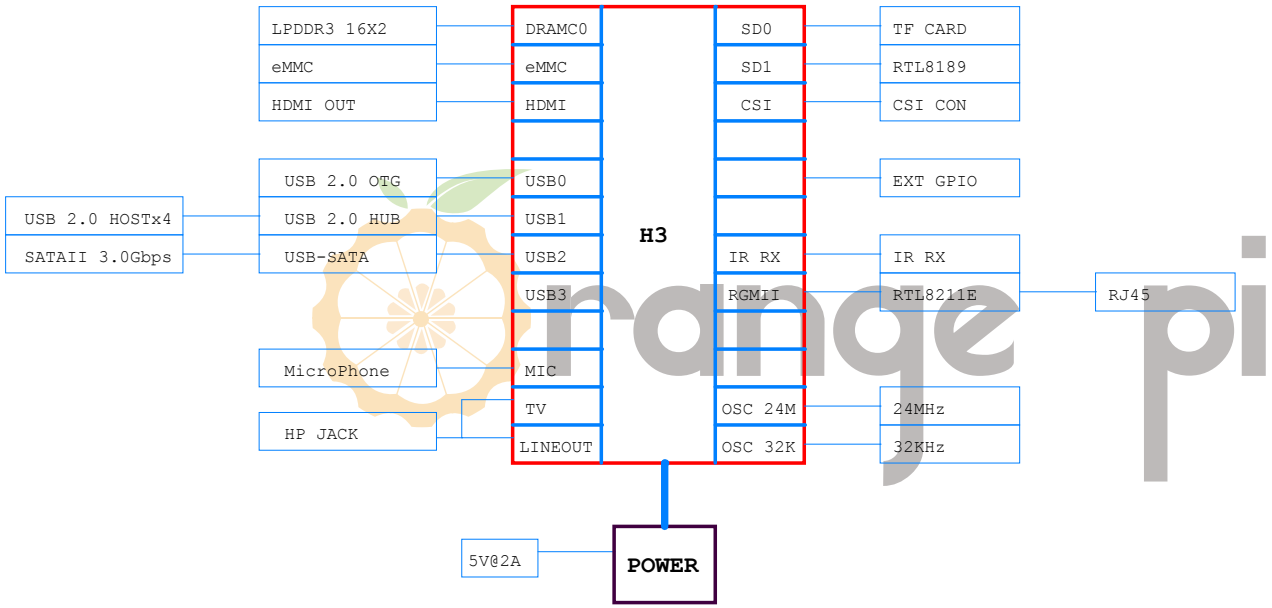
REVISION HISTORY

Revision	Description	Date	Drawn	Checked
Ver 1.1		2016-04-15		

Schematics Index:

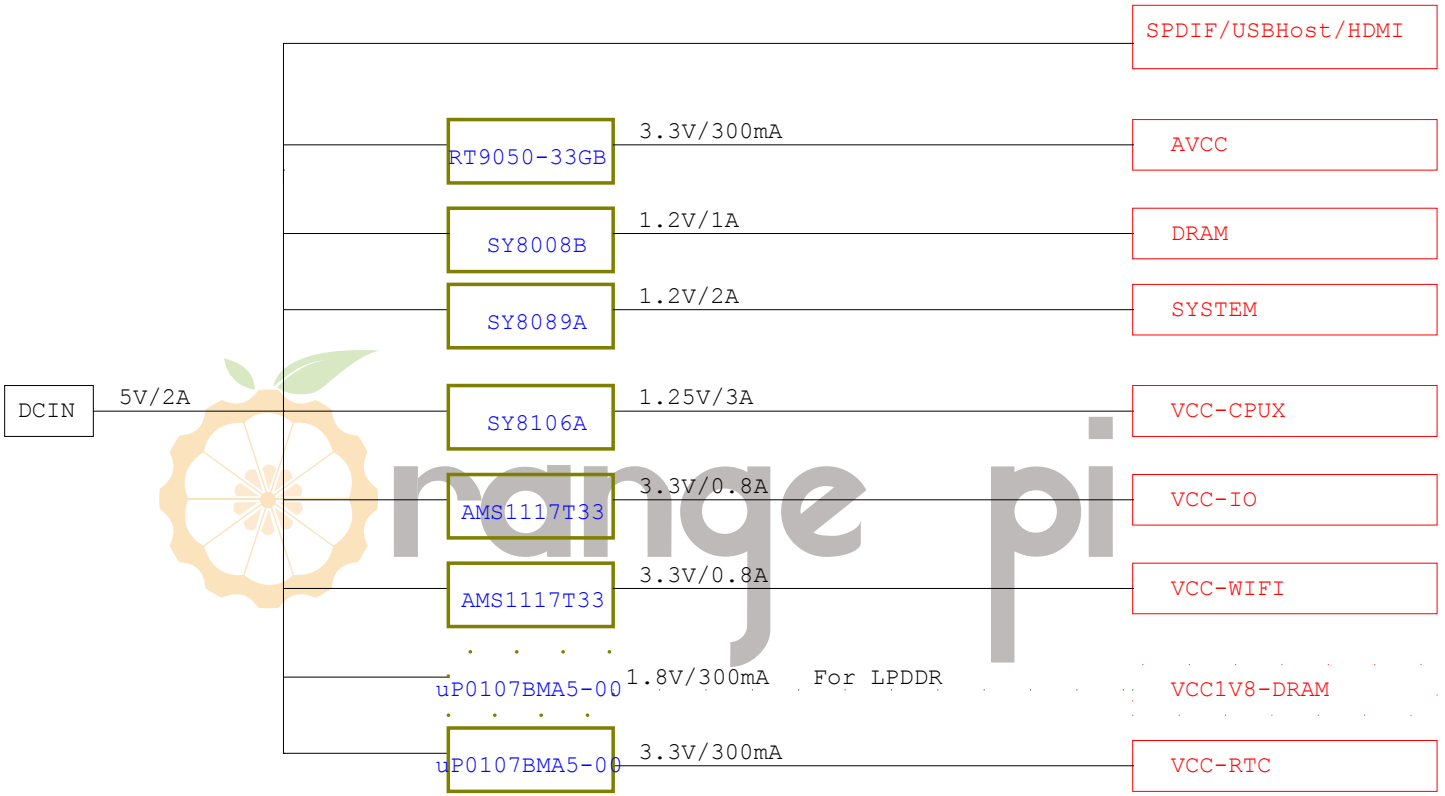
Xunlong Software	
Design Name	Orange Pi Plus 2E
Size: A3	Page Name: REVISION HISTORY
Rev	
Date: Friday, April 15, 2016	Sheet 1 of 16

BLOCK



Xunlong Software	
Design Name	Orange Pi Plus 2E
Size: A3	Page Name: BLOCK
Rev	
Date: Friday, April 15, 2016	Sheet 2 of 16

POWER TREE



Xunlong Software	
Design Name	Orange Pi Plus 2E
Size A3	Page Name: POWER TREE
Rev	
Date: Friday, April 15, 2016	Sheet 3 of 16

GPIO ASSIGNMENT

PIN	Define	CFG	Function
PA0	TMS/DRVVBUS0	3/1	JTAG /USB
PA1	TCK/DRVVBUS1	3/1	
PA2	TDO/WPS	3/1	
PA3	TDI	3	
PA4	UART-TX	3	UART
PA5	UART-RX	3	
PA6	NC	7	
PA7	NC	7	
PA8	NC	7	
PA9	NC	7	
PA10	NC	7	
PA11	NC	7	
PA12	NC	7	
PA13	NC	7	
PA14	NC	7	
PA15	STATUS-LED	1	LED
PA16	MUTE	1	AV
PA17	SPDIF-OUT	2	SPDIF
PA18	NC	7	
PA19	NC	7	
PA20	NC	7	
PA21	NC	7	

PIN	Define	CFG	Function
PC0	NWE	2/3	NAND /eMMC /NOR
PC1	NALE	2/3	
PC2	NCLE	2/3	
PC3	NCE1	2/3	
PC4	NCE0	2	
PC5	NRE	2/3	
PC6	NRB0	2/3	
PC7	NRB1	2	
PC8	NDQ0	2/3	
PC9	NDQ1	2/3	
PC10	NDQ2	2/3	
PC11	NDQ3	2/3	
PC12	NDQ4	2/3	
PC13	NDQ5	2/3	
PC14	NDQ6	2/3	
PC15	NDQ7	2/3	
PC16	NDQS	2/3	

PIN	Define	CFG	Function
PD0	NC	7	
PD1	NC	7	
PD2	NC	7	
PD3	NC	7	
PD4	NC	7	
PD5	NC	7	
PD6	NC	7	
PD7	NC	7	
PD8	NC	7	
PD9	NC	7	
PD10	NC	7	
PD11	NC	7	
PD12	NC	7	
PD13	NC	7	
PD14	NC	7	
PD15	NC	7	
PD16	NC	7	
PD17	NC	7	

PIN	Define	CFG	Function
PE0	NC	7	
PE1	NC	7	
PE2	NC	7	
PE3	NC	7	
PE4	NC	7	
PE5	NC	7	
PE6	NC	7	
PE7	NC	7	
PE8	NC	7	
PE9	NC	7	
PE10	NC	7	
PE11	NC	7	
PE12	NC	7	
PE13	NC	7	
PE14	NC	7	
PE15	NC	7	

PIN	Define	CFG	Function
PF0	D1	2	CARD0
PF1	D0	2	
PF2	CLK	2	
PF3	CMD	2	
PF4	D3	2	
PF5	D2	2	
PF6	DET	0	

PIN	Define	CFG	Function
PG0	NC	7	
PG1	NC	7	
PG2	NC	7	
PG3	NC	7	
PG4	NC	7	
PG5	NC	7	
PG6	NC	7	
PG7	NC	7	
PG8	NC	7	
PG9	NC	7	
PG10	NC	7	
PG11	NC	7	
PG12	NC	7	
PG13	NC	7	

PIN	Define	CFG	Function
PL0	TWI	2	TWI
PL1	TWI	2	
PL2	USB0-DRVVBUS	1	USB
PL3	USB1-DRVVBUS	1	
PL4	RECOVERY	0	KEY
PL5	VCC-IO-EN	1	IO-EN
PL6	NC	7	
PL7	WIFI-EN	7	WIFI-EN
PL8	PWR-STB	1	
PL9	PWR-DRAM	1	
PL10	PWR-LED	1	
PL11	IR-RX	2	

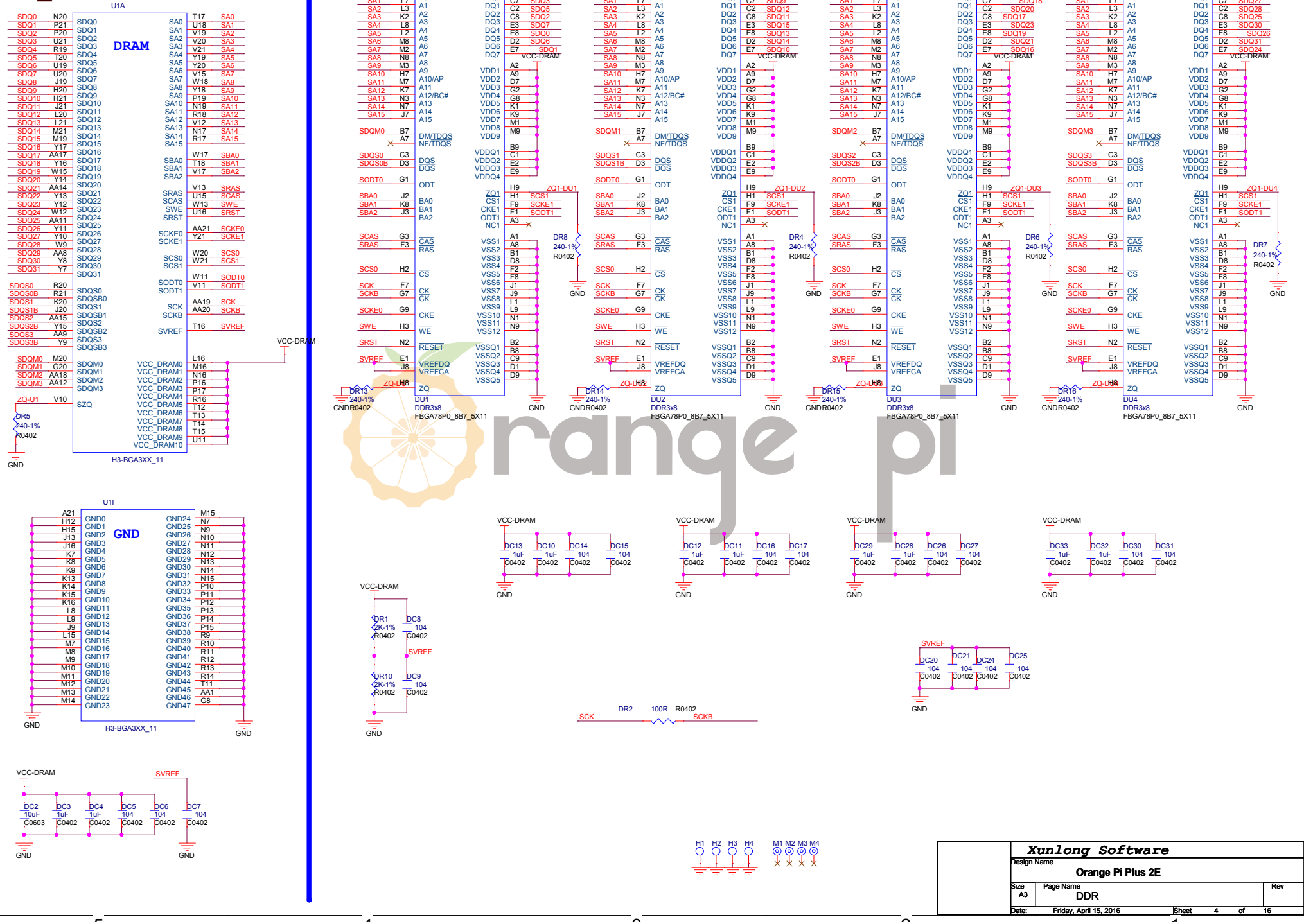
Xunlong Software

Design Name: Orange Pi Plus 2E

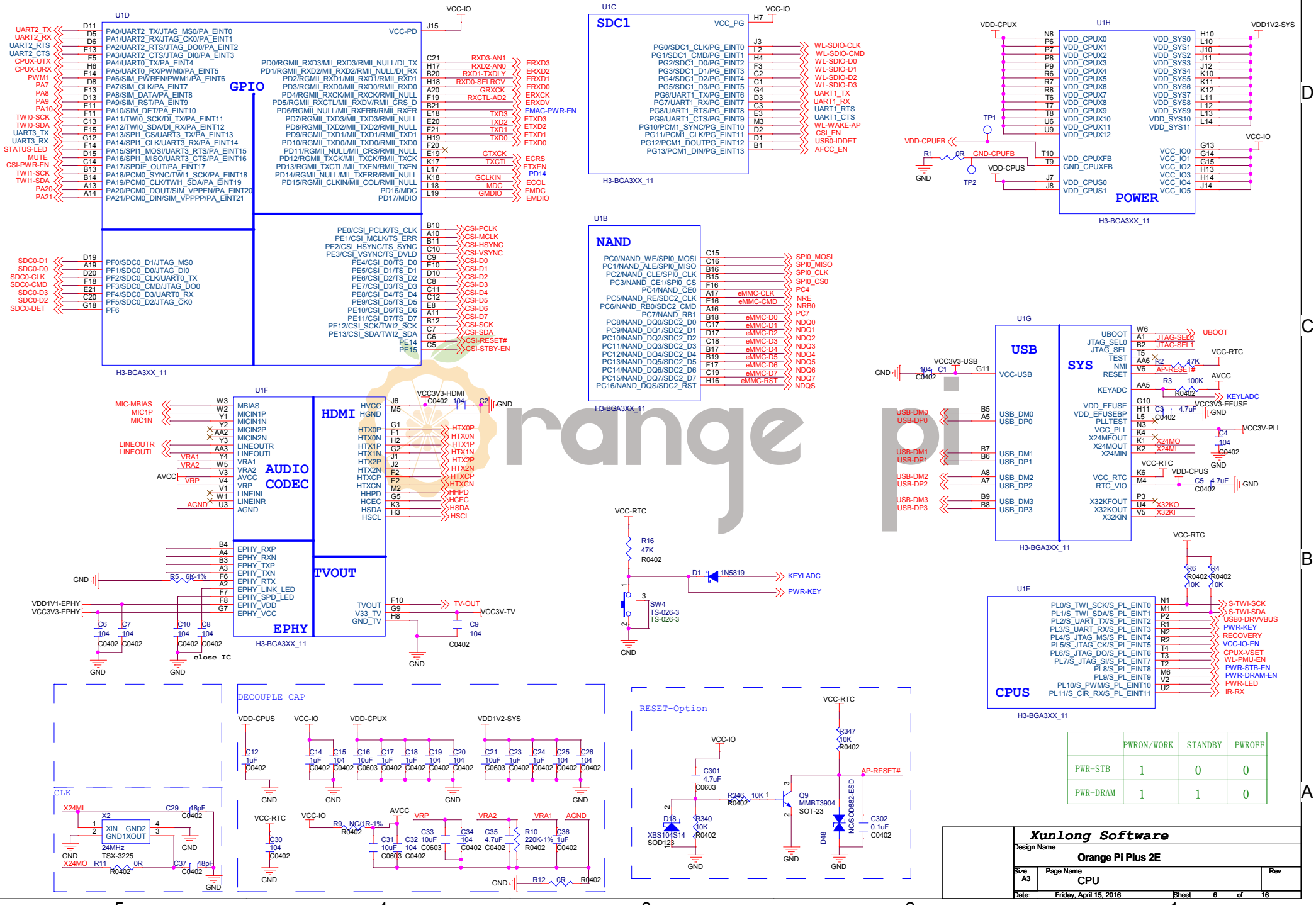
Size: A3 | Page Name: GPIO ASSIGNMENT | Rev:

Date: Friday, April 15, 2016 | Sheet 4 of 16

DDR3_8X4

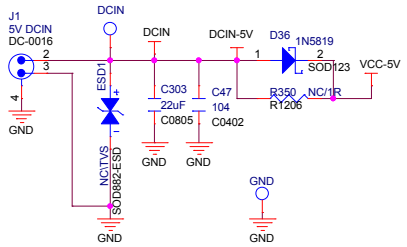

U1A
DRAM
H3-BGA3XX_11
U1I
GND
H3-BGA3XX_11
DU1
DU2
DU3
DU4
DDR3x8
FBGA78P0_8B7_5X11
VCC-DRAM
SVREF
GND
Xunlong Software
Design Name
Orange Pi Plus 2E
Size
A3
Page Name
DDR
Rev
Date:
Friday, April 15, 2016
Sheet
4
of
16

CPU



	PWRON/WORK	STANDBY	PWROFF
PWR-STB	1	0	0
PWR-DRAM	1	1	0

DCIN



VCC-IO
- VCC3V3-EPHY
- VCC3V3-HDMI
- VCC3V3-EFUSE
- VCC3V3-SDC
- VCC3V3-USBWIFI
- R20 NC/0R R0603
- VCC3V3-NAND
- VCC3V3-USB
- VCC3V3-AUDIO
- VCC3V3-UARTX
- VCC3V3-JTAGX
- VCC3V3-FELED
- VCC3V3-KEY
- VCC3V3-LED
- VCC3V3-EXT
- VCC-3V3

VCC-5V

VCC-1V2
- VDD1V2-SYS
- VDD1V1-EPHY
- R19 2R-1% R0402

VDD-CPUX

VCC-DRAM

VCC-RTC
- VCC3V3-IR
- VCC3V3-KEYPWR

AVCC
- R25 0R R0603 VCC3V-PLL
- R26 0R R0603 VCC3V-TV

VCC3V3-NAND VCC-NAND

VCC3V3-SDC VCC-SDC

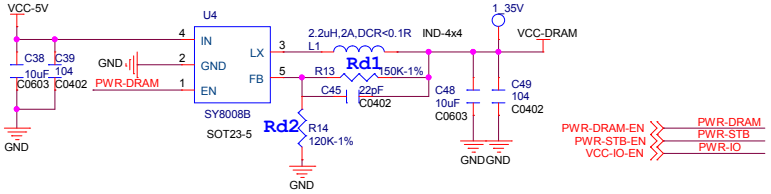
VCC3V3-HDMI HDMI-3V

VCC3V3-FELED VCC-EPHY-LED

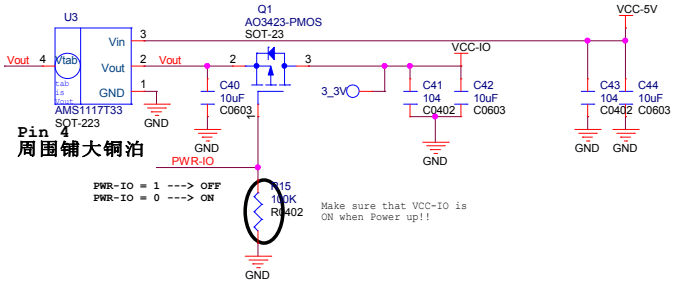
VCC3V3-USBWIFI VCC-WIFI-IO

POWER

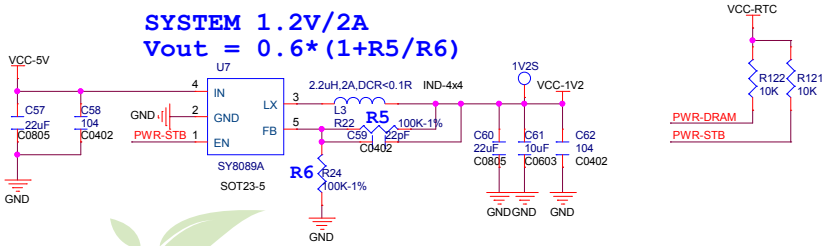
Vout = 0.6*(1+Rd1/Rd2)
VDRAM=1.5V/1A,R2=100K-1%
VDRAM=1.35V/1A,R2=120K-1%



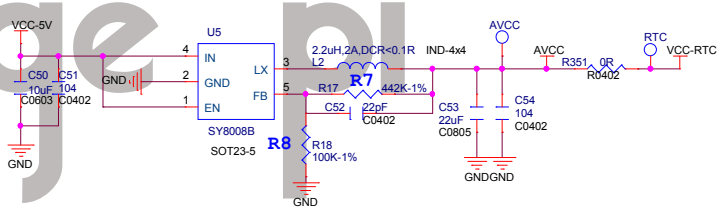
VCCIO 3.3V/1A



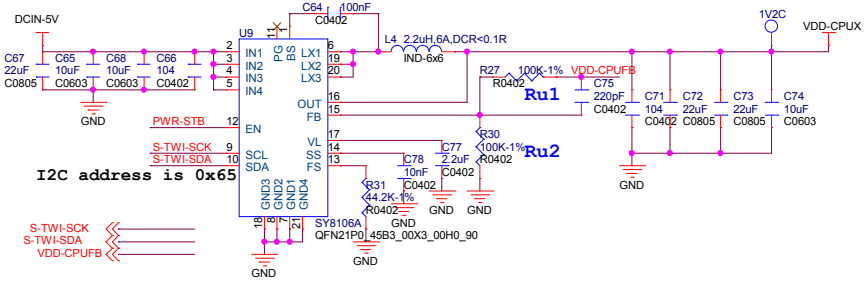
SYSTEM 1.2V/2A
Vout = 0.6*(1+R5/R6)



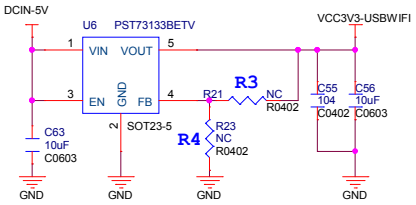
AVCC 3.3V/1A



CPUX 1.2V/6A
Vout = 0.6*(1+Ru1/Ru2)

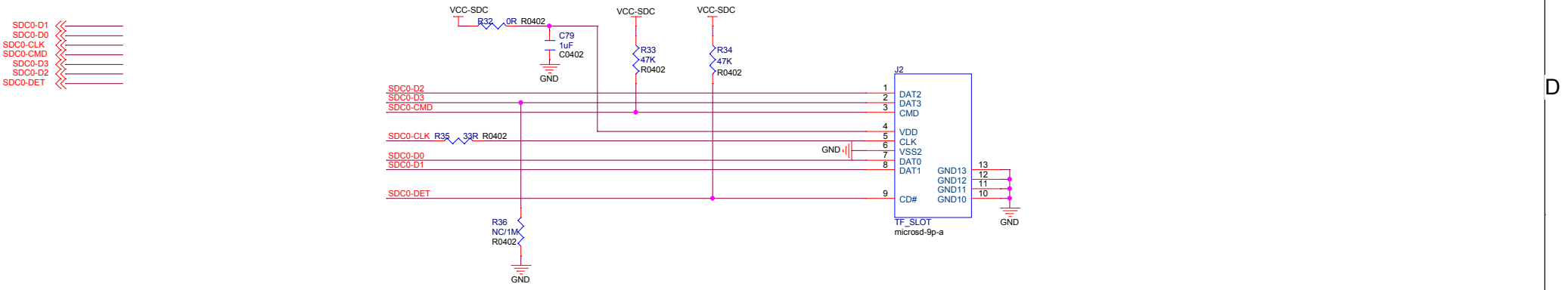


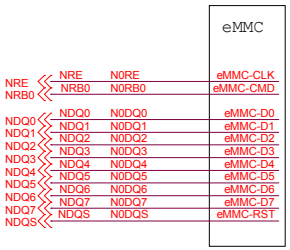
WIFI Power 3.3V/300mA

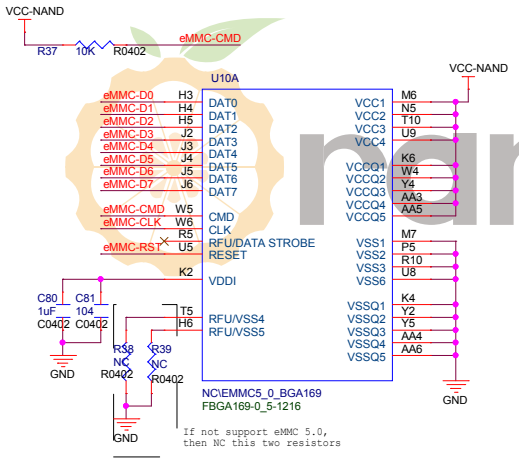


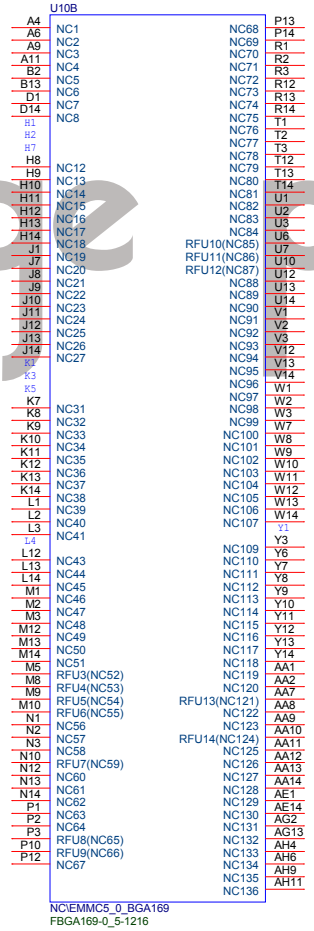
Xunlong Software		
Design Name: Orange Pi Plus 2E		
Size: A3	Page Name: POWER	Rev
Date: Friday, April 15, 2016	Sheet 7 of 16	

TF-eMMC



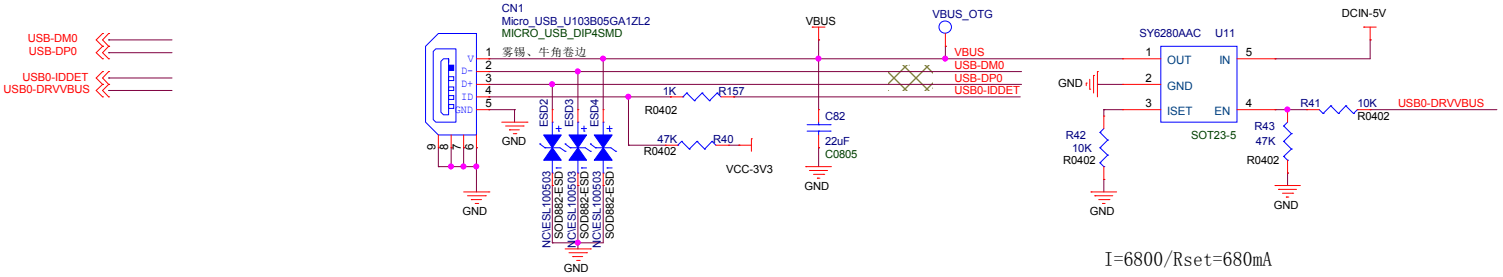




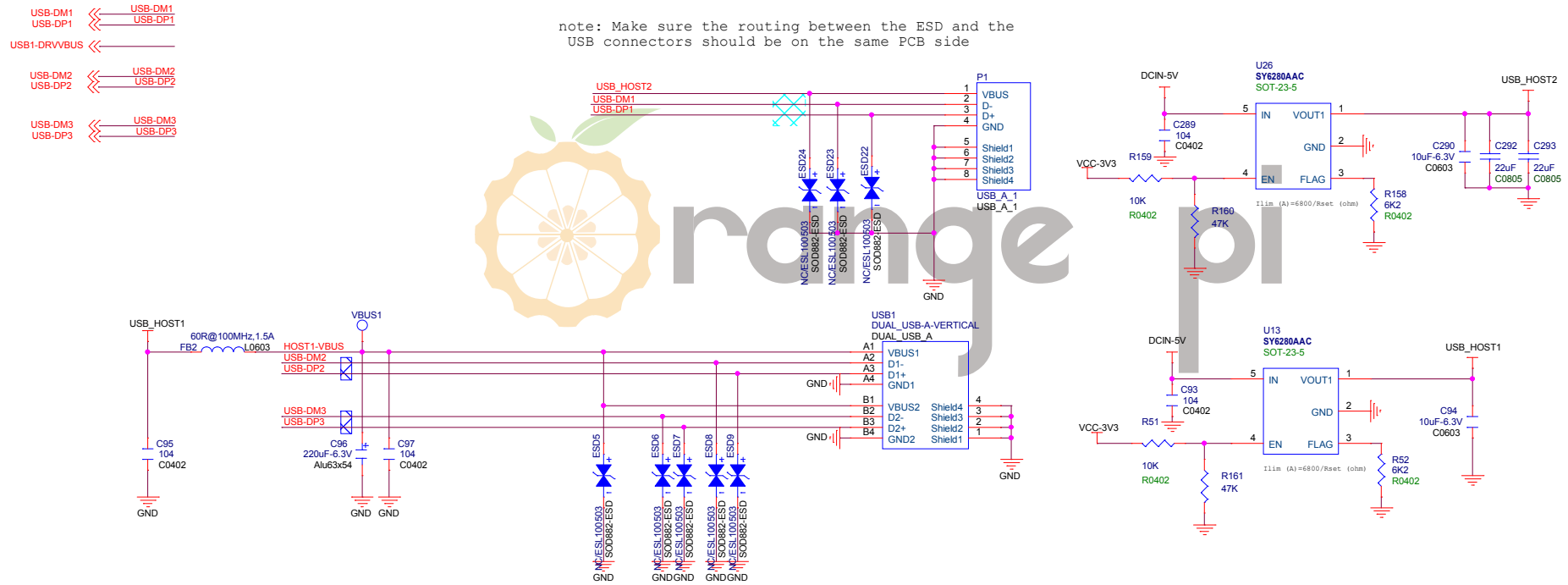


Xunlong Software		
Design Name: Orange Pi Plus 2E		
Size: A3	Page Name: TF-eMMC	Rev
Date: Friday, April 15, 2016	Sheet 8 of 16	

USB

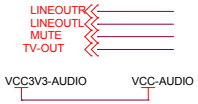


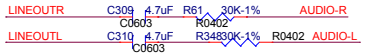
I=6800/Rset=680mA

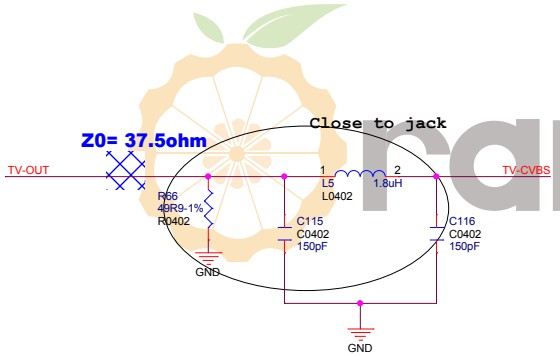


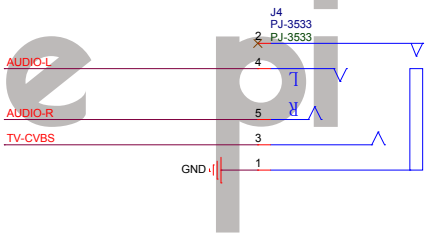
Xunlong Software			
Design Name: Orange Pi Plus 2E			
Size: A3	Page Name: USB		Rev
Date: Friday, April 15, 2016	Sheet 9 of 16		

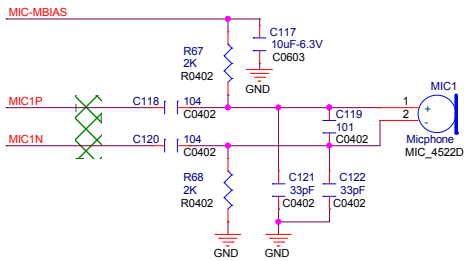
AV-MIC





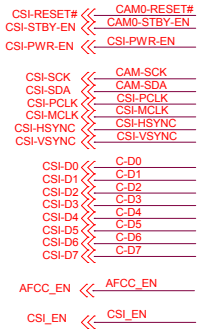


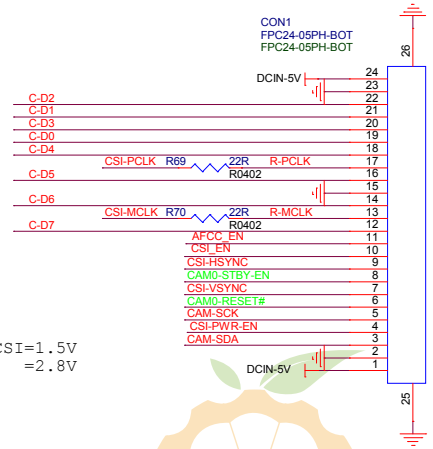




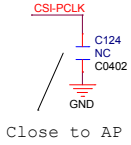
	Xunlong Software	
	Design Name: Orange Pi Plus 2E	
Size: A3	Page Name: AV-MIC	Rev
Date: Friday, April 15, 2016	Sheet 10 of 16	

Camera

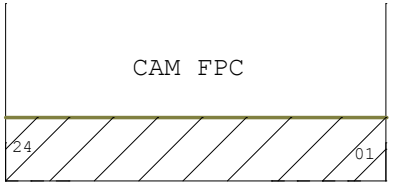


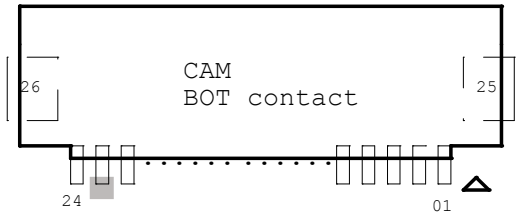


VDD1V5-CSI=1.5V
VCC-CSI =2.8V



Close to AP

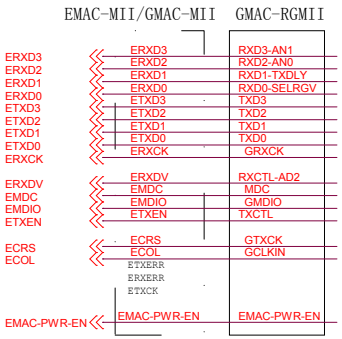


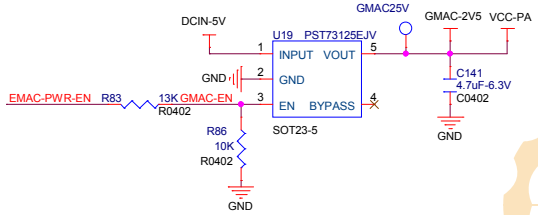


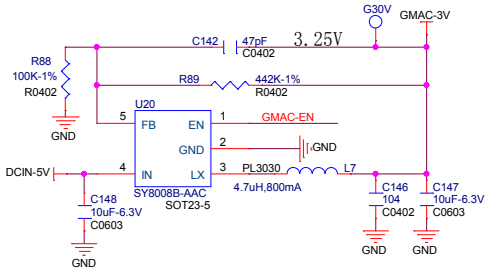
Xunlong Software		
Design Name: Orange Pi Plus 2E		
Size: A3	Page Name: CSI	Rev
Date: Friday, April 15, 2016	Sheet 11 of 16	

GMAC

10/100/1000 RGMII Ethernet PHY

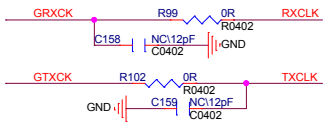


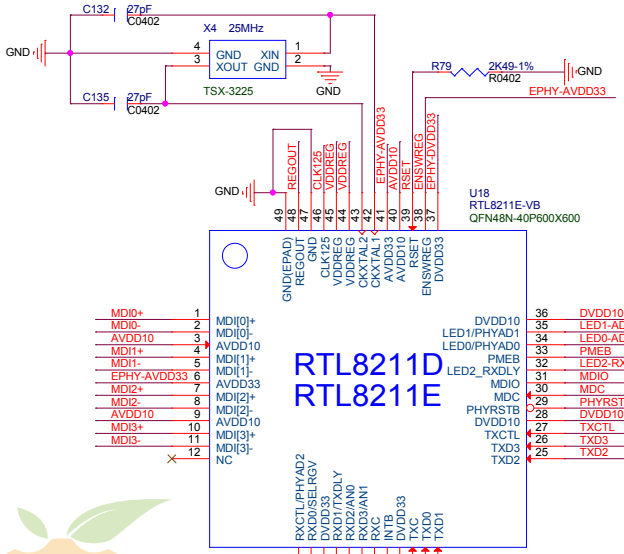


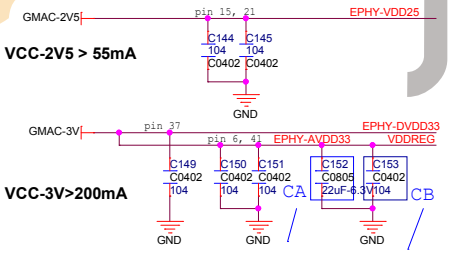


Place filter network close to CLK125.
Reserved for EMI

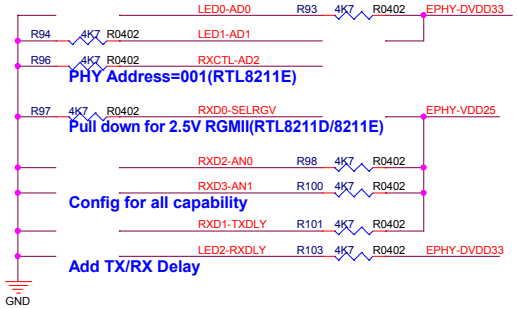
Place filter network close to RX_CLK.
Reserved for EMI



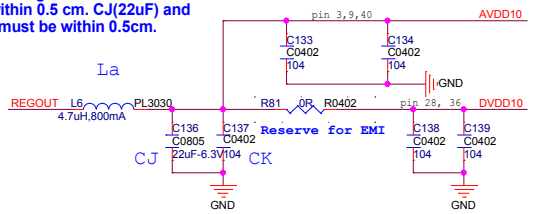


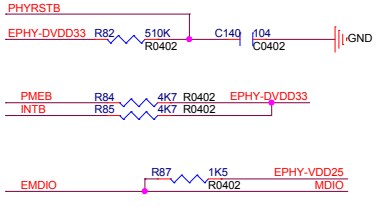


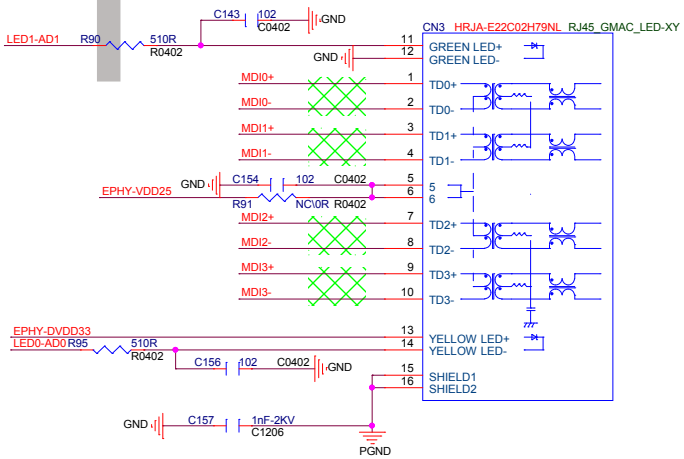
Note 2: The Trace length from CA(22uF),CB(0.1uF) to Pin 44,45(VDDREG) must bewithin 0.5 cm. The trace width from AVDD33 to Pin 44,45 should>40mils.



Note 1: The Trace length between La and PHY's Pin48 must be within 0.5 cm. CJ(22uF) and CK(0.1uF) to La must be within 0.5cm.



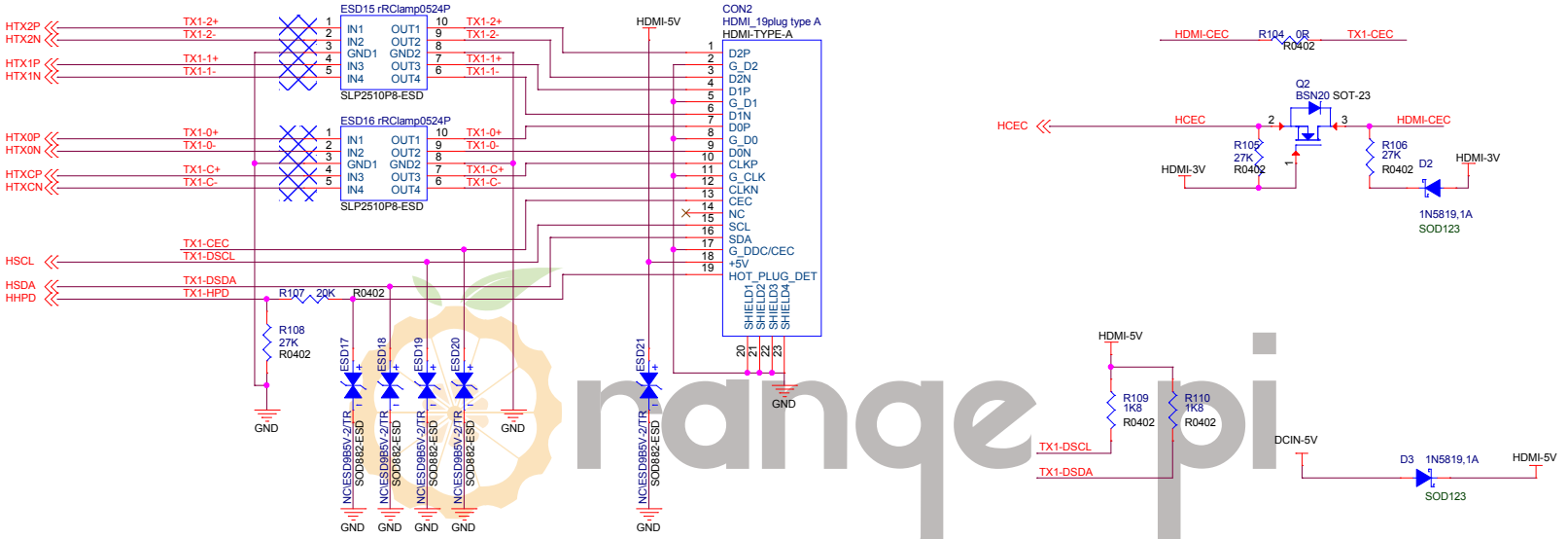




LED0:Blinking=Transmitting or Receiving.
LED1:Link Up/Down

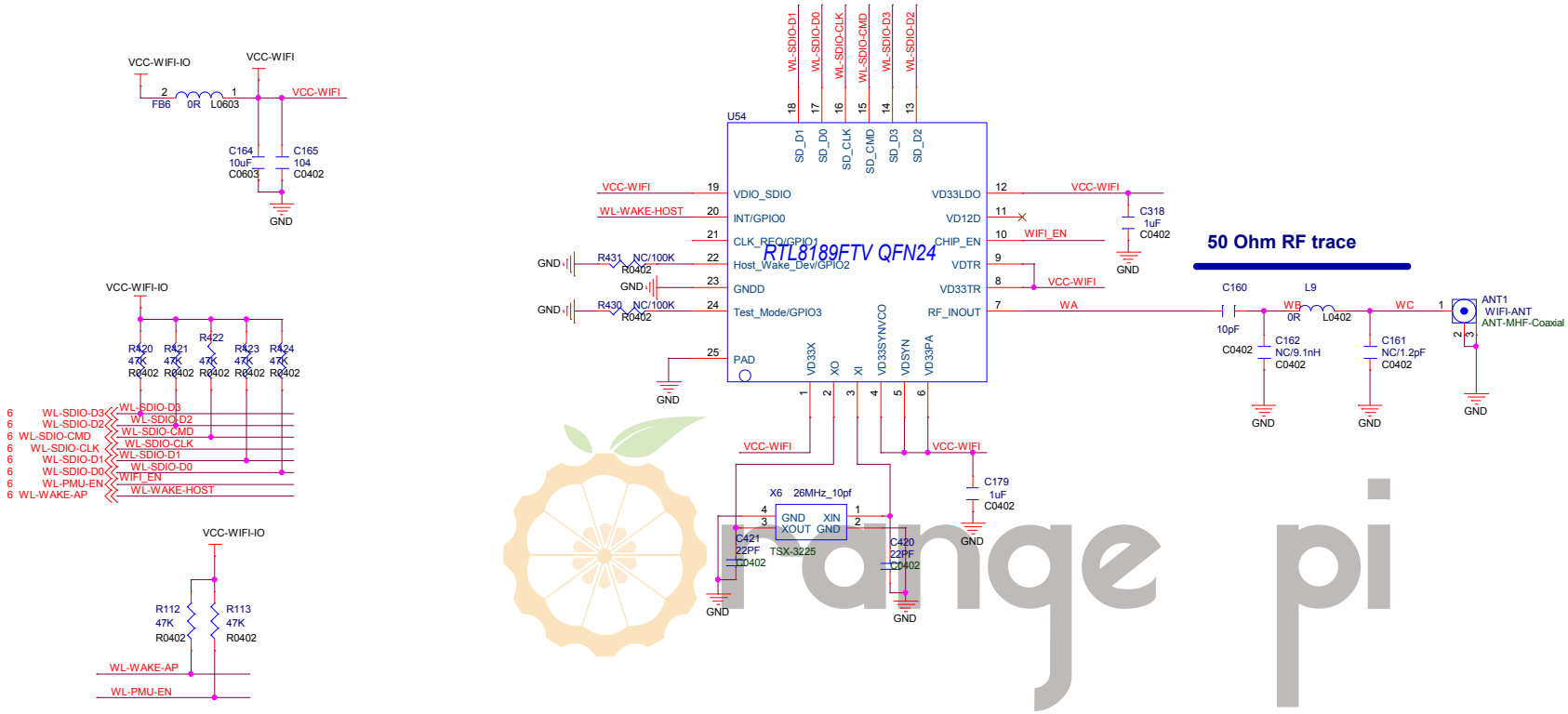
Xunlong Software		
Design Name: Orange Pi Plus 2E		
Size: A3	Page Name: GMAC	Rev
Date: Friday, April 15, 2016	Sheet 12 of 16	

HDMI



Xunlong Software		
Design Name: Orange Pi Plus 2E		
Size: A3	Page Name: HDMI	Rev
Date: Friday, April 15, 2016	Sheet 13 of 16	

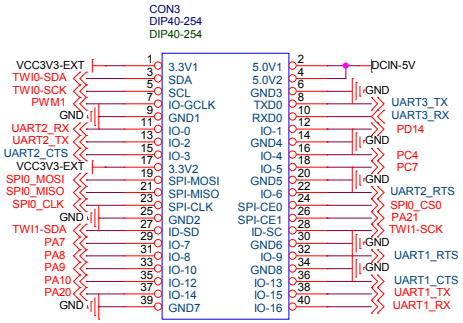
WIFI

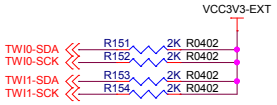


Xunlong Software		
Design Name: Orange Pi Plus 2E		
Size: A3	Page Name: WIFI	Rev
Date: Friday, April 15, 2016	Sheet 14 of 16	

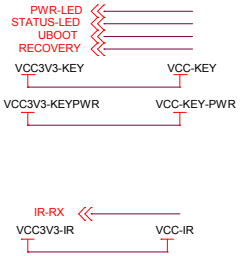
Ext Port

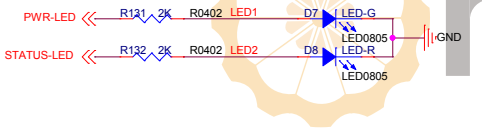
Ext



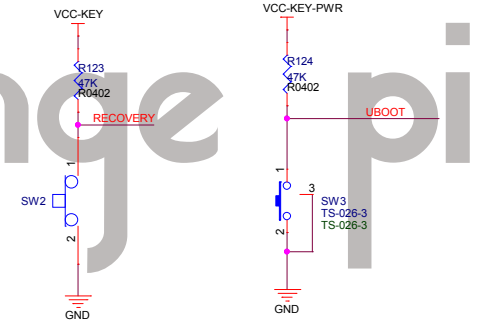


LED

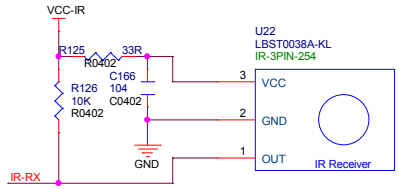




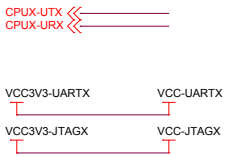
KEY

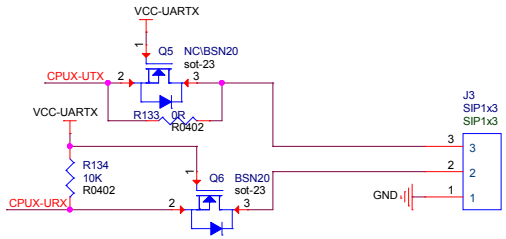


IR



DEBUG





	Xunlong Software	
Design Name	Orange Pi Plus 2E	
Size A3	Page Name EXTPORT	Rev
Date: Friday, April 15, 2016	Sheet 15 of 16	

USB-SATA

Xunlong Software		
Design Name: Orange Pi Plus 2E		
Size: A3	Page Name: FE-DBG	Rev
Date: Friday, April 15, 2016	Sheet 16 of 16	