

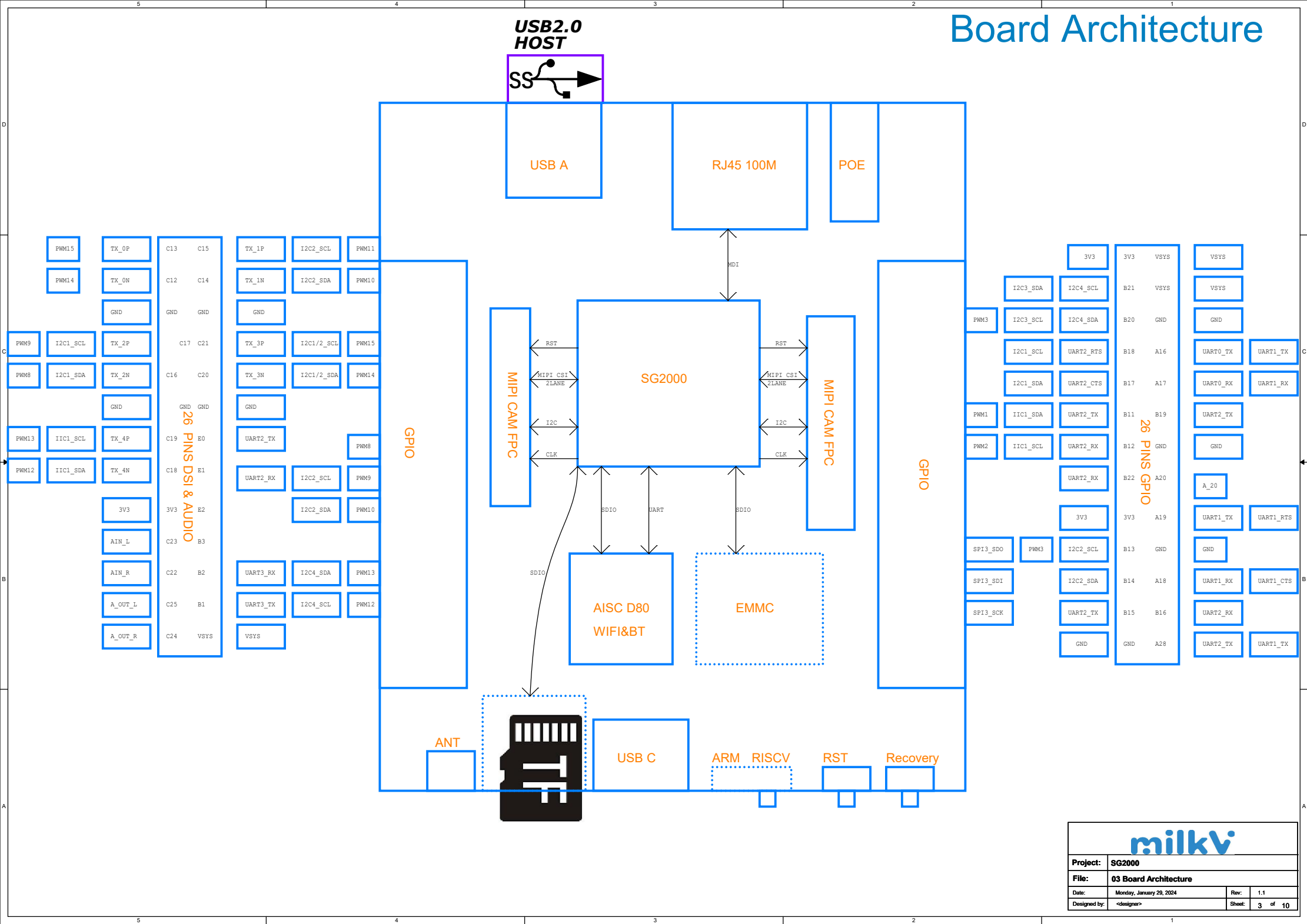
PROJECT COVER

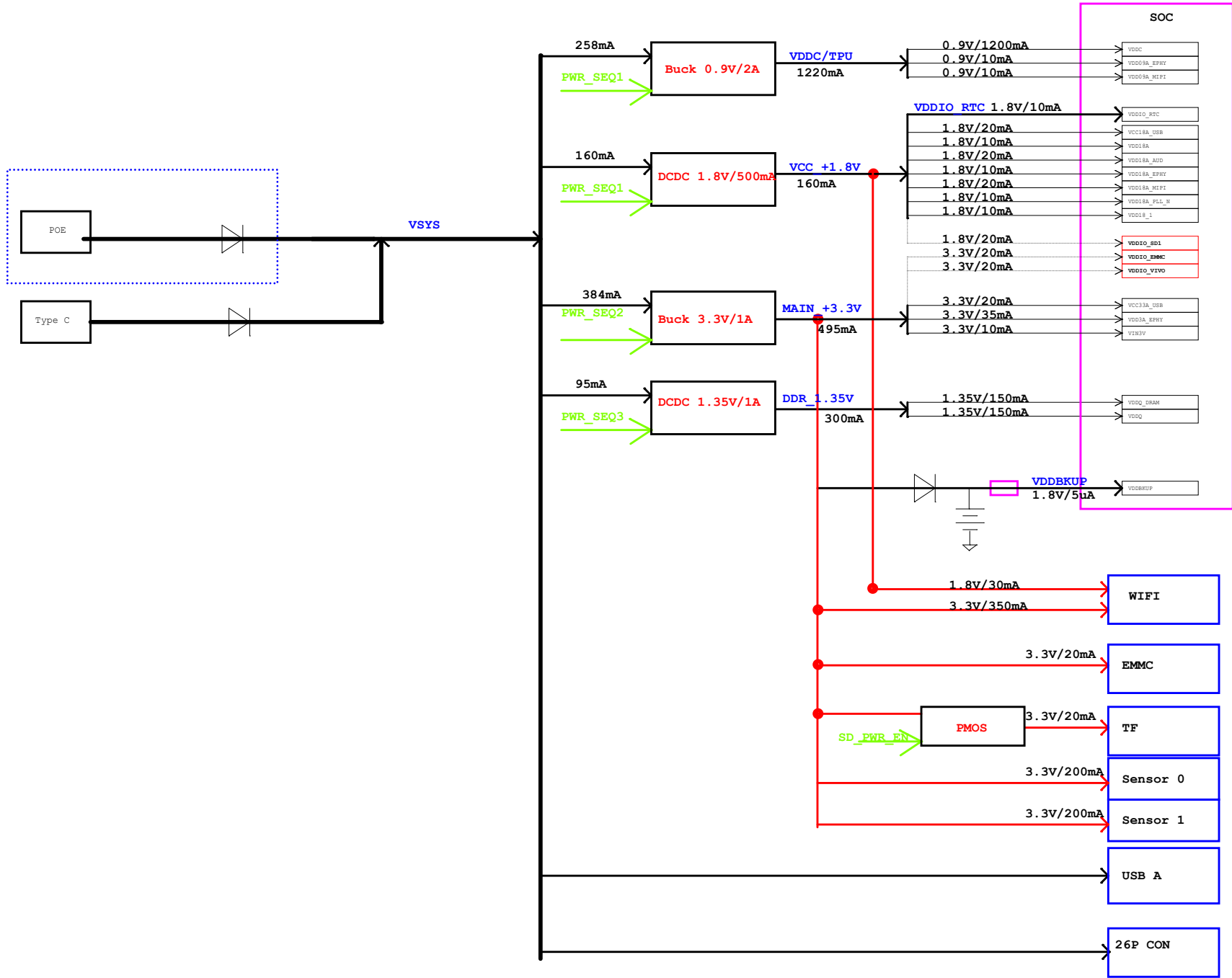
Board Name	DUO S
Board Version	V1.1
Designer	
Reviewed by	

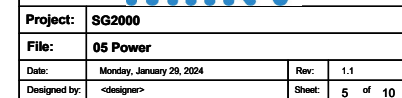
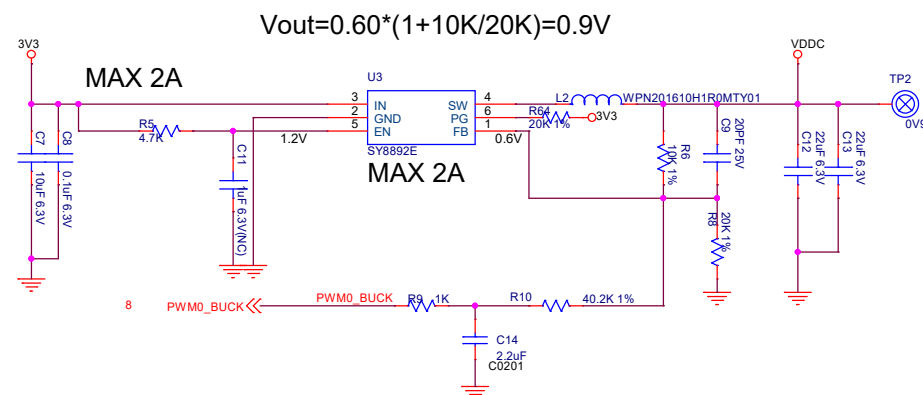
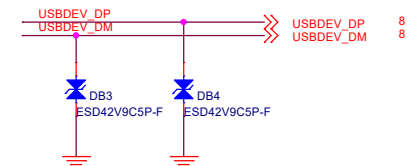
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Board Architecture







SG2000 PART I

USBÐ&MIPI

U6H

VDD18A_MIPI
1p8V only

```
((PAD_MIPI_TXP0)/V10_D[10]/VO_D[3]/XGPIOC[13]/CAM_MCLK0/PWM[15]/CAM_HSO/DBG[13]) [PD] [ ] PAD_MIPI_TXP0
((PAD_MIPI_TXM0)/V10_D[9]/VO_D[4]/XGPIOC[12]/CAM_MCLK1/PWM[14]/CAM_VSO/DBG[12]) [PD] [ ] PAD_MIPI_TXM0
((CR_2WTCK/V10_D[12]/VO_D[1]/XGPIOC[15]/IIC2_SCL/PWM[10]/SPI0_SDO/DBG[15]) [PD] [ ] PAD_MIPI_TXP1
((CR_2WTMS/V10_D[11]/VO_D[2]/XGPIOC[14]/IIC2_SDA/PWM[10]/SPI0_SDO/DBG[14]) [PD] [ ] PAD_MIPI_TXM1
((CR_SCL0/V10_D[14]/VO_CLK0/XGPIOC[17]/IIC1_SCL/PWM[9]/SPI0_CS_X/SD1_D3) [PD] [ ] PAD_MIPI_TXP2
((CR_SDA0/V10_D[13]/VO_D[0]/XGPIOC[16]/IIC1_SDA/PWM[8]/SPI0_SCK/SD1_D2) [PD] [ ] PAD_MIPI_TXM2
(V10_D[18]/SD1_D1/VO_D[27]/XGPIOC[21]/IIC2_SCL/PWM[15]/IIC1_SCL/CAM_HSO) [PD] [ ] PAD_MIPI_TXP3
(V10_D[17]/SD1_D0/VO_D[26]/XGPIOC[20]/IIC2_SDA/PWM[14]/IIC1_SDA/CAM_VSO) [PD] [ ] PAD_MIPI_TXM3
(V10_D[16]/SD1_CMD/VO_D[25]/XGPIOC[19]/CAM_MCLK0/PWM[13]/IIC1_SCL/DBG[19]) [PD] [ ] PAD_MIPI_TXP4
(V10_D[15]/SD1_CLK/VO_D[24]/XGPIOC[18]/CAM_MCLK1/PWM[12]/IIC1_SDA/DBG[18]) [PD] [ ] PAD_MIPI_TXM4
```

```
((IIS1_MCLK/XGPIOA[1]/CAM_HSO) [PD] [ ] CAM_PD0
((IIS1_MCLK/XGPIOA[4]/CAM_VSO/IIC4_SDA) [PD] [ ] CAM_PD1

(CAM_MCLK0/AUX1/XGPIOA[0]) [PD] [ ] CAM_MCLK0
(CAM_MCLK1/AUX2/XGPIOA[3]/CAM_HSO) [PD] [ ] CAM_MCLK1
(XGPIOA[2]/CAM_VSO/IIC4_SCL) [PD] [ ] CAM_RST0
```

```
((PAD_MIPIRX0P)/V10_D[8]/VO_D[5]/XGPIOC[11]/CAM_MCLK0/DBG[11]) [PD] [ ] PAD_MIPIRX0P
((PAD_MIPIRX0N)/V10_D[7]/VO_D[6]/XGPIOC[10]/IIC1_SCL/CAM_MCLK1/DBG[10]) [PD] [ ] PAD_MIPIRX0N
((PAD_MIPIRX1P)/V10_D[6]/VO_D[7]/XGPIOC[9]/IIC1_SDA/KEY_ROW2/DBG[9]) [PD] [ ] PAD_MIPIRX1P
((PAD_MIPIRX1N)/V10_D[5]/VO_D[8]/XGPIOC[8]/KEY_ROW3/DBG[8]) [PD] [ ] PAD_MIPIRX1N
((PAD_MIPIRX2P)/V10_D[4]/VO_D[9]/XGPIOC[7]/V11_D[18]/IIC4_SDA/DBG[7]) [PD] [ ] PAD_MIPIRX2P
((PAD_MIPIRX2N)/V10_D[3]/VO_D[10]/XGPIOC[6]/V11_D[17]/IIC4_SCL/DBG[6]) [PD] [ ] PAD_MIPIRX2N
((CR_2WTCK/V10_D[2]/V11_D[16]/XGPIOC[5]/MUX_SPI1_MOSI) [PD] [ ] PAD_MIPIRX3P
((CR_2WTMS/V10_D[1]/V11_D[15]/XGPIOC[4]/CAM_MCLK0/MUX_SPI1_MISO) [PD] [ ] PAD_MIPIRX3N
((CR_SDA0/V10_D[0]/V11_D[14]/XGPIOC[3]/IIC1_SCL/CAM_MCLK1/KEY_ROW1/MUX_SPI1_CS) [PD] [ ] PAD_MIPIRX4P
((CR_SCL0/V10_CLK/V11_D[13]/XGPIOC[2]/IIC1_SDA/CAM_MCLK0/KEY_ROW0/MUX_SPI1_SCK) [PD] [ ] PAD_MIPIRX4N
((PAD_MIPIRX5P)/V11_D[12]/VO_D[11]/XGPIOC[1]/IIS1_MCLK0/CAM_MCLK1/WG0_D1/DBG[1]) [PD] [ ] PAD_MIPIRX5P
((PAD_MIPIRX5N)/V11_D[11]/VO_D[12]/XGPIOC[0]/CAM_MCLK0/WG0_D0/DBG[0]) [PD] [ ] PAD_MIPIRX5N
```

```
((IIC3_SDA/XGPIOA[6]) [PD] [ ] IIC3_SDA
((IIC3_SCL/XGPIOA[5]) [PD] [ ] IIC3_SCL
```

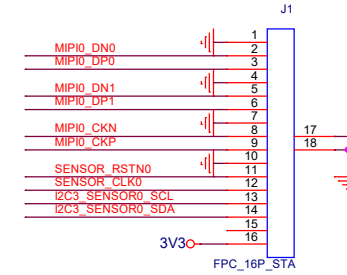
CV181xH_BGA_10X10

```
E1 MIPI_TX_OP 7
D1 MIPI_TX_ON 7
D2 MIPI_TX_1P 7
C1 MIPI_TX_1N 7
C2 MIPI_TX_2P 7
B1 MIPI_TX_2N 7
B2 MIPI_TX_3P 7
B3 MIPI_TX_3N 7
A2 MIPI_TX_4P 7
A1 MIPI_TX_4N 7
```

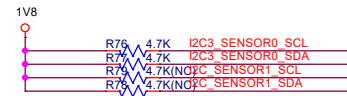
```
C3 SENSOR_RSTN1
E4 SENSOR_CLK0
D3 SENSOR_CLK1
E5 SENSOR_RSTN0
```

```
B4 MIPI0_DP0
A4 MIPI0_DN0
C5 MIPI0_DP1
B5 MIPI0_DN1
C6 MIPI0_CKN
B6 MIPI0_CKP
A6 MIPI0_DP3
C7 MIPI0_DN3
A7 MIPI0_DP4
B7 MIPI0_DN4
C8 MIPI0_DP5
B8 MIPI0_DN5
```

```
F4 I2C3_SENSOR0_SDA
D4 I2C3_SENSOR0_SCL
```



```
I2C_SENSOR1_SCL I2C_SENSOR1_SCL 7
I2C_SENSOR1_SDA I2C_SENSOR1_SDA 7
```



VDDIO_SD1

U6G

VDDIO_SD1

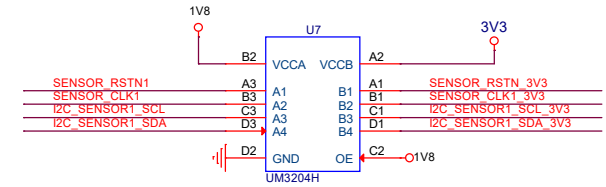
3p3V or 1p8V

VDDIO_SD1

```
(PWR_SD1_D0_VO35/SPI2_SDI/IIC1_SDA/PWR_GPIO[21]/CAM_MCLK1/UART3_RTS/PWR_SPINOR1_MISO/PWM[7]) [PD] [ ] SD1_D0
(PWR_SD1_D1_VO34/IIC1_SDA/UART2_RX/PWR_GPIO[20]/CAM_MCLK1/UART3_RX/PWR_SPINOR1_WP_X/PWM[6]) [PD->DRV_HI+PD] [ ] SD1_D1
(PWR_SD1_D2_VO33/IIC1_SCL/UART2_TX/PWR_GPIO[19]/CAM_MCLK0/UART3_TX/PWR_SPINOR1_HOLD_X/PWM[5]) [PD->DRV_HI+PD] [ ] SD1_D2
(PWR_SD1_D3_VO32/SPI2_CS_X/IIC1_SCL/PWR_GPIO[18]/CAM_MCLK0/UART3_CTS/PWR_SPINOR1_CS_X/PWM[4]) [PD->DRV_HI+PD] [ ] SD1_D3
(PWR_SD1_CMD_VO36/SPI2_SDO/IIC3_SCL/PWR_GPIO[22]/CAM_VSO/EPHY_LNK_LED/PWR_SPINOR1_MOSI/PWM[8]) [PD] [ ] SD1_CMD
(PWR_SD1_CLK_VO37/SPI2_SCK/IIC3_SDA/PWR_GPIO[23]/CAM_HSO/EPHY_SPD_LED/PWR_SPINOR1_SCK/PWM[9]) [PD->DRV_LO+PD] [ ] SD1_CLK
```

CV181xH_BGA_10X10

```
H15 WIFI_SD1_D0 10
H14 WIFI_SD1_D1 10
F14 WIFI_SD1_D2 10
G13 WIFI_SD1_D3 10
G15 WIFI_SD1_CMD 10
G14 WIFI_SD1_CLK 10
```



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File:	06 SG2000 PART1		
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SG2000 PART II



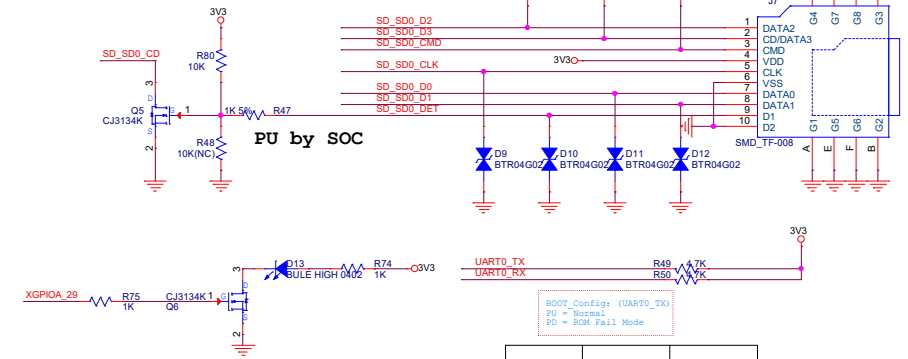
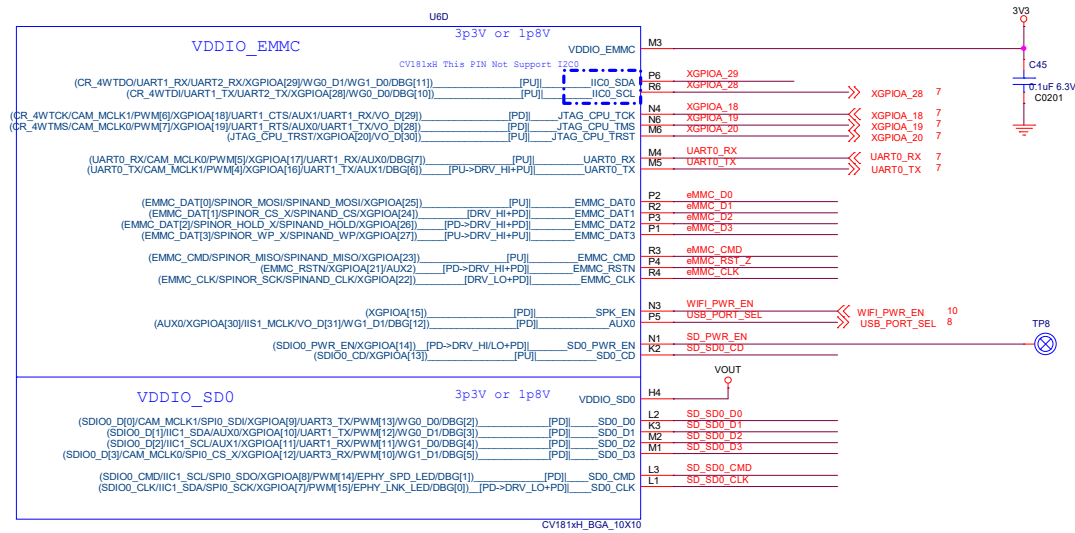
Pin	Signal	Capacitor
G2	PAD_AUD_AOUTL	C34 (2.2uF C0201)
G2	PAD_AUD_AOUTR	C35 (2.2uF C0201)
H1	PAD_AUD_AINL_MIC	C36 (2.2uF C0201)
J1	PAD_AUD_AINR_MIC	C37 (2.2uF C0201)
G1	PAD_AUD_AVREF	C38 (4.7uF), C39 (0.1uF C0201), C402
B15	EPHY_TXP	
C14	EPHY_TXN	
D14	EPHY_RXP	
D15	EPHY_RXN	

Pin 100 connections for VDDIO18_1:

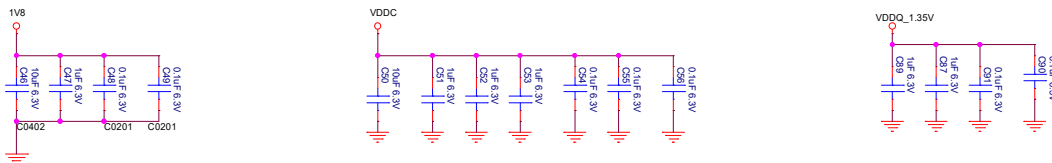
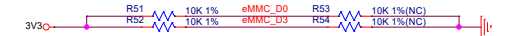
Pin	Signal	Internal Component
1	USB_DP	A14
2	USB_DM	B14
3	USB_DP	A14
4	USB_DM	B14
5	USB_DP	A14
6	USB_DM	B14
7	USB_DP	A14
8	USB_DM	B14
9	USB_DP	A14
10	USB_DM	B14
11	USB_DP	A14
12	USB_DM	B14
13	USB_DP	A14
14	USB_DM	B14
15	USB_DP	A14
16	USB_DM	B14
17	USB_DP	A14
18	USB_DM	B14
19	USB_DP	A14
20	USB_DM	B14
21	USB_DP	A14
22	USB_DM	B14
23	USB_DP	A14
24	USB_DM	B14
25	USB_DP	A14
26	USB_DM	B14
27	USB_DP	A14
28	USB_DM	B14
29	USB_DP	A14
30	USB_DM	B14
31	USB_DP	A14
32	USB_DM	B14
33	USB_DP	A14
34	USB_DM	B14
35	USB_DP	A14
36	USB_DM	B14
37	USB_DP	A14
38	USB_DM	B14
39	USB_DP	A14
40	USB_DM	B14
41	USB_DP	A14
42	USB_DM	B14
43	USB_DP	A14
44	USB_DM	B14
45	USB_DP	A14
46	USB_DM	B14
47	USB_DP	A14
48	USB_DM	B14
49	USB_DP	A14
50	USB_DM	B14
51	USB_DP	A14
52	USB_DM	B14
53	USB_DP	A14
54	USB_DM	B14
55	USB_DP	A14
56	USB_DM	B14
57	USB_DP	A14
58	USB_DM	B14
59	USB_DP	A14
60	USB_DM	B14
61	USB_DP	A14
62	USB_DM	B14
63	USB_DP	A14
64	USB_DM	B14
65	USB_DP	A14
66	USB_DM	B14
67	USB_DP	A14
68	USB_DM	B14
69	USB_DP	A14
70	USB_DM	B14
71	USB_DP	A14
72	USB_DM	B14
73	USB_DP	A14
74	USB_DM	B14
75	USB_DP	A14
76	USB_DM	B14
77	USB_DP	A14
78	USB_DM	B14
79	USB_DP	A14
80	USB_DM	B14
81	USB_DP	A14
82	USB_DM	B14
83	USB_DP	A14
84	USB_DM	B14
85	USB_DP	A14
86	USB_DM	B14
87	USB_DP	A14
88	USB_DM	B14
89	USB_DP	A14
90	USB_DM	B14
91	USB_DP	A14
92	USB_DM	B14
93	USB_DP	A14
94	USB_DM	B14
95	USB_DP	A14
96	USB_DM	B14
97	USB_DP	A14
98	USB_DM	B14
99	USB_DP	A14
100	USB_DM	B14

[illegible]

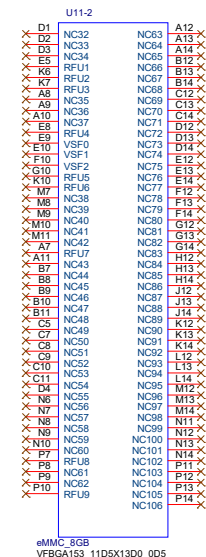
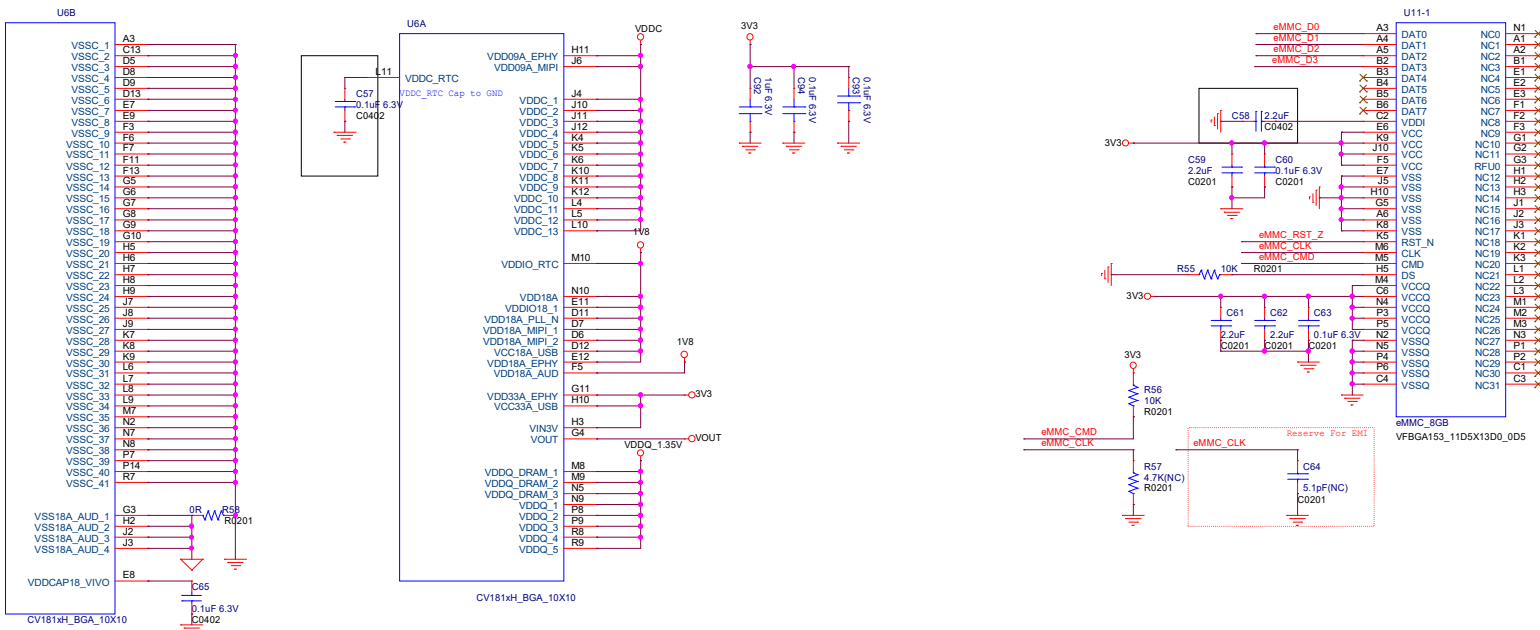
TF_SOCKET



eMMC_D0	eMMC_D3	boot device selection
1	1	eMMC
1	0	Serial NOR
0	0	Serial NAND



EMMC



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File:	09 SG2000 PART4&emmc		
Date:	Monday, January 29, 2024	Rev:	1.1
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