VERSION HISTORY

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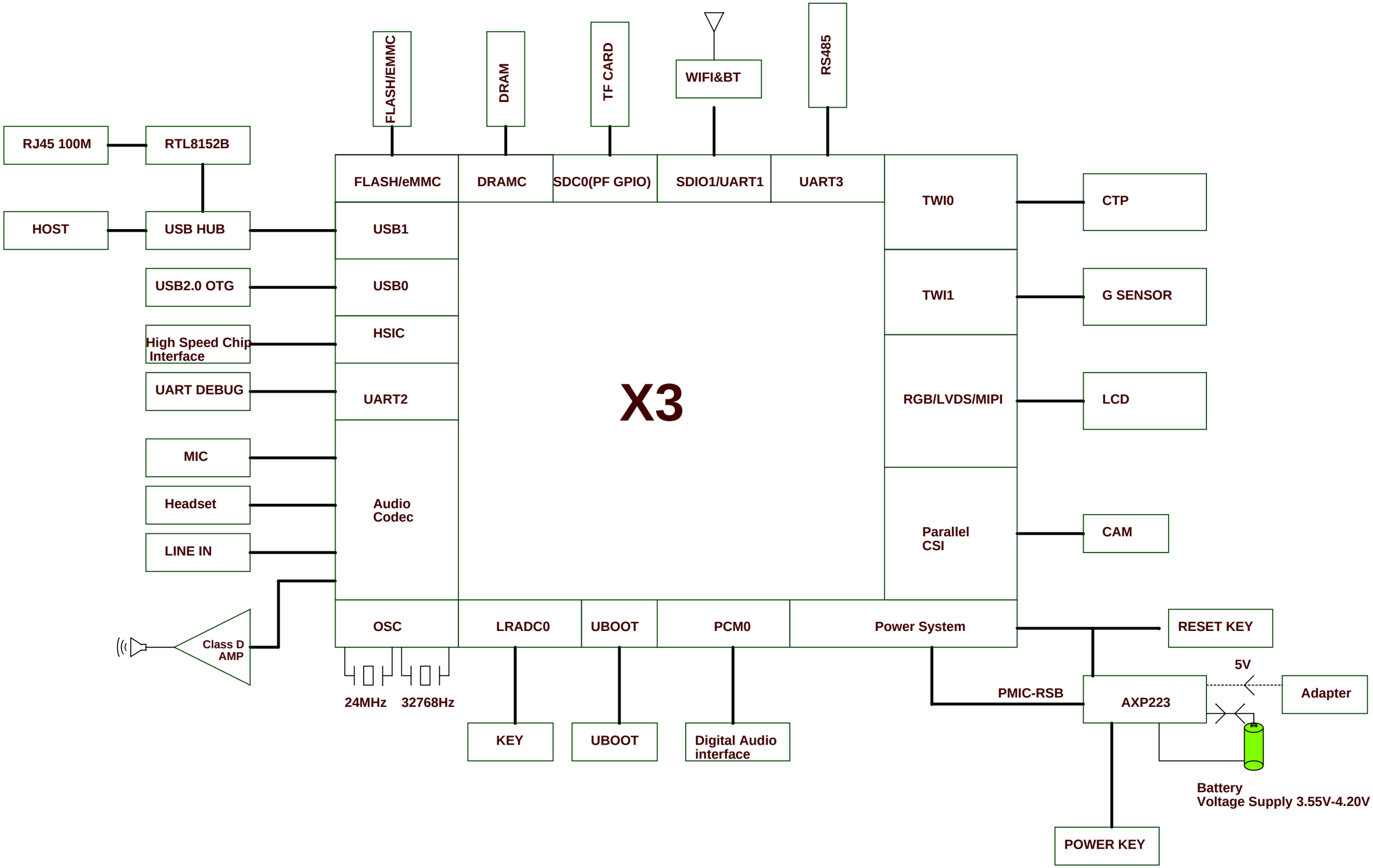
12 WIFI
13 ETHERNET

Revision	Description	Date	Drawn	Checked	Approved
Ver 00	First release	2019-8-26	zsc		

Sochip 深圳市索智科技股份有限公司 ShenZhen Sochip Technology Co.,LTD		
Design name	SC3886Q	
Size A3	Document Number VERSION HISTORY	Rev V00
Date: Saturday, September 28, 2019	Sheet 1 of 13	

BLOCK DIAGRAM



Sochip	深圳市索智科技股份有限公司 ShenZhen Sochip Technology Co.,LTD
Design name	SC3886Q
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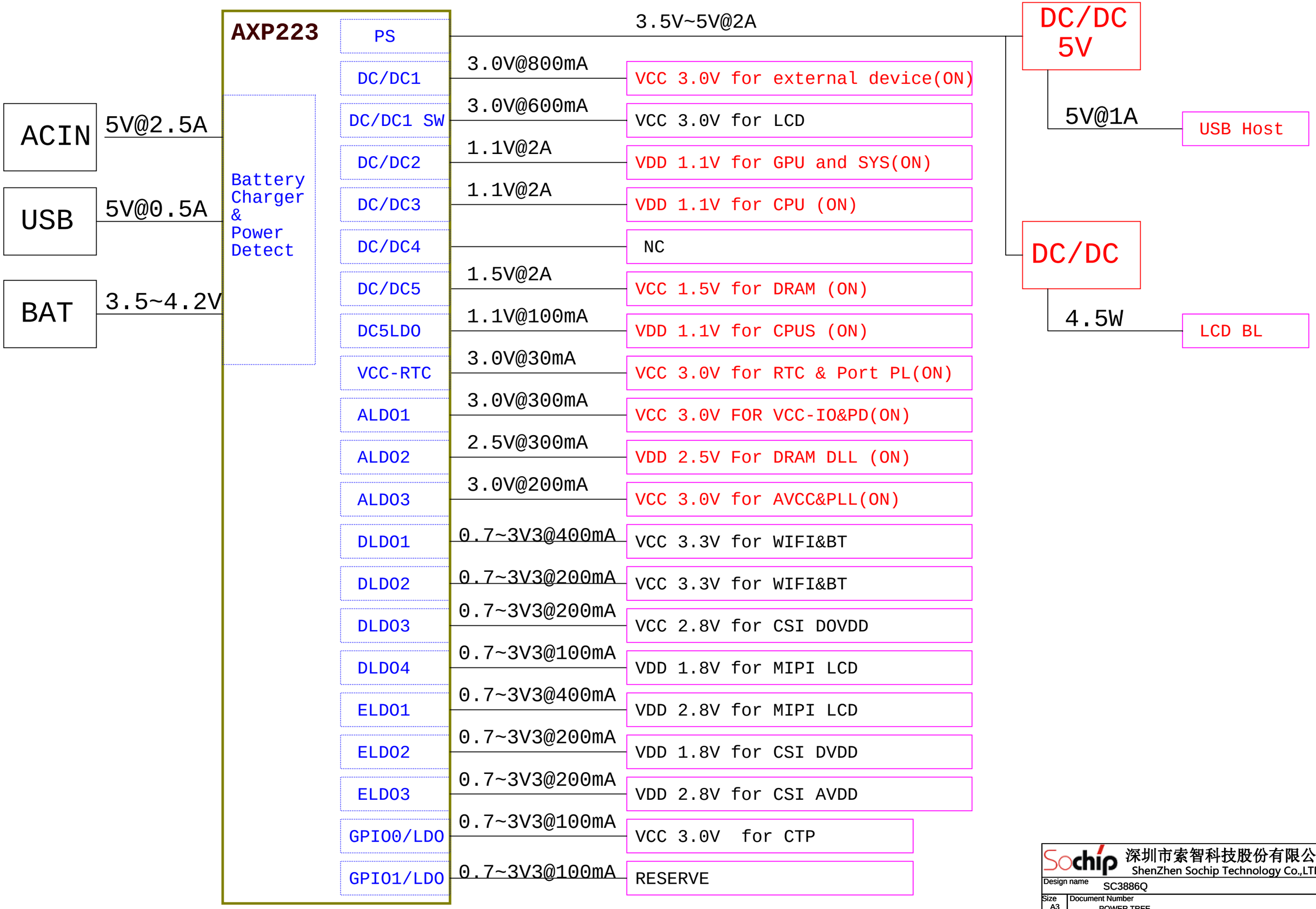
POWER TREE



Sochip	深圳市索智科技股份有限公司 ShenZhen Sochip Technology Co.,LTD
Design name	SC3886Q
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GPIO ASSIGNMENT

PIN	Name	Function
PB0	UART2-TX	DEBUG
PB1	UART2-RX	
PB2	PB2	Digital Audio
PB3	GS-INT	G-Sensor
PB4	PCM0-SYNC	Digital Audio
PB5	PCM0-CLK	
PB6	PCM0-DOUT	
PB7	PCM0-DIN	

PIN	Name	Function
PG0	WL-SDIO-CLK	WLAN&BT
PG1	WL-SDIO-CMD	
PG2	WL-SDIO-D0	
PG3	WL-SDIO-D1	
PG4	WL-SDIO-D2	
PG5	WL-SDIO-D3	
PG6	AP-UART1-TX	
PG7	AP-UART1-RX	
PG8	AP-UART1-RTS	
PG9	AP-UART1-CTS	
PG10	WL-WAKE-AP	
PG11	BT-WAKE-AP	
PG12	AP-WAKE-BT	
PG13	BT-RST-N	

PIN	Name	Function
PH0	LCD-PWM0	LCM
PH1	PWM1	Digital Audio
PH2	TWI0-SCK	TP
PH3	TWI0-SDA	
PH4	TWI1-SCK	SENSOR
PH5	TWI1-SDA	
PH6	UART3_TX	RS485
PH7	UART3-RX	
PH8	REVERSE	Digital Audio
PH9	PA-SHDN	WIFI&BT

PIN	Name	Function
PL0	PMIC-SCK	PMIC
PL1	PMIC-SDA	
PL2	RJ45-EN	RJ45
PL3	HUB-RST	HUB
PL4	CTP-RST	CTP
PL5	CTP-INT	
PL6	USB-ID	USB
PL7	LCD-RESET	LCD
PL8	USB-HOST-EN	HOST
PL9	T-CARD-DET	TF CARD
PL10	LCD-BL-EN	LCD
PL11	PA-SHDN-N	SPK

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CPU

U1A

PC0/ND_WE/SPI0_MOSI
PC1/ND_ALE/SPI0_MISO
PC2/ND_CLE/SPI0_CLK
PC3/ND_CE1/SPI0_CS
PC4/ND_CE0
PC5/ND_RE/SDC2_CLK
PC6/ND_RB0/SDC2_CMD
PC7/ND_RB1
PC8/ND_DQ0/SDC2_D0
PC9/ND_DQ1/SDC2_D1
PC10/ND_DQ2/SDC2_D2
PC11/ND_DQ3/SDC2_D3
PC12/ND_DQ4/SDC2_D4
PC13/ND_DQ5/SDC2_D5
PC14/ND_DQ6/SDC2_D6
PC15/ND_DQ7/SDC2_D7
PC16/ND_DQS/SDC2_RST

PF0/SDC0_D1/JTAG_MS1
PF1/SDC0_D0/JTAG_DI1
PF2/SDC0_CLK/UART0_TX
PF3/SDC0_CMD/JTAG_DO1
PF4/SDC0_D3/UART0_RX
PF5/SDC0_D2/JTAG_CK1

PE0/CSI_PCLK
PE1/CSI_MCLK
PE2/CSI_HSYNC
PE3/CSI_VSYNC
PE4/CSI_D0
PE5/CSI_D1
PE6/CSI_D2
PE7/CSI_D3
PE8/CSI_D4
PE9/CSI_D5
PE10/SI_D6
PE11/CSI_D7
PE12/CSI_SCK/TWI2_SCK
PE13/CSI_SDA/TWI2_SDA
PE14
PE15
PE16
PE17

VCC-USB
USB-DP0
USB-DM0
USB-DP1
USB-DM1
HSIC-DAT
HSIC-STR
VCC-HSIC
X24MIN
X24MOUT
VCC-PLL
VCC-RTC
X32KIN
X32KOUT
RTCVIO
X32KFOUT

VCC-PD1
VCC-PD2

PD2/LCD_D2/SDC1_CLK
PD3/LCD_D3/SCD1_CMD
PD4/LCD_D4/SCD1_D0
PD5/LCD_D5/SDC1_D1
PD6/LCD_D6/SDC1_D2
PD7/LCD_D7/SDC1_D3
PD10/LCD_D10/UART1_TX
PD11/LCD_D11/UART1_RX
PD12/LCD_D12/UART1_RTS
PD13/LCD_D13/UART1_CTS
PD14/LCD-D14
PD15/LCD_D15
PD18/LCD_D18/LVDS_VP0
PD19/LCD_D19/LVDS_VN0
PD20/LCD_D20/LVDS__VP1
PD21/LCD_D21/LVDS_VN1
PD22/LCD_D22/LVDS_VP2
PD23/LCD_D23/LVDS_VN2
PD24/LCD_CLK/LVDS_VPC
PD25/LCD_DE/LVDS_VNC
PD26/LCD_HSYNC/LVDS_VP3
PD27/LCD_VSYNC/LVDS__VN3

PH0/PWM0
PH1/PWM1
PH2/TWI0_SCK
PH3/TWI0_SDA
PH4/TWI1_SCK
PH5/TWI1_SDA
PH6/SPI0_CS/UART3_TX
PH7/SPI0_CLK/UART3_RX
PH8/SPI0_MOSI/UART3_RTS
PH9/SPI0_MISO/UART3_CTS

PB0/UART2_TX/UART0_TX/PB_EINT0
PB1/UART2_RX/UART0_RX/PB_EINT1
PB2/UART2_RTS/PB_EINT2
PB3/UART2_CTS/PB_EINT3
PB4/PCM0_SYNC/PB_EINT4
PB5/PCM0_CLK/PB_EINT5
PB6/PCM0_DOUT/PB_EINT6
PB7/PCM0_DIN/PB_EINT7

PG0/SDC1_CLK/PG_EINT0
PG1/SDC1_CMD/PG_EINT1
PG2/SDC1_D0/PG_EINT2
PG3/SDC1_D1/PG_EINT3
PG4/SDC1_D2/PG_EINT4
PG5/SDC1_D3/PG_EINT5
PG6/UART1_TX/PG_EINT6
PG7/UART1_RX/PG_EINT7
PG8/UART1_RTS/PG_EINT8
PG9/UART1_CTS/PG_EINT9
PG10/PCM1_SYNC/PG_EINT10
PG11/PCM1_CLK/PG_EINT11
PG12/PCM1_DOUT/PG_EINT12
PG13/PCM1_DIN/PG_EINT13

PL0/RSB_SCK/S_TWI_SCK/PL_EINT0
PL1/RSB_SDA/S_TWI_SDA/PL_EINT1
PL2/S_UART_TX/PL_EINT2
PL3/S_UART_RX/PL_EINT3
PL4/JTAG_MS/PL_EINT4
PL5/JTAG_CK/PL_EINT5
PL6/JTAG_DO/PL_EINT6
PL7/JTAG_DI/PL_EINT7
PL8/S_TWI_SCK/PL_EINT8
PL9/S_TWI_SDA_PL_EINT9
PL10/PWM/PL_EINT10
PL11/PL_EINT11

X3
bga262-ata100_16x13

U1B

HBIAS
MBIAS
MIC1P
MIC1N
MIC2P
MIC2N
VRA1
VRA2
VRP
AVCC
AGND
HPVCCIN
HPVCCBP
HPCOM
HPCOMFB
HPOUTL
HPOUTR
LINEINL
LINEINR
VDD-DLL
DVREF
DDRZQ
DZQ

VCC-DSI1
VCC-DSI2
DSI-D0P
DSI-D0N
DSI-D1P
DSI-D1N
DSI-CKP
DSI-CKN
DSI-D2P
DSI-D2N
DSI-D3P
DSI-D3N

UBOOT
NMI
RESET
VCC-EFUSE

LRADC0
LRADC1

X3
bga262-ata100_16x13

VCC-DRAM
R5 2K-1% R0402
R6 2K-1% R0402
CD1 104 C0402
R2 240-1% R0402
R1 240-1% R0402
C1 104 C0402
C7 104 C0402
Delay locked loop
VDD-DLL
GND

AVCC
R41 100K-1% R0402
RESET
LARDC0
LARDC1
C58 102 C0402
C57 102 C0402
C213 NC/102 C0402

VCC-IO
VDD-SYS
VDD-CPU
VDD-CPUS
VCC-DRAM
X3
bga262-ata100_16x13

VCC-DRAM
C2 10uF C0603
C3 1uF C0402
C4 1uF C0402
C5 104 C0402
C6 104 C0402
VCC-EFUSE
C19 104 C0402

VDD-CPU
C15 4.7uF C0603
C16 1uF C0402
C17 104 C0402
C18 104 C0402
VCC-HSIC
C209 104 C0402
VCC-USB
C85 104 C0402

Phase locked loop
X24MIN
C10 18pF C0402
Y1
XIN GND1 GND2 XOUT
24M-20pF-10ppm
X24MOUT R3 0R R0402
C11 18pF C0402
VCC-PLL
C8 104 C0402
VCC-RTC
R66 NC/10K R0402
X32KFOUT
CPUS-URX PL3
CPUS-UTX PL2
TP58 CPUS-URX tp40_smd
TP59 CPUS-UTX tp40_smd

VCC-IO
C13 4.7uF C0603
C14 104 C0402

VDD-SYS
C20 4.7uF C0603
C21 1uF C0402
C22 104 C0402
C23 104 C0402
VCC-PD
C86 104 C0402

X32KIN
C24 18pF C0402
Y2
R4 10M-1% R0402
X32KOUT
CRYSTAL-2P-3215-H0_85A
32.768KHz
C25 18pF C0402
VCC-RTC
C12 104 C0402
RTCVIO
C26 104 C0402

AVCC
C54 10uF C0603
C55 104 C0402
AGND
VRA2
C52 4.7uF C0603
C97 104 C0402
R39 200K-1% R0402
VRA1
C56 1uF C0402
VRP
C95 10uF C0603
C96 104 C0402
HPCOMFB
C53 1uF C0402
R40 0R R0402

MBIAS
C59 104 C0402
HPVCCBP
C98 4.7uF C0603
C99 104 C0402

VDD-CPUS
C50 4.7uF C0603
C51 1uF C0402
HPVCC
C92 104 C0402
VCC-DSI
C9 104 C0402

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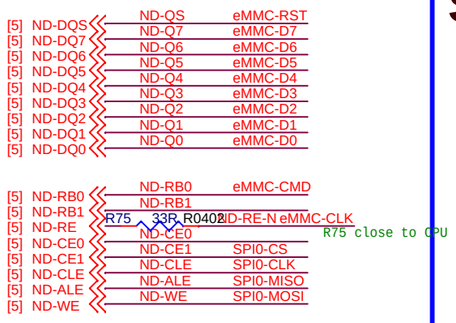
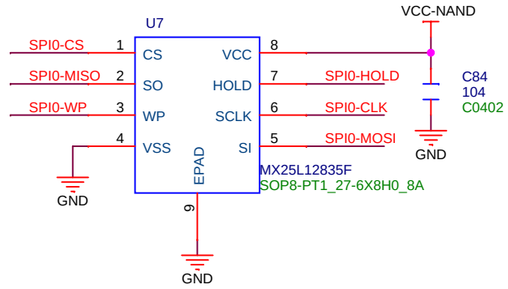
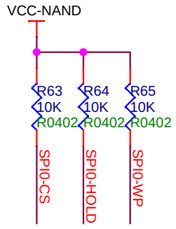
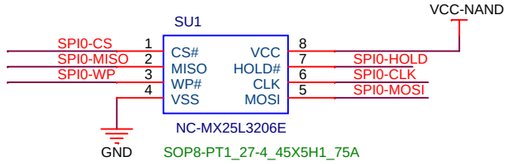
SPI FLASH

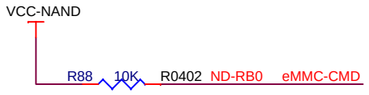


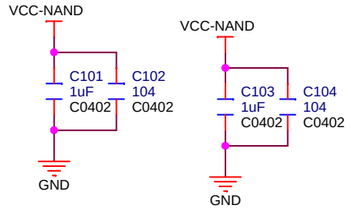




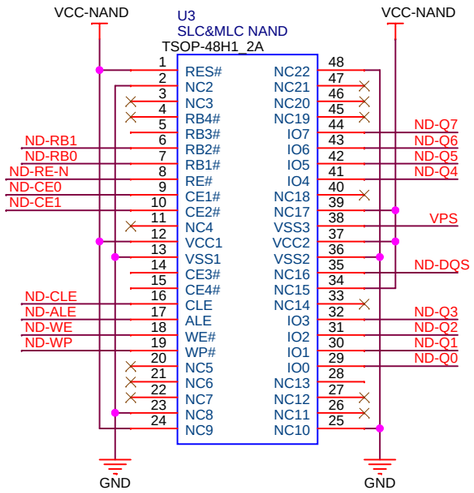
U7/SU1 LAYOUT时重叠在一起

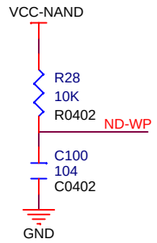


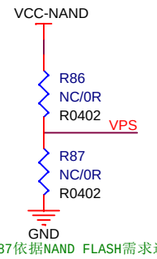




NAND FlASH

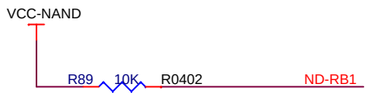




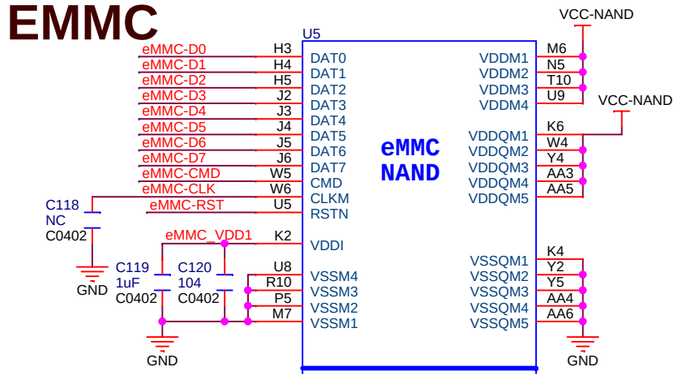


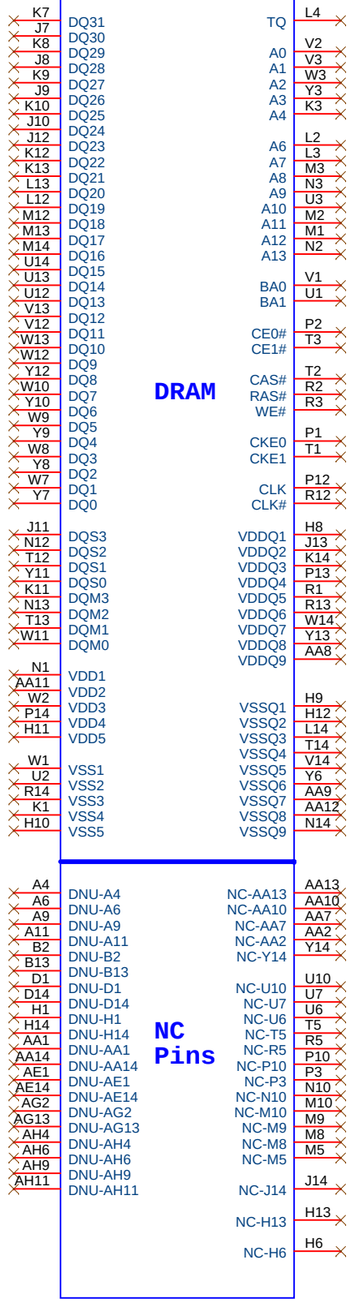
R86 ,R87依据NAND FLASH需求选贴

U3/U5 LAYOUT时重叠在一起



EMMC





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ShenZhen Sochip Technology Co.,LTD
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POWER

ALDO1	3.0V	ALDO1 300mA	R80 0.01R R0603 · VCC-PD · VCC-USB · HPVCC · VCC-IO-WIFI · R81 0.01R R0603 · VCC-IO
ALDO2	2.5V	ALDO2 300mA	R82 0.01R R0603 · VDD-DLL · R128 0R R0402 · VCC-EFUSE 启用eFuse 功能 则R128 贴0R,CPU页 C19 贴104 致残eFuse功能 则R128 NC, CPU页 C19 可贴0R 或者不贴
ALDO3	3.0V	ALDO3 200mA	R83 0.01R R0603 · AVCC · VCC-PLL
DLDO1	3.3V	DLDO1 400mA	VCC-WIFI 提供WIFI供电3.3V
DLDO2	3.3V	DLDO2 200mA	VCC-WIFI 提供WIFI供电3.3V
DLDO3	2..8V	DLDO3 200mA	AFVCC-CSI · DOVDD-CSI 提供CAM
DLDO4	1.8V	DLDO4 100mA	DLDO4 提供MIPI LCD VCC供电1.8V
ELDO1	2.8V	ELDO1 400mA	ELDO1 提供MIPI LCD VCC供电2.8V
ELDO2	1.8V	ELDO2 200mA	DVDD-CSI 提供CAM
ELDO3	2.8V	ELDO3 200mA	AVDD-CSI 提供CAM
GPIO0	1.8V	GPIO0 100mA	VCC-LDO0 提供TP供电3V
GPIO1	3V	GPIO1 100mA	VCC_MT 提供MOTOR
DC1	3V		VCC-3V0 · VCC-DSI · VCC-NAND VCC-CARD · VCC-OTG
	1400mA		
DC1SW	3V	DC1-SW 400mA	VCC-LCD 提供LCD供电
DC2	1.1V	DC2 2000mA	VDD-SYS · R74 0R R0402 · VCC-HSIC
DC3	1.1V	DC3 2000mA	VDD-CPU
DC5	1.5V	DC5 2000mA	VCC-DRAM
DC5LDO	1.1V	DC5LDO 200mA	R186 0.01R R0603 · VDD-CPUS
VCC-RTC	3.0V	VCC_RTC 30mA	R187 0.01R R0603 · VCC-RTC

ACIN · C27 10uF/10V C0603 · U2

USBVBUS · C129 10uF/10V C0603

PS · C30 10uF/10V C0603

GND

Q1 QFN6-2X2H0_8A WPM1481

VBAT · VBAT-EXT · C33 1uF C0402 · R7 0R01-1% R0805 · C36 1uF C0402 · R8 0R01-1% R0805

C35 4.7uF C0603 · C38 4.7uF C0603 · C39 10uF/10V C0603

L6 L2-2X2_5H1_2A 1.5uH@2A DCR<0.1R

R9 R0402 0R · TS

VCC-RTC · R11 10K R0402 · GND

[9] POWER_SW · POWER_SW · R10 1K R0402 · C41 C0402 104 · CHG-LED

[10] USB-DRVVBUS · [5] PMIC-SCK · [5] PMIC-SDA · [5] NMI-N · [5,9] RESET-N

C44 4.7uF C0603 · VCC_RTC

C45 10uF/10V C0603 · C47 4.7uF C0603 ALDO1 · C48 4.7uF C0603 ALDO2 · C49 4.7uF C0603 ALDO3

C109 4.7uF C0603 GPIO0 · C169 NC C0402 GPIO1

C111 1uF C0402 · C112 1uF C0402

Charger & Meter

U2 pin		U2 pin	
55	ACIN1	14	LX1
56	ACIN2	21	DCDC1
48	VBUS	22	DC1SW
53	PS1	13	VIN1
54	PS2	15	PGND1
51	N_BATDRV	25	LX2_1
49	BATSENSE	24	LX2_2
50	LOADSENSE	28	DCDC2
58	CHSENSEN	23	VIN2
57	CHSENSEP	27	PGND2_1
60	LX_CHG1	26	PGND2_2
61	LX_CHG2	41	LX3_2
62	VIN_CHG1	40	LX3_1
63	VIN_CHG2	38	DCDC3
59	PGND_CHG	39	VIN3
30	TS	42	PGND3
52	CHGLED	65	LX4
12	PWRON	67	DCDC4
11	N_VBUSEN	64	VIN4
44	SCK	66	PGND4
45	SDA	8	LX5_2
29	IRQ	7	LX5_1
43	PWROK	5	DCDC5
46	VCC_RTC	9	VIN5
33	ALDOIN	6	PGND5
32	ALDO1	10	DC5SET
34	ALDO2	4	DC5LDO
36	ALDO3	18	DLDOIN
37	GPIO0/LDO	19	DLDO1
31	GPIO1/LDO	17	DLDO2
47	VINT	16	DLDO3
35	VREF	20	DLDO4
69	GND	1	ELDOIN
		68	ELDO1
		2	ELDO2
		3	ELDO3

DC/DC1 · NR252012-1R5MC · L1 L2-2X2_5H1_2A 1.5uH@2A DCR<0.1R · C28 10uF · R76 0.01R R0603 · VCC-3V0 · C29 4.7uF C0603 · C31 10uF/10V C0603 · DC1-SW · VDD-SYS

DC/DC2 · L2 L2-2X2_5H1_2A 1.5uH@2A DCR<0.1R · C32 10uF · R79 0.01R R0603 · C34 10uF/10V C0603

DC/DC3 · L3 L2-2X2_5H1_2A 1.5uH@2A DCR<0.1R · C37 10uF · R78 0.01R R0603 · VDD-CPU · C40 10uF/10V C0603

DC/DC4 · DCDC4 600mA

DC/DC5 · L7 L2-2X2_5H1_2A 1.5uH@2A DCR<0.1R · C42 10uF · R77 0.01R R0603 · VCC-DRAM · C43 10uF/10V C0603 · Set DCDC5 voltage Low: 1.5V · DC5LDO · C46 4.7uF C0603

DLDOs · DLDO1 C108 10uF C0603 · DLDO2 C114 4.7uF C0603 · DLDO3 C115 4.7uF C0603 · DLDO4 C110 1uF C0402

ELDOs · ELDO1 C113 4.7uF C0603 · ELDO2 C116 4.7uF C0603 · ELDO3 C117 4.7uF C0603

ALDOs

AXP223
QFN69P0_4B8X8

BATTERY

BATT 3PIN · VBAT · TS · C130 4.7uF C0603 · GND

DC JACK

L9 0R L0805 · ACIN · ESD29 · ESD · C131 10uF/10V C0603 · C132 104 C0402 · DC-JACK DC-33 DC-JACK-4P-PT4_5-H5_2A · GND

POWER ON LED CHARGER LED

PS · R152 1K R0402 · D9 RED · CHG-LED · LED0603

VCC-3V0 · R151 1K R0402 · D8 green · GND · LED0603

Sochip	深圳市索智科技股份有限公司 ShenZhen Sochip Technology Co.,LTD
Design name	SC3886Q
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RGB&MIPI LCD

Differential pairs
Z0=100 ohm +/-5 ohm

SC3840 LCD
转接板同SC1663V
----SC1622V LCD V01

MIPI LCD
CON25-PT0_6-3_6X9H1B

[5] DSI-D0P
[5] DSI-D0N
[5] DSI-D1P
[5] DSI-D1N
[5] DSI-CKP
[5] DSI-CKN
[5] DSI-D2P
[5] DSI-D2N
[5] DSI-D3P
[5] DSI-D3N

[5] LCD-D2 LCD-B2
[5] LCD-D3 LCD-B3
[5] LCD-D4 LCD-B4
[5] LCD-D5 LCD-B5
[5] LCD-D6 LCD-B6
[5] LCD-D7 LCD-B7

[5] LCD-D10 LCD-G2
[5] LCD-D11 LCD-G3
[5] LCD-D12 LCD-G4
[5] LCD-D13 LCD-G5
[5] LCD-D14 LCD-G6
[5] LCD-D15 LCD-G7

[5] LCD-D18 LCD-R2 LVDS-VP0
[5] LCD-D19 LCD-R3 LVDS-VN0
[5] LCD-D20 LCD-R4 LVDS-VP1
[5] LCD-D21 LCD-R5 LVDS-VN1
[5] LCD-D22 LCD-R6 LVDS-VP2
[5] LCD-D23 LCD-R7 LVDS-VN2
[5] LCD-CLK LCD-CLK LVDS-VPC
[5] LCD-DE LCD-DE LVDS-VNC
[5] LCD-HSYNC LCD-HSYNC LVDS-VP3
[5] LCD-VSYNC LCD-VSYNC LVDS-VN3

[5] LCD-PWM0 LCD-PWM0
[5] LCD-RESET LCD-RESET
[5] LCD-BL-EN LCD-BL-EN

PS
C139 10uF C0603
C140 102 C0402
L11 10uH-DCR<0.1R-2A L4018
D2 1N5819 SOD123H14A
C141 NC C0805
C142 105/50V C0603
VLED+
GND
U12
VDD LX
EN OVP
GND FB
WD3125E
LCD-BL-EN
R36 0R R0402
VCC-LCD
R90 4.7K R0402
R92 4.7K R0402
LCD-PWM0
R94 4.7K R0402
R95 16K R0402
R42 2.2K R0402
VLED-
R91 10R-1% R0603
R93 10R-1% R0603
C143 1uF C0402

Reference:
Vfb = 100mv : LSR1 = 73K
Vfb = 150mv : LSR1 = 47K
Vfb = 200mv : LSR1 = 33K
Vfb = 250mv : LSR1 = 25K
Vfb = 300mv : LSR1 = 20K
Vfb = 350mv : LSR1 = 16K

Vfb=300mV/I(led)
LVDS 7串3并： R91,R93 贴10R
MIPI 6串2并： R91,R93贴15R

VCC-LCD
R117 0R R0603
ELDO1
R130 NC/0R R0603
LCD-VDD
C159 4.7uF C0603
C160 104 C0402
2.8V 兼容线路为MIPI LCD
调试MIPI屏，则R130 0R, R117 NC

DLDO4
R118 0R R0603
LCD-1V8
C106 104 C0402

LCD-RESET
B5819W D7 SOD323H0_75A
R129 10K R0402
LCD-RST
C215 104 C0402
调试MIPI LCD
R98 NC,C145 NC
R129 10K , C215 104
调试RGB LCD
R98 10K, C145 104
D7 NC

LCD-1V8
LCD-VDD
IOVCC_1V8
TP79
CN5
DSI-D3N DSI-D3P DSI-D2N DSI-D2P DSI-D1N DSI-D1P DSI-D0N DSI-D0P DSI-CKN DSI-CKP VLED+ VLED- LPTE LCD-RST
GND8 GND7 MIPI_D3N MIPI_D3P GND6 MIPI_D2N MIPI_D2P GND5 MIPI_D1N MIPI_D1P GND4 MIPI_D0N MIPI_D0P GND3 MIPI_LKN MIPI_LKP GND2 LED+ LED- LPTE RESET GND1 IOVCC1.8V VCC2.8V LCM_ID2

VLED- TP2
VLED+ TP4
IOVCC_1V8 TP5
LCD-RST TP7
DSI-D2P TP8
DSI-D2N TP9
DSI-D1P TP10
DSI-D1N TP11
DSI-CKP TP12
DSI-CKN TP13
DSI-D0P TP14
DSI-D0N TP15
DSI-D3P TP16
DSI-D3N TP17
LPTE TP78

VCC-LCD
L12 22uH L4018
D4 1N5819 SOD123H14A
U13
LX OVR
VDD FB
EN GND
LP3315B5F SOT23-5
SOT23-6
C151 10uF C0603
C152 102 C0402
R111 10K R0402
C150 102 C0402
C156 104 C0402
820K-1% R113 R0402
R115 110K-1% R0402
C155 4.7uF/25V C0805

Vo=(1+R1/R2)xVref
Vref=1.235V for RT9284
Vref=1.25V for LP3315B5F

C147 104/50V C0603
D3 BAT54S SOT-23
C157 104/50V C0603
D5 SOT-23 BAT54S
-5.5V
-7.5~-6.5V
LCD_VGL
R109 2.2K R0402
C148 105/50V C0603
R110 NC/5k1 R0402
C149 2.2uF/25V C0603
R112 2.2K R0402
LCD_VGH
C153 105/50V C0603
R114 15K R0402
C154 2.2uF/25V C0603
18.42V
R116 0R R0402
C158 105/50V C0603
LCD-AVDD
10.2~10.8V
10.56V
LCD-AVDD

CN4
H-C070D-18B0
FPC50PIN-0_5H2B
LCD-B2 LCD-B3 LCD-B4 LCD-B5 LCD-B6 LCD-B7 LCD-G2 LCD-G3 LCD-G4 LCD-G5 LCD-G6 LCD-G7 LCD-R2 LCD-R3 LCD-R4 LCD-R5 LCD-R6 LCD-R7 LCD-CLK LCD-DE LCD-HSYNC LCD-VSYNC LCD-RESET LCD_MODE LCD_LR LCD-DN LCD-DITH LCD_VGH LCD_VGL LCD-AVDD LCD-VCOM LCD-VDD VLED+ VLED-
GND

LCD_LR TP46
LCD-DN TP47
LCD_VGH TP48
LCD_VGL TP49
LCD-AVDD TP50
LCD-RESET TP51
LCD-DITH TP52
LCD-VDD TP18 TP19
LCD-B7 TP22
LCD-B6 TP23
LCD-B5 TP24
LCD-B4 TP25
LCD-B3 TP26
LCD-B2 TP27
LCD-G7 TP28
LCD-G6 TP29
LCD-G5 TP30
LCD-G4 TP31
LCD-G3 TP32
LCD-G2 TP33
LCD-R7 TP34
LCD-R6 TP35
LCD-R5 TP36
LCD-R4 TP37
LCD-R3 TP38
LCD-R2 TP39
LCD-CLK TP40
LCD-VCOM TP41
LCD_MODE TP42
LCD-DE TP43
LCD-VSYNC TP44
LCD-HSYNC TP45

VCC-LCD
R98 10K R0402
R99 10K R0402
R100 NC/10K R0402
R101 10K R0402
R102 NC/10K R0402
LCD-RESET
LCD-DN
LCD_LR
LCD-DITH
LCD_MODE
C145 104 C0402
R105 NC R0402
R106 10K R0402
R107 NC R0402
R108 10K R0402
GND

LCD-AVDD
R96 NC R0402
R97 20K R0402
LCD-VCOM 3.52V
R103 NC R0402
R104 10K R0402
C107 104 C0402
C144 104 C0402
GND

深圳市索智科技股份有限公司
ShenZhen Sochip Technology Co.,LTD

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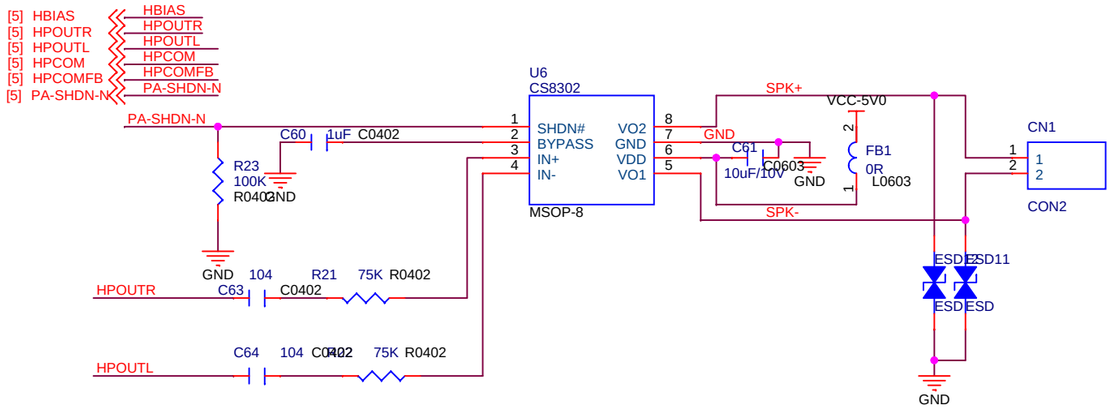
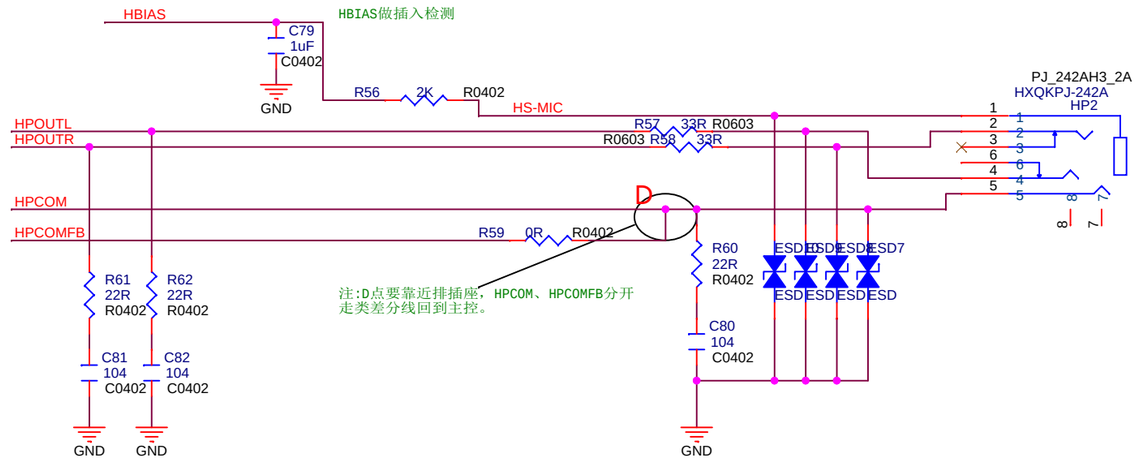
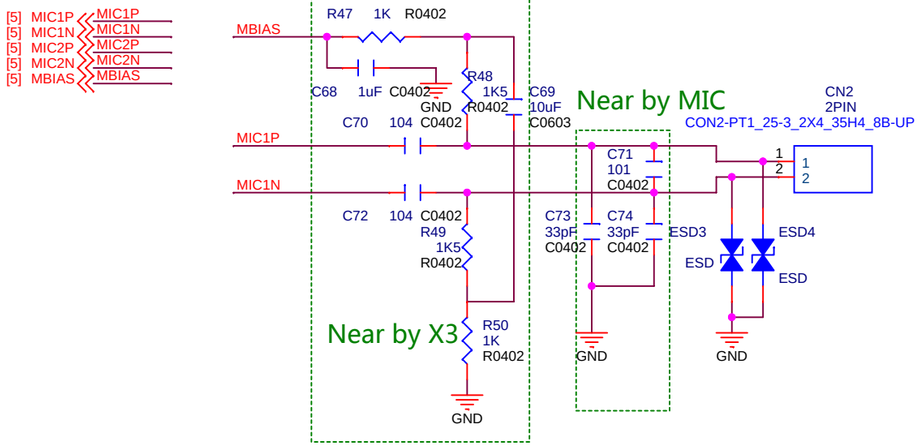
SPK



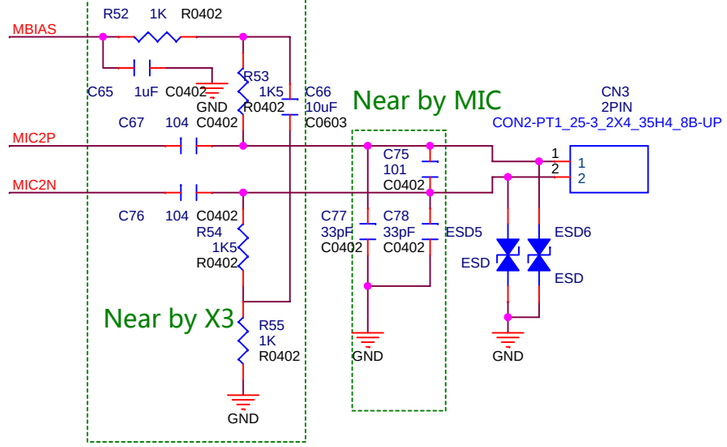
EARPHONE



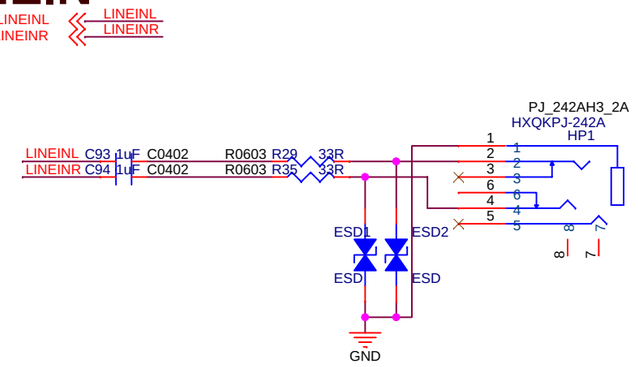
MIC1



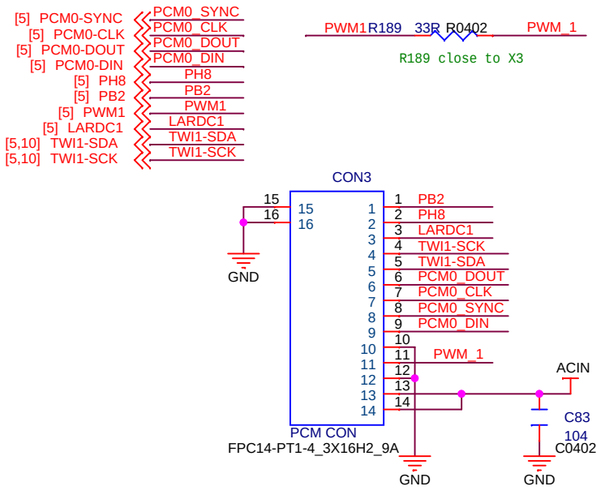
MIC2

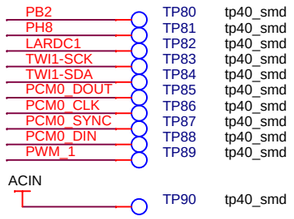


LINEIN

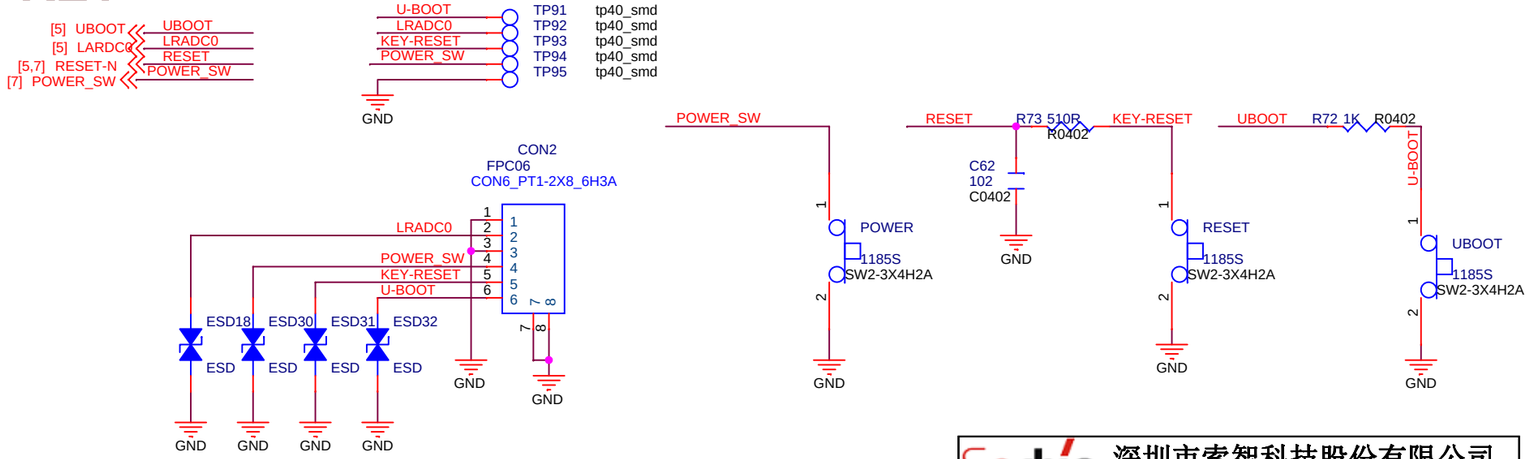


PCM AUDIO INTERFACE





KEY



Sochip 深圳市索智科技股份有限公司 ShenZhen Sochip Technology Co.,LTD			
Design name	SC3886Q		
Size A3	Document Number AUDIO		Rev V00
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USB OTG

[7] USB-DRVVBUS
[5] USB-DM0
[5] USB-DP0
[5] USB-ID
USB-DRVVBUS
USB-DM0
USB-DP0
USB-ID

Differential pairs
Z0=90 ohm +/-5 ohm

PS
L8
2.2uH@2A DCR<0.1R
L4018
VCC-5V0
VCC-3V0
U10
IN
LX
EN
NC
GND
FB
LP6216B6F
SOT23-6
C125
10uF
C0603
C126
1uF
C0402
R33 10K R0402
R0402
D1
1N5819
SOD123H14A
R31
100K-1%
R0402
R32
13K-1%
R0402
C127
10uF
C0603
C128
104
C0402
GND

因PCB板空间有限制，
5V稳压线路最大仅仅支持5V@1A
5V线路供下列线路：
1.功放
2.RJ45
3.USB OTG做HOST的供电
4.HOST USB-A座子的供电
因此请留意：功放的输出最大不能超过8R@1W
USB OTG+USB HOST同时向外供电时候不能超过5V@500mA

U9
LPW5210H-B5
VCC-5V0
USBVBUS
IN
OUT
EN
GND
ISET
USB-DRVVBUS
R27
100K
R0402
SOT23_5H14A
R30
6K8-1%
R0402
C124
10uF
C0603
C87
4.7uF/10V
C0603
C88
104
C0402
GND
Ilim (A)=6800/Rset (ohm)

VCC-OTG
R12
47K
R0402
USB-DM0
USB-DP0
L4
2 L0805x2
WCM2012F2SF-900T04
USB-VCC
DM0
DP0
USB0-ID
USB-ID R13 1K R0402
ESD13 ESD14 ESD15 ESD16
ESD ESD ESD ESD
VBUS
D-
D+
ID
GND
USB1
MIC-MCD-HXQK5F
USB-MIC-MCD-HXQK5FH2_4P

CN10
5pin
CON5-PT1_25-3_2X8_1H4_8A-UP
USBVBUS
DM0
DP0
USB0-ID
GND

G-Sensor

[5,11] TWI1-SDA
[5,11] TWI1-SCK
[5] GS-INT
TWI1-SDA
TWI1-SCK
GS-INT

VCC-3V0
R24 2K R0402 TWI1-SCK
R25 2K R0402 TWI1-SDA

U8
DA380B
VCC-3V0
RESERVED
NC1
NC
DVDD
AVDD
DGND
AGND
SDA
INT
NC2
NC3
SCL
TWI1-SDA
TWI1-SCK
GS-INT R124 0R R0402
C121
104
C0402
SOP10-PT05-MMA7660FC-H1A

HOST

[13] HOST-DM4
[13] HOST-DP4
[5] USB-HOST-EN
HOST-DM4
HOST-DP4
USB-HOST-EN

VCC-5V0
C89
NC/10uF
C0603
C90
104
C0402
R14 NC/0R R0603
HOST-5V
U4
LPW5210H-B5
IN
OUT
EN
GND
ISET
R15
100K
R0402
SOT23_5H14A
R16
6K8-1%
R0402
C91
104
C0402
HOST-DM4
HOST-DP4
WCM2012F2SF-900T04
L0805x2
L5
HOST-DP
ESD ESD ESD ESD
USB2
VBUS
D-
D+
GND
Shield1
Shield2
USB_A
USB_4P-C10733H14A
Ilim (A)=6800/Rset (ohm)

CN11
4pin
CON4-PT1_25-3_2X6_85H4_8A-UP
HOST-5V
HOST-DM
HOST-DP

TF

[5,10] SDC0-D1
[5,10] SDC0-D0
[5,10] SDC0-CLK
[5,10] SDC0-CMD
[5,10] SDC0-D3
[5,10] SDC0-D2
[5,10] T-CARD-DET
PF0
PF1
PF2
PF3
PF4
PF5
T-CARD-DET

VCC-CARD
R17 2.2R R0402
C105
4.7uF
C0603
R18
10K
R0402
R19
47K
R0402
R20 33R R0402
R123 1K R0402
TF1
DAT2
DAT3
CMD
VDD
CLK
VSS2
DAT0
DAT1
CD#
GND5
GND4
GND3
GND2
GND1
GND
MICROSD/TF_SLOT
TF_CARDH1_7A
ESD ESD ESD ESD ESD ESD ESD ESD

High Speed Chip Interface

[5] HSIC-DAT
[5] HSIC-STR
HSIC-DAT
HSIC-STR

CN12
4pin
CON4-PT1_25-3_2X6_85H4_8A-UP
VCC-5V0
FB7 0R L0603

Sochip 深圳市索智科技股份有限公司 ShenZhen Sochip Technology Co.,LTD			
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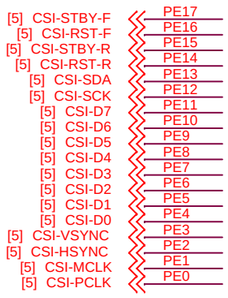
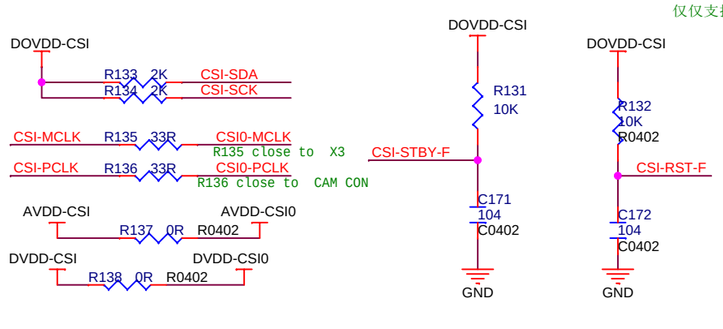
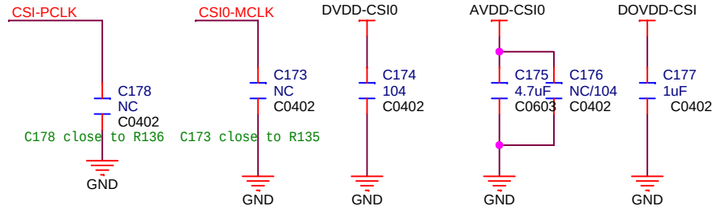
DVP CAM

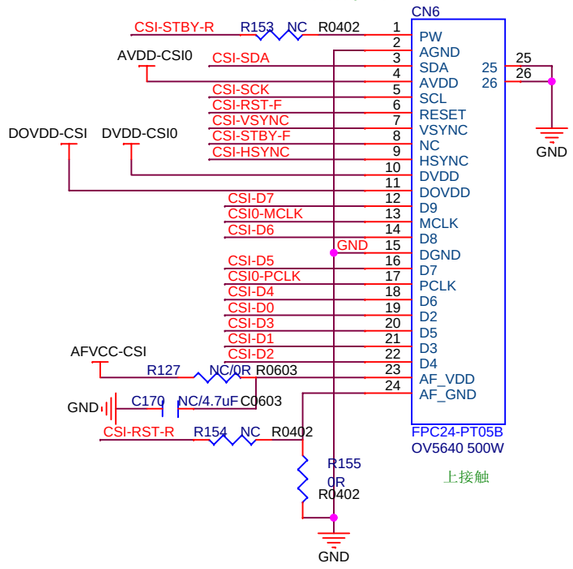


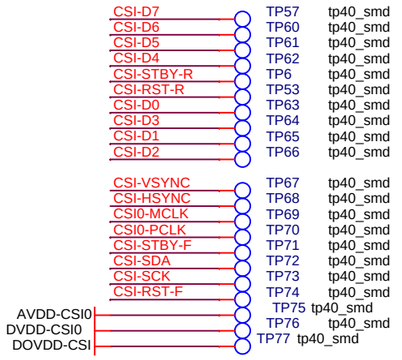


仅仅支持GPIO电压为2.8~3.3V的CAM Sensor

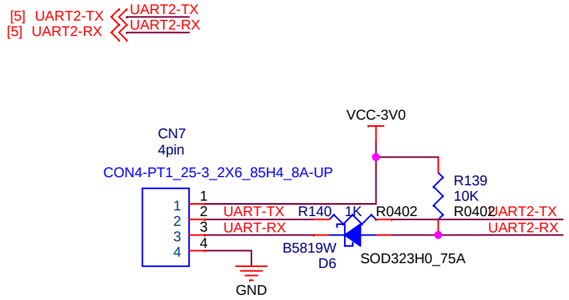


摄像头使用SC3817R开发板上的
SC3859Q-TEST-V01

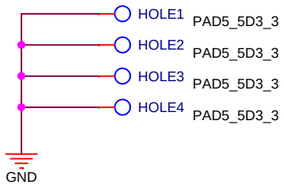




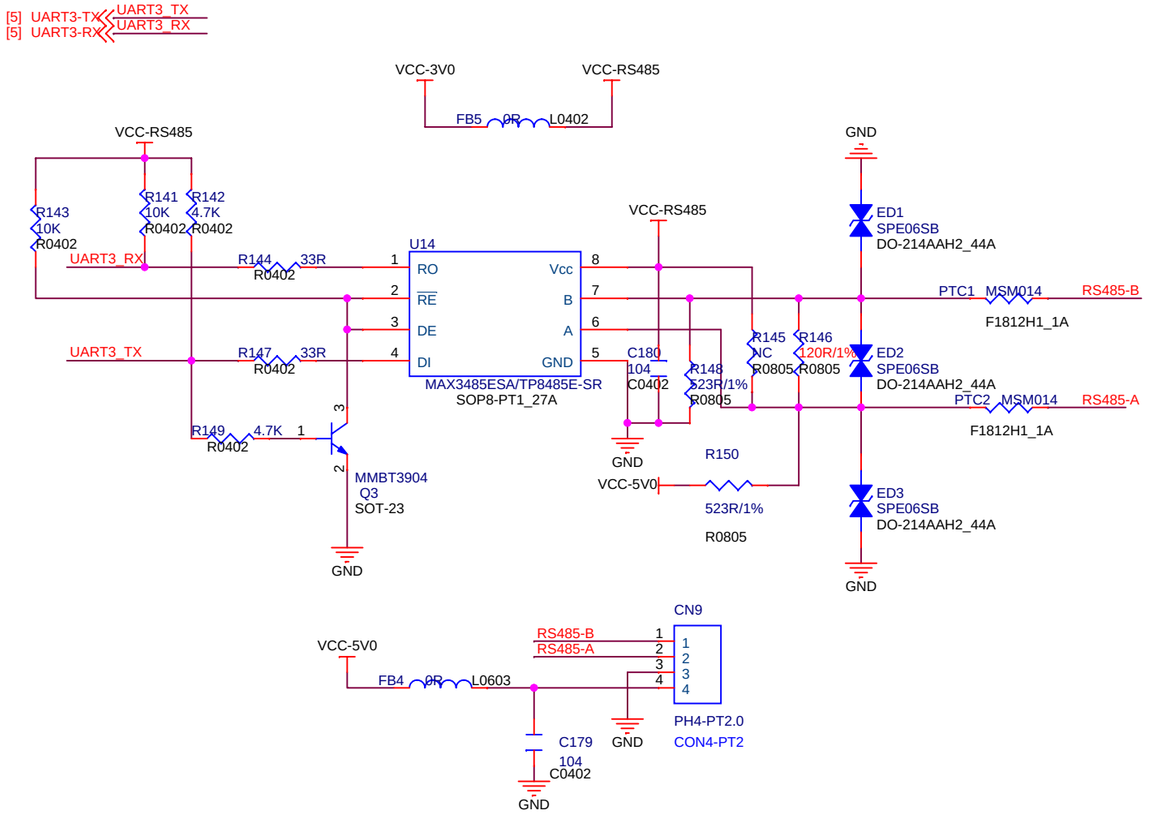
UART DEBUG



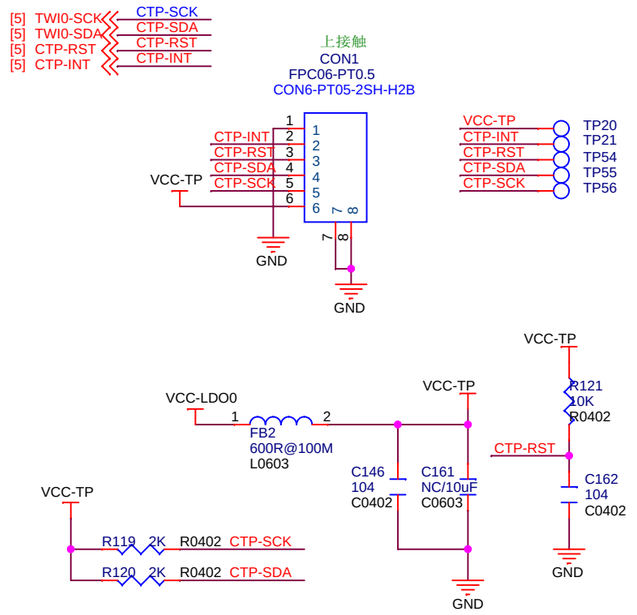
SCREW HOLD



RS485



CTP



Sochip 深圳市索智科技股份有限公司 ShenZhen Sochip Technology Co.,LTD			
Design name	SC3886Q		
Size A3	Document Number DVP CAM		Rev V00
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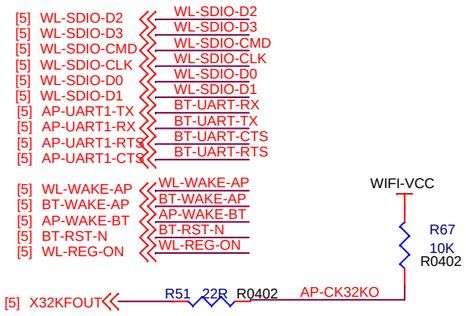
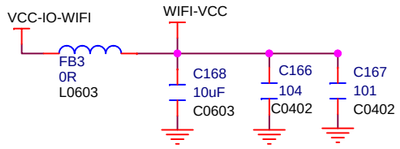
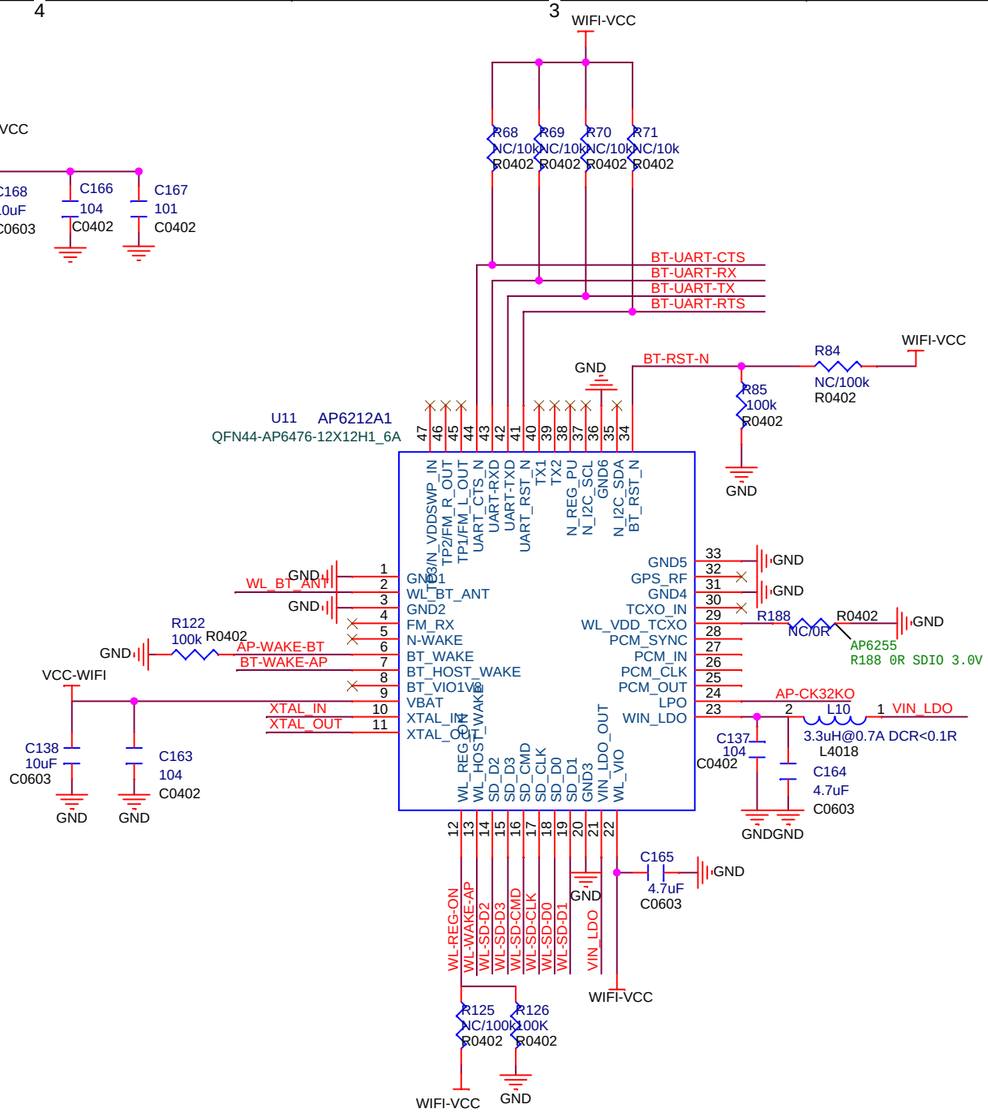
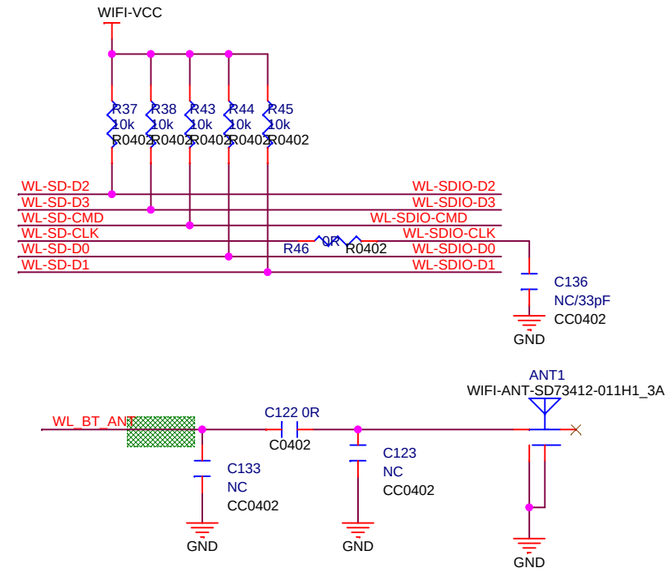
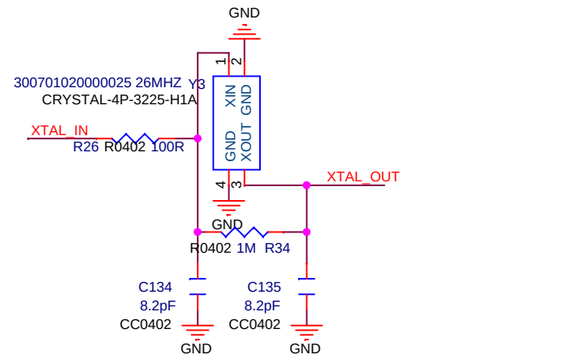
WIFI AP6212











EXT WIFI JACK

Sochip 深圳市索智科技股份有限公司 ShenZhen Sochip Technology Co.,LTD			
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ETHERNET 100M

[5] RJ45-EN
[13] HOST-DM2
[13] HOST-DP2

R157 2.49K/1% R0402
GND

R2 value should be 2.49K (1%) for all application

U15
RSET VDD10 XTAL2 XTAL1 SPISDO LANWAKEB
24 23 22 21 20 19

VDD33	1	AVDD33	
MDI0+	2	MDIP0	
MDI0-	3	MDIN0	
MDI1+	4	MDIP1	
MDI1-	5	MDIN1	
	6	U2GND	
	25	GND	
	18	SPISDI/XTALDET	
	17	LED1/SPISCK	
	16	DVDD10	
	15	LED0/SPICSB	
	14	GPIO	
	13	DVDD33	

RTL8152B

RSET AVDD10 CKXTAL2 CKXTAL1 SPISDO LANWAKEB
U2DM U2DP U2VDD10 AVDD33 VDD5 DVDD10_UPS
7 8 9 10 11 12
DM DP VDD10 VDD33 VDD5 VDD10_UPS

QFN24_PT0_5_4X4H0_9A
RTL8152B-VB-CG

RJ45_5V

WCM2012F2SF-900T04
HOST-DP2 2 DP
HOST-DM2 1 4 DM
3
L0805x2
L13

3.3V

VDD33
C188 104 C0402
C189 104 C0402
C190 104 C0402
C191 4.7uF C0603
GND GND GND GND

1.05V

VDD10
C194 104 C0402
C195 104 C0402
C196 104 C0402
C197 1uF C0402
VDD10_UPS
C198 104 C0402
C199 1uF C0402
GND GND GND GND GND GND

External Resistors

VDD33
LANWAKEB R161 10K R0402
GPIO R162 10K R0402
SPISDI/XTALDET R163 10K R0402

XTAL

Y4
XTAL1 1 XIN GND2 4 XTAL2
2 GND1XOUT 3
25M-18pF-10PPM
CRYSTAL-4P-3225-H1A
C185 27P C0402
C186 27P C0402
GND GND

SPI Flash

VDD33 VDD33
U16
LED0/SPICSB 1 CSB VCC 8
SPISDO 2 SO HOLDB 7
3 WPB SCK 6 LED1/SPISCK
4 GND SI 5 SPISDI/XTALDET
NC/MX25L1606E
GND

VCC-5V0
RJ45_5V
R156 NC/0R R0603
WPM2015
OQ1 SOT-23
C181 10uF C0603
C182 224 C0402
R158 100K R0402
C183 10uF C0603
C184 104 C0402
R159 100K R0402
RJ45-EN
C187 1uF C0402
R160 510K R0402
MMBT3904 Q4 SOT-23

HUB

[13] HOST-DM2
[13] HOST-DP2
[10] HOST-DM4
[10] HOST-DP4
[5] USB-DM1
[5] USB-DP1
[5] HUB-RST

Differential pairs
Z0=90 ohm +/-5 ohm

HUB-RST R177 0R R0402 HUB-RST#

U17
GL850G
SSOP28-5_3X10_2PT0_65H2A

		AVDD1		28	HUB-DP1
C203 1uF C0402	HUB-AVDD 1	DM2		27	HUB-DM1
	HOST-DM2 2	DP2		26	USB-DP1
	HOST-DP2 3	RREF	GL850G	25	USB-DM1
	4	AVDD2		24	
R172 680R R0402	HUB-AVDD 5	XTAL-1		23	
C204 1uF C0402	HUB1-X1 6	XTAL-2		22	
	HUB1-X2 7	DM3		21	OVCUR1#
	HOST-DM3 8	DP3		20	
C206 1uF	HOST-DP3 9	AVDD3		19	
C0402	HUB-AVDD 10	DM4		18	PGANG
	HOST-DM4 11	DP4		17	PSELF
	HOST-DP4 12	RESET#		16	
	HUB-RST# 13	TEST		15	
	14				

SS0P28

HUB-3V3 FB6 2 1 L0603 600R@100M HUB-AVDD
R171 0R R0402
C202 1uF C0402
GND
HUB_5V
C205 4.7uF C0603
GND
R173 NC R0402
R174 NC R0402
R175 100K R0402
R176 4.7K R0402
HUB-3V3
C207 104 C0402
C208 4.7uF C0603
R178 10K R0402
GND GND GND GND

HUB-3V3 HUB-3V3 HUB_5V
R182 10K R0402
R180 NC R0402
R183 22K R0402
HUB-RST#
OVCUR1#
C211 1uF C0402
R185 47K R0402
GND GND

HUB1-X1 HUB1-X2
R179 NC R0402
Y5
1 XIN GND2 4
2 GND1XOUT 3
12M/20PF
CRYSTAL-4P-3225-H1A
C210 33pF C0402
C212 33pF C0402
GND GND

HUB_5V VCC-5V0
R181 0R R0402
HUB-3V3 VCC-3V0
R184 0R R0603

TCT1
TCT2
C192 104/50V C0603
GND

MDI0+ MDI0- MDI1+ MDI1-
R167 51R/1% R0603
R168 51R/1% R0603
R169 51R/1% R0603
R170 51R/1% R0603
C200 104/50V C0603
C201 104/50V C0603

RJ-45 Connector + Transformer

Differential pairs
Z0=100 ohm +/-5 ohm

SC3878
RJ45-15_95X21_35H13_6A
RJ1 MRG1HW211DB13CDRASA

TD+ TD- RD+ RD-
MDI0+ 1 1 16 16
MDI0- 2 2 15 15
MDI1+ 3 3
TCT1 4 4
TCT2 5 5
MDI1- 6 6 14 14
RJ45-GND 7 7 13 13
8 8
9 10 11 12
RJ45-GND

LED1/SPISCK
LED0/SPICSB
LED low active
R164 510R R0402
VDD33
R165 510R R0402
VDD33

C193 102/2KV C1206 RJ45-GND
R166 NC/10M R1206
GND

Design name	SC3886Q
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深圳市索智科技股份有限公司
ShenZhen Sochip Technology Co.,LTD