

# CY8CKIT-062S2-AI PSoC™ 6 AI Evaluation Board

CONTENTS	
PAGE	DESCRIPTION
01	Title, Table of Contents & Drawing Numbers
02	Function Block Diagram
03	Power Block Diagram
04	USB and Battery Power Supply
05	Regulated Voltage Supply
06	KitProg3 Interface
07	PSoC™ 6 Power
08	PSoC™ 6 Signals
09	On-board Peripherals
10	Sensors and Accessories
11	QSPI Memory and RADAR Interface
12	WiFi / BLE Module Interface
13	Addon board interface
14	Revision History

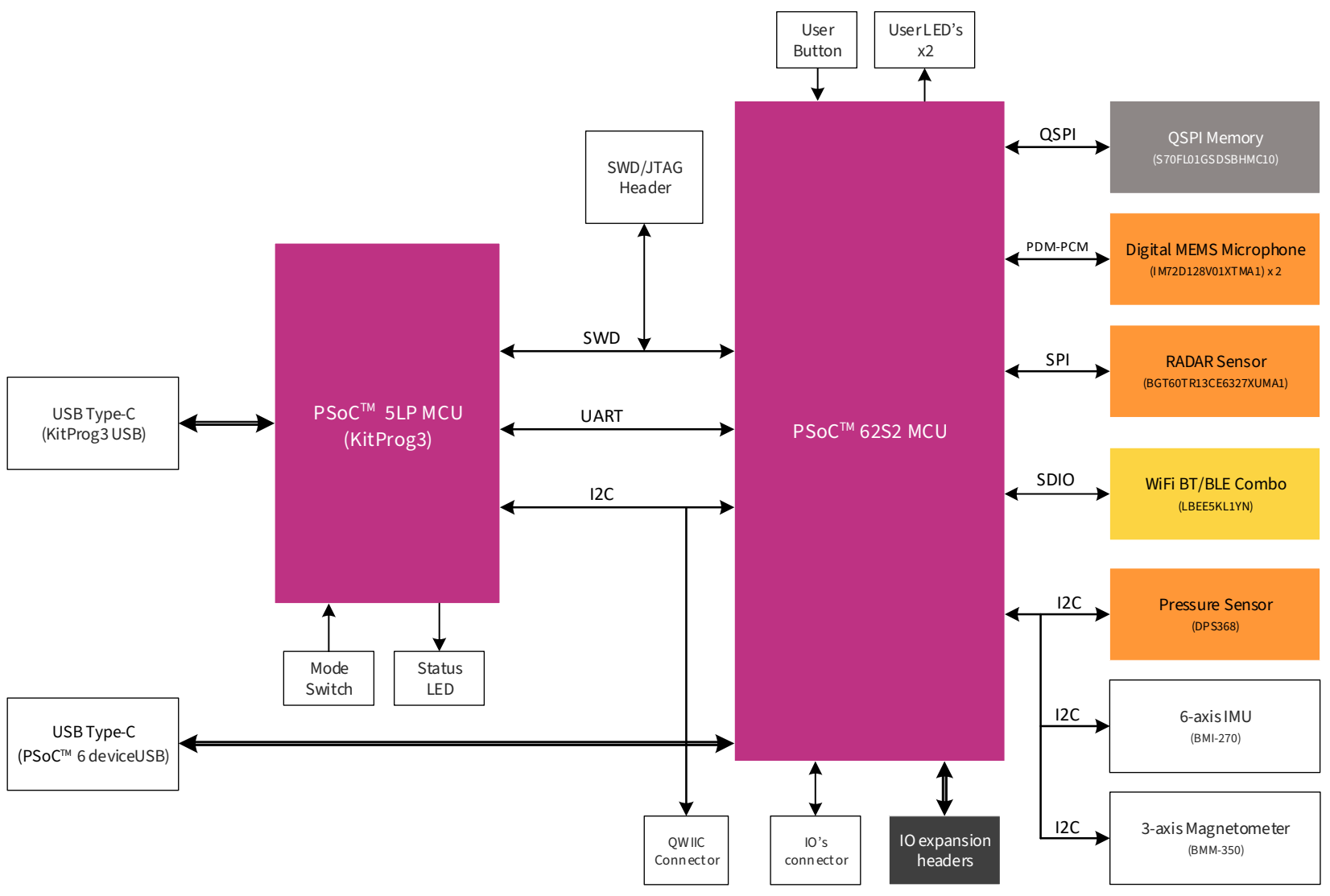
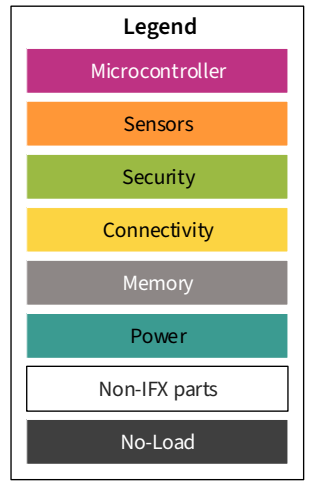
Drawing Numbers	
PCBA	121-60699-01
PCB	600-60699-01
FAB DRW	610-60699-01
ASSY DRW	620-60699-01
SCH DRW	630-60699-01

**Legal Disclaimer :**  
 The information given in this document shall in no event be regarded as a guarantee of conditions or characteristics. With respect to any examples or hints given herein, any typical values stated herein and/or any information regarding the application of the device, Infineon Technologies hereby disclaims any and all warranties and liabilities of any kind, including without limitation, warranties of non-infringement of intellectual property rights of any third party.



<b>SCH Title : PSoC™ 6 AI Evaluation Board</b>				
<b>Page Title: Title Page</b>				
Size	Document Number	Drawn By	Approved By	Rev
A4	<b>630-60699-01</b>	<b>Vamsi</b>	<b>Ronak</b>	<b>03</b>
Date:	Monday, March 11, 2024		Sheet	1 of 14

# Functional Block Diagram

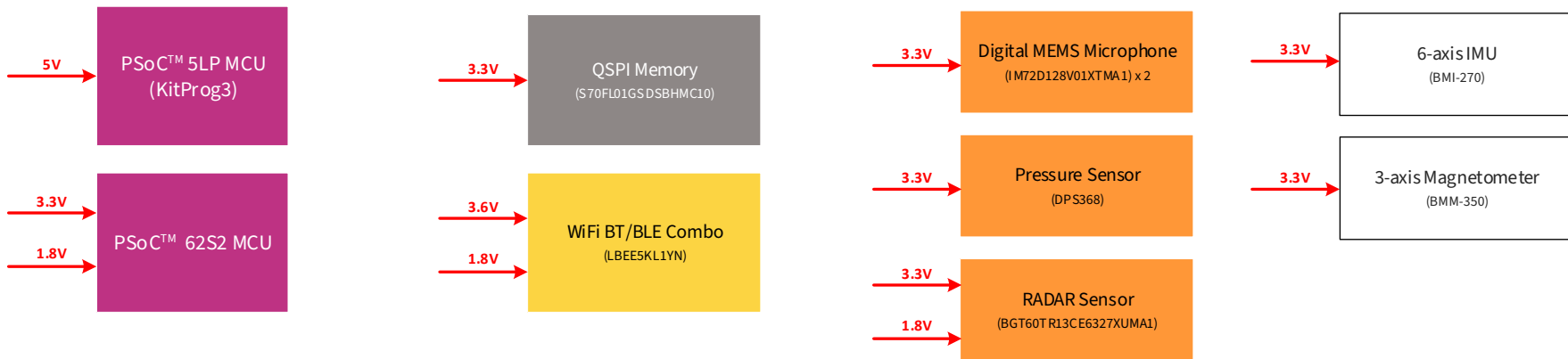
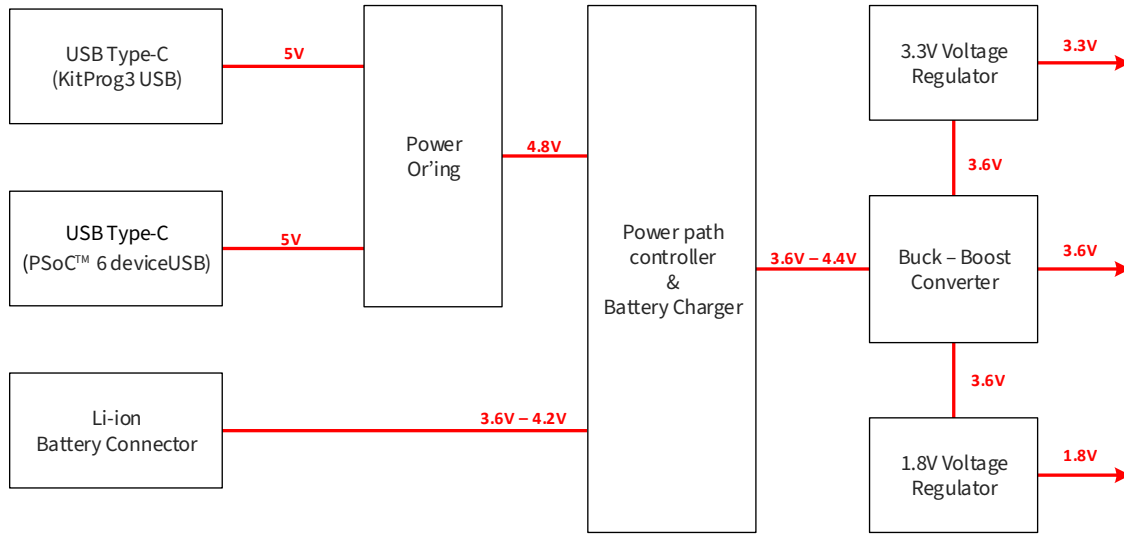
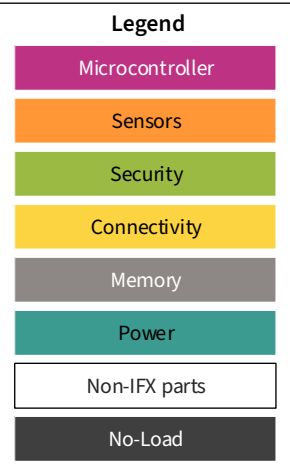


**Legal Disclaimer :**  
 The information given in this document shall in no event be regarded as a guarantee of conditions or characteristics. With respect to any examples or hints given herein, any typical values stated herein and/or any information regarding the application of the device, Infineon Technologies hereby disclaims any and all warranties and liabilities of any kind, including without limitation, warranties of non-infringement of intellectual property rights of any third party.



<b>SCH Title : PSoC™ 6 AI Evaluation Board</b>				
<b>Page Title : Functional Block Diagram</b>				
Size <b>A4</b>	Document Number <b>630-60699-01</b>	Drawn By <b>Vamsi</b>	Approved By <b>Ronak</b>	Rev <b>03</b>
Date: Wednesday, April 03, 2024	Sheet <b>2</b> of <b>14</b>			

# Power Block Diagram



**Legal Disclaimer :**  
 The information given in this document shall in no event be regarded as a guarantee of conditions or characteristics. With respect to any examples or hints given herein, any typical values stated herein and/or any information regarding the application of the device, Infineon Technologies hereby disclaims any and all warranties and liabilities of any kind, including without limitation, warranties of non-infringement of intellectual property rights of any third party.

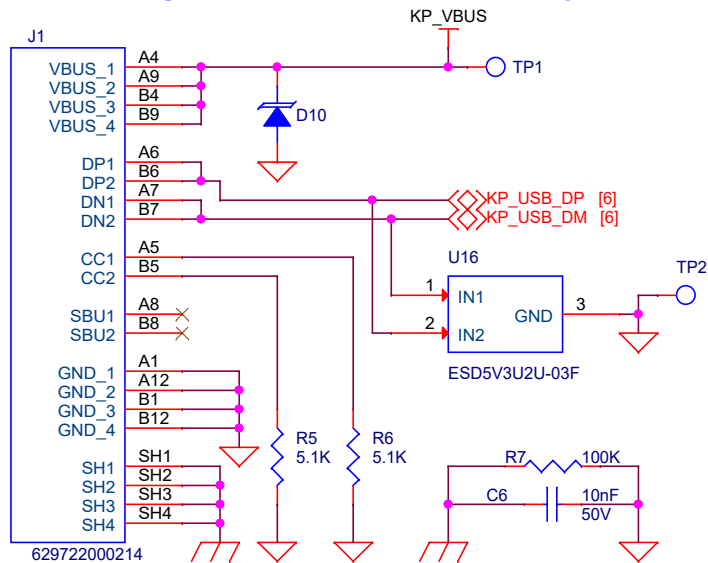


SCH Title : PSoC™ 6 AI Evaluation Board

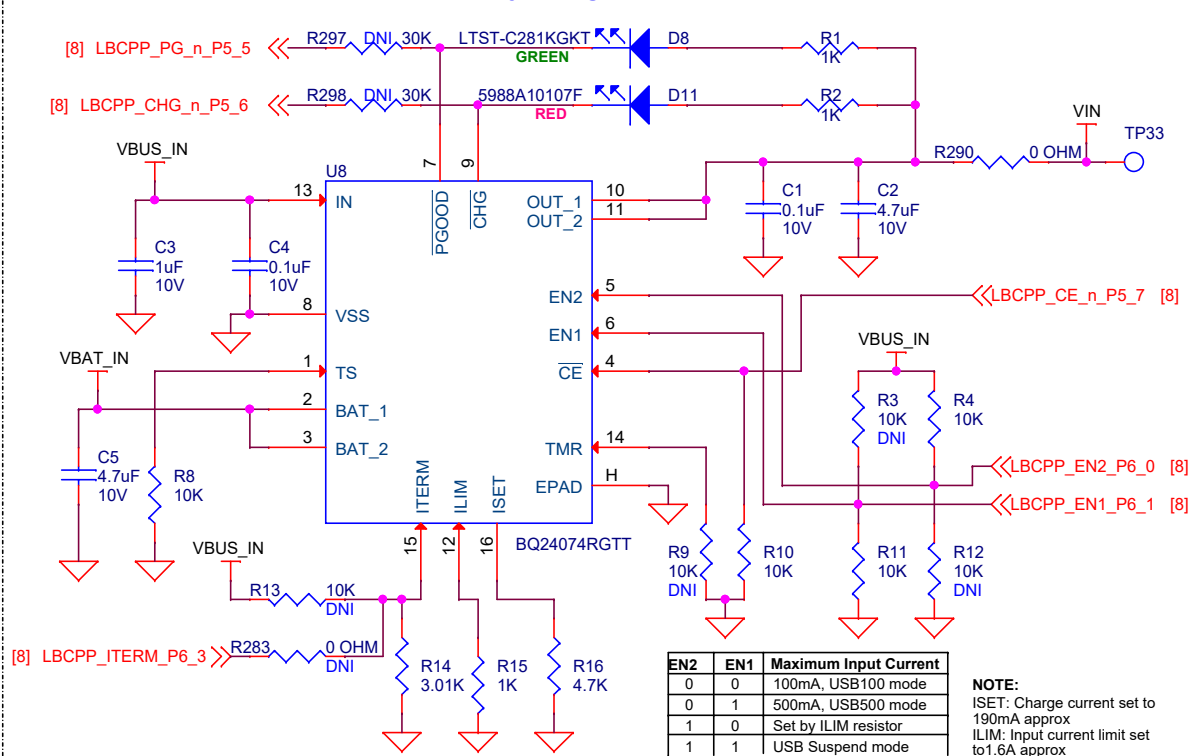
Page Title: Power Block Diagram

Size A4	Document Number 630-60699-01	Drawn By Vamsi	Approved By Ronak	Rev 03
Date: Friday, April 12, 2024	Sheet 3 of 14			

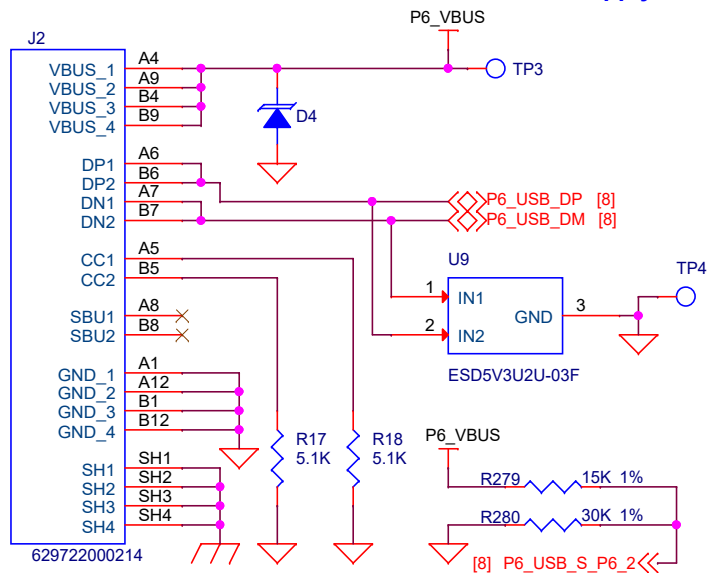
### KitProg3 USB Interface and Power Supply



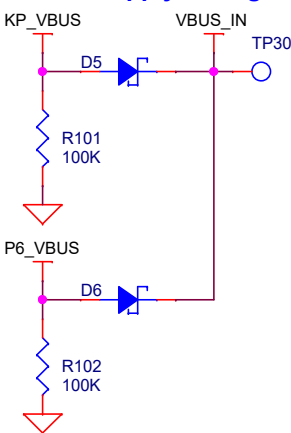
### Li-ion Battery Charger and Power path



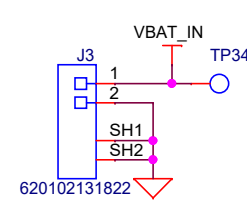
### PSoC™ 6 USB Device Interface and Power Supply



### Power Supply Or'ing



### Li-ion Battery Connector



**Legal Disclaimer :**

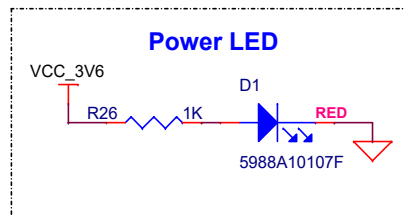
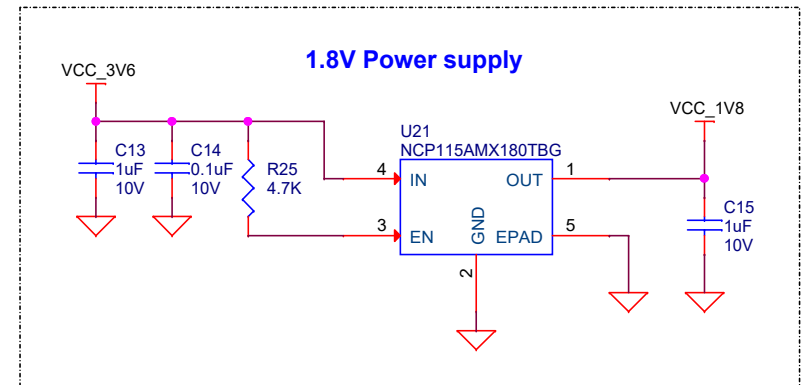
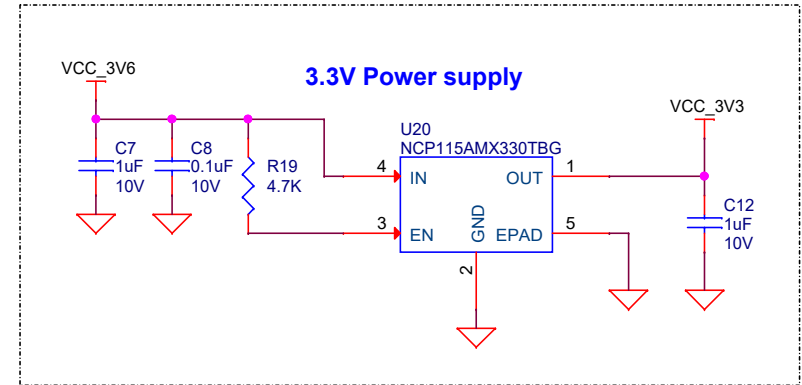
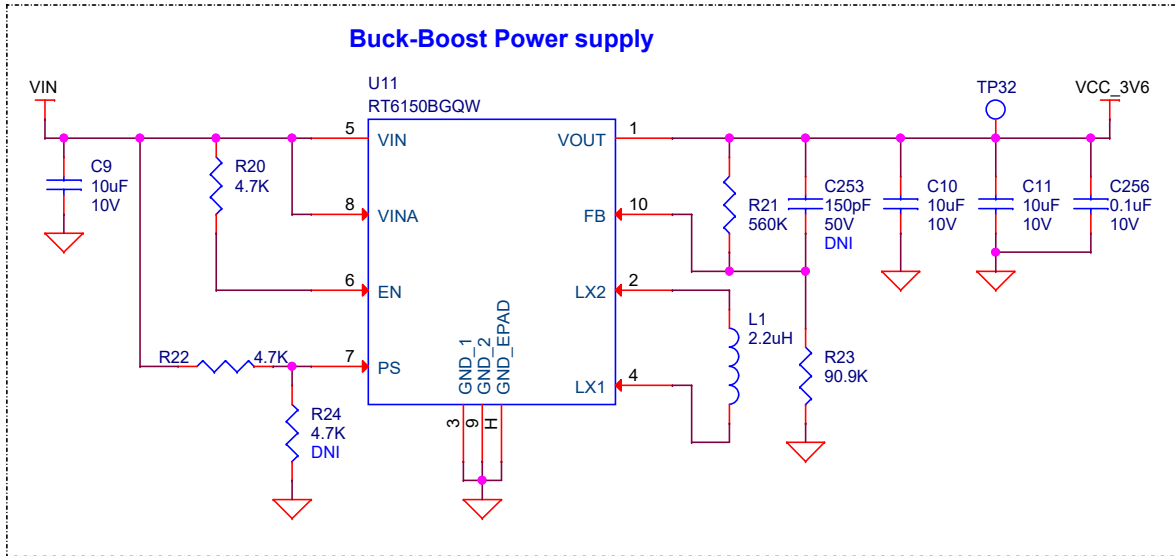
The information given in this document shall in no event be regarded as a guarantee of conditions or characteristics. With respect to any examples or hints given herein, any typical values stated herein and/or any information regarding the application of the device, Infineon Technologies hereby disclaims any and all warranties and liabilities of any kind, including without limitation, warranties of non-infringement of intellectual property rights of any third party.



**SCH Title : PSoC™ 6 AI Evaluation Board**

**Page Title : USB and Battery Power Supply Input**

Size	Document Number	Drawn By	Approved By	Rev
A4	630-60699-01	Vamsi	Ronak	03
Date:	Monday, March 11, 2024		Sheet	4 of 14



**Legal Disclaimer :**  
 The information given in this document shall in no event be regarded as a guarantee of conditions or characteristics. With respect to any examples or hints given herein, any typical values stated herein and/or any information regarding the application of the device, Infineon Technologies hereby disclaims any and all warranties and liabilities of any kind, including without limitation, warranties of non-infringement of intellectual property rights of any third party.

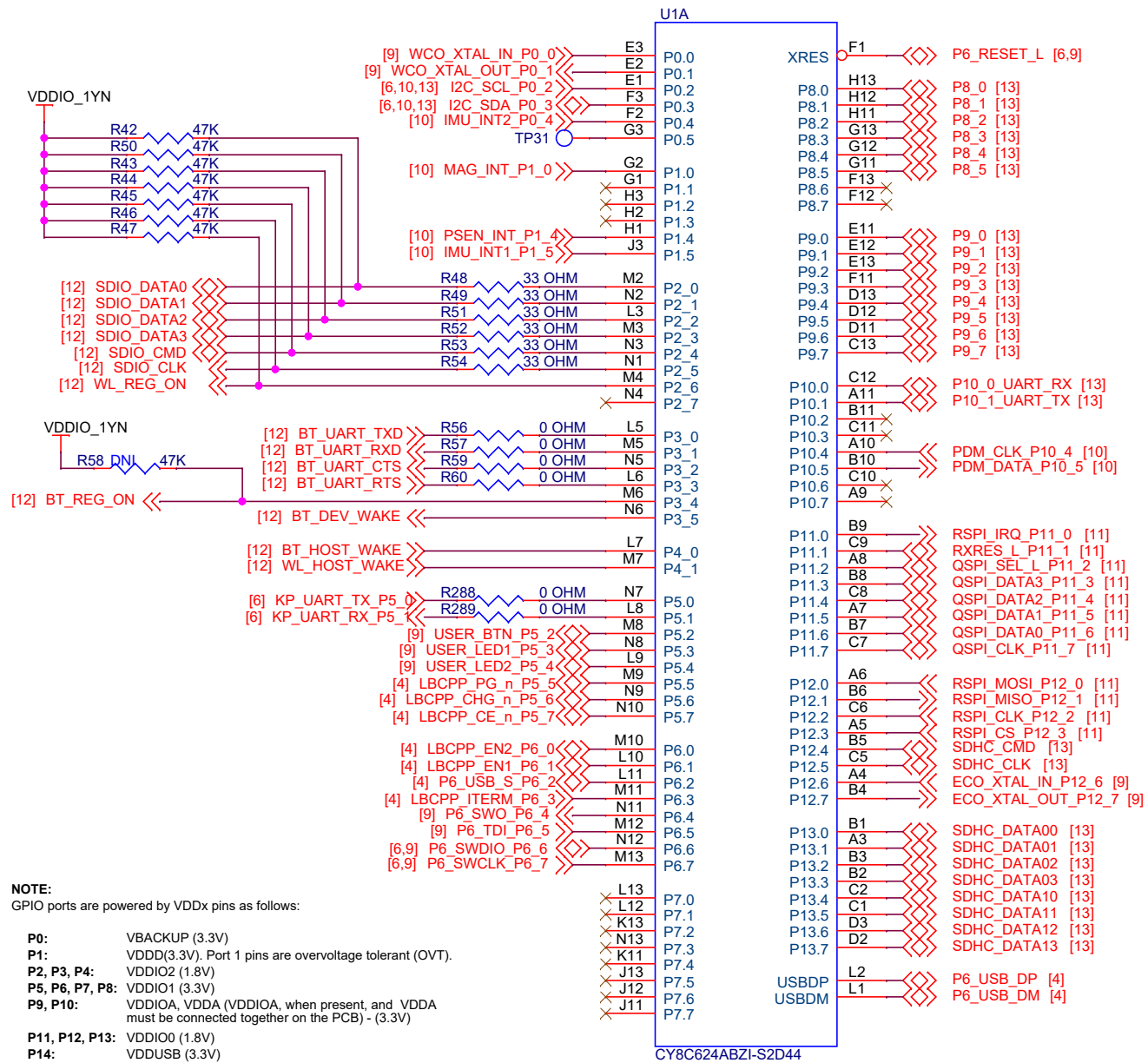


<b>SCH Title : PSoC™ 6 AI Evaluation Board</b>				
<b>Page Title: Regulated Voltage Supply</b>				
Size A4	Document Number 630-60699-01	Drawn By Vamsi	Approved By Ronak	Rev 03
Date:	Monday, March 11, 2024		Sheet	5 of 14





### PSoC™ 6 I/O Signals



**NOTE:**  
GPIO ports are powered by VDDx pins as follows:

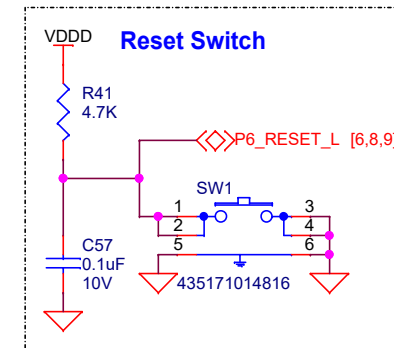
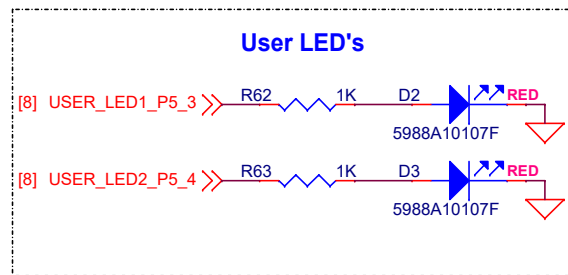
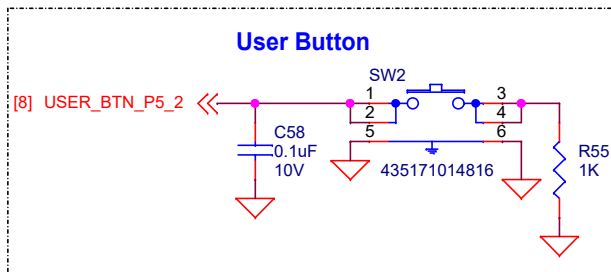
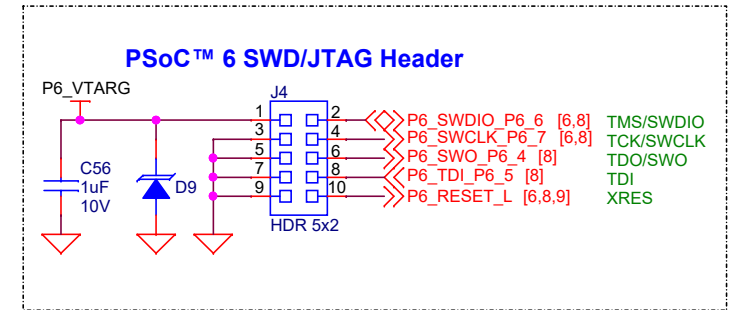
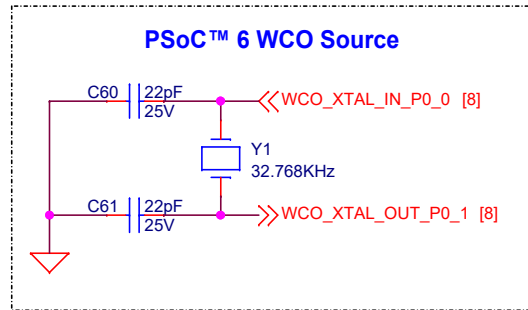
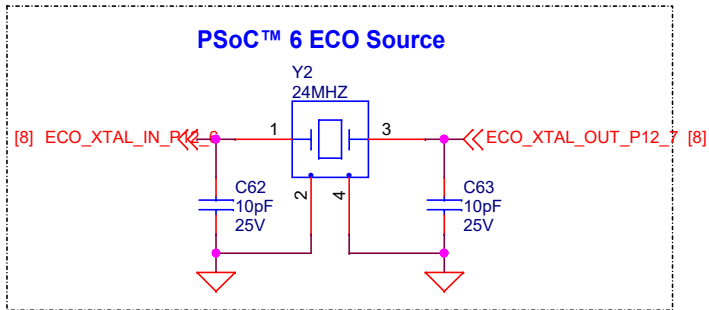
- P0:** VBACKUP (3.3V)
- P1:** VDDD(3.3V). Port 1 pins are overvoltage tolerant (OVT).
- P2, P3, P4:** VDDIO2 (1.8V)
- P5, P6, P7, P8:** VDDIO1 (3.3V)
- P9, P10:** VDDIOA, VDDA (VDDIOA, when present, and VDDA must be connected together on the PCB) - (3.3V)
- P11, P12, P13:** VDDIO0 (1.8V)
- P14:** VDDUSB (3.3V)

**Legal Disclaimer :**  
The information given in this document shall in no event be regarded as a guarantee of conditions or characteristics. With respect to any examples or hints given herein, any typical values stated herein and/or any information regarding the application of the device, Infineon Technologies hereby disclaims any and all warranties and liabilities of any kind, including without limitation, warranties of non-infringement of intellectual property rights of any third party.



<b>SCH Title : PSoC™ 6 AI Evaluation Board</b>				
<b>Page Title : PSoC™ 6 I/O Signals</b>				
Size	Document Number	Drawn By	Approved By	Rev
A4	630-60699-01	Vamsi	Ronak	03
Date:	Monday, March 11, 2024		Sheet	8 of 14





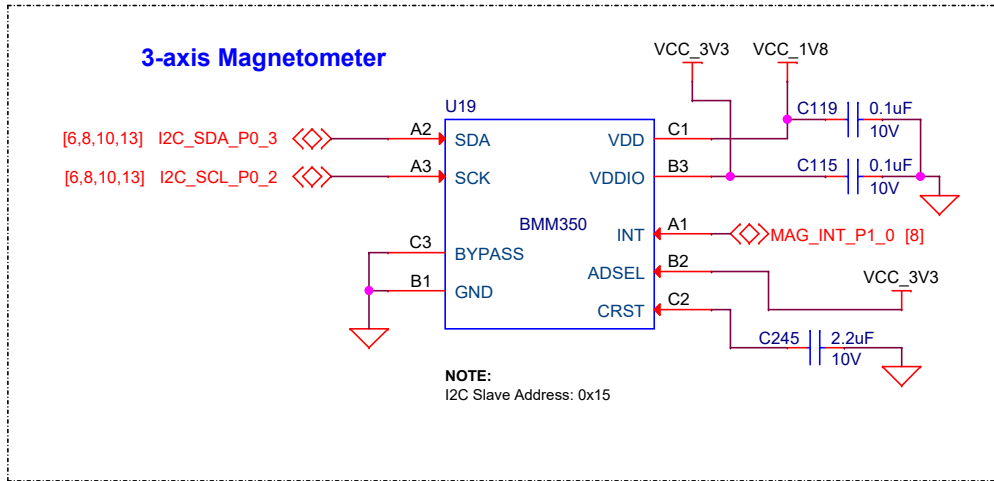
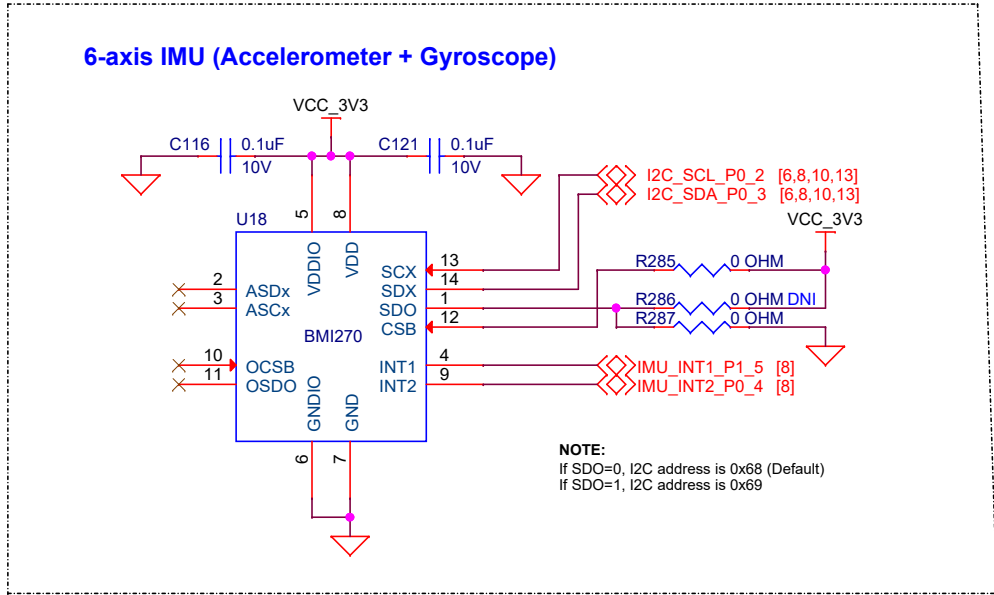
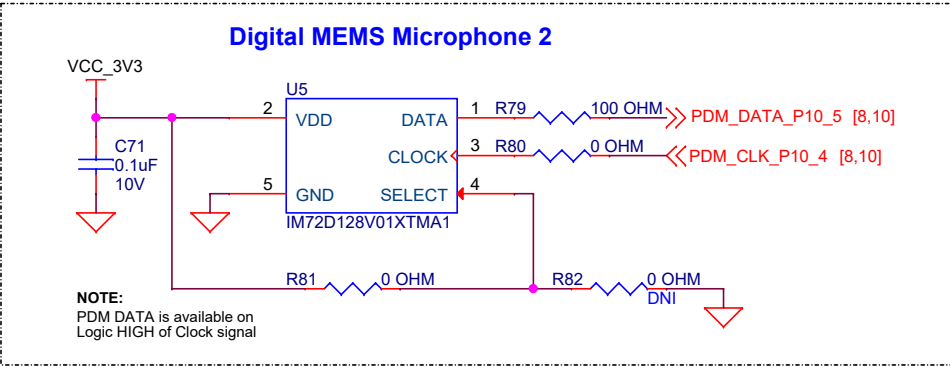
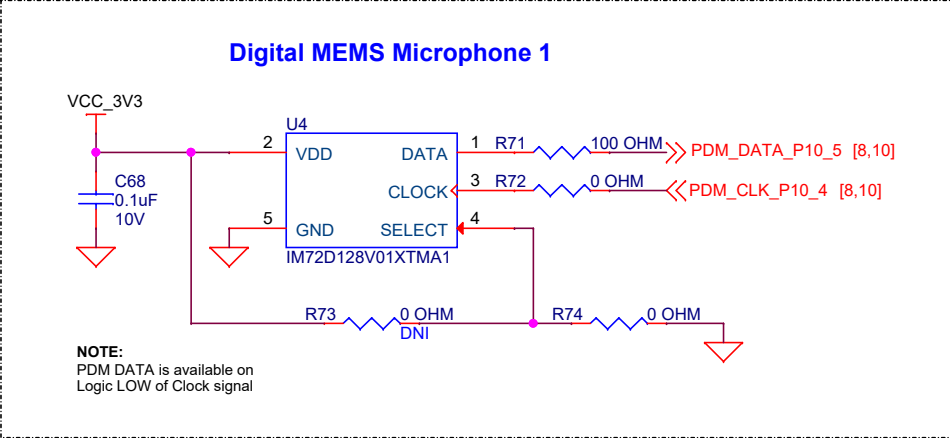
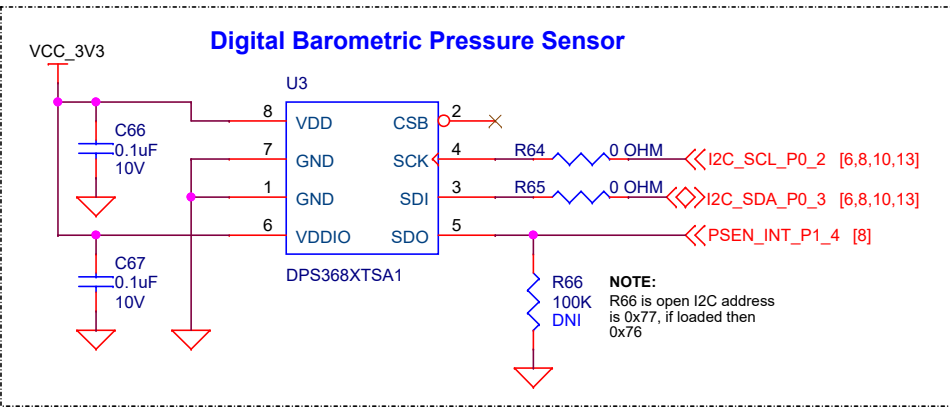
**Legal Disclaimer :**  
The information given in this document shall in no event be regarded as a guarantee of conditions or characteristics. With respect to any examples or hints given herein, any typical values stated herein and/or any information regarding the application of the device, Infineon Technologies hereby disclaims any and all warranties and liabilities of any kind, including without limitation, warranties of non-infringement of intellectual property rights of any third party.



**SCH Title : PSoC™ 6 AI Evaluation Board**

**Page Title: On-board Peripherals**

Size A4	Document Number 630-60699-01	Drawn By Vamsi	Approved By Ronak	Rev 03
Date:	Monday, March 11, 2024		Sheet	9 of 14

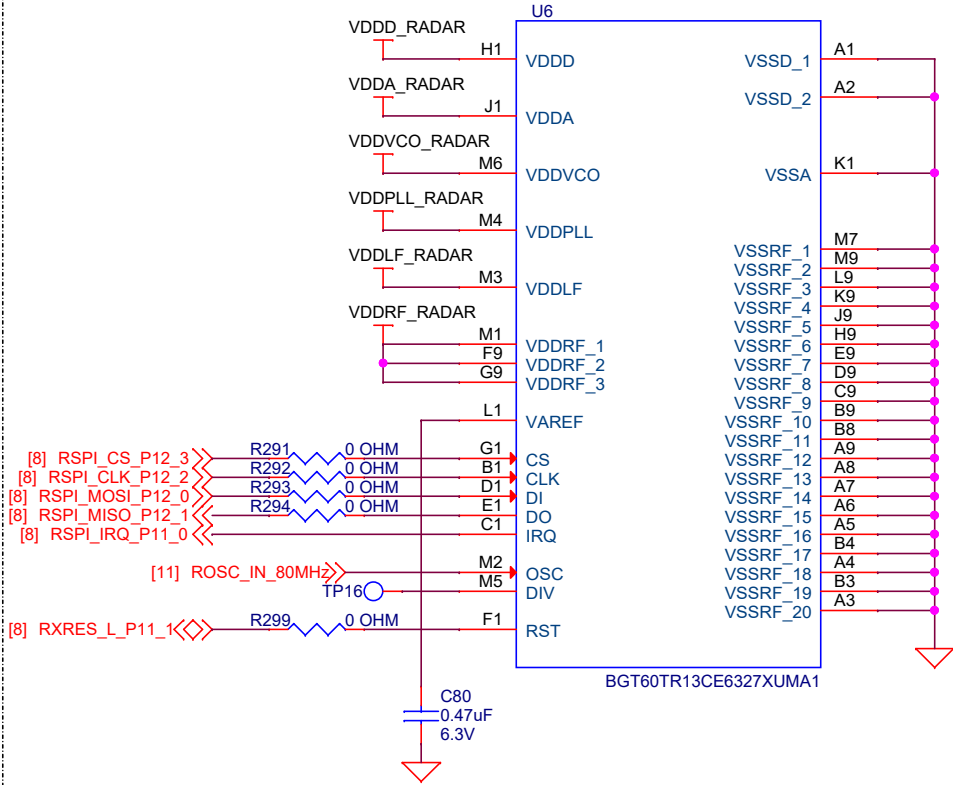


**Legal Disclaimer :**  
The information given in this document shall in no event be regarded as a guarantee of conditions or characteristics. With respect to any examples or hints given herein, any typical values stated herein and/or any information regarding the application of the device, Infineon Technologies hereby disclaims any and all warranties and liabilities of any kind, including without limitation, warranties of non-infringement of intellectual property rights of any third party.

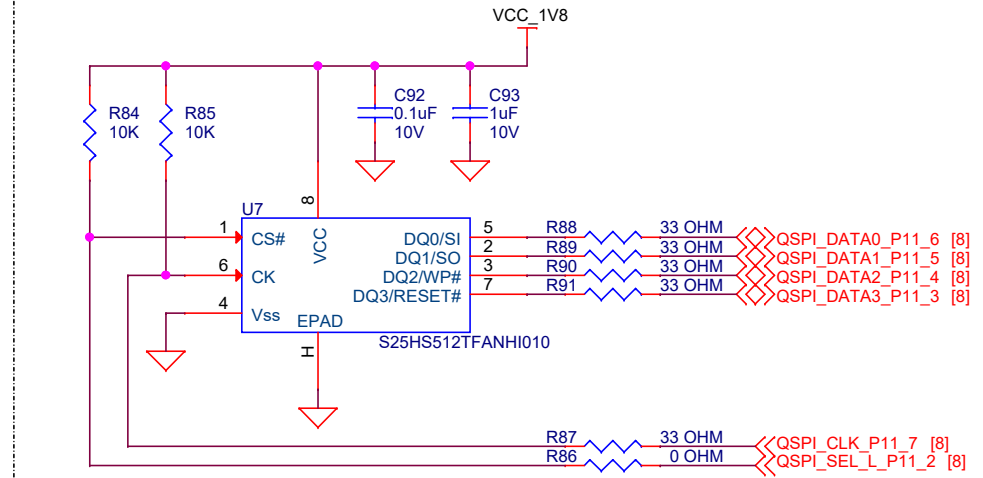


<b>SCH Title : PSoC™ 6 AI Evaluation Board</b>				
<b>Page Title: IMU, Magnetometer, DMIC's, Pressure sensor</b>				
Size	Document Number	Drawn By	Approved By	Rev
A4	630-60699-01	Vamsi	Ronak	03
Date:	Monday, March 11, 2024		Sheet	10 of 14

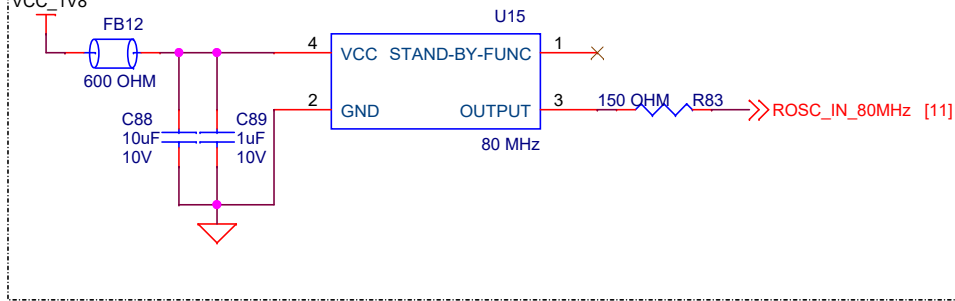
### RADAR Sensor



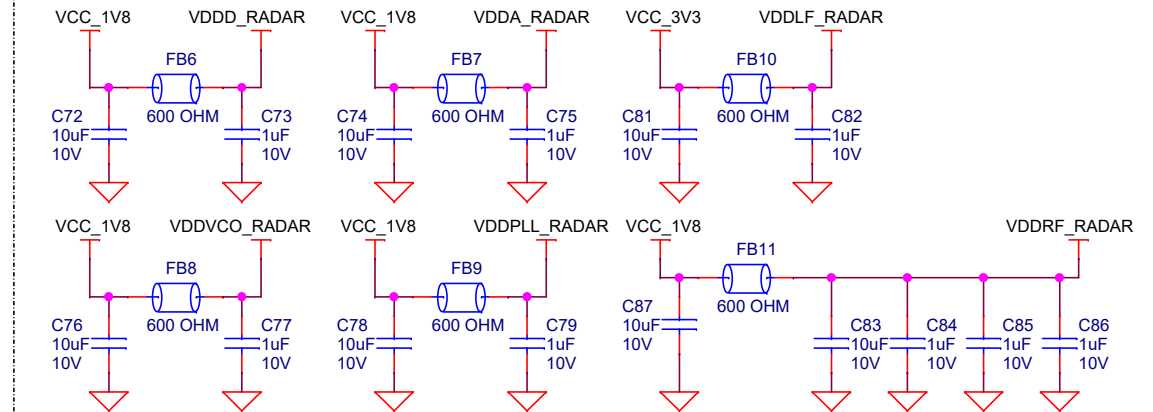
### QSPI Memory interface



### Crystal Oscillator - RADAR Clock Source



### Supply for RADAR Sensor



**Legal Disclaimer :**

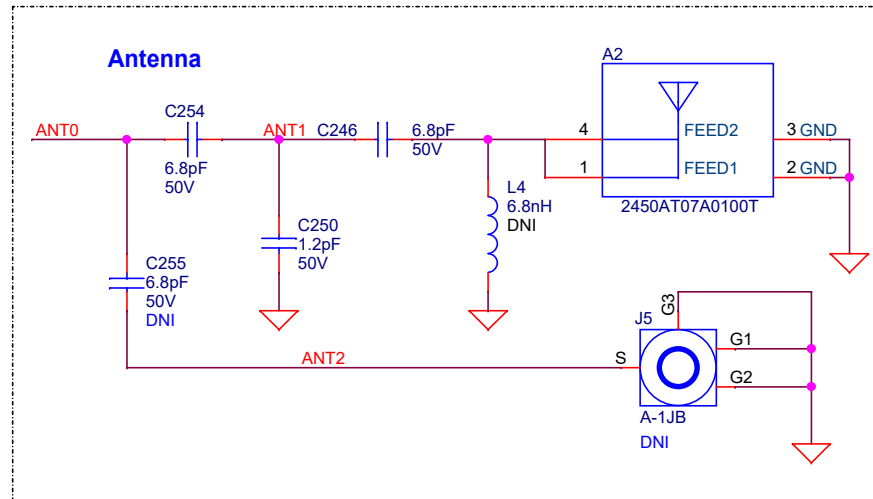
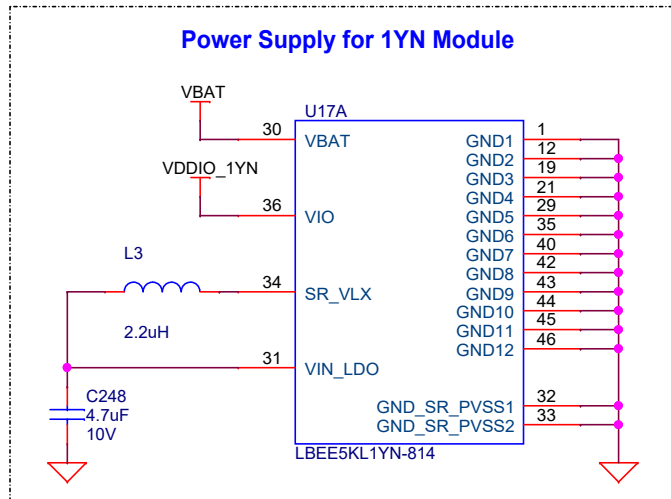
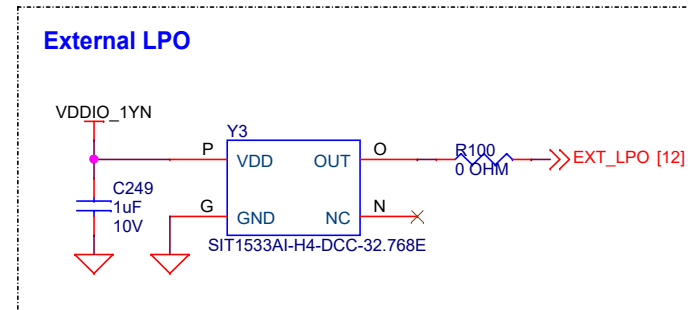
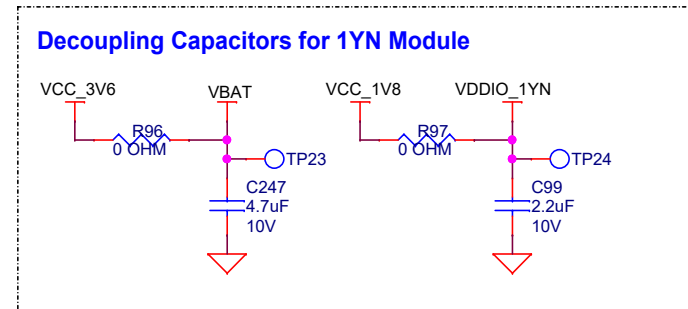
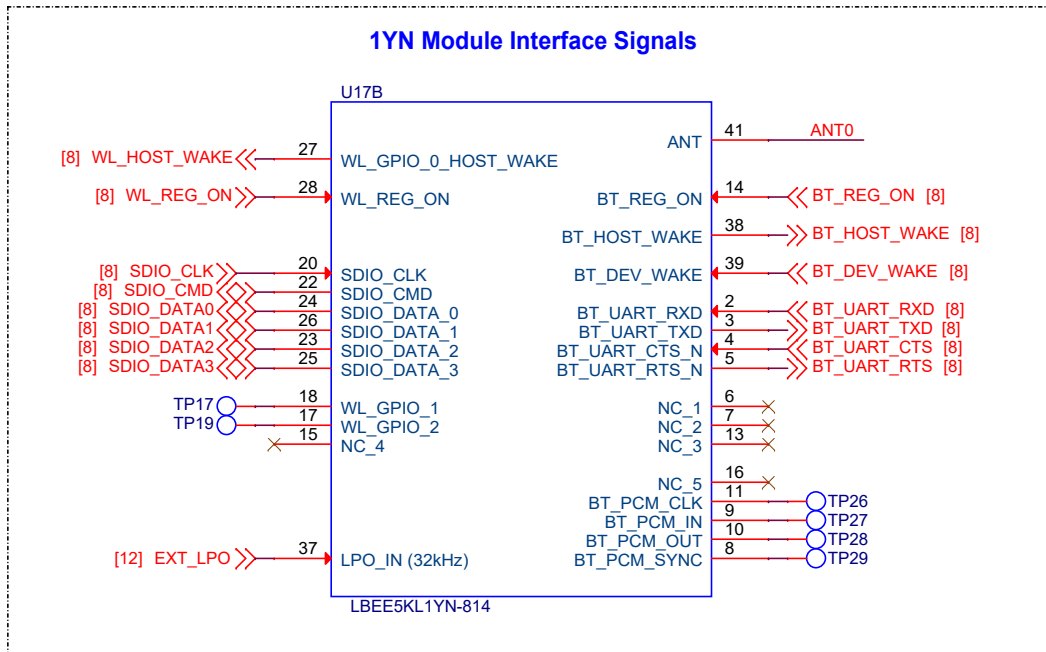
The information given in this document shall in no event be regarded as a guarantee of conditions or characteristics. With respect to any examples or hints given herein, any typical values stated herein and/or any information regarding the application of the device, Infineon Technologies hereby disclaims any and all warranties and liabilities of any kind, including without limitation, warranties of non-infringement of intellectual property rights of any third party.



**SCH Title : PSoC™ 6 AI Evaluation Board**

**Page Title : QSPI Memory, RADAR Sensor interface**

Size	Document Number	Drawn By	Approved By	Rev
A4	630-60699-01	Vamsi	Ronak	03
Date:	Monday, March 11, 2024		Sheet	11 of 14



**Legal Disclaimer :**  
 The information given in this document shall in no event be regarded as a guarantee of conditions or characteristics. With respect to any examples or hints given herein, any typical values stated herein and/or any information regarding the application of the device, Infineon Technologies hereby disclaims any and all warranties and liabilities of any kind, including without limitation, warranties of non-infringement of intellectual property rights of any third party.



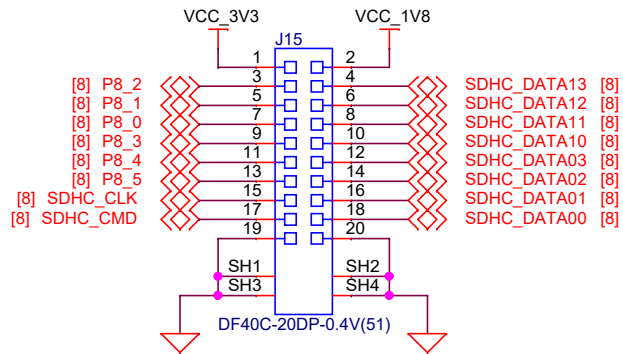
**SCH Title : PSoC™ 6 AI Evaluation Board**

**Page Title : 1YN Module Interface (WiFi & BLE)**

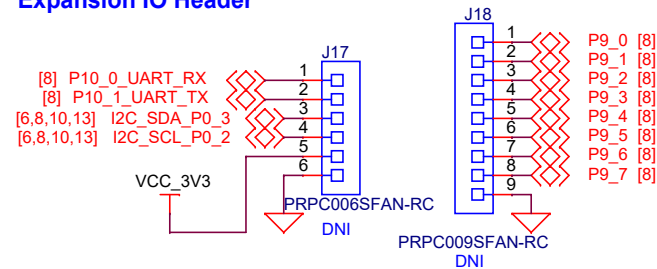
Size	Document Number	Drawn By	Approved By	Rev
A4	630-60699-01	Vamsi	Ronak	03

Date: Monday, March 11, 2024 Sheet 12 of 14

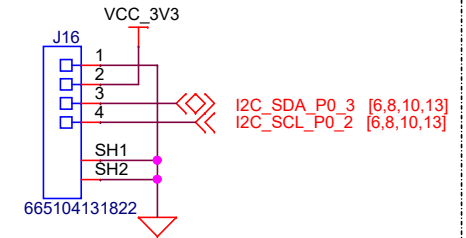
### Expansion IO connector



### Expansion IO Header



### QWIIIC interface



#### Legal Disclaimer :

The information given in this document shall in no event be regarded as a guarantee of conditions or characteristics. With respect to any examples or hints given herein, any typical values stated herein and/or any information regarding the application of the device, Infineon Technologies hereby disclaims any and all warranties and liabilities of any kind, including without limitation, warranties of non-infringement of intellectual property rights of any third party.



SCH Title : PSoC™ 6 AI Evaluation Board

Page Title : IO Expansion, QWIIIC and Headers

Size	Document Number	Drawn By	Approved By	Rev
A4	630-60699-01	Vamsi	Ronak	03
Date:	Monday, March 11, 2024		Sheet	13 of 14

## REVISION HISTORY

REV	DESCRIPTION OF CHANGE	DATE
0.01	Initial darft schematic	08-11-2023
0.02	Fixing the Open Net issues	13-11-2023
0.03	Updated QSPI memory and added IO expansion header with I2C, UART and SmartIO interface	16-11-2023
01	Initial release	06-12-2023
02	UART signals are updated for J17	06-02-2024
03	Microphone changed to IM72D series	11-03-2024

**Legal Disclaimer :**

The information given in this document shall in no event be regarded as a guarantee of conditions or characteristics. With respect to any examples or hints given herein, any typical values stated herein and/or any information regarding the application of the device, Infineon Technologies hereby disclaims any and all warranties and liabilities of any kind, including without limitation, warranties of non-infringement of intellectual property rights of any third party.



**SCH Title : PSoC™ 6 AI Evaluation Board**

**Page Title: Revision History**

Size	Document Number	Drawn By	Approved By	Rev
A4	630-60699-01	Vamsi	Ronak	03
Date:	Friday, April 19, 2024		Sheet	14 of 14