 <b>ARTOSYN CONFIDENTIAL</b>		
Designed by Wuping Wang	Project Name <b>Sirius EK V001</b>	Rev 1.0.0
Date 2017.11.22	Size A4	Page Title P01_COVER
Dept: R&D, ARTOSYN	Sheet 1 of 27	

D

C

B

A

D

C

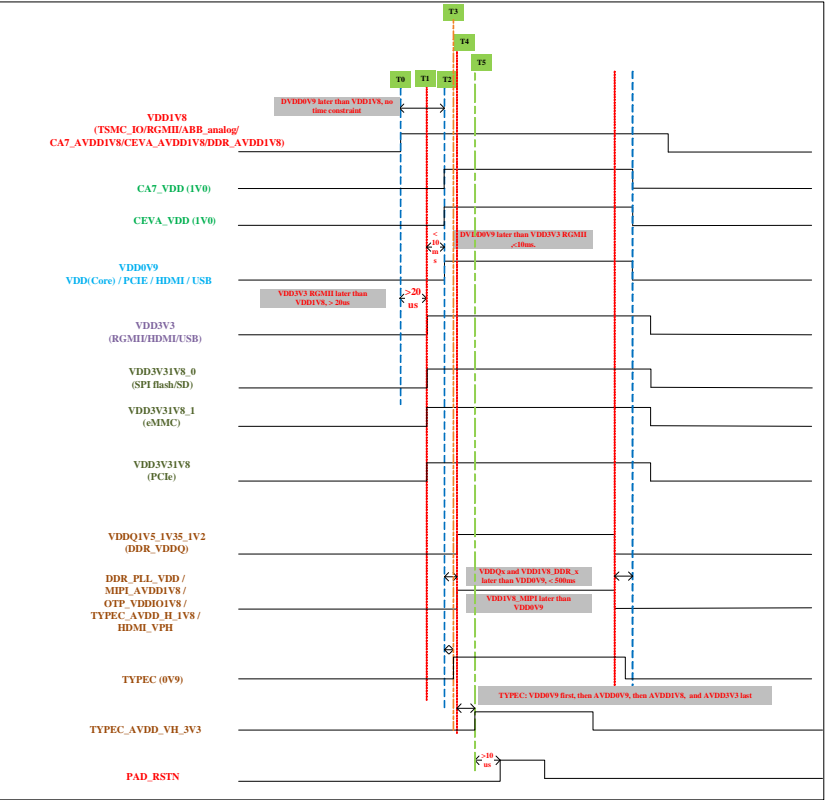
B

A

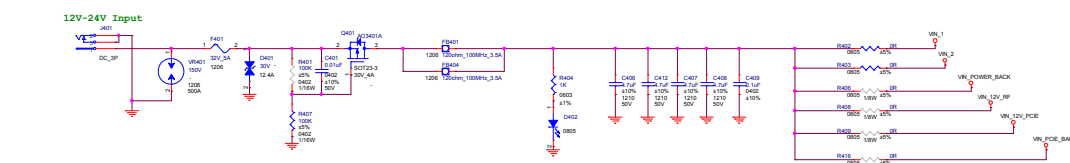
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Designed by Wuping Wang	Project Name Sirius EK V001	Rev 1.0.0
Date 2017.11.22	Size A4	Page Title P02_BLOCK DIAGRAM
Dept: R&D, ARTOSYN		Sheet <div><div></div>2<div></div></div> of <div><div></div>27<div></div></div>

Power Sequence

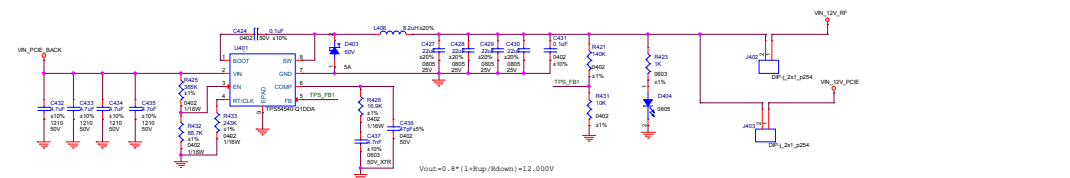
Power Tree



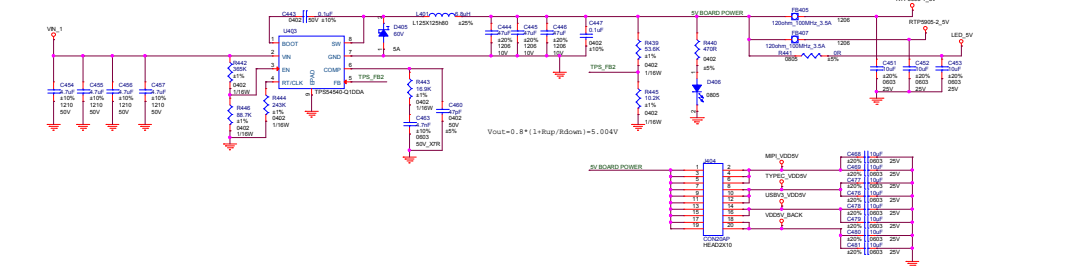
POWER INPUT



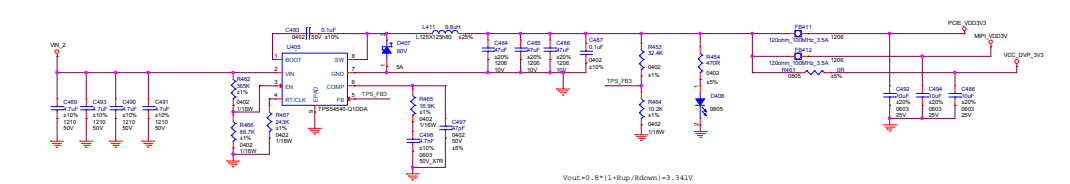
12V PCIE6RF CON POWER



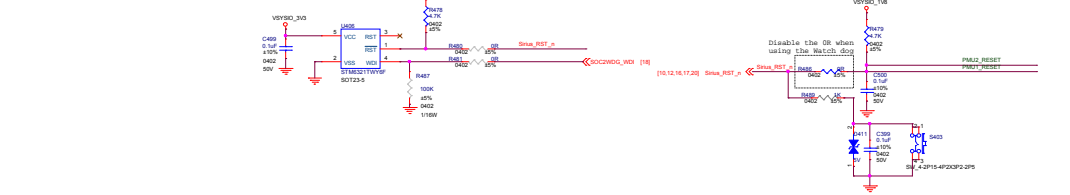
5V BOARD POWER



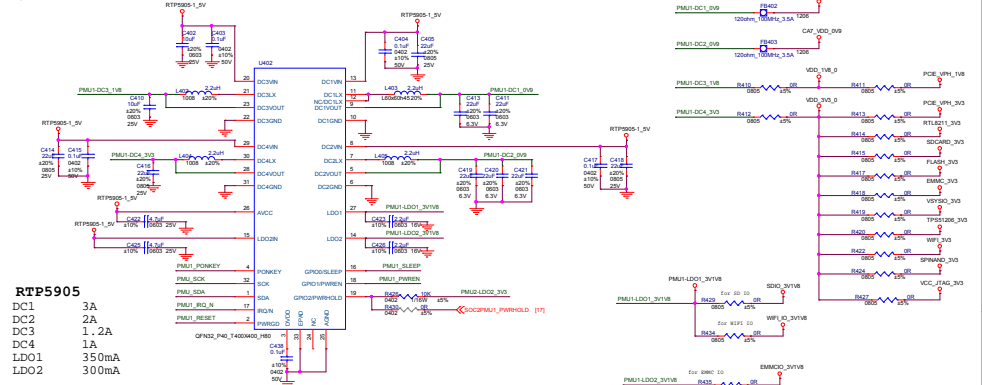
3.3V CON POWER



SYSTEM RESET

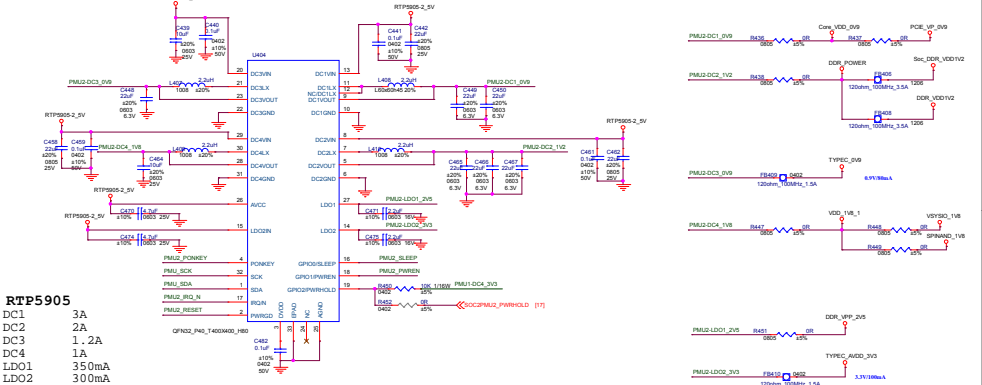


PMU1



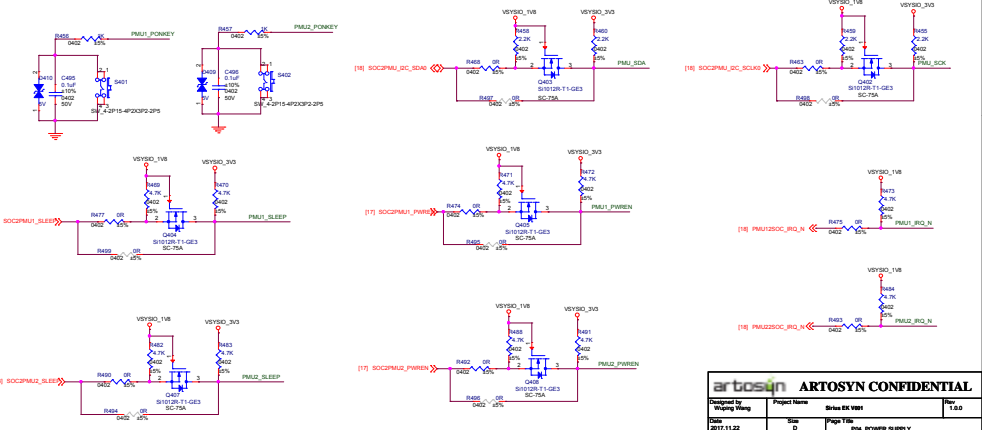
RTP5905  
DC1 3A  
DC2 2A  
DC3 1.2A  
DC4 1A  
LDO1 350mA  
LDO2 300mA

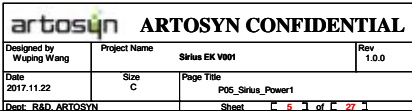
PMU2

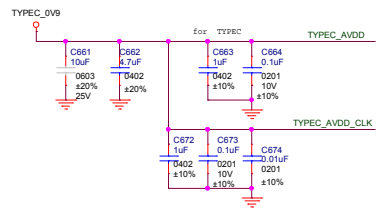
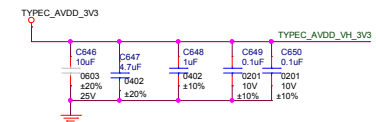
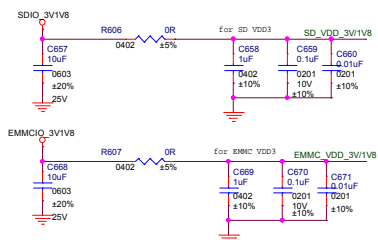
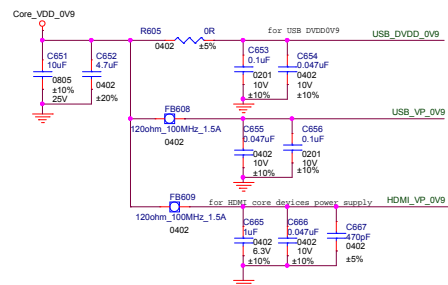
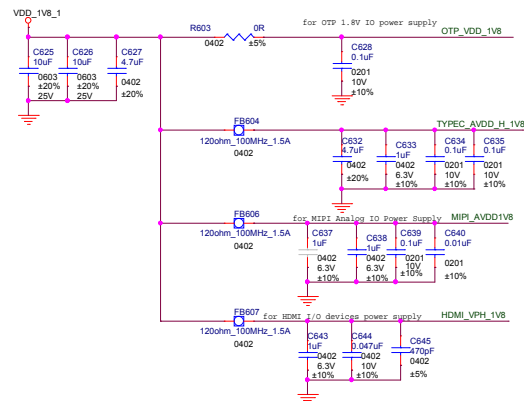
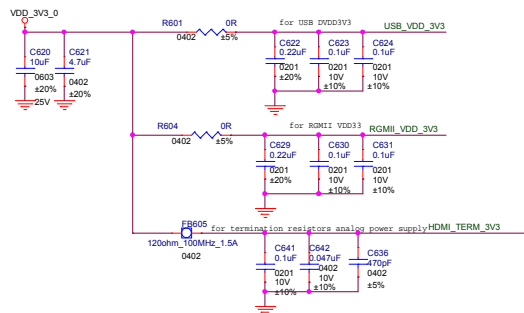
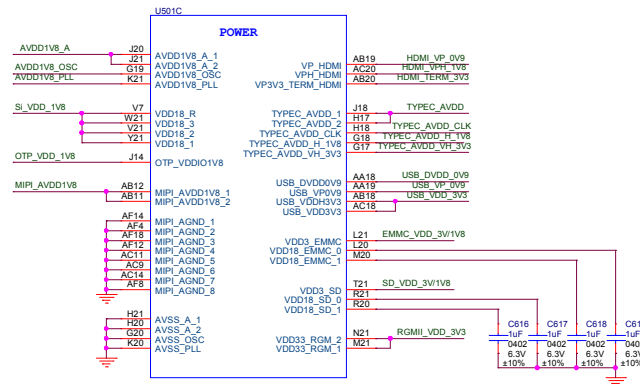
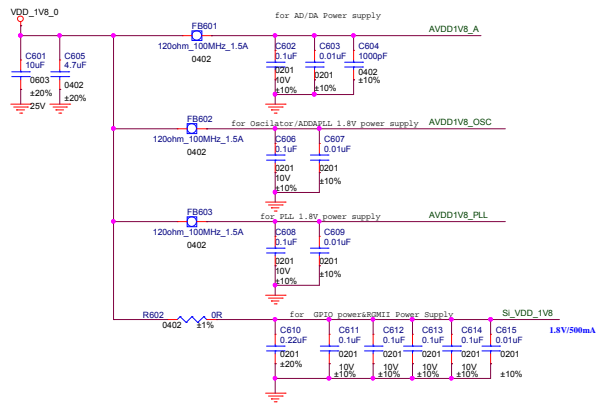


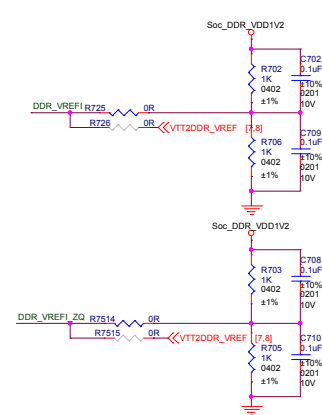
RTP5905  
DC1 3A  
DC2 2A  
DC3 1.2A  
DC4 1A  
LDO1 350mA  
LDO2 300mA

BUTTON & LEVEL SHIFT



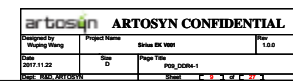












## D



## B

B

Designed by Wuping Wang	Project Name <b>Sirius EK V001</b>		Rev 1.0.0
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# SOC EMMC & SD

U501H

## EMMC

EMMC_D0//GP(C3)_0	H25	R1101	0R	SOC2EMMC_D0 [12]
EMMC_D1//GP(C3)_1	H26	R1105	0R	SOC2EMMC_D1 [12]
EMMC_D2//GP(C3)_2	J25	R1108	0R	SOC2EMMC_D2 [12]
EMMC_D3//GP(C3)_3	J26	R1110	0R	SOC2EMMC_D3 [12]
EMMC_D4//GP(C3)_4	K27	R1111	0R	SOC2EMMC_D4 [12]
EMMC_D5//GP(C3)_5	K28	R1112	0R	SOC2EMMC_D5 [12]
EMMC_D6//GP(C3)_6	L28	R1114	0R	SOC2EMMC_D6 [12]
EMMC_D7//GP(C3)_7	L27	R1115	0R	SOC2EMMC_D7 [12]


EMMC_CCLK_OUT//GP(B0)_2	J28	R1120	22R	SOC2EMMC_CLK [12]
EMMC_CCMD//GP(B0)_3	J27	R1122	0R	SOC2EMMC_CMD [12]
EMMC_PWR//GP(B0)_4	K22	R1125	0R	SOC2EMMC_PWR [12]

U501I

## SD CARD

SD_CCLK_OUT/QSPI_SCK//GP(D2)_0	U28	Sirius_SD_CCLK_OUT
SD_CCMD/QSPI_CS_N//GP(D2)_1	U27	Sirius_SD_CCMD
SD_CARD_DETECT_N//GP(D2)_2	V28	Sirius_SD_CARD_DET_N
SD_CARD_WPRT/GP(D2)_3	V27	Sirius_SD_CARD_WPRT
SD_CDATA_0/QSPI_DATA_0//GP(D2)_4	W28	Sirius_SD_CDATA_0
SD_CDATA_1/QSPI_DATA_1//GP(D2)_5	W27	Sirius_SD_CDATA_1
SD_CDATA_2/QSPI_DATA_2//GP(D2)_6	Y28	Sirius_SD_CDATA_2
SD_CDATA_3/QSPI_DATA_3//GP(D2)_7	Y27	Sirius_SD_CDATA_3

Sirius_SD_CCLK_OUT	R1102	22R	SOC2SD_CCLK_OUT [12]
	R1103	22R	SOC2QSPI_SCK [13]
	R1104	22R	SOC2SDIO_CLK_OUT [13]
Sirius_SD_CCMD	R1106	22R	SOC2SD_CCMD [12]
	R1107	22R	SOC2QSPI_CS_N [13]
	R1109	22R	SOC2SDIO_CMD [13]
Sirius_SD_CARD_DET_N	R1113	22R	SOC2SD_CARD_DET_N [12]
Sirius_SD_CARD_WPRT	R1116	0R	TP1101
Sirius_SD_CDATA_0	R1117	0R	SOC2SD_CDATA_0 [12]
	R1118	0R	SOC2QSPI_DATA_0 [13]
	R1119	0R	SOC2SDIO_DATA_0 [13]
Sirius_SD_CDATA_1	R1121	0R	SOC2SD_CDATA_1 [12]
	R1123	0R	SOC2QSPI_DATA_1 [13]
	R1124	0R	SOC2SDIO_DATA_1 [13]
Sirius_SD_CDATA_2	R1126	0R	SOC2SD_CDATA_2 [12]
	R1127	0R	SOC2QSPI_DATA_2 [13]
	R1128	0R	SOC2SDIO_DATA_2 [13]
Sirius_SD_CDATA_3	R1129	0R	SOC2SD_CDATA_3 [12]
	R1130	0R	SOC2QSPI_DATA_3 [13]
	R1131	0R	SOC2SDIO_DATA_3 [13]

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Date 2017.11.22	Size B	Page Title P11_Sirius_Memory	
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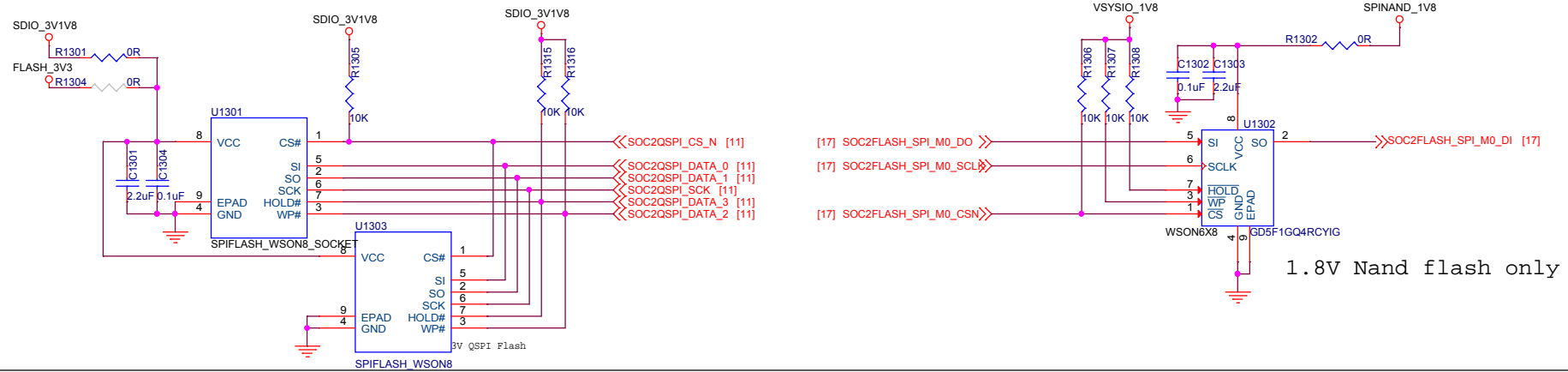
## D



## B

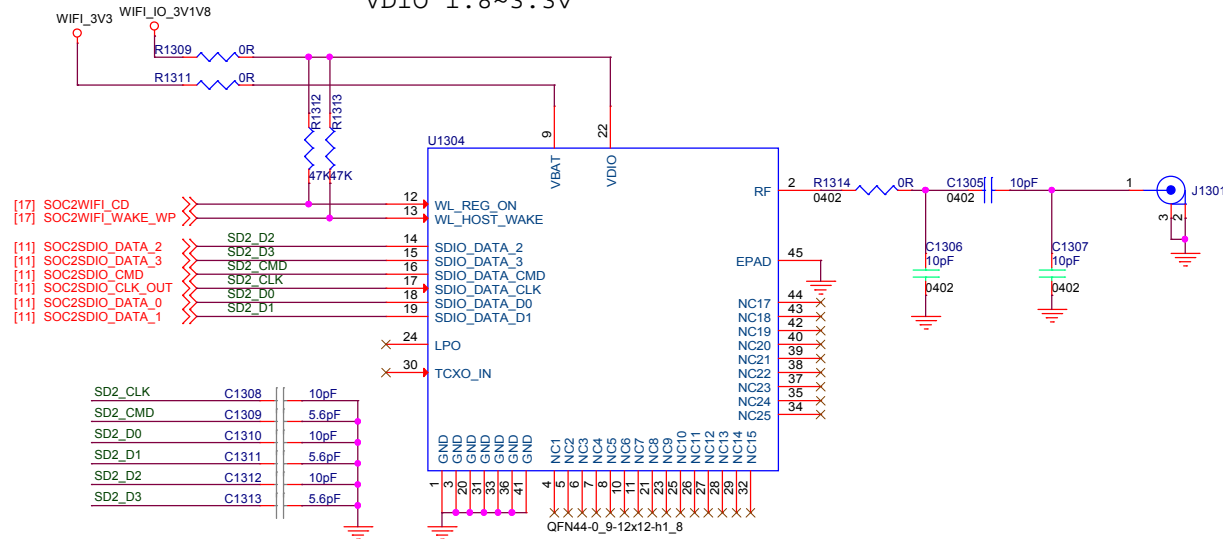
DCB

## QSPI & SPI Nand flash

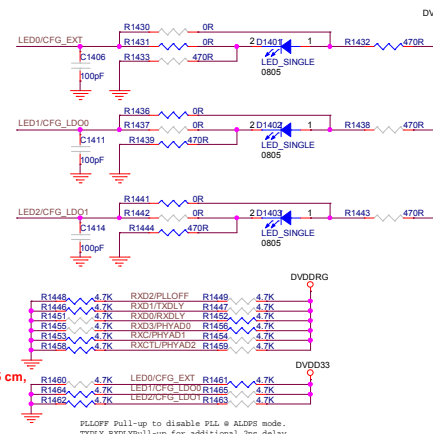
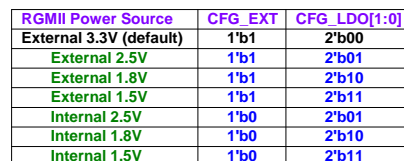
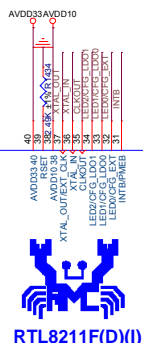
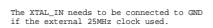
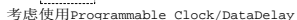
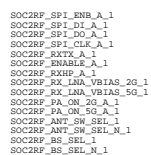


## SDIO WIFI Module

VDIO 1.8~3.3v



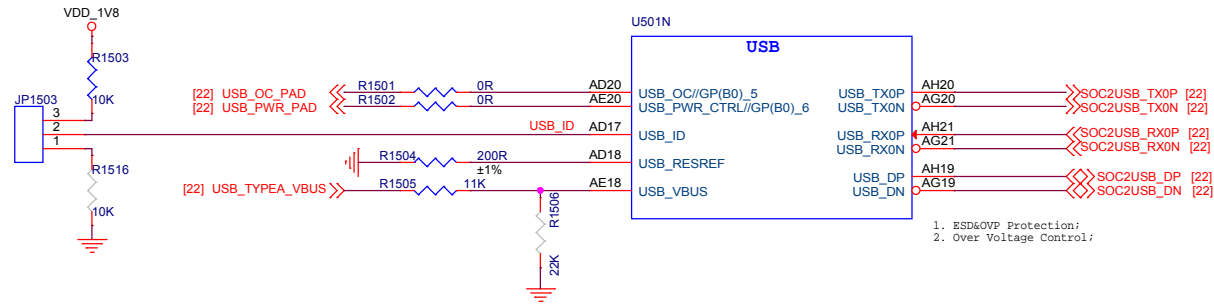
<b>artosyn</b> ARTOSYN CONFIDENTIAL			
Designed by Wuping Wang	Project Name Sirius EK V001	Rev 1.0.0	
Date 2017.11.22	Size B	Page Title P13_FLASH_SDIO	
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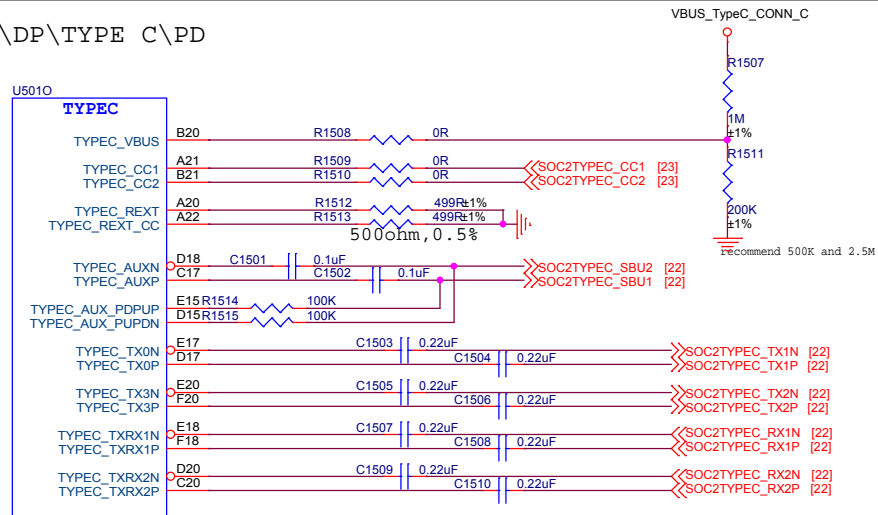
**Note 3: CAPs(C1417/C1448) must be closed to pin28 for EMI consideration.**

**Note 6: Any inductance or bead except L1 is not allowed on the path from REGOUT to DVDD10/AVDD10.**

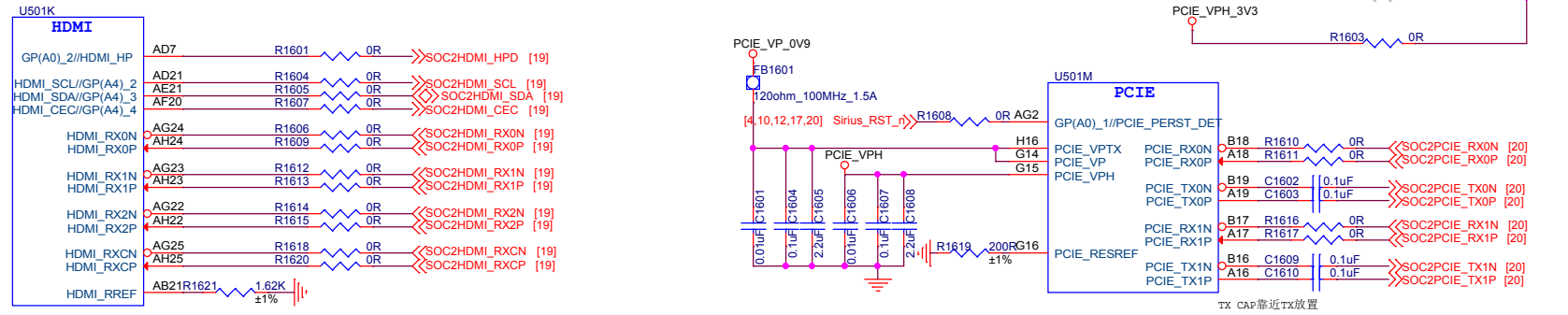
## SOC:USB3.0 AND USB2.0



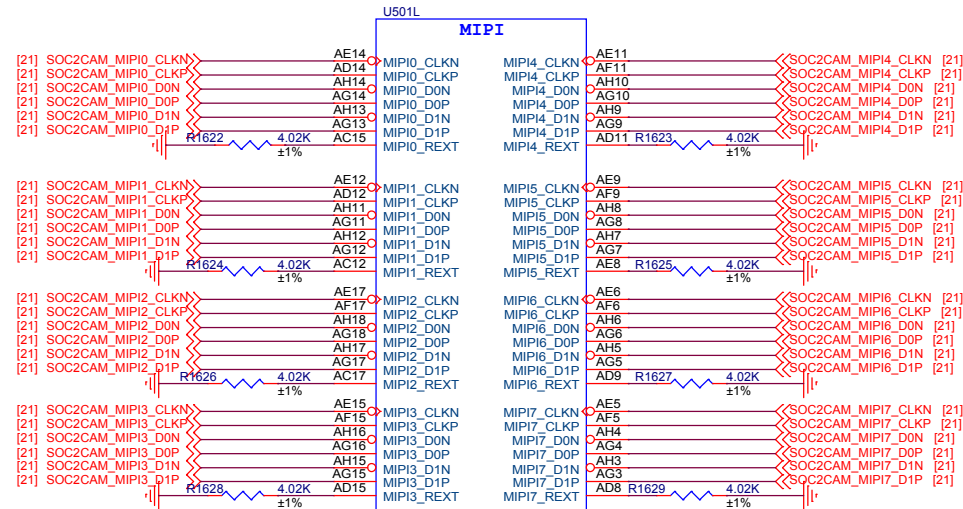
## SOC:USB3.0\DP\TYPE C\PD



## SOC:HDMI RX AND PCIE



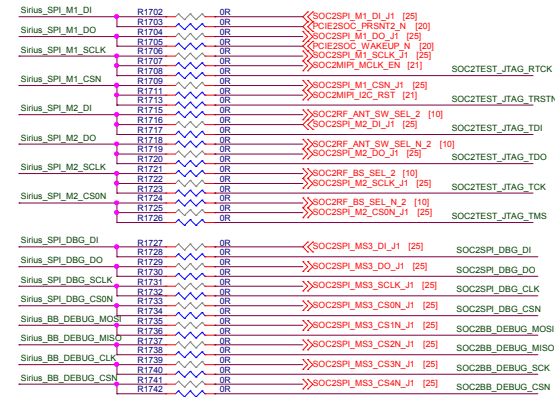
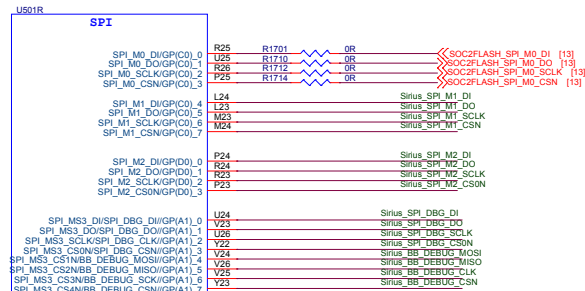
## SOC:MIPI CSI RX\*8 AND TX\*2



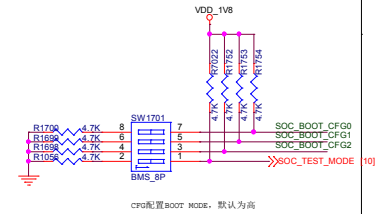
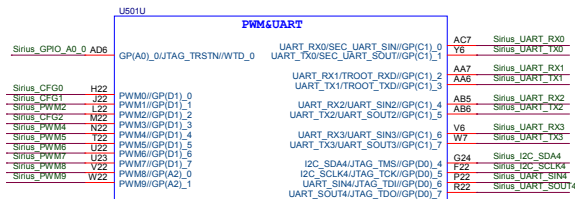
<b>ARTOSYN CONFIDENTIAL</b>		
Designed by Wuping Wang	Project Name Sirius EK V001	Rev 1.0.0
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SOC SPI



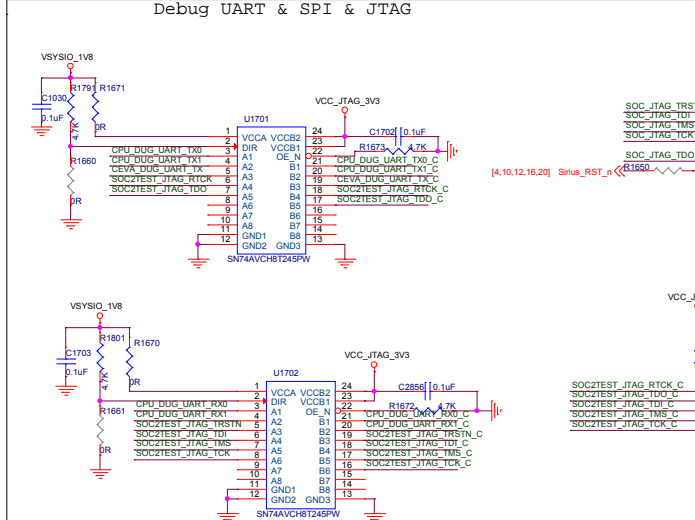
## UART&amp;CFG



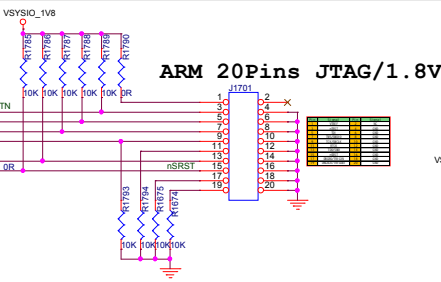
1.8v digital IO

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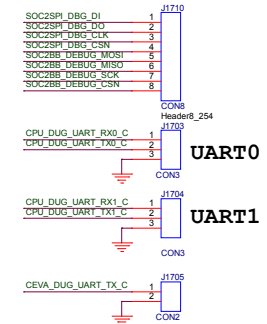
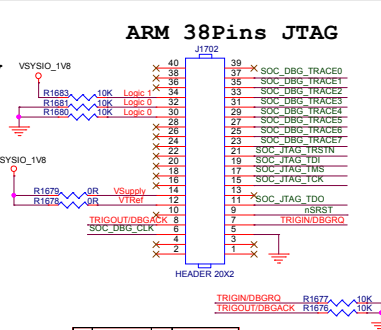
Debug UART & SPI & JTAG



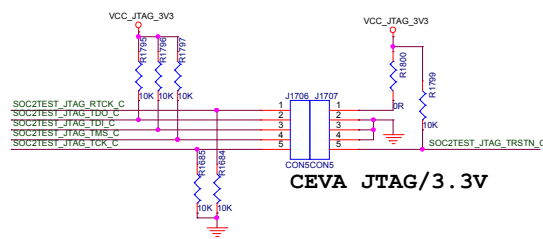
## ARM 20Pins JTAG/1.8V



ARM 38Pins JTAG



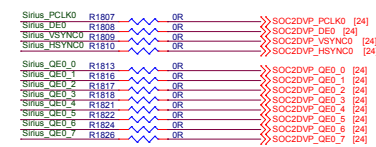
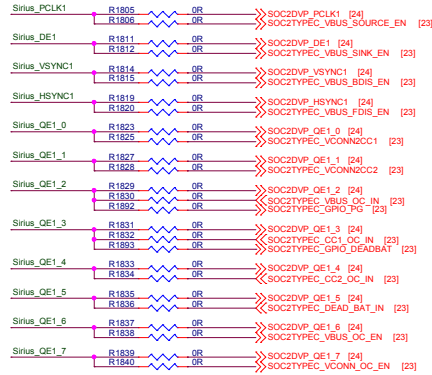
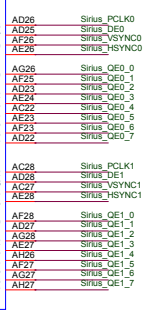
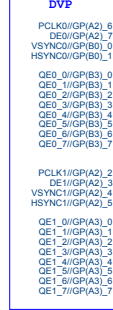
CEVA JTAG/3.3V



Pin	Signal	Pin	Signal
33	TRACDATA[0]	35	TRACDATA[8]
34	TRACCTL	36	TRACDATA[9]
34	Logic1	33	TRACDATA10
33	Logic0	33	TRACDATA11
34	Logic0	35	TRACDATA12
26	TRACDATA[1]	26	TRACDATA13
26	TRACDATA[2]	26	TRACDATA14
24	TRACDATA[3]	24	TRACDATA15
22	TRACDATA[4]	22	NTST
22	TRACDATA[5]	22	NTST
18	TRACDATA[6]	17	TMS/SDB0
16	TRACDATA[7]	15	TCK/SDB1
14	VSignal	13	RTCK
12	VREF	13	T00/SDB
0	No connection	0	No connection
8	TRICG1/DBGACK	7	TRIGIN/DBGACK
6	TRACCLK	5	GND
4	No connection	2	No connection

# Sirius DVP

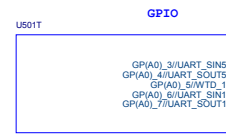
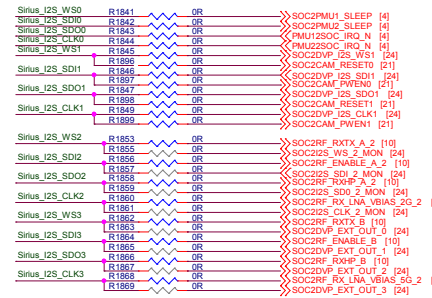
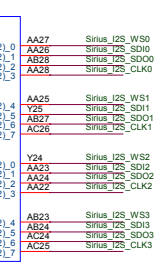
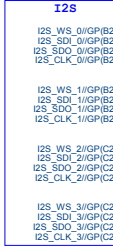
U501P



DVP 0和MON OUT复用接口  
DVP 1和MON OUT复用接口  
DVP 0和TYPE C 兼容设计

# Sirius I2S&GPIO

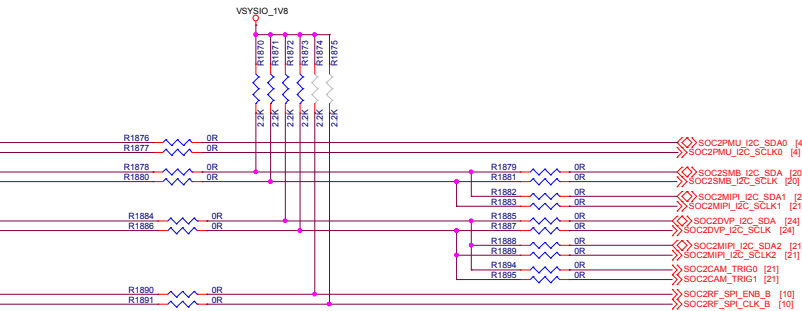
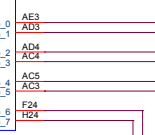
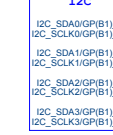
U501Q

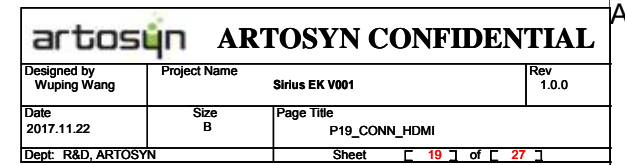


1.8v digital IO

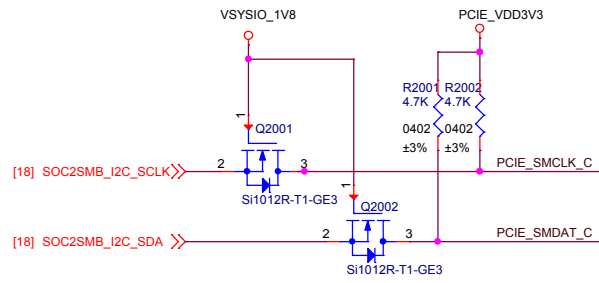
# Sirius I2C

U501S

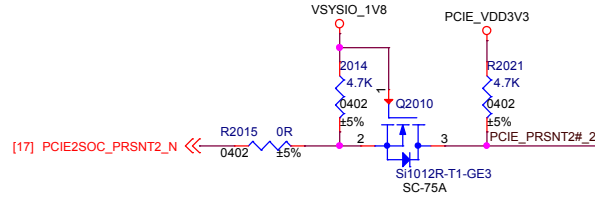




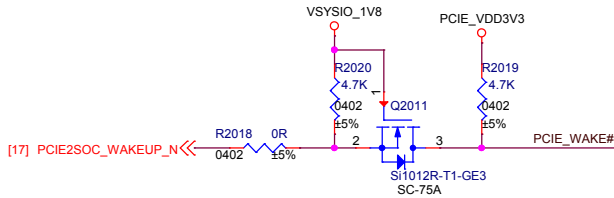
D



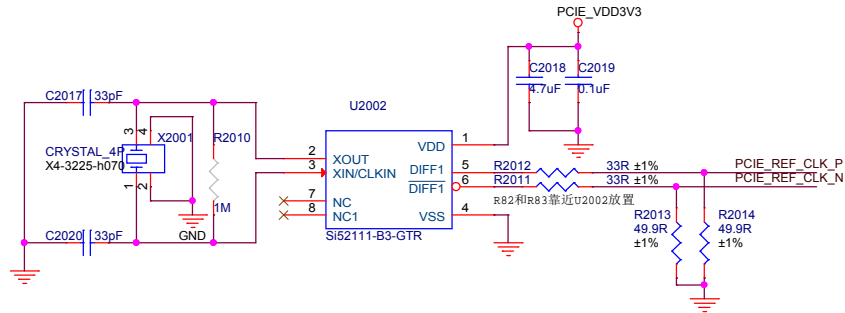
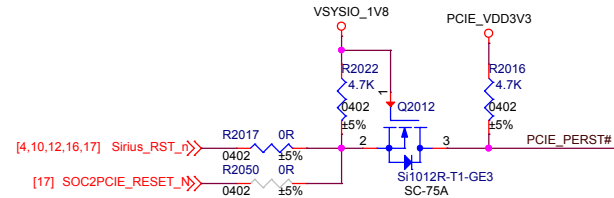
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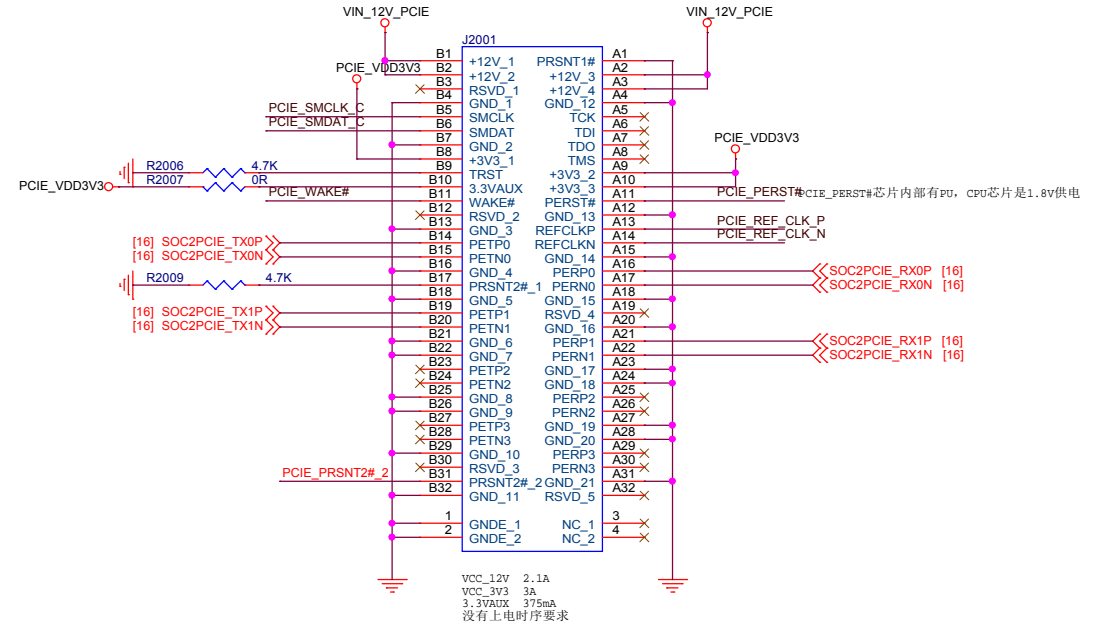
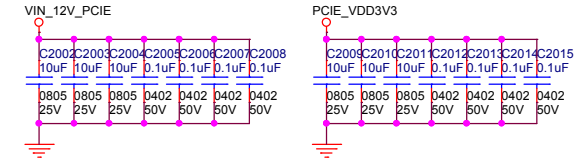
B




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1



PCIE接口保护？

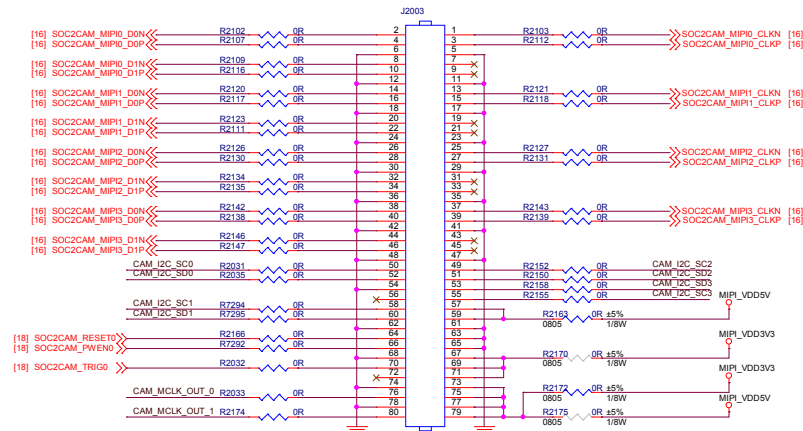


ARTOSYN CONFIDENTIAL

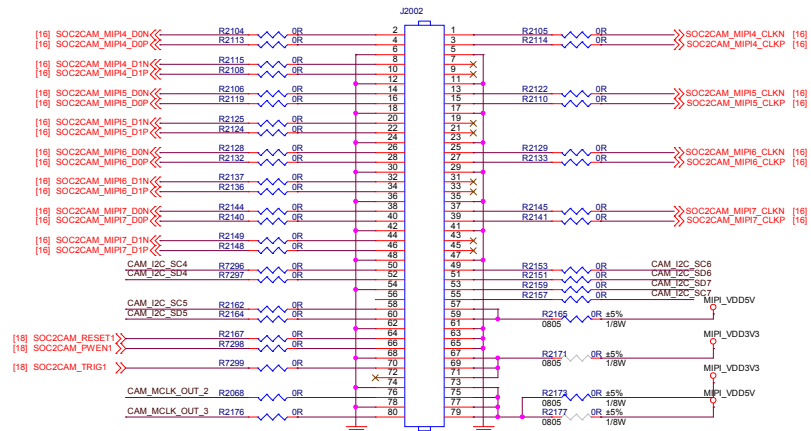
Designed by Wuping Wang	Project Name Sirius EK V001	Rev 1.0.0
Date 2017.11.22	Size B	Page Title P20_CONN_PCIE
Dept: R&D, ARTOSYN	Sheet <span style="border: 1px solid black; padding: 0 5px;">20</span> of <span style="border: 1px solid black; padding: 0 5px;">27</span>	

1

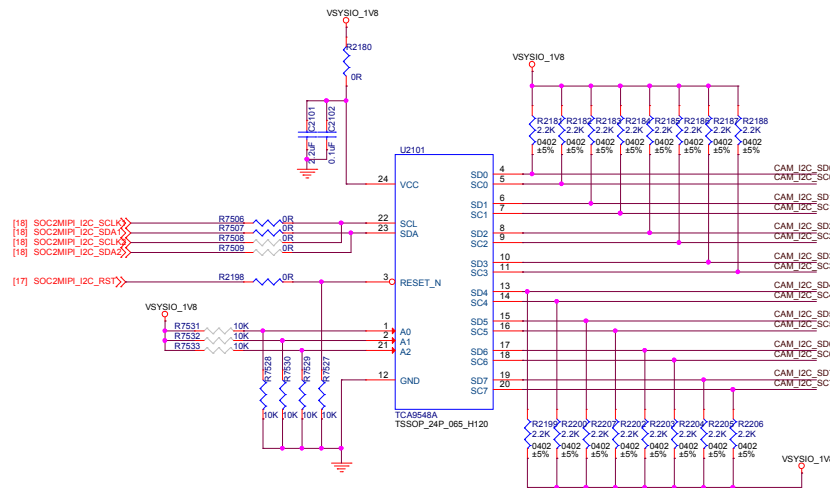
# Sensor Connector



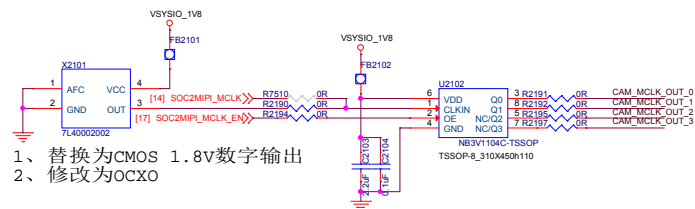
SMT-HEADER40\*2  
接口定义  
4Lane 时使用为pin13/15,  
需要重新做转接器?  
需要重新做转接器?  
需要重新做转接器?



# Sensor I2C Switch

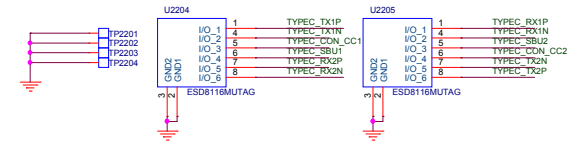
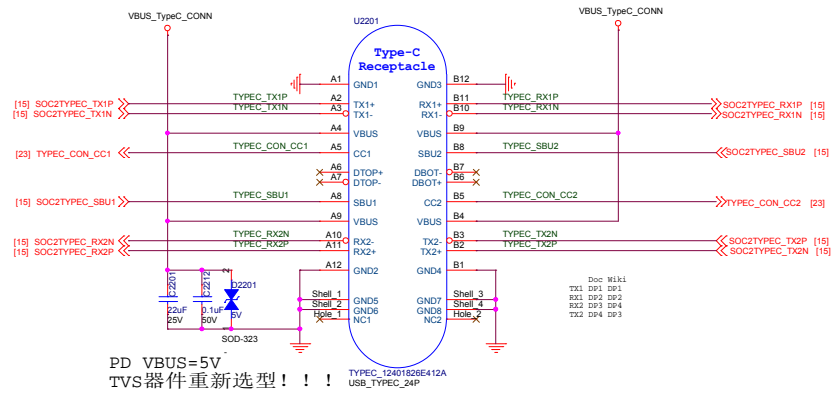


# Sensor MCLK router

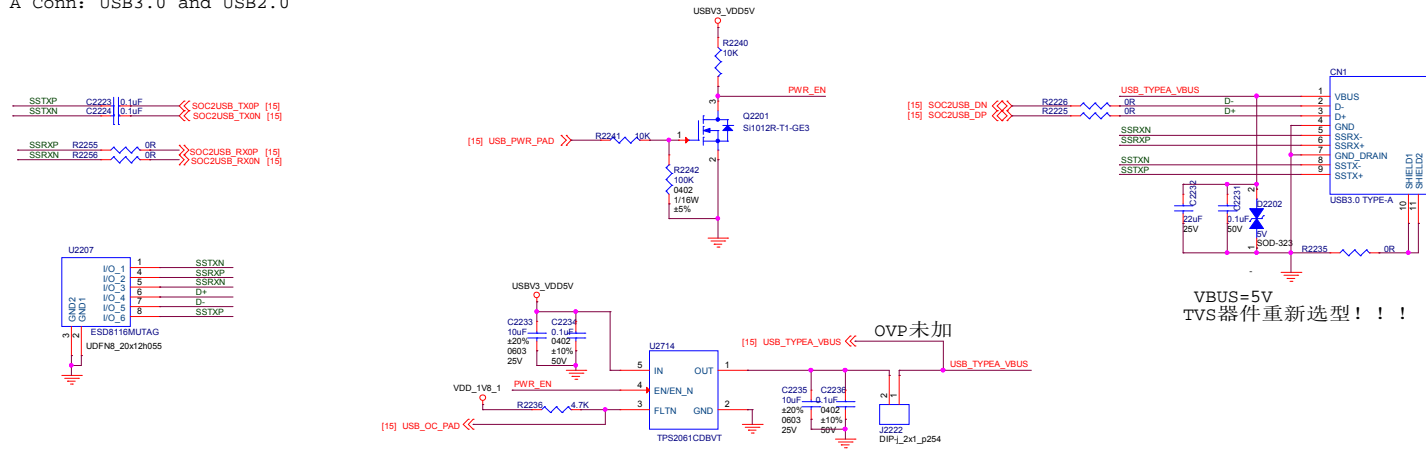


- 1、替换为CMOS 1.8V数字输出
- 2、修改为OCXO

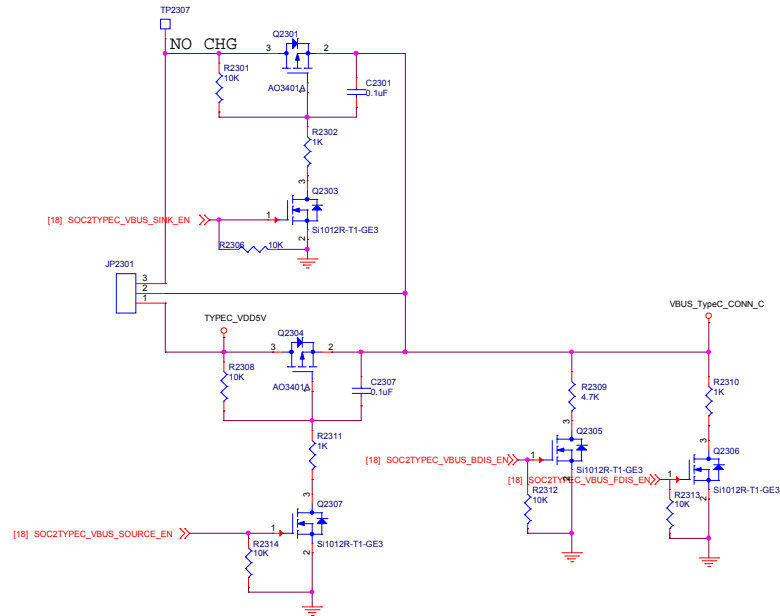
## TYPE C Conn: USB3.0、DP and PD



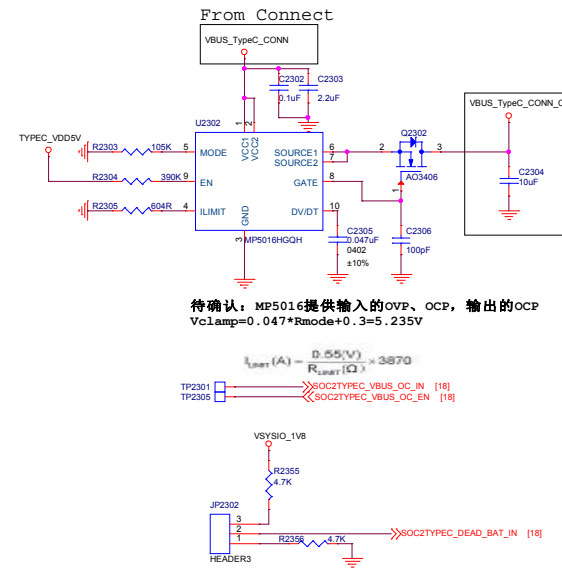
## TYPE A Conn: USB3.0 and USB2.0



PD Feature option:  
1)Discharge,2)Sink/chg and source router



PD Feature option:  
1)Input OVP,2)VBUS Input/Output OCP



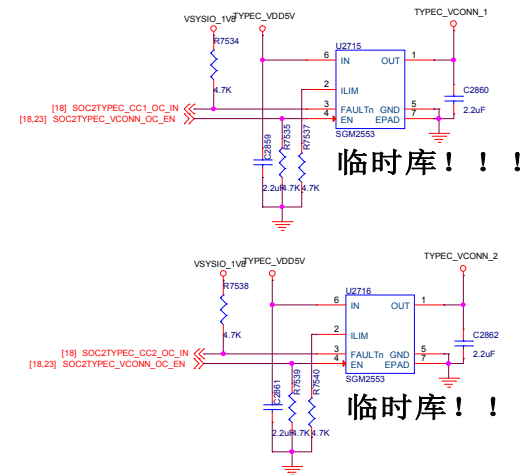
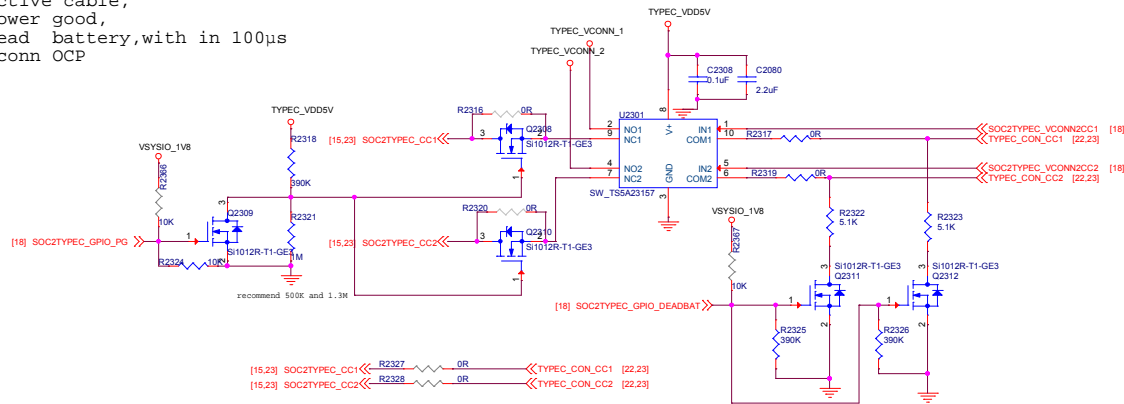
待确认: MP5016提供输入的OVP、OCP, 输出的OCP  
 $V_{clamp}=0.047 \times R_{mode}+0.3=5.235V$

$$I_{\text{LIMIT}}(\text{A}) = \frac{0.55(\text{V})}{R_{\text{LIMIT}}(\Omega)} \times 3870$$

TP2301                                                                                                                                               

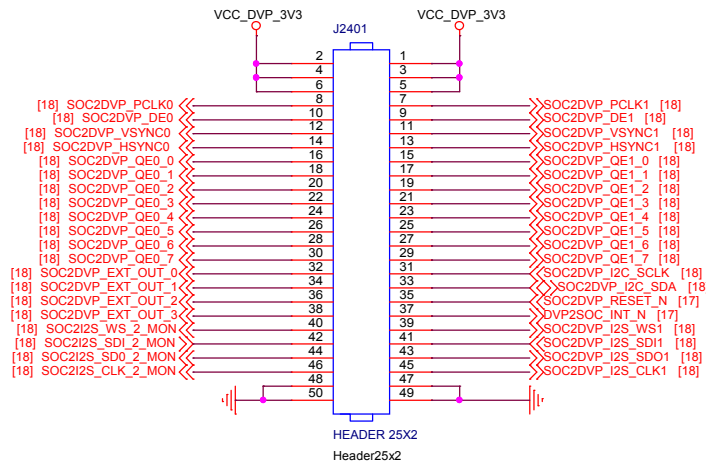
Type C cc Feature and PD Feature option:

- 1)Active cable,
- 2)Power good,
- 3)Dead battery,with in 100μs
- 4)Vconn OCP

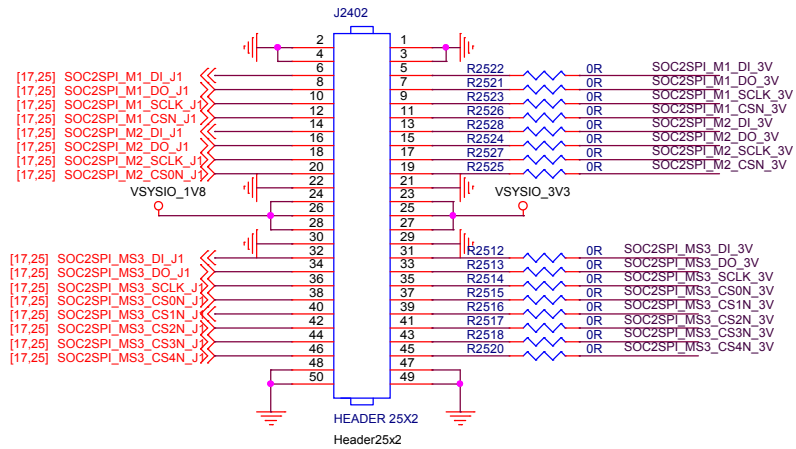
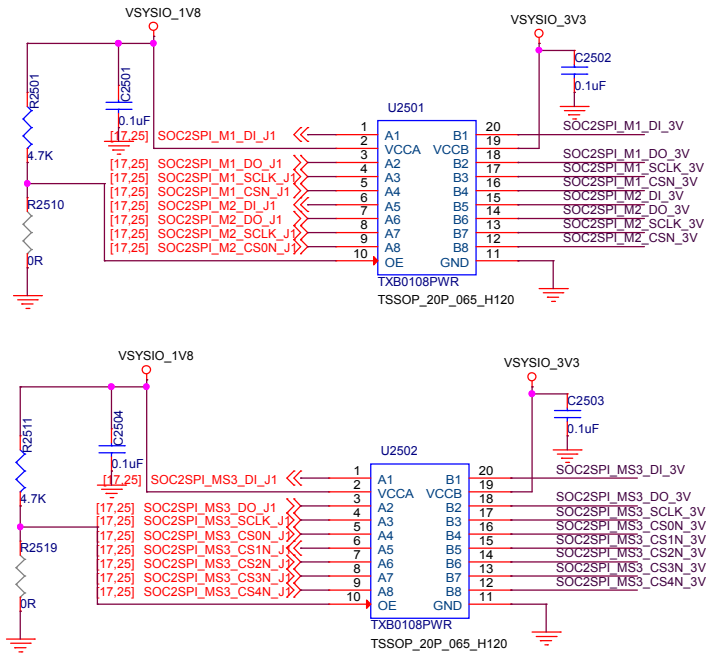


临时库!!!

## 临时库！！







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