

REVISION HISTORY

REV. 1.0.0 ("REV. A")

AP0LL02 AMAPH1KK-KBR BOARD

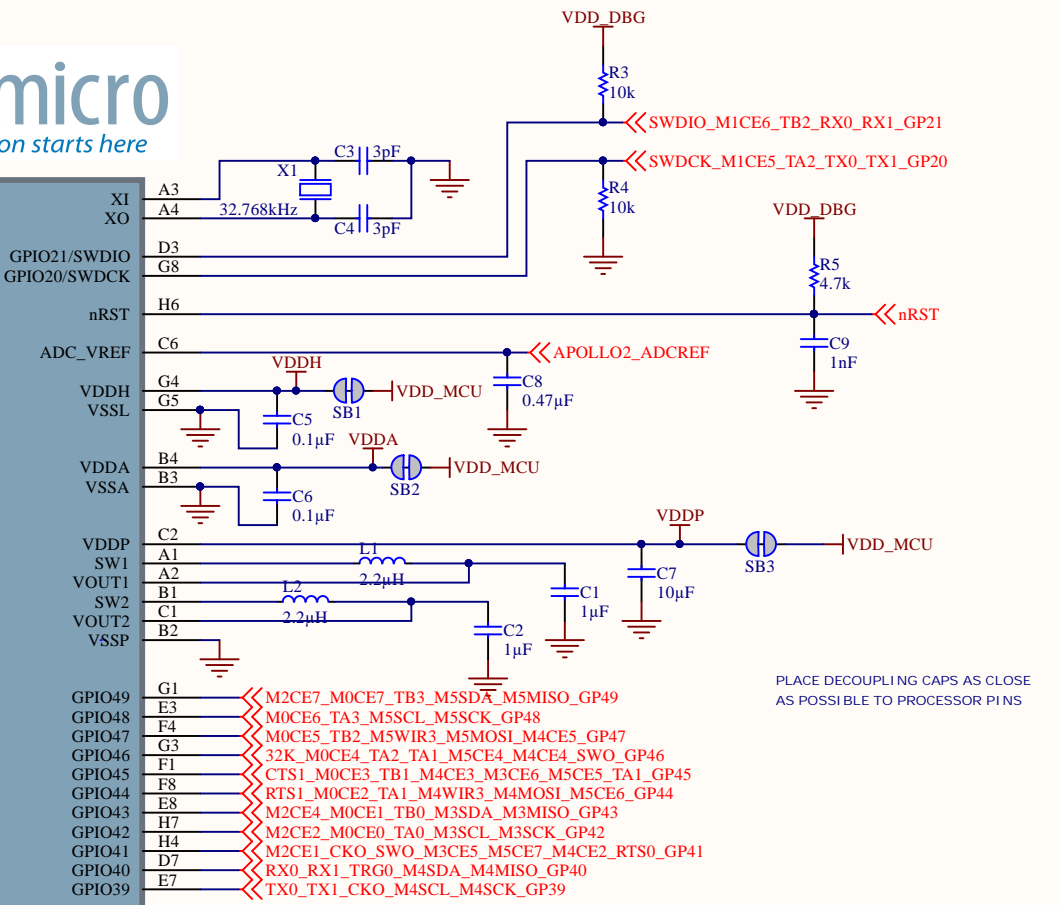
- FID1
PCB-FIDUCIAL
- FID2
PCB-FIDUCIAL
- FID3
PCB-FIDUCIAL

Title <i>Apollo2 AMAPH1KK-KBR BRD</i>		Ambiq Micro 6500 River Place Blvd Building 7, Suite 200 Austin, TX 78730 USA		Cannot open file Z:\ambiq\r epositories
Size: A4	Number:	Revision:		
Date: 6/1/17	Time: 8:19:40 AM	Sheet 1 of 9		
File: X:\Ambiq Micro\Hardware Release\apollo2\r1.0\Altium Designer\cover-page.SchDoc				



SSCL_SSCK_CKO_M2SCK_M2SCL_GP0	G2	GPIO0	X1
SSDA_SMISO_TX0_M2MISO_M2SDA_GP1	F2	GPIO1	XO
SWIR3_SMOSI_RX0_M2MOSI_M2WIR3_GP2	E1	GPIO2	
RTS0_SCE_M1CE4_M2CE0_TRG1_I2SW_GP3	F3	GPIO3	
CTS0_SINT_M0CE5_M2CE5_CKO_32K_GP4	H8	GPIO4	
MOSCL_M0SCK_RTS0_EXHFA_M1CE2_GP5	E2	GPIO5	
M0SDA_M0MISO_CTS0_M1CE0_I2SD_GP6	D2	GPIO6	
M0WIR3_M0MOSI_CKO_TRG0_TX0_M1CE1_GP7	D1	GPIO7	
M1SCL_M1SCK_M0CE4_M2CE4_TX1_GP8	F7	GPIO8	
M1SDA_M1MISO_M0CE5_M4CE5_RX1_GP9	F6	GPIO9	
M1WIR3_M1MOSI_M0CE6_M2CE6_RTS1_M4CE4_GP10	G7	GPIO10	
ADCSE2_M0CE0_CKO_M2CE7_CTS1_RX0_PDMD_GP11	D5	GPIO11	
ADC0NSE9_M1CE0_TA0_CKO_PDMD_CTS0_TX1_GP12	A8	GPIO12	
ADCOPSE8_M1CE1_TB0_M2CE3_EXHFB_RTS0_RX1_GP13	B8	GPIO13	
ADC1P_M1CE2_TX1_M2CE1_EXHFS_SWDCCK_32K_GP14	D8	GPIO14	
ADC1N_M1CE3_RX1_M2CE2_EXXT_SWDCCK_SWO_GP15	C8	GPIO15	
ADCSE0_M0CE4_TRG0_M2CE3_CMP10_TX0_RTS1_GP16	A5	GPIO16	
CMPR1_M0CE1_TRG1_M4CE3_EXLF_RX0_CTS1_GP17	D4	GPIO17	
CMP11_M0CE2_TA1_M4CE1_ATST2_TX1_32K_GP18	C4	GPIO18	
CMPR0_M0CE3_TB1_TA1_ATST1_RX1_I2SB_GP19	C3	GPIO19	
TX0_M1CE7_TA3_PDMD_TB1_SWO_GP22	H5	GPIO22	
RX0_M0CE0_TB3_PDMD_CMP0_TB1_GP23	G6	GPIO23	
M2CE1_M0CE1_CKO_M5CE0_TA1_I2SB_SWO_GP24	E4	GPIO24	
EXXT_M0CE2_TA0_M2SDA_M2MISO_GP25	E5	GPIO25	
EXLF_M0CE3_TB0_M2CE0_TA1_M5CE1_M3CE0_GP26	F5	GPIO26	
EXHF_M1CE4_TA1_M2SCL_M2SCK_GP27	D6	GPIO27	
I2SW_M1CE5_TB1_M2WIR3_M2MOSI_M5CE3_GP28	E6	GPIO28	
ADCSE1_M1CE6_TA2_CTS0_CTS1_M4CE0_PDMD_GP29	B5	GPIO29	
M1CE7_TB2_TX0_RTS1_SWO_I2SD_GP30	C7	GPIO30	
ADCSE3_M0CE4_TA3_RX0_TB1_GP31	A6	GPIO31	
ADCSE4_M0CE5_TB3_TB1_GP32	B6	GPIO32	
ADCSE5_M0CE6_32K_M3CE7_TB1_SWO_GP33	C5	GPIO33	
ADCSE6_M0CE7_M2CE3_CMPR2_M3CE1_M4CE0_M5CE2_GP34	A7	GPIO34	
ADCSE7_M1CE0_TX1_M4CE6_TA1_RTS0_M3CE2_GP35	B7	GPIO35	
TRG1_M1CE1_RX1_32K_M2CE0_CTS0_M3CE3_GP36	H1	GPIO36	
TRG2_M1CE2_RTS0_M3CE4_M4CE1_PDMD_TA1_GP37	H2	GPIO37	
TRIG3_M1CE3_CTS0_M3WIR3_M3MOSI_M4CE7_GP38	H3	GPIO38	

APOLLO2-BGA



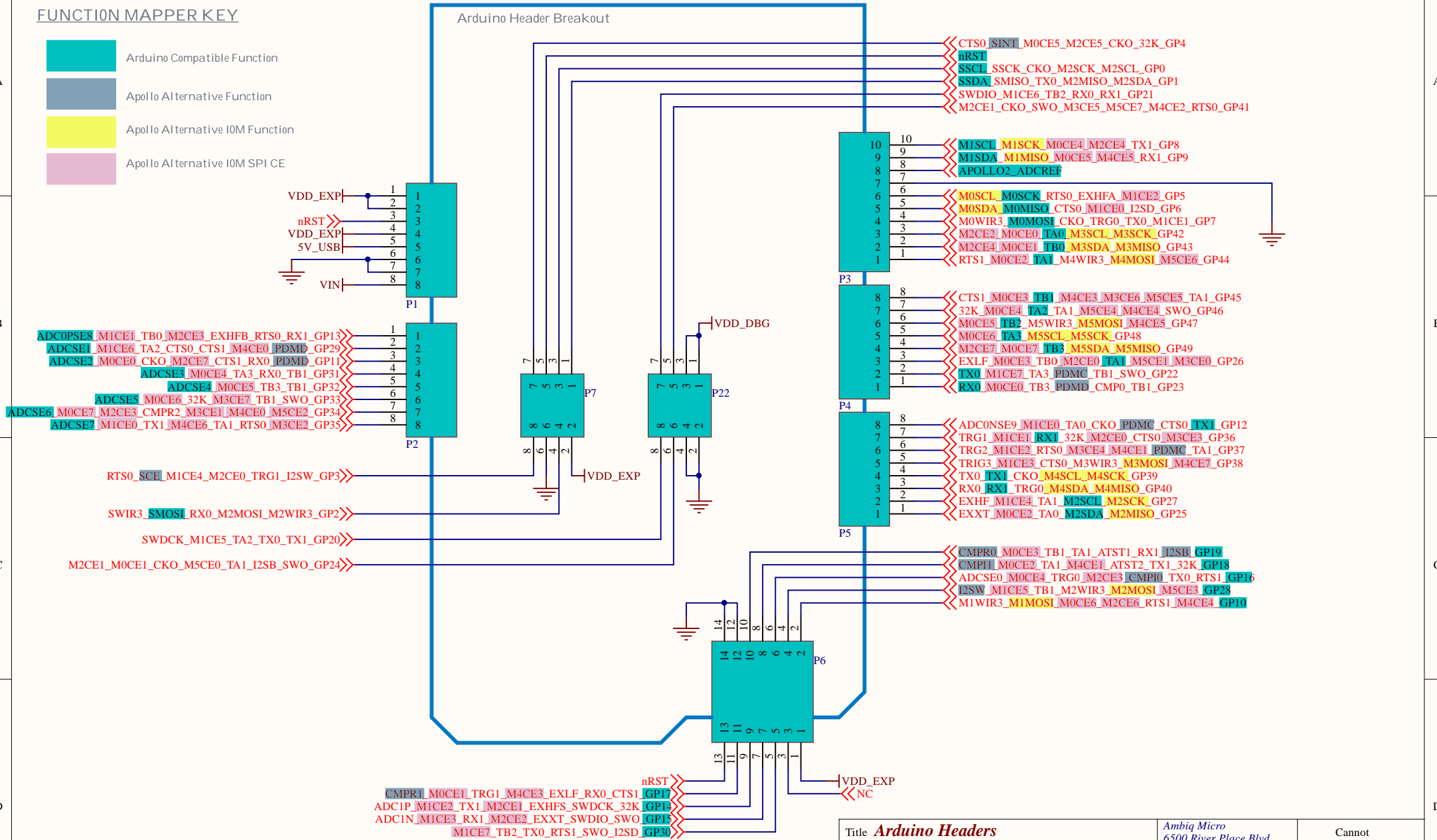
PLACE DECOUPLING CAPS AS CLOSE AS POSSIBLE TO PROCESSOR PINS



Title Apollo2 BGA		Ambiq Micro 6500 River Place Blvd Building 7, Suite 200 Austin, TX 78730 USA	Cannot open file Z:\ambiq\repositories
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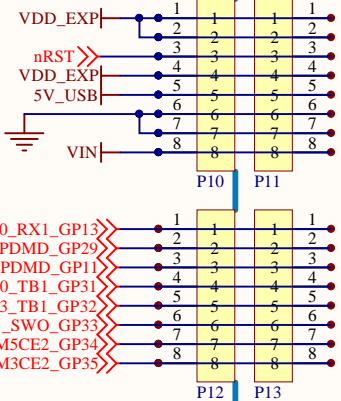
FUNCTION MAPPER KEY

- Arduino Compatible Function
- Apollo Alternative Function
- Apollo Alternative IOM Function
- Apollo Alternative IOM SPI CE

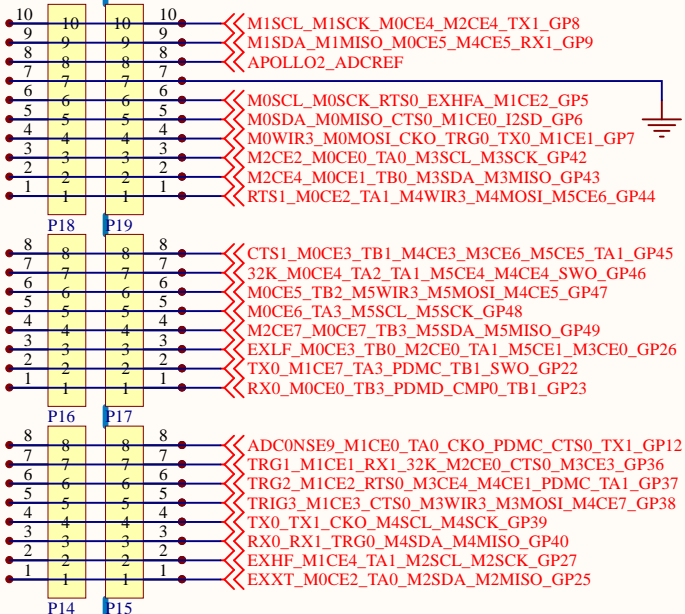


Title Arduino Headers		Ambiq Micro 6500 River Place Blvd Building 7, Suite 200 Austin, TX 78730 USA		Cannot open file Z:\ambiq\r epositories
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Date: 6/1/17	Time: 8:19:40 AM	Sheet 3 of 9		
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Arduino Debug Header Breakout

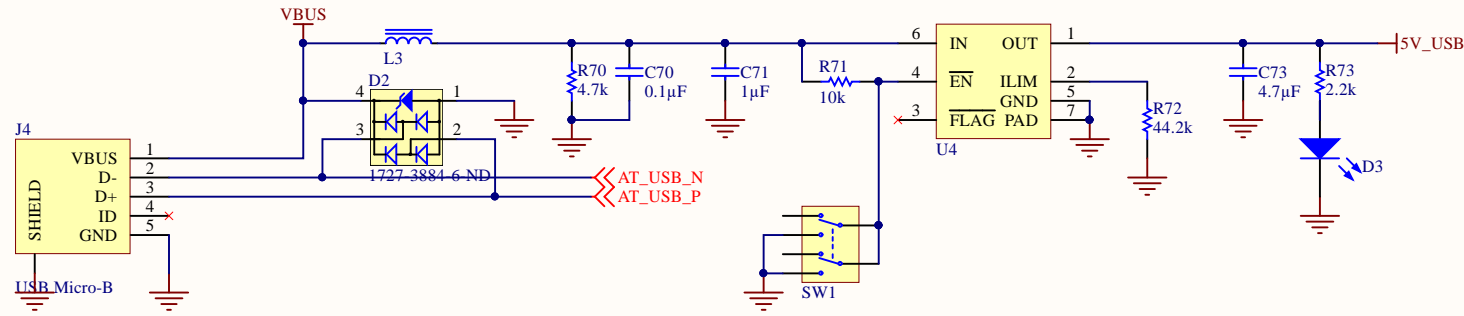


- ADC0PSE8_M1CE1_TB0_M2CE3_EXHFB_RTS0_RX1_GP13
- ADCSE1_M1CE6_TA2_CTS0_CTS1_M4CE0_PDMD_GP29
- ADCSE2_M0CE0_CKO_M2CE7_CTS1_RX0_PDMD_GP11
- ADCSE3_M0CE4_TA3_RX0_TB1_GP31
- ADCSE4_M0CE5_TB3_TB1_GP32
- ADCSE5_M0CE6_32K_M3CE7_TB1_SWO_GP33
- ADCSE6_M0CE7_M2CE3_CMPR2_M3CE1_M4CE0_M5CE2_GP34
- ADCSE7_M1CE0_TX1_M4CE6_TA1_RTS0_M3CE2_GP35

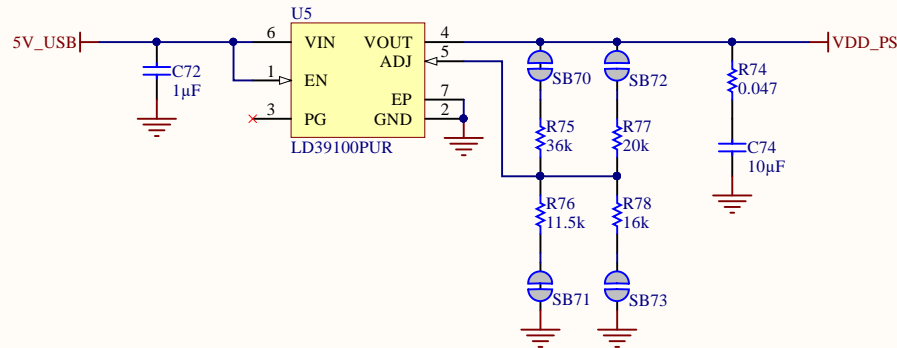


Title Arduino Headers Debug		Ambiq Micro 6500 River Place Blvd Building 7, Suite 200 Austin, TX 78730 USA		Cannot open file Z:\ambiq\r epositories
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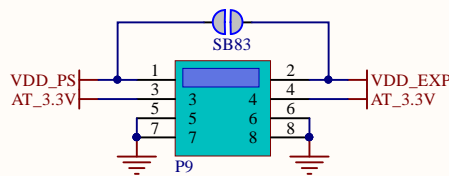
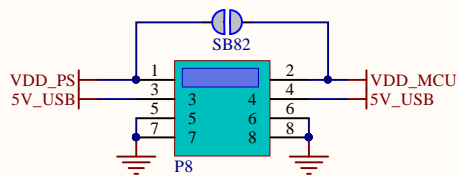
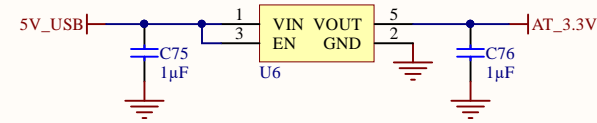
USB Power



Selectable 3.3/1.8V Supply

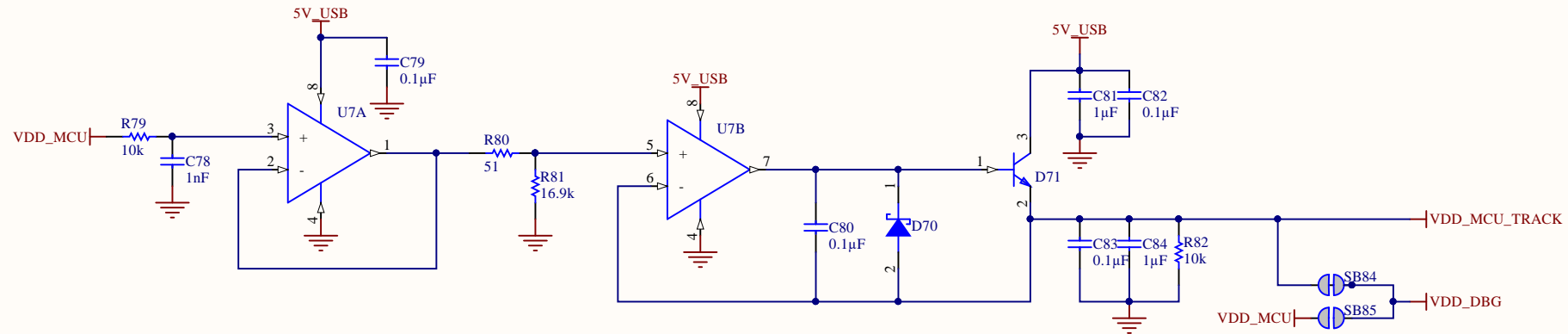


On-board Debugger Supply

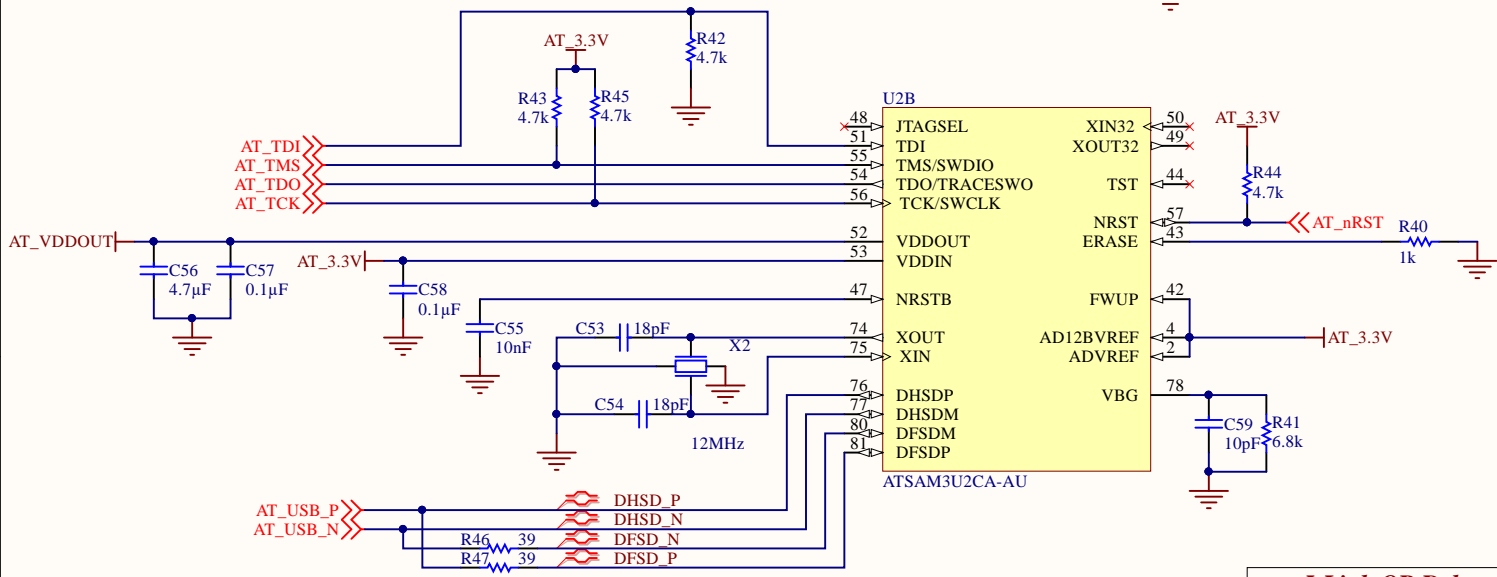
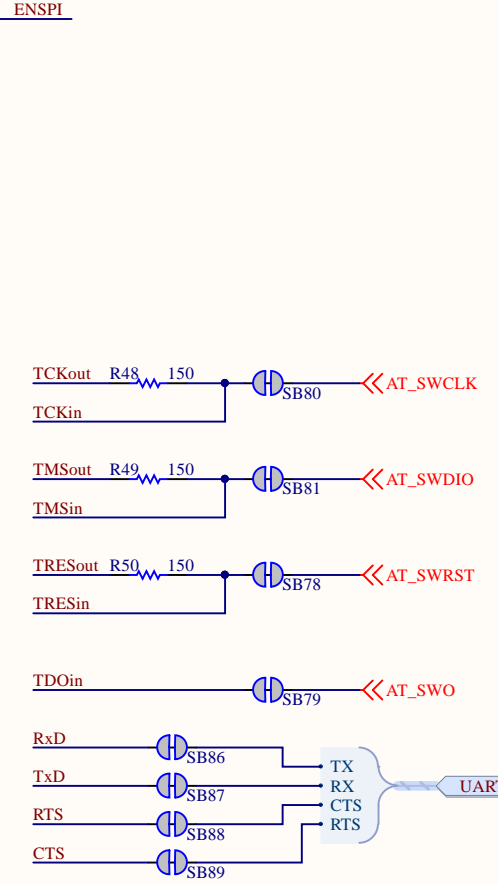
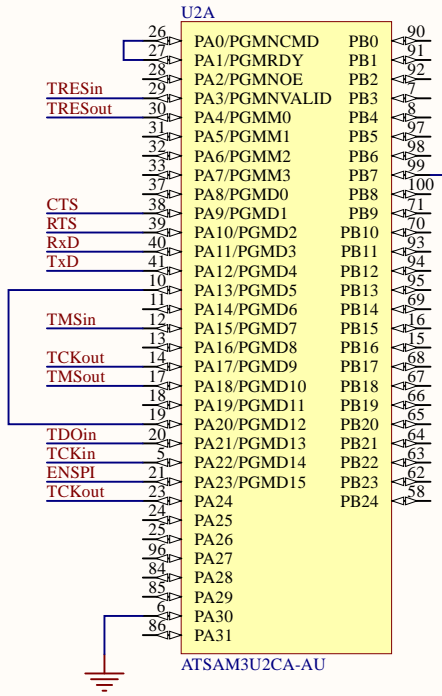
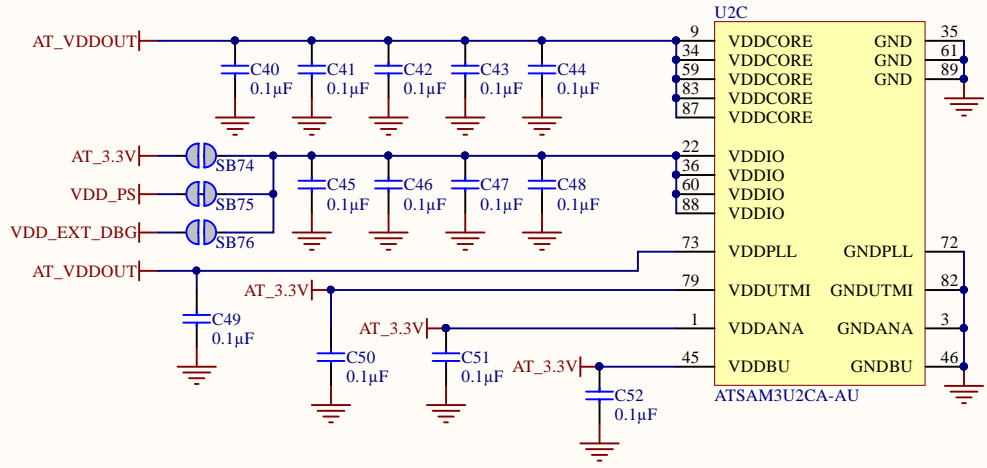


Title Power Supplies			Amiq Micro 6500 River Place Blvd Building 7, Suite 200 Austin, TX 78730 USA	Cannot open file Z:\amiq\r epositories
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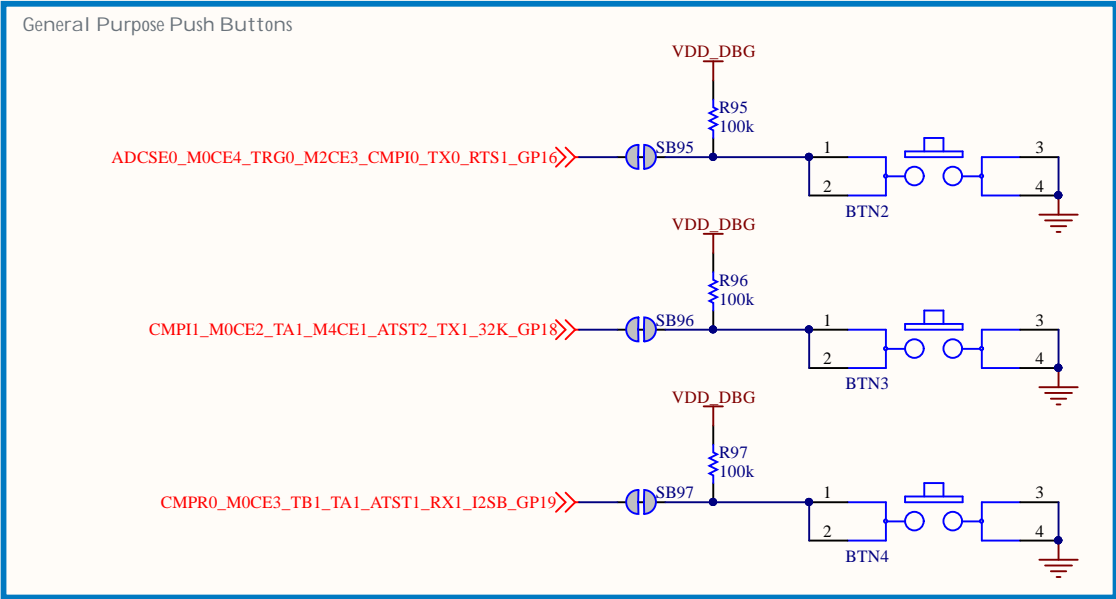
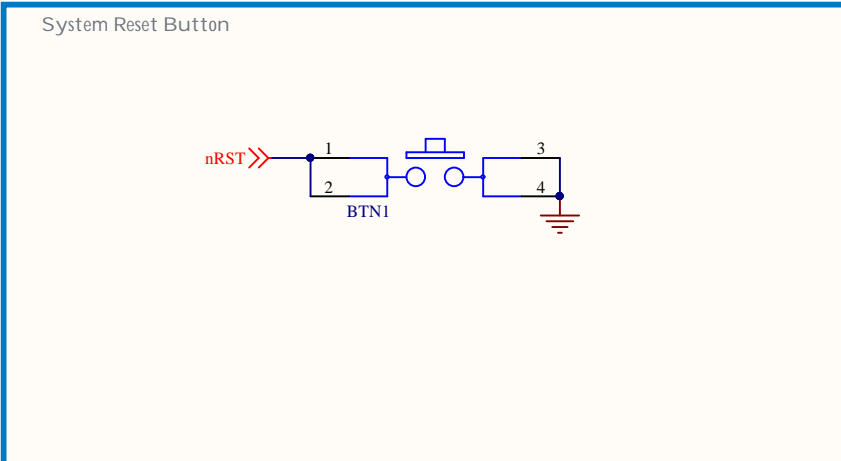
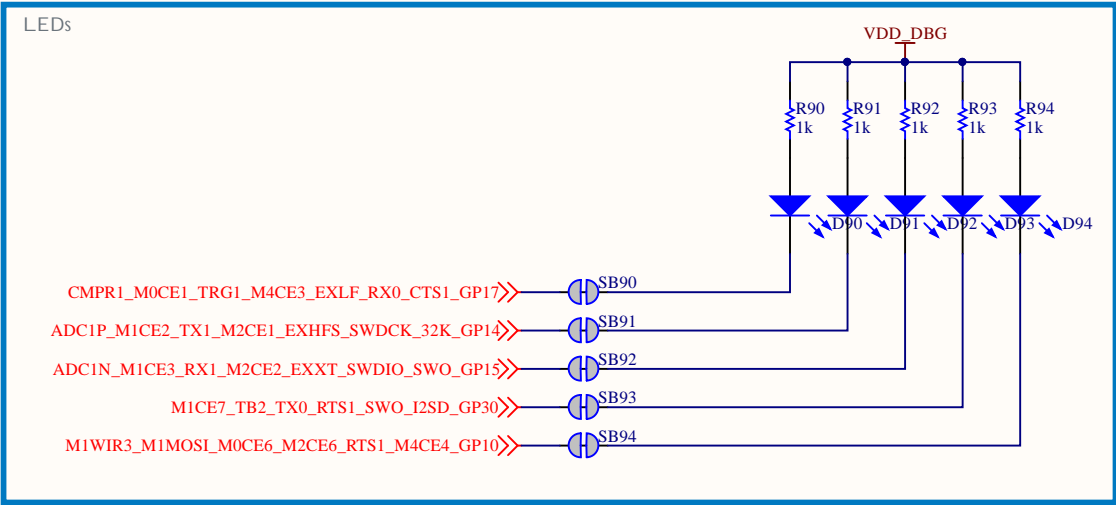
Supply Tracker



Title Power Supply Tracker		Ambiq Micro 6500 River Place Blvd Building 7, Suite 200 Austin, TX 78730 USA		Cannot open file Z:\ambiq\r epositories
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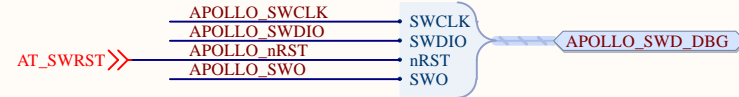
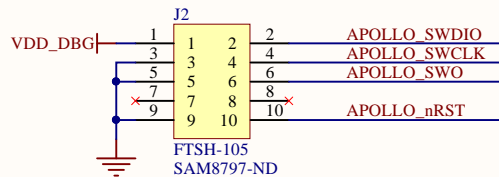


Title J-Link OB Debugger		Ambiq Micro 6500 River Place Blvd Building 7, Suite 200 Austin, TX 78730 USA		Cannot open file Z:\ambiq\r epositories
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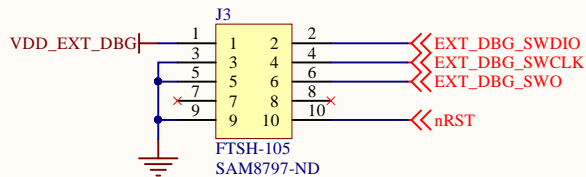


Title <i>User Interface</i>		Ambiq Micro 6500 River Place Blvd Building 7, Suite 200 Austin, TX 78730 USA		Cannot open file Z:\ambiq\r epositories
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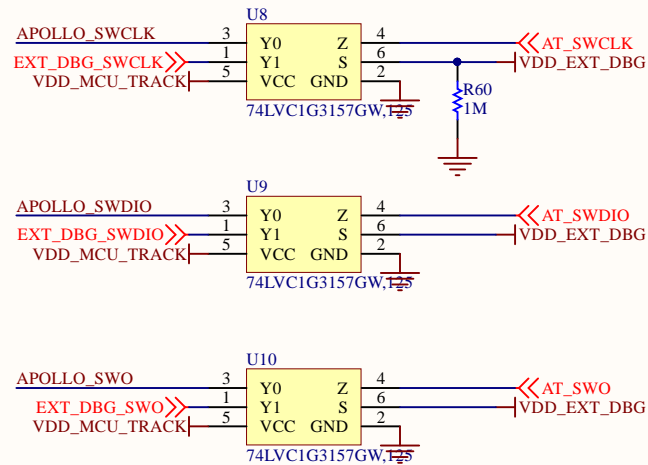
External Debug In



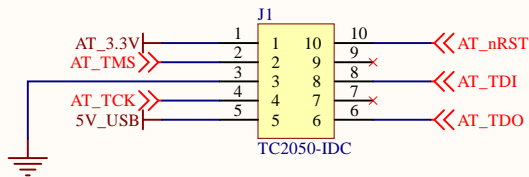
External Debug Out



External Debug Out Switch



J-Link 0B Programmer

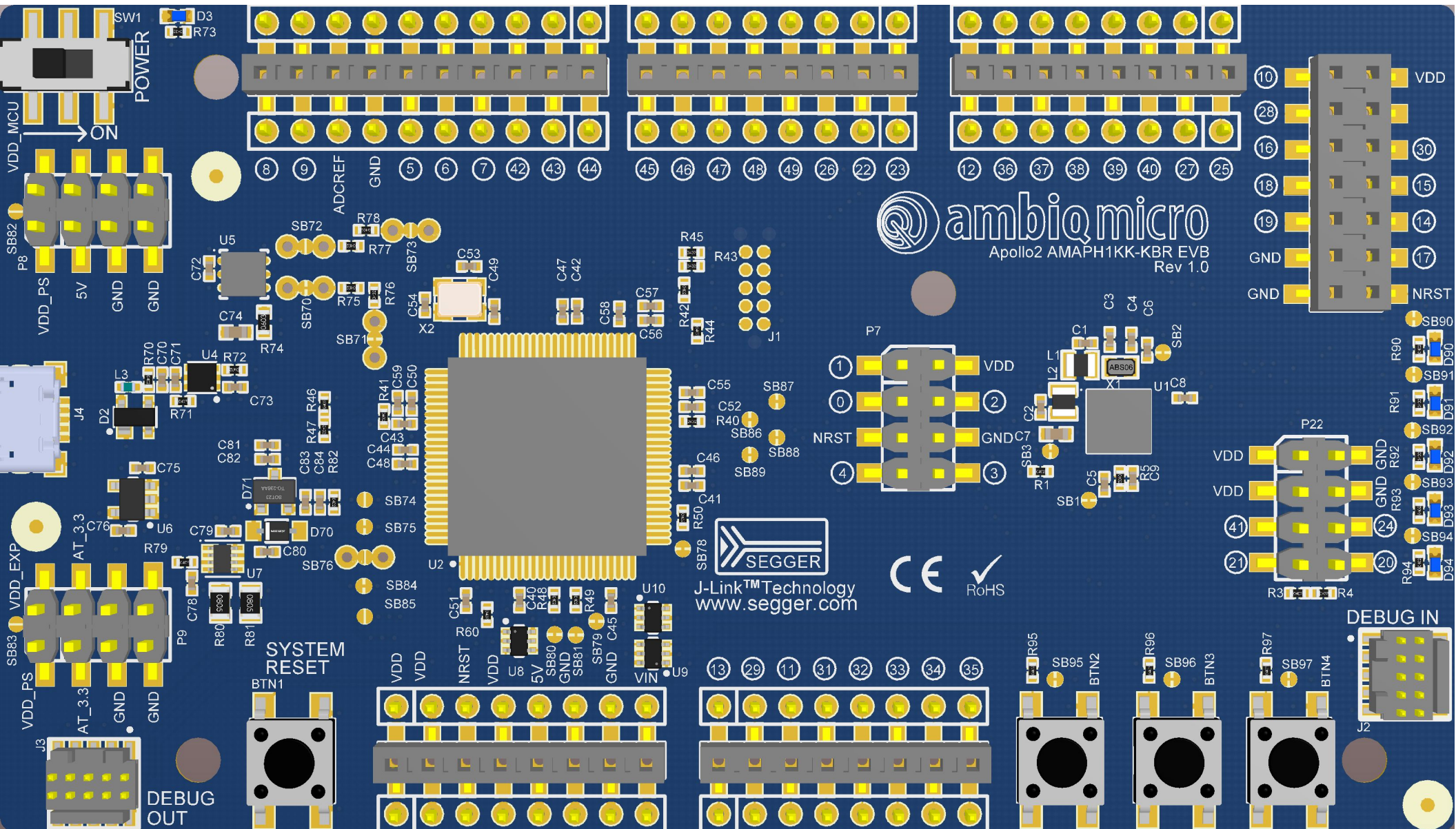


Title **Debug Connectors & Support**

Ambiq Micro
6500 River Place Blvd
Building 7, Suite 200
Austin, TX 78730
USA

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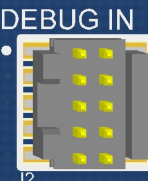
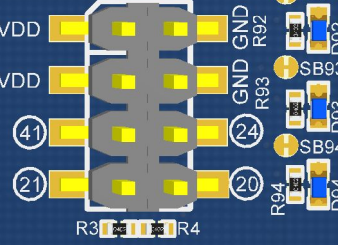
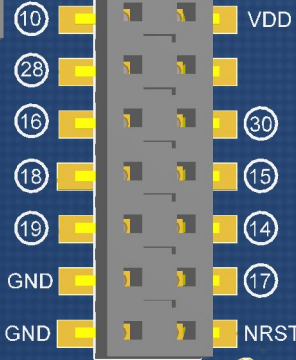
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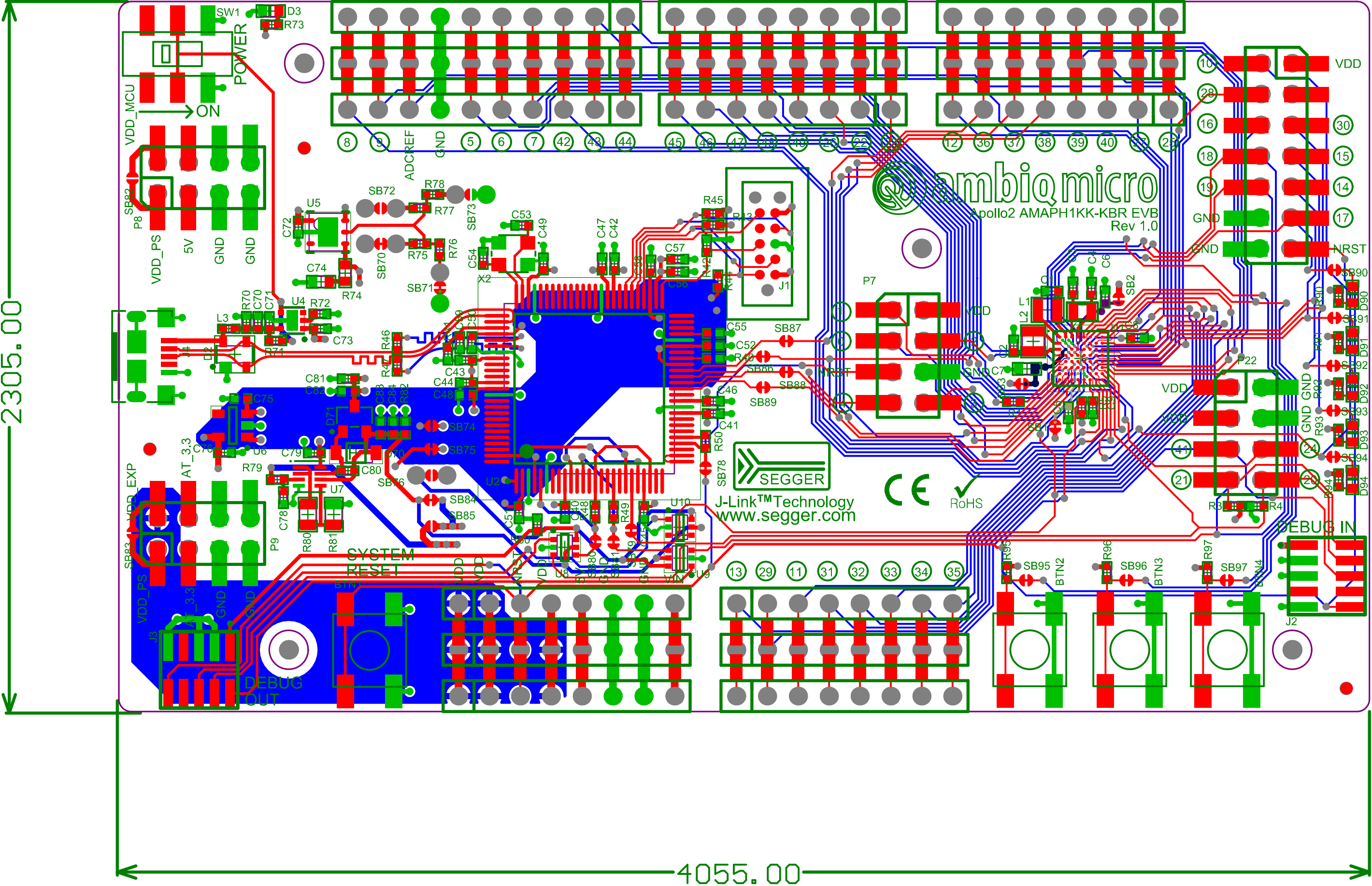


ambiqmicro
Apollo2 AMAPH1KK-KBR EVB
Rev 1.0

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2305.00

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CE
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DEBUG
OUT

SYSTEM
RESET

DEBUG IN

POWER
ON

VDD_MCU

VDD_PS
5V
GND
GND

VDD_EXP
AT_3.3
C79

VDD_PS
3.3
GND
GND

8 9 ADCREF GND 5 6 7 42 43 44 45 46 47 48 49 25 22

12 36 37 38 39 40 25

10 VDD
28
16
18
19
30
15
14
17
NRST
GND
GND

41 VDD
44 VDD
21 GND
28 GND
29 GND
30 GND
31 GND
32 GND
33 GND
34 GND
35

BTN2
BTN3
BTN4
J2

R90
D90
R91
D91
R92
D92
R93
D93
R94
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R95
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R97
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R98
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