K VCCIO_PHY0

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

GMAC0_RXD1
R91055 4.7K R91056 NC/4.7K VCCIO_PHY0

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

R91058 NC/4.7K R91059 4.7K VCCIO_PHY0
GMAC0_RXD2

Pull-up to disable PLL @ ALDPS mode(Low power mode)

PHY0_REG_OUT L1 2.2uH IND_252010 R91061 0R VDD10_PHY0
C2182 4.7uF C2183 100nF
Close to PIN30
Close to PIN21
C2184 100nF
C2189 100nF C2190 100nF C2191 100nF
Close to PIN3,8,38

VCC_1V8_1 R91057 0R VCCIO_PHY0
VDD33_IO R91060 NC
C2178 1uF C2179 4.7uF C2180 1uF C2181 100nF
Close to PIN28

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

VCC3V3_PHY0
PHY0_Y_LED- R91039 0R PHY0_LED2/CFG_LDO1 R91040 NC R91041 510R PHY0_Y_LED+
R91043 NC
R91047 NC PHY0_LED0/CFG_EXT
D3 BTR04G02 C2175 1000pF
Reserve for EMI.

PHY0_LED0/CFG_EXT R91050 NC PHY0_G_LED-
D4 BTR04G02 C2176 1000pF R91054 510R

VCC3V3_PHY0
R91049 NC R91051 0R PHY0_LED1/CFG_LDO0
PHY0_LED_G+
D5 BTR04G02 C2177 1000pF
Reserve for EMI.

Note:
According to the actual choice of mounted Cannot be mounted at the same time

VDD33_IO R91062 0R VCC3V3_PHY0
C2187 4.7uF
C2185 100nF C2186 100nF
Close to PIN11,40
C2192 4.7uF C2193 100nF
Close to PIN29

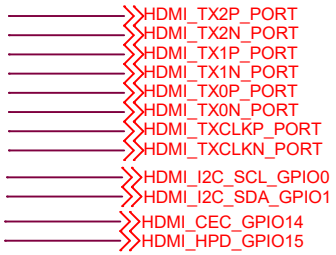
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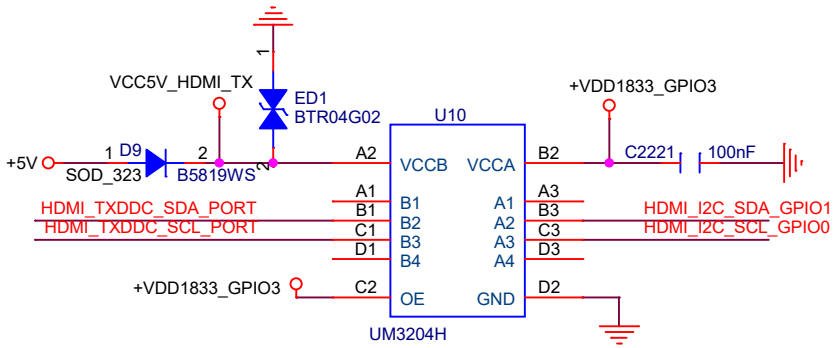
Title: VisionFive 2

Size	Document Number	Rev
A3	Ethernet_1000MHz	V1.2A

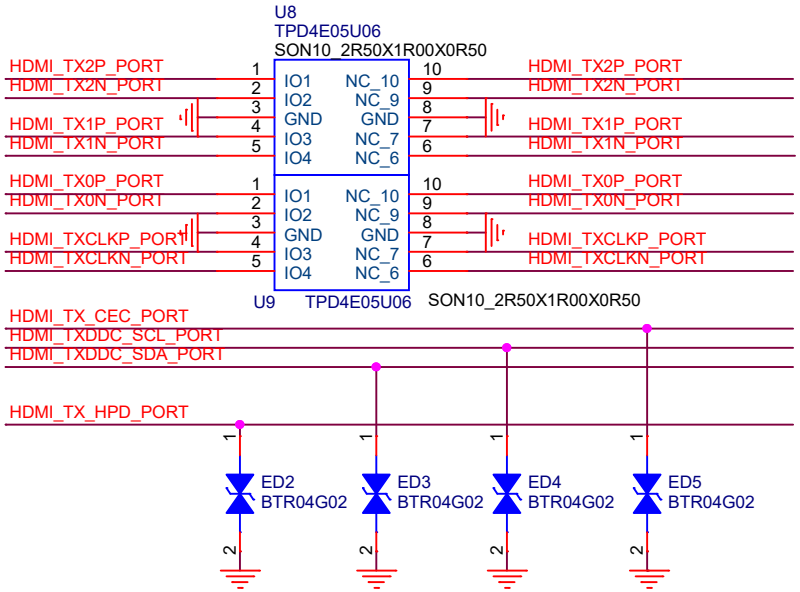
Date: Friday, December 16, 2022 Sheet 12 of 23

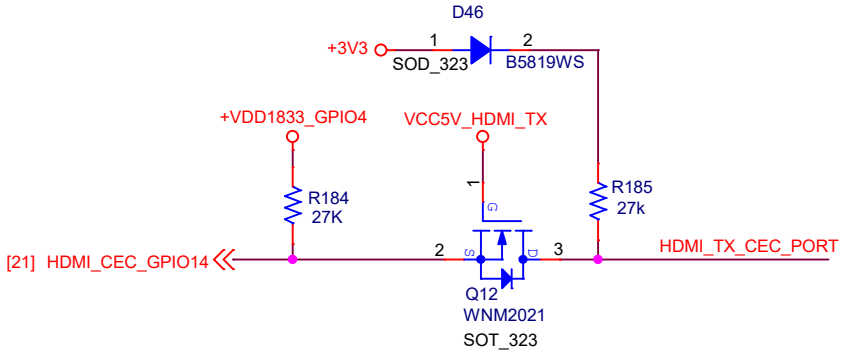
HDMI2.0 TX

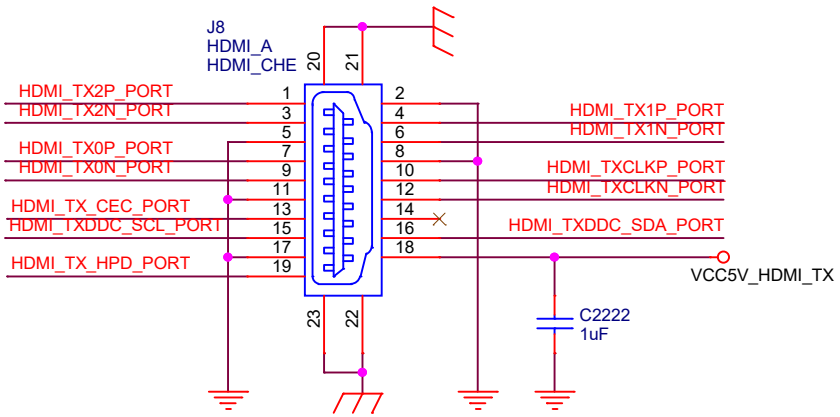


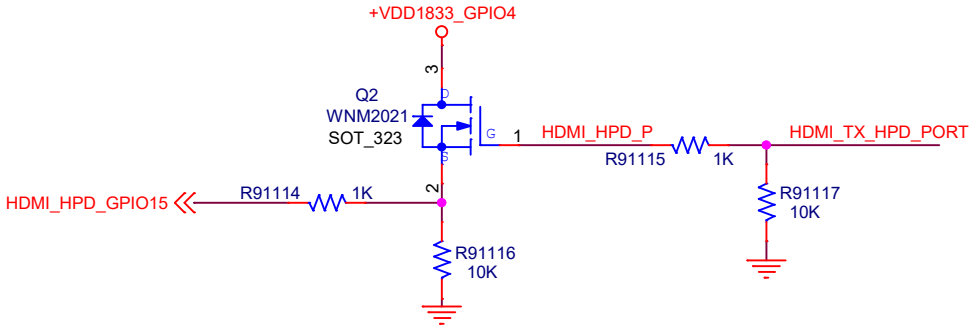


Cj<=0.4pF





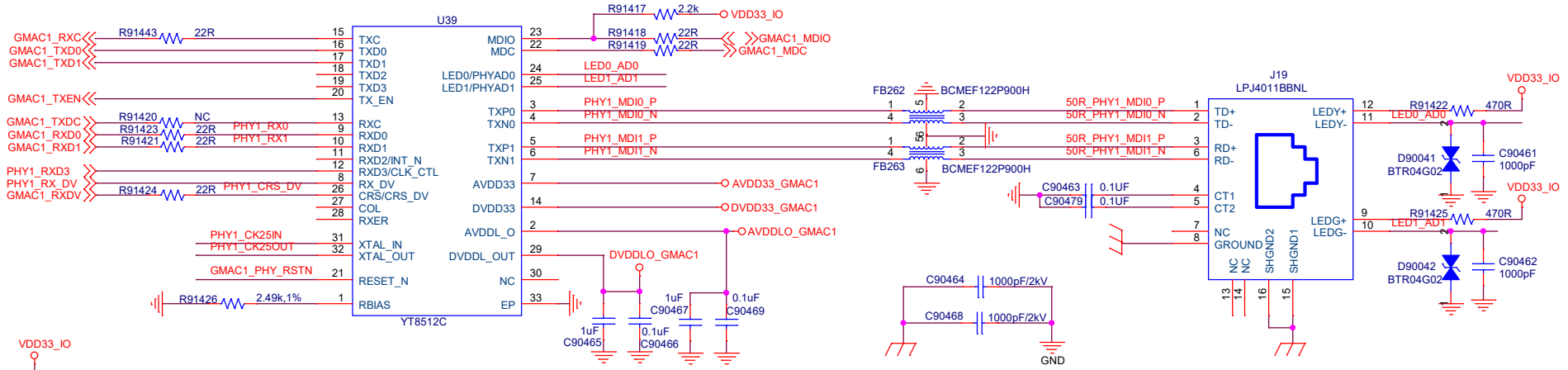


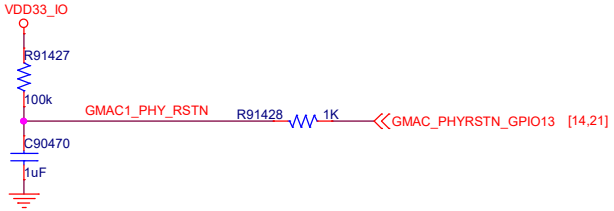


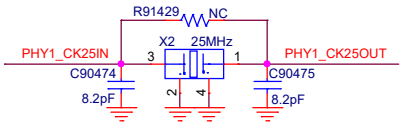
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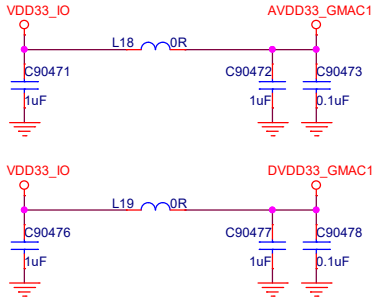
Title: VisionFive 2		
Size: A4	Document Number: HDMI	Rev: V1.2A
Date: Tuesday, December 13, 2022	Sheet 14 of 23	

Giga PHY1





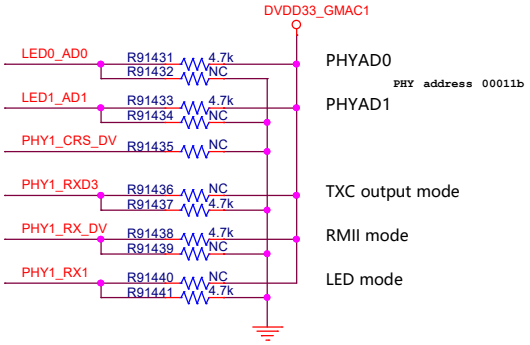




Power on Strapping Pins

RX_DV (IPD)	0 = MII mode 1 = RMII mode
RXD3 (IPD)	0 = TXC output mode 1 = TXC input mode
RXD1 (IPD)	0 = LED mode 1 = WOL mode

LED1/PHYAD1 (IPD)	LED0/PHYAD0 (IPD)	PHY address
0	0	00000
0	1	00001
1	0	00010
1	1	00011



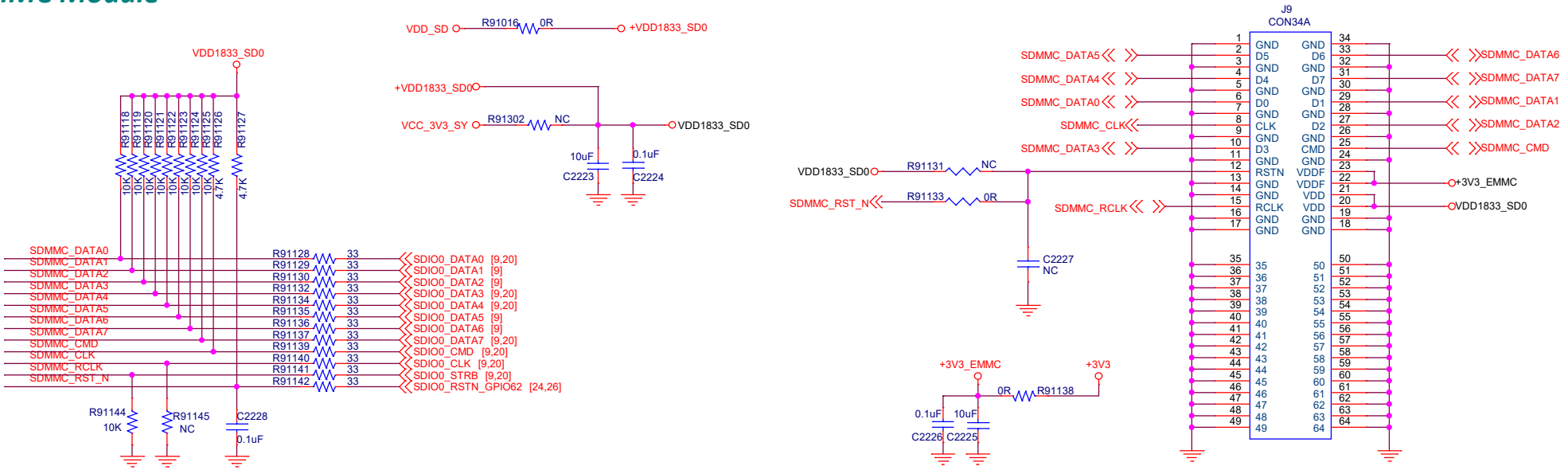
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Title: VisionFive 2

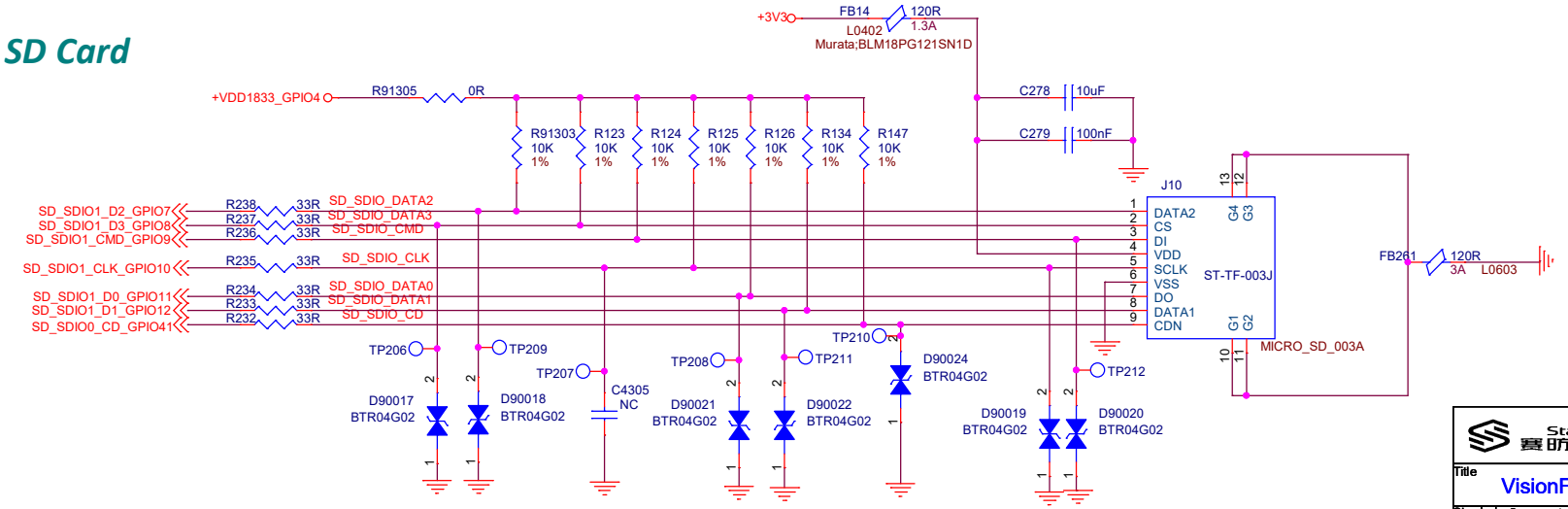
Size	Document Number	Rev
B	Ethernet_100MHz	V1.2A

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eMMC Module



Micro SD Card



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Title: VisionFive 2

Size	Document Number	Rev
B	eMMC & SD	V1.2A

Date: Tuesday, December 13, 2022 Sheet 15 of 23

PCIE TO USB

PWREN1
PWREN2
PWREN3
PWREN4

OVCUR1
OVCUR2
OVCUR3
OVCUR4

SSRX1- [6]
SSRX1+ [6]
SSRX2- [6]
SSRX2+ [6]
SSRX3- [6]
SSRX3+ [6]
SSRX4- [6]
SSRX4+ [6]
1_05V [4]
3V3_AUX

USBHP1- [6]
USBHP1+ [6]
SSTX1- [6]
SSTX1+ [6]
USBHP2- [6]
USBHP2+ [6]
SSTX2- [6]
SSTX2+ [6]
USBHP3- [6]
USBHP3+ [6]
SSTX3- [6]
SSTX3+ [6]
USBHP4- [6]
USBHP4+ [6]
SSTX4- [6]
SSTX4+ [6]

3V3_HUB
R91165 0R
VCC_3V3_SY
U14
SY8089AAAC
SOT_23_5
VIN
LX
GND
EN
FB/OUT
L3
2.2uH
IND_303015
1V05
C2235 10uF
R91166 10K
C2239 100nF
C2236 100pF
R91167 75K 1%
R91168 100K 1%
C2237 22uF
C2238 100nF

3V3_HUB
C2245 0.1uF
GND
3V3_AUX
C2246 1000pF
C2247 1000pF
C2248 1000pF
GND

3V3_AUX
C2255 0.1uF
C2256 0.1uF
C2257 0.1uF
C2258 0.1uF
C2259 0.1uF
C2260 0.1uF
GND

[4] 1_05V
C2262 0.1uF
C2263 1000pF
C2264 0.1uF
C2265 1000pF
C2266 0.1uF
C2267 0.1uF
GND

[4] 1_05V
C2272 0.1uF
C2273 0.1uF
C2274 0.1uF
C2275 0.1uF
C2276 1000pF
C2277 1000pF
GND

SSXI
SSXO
X1
25MHz_9pf
C2240 12pF
C2241 12pF
GND

3V3_AUX
D90030
B5819WS
SOD_323
R91170 10K
PONRST
C2242 1uF
GND

Put close to J8

U16
VL805-Q6 T

TESTEN
SSREXT
3V3_AUX
SSXO
SSXI
3V3_AUX
1_05V
PWREN1
OVCUR1
PWREN2
OVCUR2
PWREN3
OVCUR3
PWREN4
OVCUR4
SPISI
SPICK

SSREXT(NEC:RREF)
TESTEN(NEC:IC(L))
SSREXT R91177 6.04K_1%
TESTEN R91178 4.7K
GND

SSTX1+ C2243 0R
SSTX1- C2244 0R
SSTX2+ C2249 0R
SSTX2- C2251 0R
SSRX1+
SSRX1-
SSRX2+
SSRX2-
USBHP1+
USBHP1-
USBHP2+
USBHP2-
1_05V
3V3_AUX

SSTX1+
SSTX1-
VCCA10SSRX12
SSRX1+
SSRX1-
VCCA33SS12
USB2D1+
USB2D1-
VDD
SSTX2+
SSTX2-
VCCA10SSRX12
SSRX2+
SSRX2-
VCCA33SS12
USB2D2+
USB2D2-

SPICS#
SPISO
VSUS33
PONRST#
PEXCREQ#
VDD
PEXRX-
PEXRX+
NC
PEXTX-
PEXTX+
VCCA33PEX
PEXCLK-
PEXCLK+
PEXWAKE#
PEXRST#
SMI#

R91368 0R 50R_PCIE0_TXN [18]
R91369 0R 50R_PCIE0_TXP [18]
C2250 0.1uF 50R_PCIE0_RXN [18]
C2252 0.1uF 50R_PCIE0_RXP [18]
R91370 0R 50R_PCIE0_CKREFN [18]
R91371 0R 50R_PCIE0_CKREFP [18]
PEXWAKE
VL805_RST
SMI
TP183
C2261 10uF
GND

C2253 4.7uF
C2254 100nF
3V3_HUB

SSTX3+
SSTX3-
VCCA10SSRX34
SSRX3+
SSRX3-
VCCA33SS34
USB2D3+
USB2D3-
VDD
SSTX4+
SSTX4-
VCCA10SSRX34
SSRX4+
SSRX4-
VCCA33SS34
USB2D4+
USB2D4-
G1

C2268 0R
C2269 0R
C2270 0R
C2271 0R
1_05V
SSRX3+
SSRX3-
3V3_AUX
USBHP3+
USBHP3-
SSRX4+
SSRX4-
USBHP4+
USBHP4-
SSTX3+ SSTX3-
SSTX4+ SSTX4-
GND

1V05
[4] 1_05V
FB10 FB120R
C2278 0.1uF
C2279 4.7uF
GND

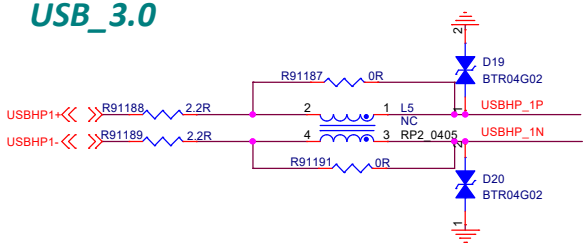
3V3_AUX
R91169 10K
SPI Flash ROM
W25X10CLSNIG
U15
SPICS
SPISO
CE#
SO
WP#
VSS
VDD
HOLD#
SCK
SI
GND
SPICK
SPISI
3V3_AUX
3V3_AUX
GND

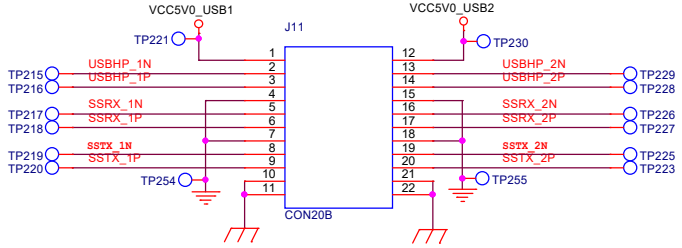
VL805_RST R91171 0R PCIE0_PERSTN_GPIO26
PEXCREQ R91172 0R PCIE0_PRSN_GPIO27
R91173 10K 3V3_AUX
PEXWAKE R91174 0R PCIE0_PWREN_H_GPIO32
R91175 10K 3V3_AUX
SMI R91176 10K
VCC_3V3_SY FB9 FB120R 3V3_AUX

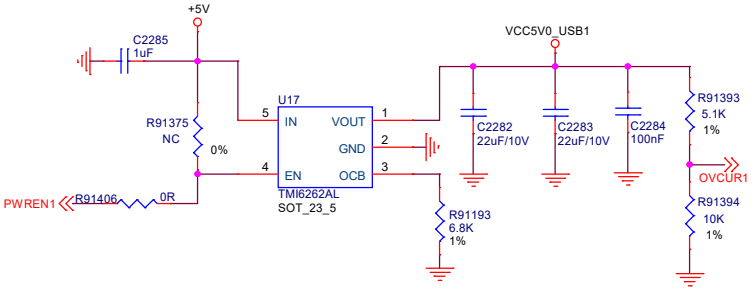
StarFive 赛昉科技

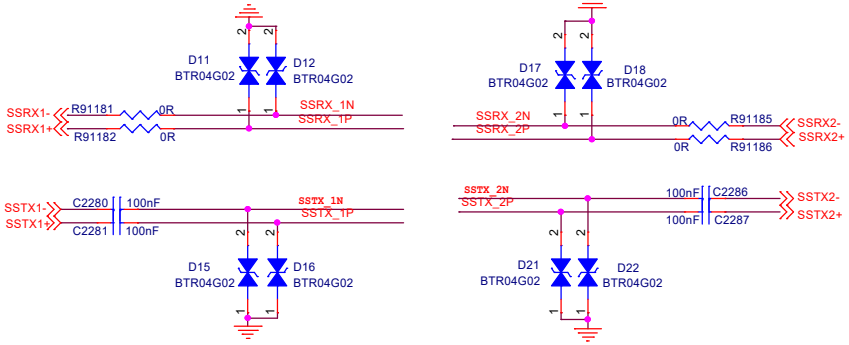
Title	VisionFive 2	
Size B	Document Number VL805 QFN68	Rev V1.2A
Date: Wednesday, December 14, 2022	Sheet 16 of 23	

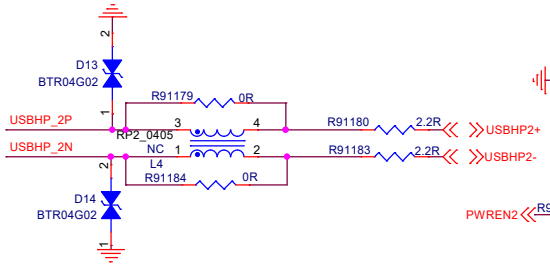
USB_3.0

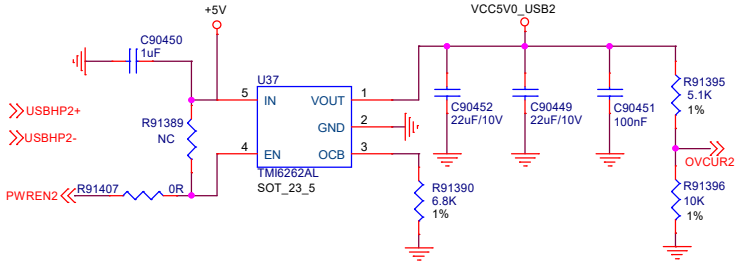


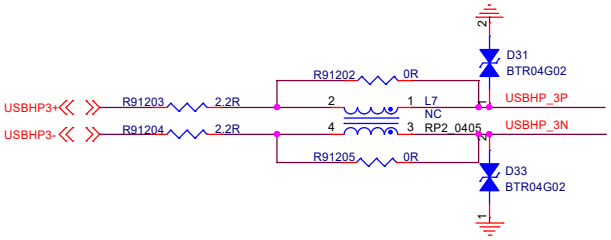


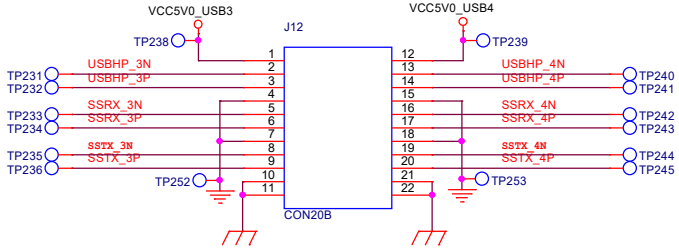


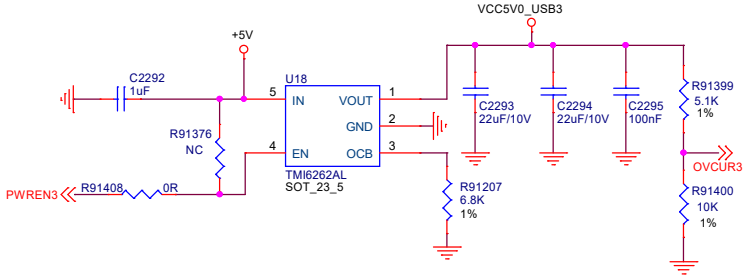


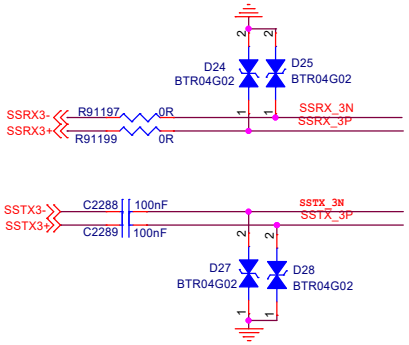


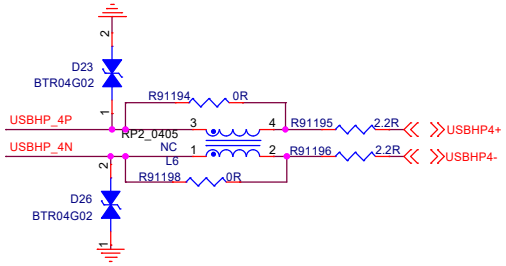


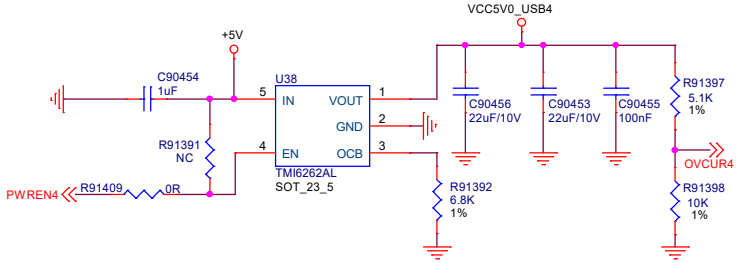










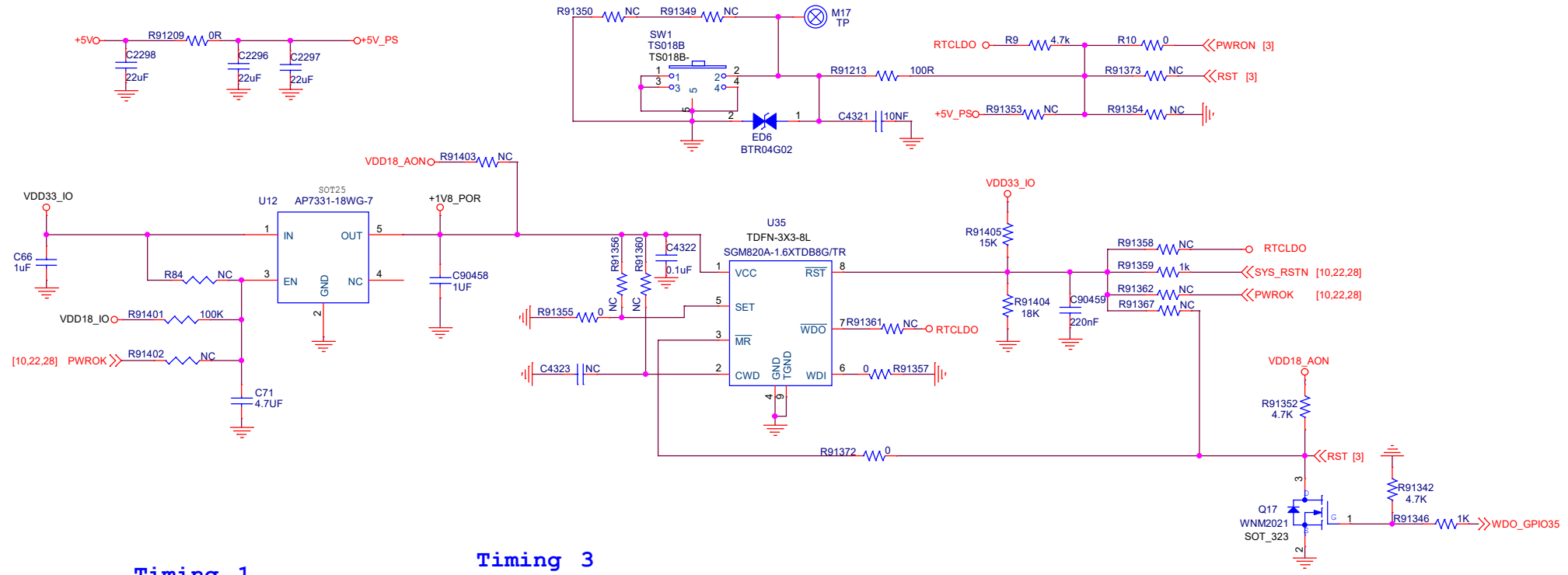


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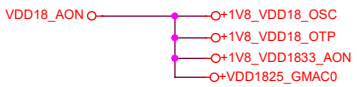
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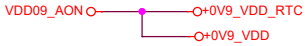
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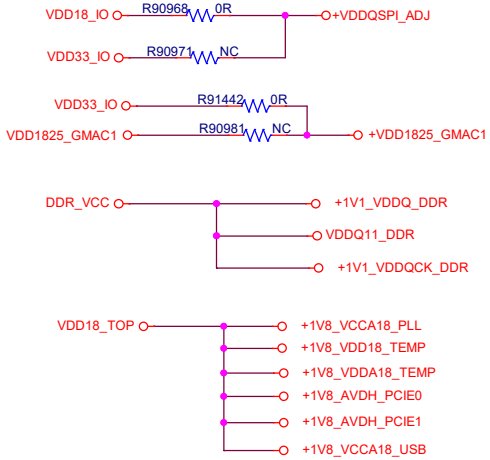


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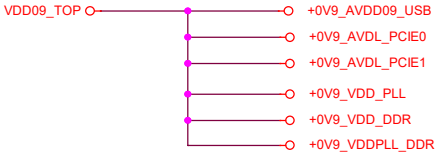




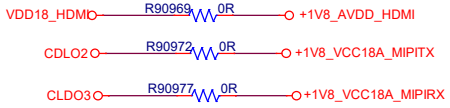
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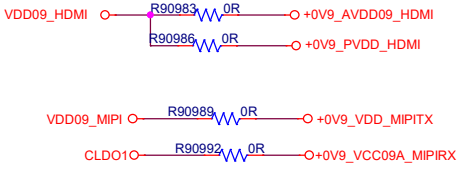
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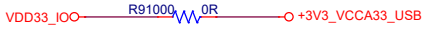
Timing 5



Timing 6



Timing 7



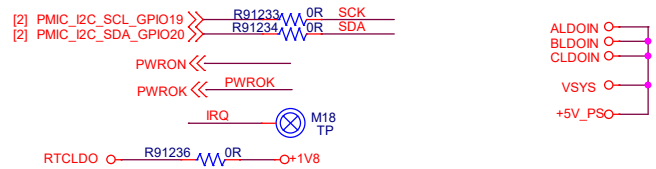
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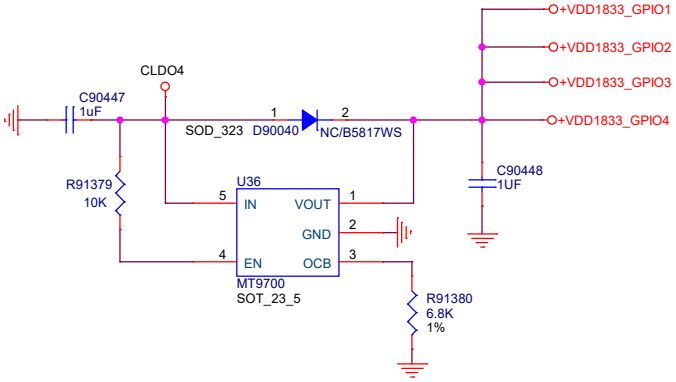
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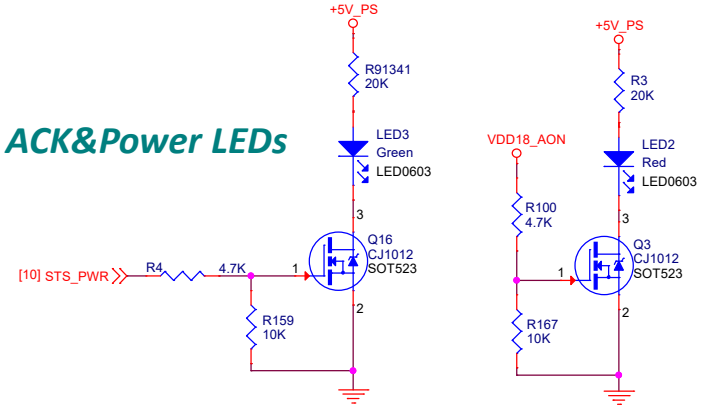
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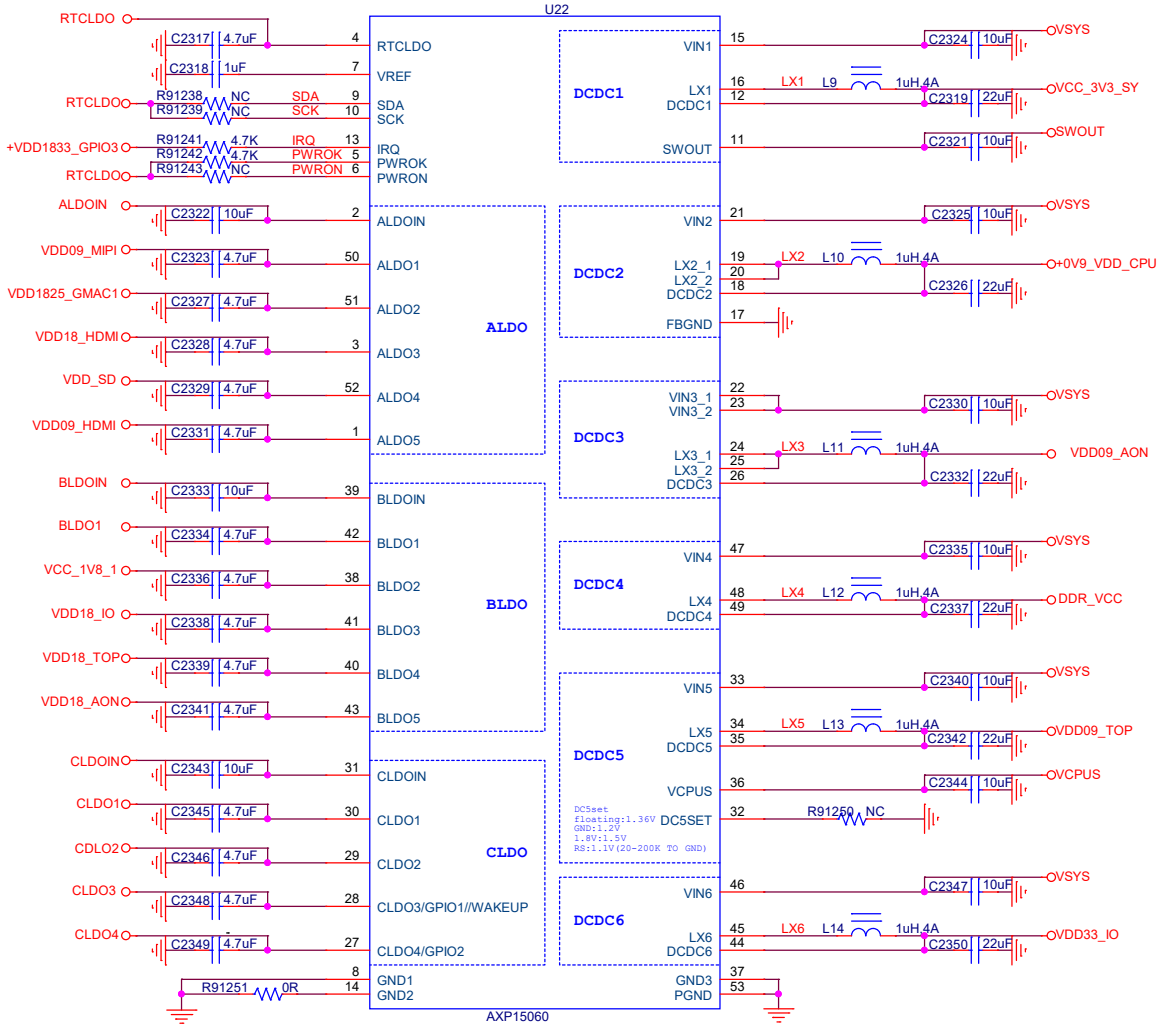
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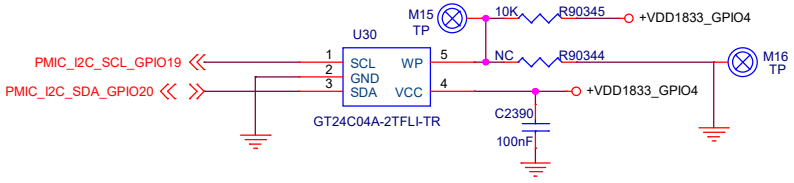




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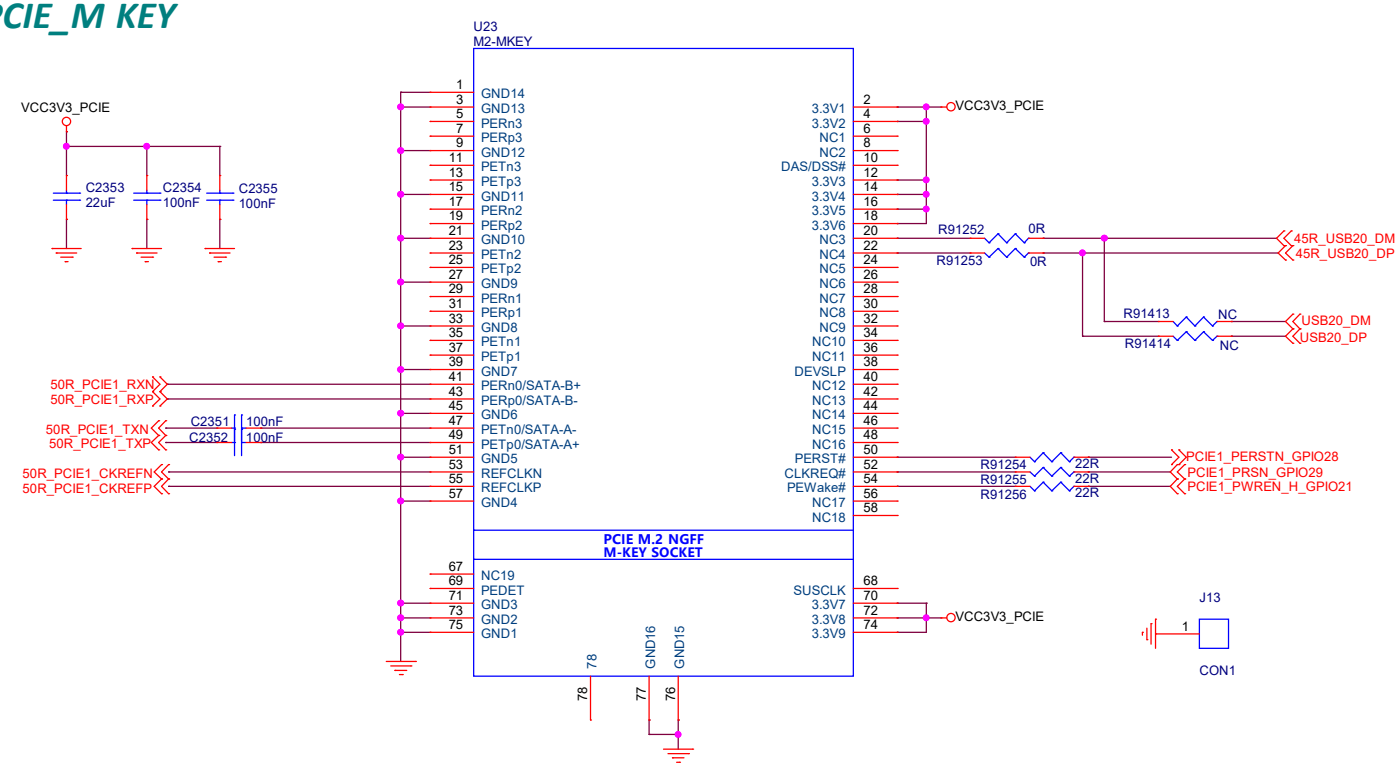
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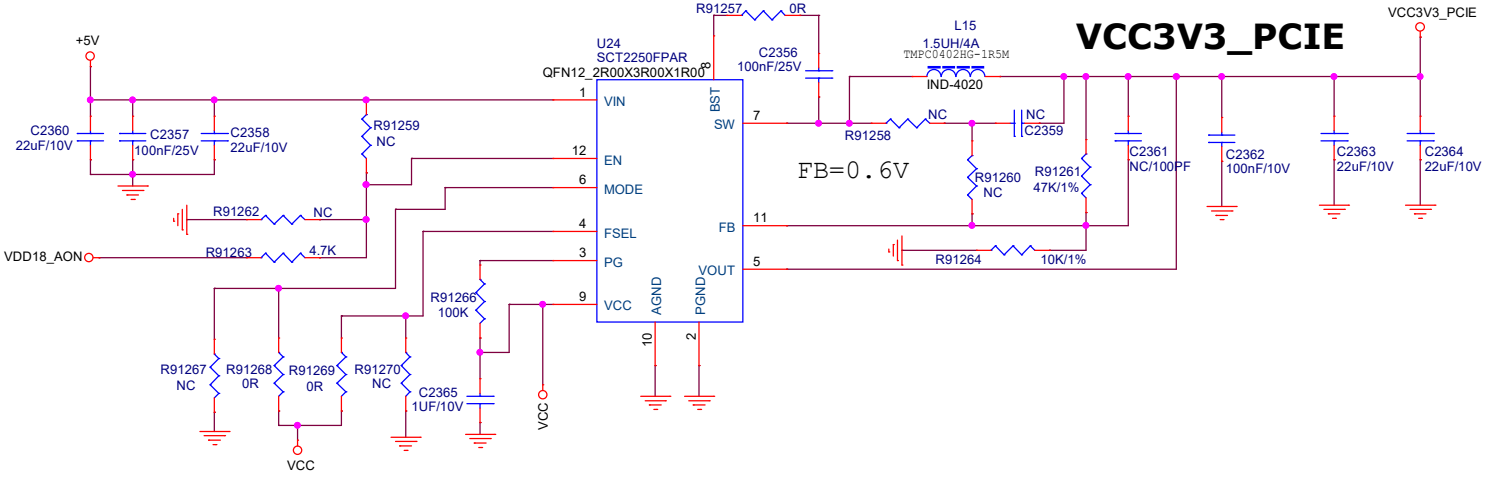
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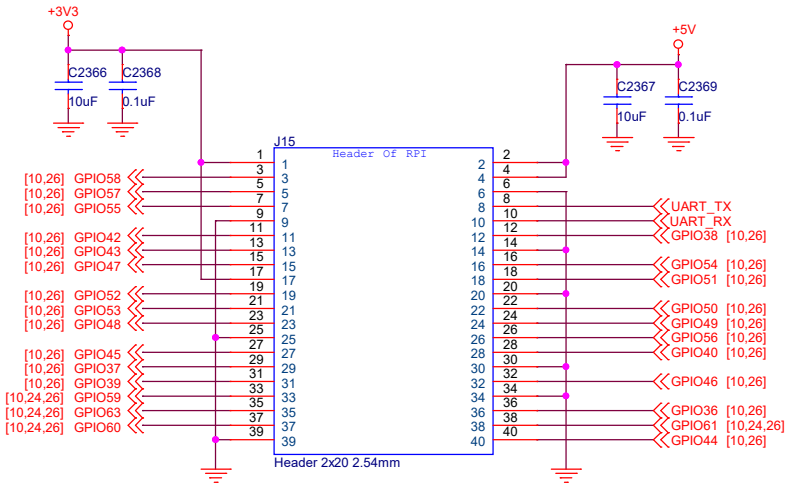
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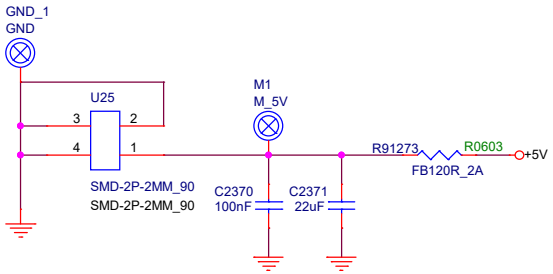


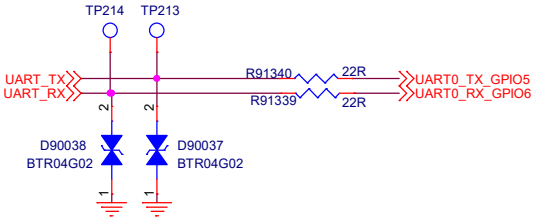


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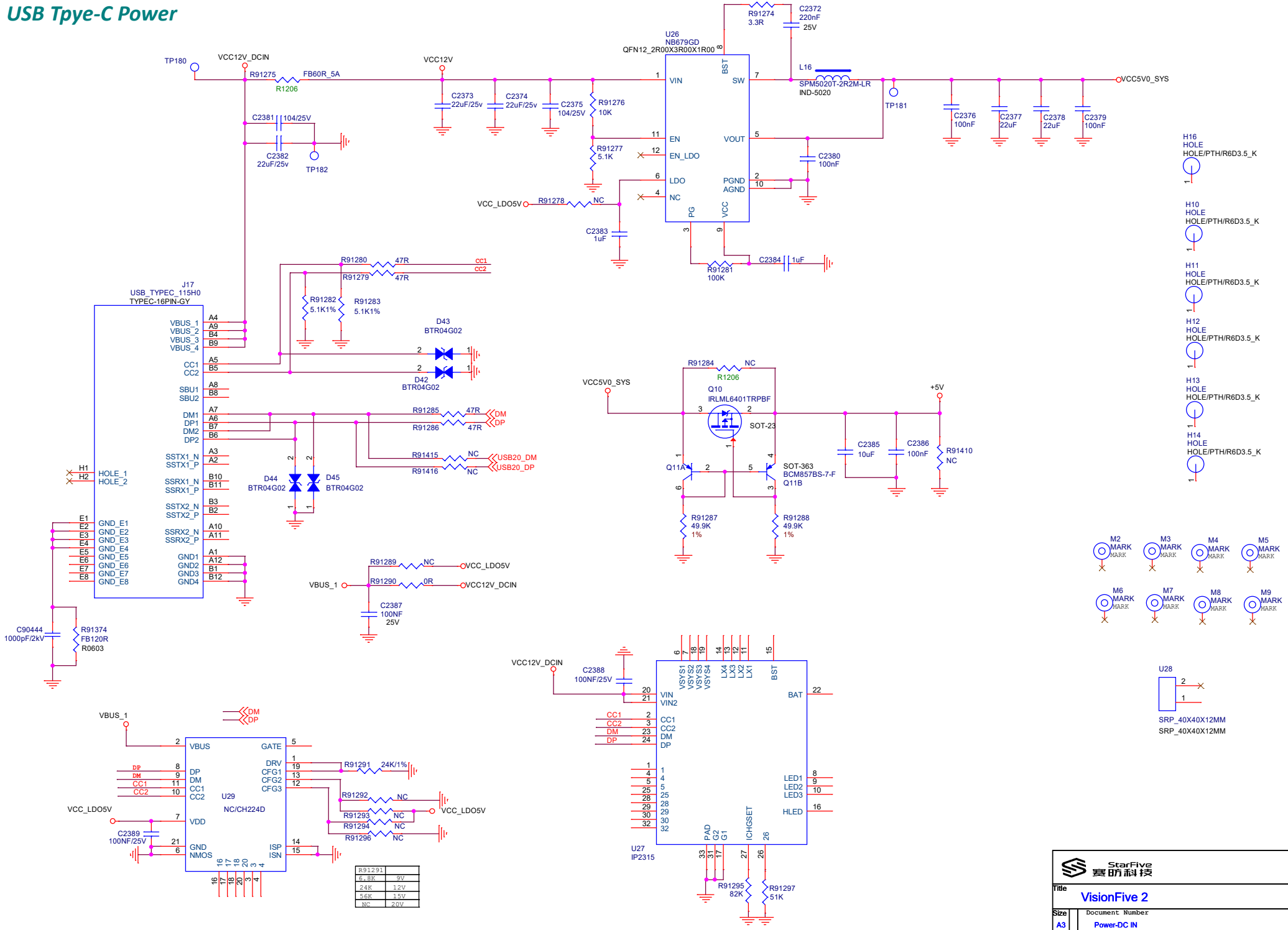




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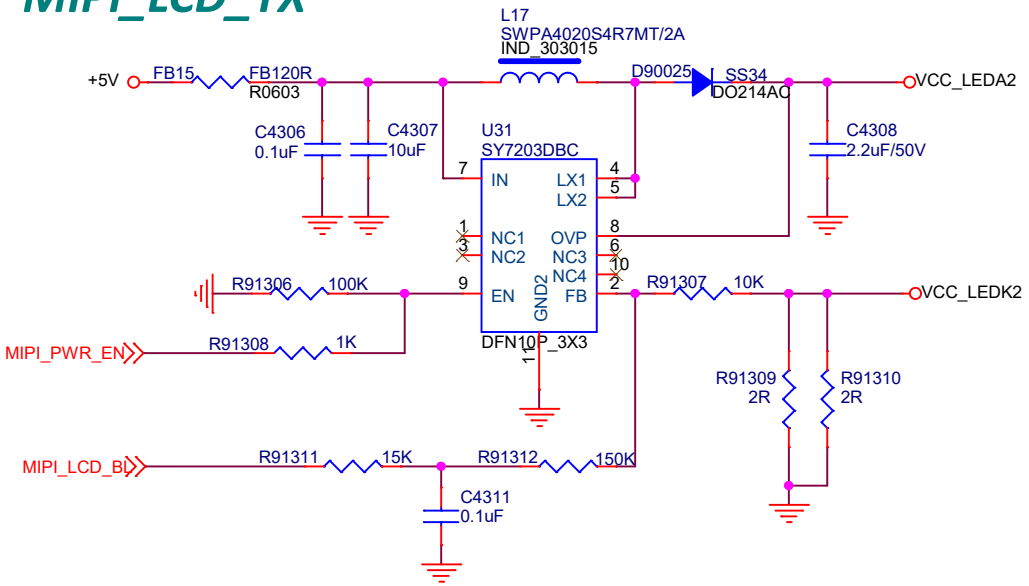
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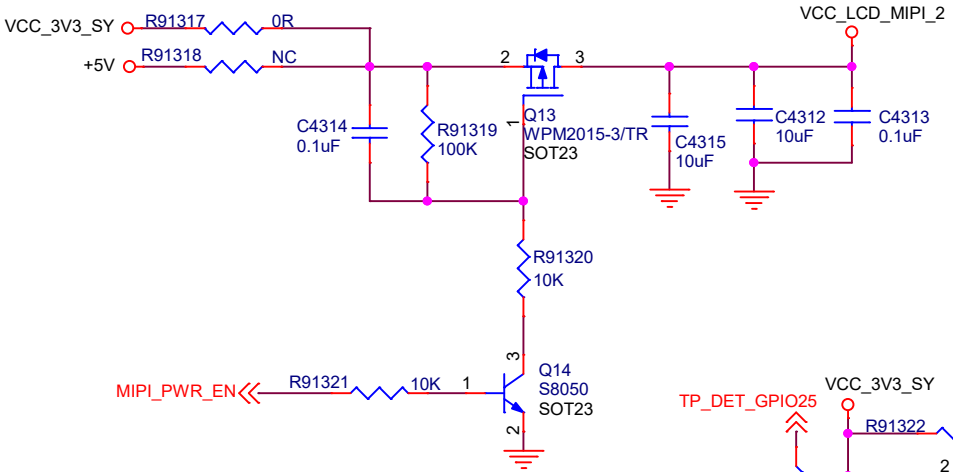
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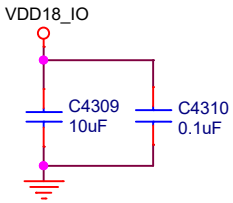


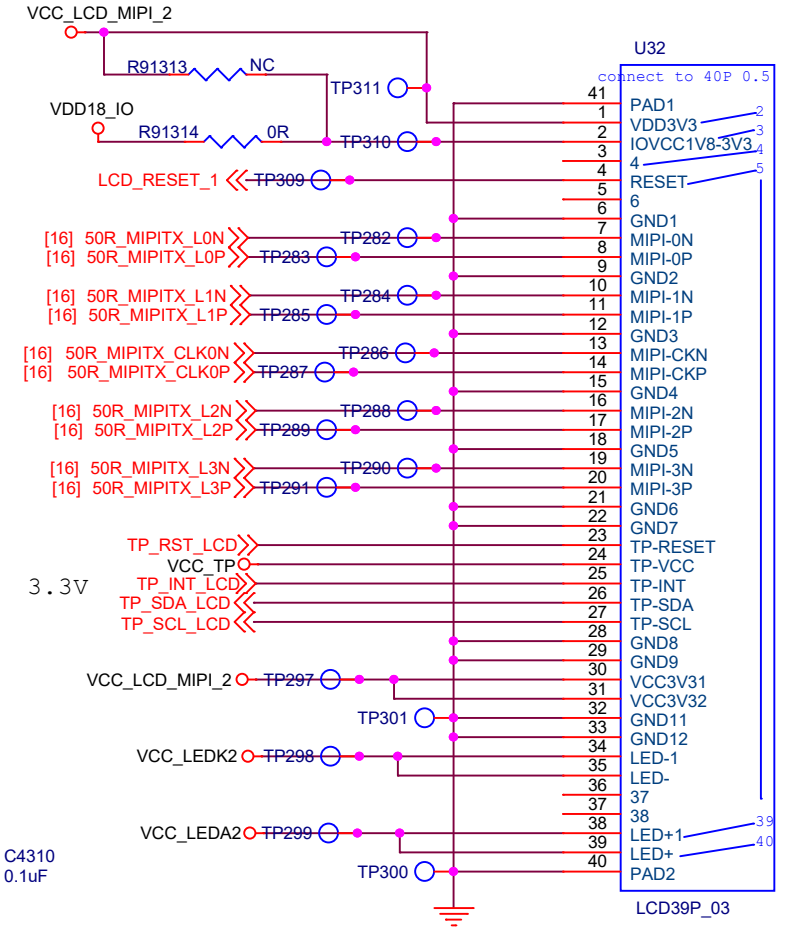
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MIPI_LCD_TX

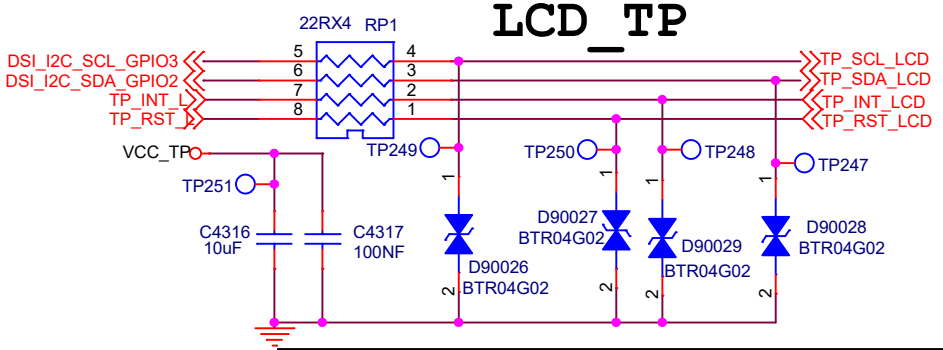




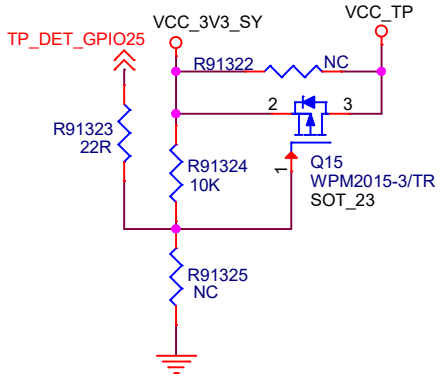




LCD_TP







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