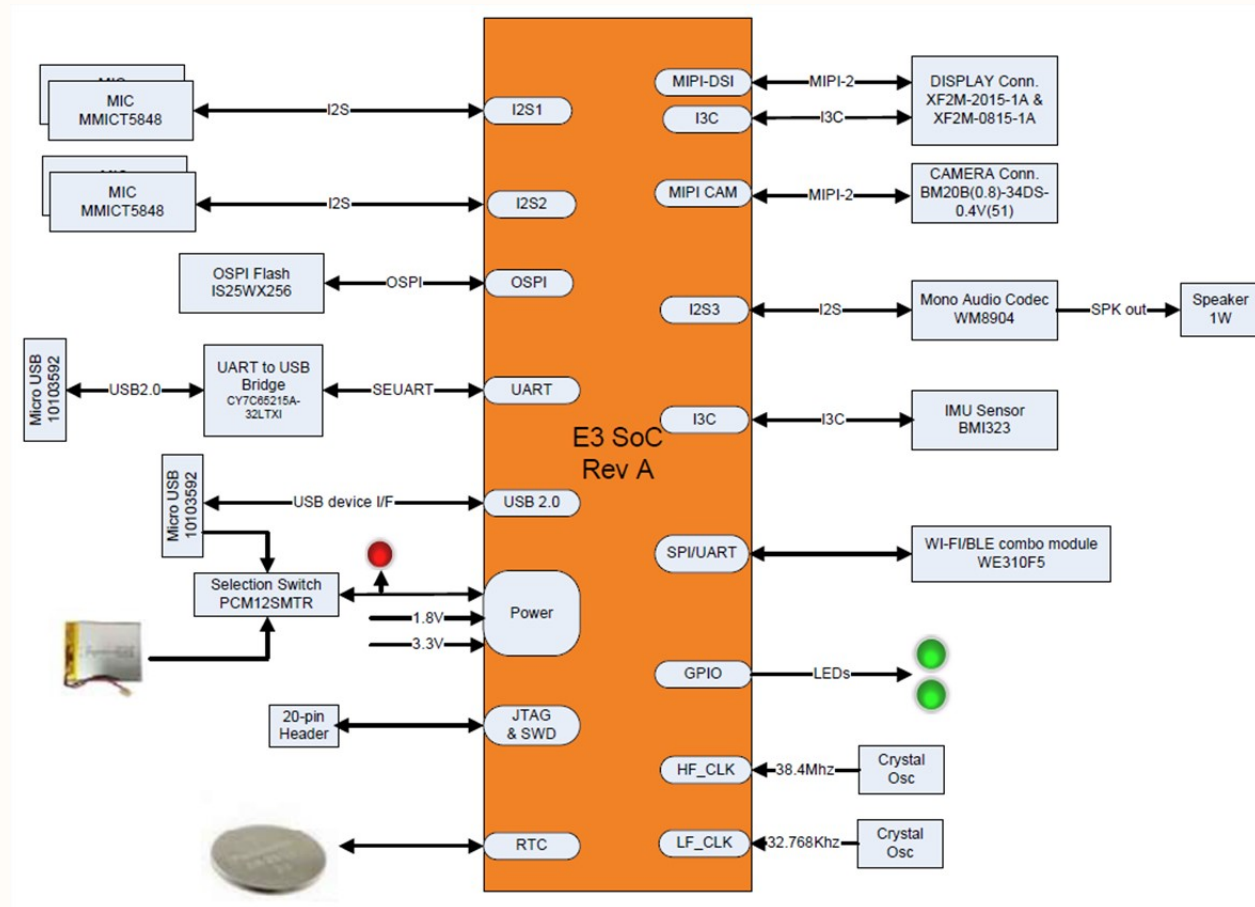


BLOCK DIAGRAM



CONVENTIONS

- 1.PASIVE COMPONENTS MINIMUM PACKAGE IS 0402
- 2.RESISTORS WITH 1% TOLERANCE IS USED AND DISPLAYED

CUSTOMER			
 ALIF_SEMICONDUCTOR			
DRAWING TITLE			
AI_ML_APP_KIT			
CAGE CODE		DRAWING NUMBER	
		220-00501-B	
SIZE	Sheet	Total	REVISION
B	2	23	B.6



Sl.No.	E3 Ball Name	Function	Signal assign
1	A15	P2_28/I2S0_SDI_B	I2S0_Data
2	C15	P2_29/GPIO2_29	LED1 GPIO
3	E15	P2_30/I2S0_SCLK_B	I2S0_SCLK
4	B14	P2_31/I2S0_WS_B	I2S0_WS
5	F12	P3_4/I2S1_SDI_B	I2S1_Data
6	J25	P1_14/GPIO1_14	LED2 GPIO
7	C11	P3_6/I2S1_SCLK_B	I2S1_SCLK
8	B10	P3_7/I2S1_WS_B	I2S1_WS
9	D6	P4_2/LPGPIO_2	TOUCH_RESET
10	C3	P4_5/LPGPIO_5	CSI_RESET
11	C5	P4_6/LPGPIO_6	DSI_RESET
12	A17	P2_21/ GPIO2_21	TOUCH_INT
13	A3	P3_15/CAM_XVCLK_A	CAM_EXTCLK_A
14	D16	P2_26/GPIO2_26	CAM_PWR_CNTL
15	E17	P2_24/GPIO2_24	Gyro sensor INT1
16	B16	P2_25/GPIO2_25	Gyro sensor INT2
17	N15	USB_REXT	USB_Device
18	N13	USB_DP	
19	M14	USB_DM	
20	J13	USB_VBUS	
21	P12	USB_IO_ID	
22	N9	MIPI_REXT	MIPI CSI and DSI
23	J9	MIPICSI_0_P	
24	L9	MIPICSI_0_N	
25	K8	MIPICSI_1_P	
26	P8	MIPICSI_1_N	
27	M8	MIPICSI_C_P	
28	N7	MIPICSI_C_N	
29	J11	MIPIDSI_0_P	
30	L11	MIPIDSI_0_N	
31	K12	MIPIDSI_1_P	
32	L13	MIPIDSI_1_N	
33	M12	MIPIDSI_C_P	
34	N11	MIPIDSI_C_N	

CUSTOMER  ALIF SEMICONDUCTOR			
DRAWING TITLE AI_ML_APP_KIT			
CAGE CODE		DRAWING NUMBER 220-00501-B	
SIZE B	Sheet 3	Total 23	REVISION B.6



35	L27	P1_24/SEUART_RX_A	SEUART_RX
36	L25	P1_25/SEUART_TX_A	SEUART_TX
37	H22	P1_10/UART2_RX_A	USB TO UART2_RX
38	H20	P1_11/UART2_TX_A	USB TO UART2_TX
39	H18	P1_12/UART2_CTS_A	USB TO UART2_CTS
40	H16	P1_13/UART2_RTS_A	USB TO UART2_RTS
41	F18	P1_2/UART4_RX_A	USB TO UART4_RX
42	F16	P1_3/UART4_TX_A	USB TO UART4_TX
43	B2	P3_19/ GPIO3_19	LED driver enable pin
44	G17	P1_4/UART1_RX_A	WiFi_BLE UART
45	G25	P1_5/UART1_TX_A	
46	G23	P1_6/UART1_CTS_A	
47	G21	P1_7/UART1_RTS_A	
48	D8	P4_3/LPGPIO_3	WiFi RESET
49	F22	P1_0/GPIO1_0	WiFi wakeup
50	L23	P1_26/GPIO1_26	WiFi INT
51	L17	P2_8/OSPI1_D0_A	OSPI1
52	P18	P2_9/OSPI1_D1_A	
53	N17	P2_10/OSPI1_D2_A	
54	M16	P2_11/OSPI1_D3_A	
55	K16	P2_12/OSPI1_D4_A	
56	J15	P2_13/OSPI1_D5_A	
57	L15	P2_14/OSPI1_D6_A	
58	K14	P2_15/OSPI1_D7_A	
59	A19	P2_16/OSPI1_RXDS_A	
60	C19	P2_17/OSPI1_CS_A	
61	D20	P2_18/OSPI1_SCLKN_A	
62	E19	P2_19/OSPI1_SCLK_A	

CUSTOMER			
 ALIF_SEMICONDUCTOR			
DRAWING TITLE			
AI_ML_APP_KIT			
CAGE CODE		DRAWING NUMBER	
		220-00501-B	
SIZE	Sheet	Total	REVISION
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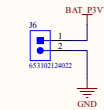
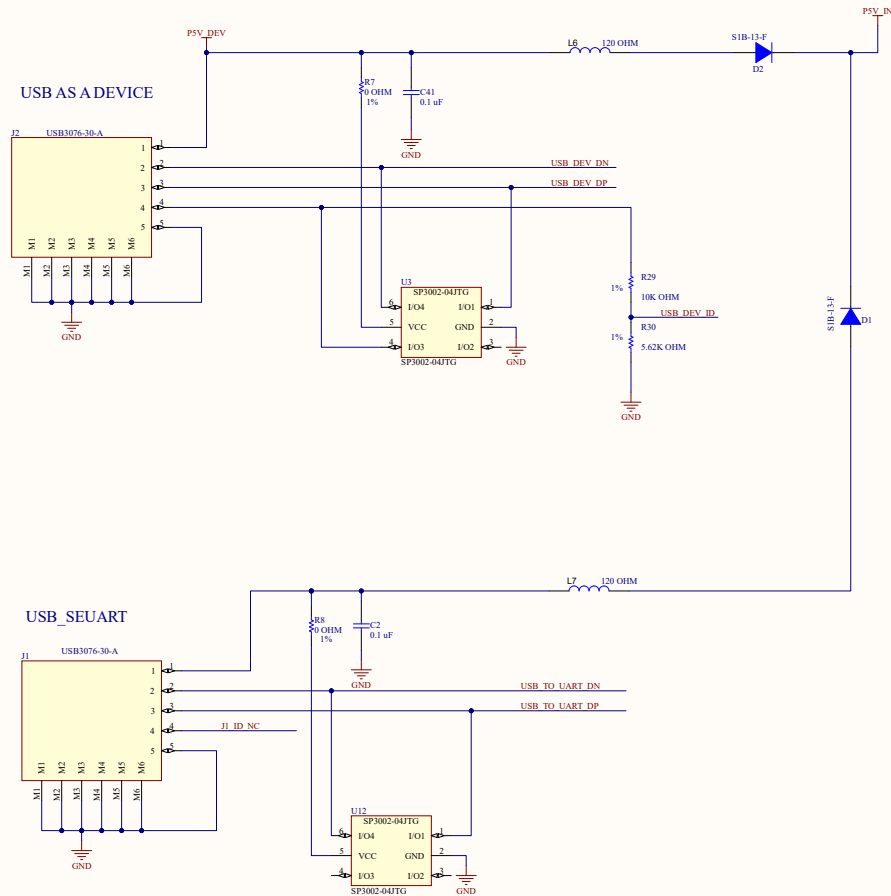


63	D12	P3_5/GPIO3_5	OSPI1 reset
64	F20	P1_1/GPIO1_1	CODEC INT
65	L21	P1_27/JTAG0_NSRST	JTAG signals
66	L19	P1_28/JTAG0_TCK	
67	M26	P1_29/JTAG0_TMS	
68	M24	P1_30/JTAG0_TDI	
69	M22	P1_31/JTAG0_TDO	
70	P26	P2_1/JTAG0_TDATA0	
71	N25	P2_2/JTAG0_TDATA1	
72	P24	P2_3/JTAG0_TDATA2	
73	N23	P2_4/JTAG0_TDATA3	JTAG_NSRST
74	M20	P2_5/JTAG0_TRACECLK	
75	N27	P2_0/JTAG0_TRST	I3C
76	B18	P2_20/JTAG3_NSRST	
77	N19	P2_6/GPIO2_6	CODEC-I2S
78	M18	P2_7/GPIO2_7	
79	E11	P3_8/I2S2_SDI_B	
80	A9	P3_9/I2S2_SDO_B	Push button switch - GPIO switch1
81	A7	P3_13/I2S2_WS_B	
82	P24	P2_3/I2S2_SCLK_A	Push button switch - GPIO switch2
83	B4	P3_18/GPIO3_18	WiFi_BLE SPI
84	G15	P2_27/ GPIO2_27	
85	E3	P3_20/SPI0_MISO_A	
86	F2	P3_21/ SPI0_MOSI_A	
87	G1	P3_22/ SPI0_SCLK_A	
88	H2	P3_23/SPI0_SS0_A	

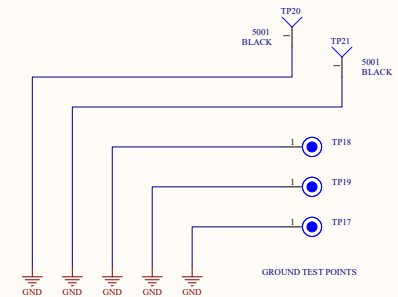


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DRAWING TITLE AI_ML_APP_KIT			
CAGE CODE		DRAWING NUMBER 220-00501-B	
SIZE B	Sheet 5	Total 23	REVISION B.6

5V INPUT SUPPLY



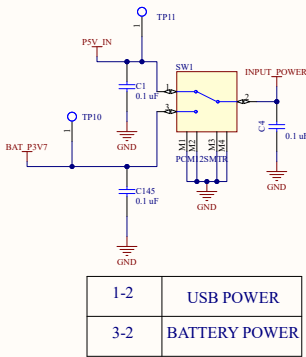
BATTERY CONNECTOR



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DRAWING TITLE AI_ML_APP_KIT				
CAGE CODE		DRAWING NUMBER 220-00501-B		
SIZE B	Sheet 6	Total 23	REVISION B.6	

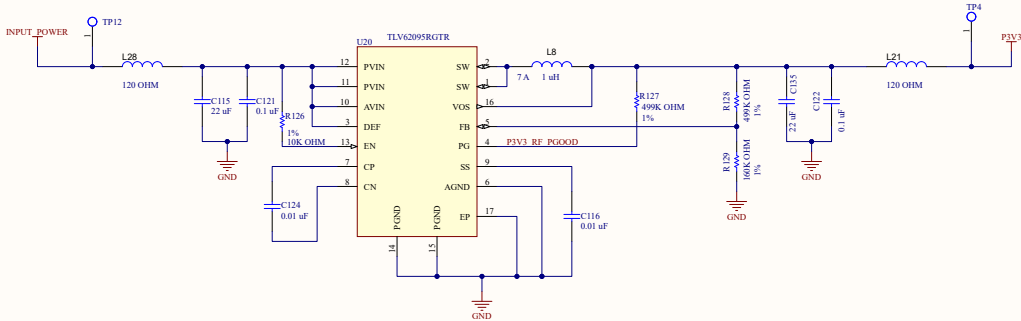


INPUT POWER SELECTION SWITCH

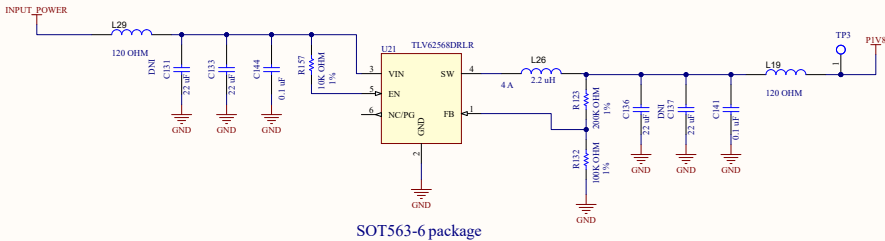


1-2	USB POWER
3-2	BATTERY POWER

P3V3 REGULATOR



P1V8 REGULATOR

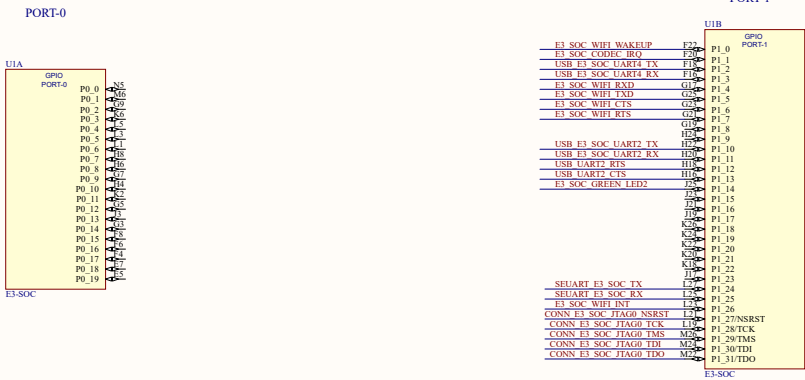


SOT563-6 package

CUSTOMER			
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AI_ML_APP_KIT			
CAGE CODE		DRAWING NUMBER	
		220-00501-B	
SIZE	Sheet	Total	REVISION
B	7	23	B.6



E3 - SOC I/O



CUSTOMER

 ALIF_SEMICONDUCTOR

DRAWING TITLE

AI_ML_APP_KIT

CAGE CODE

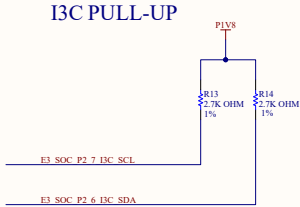
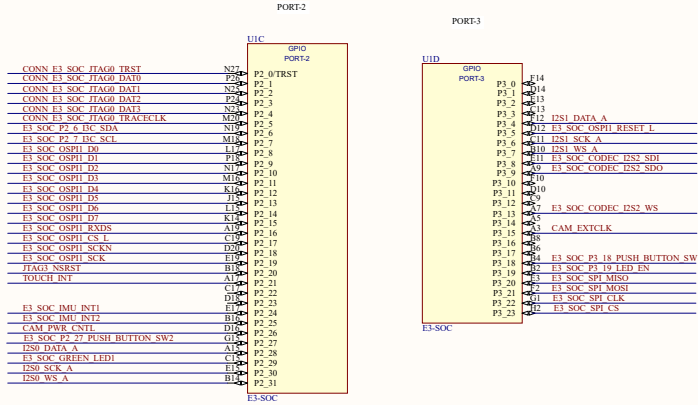
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SIZE	Sheet	Total	REVISION
B	8	23	B.6

E3 - SOC I/O



CUSTOMER

ALIF SEMICONDUCTOR

ALIF_SEMICONDUCTOR

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AI_ML_APP_KIT

CAGE CODE

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SIZE

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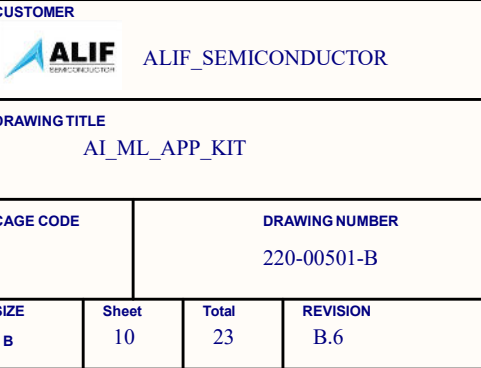
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REVISION

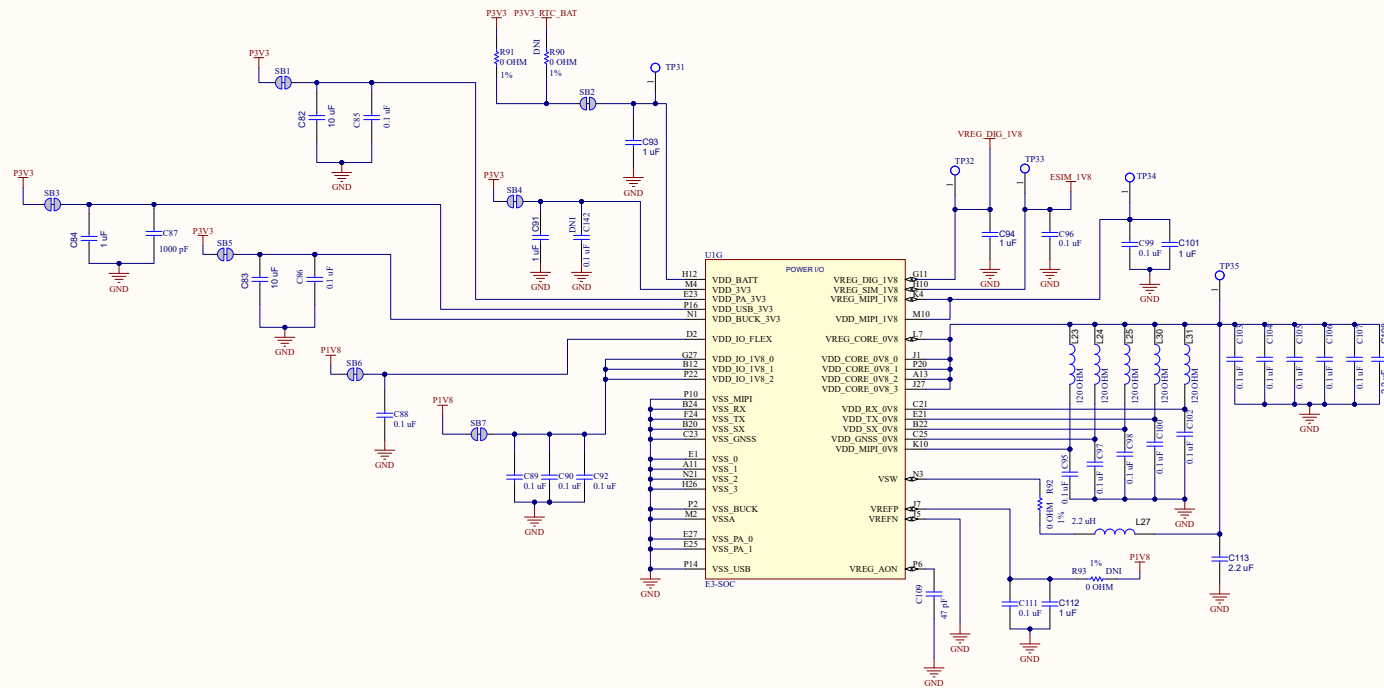
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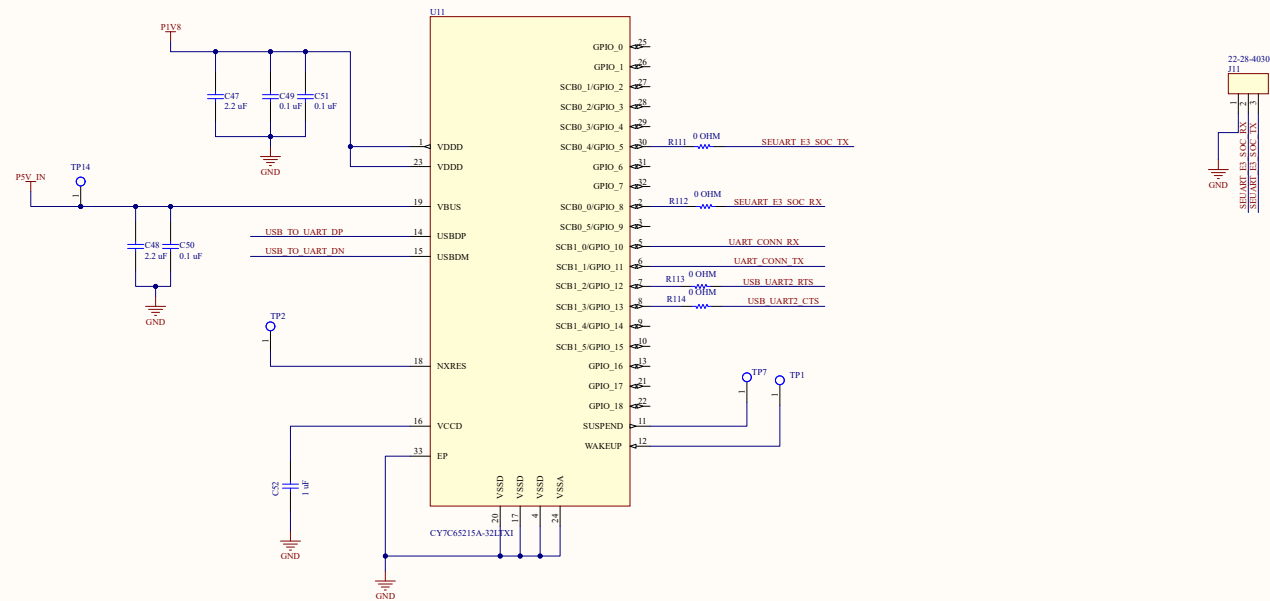
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REVISION
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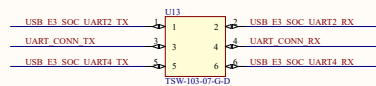


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AI_ML_APP_KIT							
CAGE CODE				DRAWING NUMBER			
				220-00501-B			
SIZE	Sheet	Total	REVISION				
B	11	23	B.6				

USB TO UART CONVERTER



UART2 \UART4 SELECTION



CUSTOMER			
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DRAWING TITLE			
AI_ML_APP_KIT			
CAGE CODE		DRAWING NUMBER	
		220-00501-B	
SIZE	Sheet	Total	REVISION
B	12	23	B.6



Diagram illustrating the pinout and connections for the J3 connector (20 pins) on the XFXM-2015-1A module. The connections are as follows:

- Pin 1:** J3 01 NC
- Pin 2:** J3 03 NC
- Pin 3:** J3 05 NC
- Pin 4:** J3 08 NC
- Pin 5:** MIPI DSI D1 P
- Pin 6:** MIPI DSI D1 N
- Pin 7:** MIPI DSI CLK P
- Pin 8:** MIPI DSI CLK N
- Pin 9:** MIPI DSI D0 P
- Pin 10:** MIPI DSI D0 N
- Pin 11:** M1
- Pin 12:** M2
- Pin 13:** GND
- Pin 14:** GND
- Pin 15:** GND
- Pin 16:** GND
- Pin 17:** GND
- Pin 18:** GND
- Pin 19:** GND
- Pin 20:** GND

External components and connections shown:

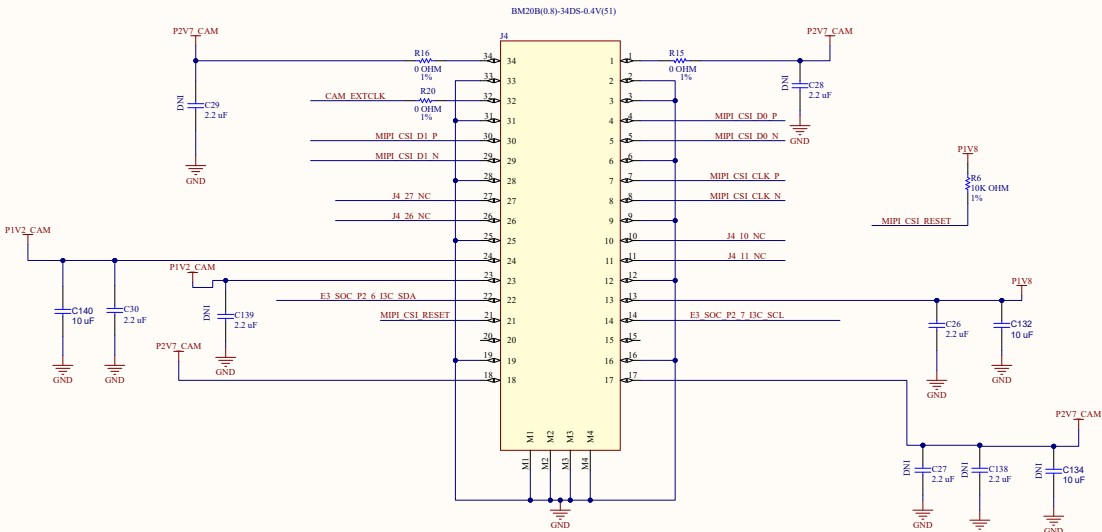
- LEDK:** Connected to Pin 1 through capacitor C5 (0.1 uF) to GND.
- LEDA:** Connected to Pin 2 through capacitor C51 (0.1 uF) to GND.
- P3V3:** Connected to Pins 3, 4, 5, and 6 through capacitors C7 (0.1 uF) and C3 (0.1 uF) to GND.
- P1V8:** Connected to Pins 7 and 8 through capacitors C7 (0.1 uF) and C3 (0.1 uF) to GND.
- MIPI DSI RESET:** Connected to Pin 9 through resistor R2 (10K OHM, 1% tolerance) to P1V8.
- M1 and M2:** Connected to GND.

[illegible]

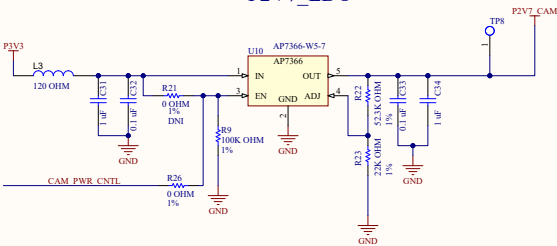
LOAD CURRENT = 40mA



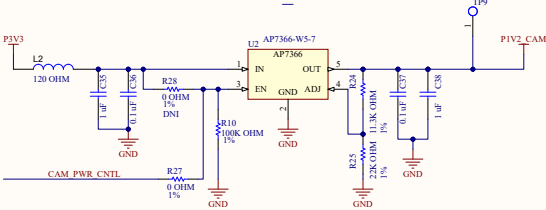
CAMERA CONNECTOR (FRONT)



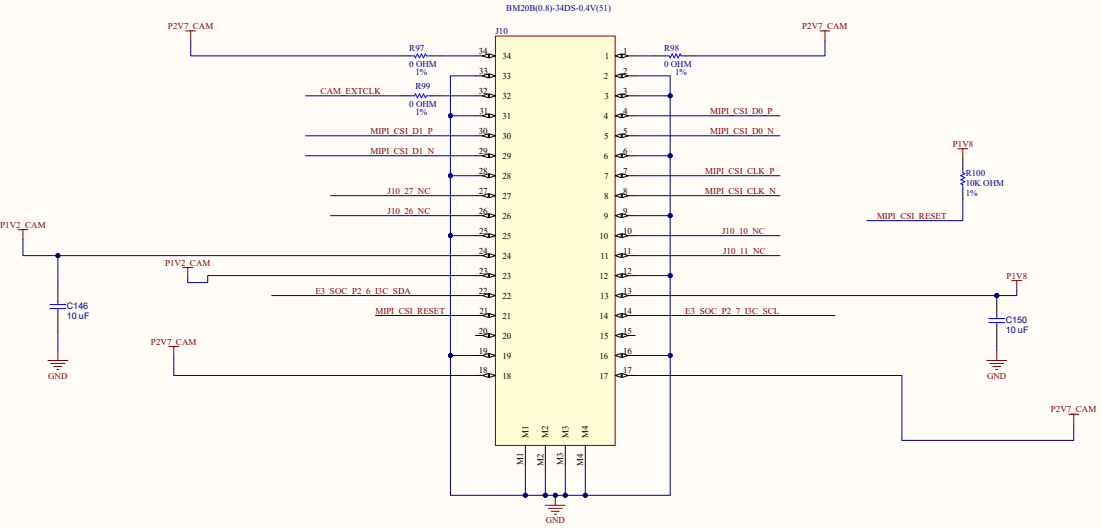
P2V7_LDO



P1V2_LDO



CAMERA CONNECTOR (REAR)

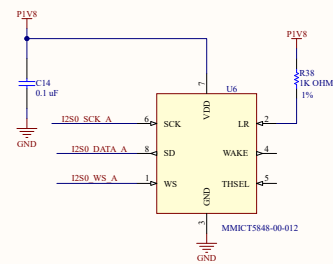


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SIZE	Sheet	Total	REVISION
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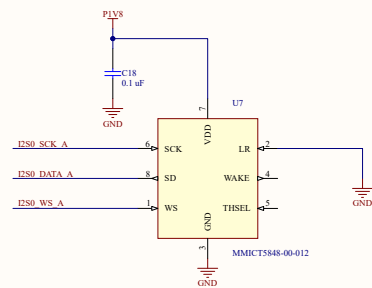


MICROPHONE

RIGHT CHANNEL

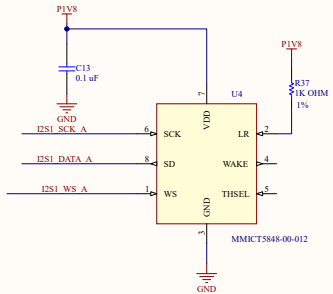


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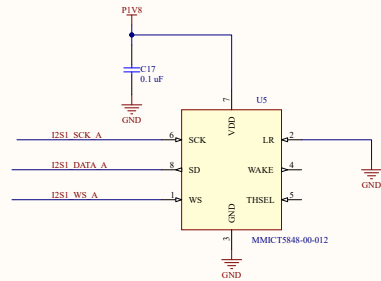


NOTE: Opening fot all MICs will be NPTH

RIGHT CHANNEL



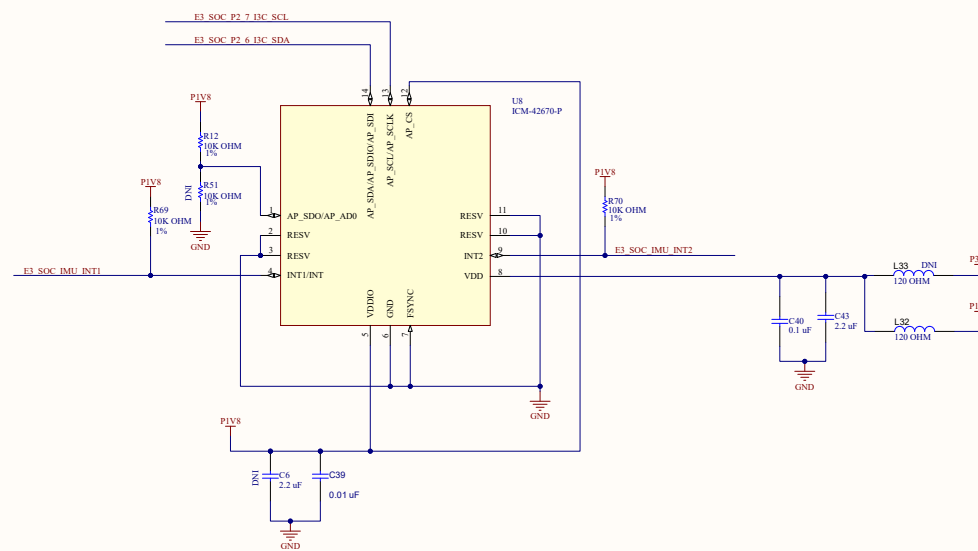
LEFT CHANNEL



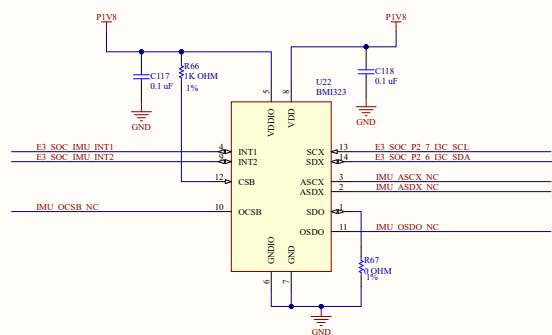
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SIZE	Sheet	Total	REVISION
B	15	23	B.6



IMU SENSOR (ICM-42670-P)



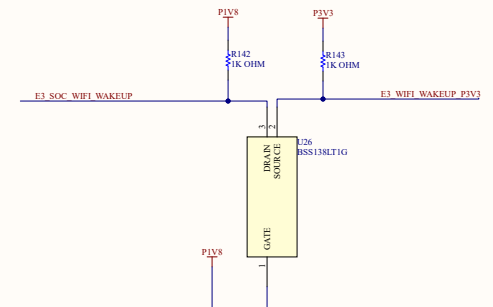
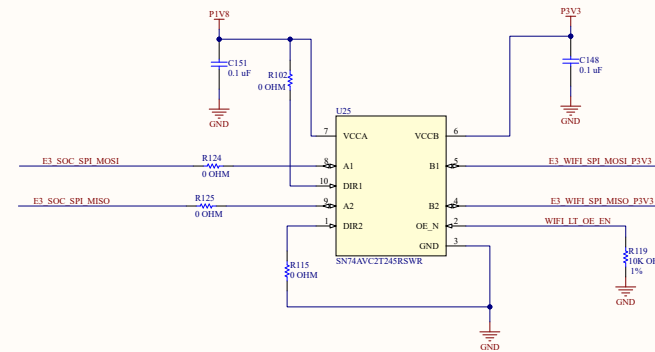
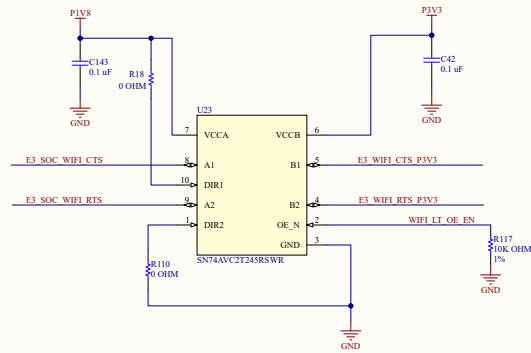
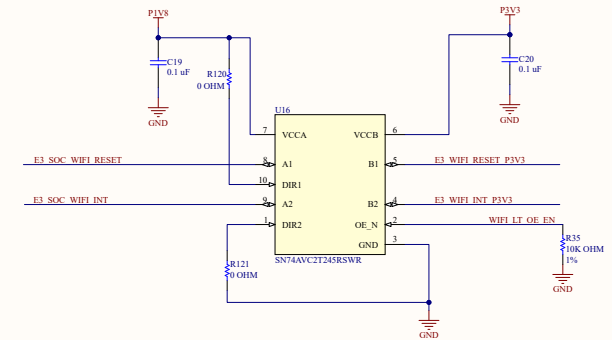
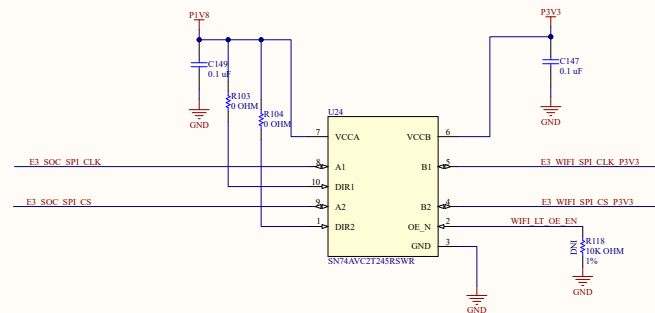
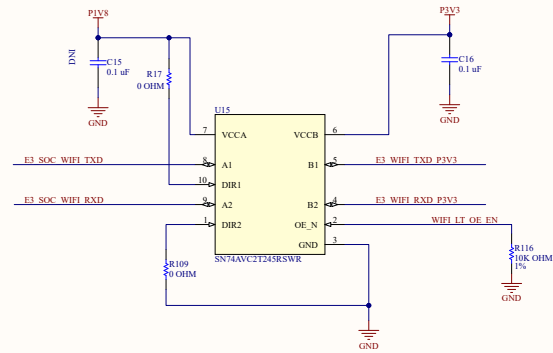
IMU SENSOR (BMI323)



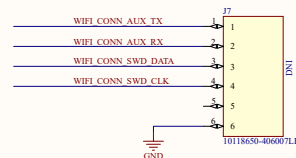
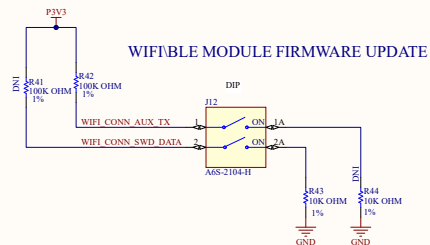
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CAGE CODE		DRAWING NUMBER	
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SIZE	Sheet	Total	REVISION
B	16	23	B.6



LEVEL TRANSLATORS



WIFI MODULE DEBUG CONNECTOR



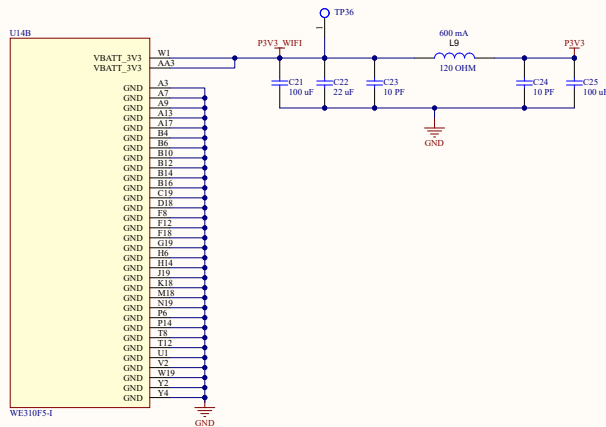
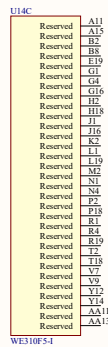
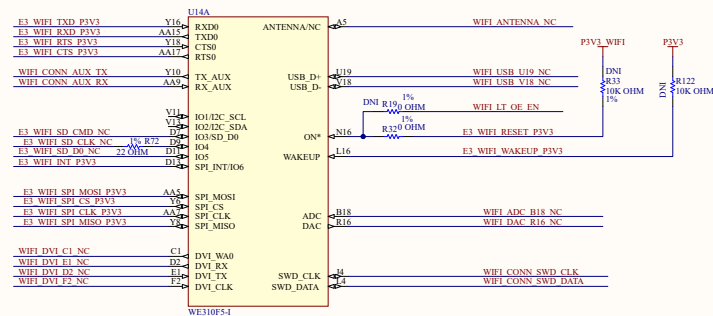
AUX_TX	LOW	PROGRAMMING MODE
	HIGH	RUN MODE(DEFAULT)

SWD_DATA	LOW	BOOTSTRAP PIN
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DRAWING TITLE AI_ML_APP_KIT				
CAGE CODE		DRAWING NUMBER 220-00501-B		
SIZE B	Sheet 17	Total 23	REVISION B.6	

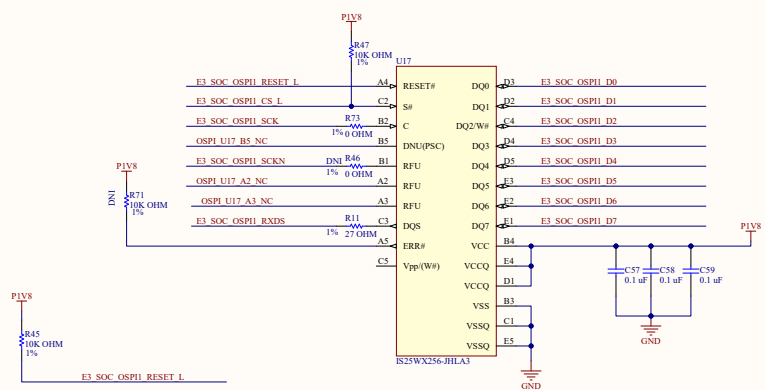
WIFI_BLE_MODULE



CUSTOMER			
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CAGE CODE		DRAWING NUMBER	
		220-00501-B	
SIZE	Sheet	Total	REVISION
B	18	23	B.6



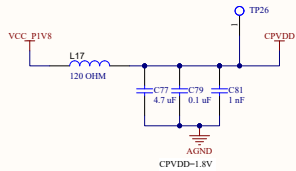
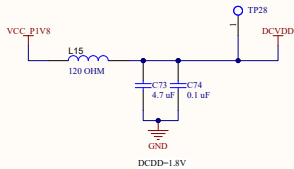
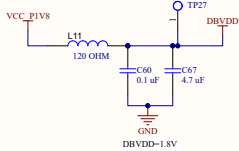
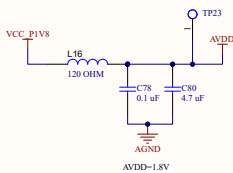
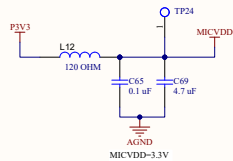
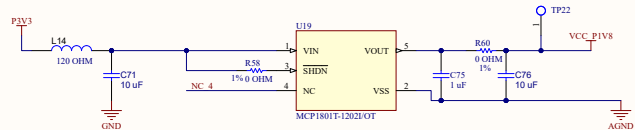
OSPI FLASH



CUSTOMER			
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AI_ML_APP_KIT			
CAGE CODE		DRAWING NUMBER	
		220-00501-B	
SIZE	Sheet	Total	REVISION
B	19	23	B.6



AUDIO_CODEC



CUSTOMER
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ALIF_SEMICONDUCTOR

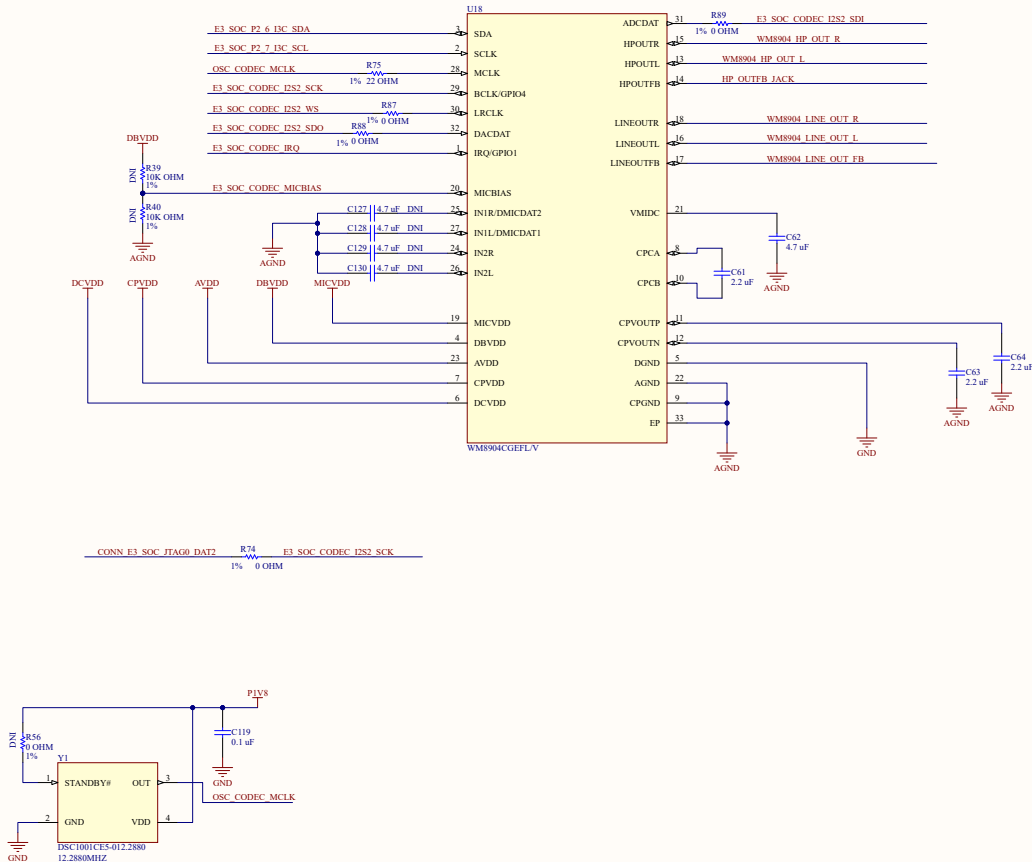
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AI_ML_APP_KIT

CAGE CODE
DRAWING NUMBER
220-00501-B

TESSOLVE
A Hero Electronix Venture

SIZE
B
Sheet
20
Total
23
REVISION
B.6

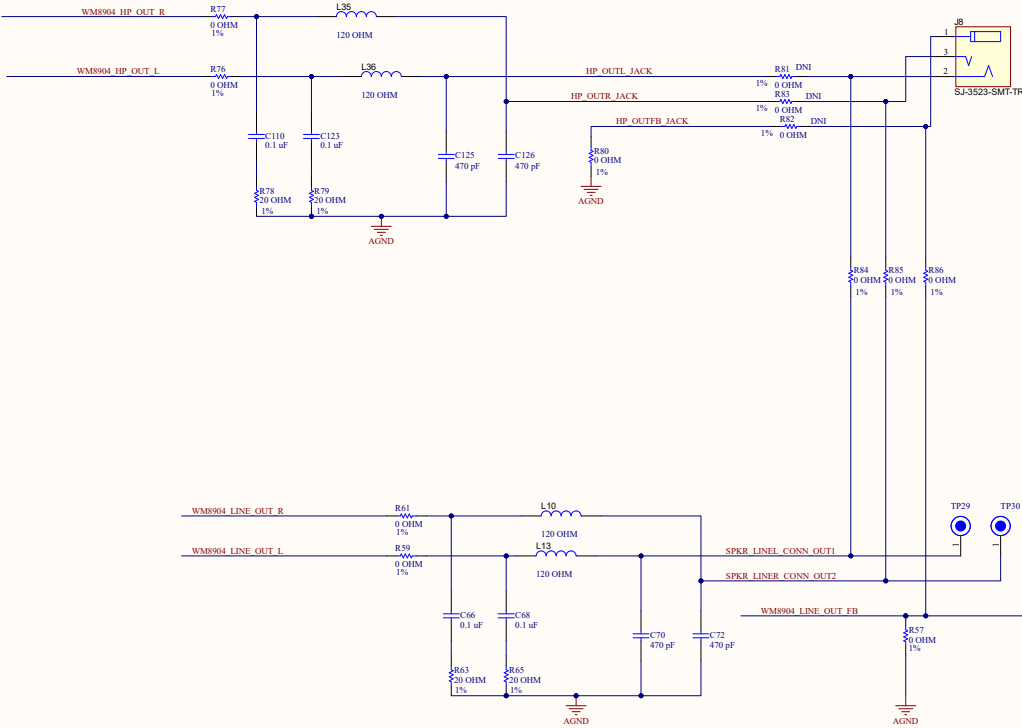
AUDIO CODEC



 CUSTOMER			
DRAWING TITLE AI_ML_APP_KIT			
CAGE CODE		DRAWING NUMBER 220-00501-B	
SIZE B	Sheet 21	Total 23	REVISION B.6



SPEAKER AND HEAD PHONE JACK



CUSTOMER
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ALIF_SEMICONDUCTOR

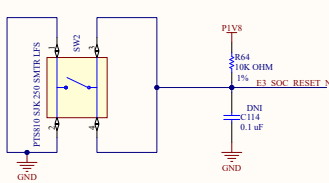
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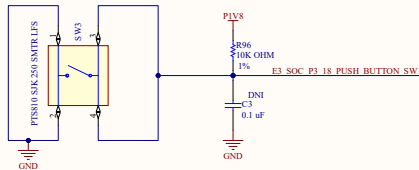


SIZE B	Sheet 22	Total 23	REVISION B.6
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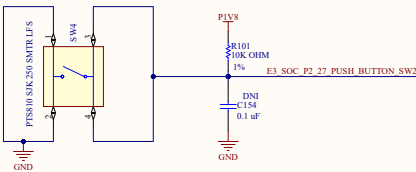
RESET SWITCH



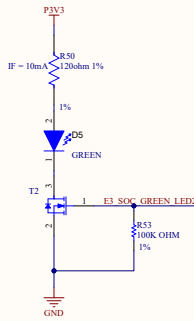
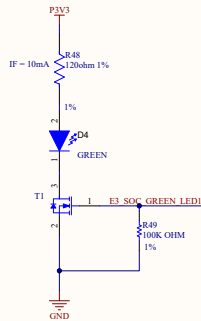
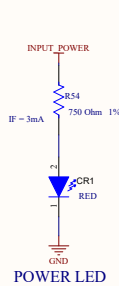
GPIO SWITCH1



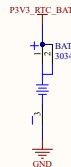
GPIO SWITCH2



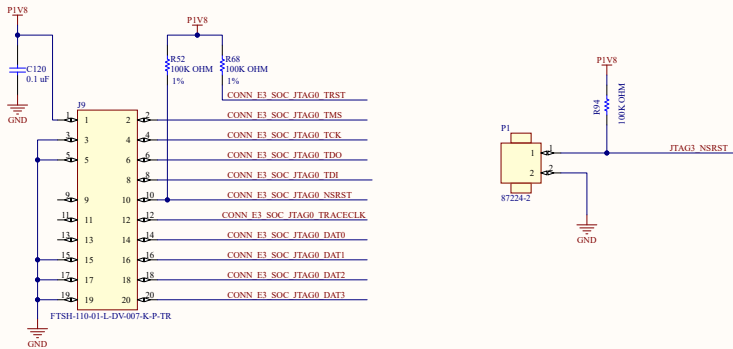
POWER LED AND RTC BATTERY CONNECTOR



BATTERY HOLDER



JTAG HEADER



CUSTOMER			
		ALIF_SEMICONDUCTOR	
DRAWING TITLE			
AI_ML_APP_KIT			
CAGE CODE		DRAWING NUMBER	
		220-00501-B	
SIZE	Sheet	Total	REVISION
B	23	23	B.6

