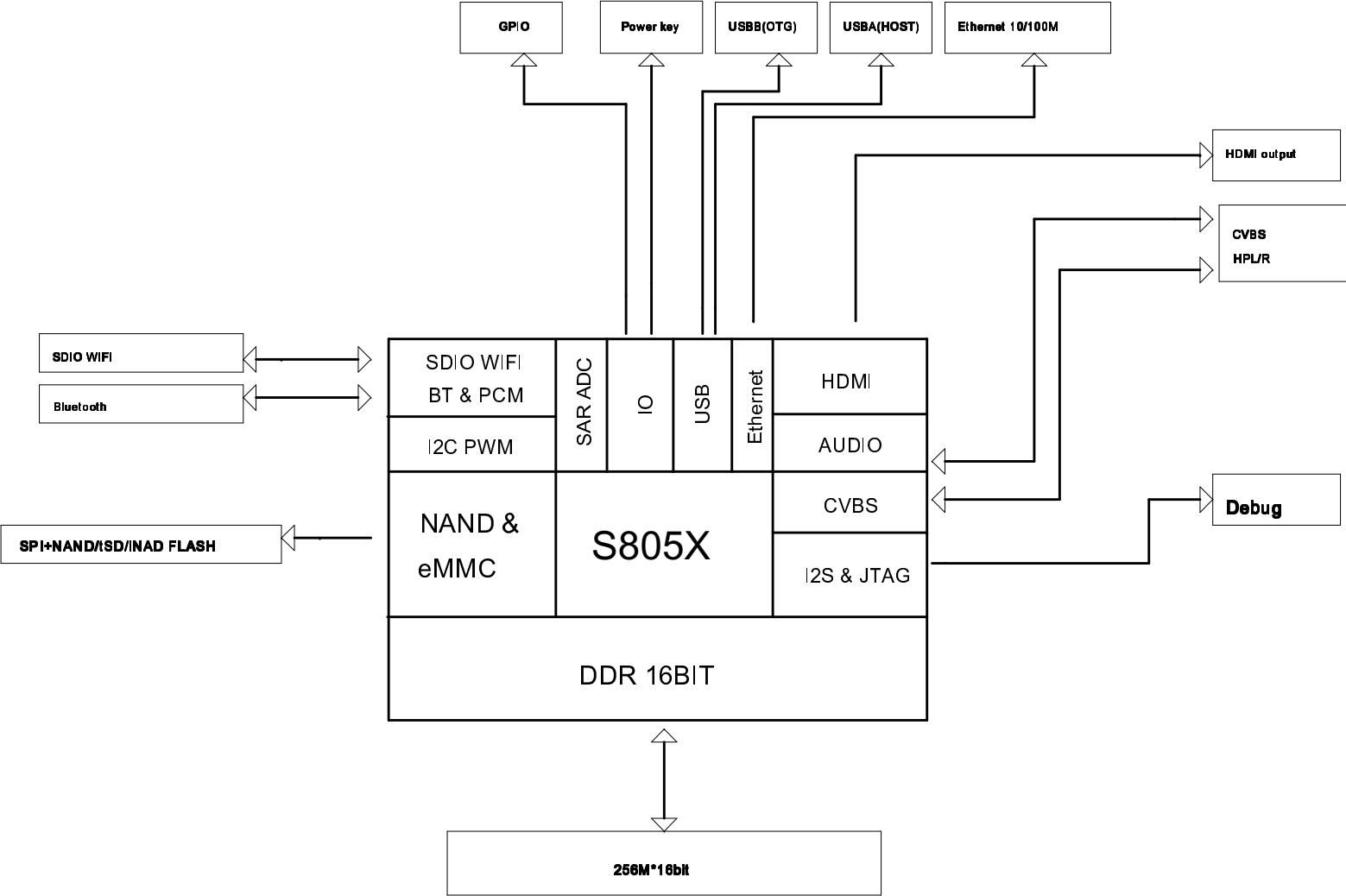
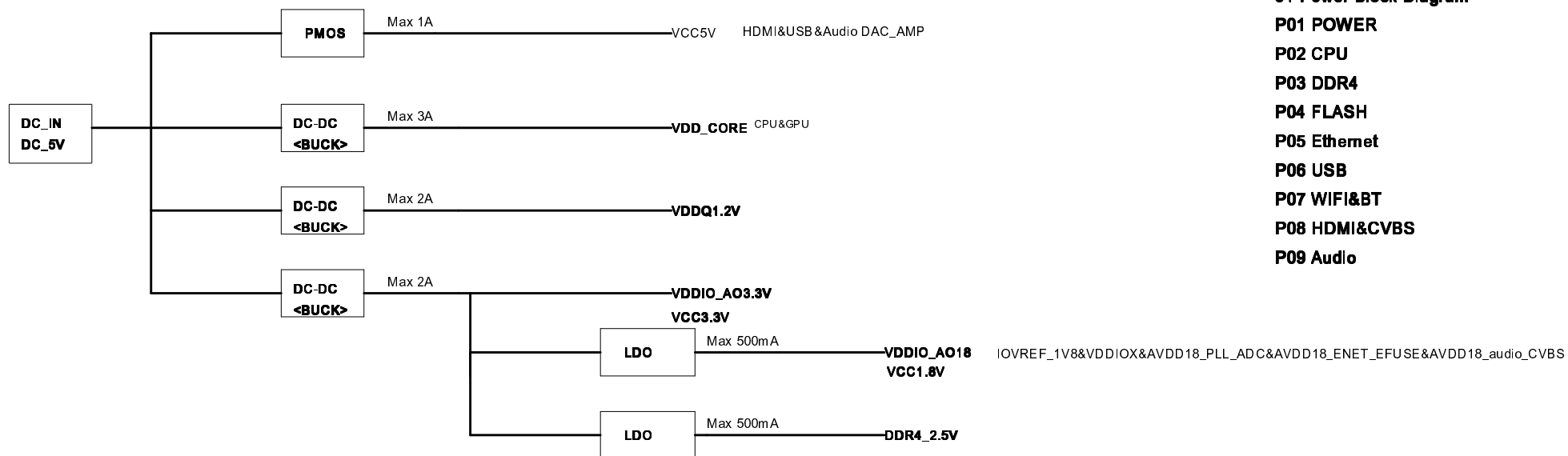


Block diagram MBX



MainBoard			Drawn by:
Document Number: S805X_DDR4			Drawn Date:
Title: Block Diagram		Size B Rev V03	Checked by: < Checked >
Date:		Sheet 1	of 12

Power Tree



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00 Block diagram of MBX

01 Power Block Diagram

P01 POWER

P02 CPU

P03 DDR4

P04 FLASH

P05 Ethernet

P06 USB

P07 WIFI&BT

P08 HDMI&CVBS

P09 Audio

Power_ON Sequence

- 1.VDD_CORE
- 2.VDDIO_AO3.3V
- 3.VDDIO_AO18,DDR4_2.5V
- 4.VDDQ1.2V

MainBoard		Drawn by:
Document Number: S805X_DDR4		Drawn Date:
Title: Power Block Diagram		Checked by: < Checked >
Date:		Sheet 2 of 12

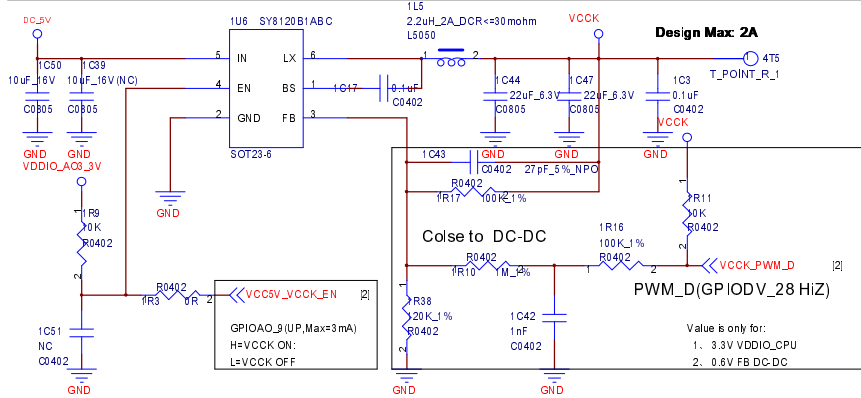
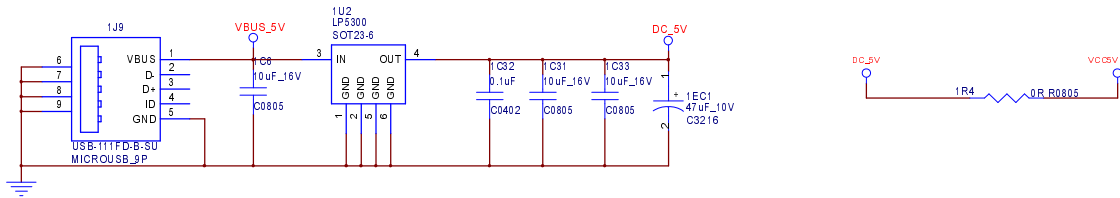
Version	Date	Author	Change Note	Approved
V01	20190308		First issue	
V02	20190626		1.Delete 1D7 green LED, leave 1D8 red LED. 2.Change 2U3 to HBQ-1838D, with metallic shell.	
V03	20191203		1.Add button 4SW1.	

MainBoard			Drawn by:
Document Number: S805X_DDR4			Drawn Date:
Title MODIFY NOTE		Size B	Checked by: < Checked >
Date:		Rev V03	Checked Date: checked date
Sheet		3	of 12

DC power supply input

DC 5V 2A

Please check the
PCB Footprint



High performance,VCCSV & VDDEE separate power, BOM list :

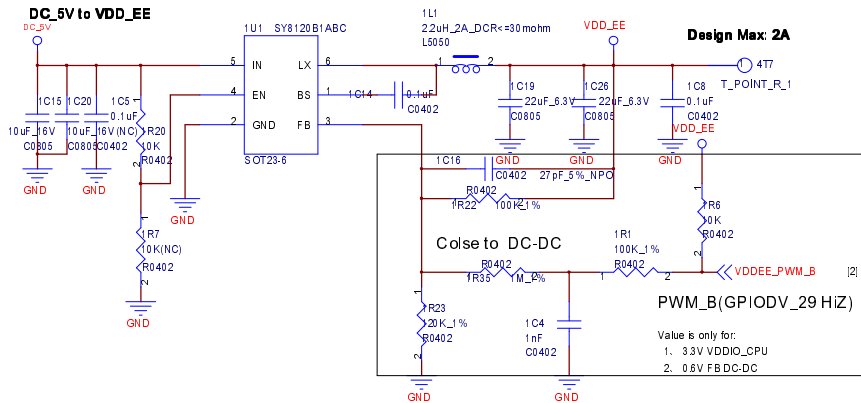
Solder:1U6/1L5/1C3/1C39/1C10/1C13/1C17/1C9/1C8/1R9/1R17/1R12/1R16

NC:2R2

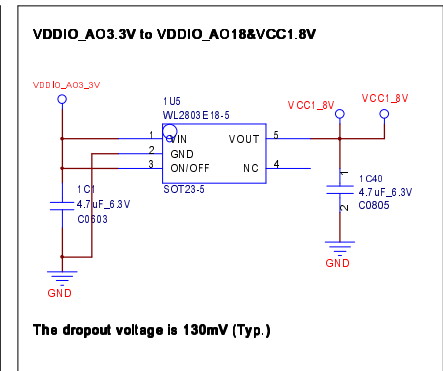
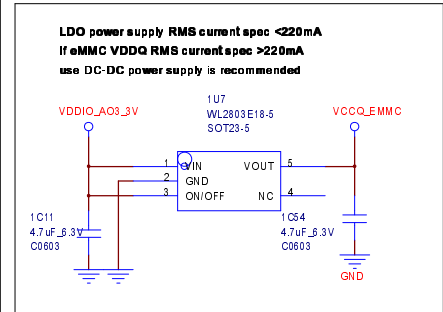
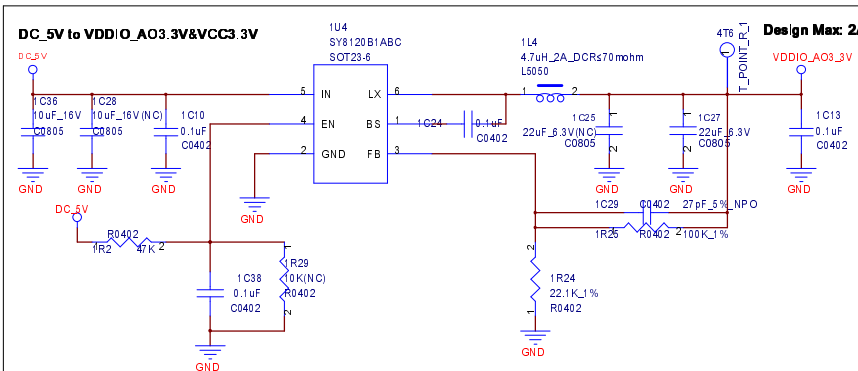
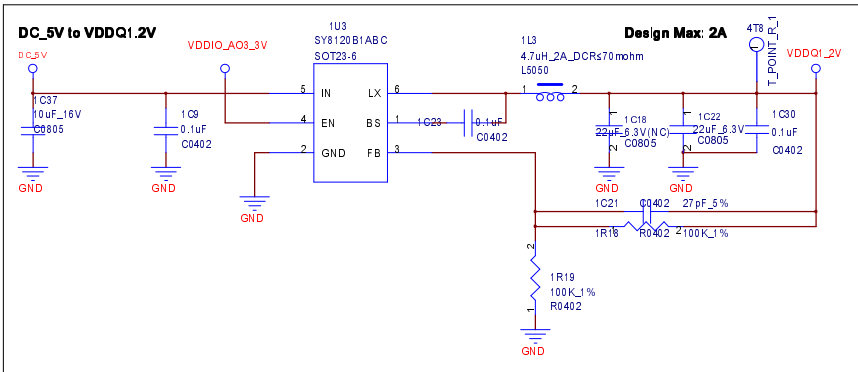
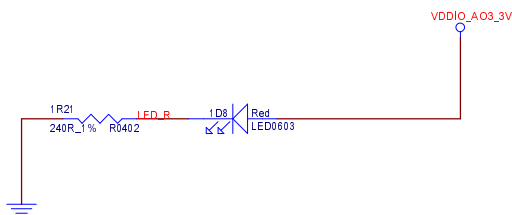
Low performance,VCCSV amalgamate with VDDEE, BOM list :

Solder:2R2

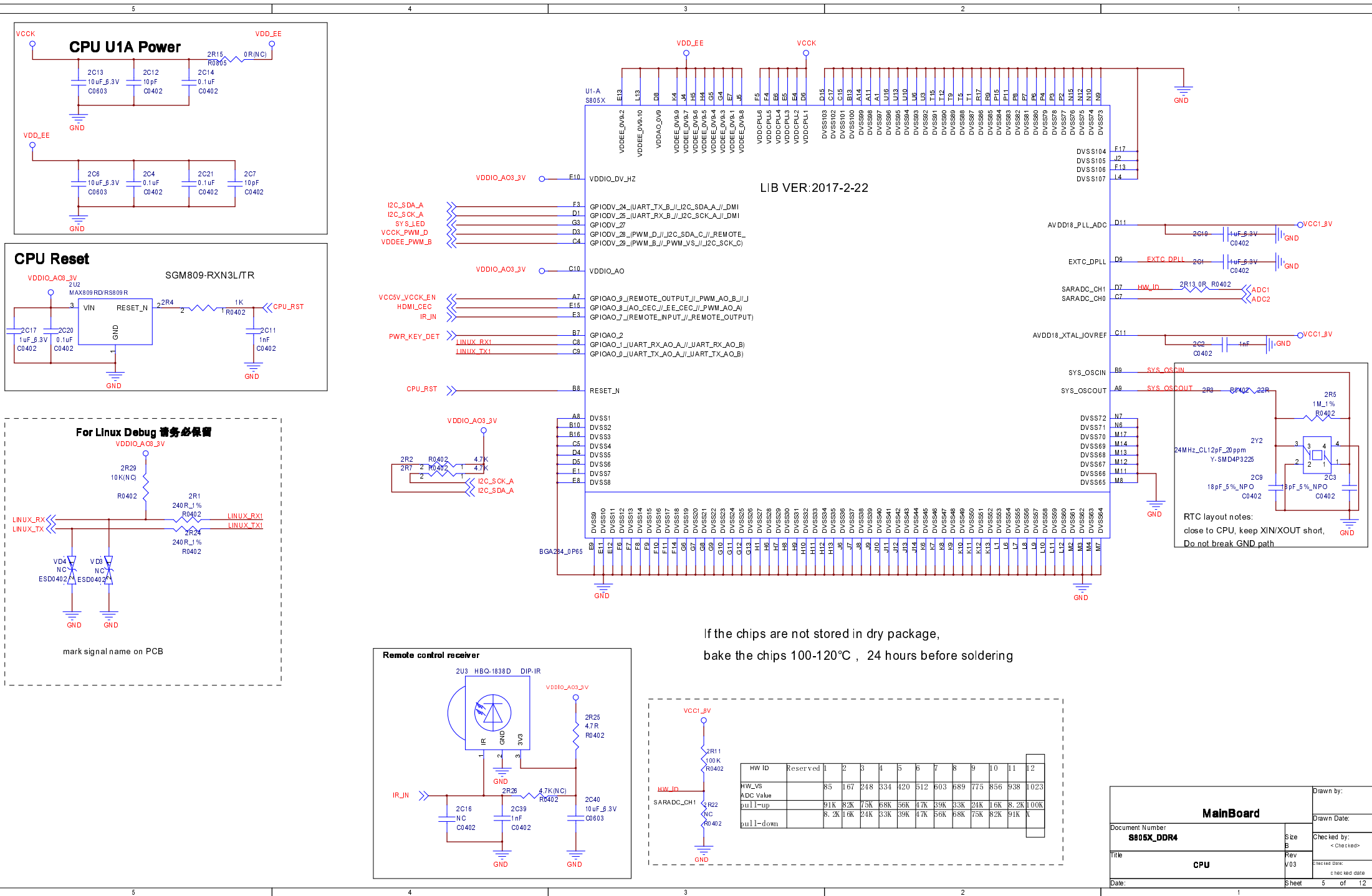
NC:1U6/1L5/1C39/1C10/1C13/1C17/1C9/1C8/1R9/1R17/1R12/1R16



System LED



MainBoard				Drawn by:
Document Number: S805X_DDR4				Drawn Date:
File: Power				Checked by: <Checked>
Date:				Checked Date: checked date
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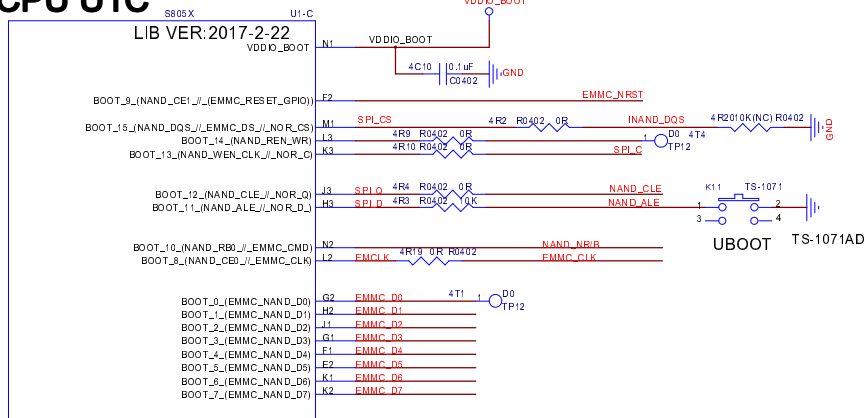
If the chips are not stored in dry package,
bake the chips 100-120°C , 24 hours before soldering

HW ID	Reserved	1	2	3	4	5	6	7	8	9	10	11	12
HW_VS		85	167	248	334	420	512	603	689	775	856	938	1023
ADC Value		91K	82K	75K	68K	56K	47K	39K	33K	24K	16K	8.2K	100K
pull-up		8.2K	16K	24K	33K	39K	47K	56K	68K	75K	82K	91K	K
pull-down													

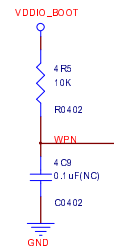
MainBoard				Drawn by:
Document Number: S805X_DDR4				Drawn Date:
File: CPU				Checked by: <Checked>
Date:				Sheet 5 of 12



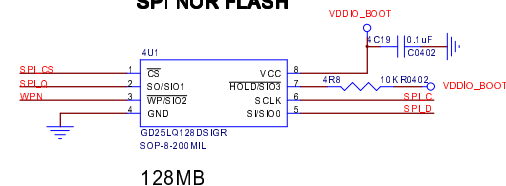
CPU U1C



BGA284_DP65

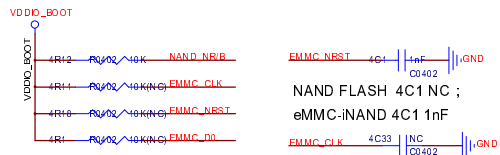
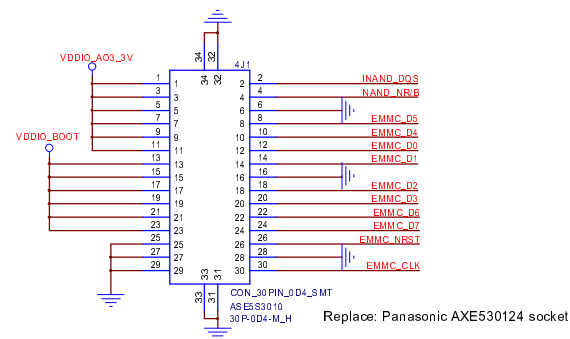


SPI NOR FLASH



128MB

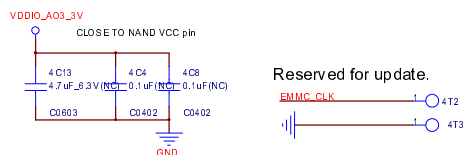
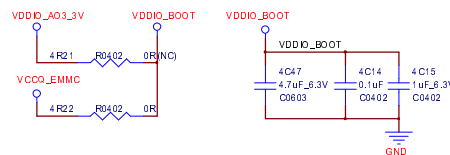
External eMMC module



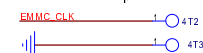
Flash selection

EMMC (default)

Name	4C1	4R11 4R18	4C3	4R5 4C9	4C13,4C4,4C8 4C12,4C11	4C47,4C14,4C15 4C18,4C17	4R9 4R10
NAND	NC	10K	NC	Yes	Yes	NC	0R
EMMC	1nF	NC	1nF	NC	NC	Yes	NC



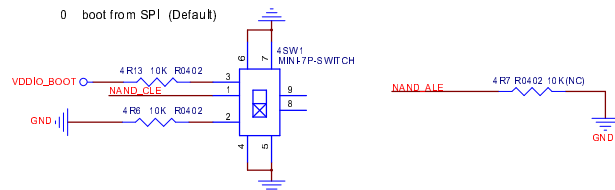
Reserved for update.



Power ON Config

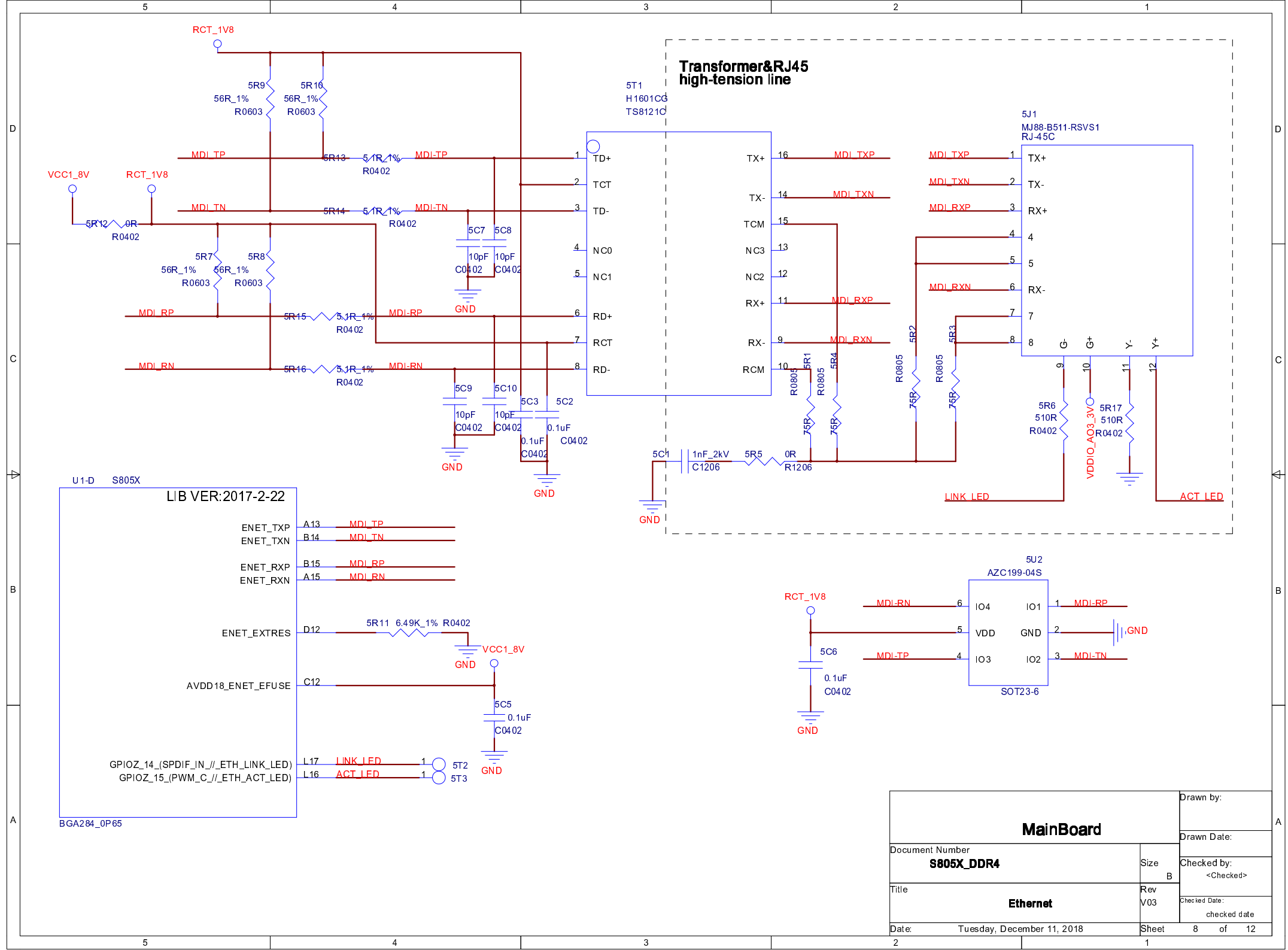
NAND_CLE

- 1 boot from NAND/eMMC
- 0 boot from SPI (Default)

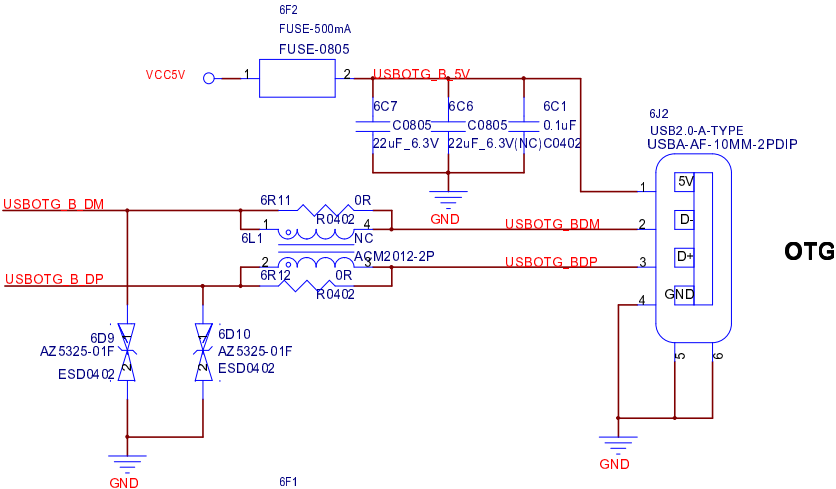
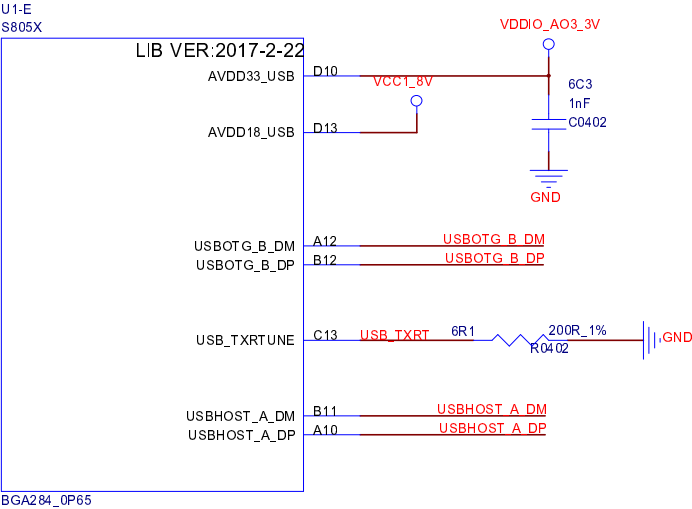


MainBoard

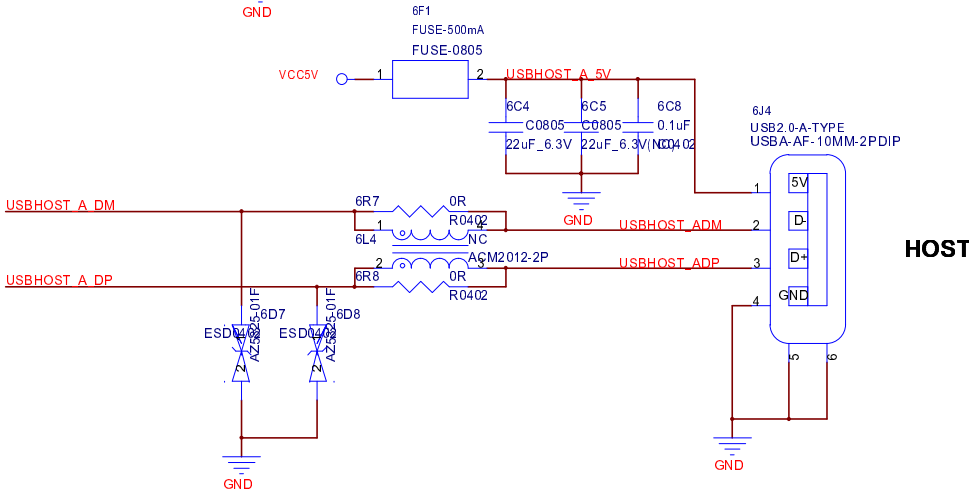
Document Number:	S805X_DDR4	Size:	B	Checked by:	<C checked>
File:	FLA8H	Rev:	V03	Checked date:	<C checked date>
Date:		Sheet:	7	of:	12



CPU U1E



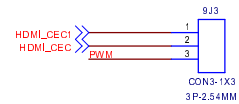
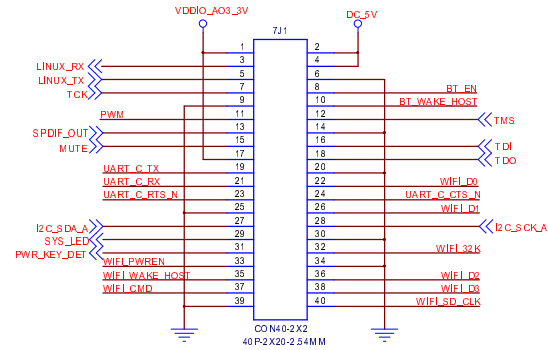
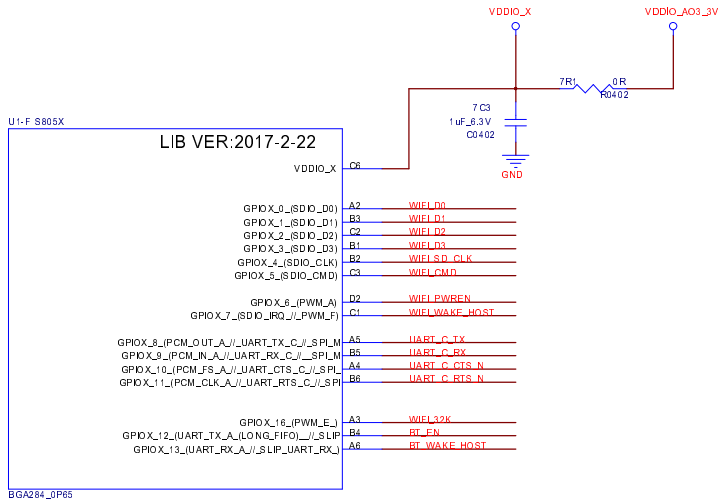
OTG



HOST

短体10mm 带卷边 贴片2固定脚

MainBoard		Drawn by:	
		Drawn Date:	
Document Number S805X_DDR4		Size B	Checked by: <Checked>
Title USB&CARD&KEY		Rev V03	Checked Date: checked date
Date:		Sheet 9	of 12



MainBoard			Drawn by:	
Document Number:			Drawn Date:	
S805X_DDR4			Size	Checked by:
			B	<C checked>
File			Rev	Checked Date:
WIFI BT			V03	<C checked date>
Date:			Sheet	10 of 12

CPU U1G

U1-G S805X

LIB VER:2017-2-22

GPIOH_0(HDMI_HPD_OD_5V))
GPIOH_1(HDMI_SDA_OD_5V))
GPIOH_2(HDMI_SCL_OD_5V))

GPIOH_4(SPDI_F_OUT_J_SPDIF_IN)
GPIOH_5

GPIOH_6(UTAG_TCK_J_TSIN_CLK_B)
GPIOH_7(UTAG_TMS_J_TSIN_D0_B)
GPIOH_8(UTAG_TDO_J_TSIN_SOP_B)
GPIOH_9(UTAG_TDO_J_TSIN_D_VALID_B)

AVDD18_HDMITX

HDMI_REXT

HDMITX_CKP
HDMITX_CKN
HDMITX_OP
HDMITX_ON
HDMITX_IP
HDMITX_IN
HDMITX_2P
HDMITX_2N

CVBS_COMP

CVBS_VREF

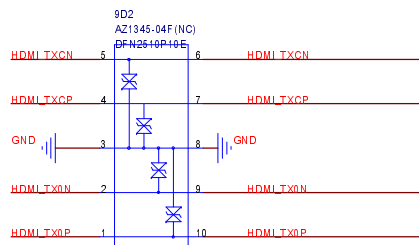
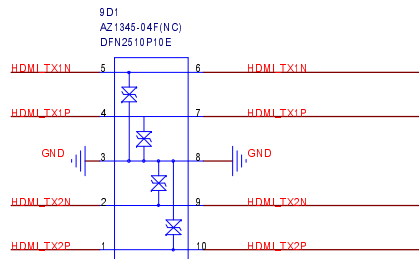
CVBS_RSET

CVBS_IOUT

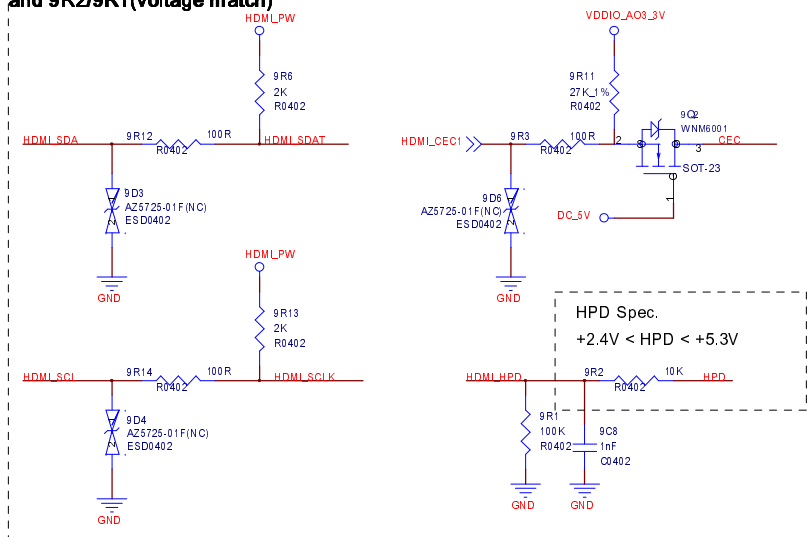
AVSS_CVBS

BGA284_0P65

HDMI output

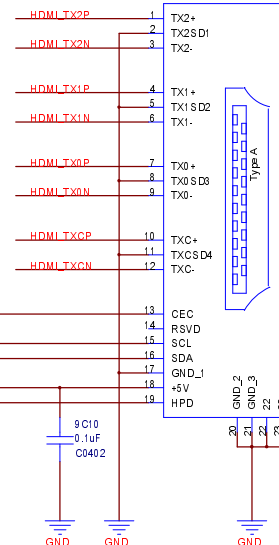


Do not delete 9Q2(avoid inverse current)
and 9R2/9R1(voltage match)



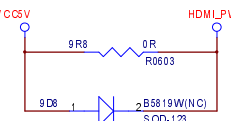
Type A

9J1
HDA31-F1F1-1000-A
HDMI-A-19NSMD
HHF-14A000-2SA-N



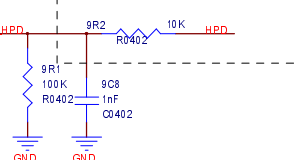
HDMI(power)Spec.

+4.8V < PVDD5 < +5.3V



HPD Spec.

+2.4V < HPD < +5.3V



MainBoard

Document Number:

S805X_DDR4

File

HDMI output

Date:

Drawn by:

Drawn Date:

Checked by:

< Checked >

Checked Date:

checked date

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