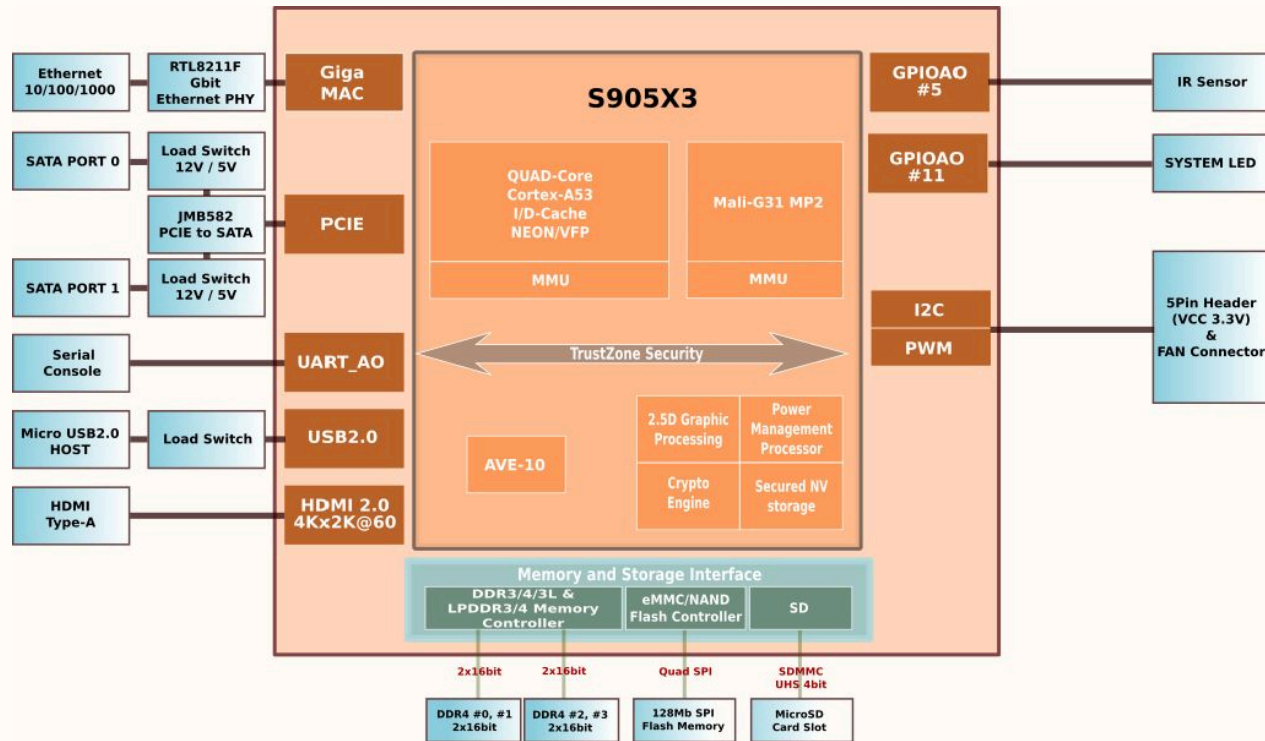
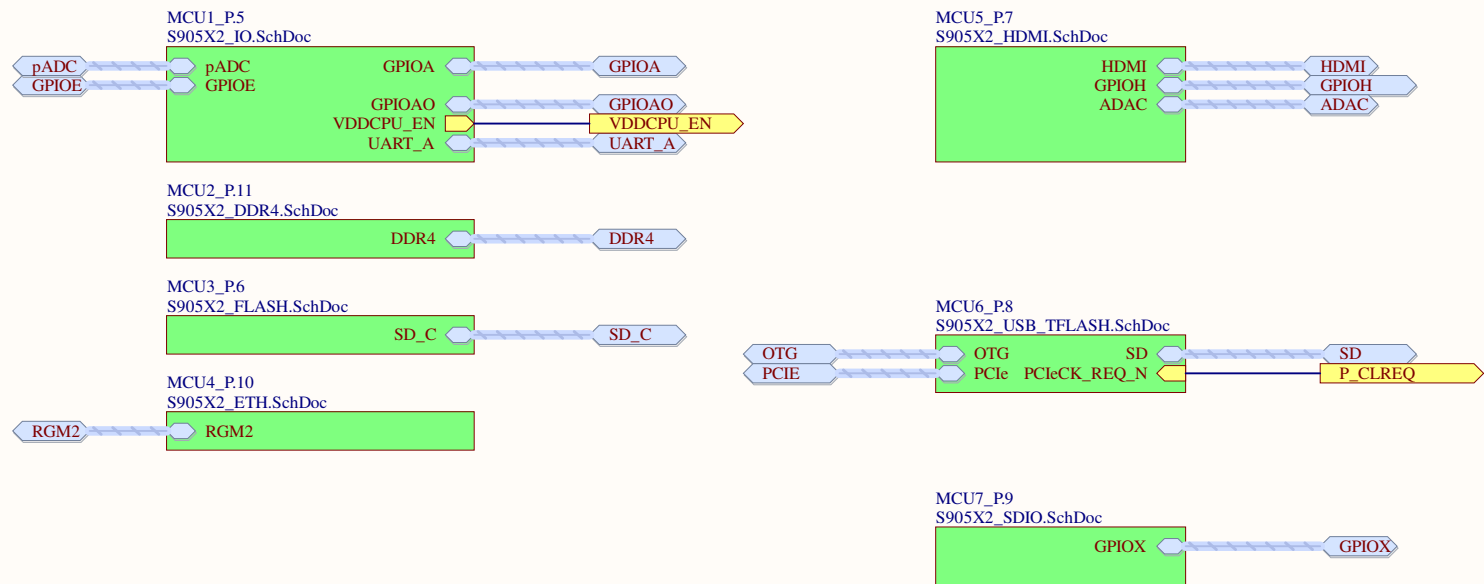
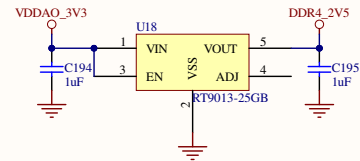
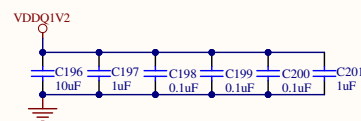
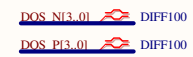
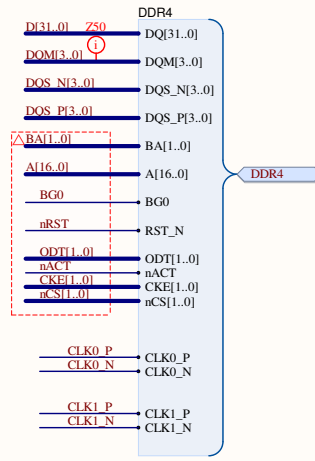
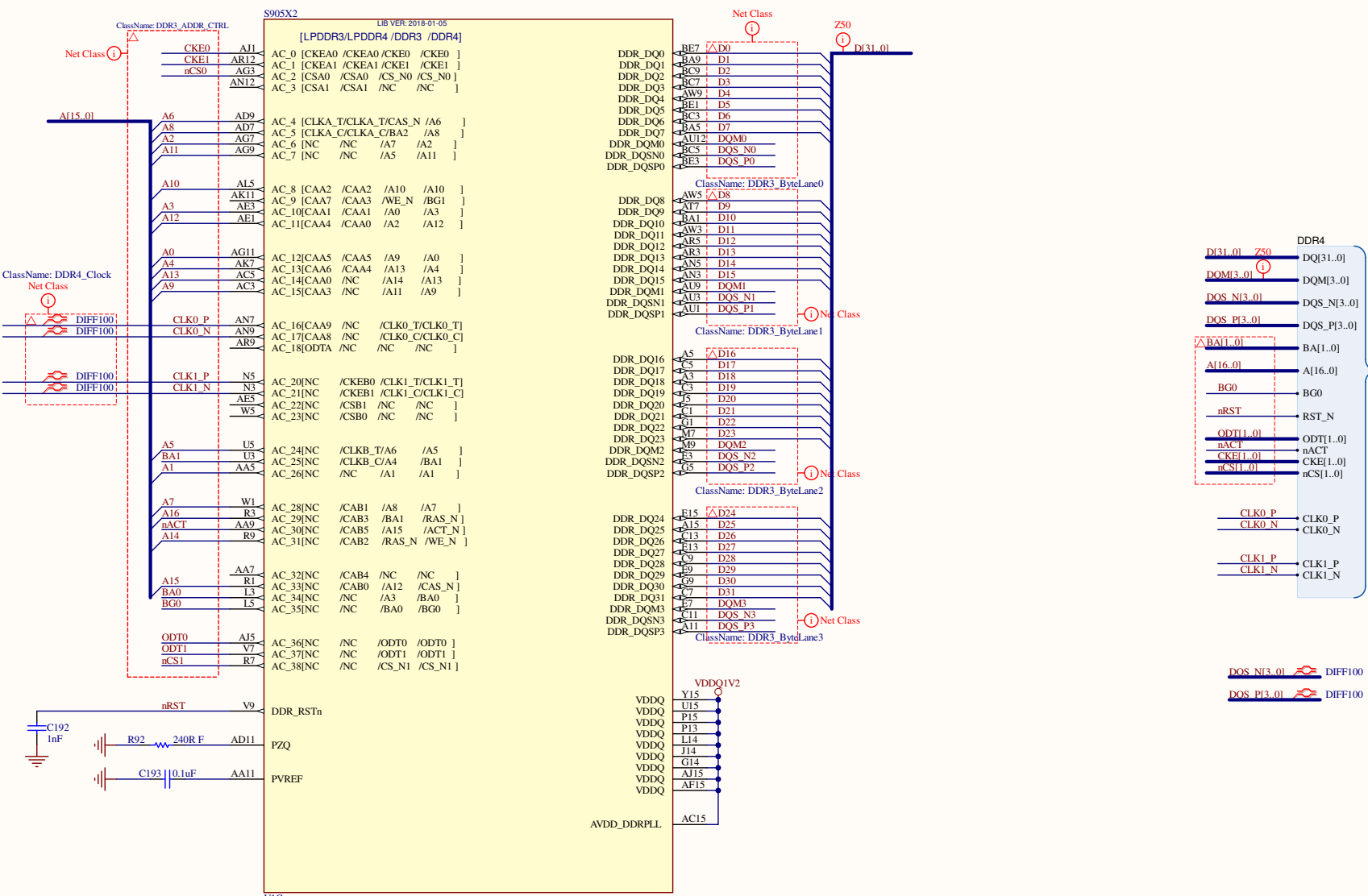




Title HC4 Block Diagram			Hardkernel Co.,LTD. 475-1 Mananro Manangu, Anyang City Gyeonggi-do South Korea		ODROID
Size: A4	Number: 1	Revision: 0.1			
Date: 2020-10-06	Time: 오전 11:42:12	Sheet 1 of 31	Designed by: ruppi.kim@hardkernel.com		
File: HC4 Block Diagram.SchDoc					





S905X2

LIB VER: 2018-01-05

ENET_TXP
ENET_TXN

C39
A39

ENET_RXP
ENET_RXN

C41
A41

ENET_ATP

L26

ENET_EXTRES

J26

R36
2k26 F

DVSS

U29

AVDD18_ENET

L33

VDDIO_AO1V8

C90
0.1uF

VDDIO_Z

AV39

VDDIO_AO1V8
C91 0.1uF
C92 4.7uF

GPIOZ_0(ETH_MDIO//ISO7816_CLK//BT656_A_VS//I2C_EE_M0_SDA)
GPIOZ_1(ETH_MDC//ISO7816_DATA//BT656_A_HS//I2C_EE_M0_SCL)

AR37
AR39

RGM2
MDIO
MDIC

GPIOZ_2(ETH_RGMII_RX_CLK//TSIN_B_VALID//TDMC_D0//TDMC_DIN0//PDM_DIN0//SDCARD_D0)
GPIOZ_3(ETH_RX_DV//TSIN_B_SOP//BT656_A_CLK//TDMC_D1//TDMC_DIN1//PDM_DIN1//SDCARD_D1)
GPIOZ_4(ETH_RXD0//TSIN_B_DIN0//BT656_A_DIN0//TDMC_D2//TDMC_DIN2//PDM_DIN2//SDCARD_D2)
GPIOZ_5(ETH_RXD1//TSIN_B_CLK//BT656_A_DIN1//TDMC_D3//TDMC_DIN3//PDM_DIN3//SDCARD_D3)
GPIOZ_6(ETH_RXD2_RGMII//TSIN_B_FAIL//BT656_A_DIN2//TDMC_FS//TDMC_SLV_FS//PDM_DCLK//SDCARD_CLK)
GPIOZ_7(ETH_RXD3_RGMII//TSIN_B_DIN1//BT656_A_DIN3//TDMC_SCLK//TDMC_SLV_SCLK//I2C_EE_M0_SDA//SDCARD_CMD)
CARD port on GPIOZ is not bootable

BC43
BE45
AW45
AY41
BA43
BA45

RXCLK
RX_DV
RXD0
RXD1
RXD2
RXD3

RGM2

GPIOZ_8(ETH_RGMII_TX_CLK//TSIN_B_DIN2//BT656_A_DIN4//MCLK_1//I2C_EE_M0_SCL)
GPIOZ_9(ETH_TXEN//TSIN_B_DIN3//BT656_A_DIN5)
GPIOZ_10(ETH_TXD0//TSIN_B_DIN4//BT656_A_DIN6)
GPIOZ_11(ETH_TXD1//TSIN_B_DIN5//BT656_A_DIN7)
GPIOZ_12(ETH_TXD2_RGMII//TSIN_B_DIN6)
GPIOZ_13(ETH_TXD3_RGMII//TSIN_B_DIN7//GEN_CLK_EE)

AV41
AU43
AT41
AM37
AM39
AM35

TXCLK
TXEN
TXD0
TXD1
TXD2
TXD3

GPIOZ_14 (OD3.3V) (ETH_LINK_LED//I2C_EE_M2_SDA)
GPIOZ_15 (OD3.3V) (ETH_ACT_LED//I2C_EE_M2_SCL)

AR45
AR43

INTR
NRST

UIG

Title S905X2_ETH

Size: A4

Number: 11

Revision: 0.1

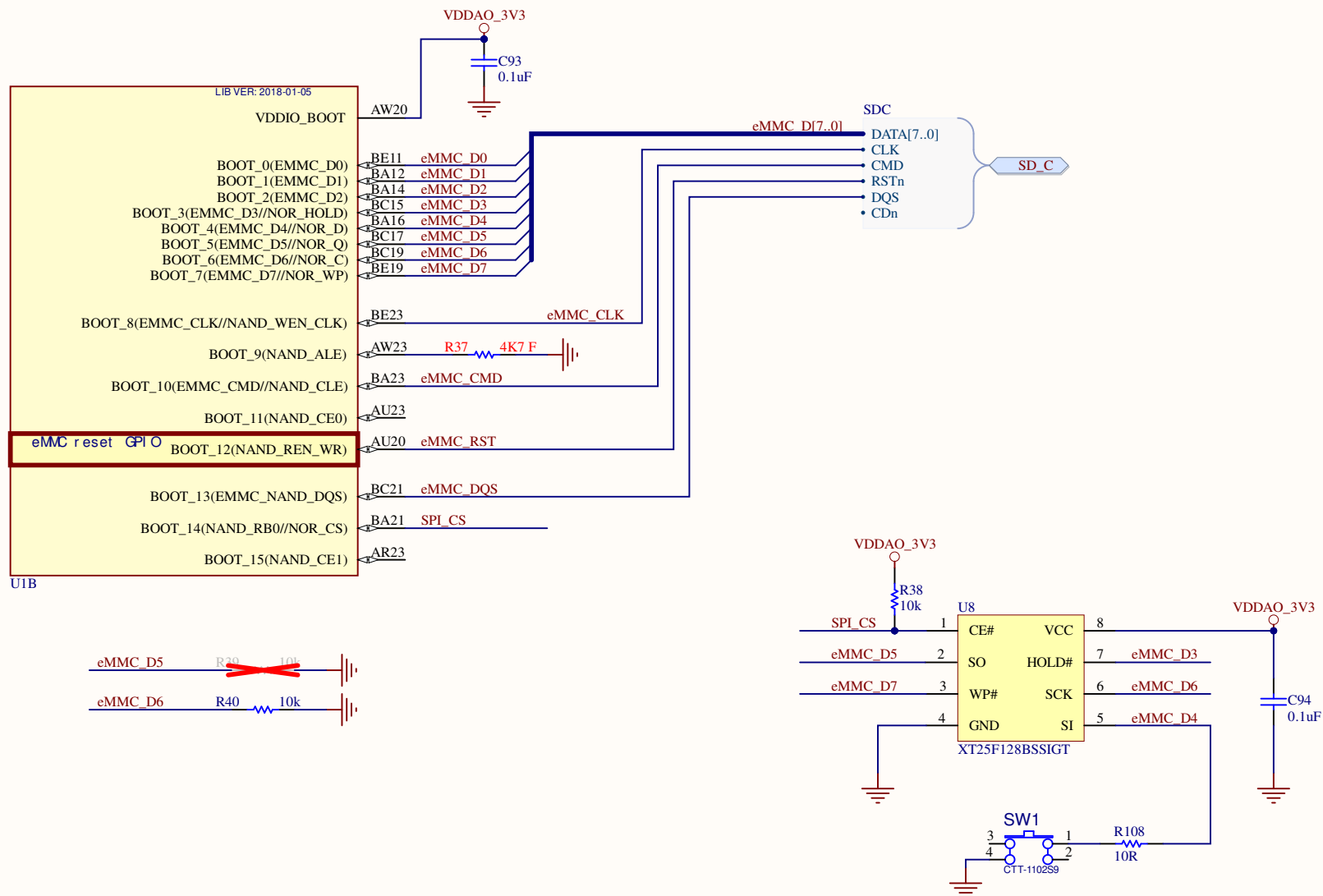
Date: 2020-10-06 Time: 오전 11:42:13 Sheet 11 of 31

File: S905X2_ETH.SchDoc

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Manangu, Anyang City
Gyeonggi-do
South Korea

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ODROID

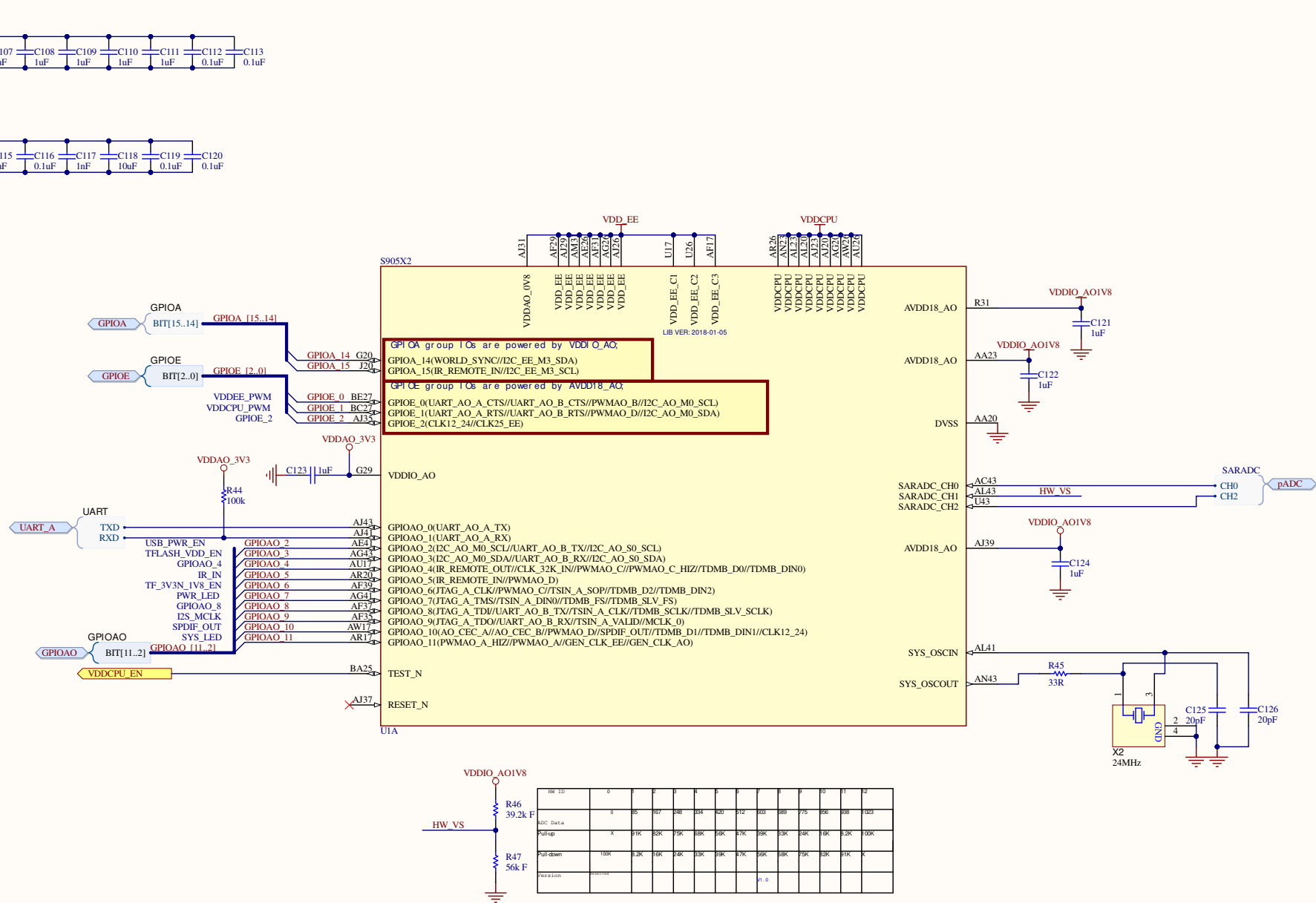
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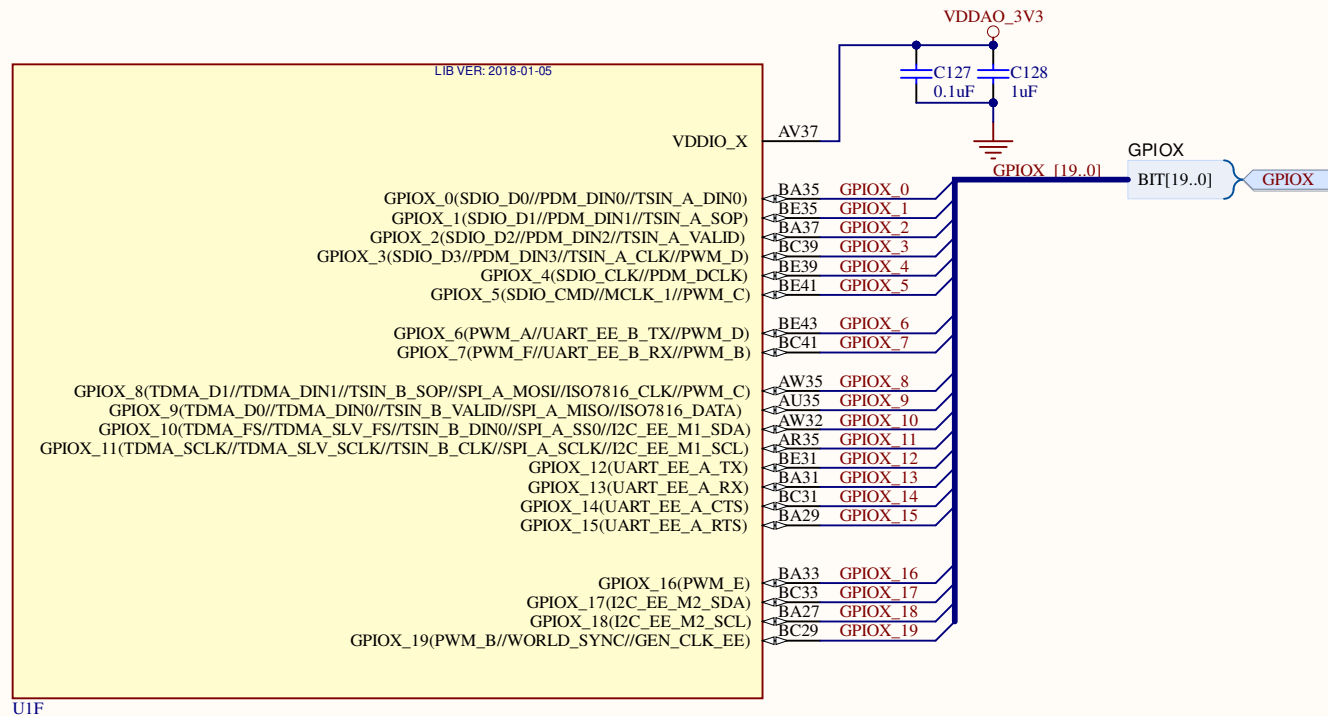
Date: 2020-10-06 Time: 2020-10-06 11:42:13 Sheet 7 of 31

File: **S905X2_FLASH.SchDoc**

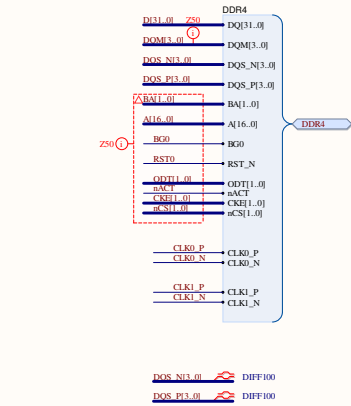
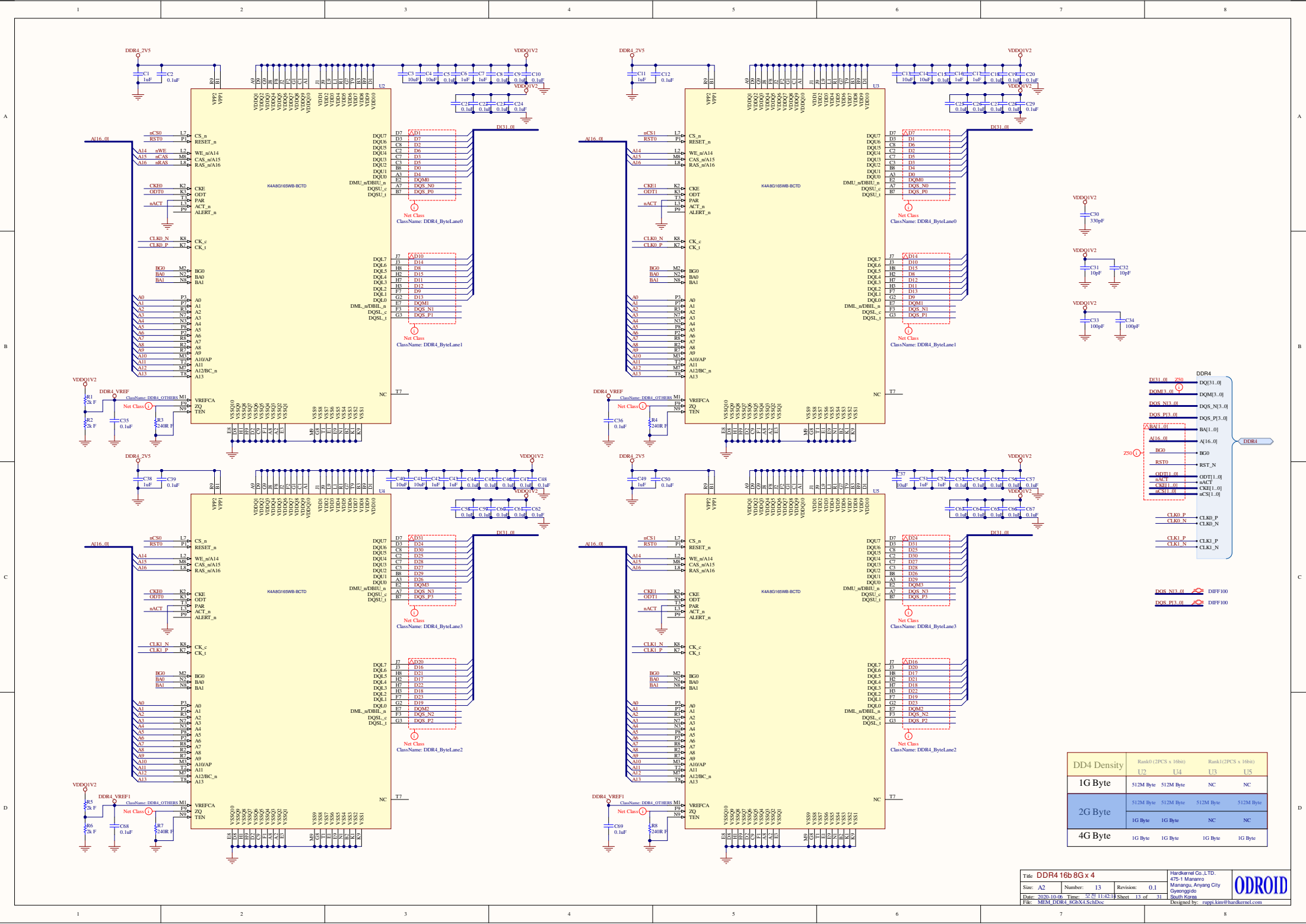
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Manangu, Anyang City
Kyeonggi-do
South Korea

Designed by: neal.kim@hardkernel.com
ODROID

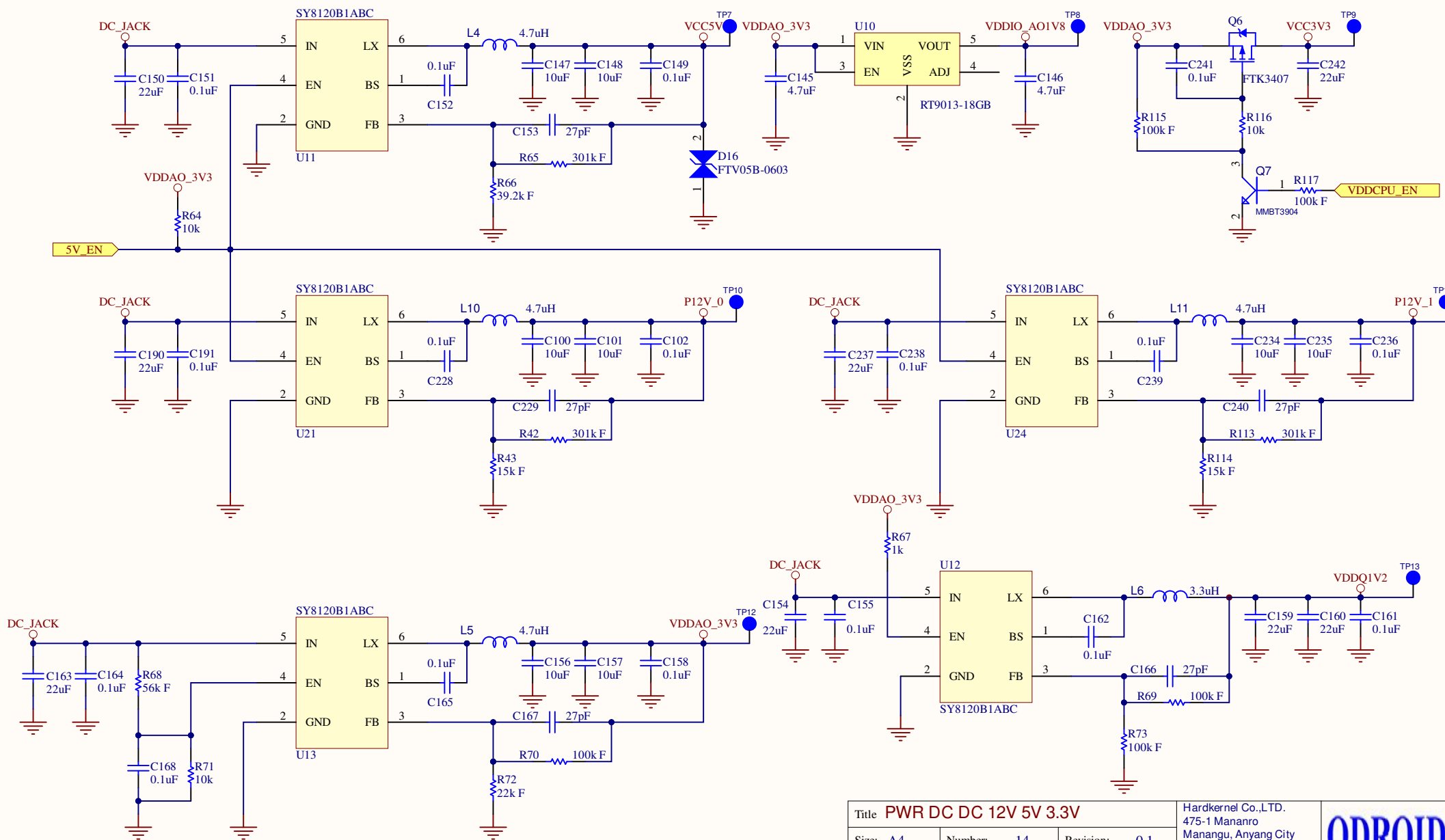




Title S905X2_SDIO			Hardkernel Co., LTD 475-1 Mananro Manangu, Anyang City Gyeonggi-do South Korea		ODROID
Size: A4	Number: 10	Revision: 0.1			
Date: 2020-10-06	Time: 오전 11:42:13	Sheet 10 of 31			
File: S905X2_SDIO.SchDoc			Designed by: neal.kim@hardkernel.com		



DDR4 Density	Rank0 (2PCS x 16Gb)	Rank1 (2PCS x 16Gb)	Rank2 (2PCS x 16Gb)	Rank3 (2PCS x 16Gb)
1G Byte	512M Byte	512M Byte	NC	NC
2G Byte	512M Byte	512M Byte	512M Byte	512M Byte
4G Byte	1G Byte	1G Byte	1G Byte	1G Byte



Title **PWR DC DC 12V 5V 3.3V**

Size: **A4**

Number: **14**

Revision: **0.1**

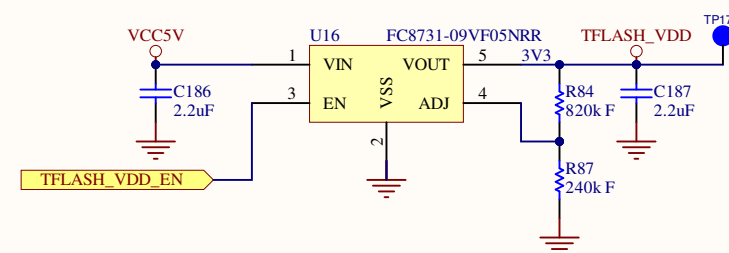
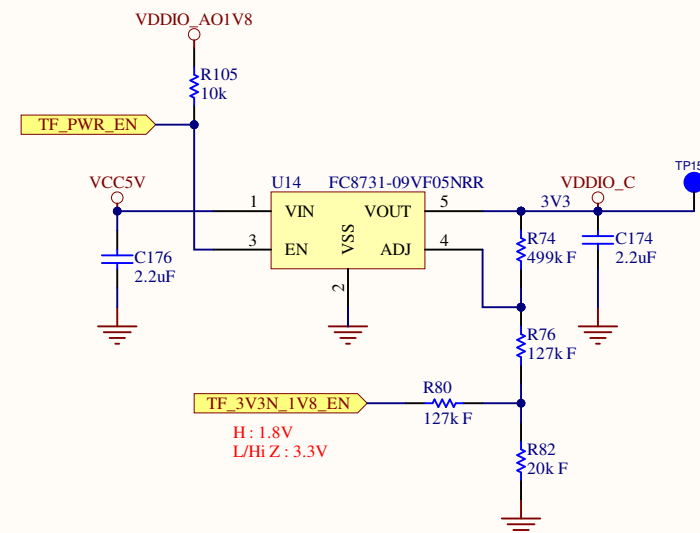
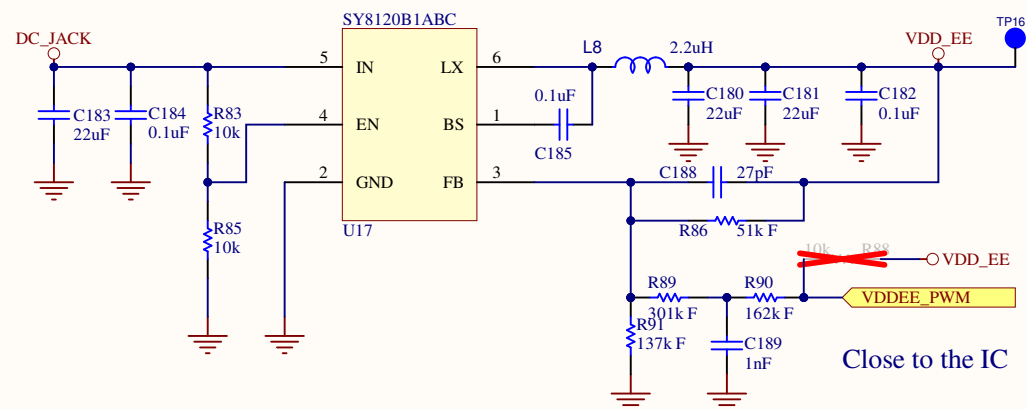
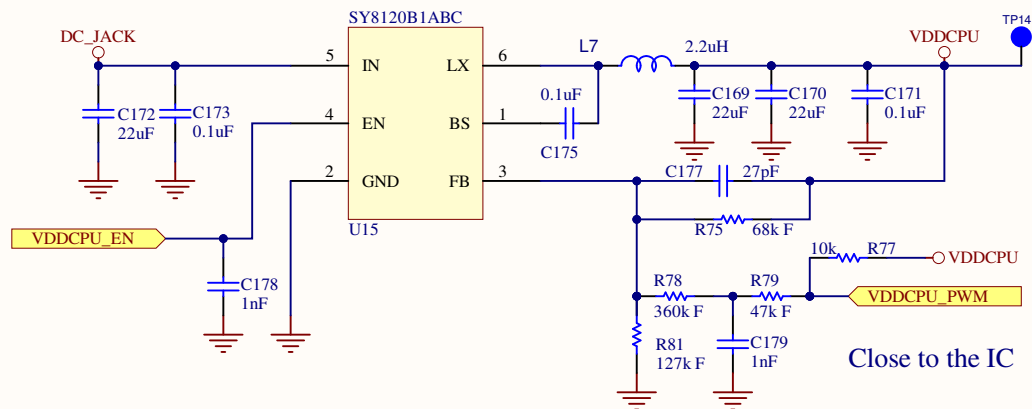
Date: 2020-10-06 Time: 2020-10-06 11:42:14 Sheet 14 of 31

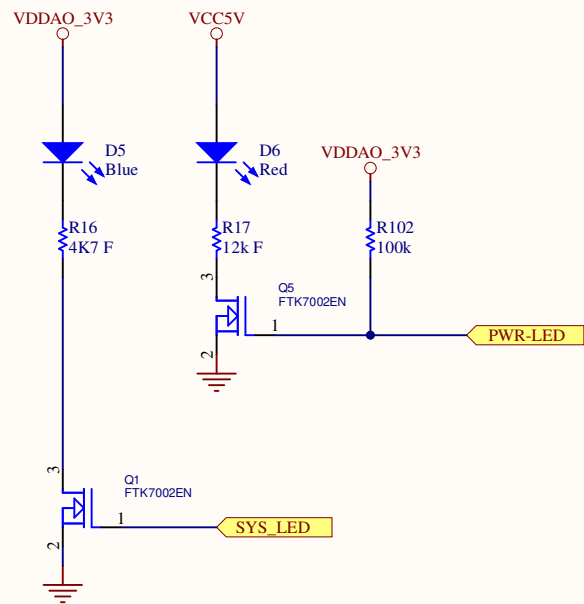
File: PWR_DCDC_5V_3V3.SchDoc

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Manangu, Anyang City
Gyeonggi-do
South Korea

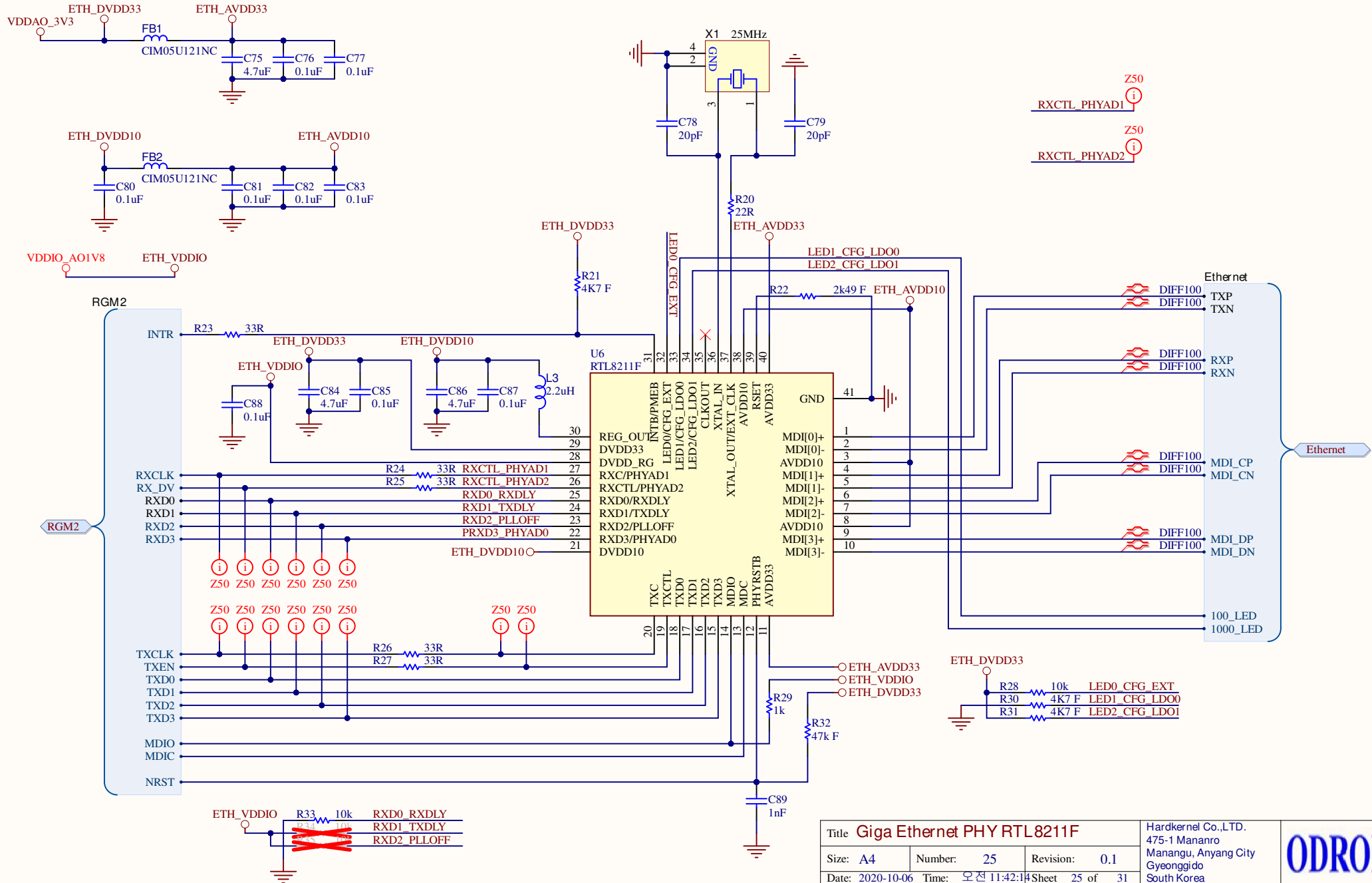
Designed by: neal.kim@hardkernel.com

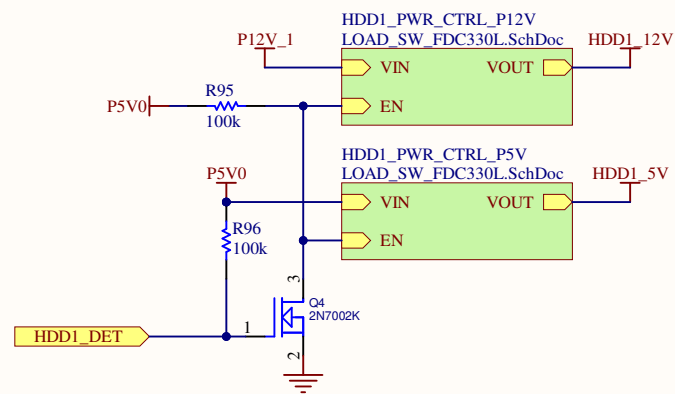
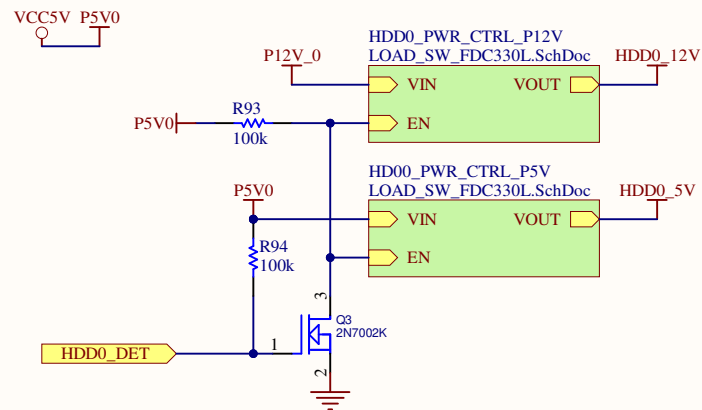
ODROID



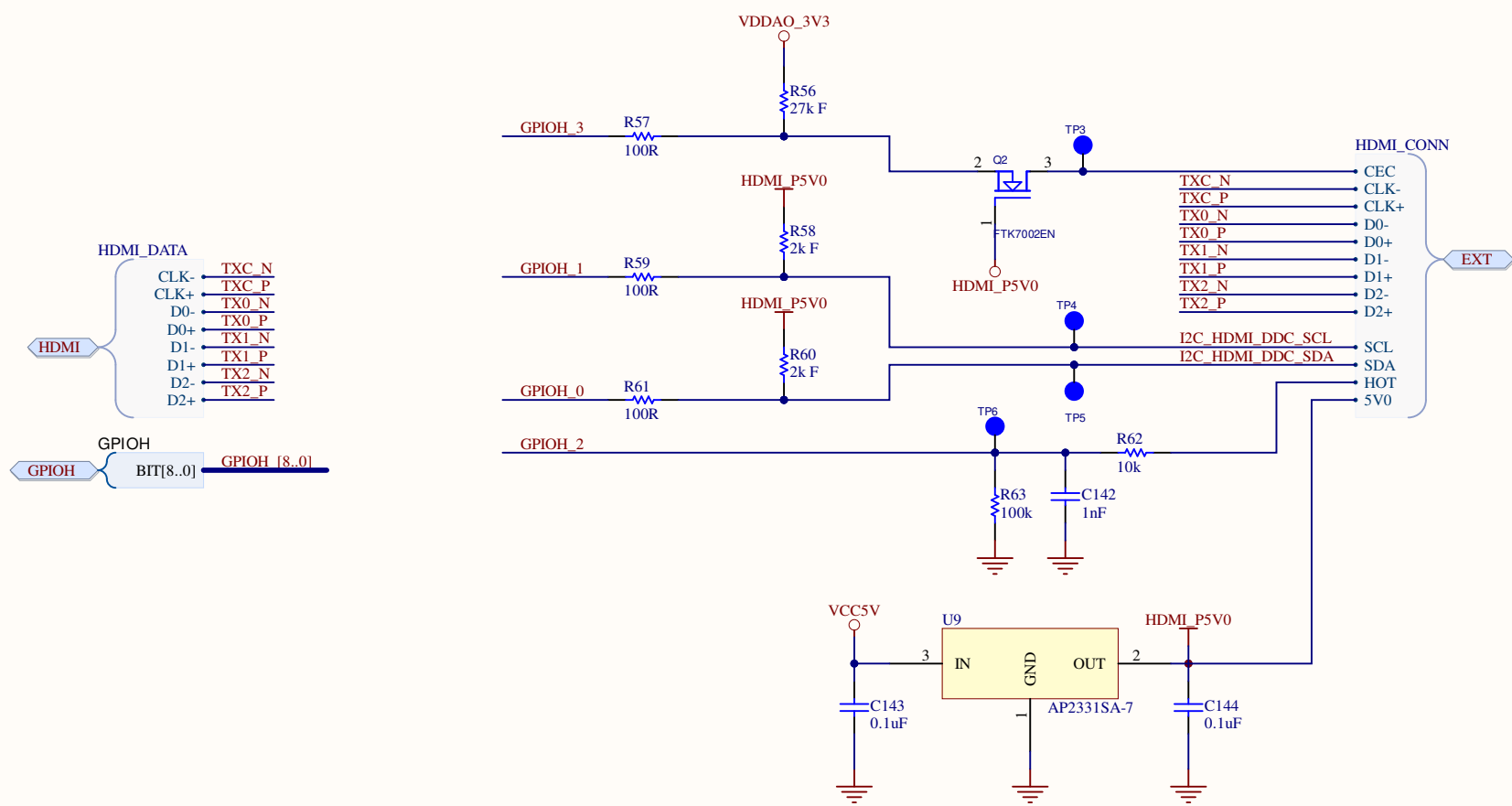


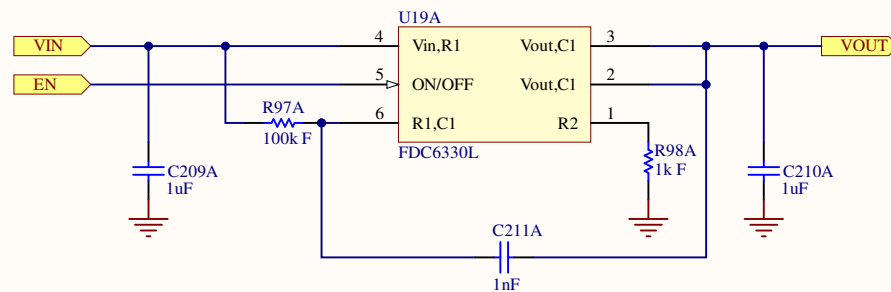
Title PWR SYSTEM LEDs			Hardkernel Co.,LTD. 475-1 Mananro Manangu, Anyang City Gyeonggido South Korea		
Size: A4	Number: 21	Revision: 0.1			
Date: 2020-10-06	Time: 오전 11:42:14	Sheet 21 of 31			
File: C_LEDS.SchDoc			Designed by: ruppi.kim@hardkernel.com		



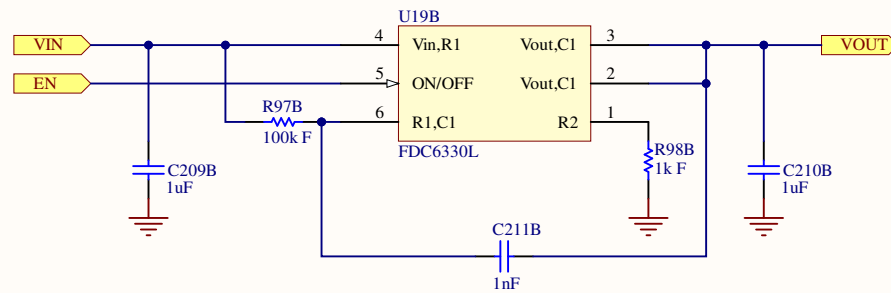


Title HDD PWR Control			Hardkernel Co.,LTD. 475-1 Mananro Manangu, Anyang City Gyeonggi-do South Korea		ODROID
Size: A4	Number: 20	Revision: 0.1			
Date: 2020-10-06	Time: 오전 11:42:14	Sheet 20 of 31			
File: HDD_PWR_CTRL.SchDoc			Designed by: ruppi.kim@hardkernel.com		

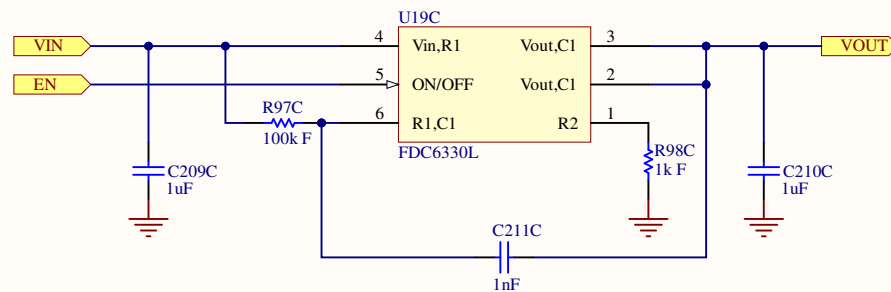




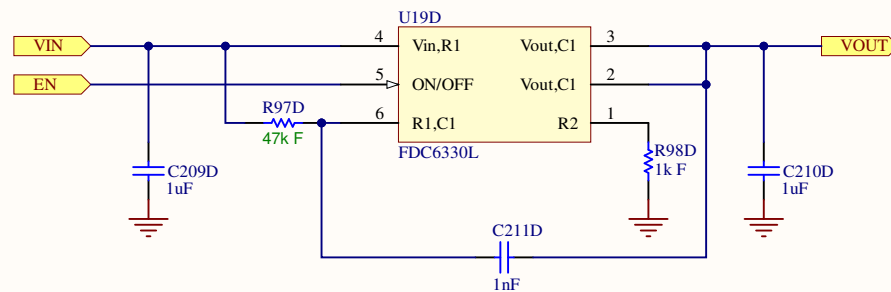
Title LOAD SW FDC330L			Hardkernel Co.,LTD. 475-1 Mananro Manangu, Anyang City Gyeonggi-do South Korea		ODROID
Size: A4	Number: 18	Revision: 0.1			
Date: 2020-10-06	Time: 오전 11:42:14	Sheet 18 of 31			
File: LOAD_SW_FDC330L.SchDoc			Designed by: ruppi.kim@hardkernel.com		



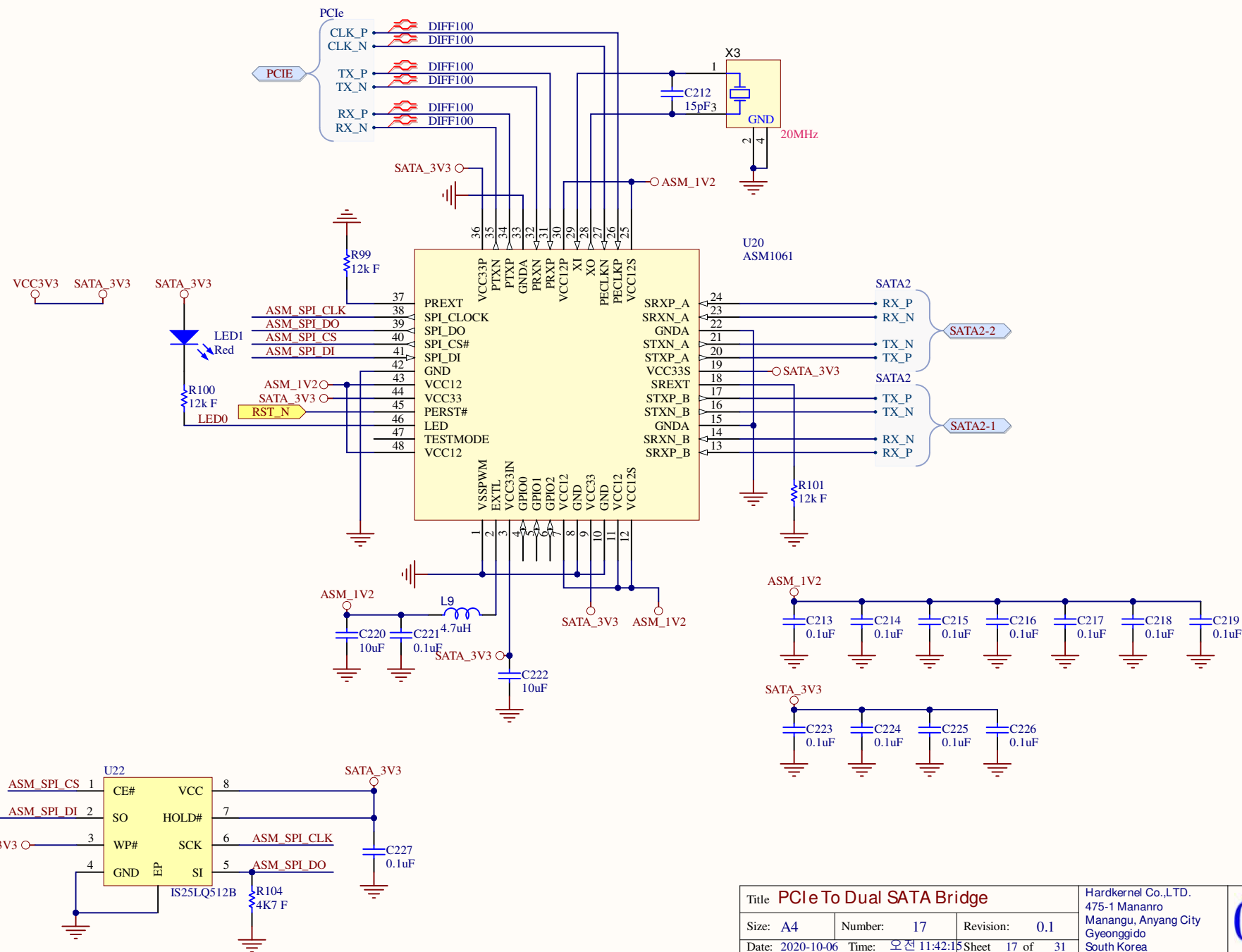
Title LOAD SW FDC330L			Hardkernel Co.,LTD. 475-1 Mananro Manangu, Anyang City Gyeonggi-do South Korea		ODROID
Size: A4	Number: 18	Revision: 0.1			
Date: 2020-10-06	Time: 오전 11:42:15	Sheet 18 of 31			
File: LOAD_SW_FDC330L.SchDoc			Designed by: ruppi.kim@hardkernel.com		



Title LOAD SW FDC330L			Hardkernel Co.,LTD. 475-1 Mananro Manangu, Anyang City Gyeonggi-do South Korea	
Size: A4	Number: 18	Revision: 0.1	ODROID	
Date: 2020-10-06	Time: 오전 11:42:15	Sheet 18 of 31		
File: LOAD_SW_FDC330L.SchDoc			Designed by: ruppi.kim@hardkernel.com	



Title LOAD SW FDC330L			Hardkernel Co.,LTD. 475-1 Mananro Manangu, Anyang City Gyeonggi-do South Korea		ODROID
Size: A4	Number: 18	Revision: 0.1			
Date: 2020-10-06	Time: 오전 11:42:15	Sheet 18 of 31			
File: LOAD_SW_FDC330L.SchDoc			Designed by: ruppi.kim@hardkernel.com		



Title **PCIe To Dual SATA Bridge**

Size: **A4**

Number: **17**

Revision: **0.1**

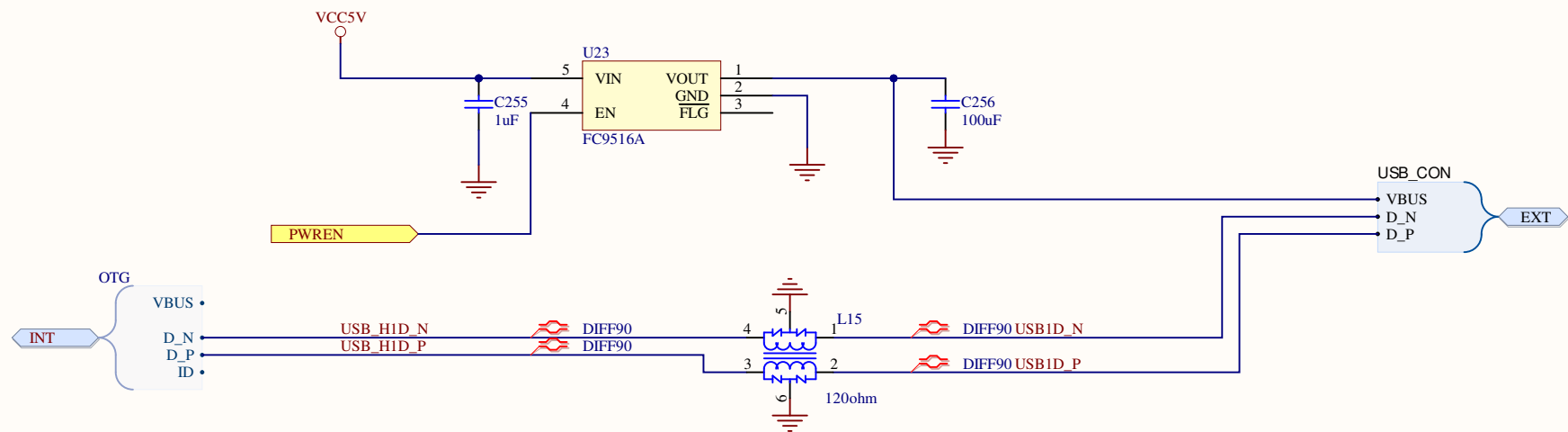
Date: 2020-10-06 Time: 11:42:15 Sheet 17 of 31

File: PCIe2SATA_ASM1061.SchDoc

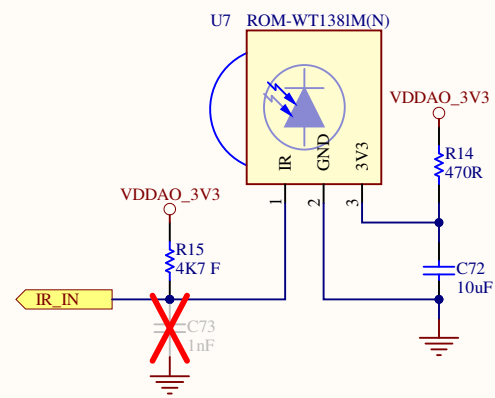
Hardkernel Co.,LTD.
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Manangu, Anyang City
Gyeonggi-do
South Korea

Designed by: ruppi.kim@hardkernel.com

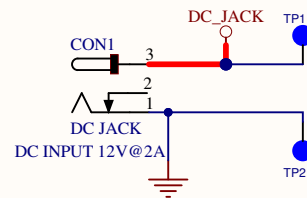
ODROID



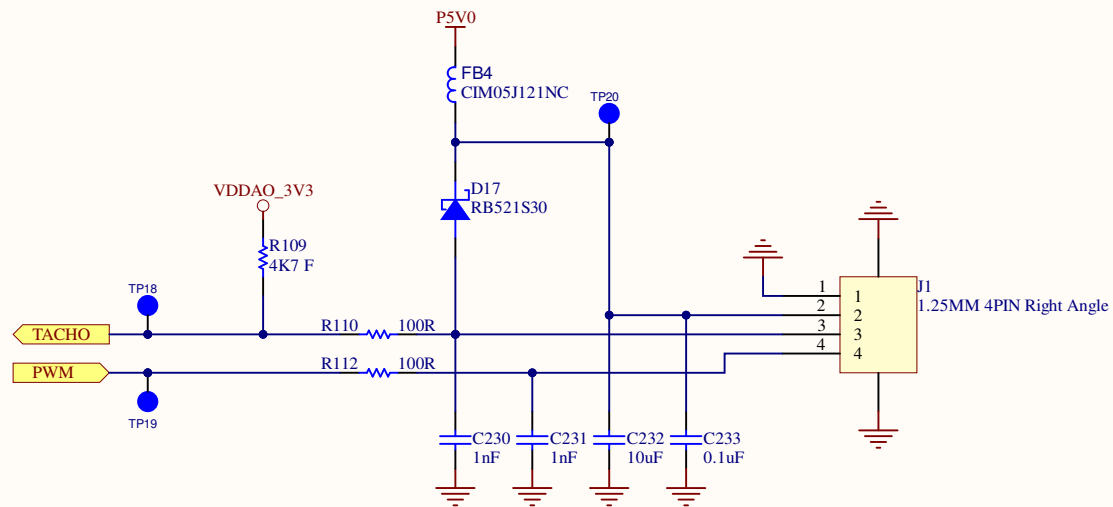
Title USB HOST PWR SW			Hardkernel Co.,LTD. 475-1 Mananro Manangu, Anyang City Gyeonggido South Korea		ODROID
Size: A4	Number: 22	Revision: 0.1			
Date: 2020-10-06	Time: 오전 11:42:15	Sheet 22 of 31			
File: USB2_HOST_PWR_SW.SchDoc			Designed by: ruppi.kim@hardkernel.com		



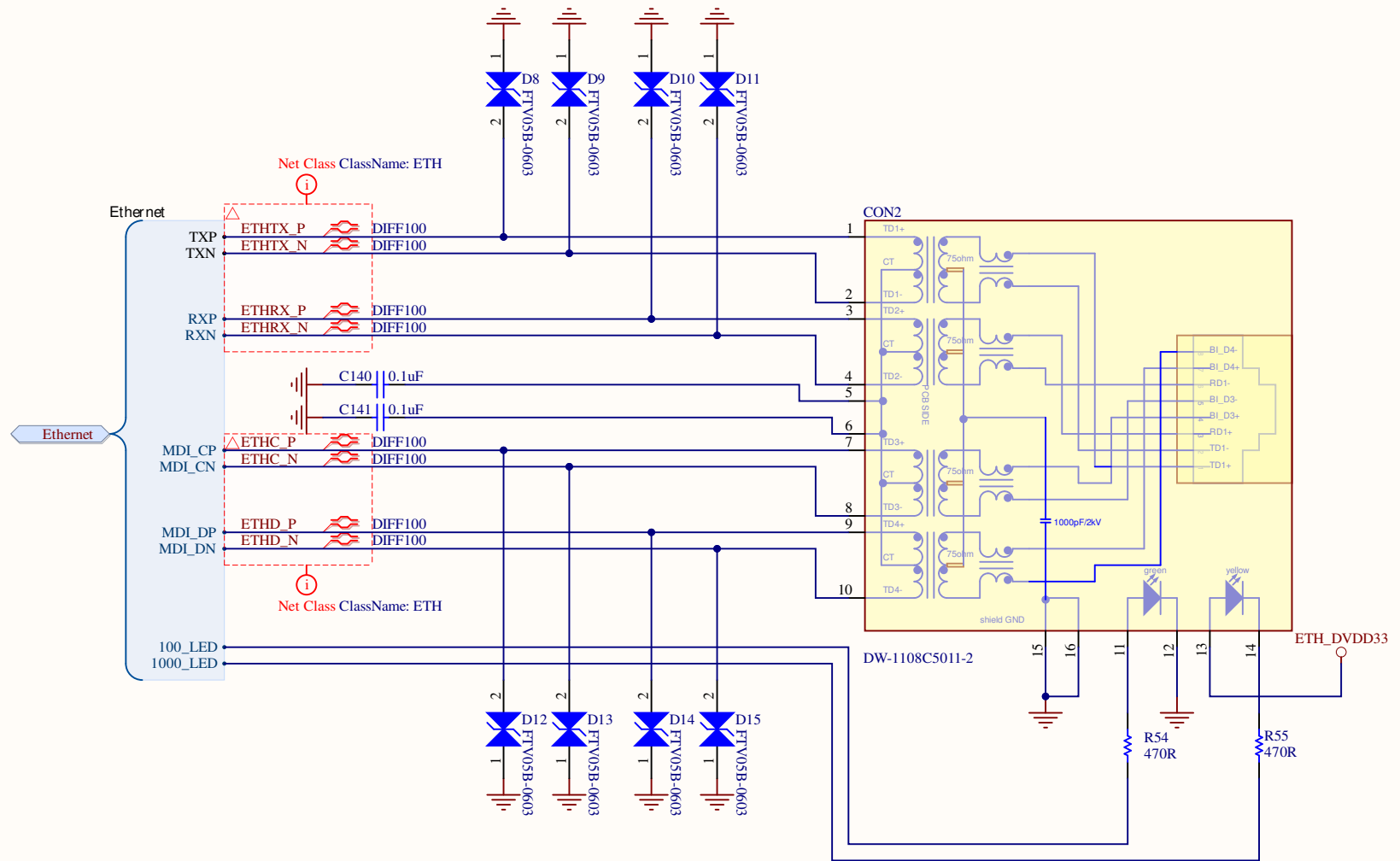
Title Remote Controller Receiver			Hardkernel Co.,LTD. 475-1 Mananro Manangu, Anyang City Gyeonggi-do South Korea	
Size: A4	Number: 19	Revision: 0.1	ODROID	
Date: 2020-10-06	Time: 오전 11:42:15	Sheet 19 of 31		
File: IR.SchDoc			Designed by: ruppi.kim@hardkernel.com	



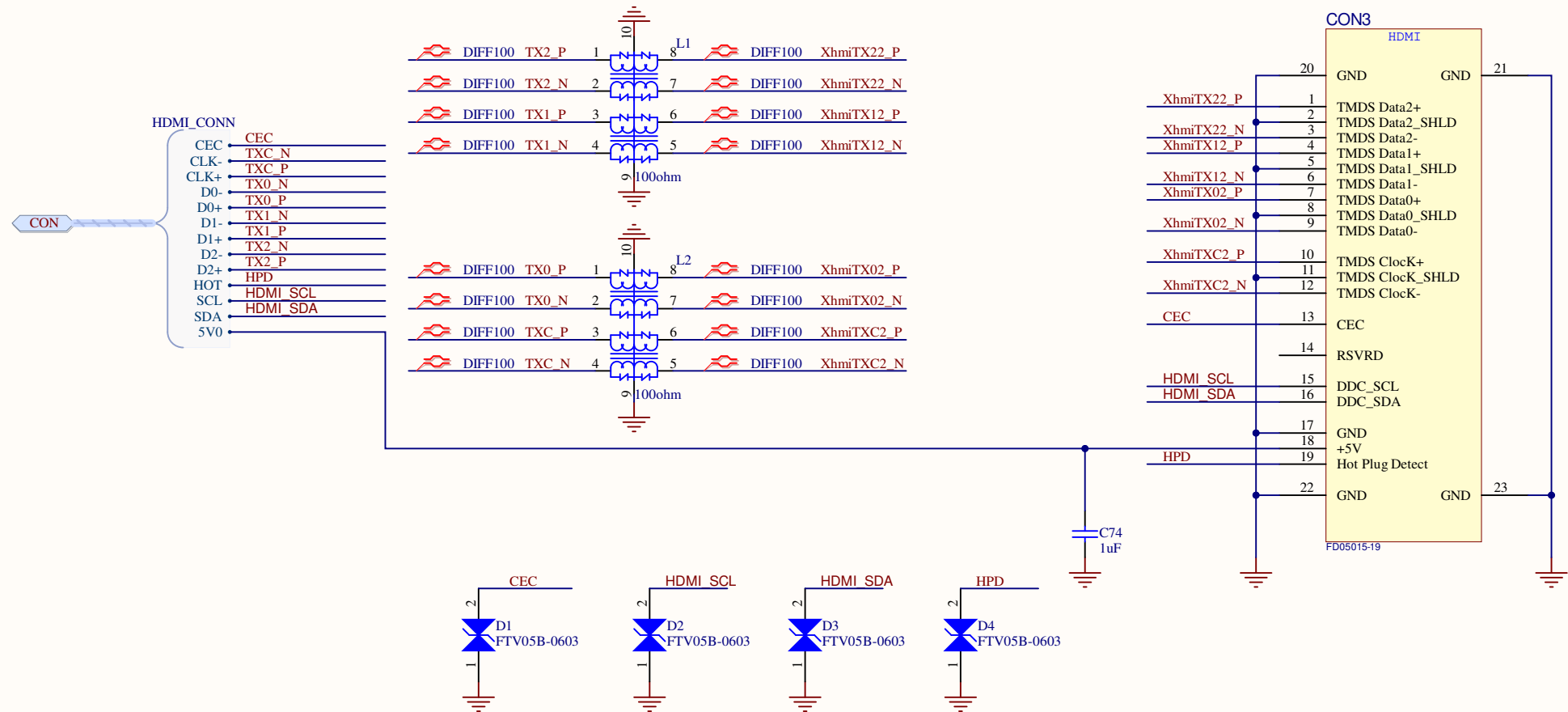
Title DC JACK			Hardkernel Co.,LTD. 475-1 Mananro Manangu, Anyang City Gyeonggi-do South Korea	
Size: A4	Number: 23	Revision: 0.1		
Date: 2020-10-06	Time: 오전 11:42:15	Sheet 23 of 31		
File: CON_DCJACK.SchDoc			Designed by: ruppi.kim@hardkernel.com	



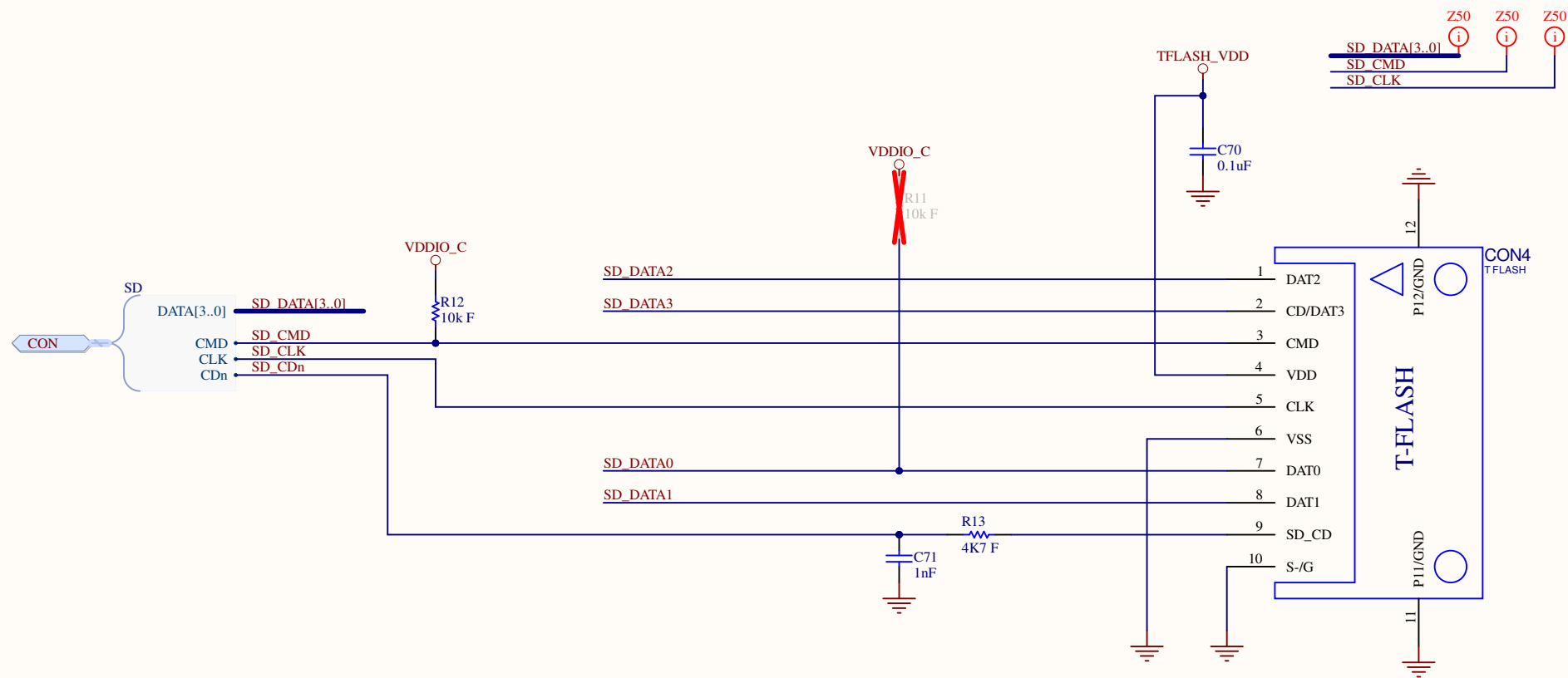
Title CON FAN				Hardkernel Co.,LTD. 475-1 Mananro Manangu, Anyang City Gyeonggi-do South Korea		ODROID
Size: A4	Number: 31	Revision: 0.1				
Date: 2020-10-06	Time: 오전 11:42:15	Sheet 31 of 31				
File: CON_FAN.SchDoc				Designed by: ruppi.kim@hardkernel.com		



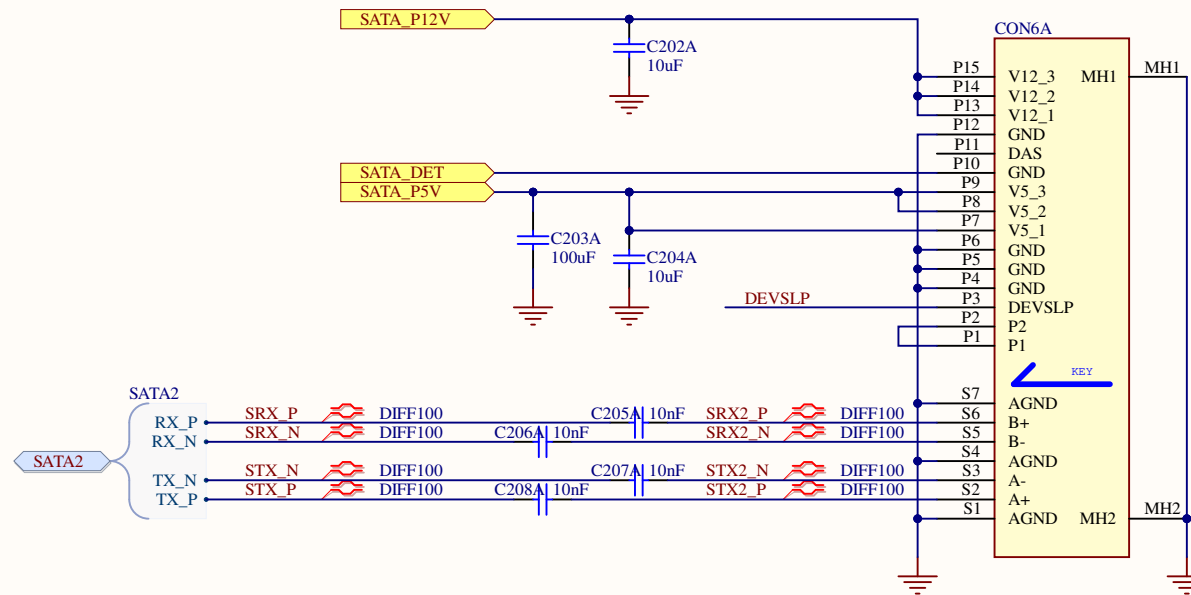
Title Giga Ethernet Connector			Hardkernel Co.,LTD. 475-1 Mananro Manangu, Anyang City Gyeonggi-do South Korea		ODROID
Size: A4	Number: 27	Revision: 0.1			
Date: 2020-10-06	Time: 오전 11:42:15	Sheet 27 of 31			
File: CON_GIGA_ETH.SchDoc			Designed by: ruppi.kim@hardkernel.com		



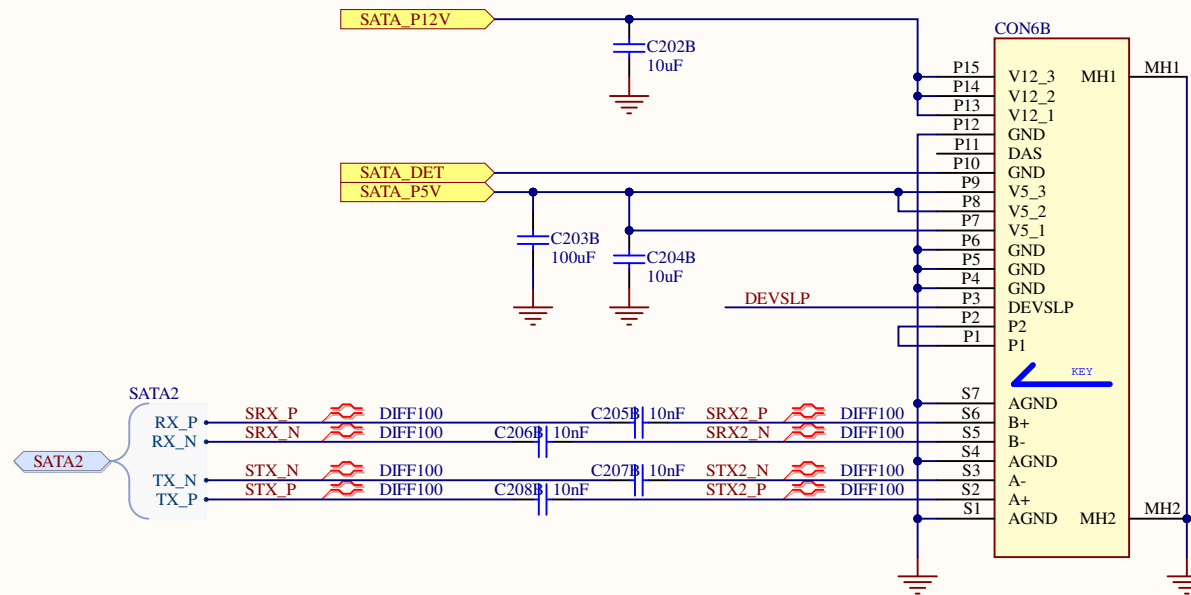
Title HDMI Connector			Hardkernel Co.,LTD. 475-1 Mananro Manangu, Anyang City Gyeonggi-do South Korea		ODROID
Size: A4	Number: 30	Revision: 0.1			
Date: 2020-10-06	Time: 오전 11:42:15	Sheet 30 of 31			
File: CON_HDMI.SchDoc			Designed by: ruppi.kim@hardkernel.com		



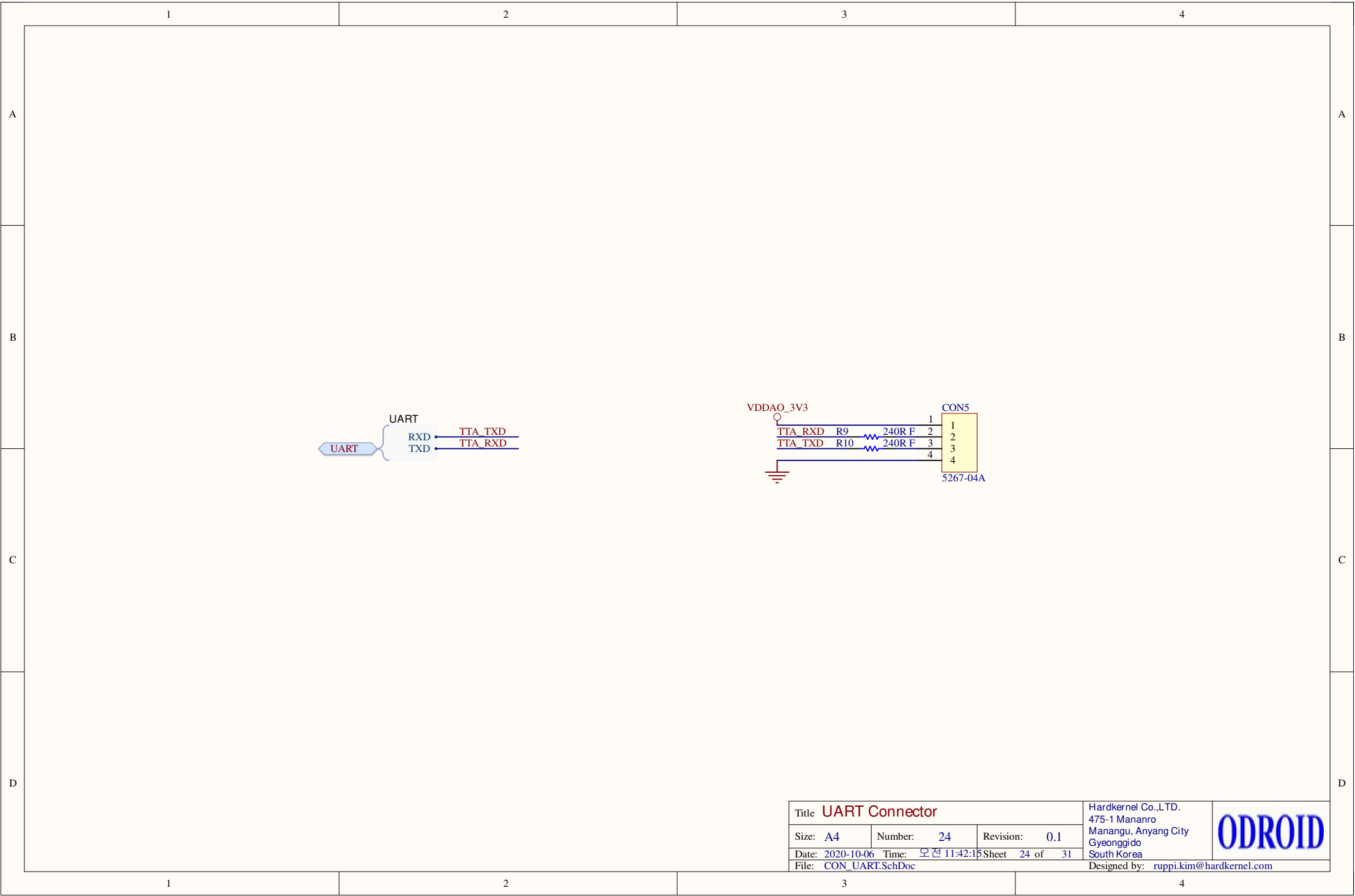
Title MicroSD Socket			Hardkernel Co.,LTD. 475-1 Mananro Manangu, Anyang City Gyeonggi-do South Korea		ODROID
Size: A4	Number: 26	Revision: 0.1			
Date: 2020-10-06	Time: 오전 11:42:15	Sheet 26 of 31			
File: CON_MICROSD_HD08-AL00335.SchDoc			Designed by: ruppi.kim@hardkernel.com		

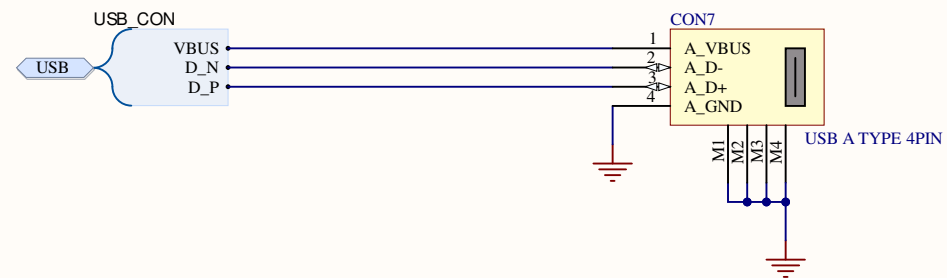


Title SATA2 Connector			Hardkernel Co.,LTD. 704 Anyang K-center 1591-9 Manangu, Anyang City Gyeonggi-do South Korea		ODROID
Size: A4	Number: 29	Revision: 0.1	Date: 2020-10-06 Time: 오전 11:42:15 Sheet 29 of 31		
File: CON_SATA2.SchDoc			Designed by: ruppi.kim@hardkernel.com		



Title SATA2 Connector			Hardkernel Co.,LTD. 704 Anyang K-center 1591-9 Manangu, Anyang City Gyeonggi-do South Korea		ODROID
Size: A4	Number: 29	Revision: 0.1	Date: 2020-10-06 Time: 오전 11:42:15 Sheet 29 of 31		
File: CON_SATA2.SchDoc			Designed by: ruppi.kim@hardkernel.com		





Title USB 2.0 Type A Connector			Hardkernel Co.,LTD. 475-1 Mananro Manangu, Anyang City Gyeonggido South Korea Designed by: ruppi.kim@hardkernel.com	
Size: A4	Number: 28	Revision: 0.1		
Date: 2020-10-06	Time: 오전 11:42:15	Sheet 28 of 31		
File: CON_USB_RA.SchDoc				