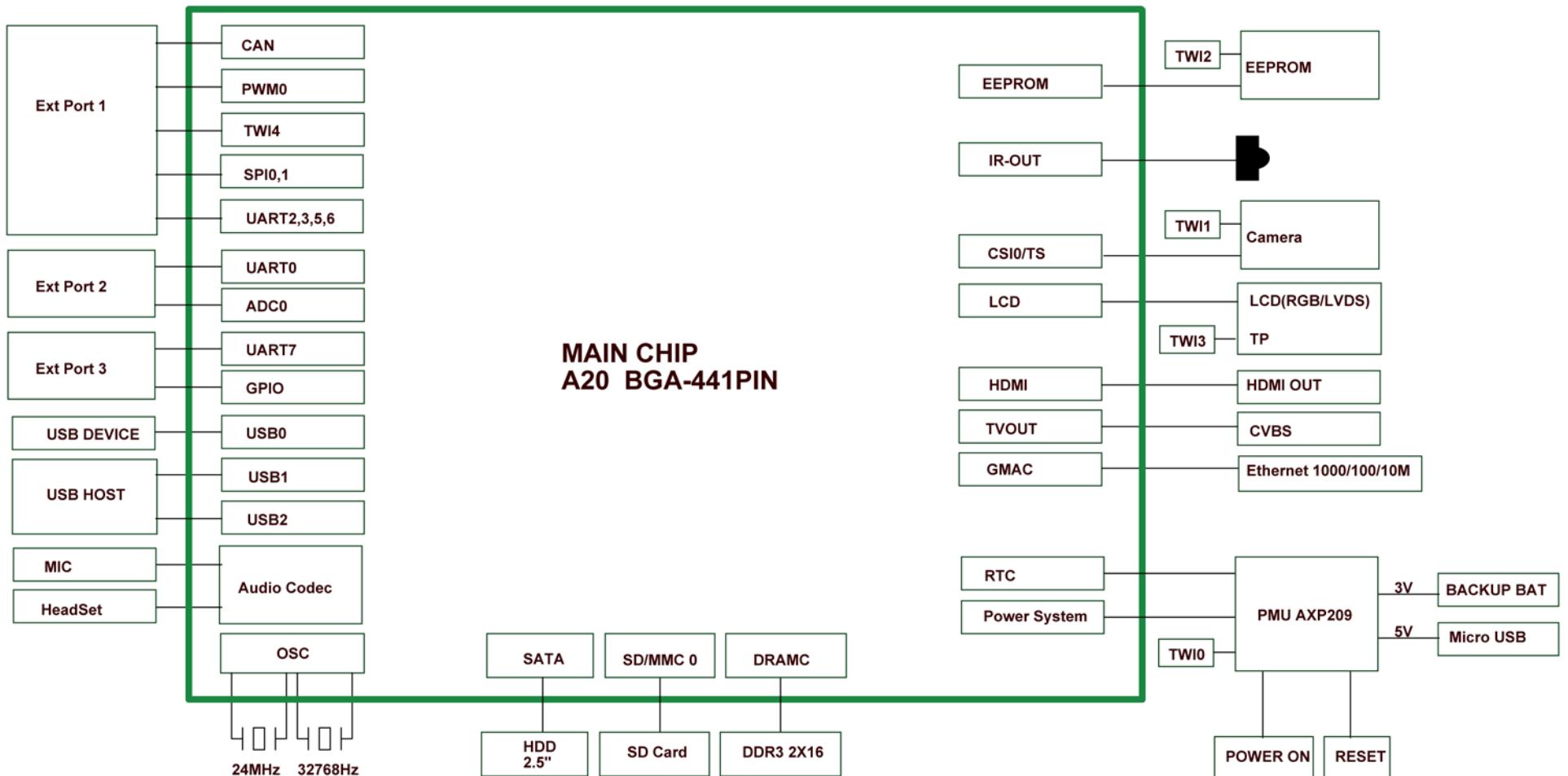


BLOCK



Differential pairs
 $Z_0 = 100\text{ohm} \pm 5 \text{ ohm}$



Differential pairs
 $Z_0 = 90 \text{ ohm} \pm 5 \text{ ohm}$

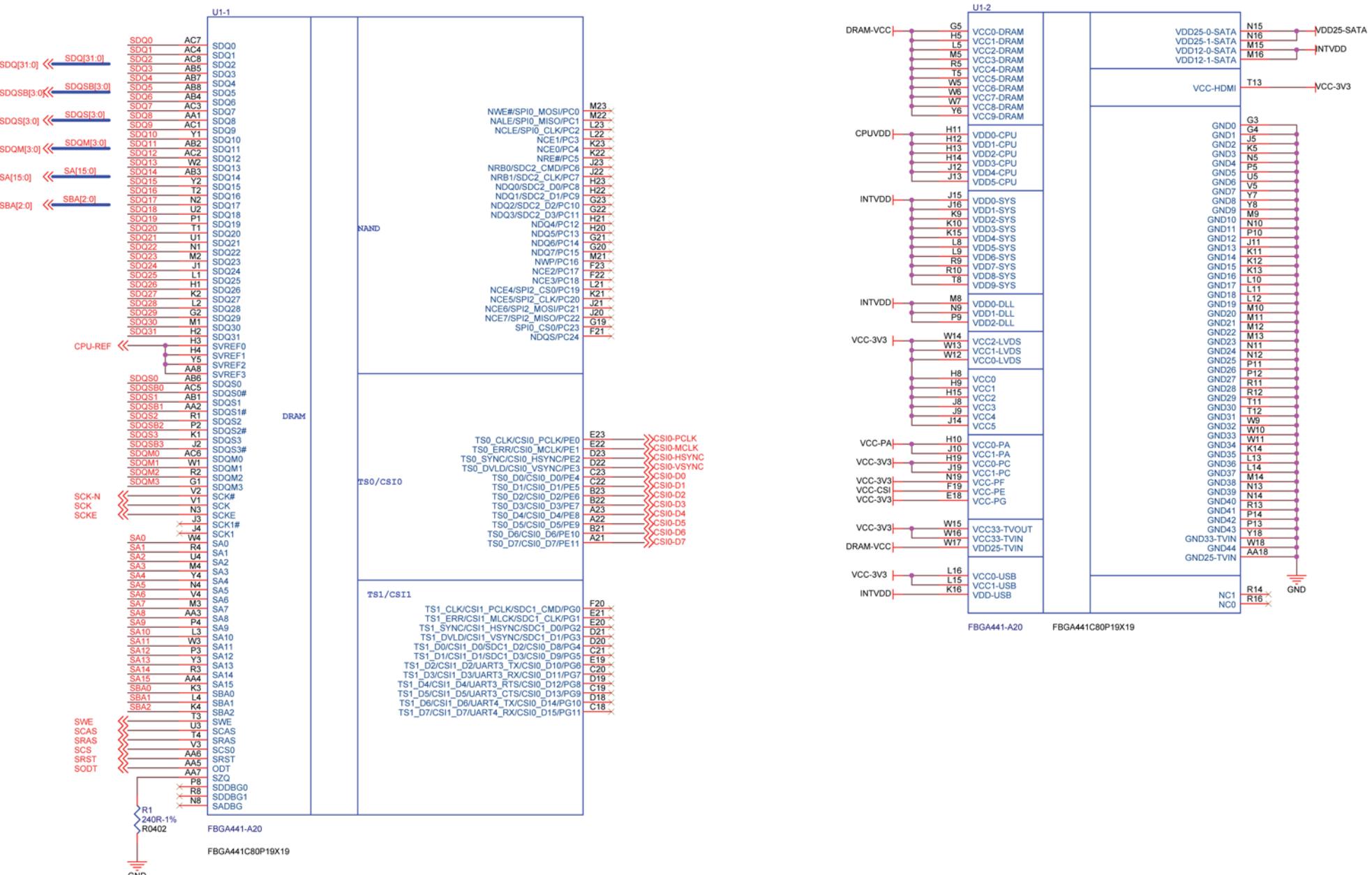


$Z_0 = 50\text{ohm} \pm 5 \text{ ohm}$

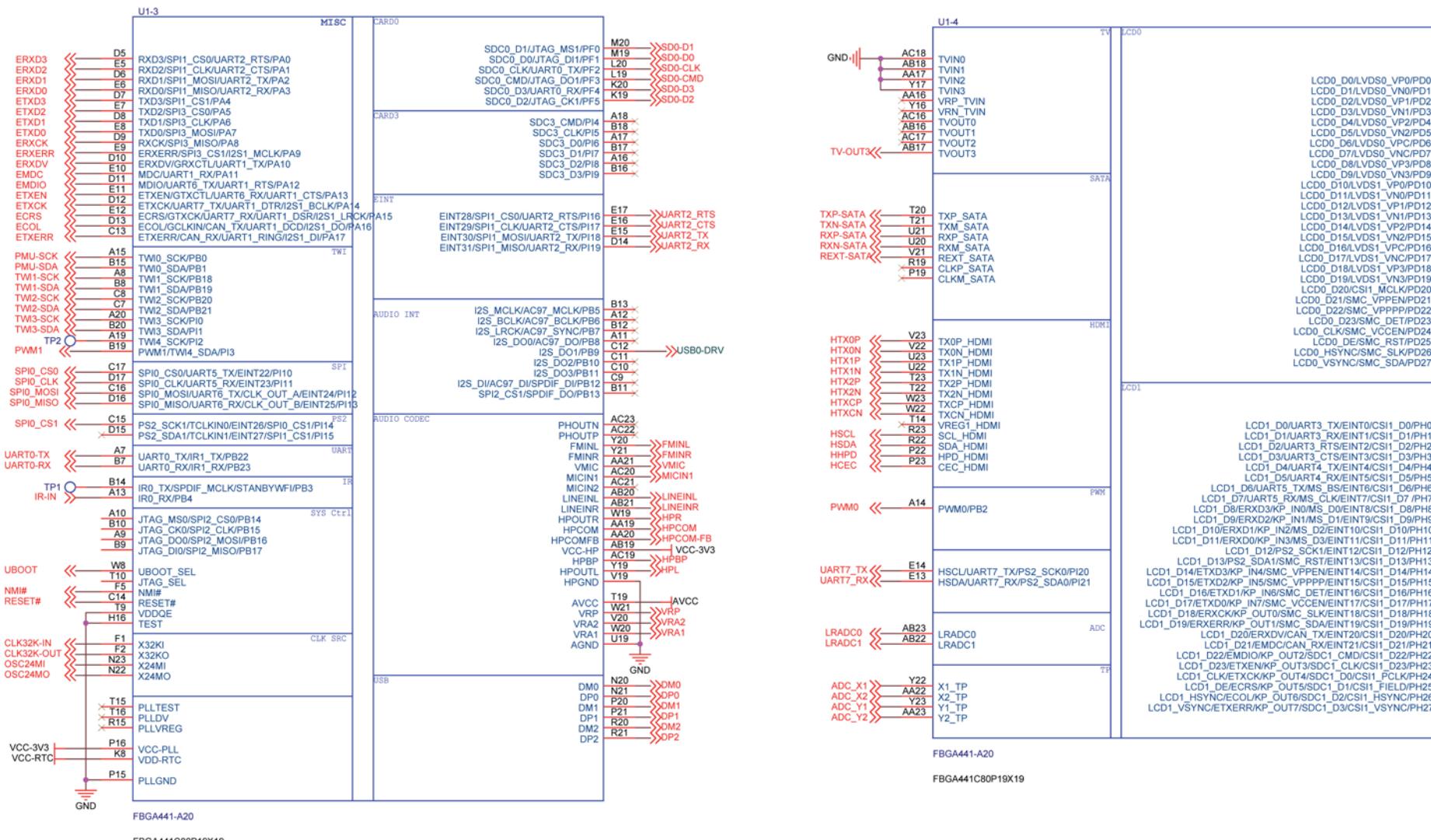


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Design Name A20_Banana_Pi			
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CPU1

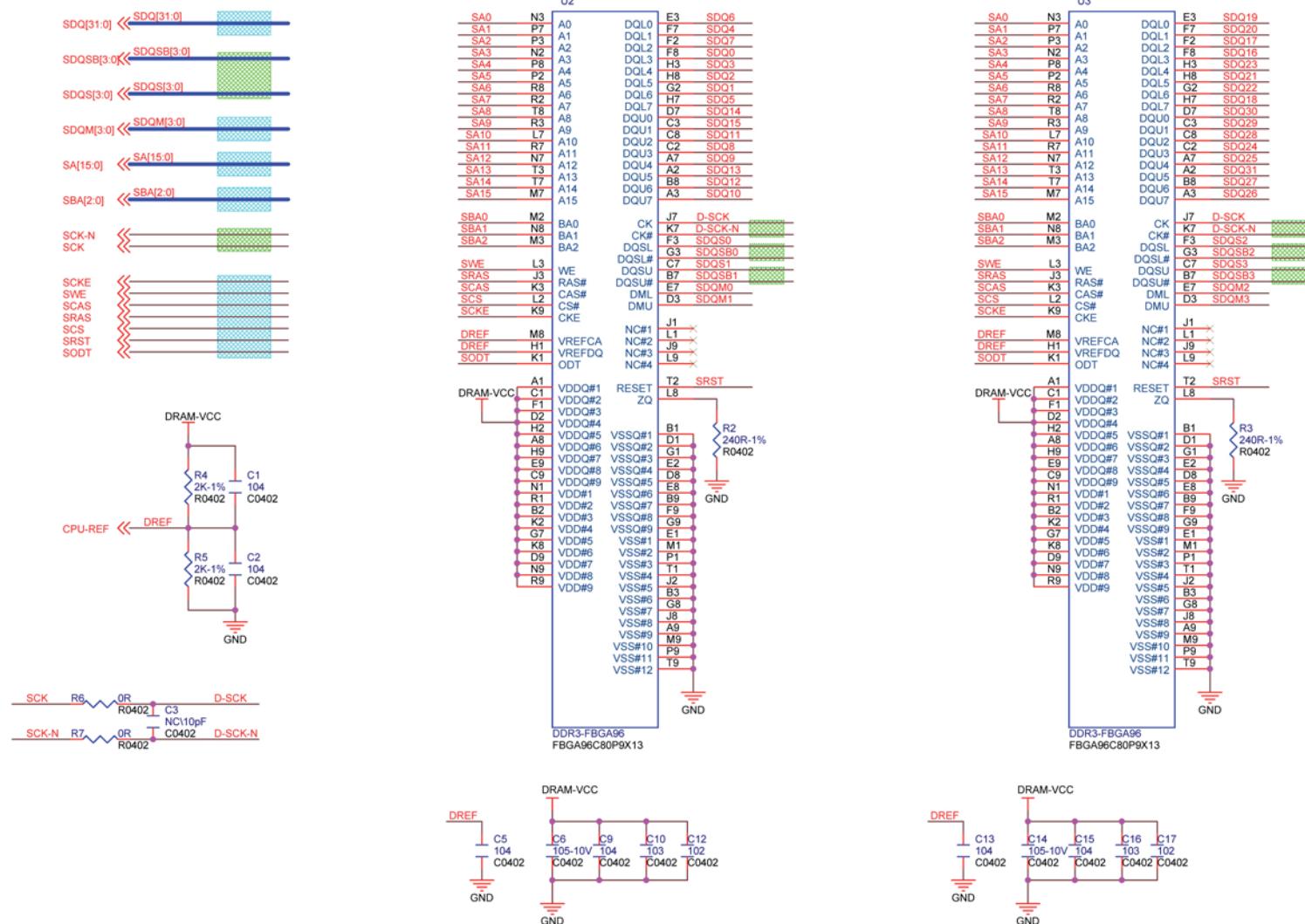


CPU2



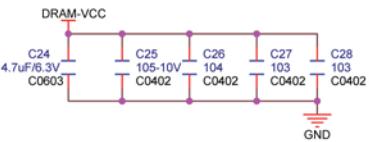
	ALLNET GmbH Computersysteme		
Design Name			
A20_Banana_Pi			
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DDR3-16BITX2



BESIDE CPU

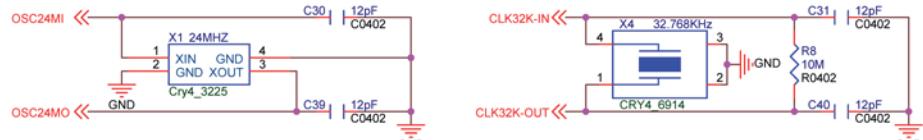
DRAM



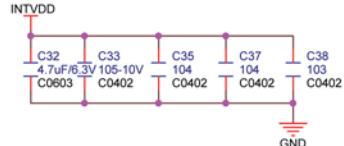
PLL



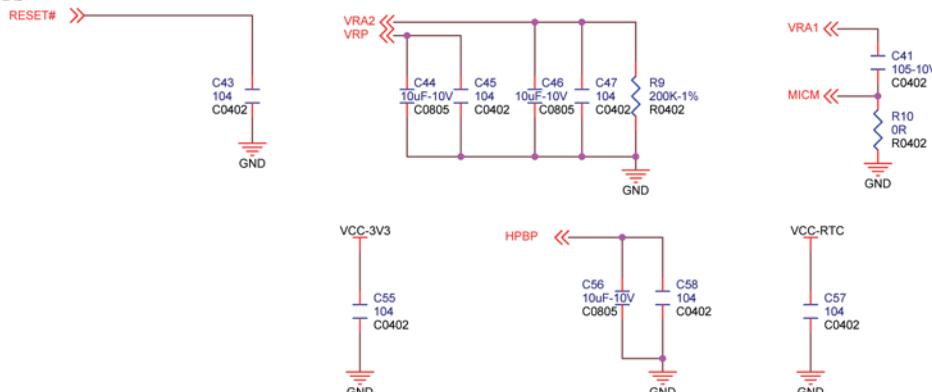
Crystal



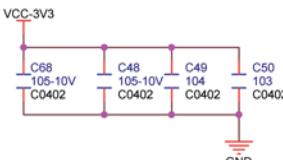
CORE



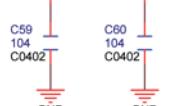
AUDIO&SYS



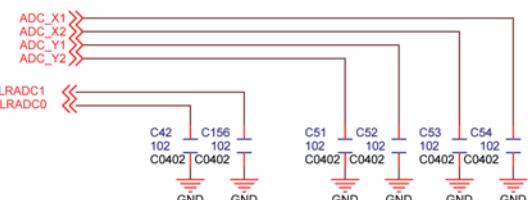
PIO-INTERFACE



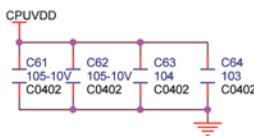
USB



ADC



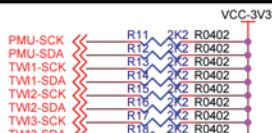
CPU&TV



SATA



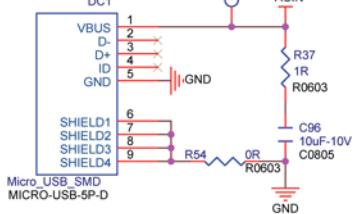
TWI-PULLUP



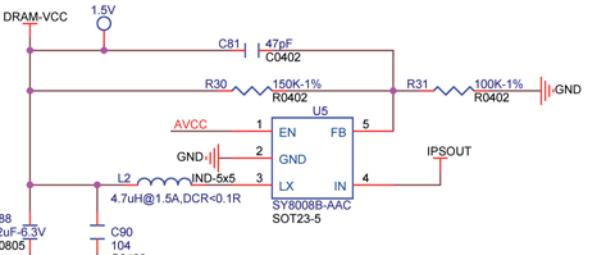
ALLNET GmbH Computersysteme			
Design Name			
A20_Banana_Pi			
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A3	BESIDE CPU	Rev 1.4	
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Power

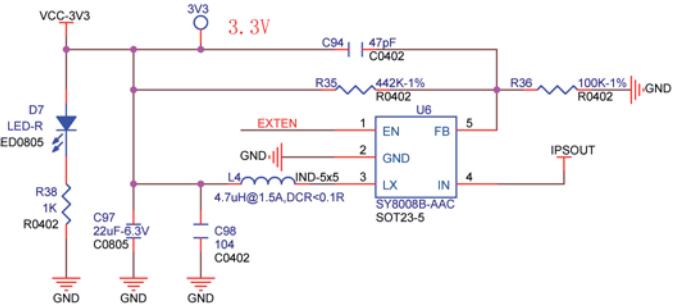
DC-IN



DRAM-VCC

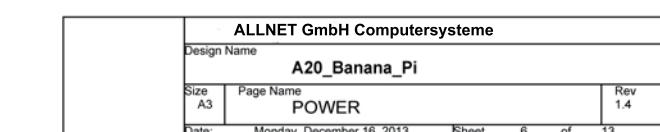
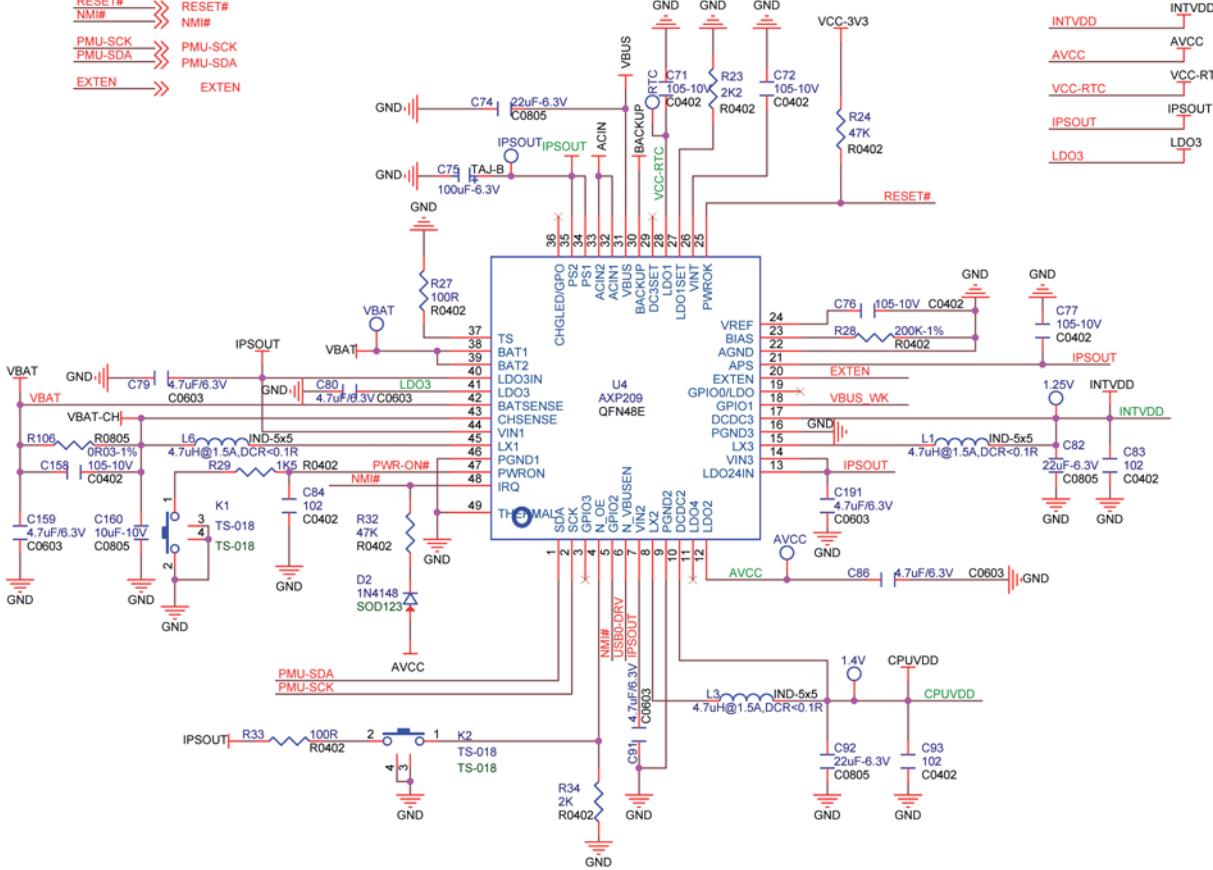


VCC-3V3

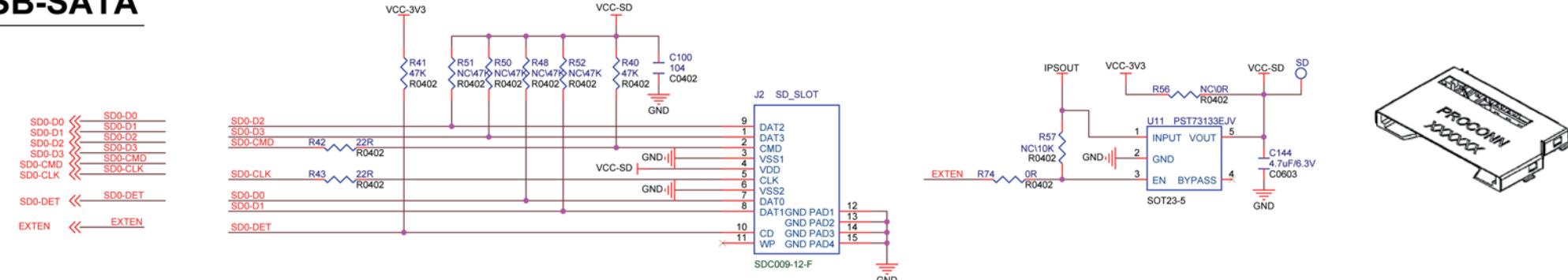


PMU-AXP209

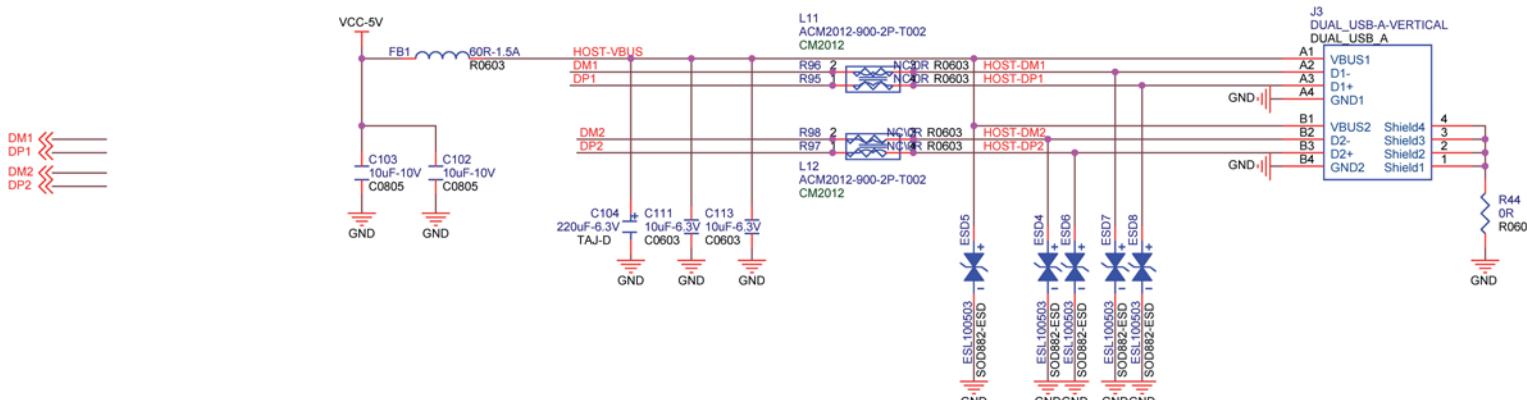
VBUS_WK	→→→	VBUS_WK
USB0-DRV	→→→	USB0-DRV
RESET#	→→→	RESET#
NMI#	→→→	NMI#
PMU-SCK	→→→	PMU-SCK
PMU-SDA	→→→	PMU-SDA
EXTEN	→→→	EXTEN



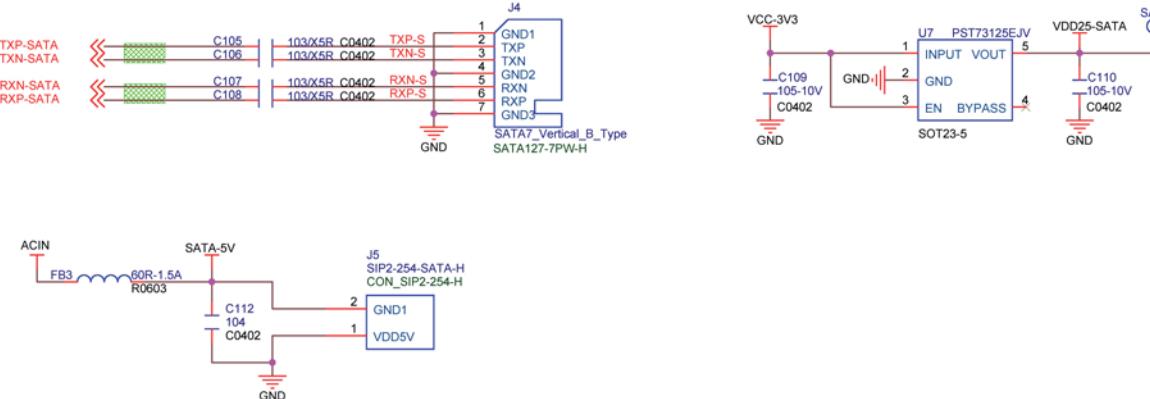
SD-USB-SATA



USB HOST



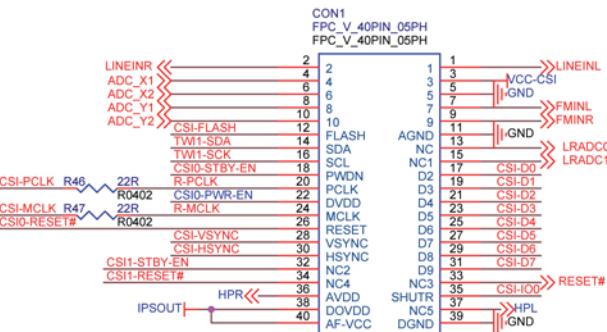
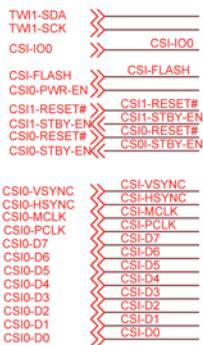
SATA



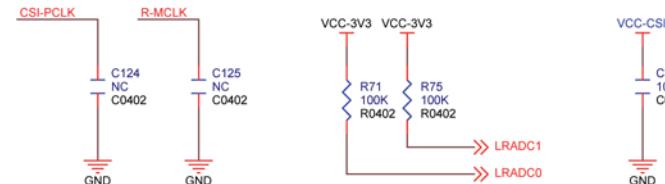
	ALLNET GmbH Computersysteme		
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CSI-HDMI

CSI

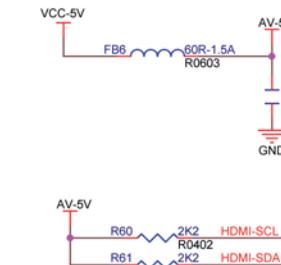
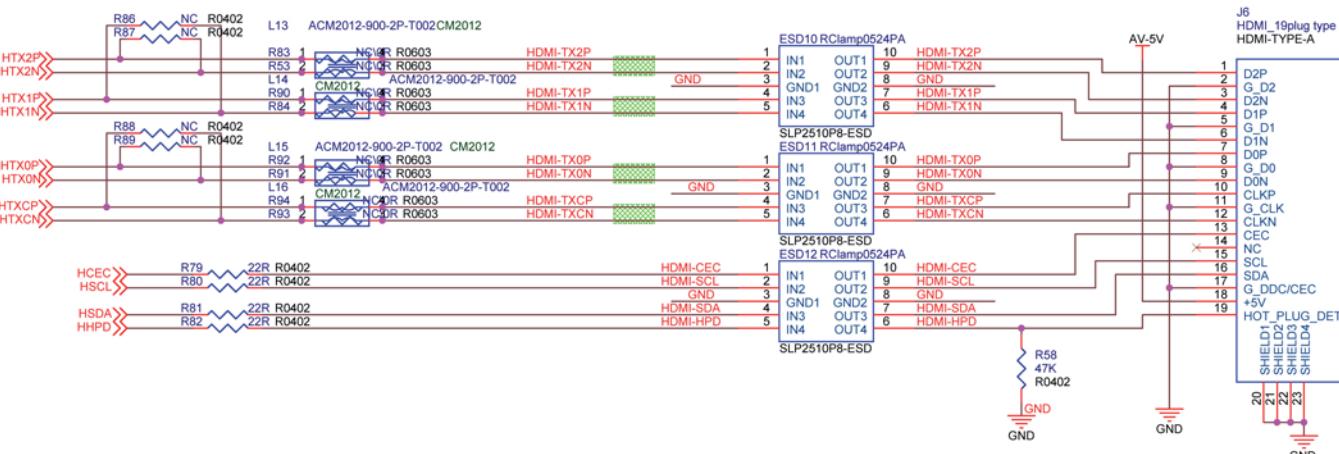


VCC-CSI为电源输入脚，给A20的PIN:F19供电
需与摄像头的IO 供电电压保持一致



CSI-RESET和CSI-STBY如需要上拉，在子板上增加

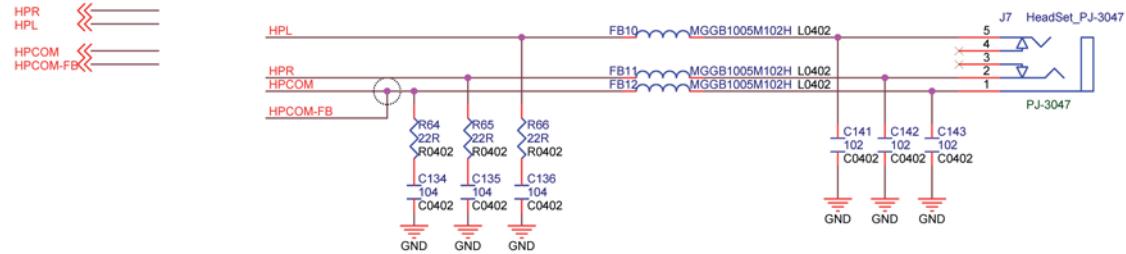
HDMI



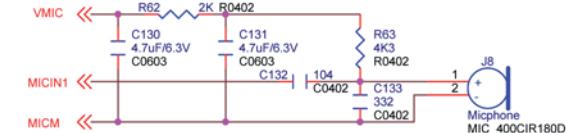
	ALLNET GmbH Computersysteme		
Design Name			
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AUDIO-LCD-EEPROM

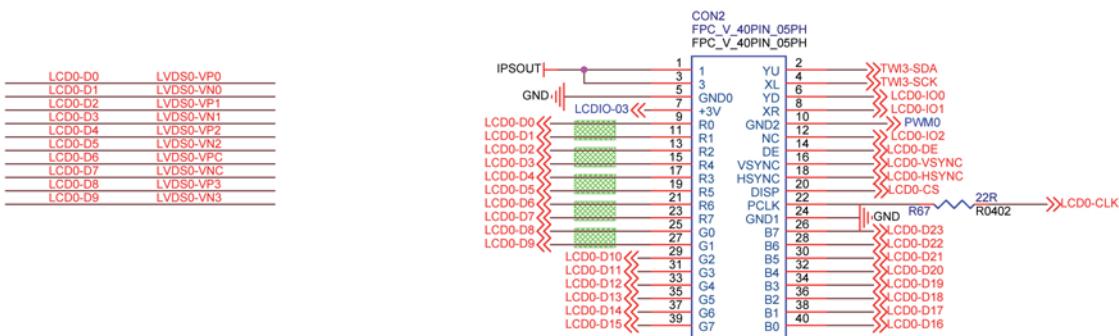
HeadSet



Microphone



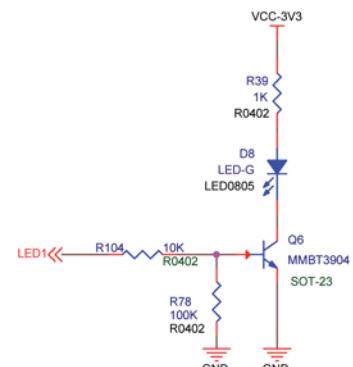
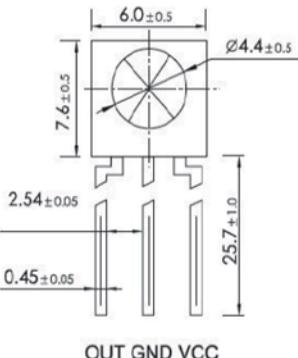
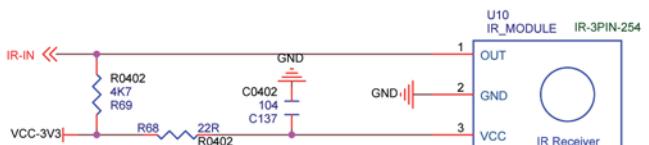
LCD



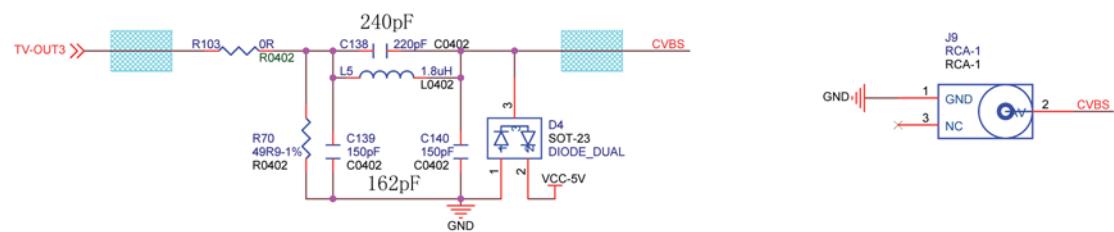
	ALLNET GmbH Computersysteme	
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	AUDIO-LCD-EEPROM	
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IR-CVBS-ExtPort

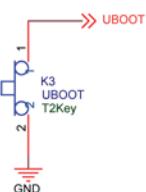
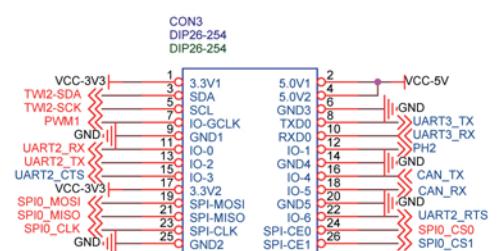
IR MODULE



CVBS



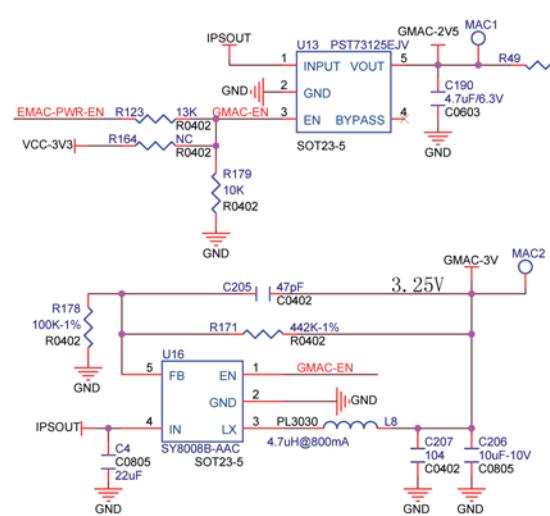
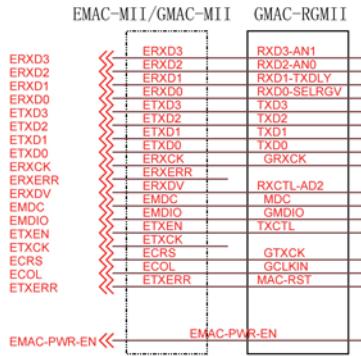
Ext Port



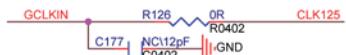
ALLNET GmbH Computersysteme		
Design Name		Rev
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Size	Page Name	
A3	IR-CVBS-ExtPort	Rev 1.4
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GMAC

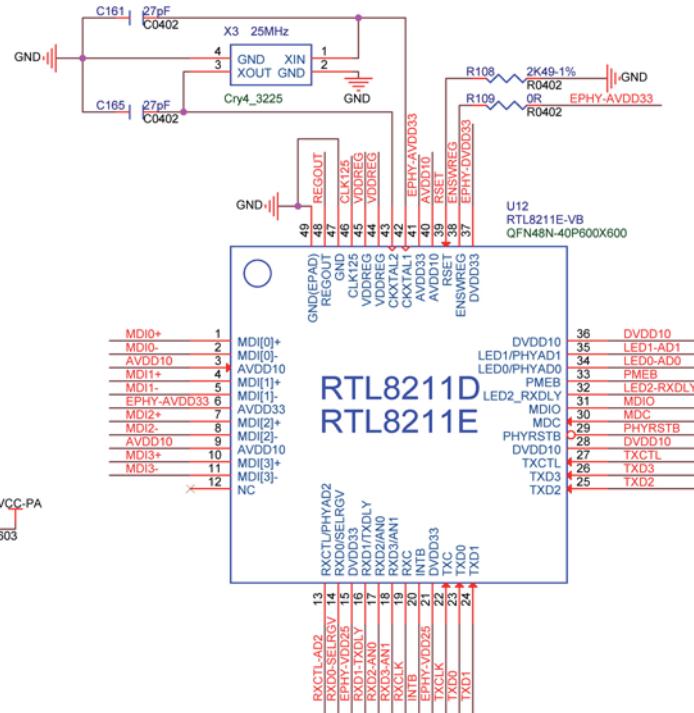
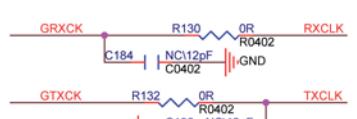
10/100/1000 RGMII Ethernet PHY



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 be within 0.5 cm. The trace width from AVDD33 to Pin 44,45 should >40mils.

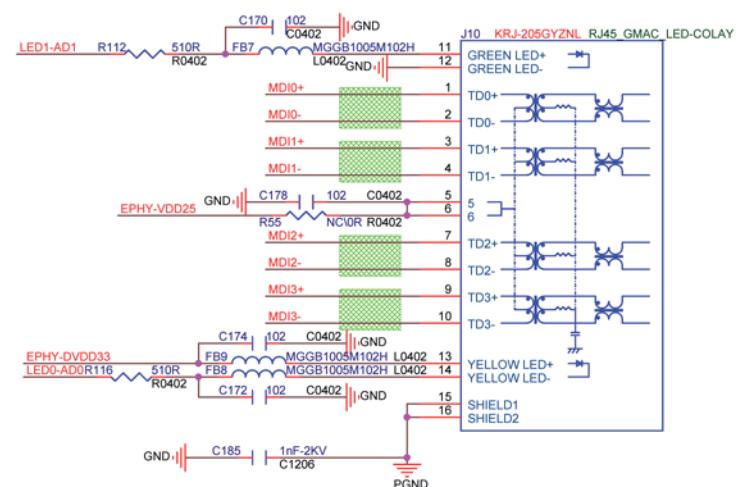
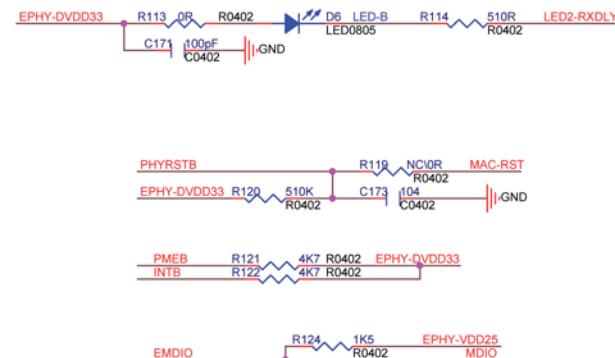
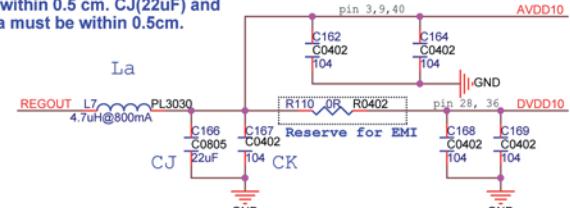


Pull down for 2.5V RGMII(RTL8211D/8211E)

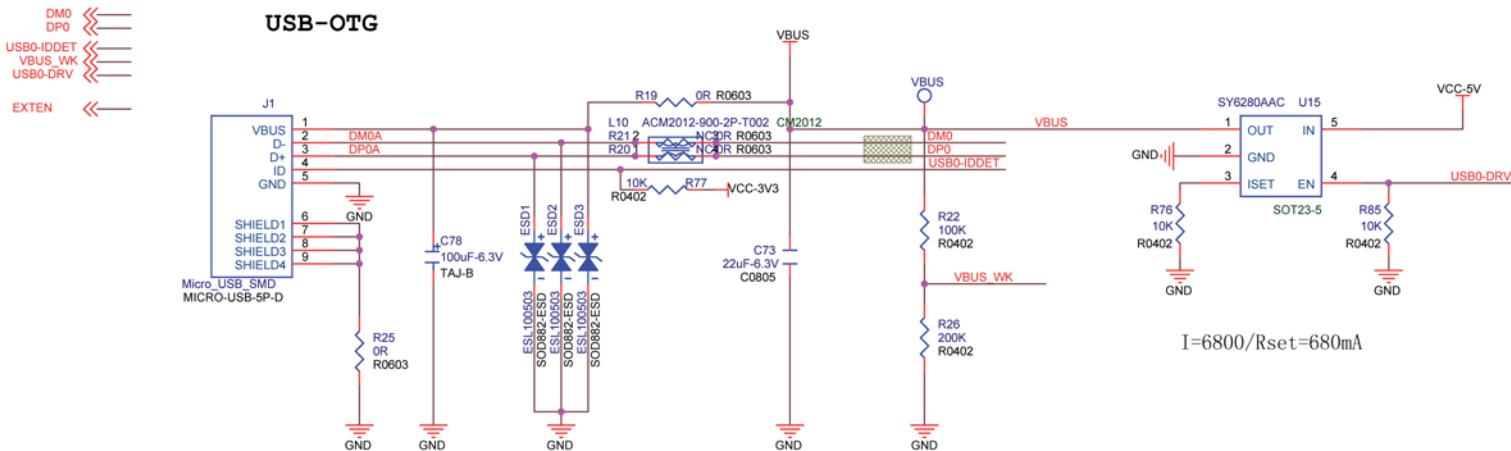
Config for all capability

Add TX/RX Delay

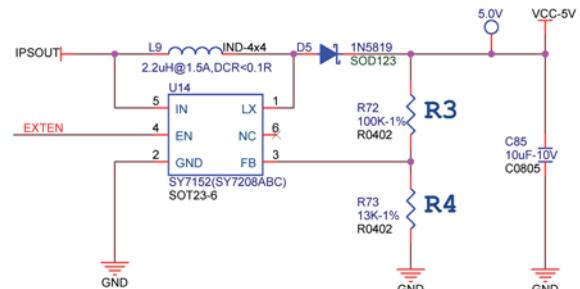
Note 1: The Trace length between La and PHY's Pin48 must be within 0.5 cm, CJ(22uF) and CK(0.1uF) to La must be within 0.5cm.



USB_OTG



VCC-5V



$$V_{out} = 0.6 * (1 + R3/R4)$$

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A20	PIN	Use	Not use
HDMI	T13	VCC-3V3	VCC-3V3
SATA 2.5V	N15, N16	2.5V	DRAM-VCC(1.5V)
CSI0	F19 (VCC-PE)	VCC-2.8	VCC-2.8
CSI1	E18 (VCC-PG)	VCC-2.8	VCC-3V3
TVIN 2.5V	W17	2.5V	DRAM-VCC(1.5V)
TVIN 3.3V	W16	VCC-3V3	VCC-3V3
TVOUT 3.3V	W15	VCC-3V3	VCC-3V3
LVDS IO	W12, W13, W14	VCC-3V3	VCC-3V3
EMAC IO	J10, H10 (VCC-PA)	3.0V/2.5V	VCC-3V3
NAND IO	J19, H19 (VCC-PC)	VCC-3V3	VCC-3V3
SD IO	N19 (VCC-PF)	VCC-3V3	VCC-3V3
USB VDD	K16	INTVDD(1.2V)	VCC-3V3
USB VCC	L15, L16	VCC-3V3	VCC-3V3

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