

Ultra Compact Linux System-On-Module Baseboard with LCD Support (UCL-SOM-BSB)

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Revision History

Rev	Date	Changes
1.00	2016-07-13	Initial release
2.00	2017-02-13	Replaced XF1 and XF2 with SMD fuse F1 Changed U3 and U5 to TPS2553 Changed R12 and R6 to 47K 1%

UCL-SOM-BSB Structure



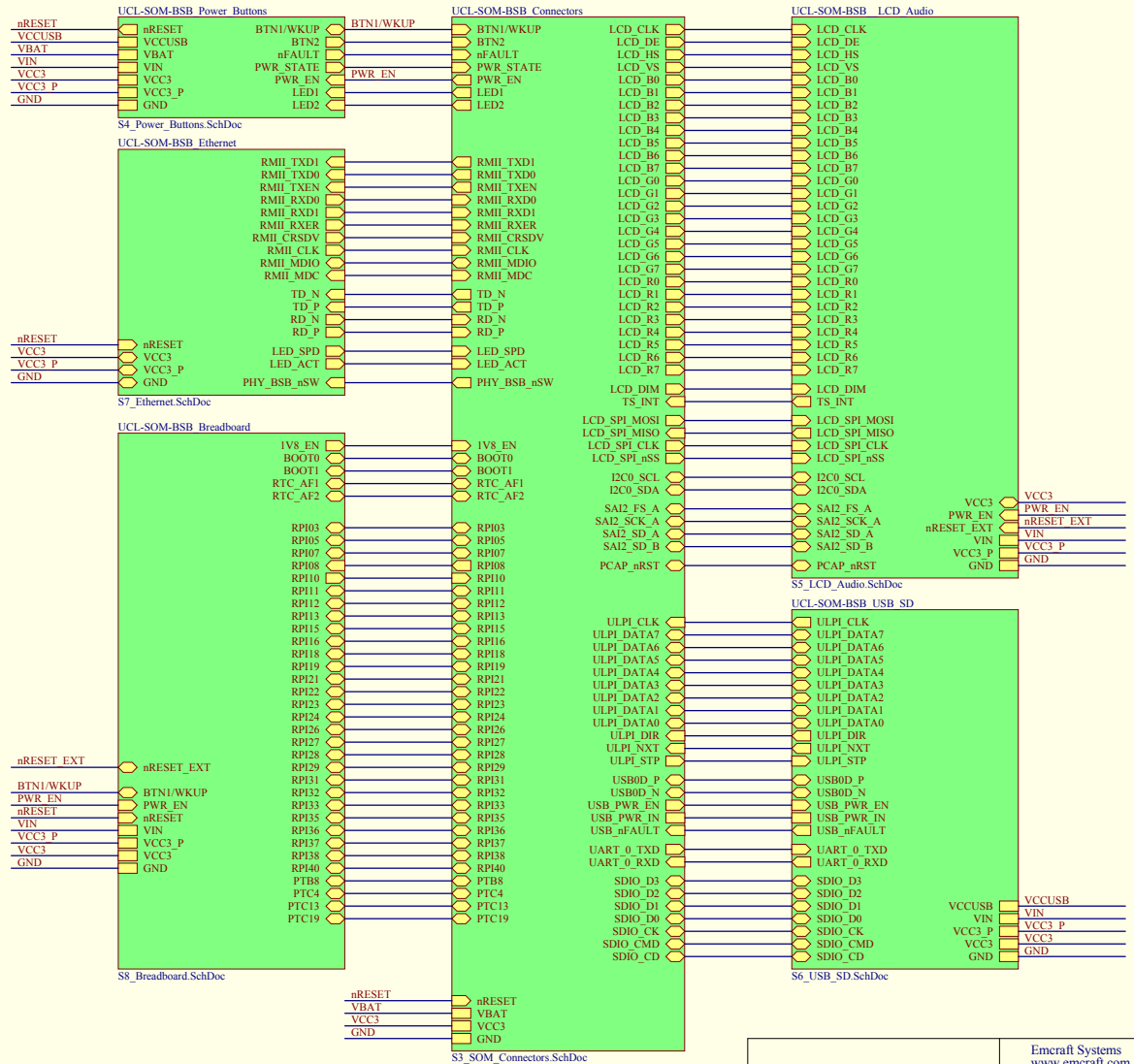
S2_Structure.SchDoc



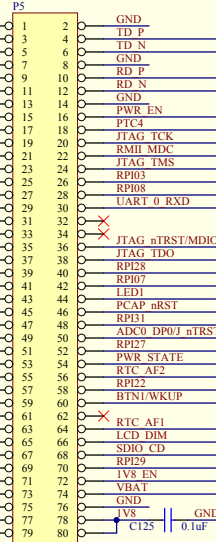
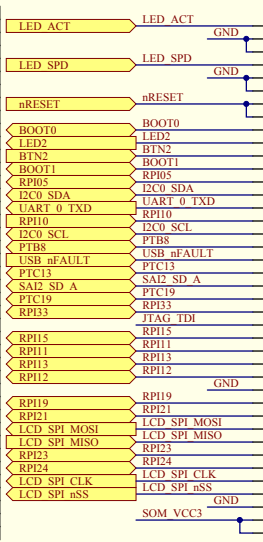
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UCL-SOM-BSB - Front Page

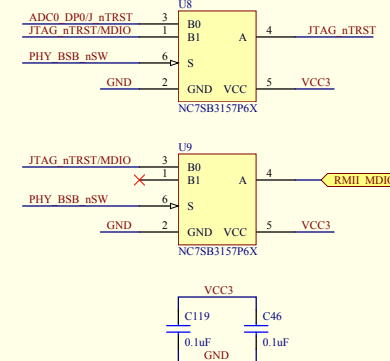
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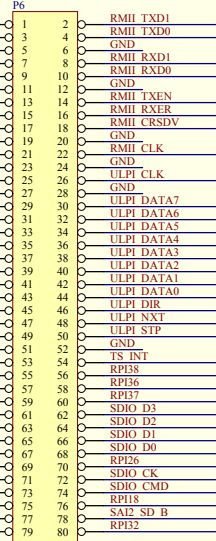
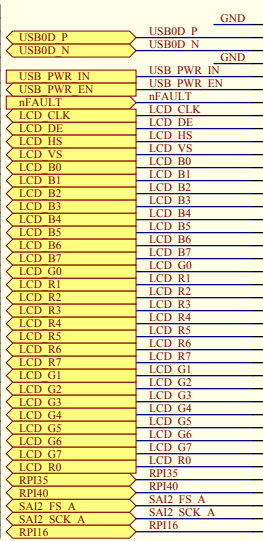
K70-SOM	STM-SOM	STM32F7-SOM	SHEET
GND	GND	GND	Sheet 7
GND	GND	GND	Sheet 7
GND	GND	GND	Sheet 7
nRESET	nRESET	nRESET	Sheet 4
nRESET	nRESET	nRESET	Sheet 4
PTA4	NC	BOOT0	Sheet 8
PTB18	PD7	PH13	Sheet 4
PTB19	PA8	PT2	Sheet 8
PTA19	PB2	PB2	Sheet 8
PTB2	NC	PH11	Sheet 8
PTB18	PD7	PH13	Sheet 4
PTB16	PD6	PH10	Sheet 4
PTC14	NC	PG12	Sheet 6
PTB19	PD8	PH14	Sheet 4
PTB8	NC	NC	Sheet 8
PTC12	NC	PG12	Sheet 6
PTC13	NC	NC	Sheet 8
PTD10	NC	P16	Sheet 5
PTC19	NC	NC	Sheet 8
PTD0	NC	NC	Sheet 8
JTAG_TDI	JTAG_TDI	JTAG_TDI	
ADC1_DP0	NC	PD6	Sheet 8
ADC1_DM0	PF8	PF8	Sheet 8
ADC0_DP1	NC	PT2	Sheet 8
ADC0_DM1	PF9	NC	Sheet 8
GND	GND	GND	
PTB16	NC	PF9	Sheet 8
PTB17	NC	PH7	Sheet 8
PTB22	PB15	PH5	Sheet 5
PTB23	PB14	PH4	Sheet 5
PTB11	PH6	PF7	Sheet 8
PTB10	NC	PF6	Sheet 8
PTB21	PT11	P11	Sheet 5
PTB20	PD9	PD9	Sheet 5
GND	GND	GND	
3V3	3V3	3V3	
3V3	3V3	3V3	



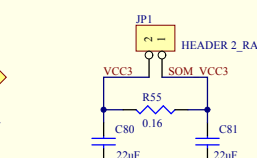
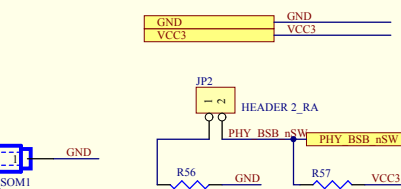
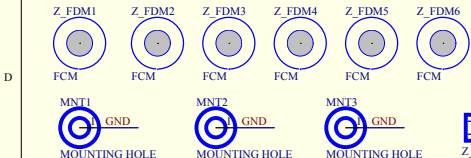
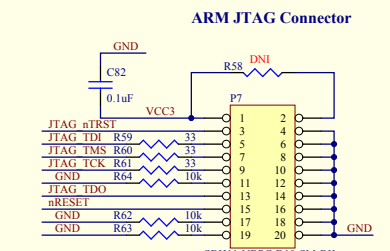
K70-SOM	STM-SOM	STM32F7-SOM	SHEET
GND	GND	GND	Sheet 7
GND	GND	GND	Sheet 7
GND	GND	GND	Sheet 7
GND	GND	GND	Sheet 7
PTC3	PC6	PF10	Sheet 4,5
PTC4	NC	NC	Sheet 8
PTB1	PC1	PC1	Sheet 7
JTAG_TMS	JTAG_TMS	JTAG_TMS	
PTB3	PH12	PH12	Sheet 8
PTC15	PF7	PC6	Sheet 8
RRE17MDIO	PA10	PA10	Sheet 6
PTB9	NC	NC	
PTD7	NC	NC	
PTB0	PA2	PA2	Sheet 7
JTAG_TDO	JTAG_TDO	JTAG_TDO	
DAC0_OUT	PA4	PA4	Sheet 8
DAC1_OUT	NC	PA8	Sheet 8
PTB5	PD3	PD3	
PTB6	NC	PH8	
PTB7	NC	PH9	Sheet 8
ADC1_DP0	JTAG nTRST	JTAG nTRST	
ADC1_DM0	NC	PH14	
PTC0	NC	PH6	
PTC1	RTC AF2	RTC AF2	Sheet 4
PTC2	NC	PH15	Sheet 8
PTC26	PA0	PA0	Sheet 4,8
ADC1_DP1	NC	NC	
PTC27	RTC AF1	RTC AF1	Sheet 8
PTD6	NC	PT0	Sheet 5
PTC28	PT3	PT3	Sheet 6
ADC1_SE16	PA6	PA6	Sheet 8
IV8_EN	NC	NC	Sheet 8
VBAT	VBAT	VBAT	Sheet 4
GND	GND	GND	
1V8	NC	NC	
1V8	NC	NC	



K70-SOM	STM-SOM	STM32F7-SOM	SHEET
GND	GND	GND	Sheet 6
USB0_DP	PA12	PA12	Sheet 6
USB0_DM	PA11	PA11	Sheet 6
GND	GND	GND	
VREGIN	PA9	PA9	Sheet 6
PTC18	PD6	PH10	Sheet 6
PTB0	PD7	PH7	Sheet 4
PTF1	PF10	PK7	Sheet 5
PTF2	PT10	PT12	Sheet 5
PTF3	PT9	PT13	Sheet 5
PTF4	GND	PJ12	Sheet 5
PTF5	PG12	PJ13	Sheet 5
PTF6	PG10	PJ14	Sheet 5
PTF7	GND	PJ15	Sheet 5
PTF8	PT4	PK3	Sheet 5
PTF9	PT5	PK4	Sheet 5
PTF10	PT6	PK5	Sheet 5
PTF11	PT7	PK6	Sheet 5
PTF12	GND	PJ7	Sheet 5
PTF21	PH3	PJ0	Sheet 5
PTF22	PH8	PJ1	Sheet 5
PTF23	PH9	PJ2	Sheet 5
PTF24	PH10	PJ3	Sheet 5
PTF25	PH11	PJ4	Sheet 5
PTF26	PH12	PJ5	Sheet 5
PTF27	PG6	PJ6	Sheet 5
PTF13	GND	PJ8	Sheet 5
PTF14	PH13	PJ9	Sheet 5
PTF15	PH14	PJ10	Sheet 5
PTF16	PH15	PJ11	Sheet 5
PTF17	PT0	PK0	Sheet 5
PTF18	PC7	PK1	Sheet 5
PTF19	PT2	PK2	Sheet 5
PTF20	PH2	PT15	Sheet 5
PTD2	NC	PH3	Sheet 8
PTD3	NC	NC	Sheet 8
PTD11	NC	P17	Sheet 5
PTD12	NC	P15	Sheet 5
PTD9	PE2	PH2	Sheet 8



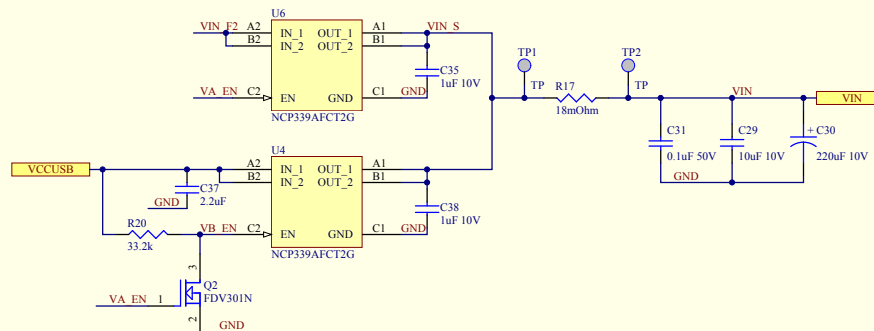
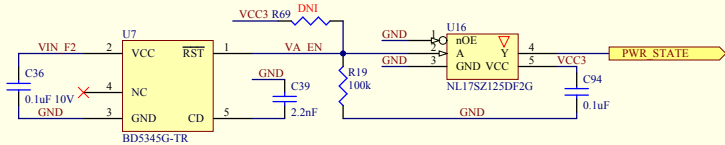
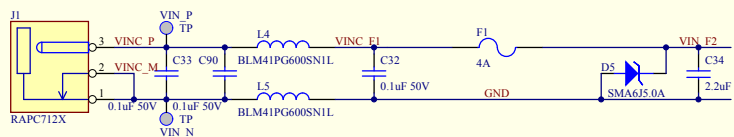
K70-SOM	STM-SOM	STM32F7-SOM	SHEET
PTA17	PG14	PG14	Sheet 7
PTA16	PG13	PG13	Sheet 7
GND	GND	GND	
PTA12	PC5	PC5	Sheet 7
PTA13	PC4	PC4	Sheet 7
GND	GND	GND	
PTA15	PG11	PG11	Sheet 7
PTA5	NC	NC	
PTA14	PA7	PA7	Sheet 7
GND	GND	GND	
PTA18	PA1	PA1	Sheet 7
GND	GND	GND	
PTA6	PA5	PA5	Sheet 7
PTA29	PB5	PB5	Sheet 6
PTA28	PB13	PB13	Sheet 6
PTA27	PB12	PB12	Sheet 6
PTA26	PB11	PB11	Sheet 6
PTA25	PB10	PB10	Sheet 6
PTA24	PB1	PB1	Sheet 6
PTA11	PB0	PB0	Sheet 6
PTA10	PA3	PA3	Sheet 6
PTA7	PT11	PT11	Sheet 6
PTA8	PH4	PH4	Sheet 6
PTA9	PC0	PC0	Sheet 6
GND	GND	GND	
PTD15	NC	PT10	Sheet 5
PTD14	NC	NC	Sheet 8
PTD13	NC	NC	Sheet 8
PTD12	NC	NC	Sheet 8
PTA4	PC11	PC11	Sheet 6
PTA5	PC10	PC10	Sheet 6
PTA0	PC9	PC9	Sheet 6
PTA1	PC8	PC8	Sheet 6
PTD11	NC	PE2	Sheet 8
PTA2	PC12	PC12	Sheet 6
PTA3	PD2	PD2	Sheet 6
PTA6	NC	PT4	Sheet 8
PTA7	NC	PG10	Sheet 5
PTA8	NC	PG9	Sheet 5



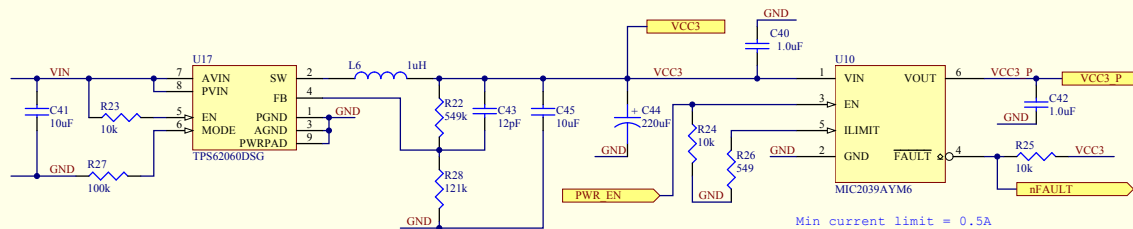
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10-9 B, Tulsakaya,
Suite 9505
Moscow,
115191, Russia

UCL-SOM-BSB - SOM Interface and JTAG Connectors

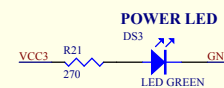
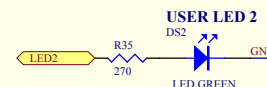
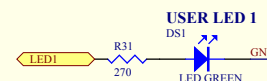
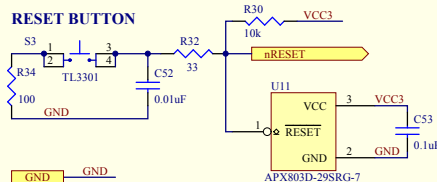
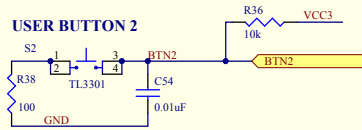
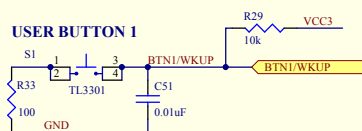
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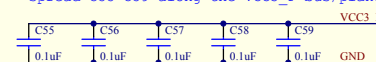
FUNCTION TABLE				
VINC_P	VCC_USB	VA_EN	VB_EN	DESCRIPTION
L	L	L	L	NO POWER SUPPLY
L	H	L	H	POWERED VIA USB
H	L	H	L	POWERED VIA JACK J1
H	H	H	L	POWERED VIA JACK J1



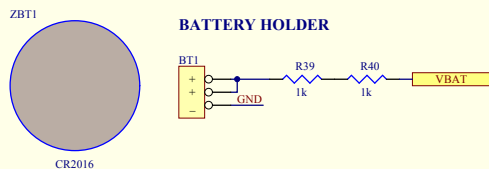
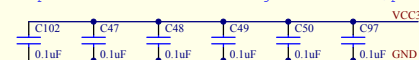
Min current limit = 0.5A



Spread C55-C59 along the VCC3_P bus/plane



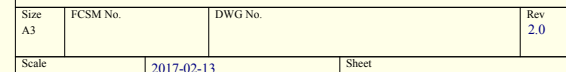
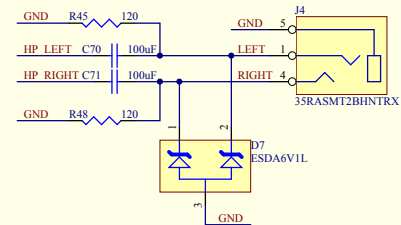
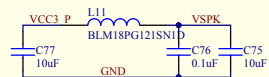
Spread C46-C50 and C97 along the VCC3 bus/plane



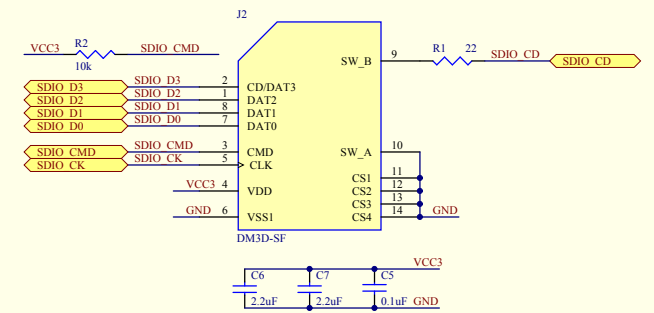
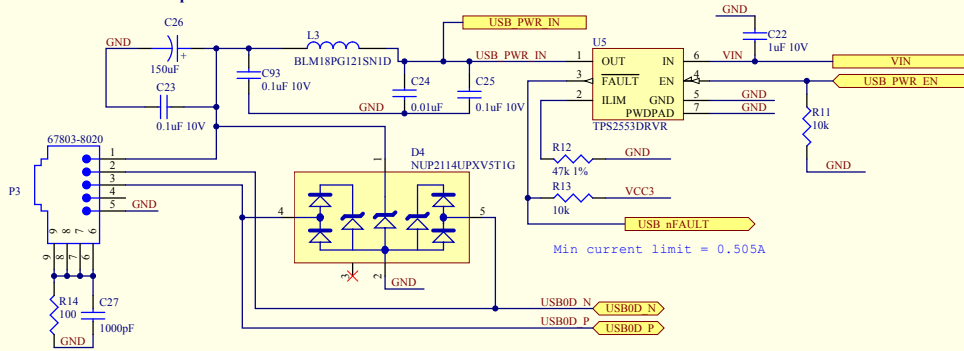
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UCL-SOM-BSB - Power, LEDs and Push-Buttons

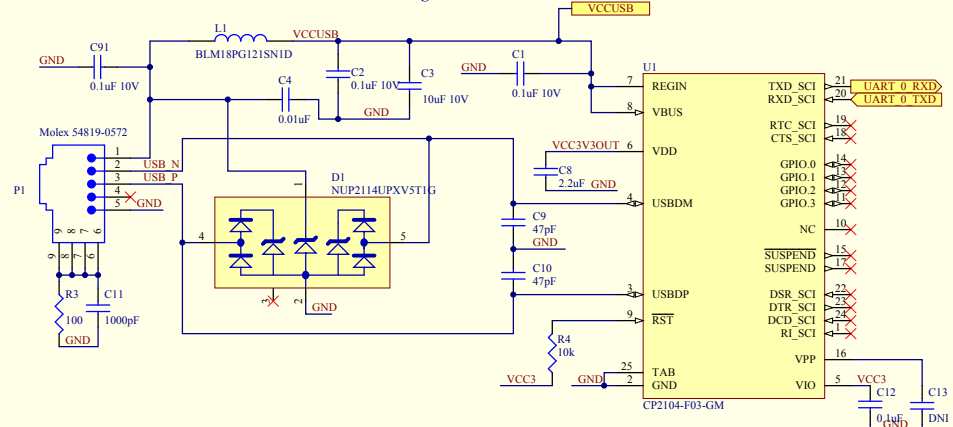
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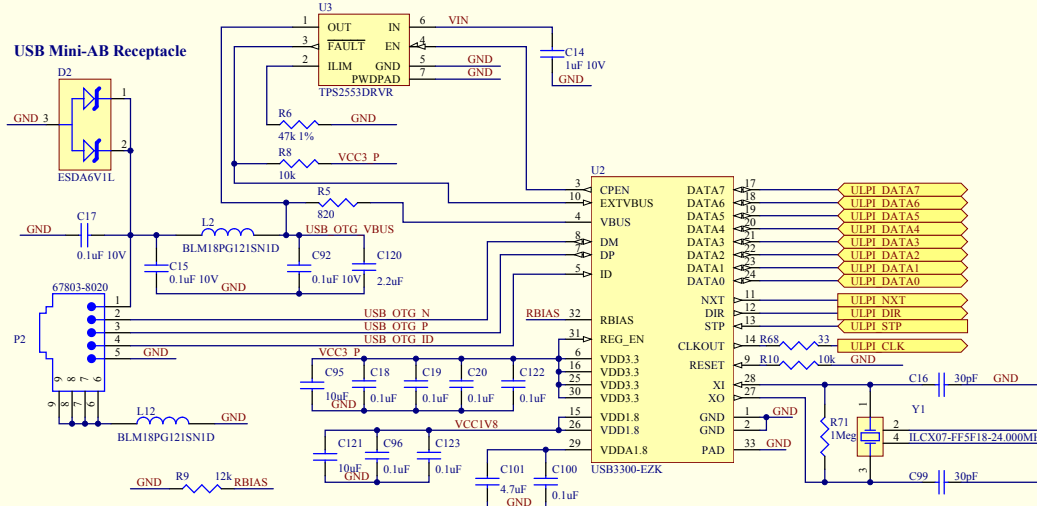
USB Mini-AB Receptacle



USB UART Bridge



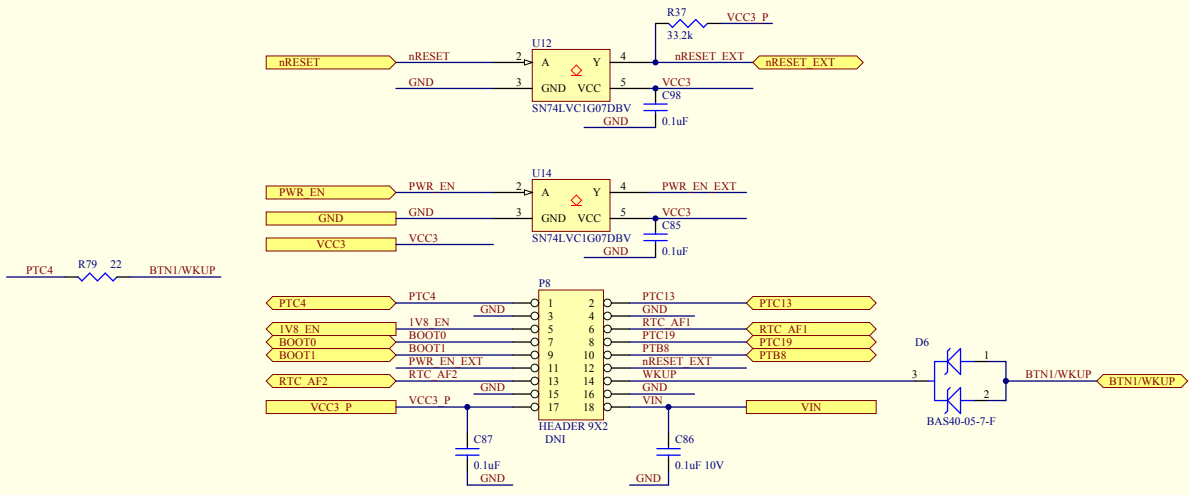
USB Mini-AB Receptacle



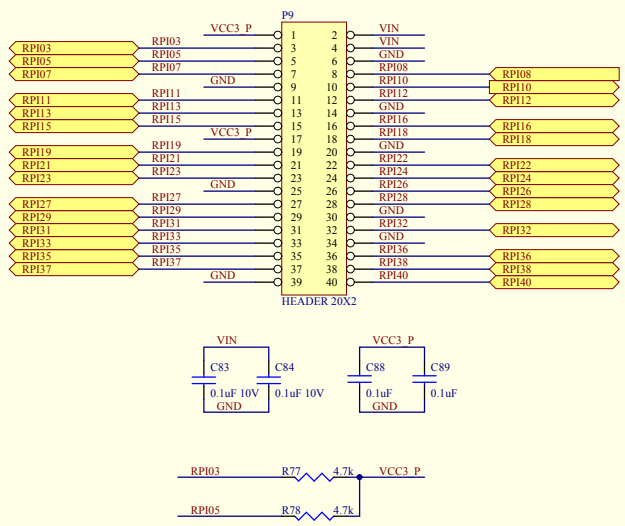
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UCL-SOM-BSB - USB and SD Interfaces

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RASPBERRY PI



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