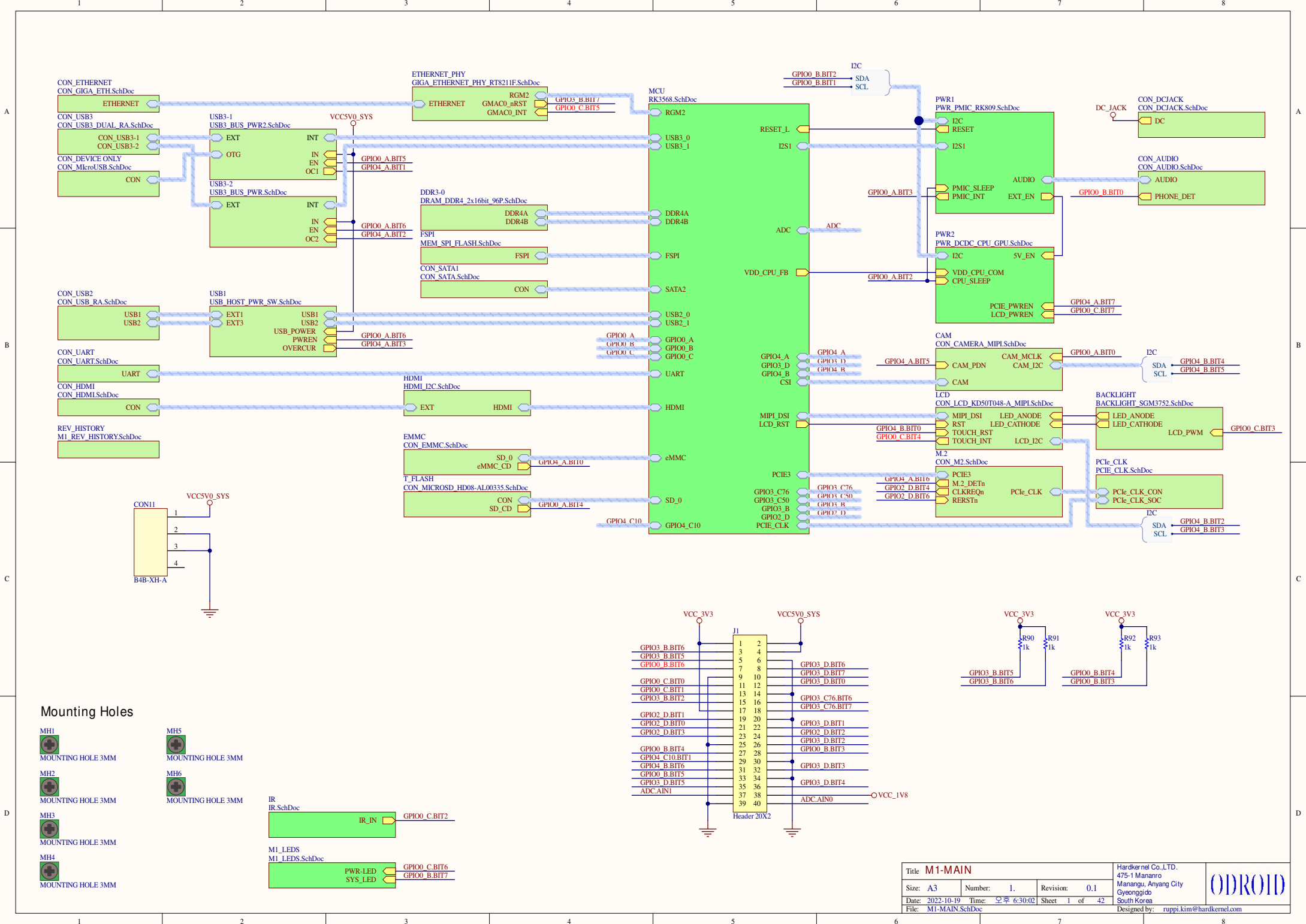
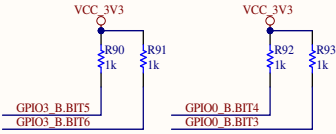
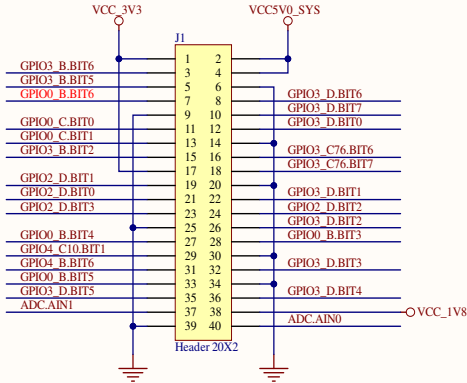
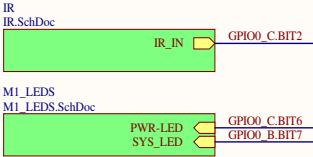


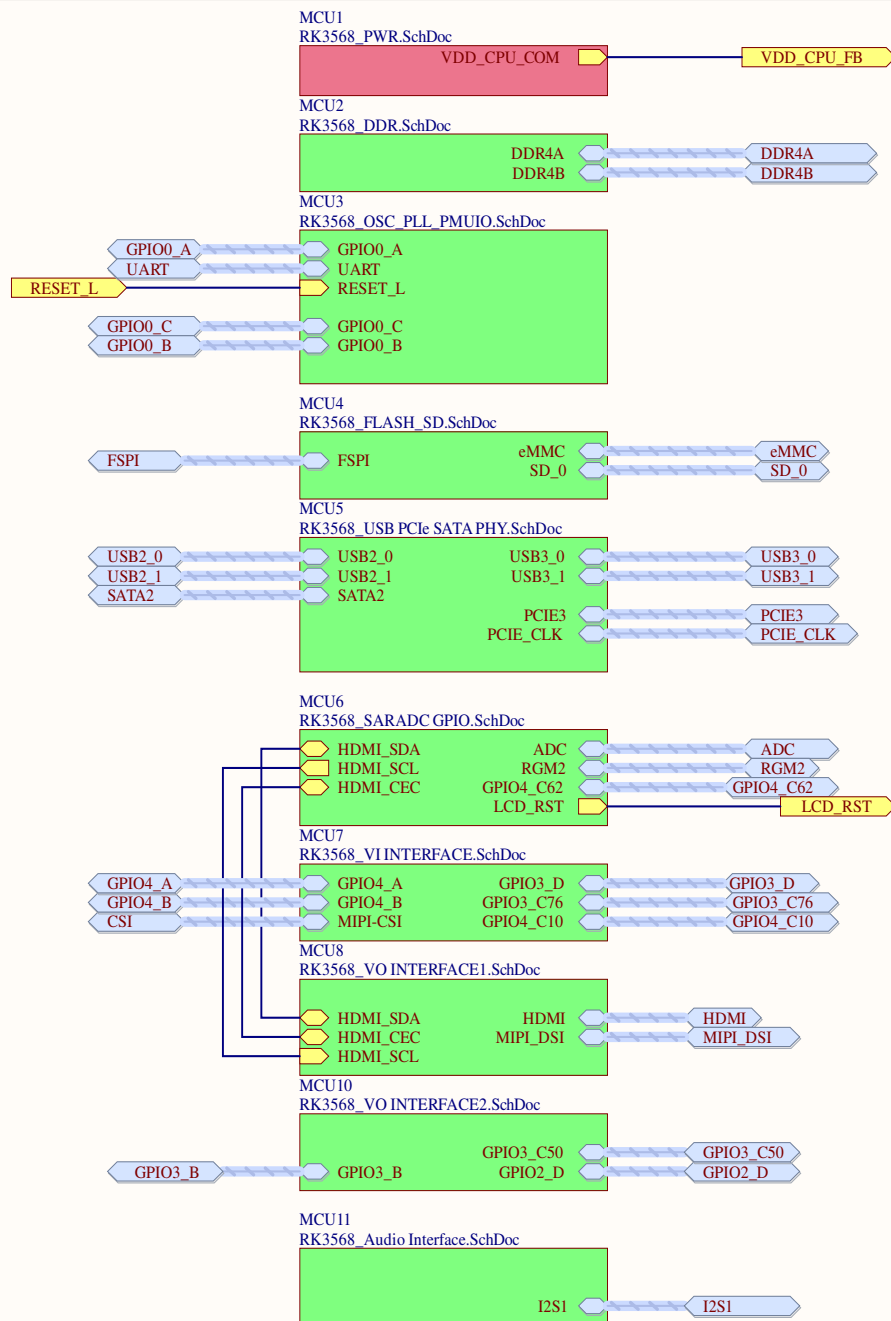


Mounting Holes

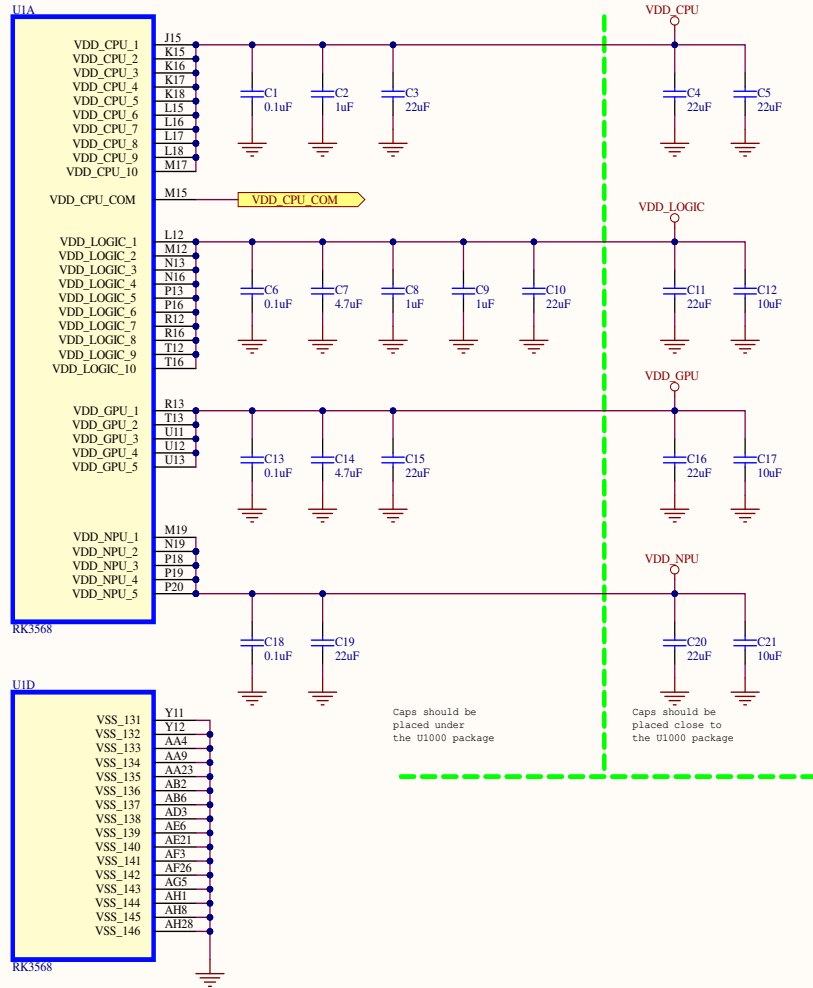


Title M1-MAIN			Hardkernel Co.,LTD.	
Size: A3	Number: 1.	Revision: 0.1	475-1 Mananro	
Date: 2022.10.19	Time: 오후 6:30:02	Sheet 1 of 42	Manangu, Anyang City	
File: M1-MAIN.SchDoc			Gyeongido	
			South Korea	
			Designed by: ruppi.kim@hardkernel.com	



Title **MCU RK3568**Size: **A4**Number: **2.**Revision: **0.1**Date: **2022-10-19** Time: **오후 6:30:03** Sheet **2** of **42**File: **RK3568.SchDoc**Hardkernel Co.,LTD.
475-1 Mananro
Manangu, Anyang City
Gyeonggi-do
South KoreaDesigned by: **ruppi.kim@hardkernel.com****ODROID**

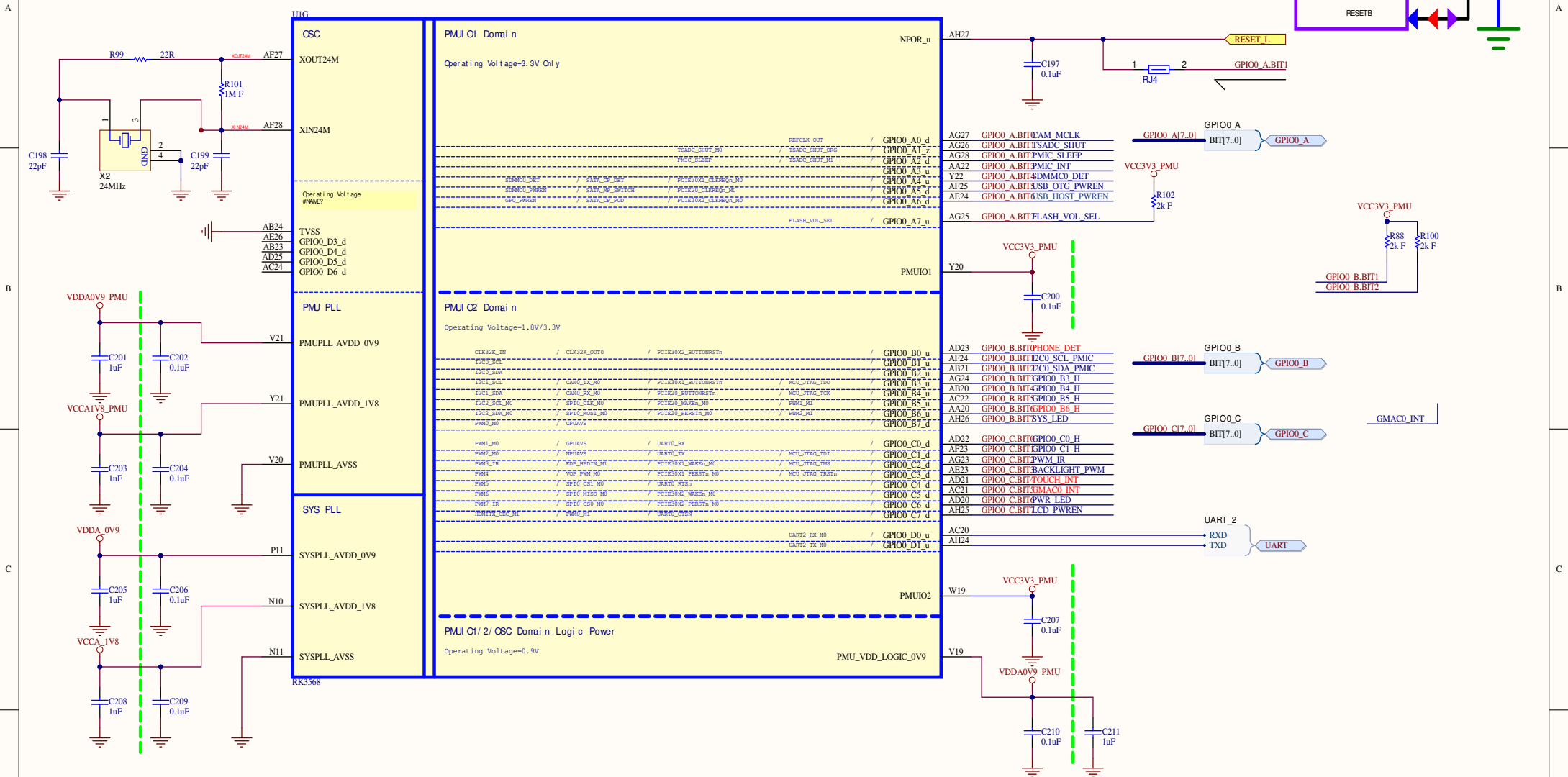
RK3568_ABCDE (Power &Gnd)



U1F

RK3568

RK3568_G OSC/ PLL/ PMU I O1/ 2)

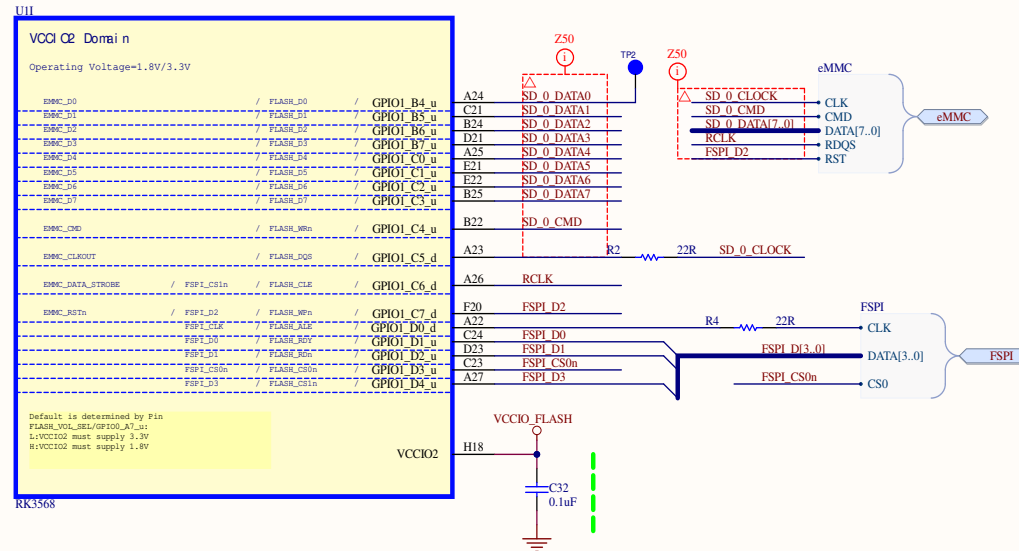


Not e:

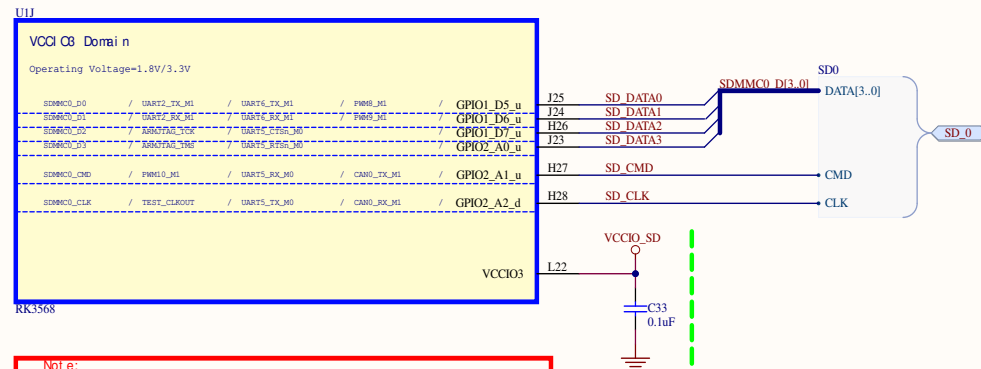
Caps of between dashed green lines and U1000 should be placed under the U1000 package. Other caps should be placed close to the U1000 package

Rockchip Confidential

RK3568_I (VCCI C2 Domai n)

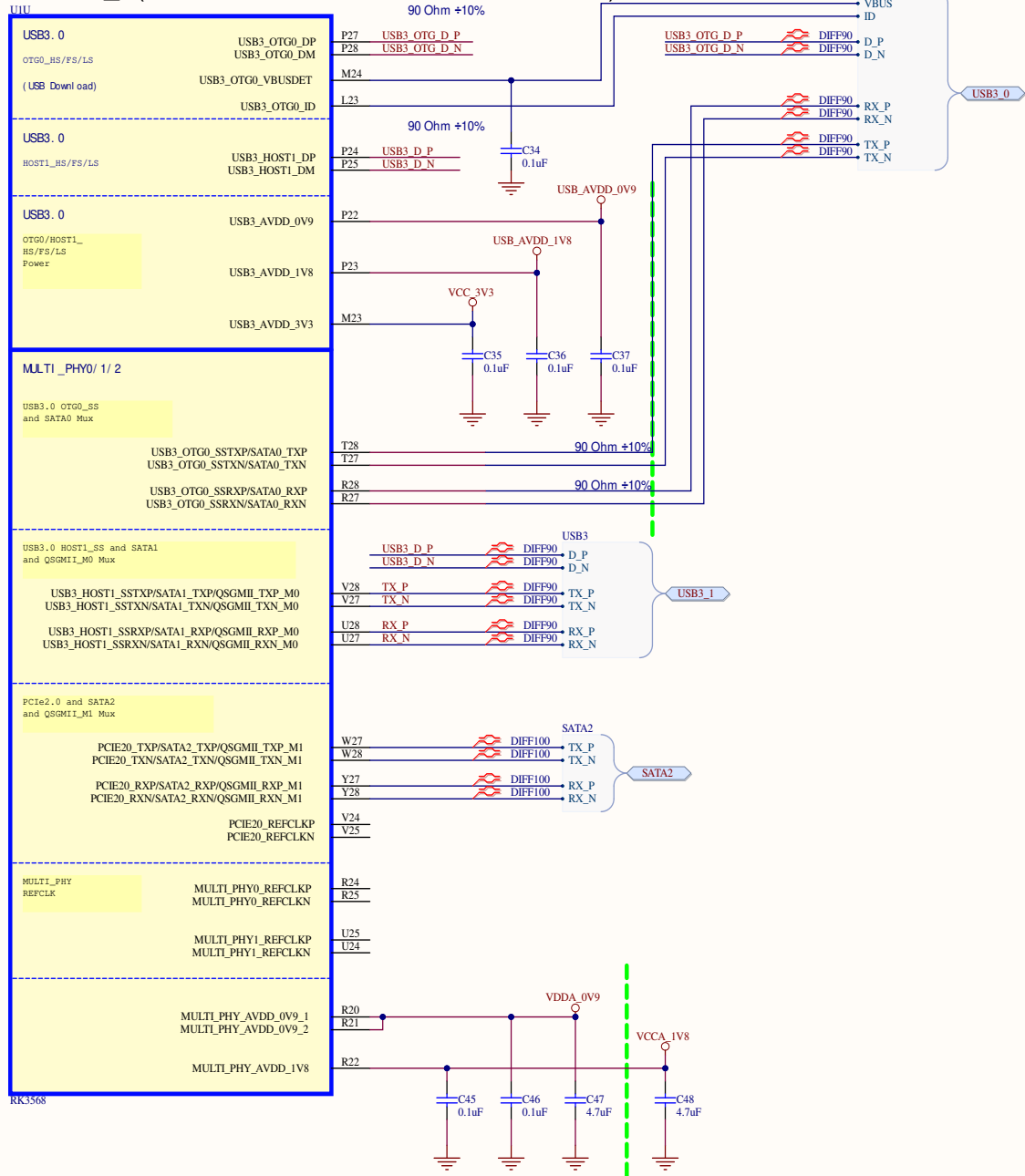


RK3568_J (VCCI C3 Domai n)



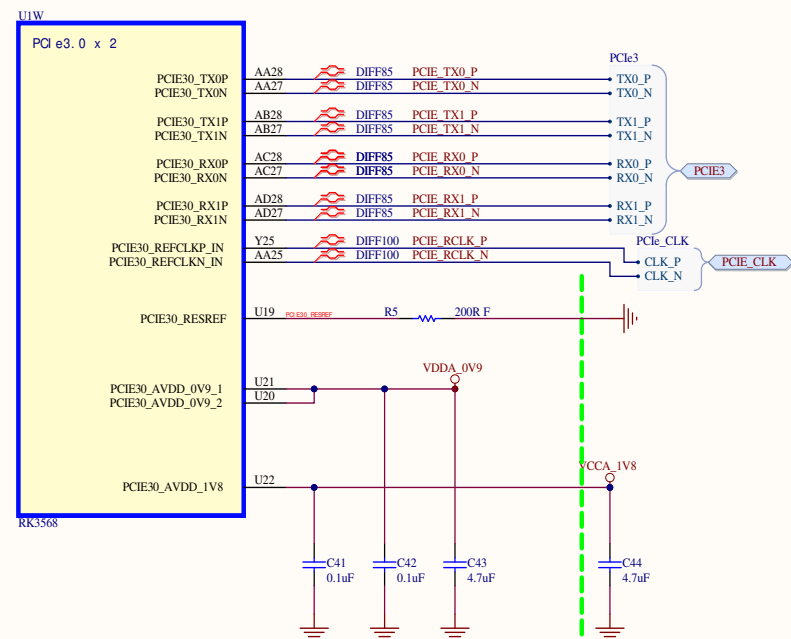
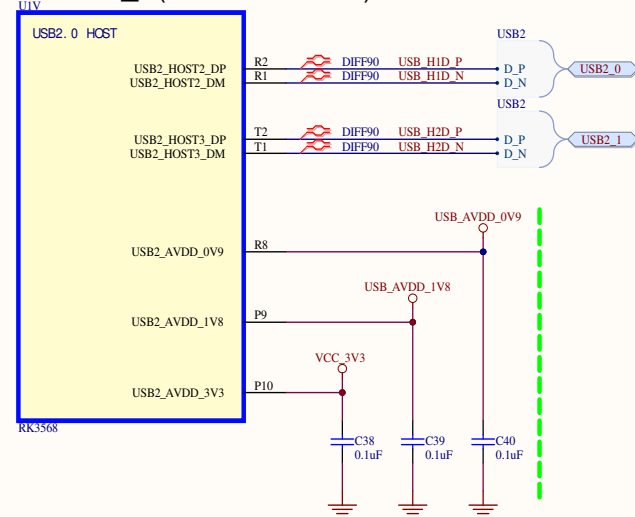
Not e:

Caps of between dashed green lines and U1000 should be placed under the U1000 package

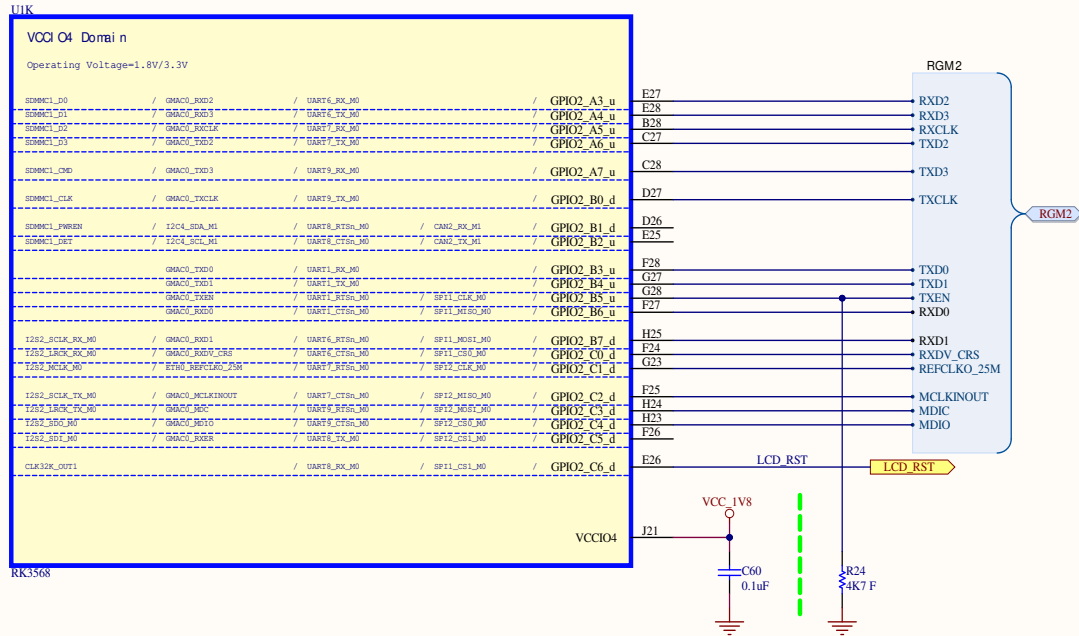


Not e:

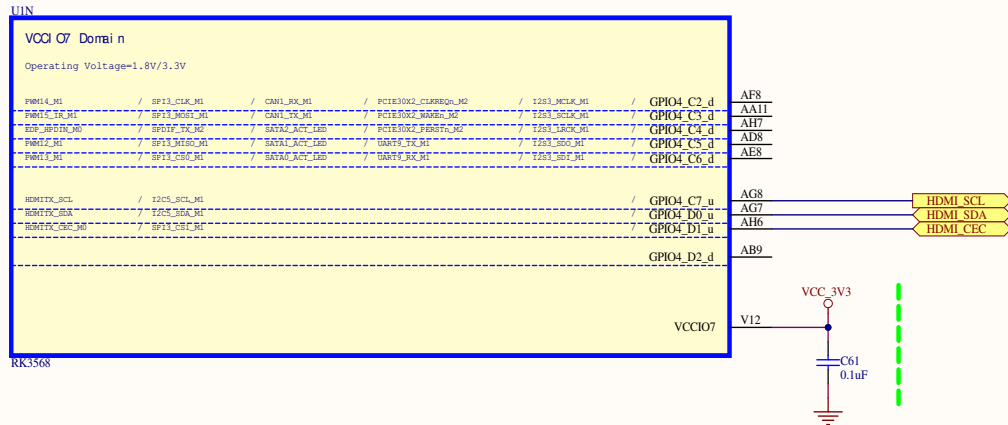
Caps of between dashed green lines and U1000
should be placed under the U1000 package.
Other caps should be placed close to the U1000 package



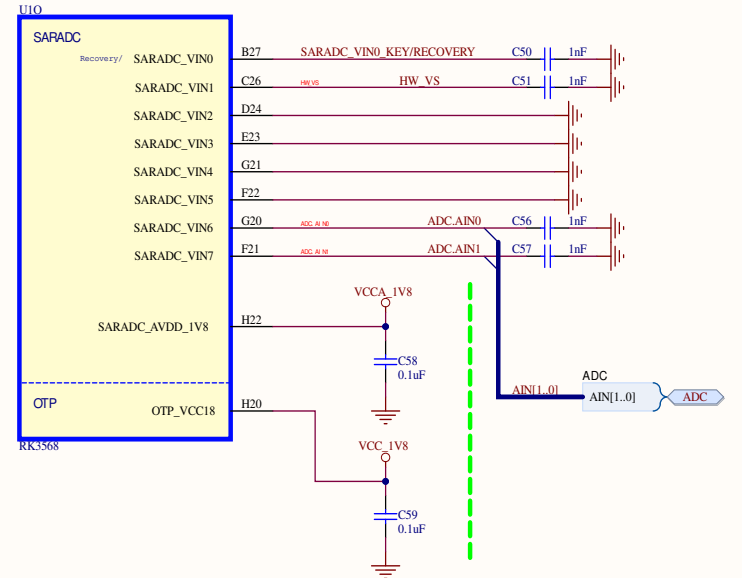
RK3568_K(VCCI 04 Domai n)



RK3568_N(VCCI 07 Domai n)



RK3568_Q(SARADC/ OTP)



Not e:
Must be mounted

VCC 1V8

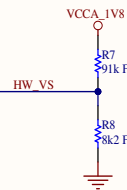
R6 10k

SARADC_VIN0 KEY/RECOVERY

SARADC_VIN0 KEY/RECOVERY

TP7 TP_SMD_05

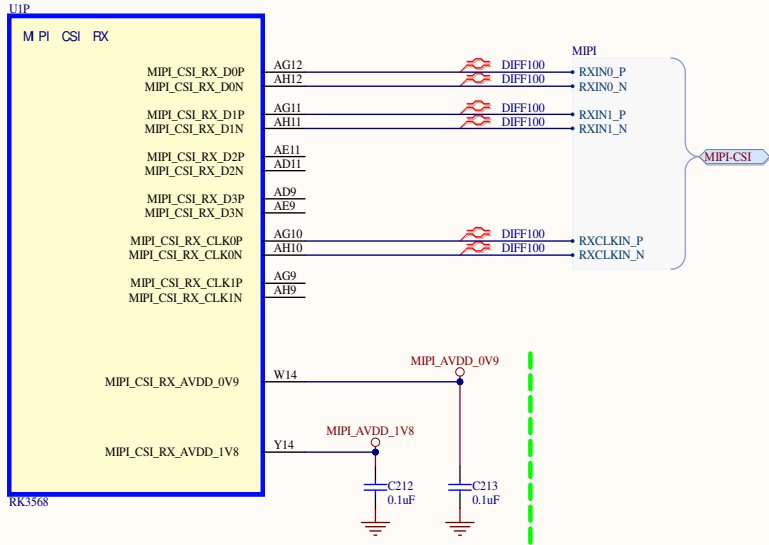
TP8 TP_SMD_05



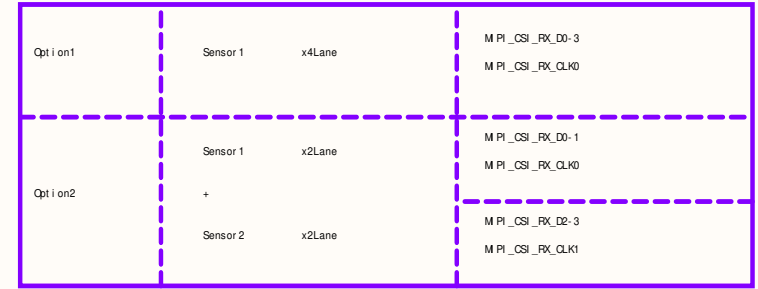
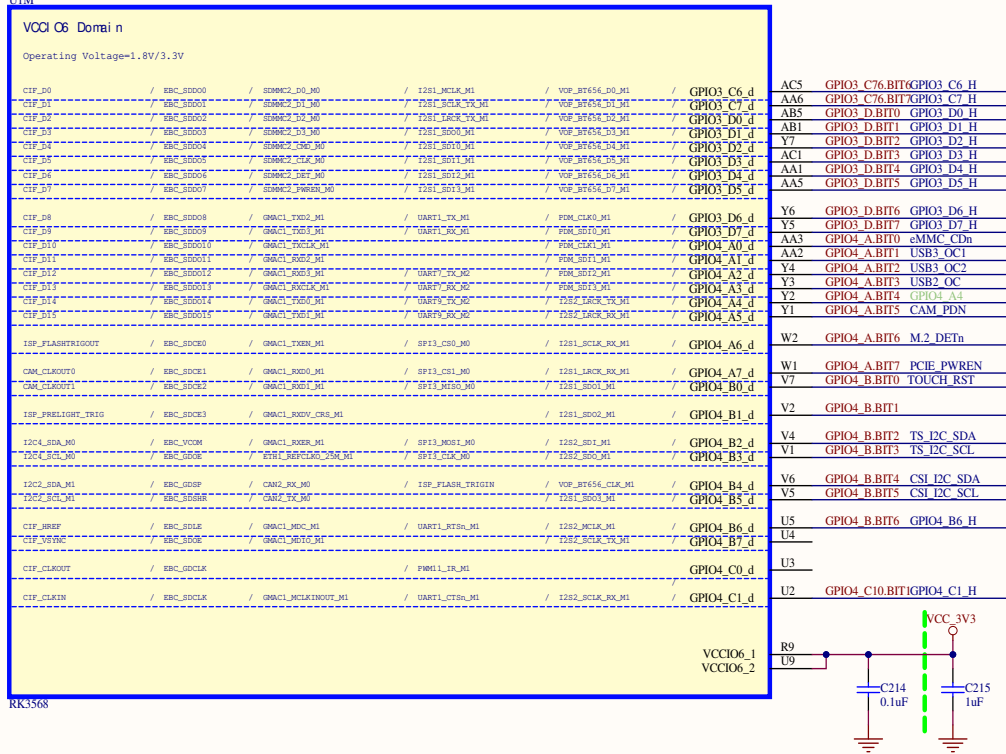
ADC Data	0	1	2	3	4	5	6	7	8	9	10	11	12
Full up	X	0.5K	0.5K	0.5K	0.5K	0.5K	0.5K	0.5K	0.5K	0.5K	0.5K	0.5K	0.5K
Full down	100K	0.5K	0.5K	0.5K	0.5K	0.5K	0.5K	0.5K	0.5K	0.5K	0.5K	0.5K	X
Not e:													

Not e:
Caps of between dashed green lines and U1000 should be placed under the U1000 package

RK3568_P(M PI _CSI _RX)

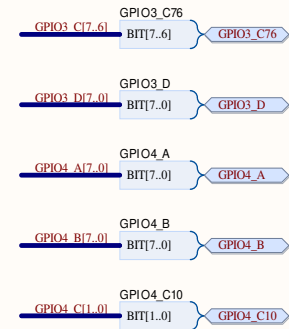


RK3568_M(VCCI O6 Domai n)



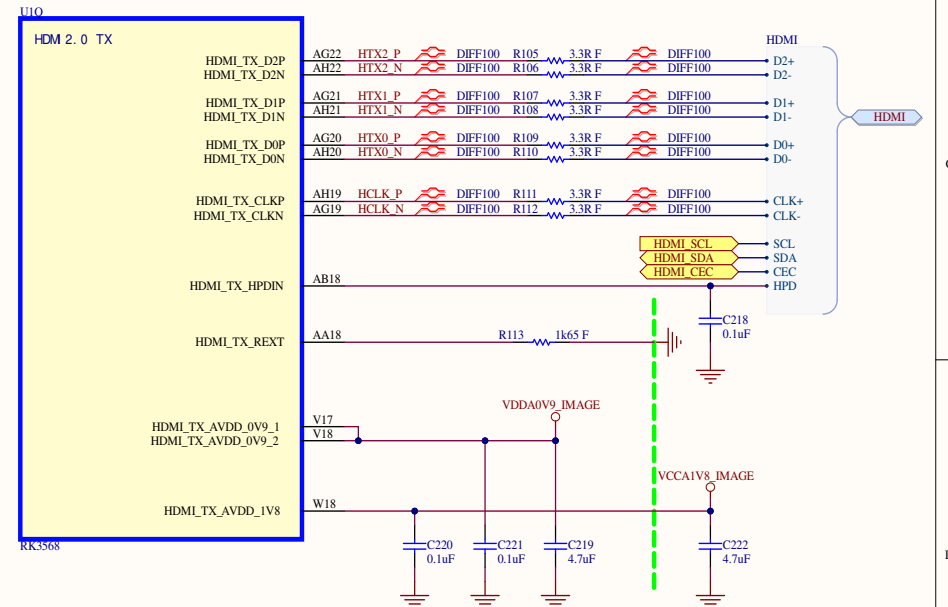
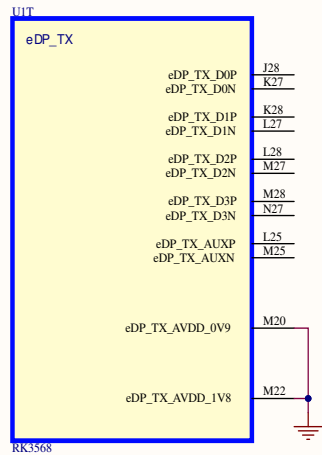
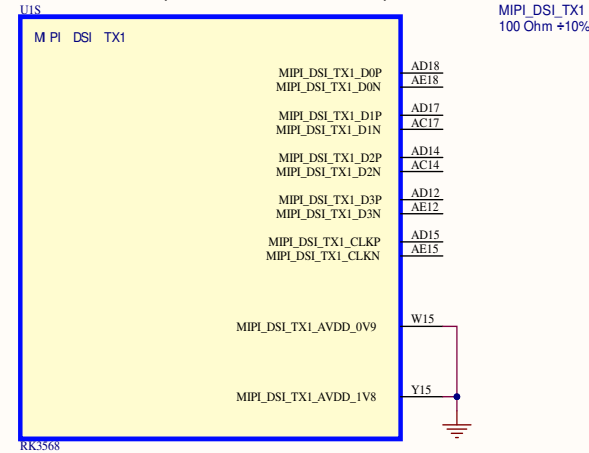
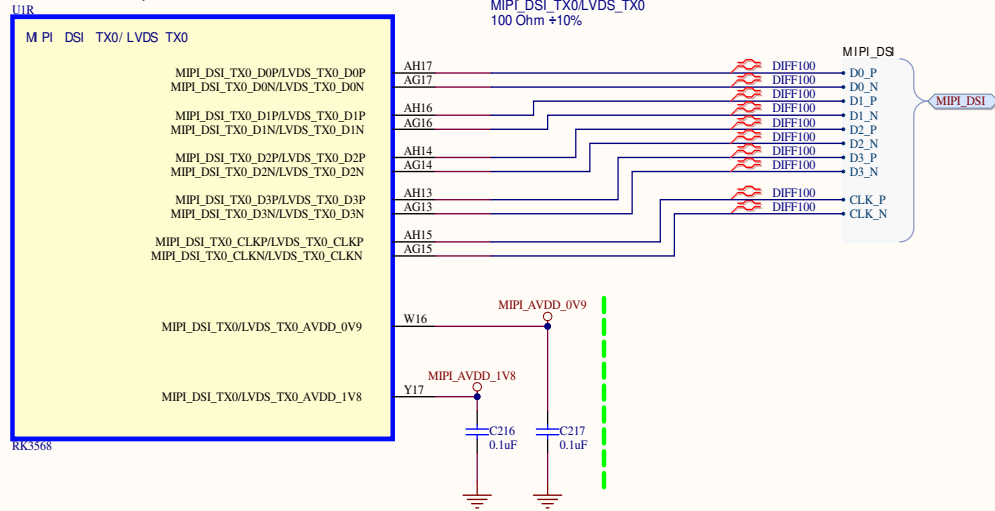
Mbde	16bi t	12bi t	10bi t	8bi t
C/F_D0	D0	--	--	--
C/F_D1	D1	--	--	--
C/F_D2	D2	--	--	--
C/F_D3	D3	--	--	--
C/F_D4	D4	D0	--	--
C/F_D5	D5	D1	--	--
C/F_D6	D6	D2	D0	--
C/F_D7	D7	D3	D1	--
C/F_D8	D8	D4	D2	D0
C/F_D9	D9	D5	D3	D1
C/F_D10	D10	D6	D4	D2
C/F_D11	D11	D7	D5	D3
C/F_D12	D12	D8	D6	D4
C/F_D13	D13	D9	D7	D5
C/F_D14	D14	D10	D8	D6
C/F_D15	D15	D11	D9	D7

Support BT601 YCbCr 422 8bit input
 Support BT656 YCbCr 422 8bit input
 Support RAW 8/10/12bit input
 Support BT1120 YCbCr 422 8/10/12/16bit input, single/dual-edge sampling
 Support 2/4 mixed BT656/BT1120 YCbCr 422 8bit input

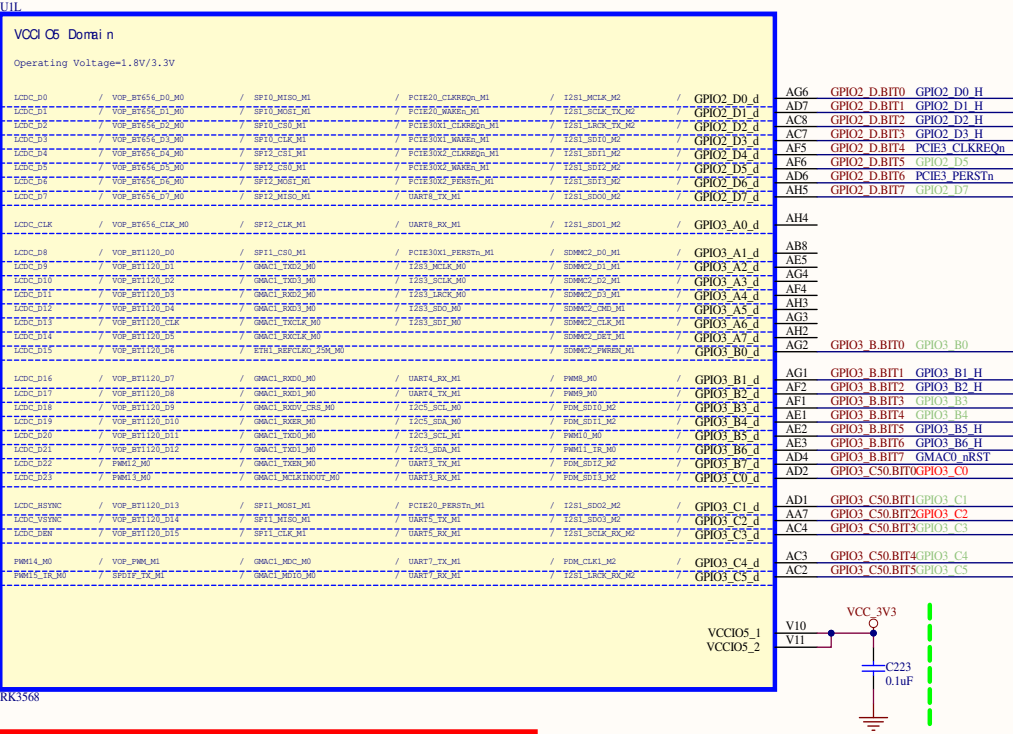


Note:

Caps of between dashed green lines and U1000 should be placed under the U1000 package. Other caps should be placed close to the U1000 package



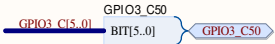
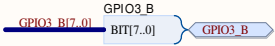
RK3568_L(VCCI C5 Domai n)



RK3568

Not e:

Caps of between dashed green lines and U1000 should be placed under the U1000 package



RK3568_H(VCCI O1 Domai n)

UIH

VCCI O1 Domai n

Operating Voltage=1.8V/3.3V

I2C3_SDA_M0	/ UART3_RX_M0	/ CAN1_RX_M0	/ AUDIOPWM_LOUT_P	/ ACODEC_ADC_DATA	/ GPIO1_A0_u	D18
I2C3_SCL_M0	/ UART3_TX_M0	/ CAN1_TX_M0	/ AUDIOPWM_LOUT_N	/ ACODEC_ADC_CLK	/ GPIO1_A1_u	E18
I2S1_MCLK_M0	/ UART3_RTSn_M0	/ SCR_CLK	/ PCIE30X1_PERSTn_M2		/ GPIO1_A2_d	A19
I2S1_SCLK_TX_M0	/ UART3_CTSn_M0	/ SCR_IO	/ PCIE30X1_WAKEn_M2	/ ACODEC_DAC_CLK	/ GPIO1_A3_d	B19
I2S1_SCLK_RX_M0	/ UART3_RX_M0	/ PDM_CLKn_M0	/ SPDIF_TX_M0		/ GPIO1_A4_d	F18
I2S1_LRCK_TX_M0	/ UART4_RTSn_M0	/ SCR_RST	/ PCIE30X1_CLKREQn_M2	/ ACODEC_DAC_SYNC	/ GPIO1_A5_d	A20
I2S1_LRCK_RX_M0	/ UART4_TX_M0	/ PDM_CLK0_M0	/ AUDIOPWM_ROUT_P		/ GPIO1_A6_d	C20
I2S1_SDO0_M0	/ UART4_CTSn_M0	/ SCR_DET	/ AUDIOPWM_ROUT_N	/ ACODEC_DAC_DATA1	/ GPIO1_A7_d	B20
I2S1_SDO1_M0	/ I2S1_SDI3_M0	/ PDM_SDI3_M0	/ PCIE20_CLKREQn_M2	/ ACODEC_DAC_DATA0	/ GPIO1_B0_d	D20
I2S1_SDO2_M0	/ I2S1_SDI2_M0	/ PDM_SDI2_M0	/ PCIE20_WAKEn_M2	/ ACODEC_ADC_SYNC	/ GPIO1_B1_d	E20
I2S1_SDO3_M0	/ I2S1_SDI1_M0	/ PDM_SDI1_M0	/ PCIE20_PERSTn_M2		/ GPIO1_B2_d	A21
	/ I2S1_SDI0_M0	/ PDM_SDI0_M0			/ GPIO1_B3_d	B21

RK3568

VCCIO1

VCCIO_ACODEC

H17

C49
0.1uF

I2S
MCLK
SCLK
LRCK
SDO
SDI

I2S1

Not e:

Caps of between dashed green lines and U1000 should be placed under the U1000 package

Title RK3568_Audio Interface

Size: A4

Number: 13.

Revision: 0.1

Date: 2022-10-19 Time: 오후 6:30:11

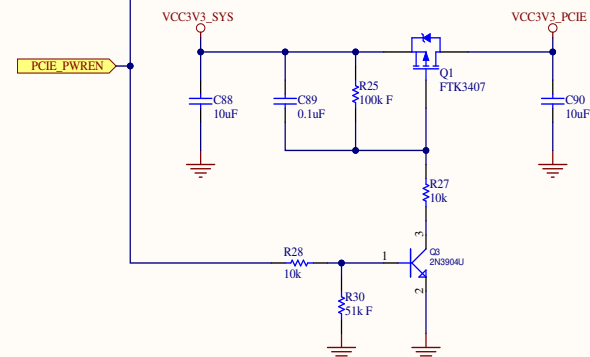
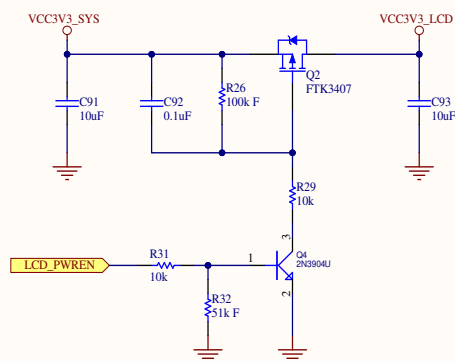
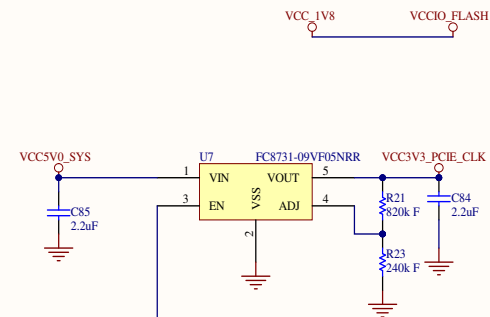
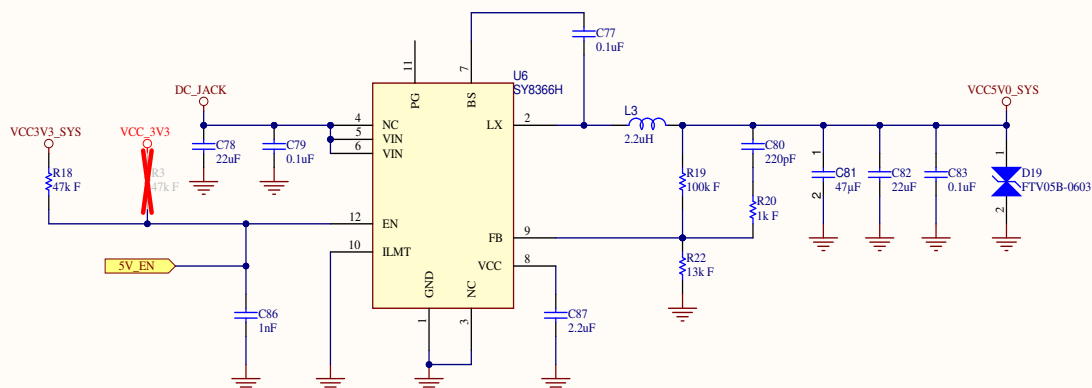
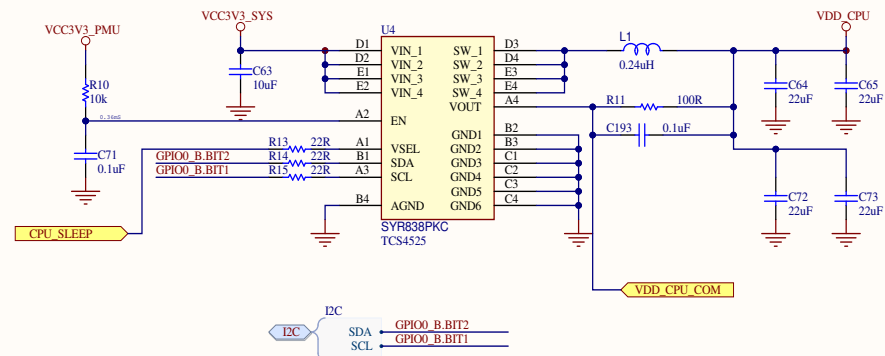
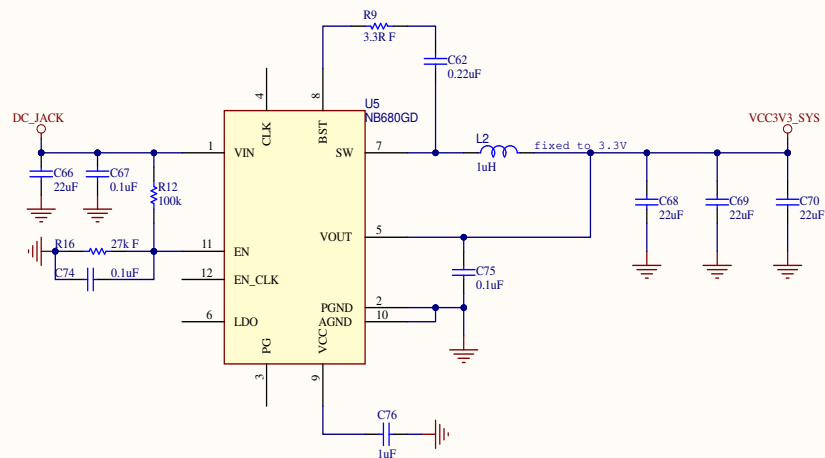
Sheet 13 of 42

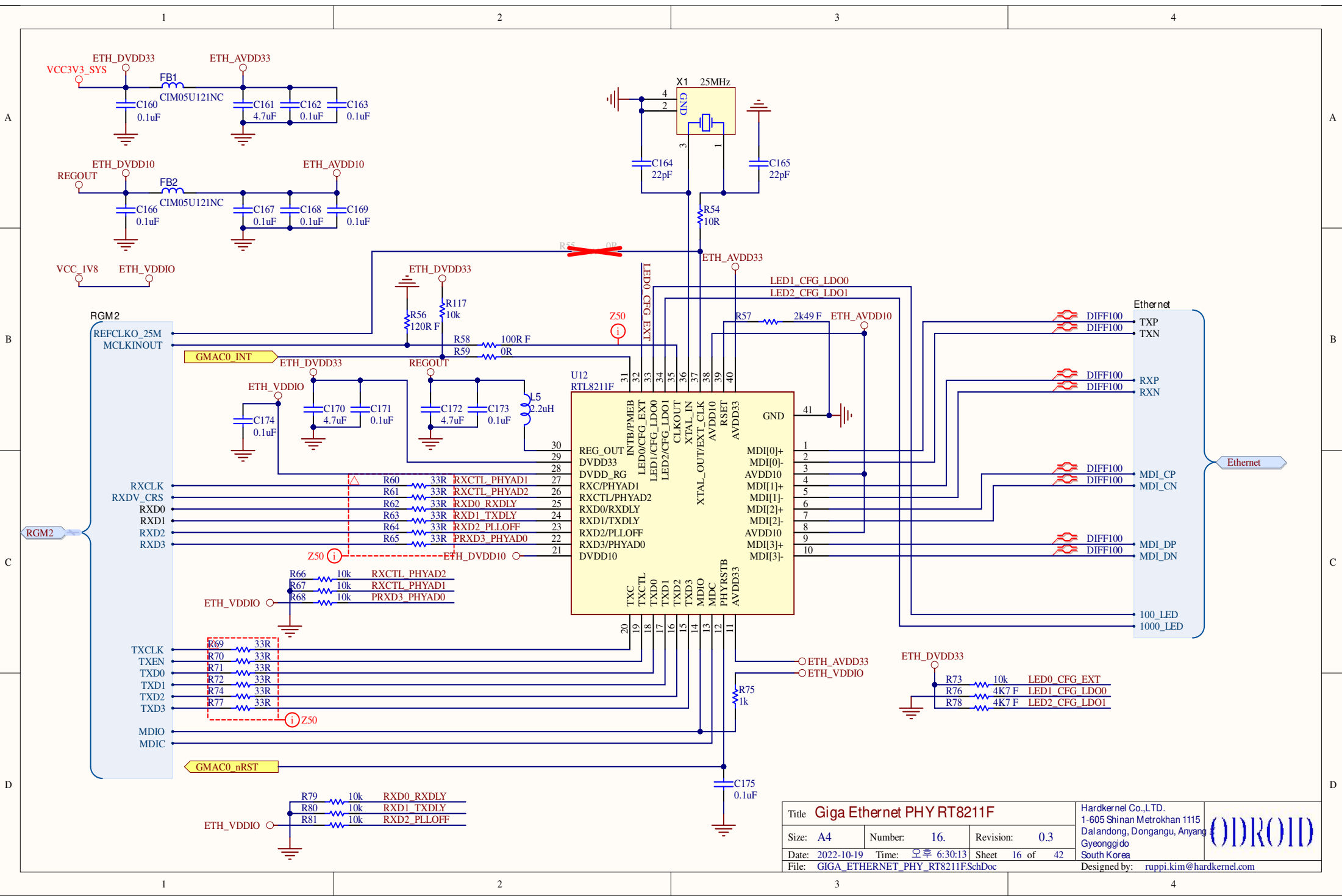
File: RK3568_Audio Interface.SchDoc

Hardkernel Co.,LTD.
475-1 Mananro
Manangu, Anyang City
Gyeonggido
South Korea

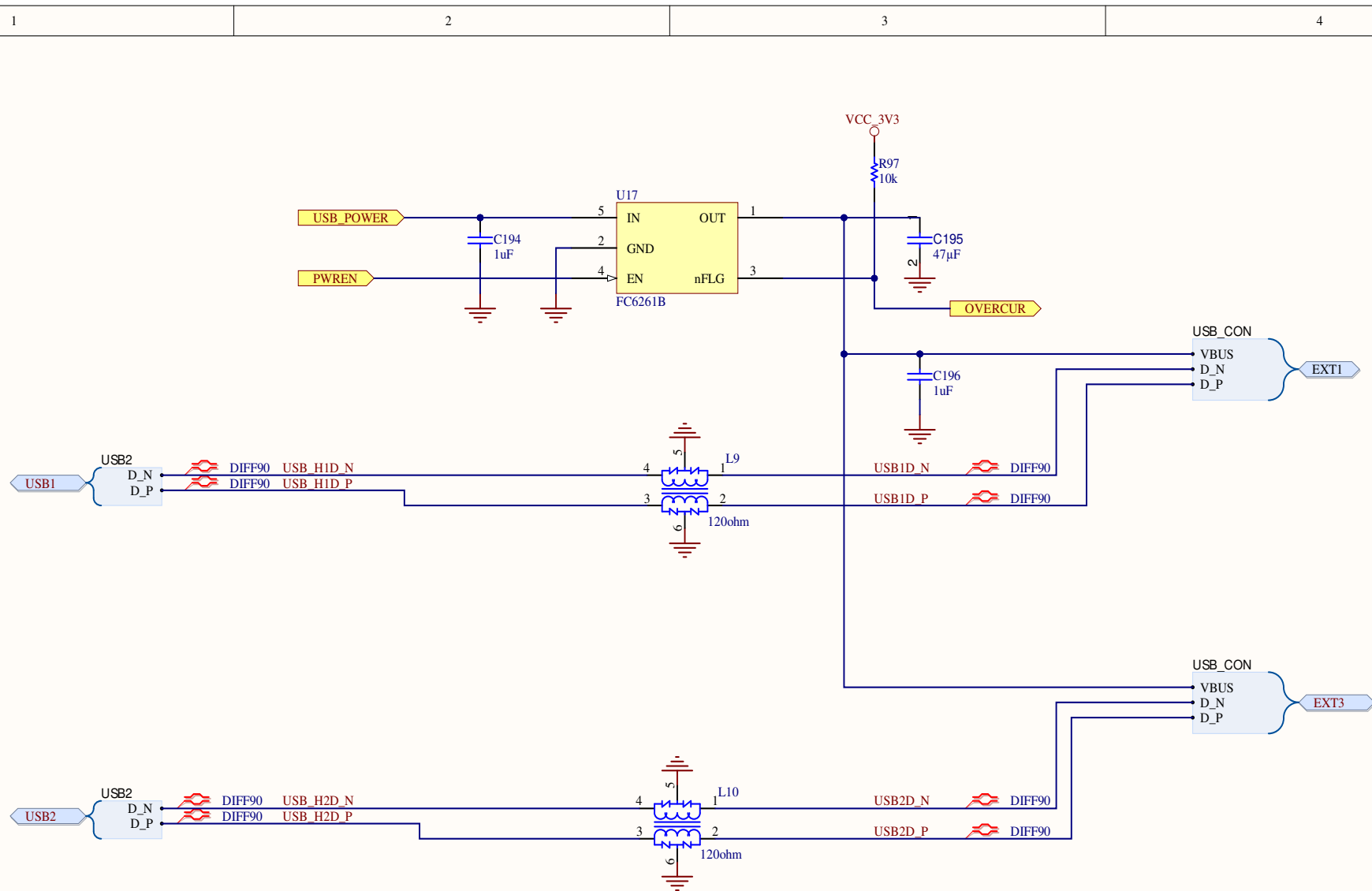
Designed by: ruppi.kim@hardkernel.com

ODROID

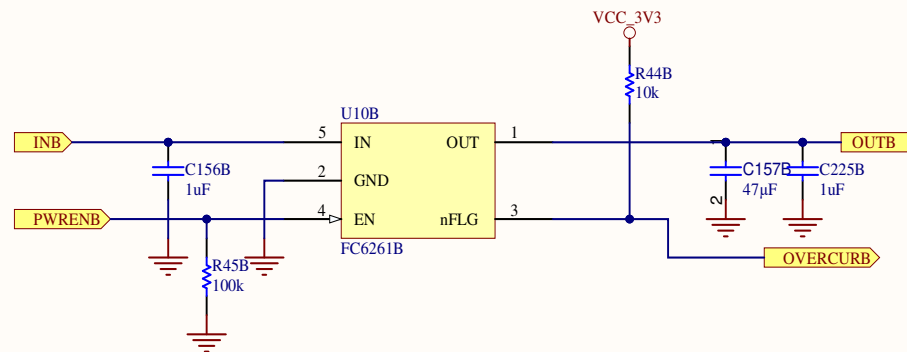




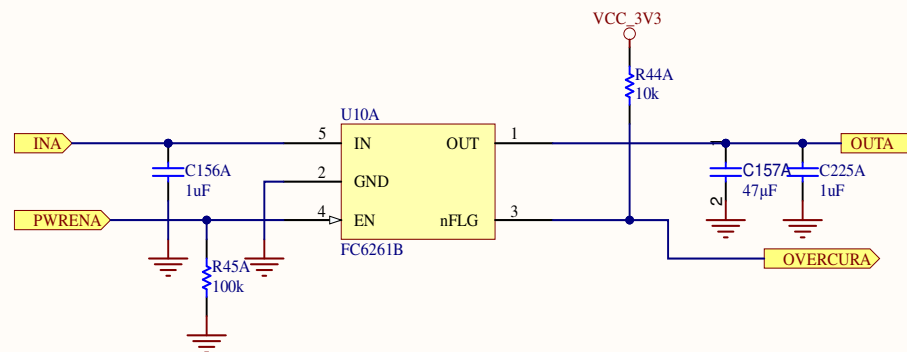
Title Giga Ethernet PHY RT8211F			Hardkernel Co.,LTD. 1-605 Shinan Metrokhan 1115 Dalandong, Dongangu, Anyang Gyeonggido South Korea		
Size: A4	Number: 16.	Revision: 0.3			
Date: 2022-10-19	Time: 오후 6:30:13	Sheet 16 of 42			
File: GIGA_ETHERNET_PHY_RT8211F.SchDoc			Designed by: ruppi.kim@hardkernel.com		



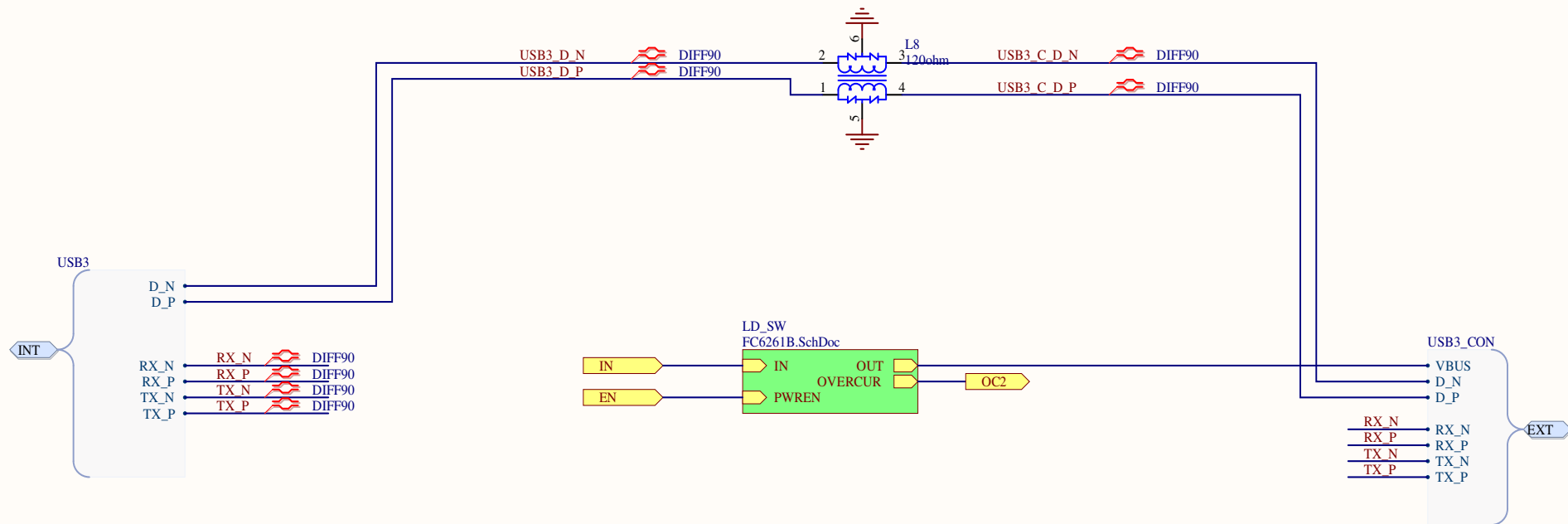
Title USB HOST PWR SW			Hardkernel Co.,LTD. 1-605 Shinan Metrokhan 1115 Dalandong, Dongangu, Anyang Gyeonggi-do South Korea		
Size: A4	Number: 17.	Revision: 0.3			
Date: 2022-10-19	Time: 오후 6:30:14	Sheet 17 of 42			
File: USB_HOST_PWR_SW.SchDoc			Designed by: ruppi.kim@hardkernel.com		



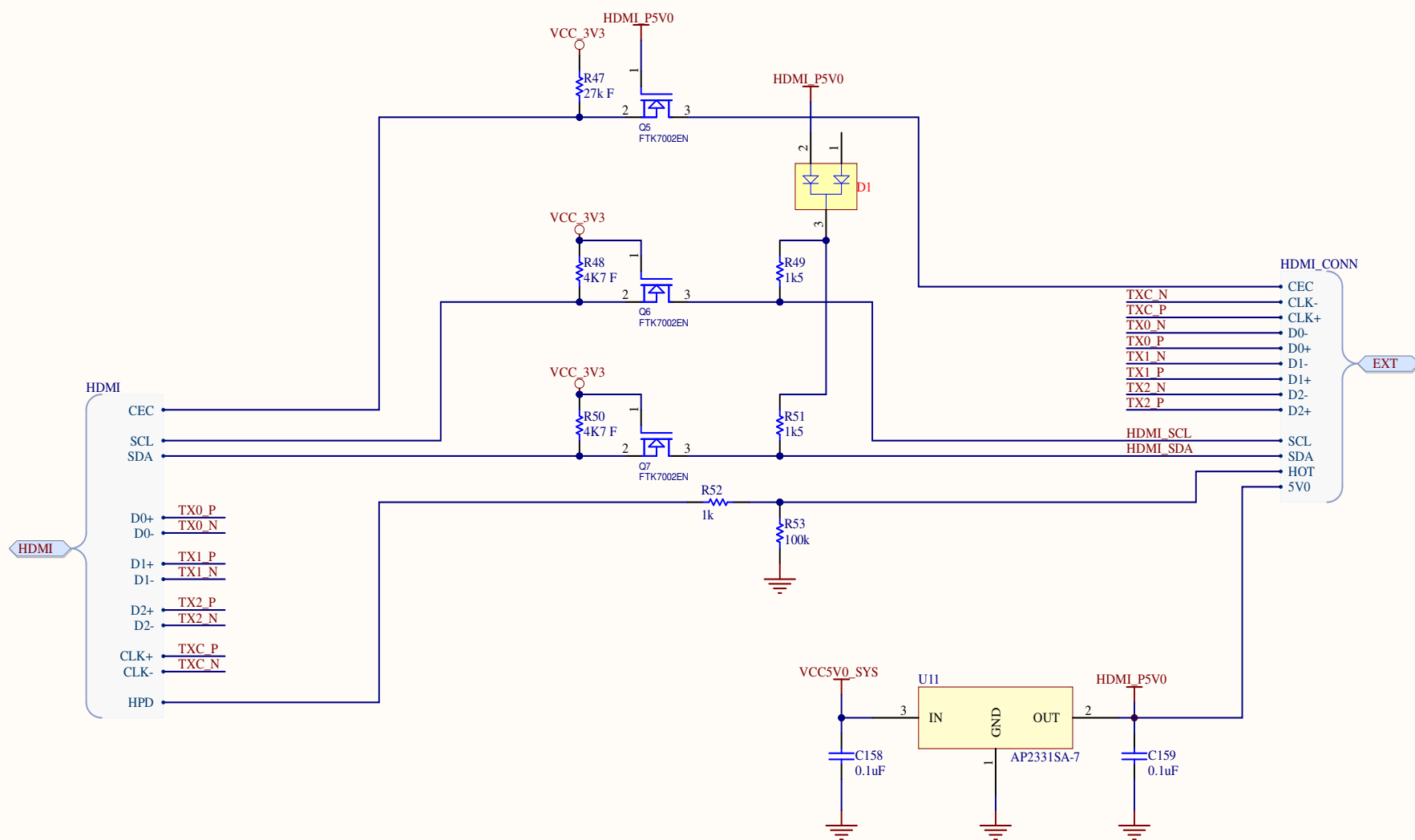
Title USB HOST Power Switch			Hardkernel Co.,LTD. 475-1 Mananro Manangu, Anyang City Gyeonggi-do South Korea		
Size: A4	Number: 18.	Revision: 0.1			
Date: 2022-10-19	Time: 오후 6:30:14	Sheet 18 of 42			
File: FC6261B.SchDoc			Designed by: ruppi.kim@hardkernel.com		



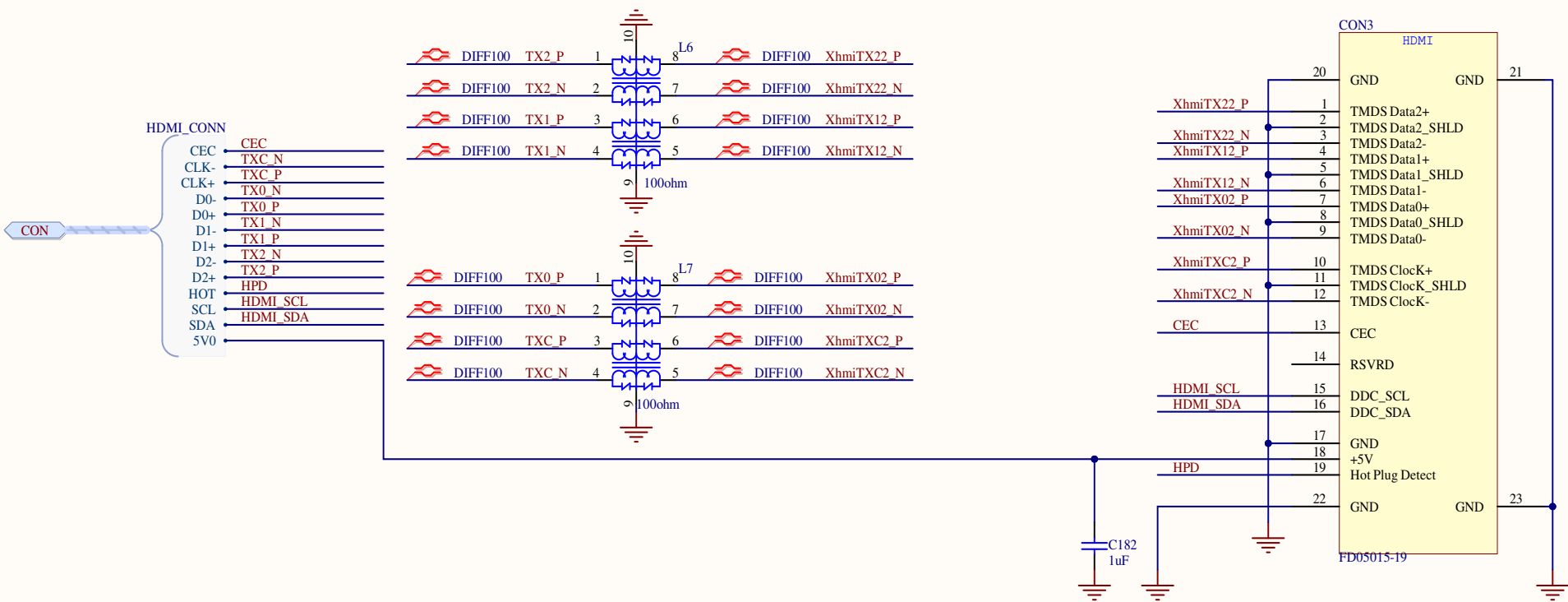
Title USB HOST Power Switch			Hardkernel Co.,LTD. 475-1 Mananro Manangu, Anyang City Gyeonggi-do South Korea		ODROID
Size: A4	Number: 18.	Revision: 0.1			
Date: 2022-10-19	Time: 오후 6:30:15	Sheet 18 of 42			
File: FC6261B.SchDoc			Designed by: ruppi.kim@hardkernel.com		



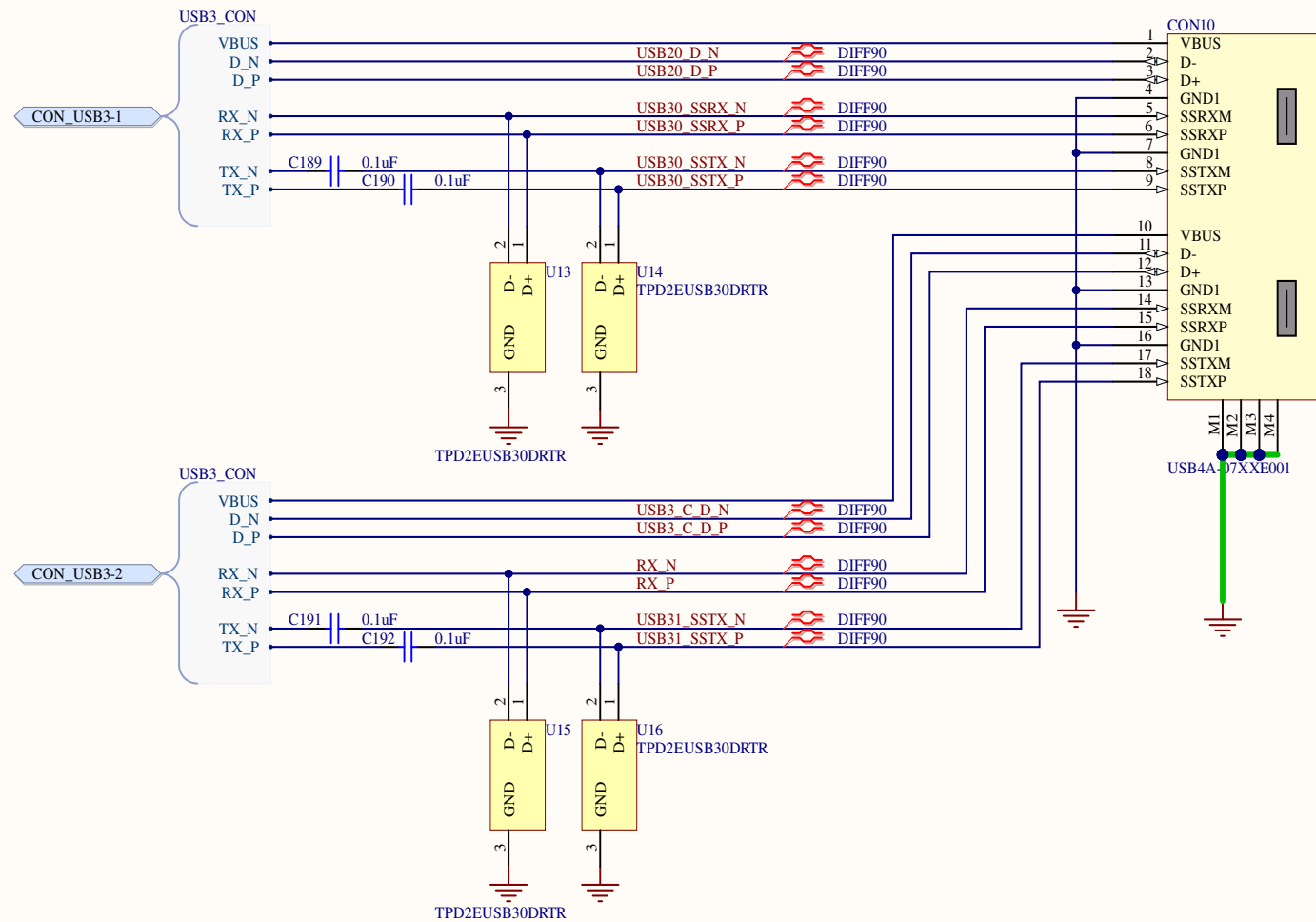
Title USB3 BUS POWER			Hardkernel Co.,LTD. 475-1 Mananro Manangu, Anyang City Gyeonggido South Korea		
Size: A4	Number: 19.	Revision: 0.1			
Date: 2022-10-19	Time: 오후 6:30:15	Sheet 19 of 42			
File: USB3_BUS_PWR.SchDoc			Designed by: ruppi kim@hardkernel.com		

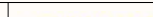


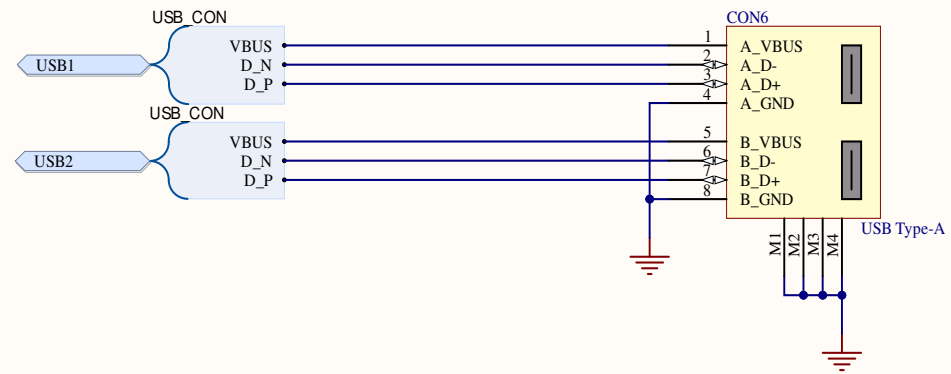
Title HDMI 2C			Hardkernel Co.,LTD. 704 Angyang K-center 1591-9 Burim, Dongangu, Anyang Kyeonggido South Korea		ODROID
Size: A4	Number: 20.	Revision: 0.3			
Date: 2022-10-19	Time: 오후 6:30:15	Sheet 20 of 42			
File: HDMI_I2C.SchDoc			Designed by: ruppi.kim@hardkernel.com		



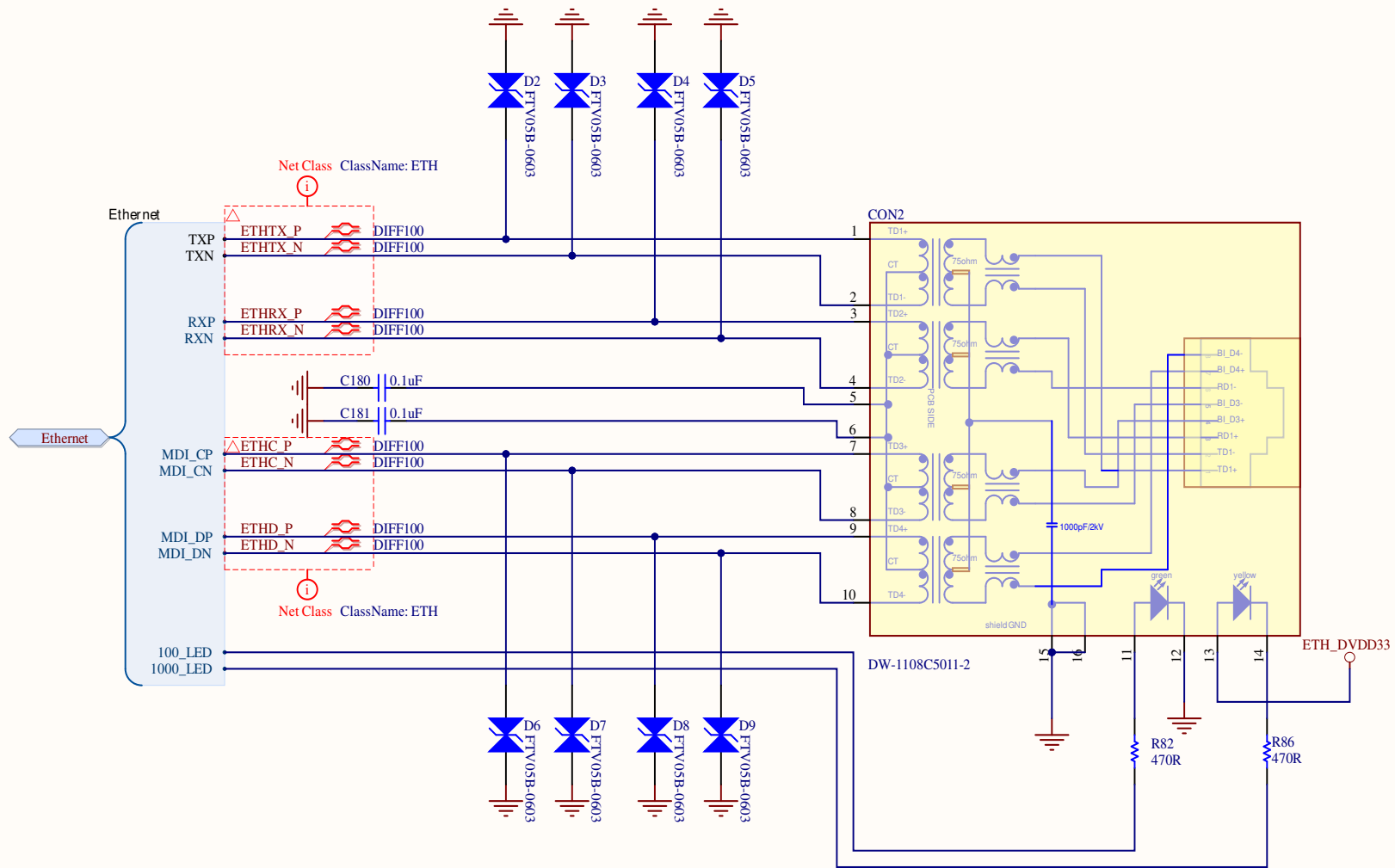
Title HDMI Type A Connector			Hardkernel Co.,LTD. 475-1 Mananro Manangu, Anyang City Gyeonggido South Korea		
Size: A4	Number: 21.	Revision: 0.1			
Date: 2022-10-19	Time: 오후 6:30:16	Sheet 21 of 42			
File: CON_HDMI.SchDoc			Designed by: ruppi.kim@hardkernel.com		



Title USB 3.0 Type A Connector			Hardkernel Co.,LTD. 475-1 Mananro Manangu, Anyang City Gyeonggido South Korea		
Size: A4	Number: 22.	Revision: 0.1			
Date: 2022-10-19	Time: 오후 6:30:17	Sheet 22 of 42			
File: CON_USB3_DUAL_RA.SchDoc			Designed by: ruppi.kim@hardkernel.com		



Title USB 2.0 Type A Connector			Hardkernel Co.,LTD. 1-605 Shinan Metrokhan 1115 Dalandong, Dongangu, Anyang Gyeonggi-do South Korea	
Size: A4	Number: 23.	Revision: 0.3		
Date: 2022-10-19	Time: 오후 6:30:17	Sheet 23 of 42		
File: CON_USB_RA.SchDoc			Designed by: ruppi.kim@hardkernel.com	



Title **Giga Ethernet Connector**

Size: **A4**

Number: **24.**

Revision: **0.1**

Date: **2022-10-19** Time: **오후 6:30:18**

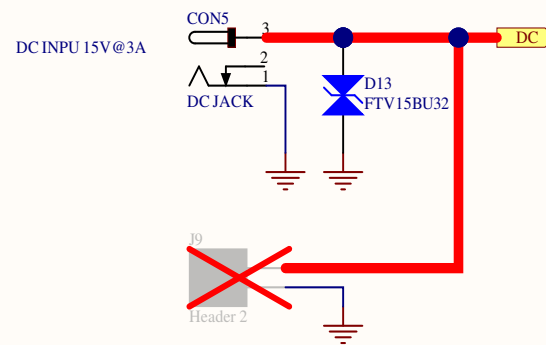
Sheet **24** of **42**

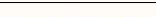
File: **CON_GIGA_ETH.SchDoc**

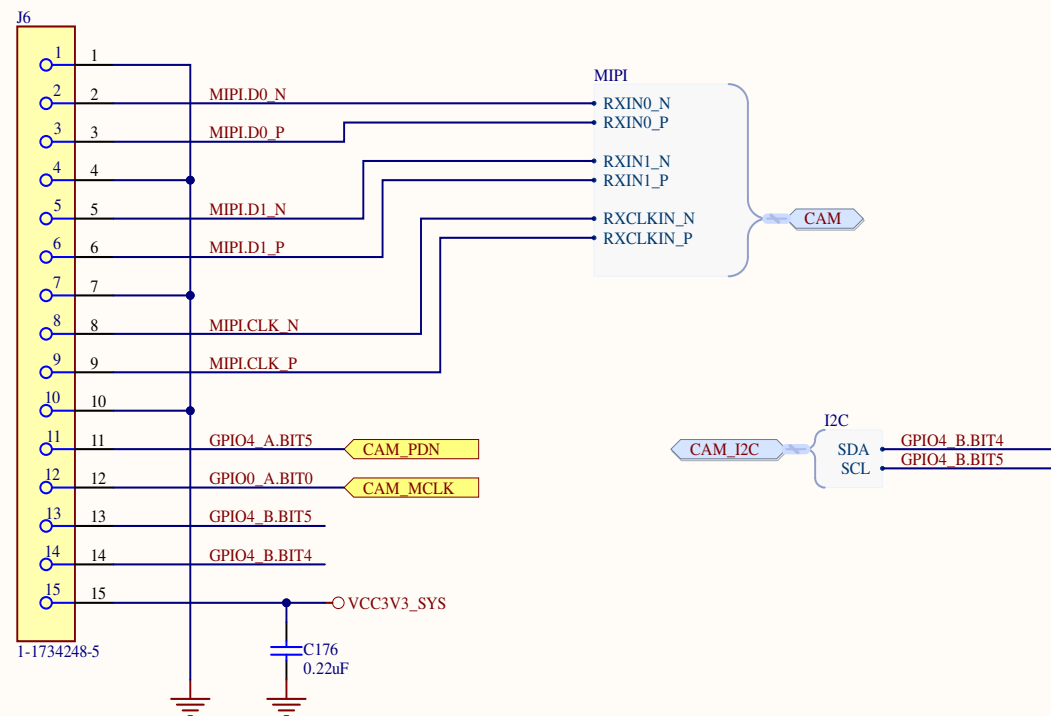
Hardkernel Co.,LTD.
475-1 Mananro
Manangu, Anyang City
Gyeonggido
South Korea

Designed by: **ruppi.kim@hardkernel.com**

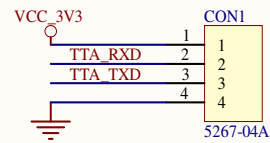
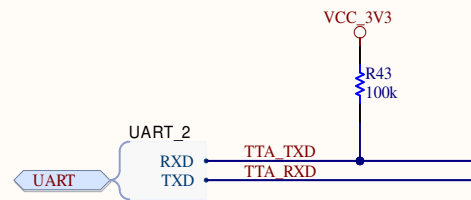
ODROID

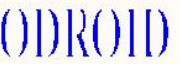


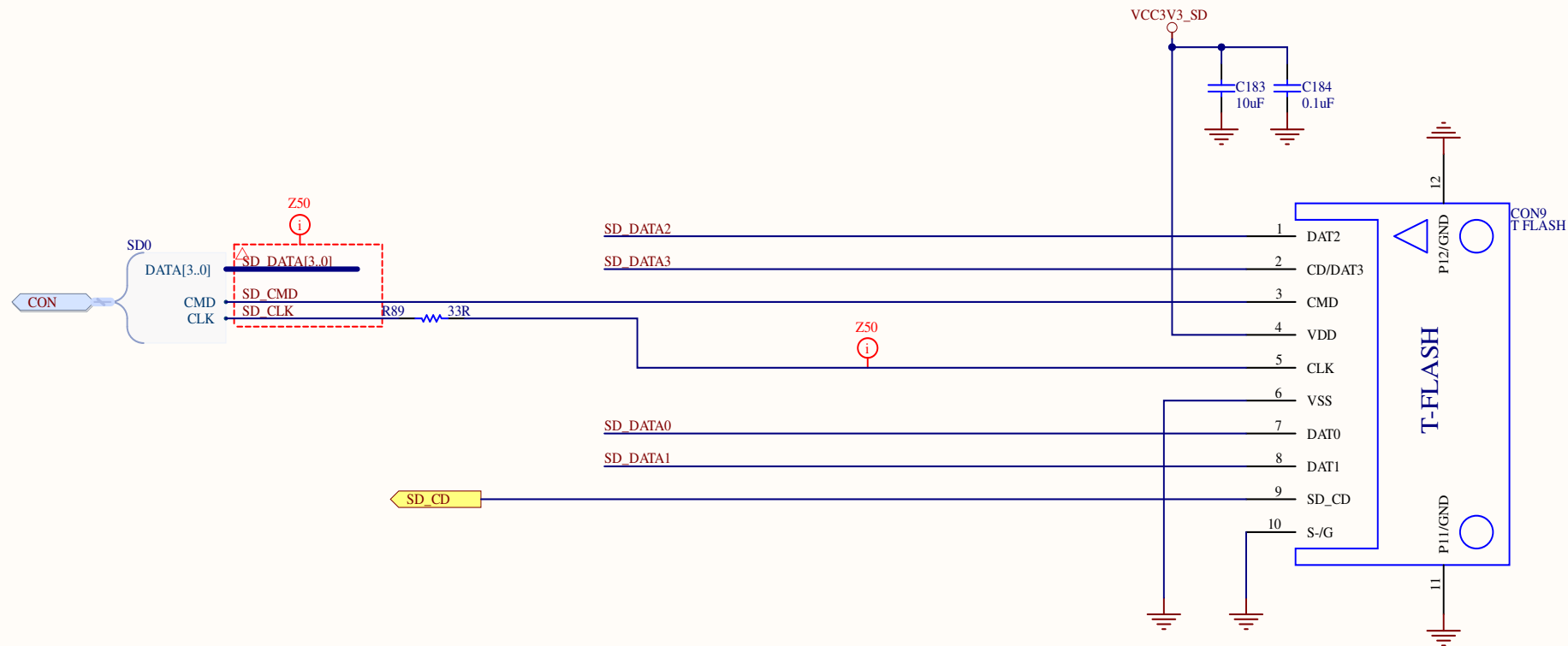
Title DC Jack			Hardkernel Co.,LTD. 475-1 Mananro Manangu, Anyang City Gyeonggido South Korea		
Size: A4	Number: 25.	Revision: 0.1			
Date: 2022-10-19	Time: 오후 6:30:18	Sheet 25 of 42			
File: CON_DCJACK.SchDoc			Designed by: ruppi kim@hardkernel.com		

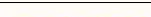


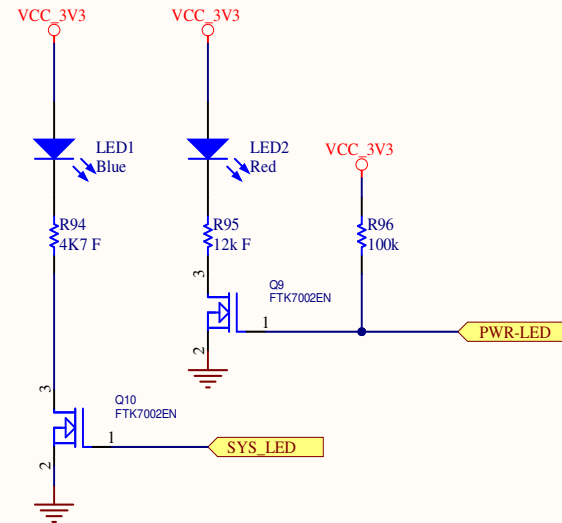
Title			Hardkernel Co.,LTD. 475-1 Mananro Manangu, Anyang City Gyeonggi-do South Korea			ODROID
Size:	A4	Number:	26.	Revision:	0.1	
Date:	2022-10-19	Time:	오후 6:30:18	Sheet	26 of 42	
File:	CON_CAMERA_MIPI.SchDoc			Designed by: ruppi.kim@hardkernel.com		



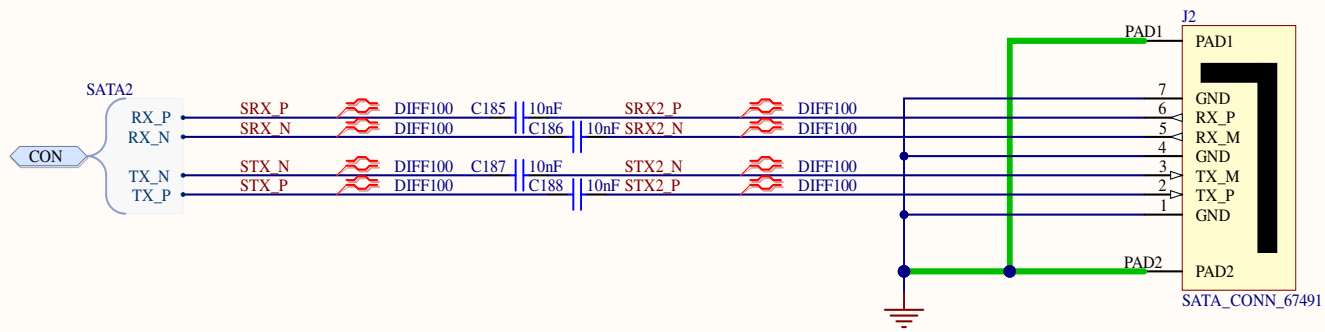
Title UART Connector			Hardkernel Co.,LTD. 475-1 Mananro Manangu, Anyang City Gyeonggido South Korea Designed by: ruppi.kim@hardkernel.com	
Size: A4	Number: 27.	Revision: 0.1		
Date: 2022-10-19	Time: 오후 6:30:19	Sheet 27 of 42		
File: CON_UART.SchDoc				



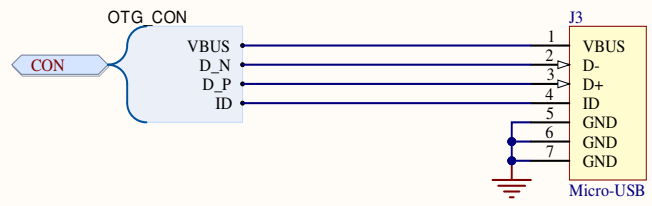
Title Micro SD Socket			Hardkernel Co.,LTD. 475-1 Mananro Manangu, Anyang City Gyeonggido South Korea		
Size: A4	Number: 28.	Revision: 0.1			
Date: 2022-10-19	Time: 오후 6:30:19	Sheet 28 of 42			
File: CON_MICROSD_HD08-AL00335.SchDoc			Designed by: ruppi kim@hardkernel.com		



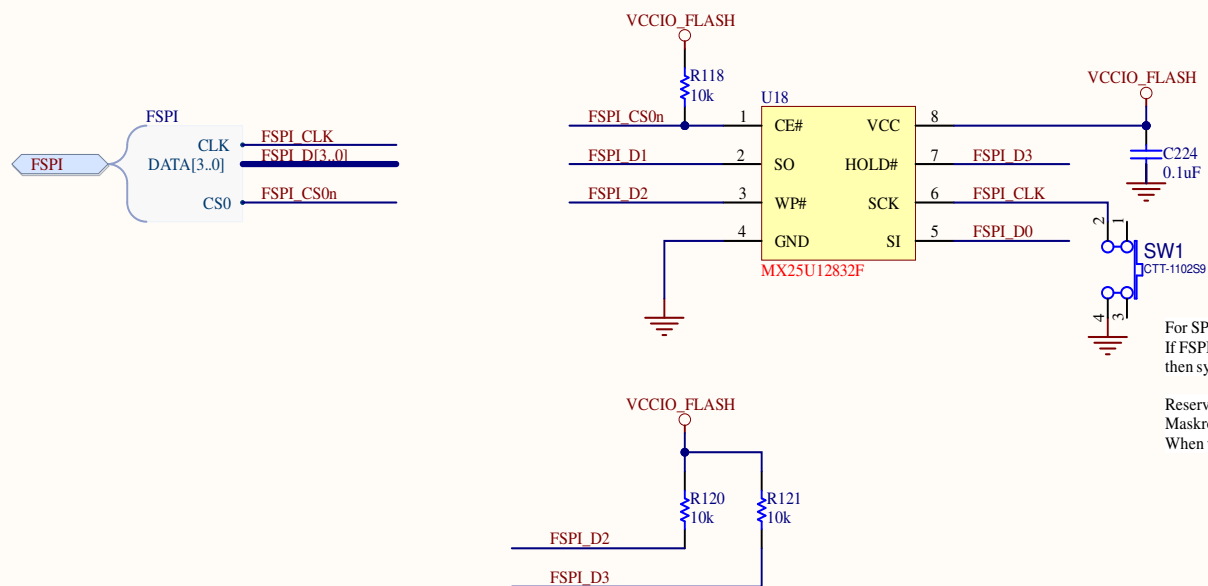
Title Indicator LEDs			Hardkernel Co.,LTD. 475-1 Mananro Manangu, Anyang City Gyeonggido South Korea		
Size: A4	Number: 29.	Revision: 0.1			
Date: 2022-10-19	Time: 오후 6:30:20	Sheet 29 of 42			
File: M1_LEDS.SchDoc			Designed by: ruppi kim@hardkernel.com		



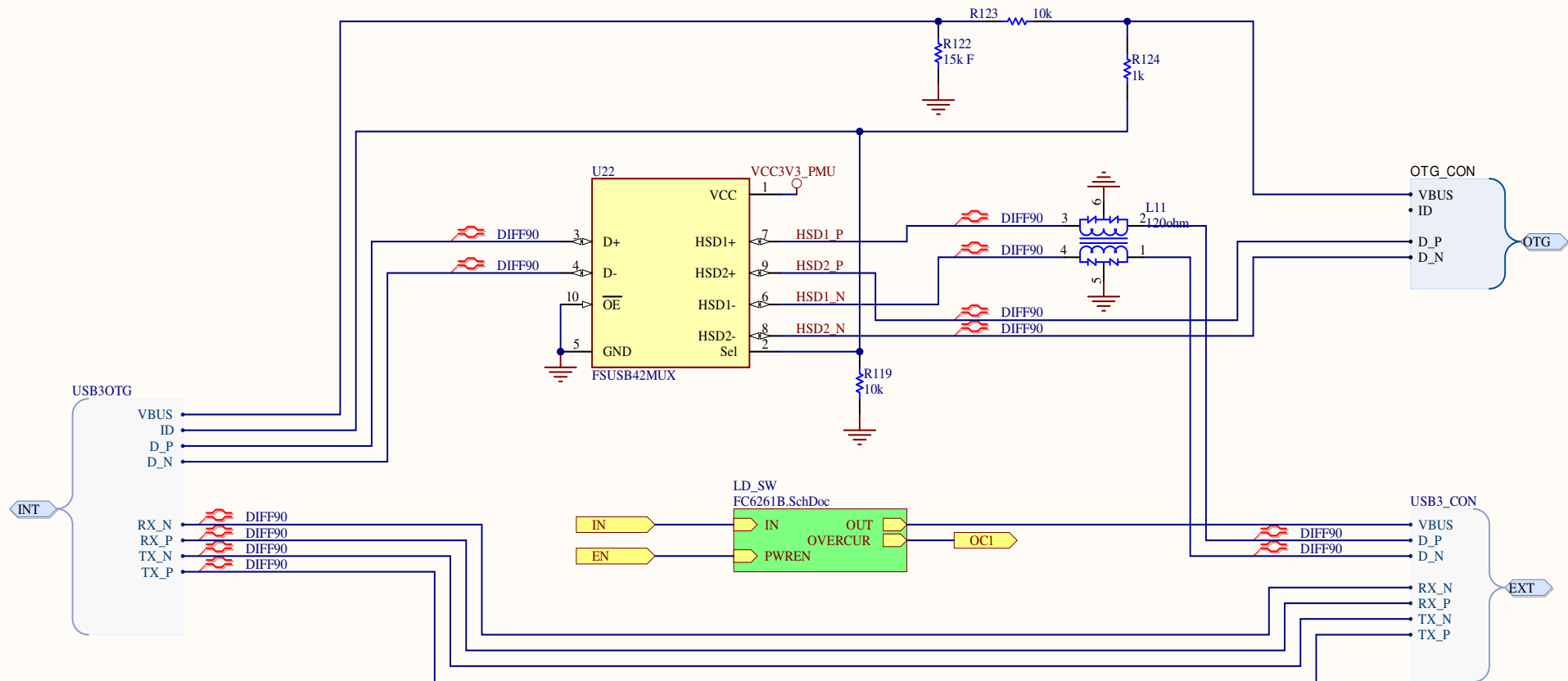
Title SATA Connector			Hardkernel Co.,LTD. 1-605 Shinan Metrokhan 1115 Dalandong, Dongangu, Anyang Gyeonggido South Korea		
Size: A4	Number: 30.	Revision: 0.1			
Date: 2022-10-19	Time: 오후 6:30:20	Sheet 30 of 42			
File: CON_SATA.SchDoc			Designed by: *		

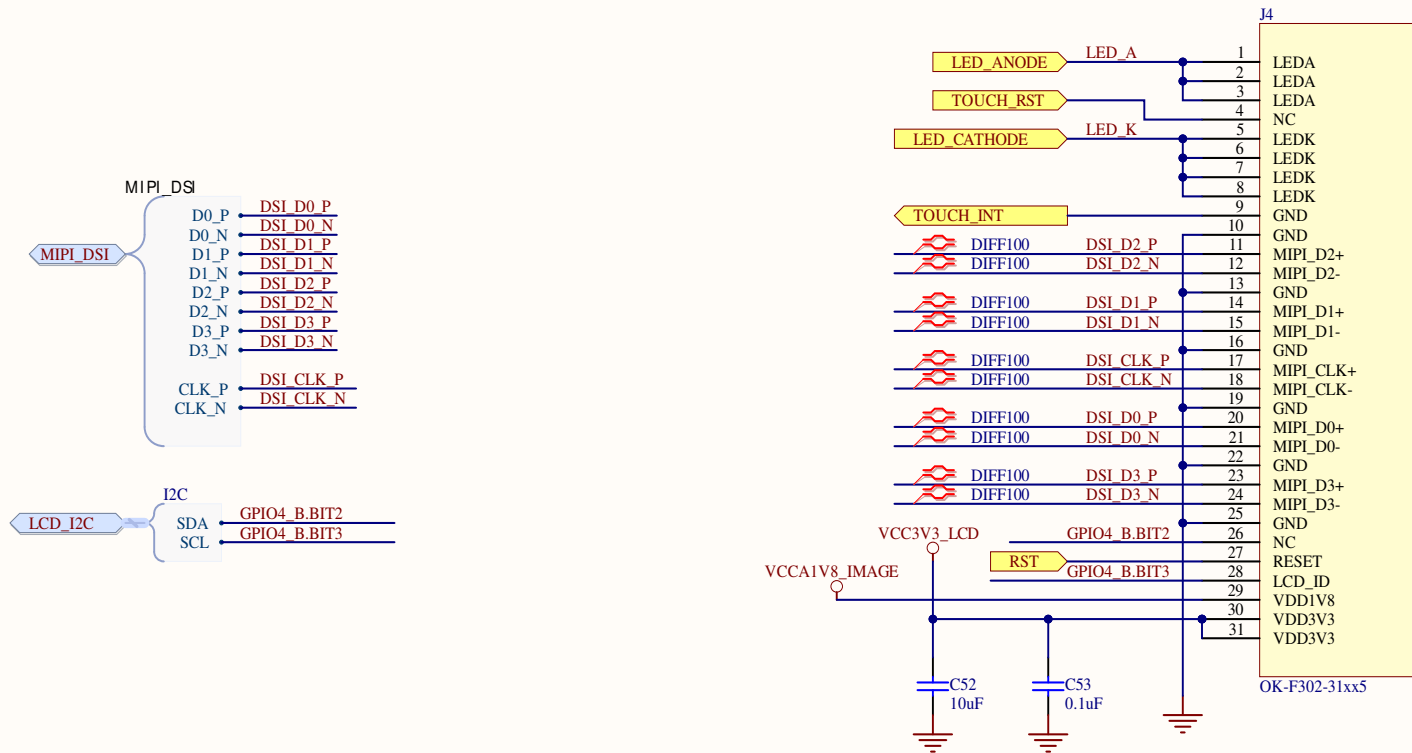


Title Micro USB Connector			Hardkernel Co.,LTD. 475-1 Mananro Manangu, Anyang City Gyeonggido South Korea		
Size: A4	Number: 31.	Revision: 0.1			
Date: 2022-10-19	Time: 오후 6:30:21	Sheet 31 of 42			
File: CON_MicroUSB.SchDoc			Designed by: ruppi.kim@hardkernel.com		

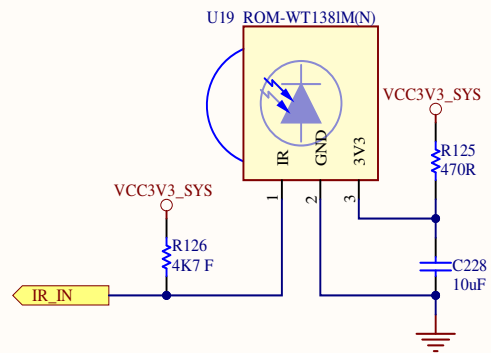


Title SPI FLash 128Mbit			Hardkernel Co.,LTD. 475-1 Mananro Manangu, Anyang City Gyeonggido South Korea		
Size: A4	Number: 32.	Revision: 0.1			
Date: 2022-10-19	Time: 오후 6:30:21	Sheet 32 of 42			
File: MEM_SPI_FLASH.SchDoc			Designed by: ruppi.kim@hardkernel.com		





Title			CON_LCD_KD50T048-A			Hardkernel Co.,LTD. 475-1 Mananro Manangu, Anyang City Gyeonggi-do South Korea			ODROID
Size: A4		Number: 35.		Revision: 1.0					
Date: 2022-10-19		Time: 오후 6:30:23		Sheet 35 of 42					
File: CON_LCD_KD50T048-A_MIPI.SchDoc						Designed by: *@hardkernel.com			



Title Remote Controller Receiver			Hardkernel Co.,LTD. 475-1 Mananro Manangu, Anyang City Gyeonggido South Korea 
Size: A4	Number: 36.	Revision: 0.1	
Date: 2022-10-19	Time: 오후 6:30:23	Sheet 36 of 42	
File: IR.SchDoc			
Designed by: ruppi.kim@hardkernel.com			

A

B

C

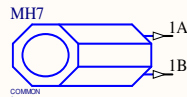
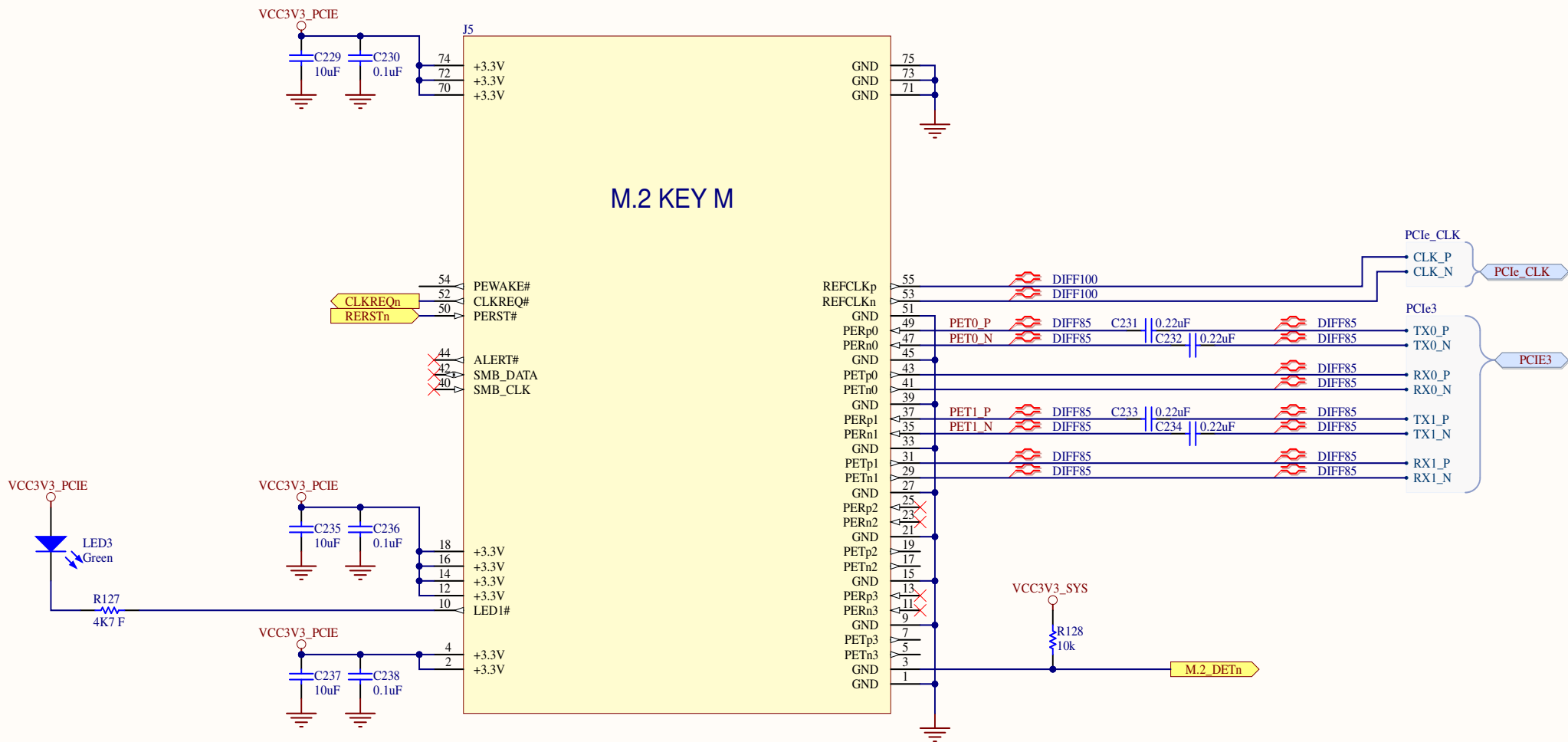
D

A

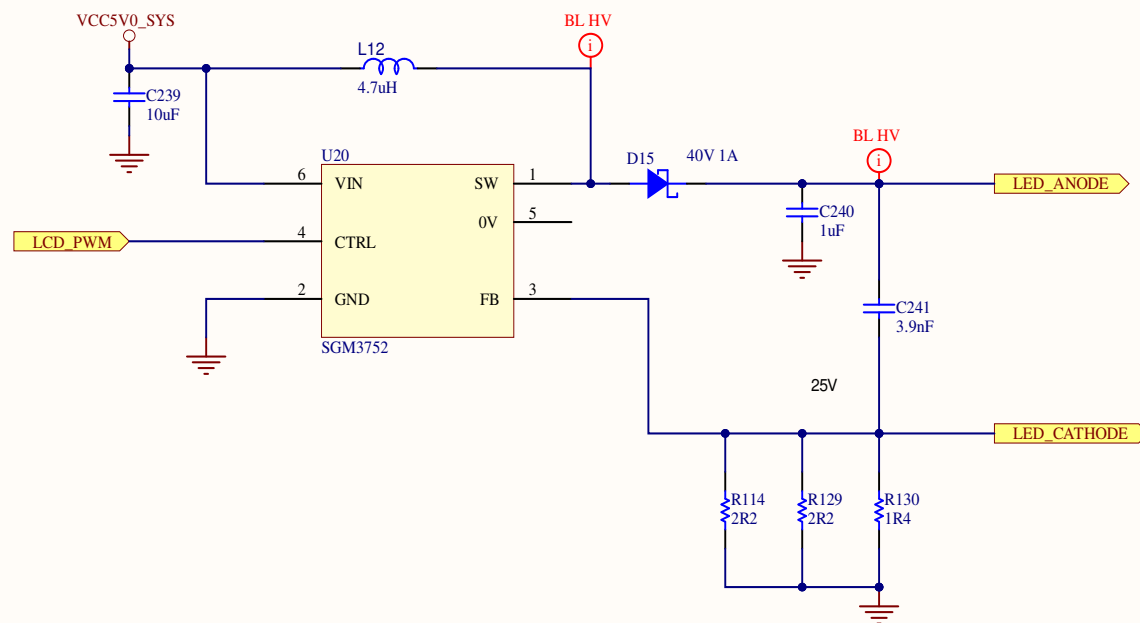
B

C

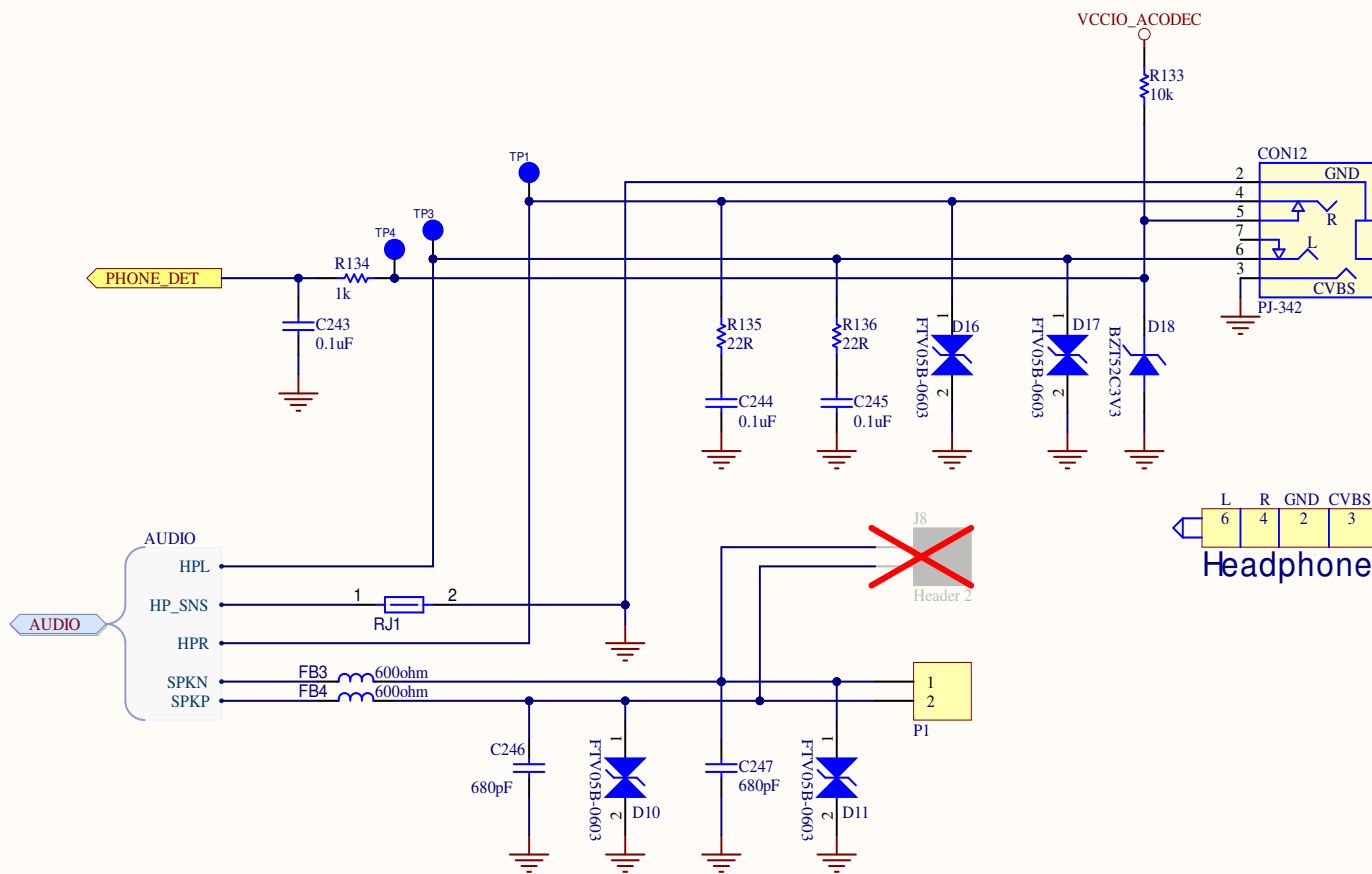
D



Title M.2 KEY M Connector			Hardkernel Co.,LTD. 475-1 Mananro Manangu, Anyang City Gyeonggi-do South Korea		ODROID
Size: A4	Number: 37.	Revision: 0.1	Date: 2022-10-19 Time: 오후 6:30:24		
File: CON_M2.SchDoc		Sheet 37 of 42	Designed by: ruppi.kim@hardkernel.com		



Title Backlight Driver			Hardkernel Co.,LTD. 475-1 Mananro Manangu, Anyang City Gyeonggido South Korea		ODROID
Size: A4	Number: 38.	Revision:			
Date: 2022-10-19	Time: 오후 6:30:24	Sheet 38 of 42			
File: BACKLIGHT_SGM3752.SchDoc			Designed by: neal.kim@hardkernel.com		



Title Audio Jack			Hardkernel Co.,LTD. 475-1 Mananro Manangu, Anyang City Gyeonggi-do South Korea		
Size: A4	Number: 39.	Revision: 0.3			
Date: 2022-10-19	Time: 오후 6:30:25	Sheet 39 of 42			
File: CON_AUDIO.SchDoc			Designed by: *@hardkernel.com		

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<table><tr><td colspan="3">Title: Revision History</td><td colspan="2">Hardkernel Co.,LTD.</td><td colspan="3" rowspan="4"></td></tr><tr><td>Size: A3</td><td>Number: 41.</td><td>Revision:</td></tr><tr><td>Date: 2022.10.19</td><td>Time: 12:06:30</td><td>Sheet 41 of 42</td></tr><tr><td colspan="3">File: MJ_REV_HISTORY.SchDoc</td></tr><tr><td colspan="6"></td><td colspan="2">Designed by: neul.kim@hardkernel.com</td></tr></table>								Title: Revision History			Hardkernel Co.,LTD.					Size: A3	Number: 41.	Revision:	Date: 2022.10.19	Time: 12:06:30	Sheet 41 of 42	File: MJ_REV_HISTORY.SchDoc									Designed by: neul.kim@hardkernel.com																																																																
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