

## CY8CKIT-028-SENSE IoT sense expansion kit

CONTENTS	
PAGE	DESCRIPTION
01	Title Table, Table of Contents, Drawing Numbers
02	Functional Block Diagram
03	Audio Codec and PDM Mic Interface Schematic
04	Arduino Shield, IMU, Pressure Sensor, OLED display interface
05	Accessories
06	Revision History

### Drawing Numbers

PCBA	121-60608-01
PCB	600-60608-01
FAB DRW	610-60608-01
ASSY DRW	620-60608-01
SCH DRW	630-60608-01

#### 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.



**SCH Title : CY8CKIT-028-SENSE IoT sense expansion kit**

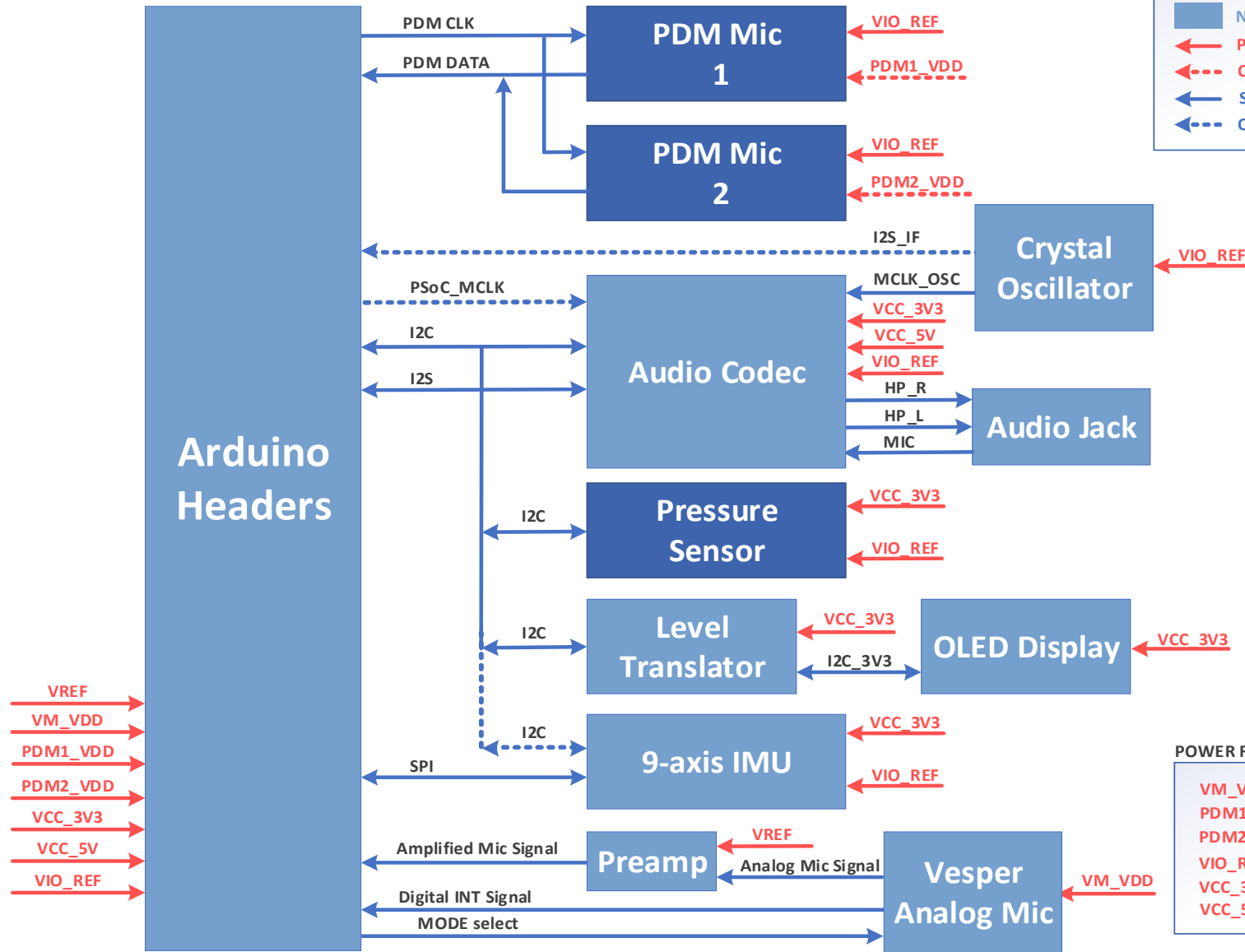
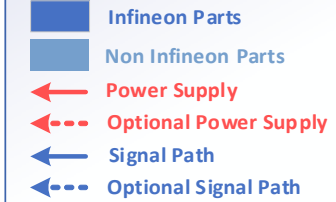
**Page Title: Title Page**

Size	Document Number	Drawn By	Approved By	Rev
A4	<b>630-60608-01</b>	<b>VAKI</b>	<b>RKAD</b>	<b>2.0</b>

Date: Friday, May 28, 2021 Sheet 1 of 7

# Functional Block Diagram

## LEGEND



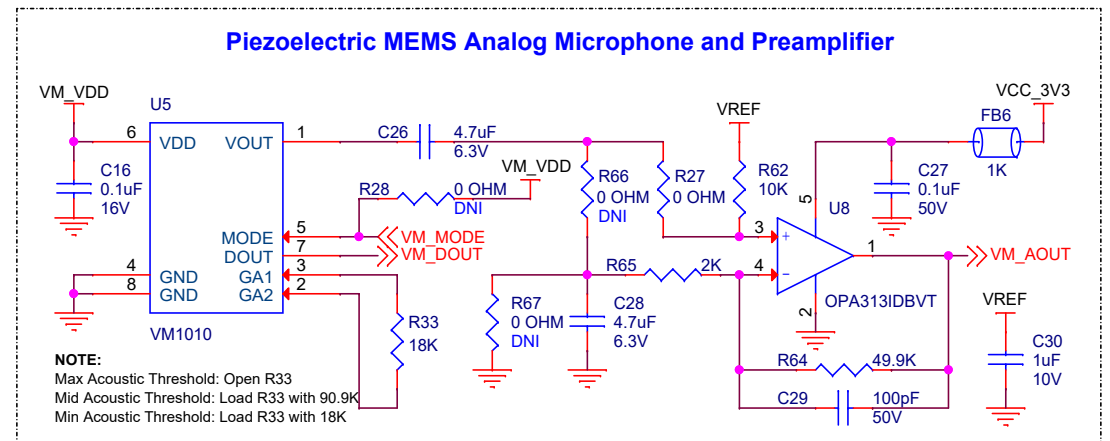
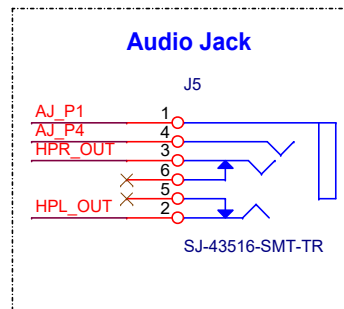
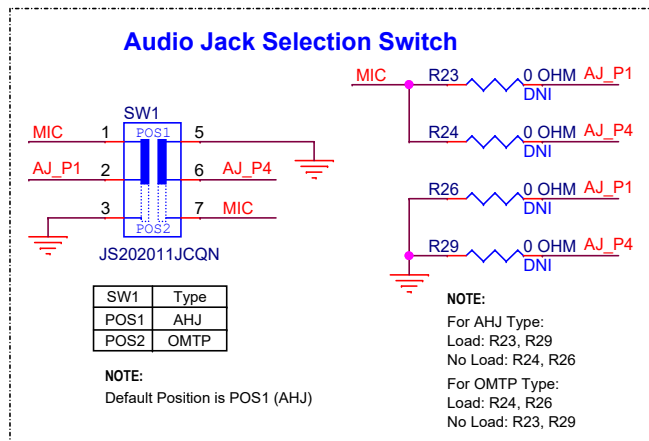
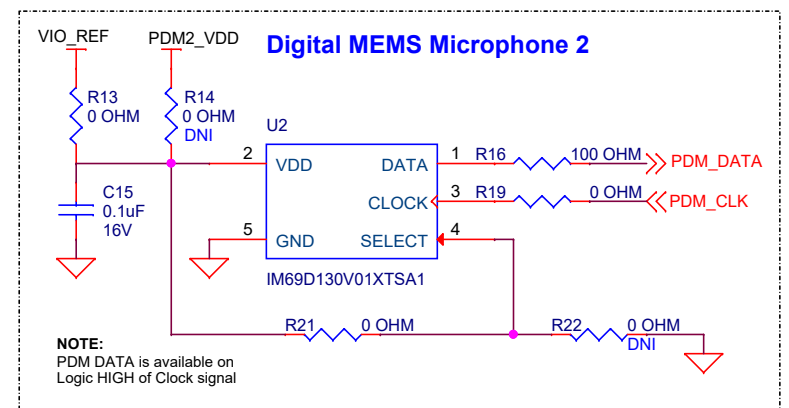
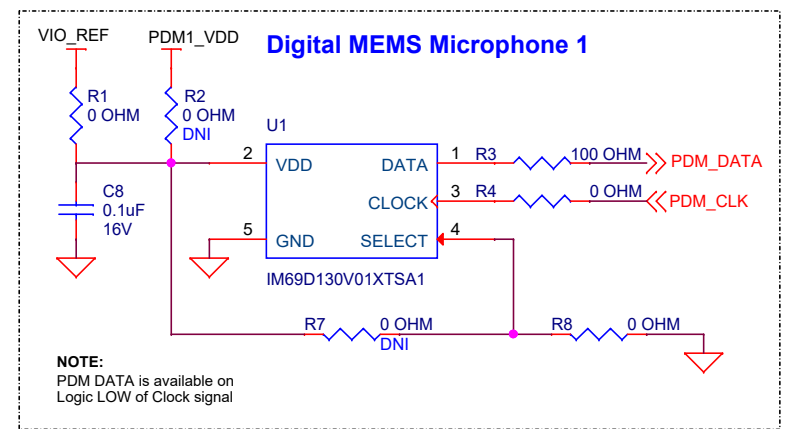
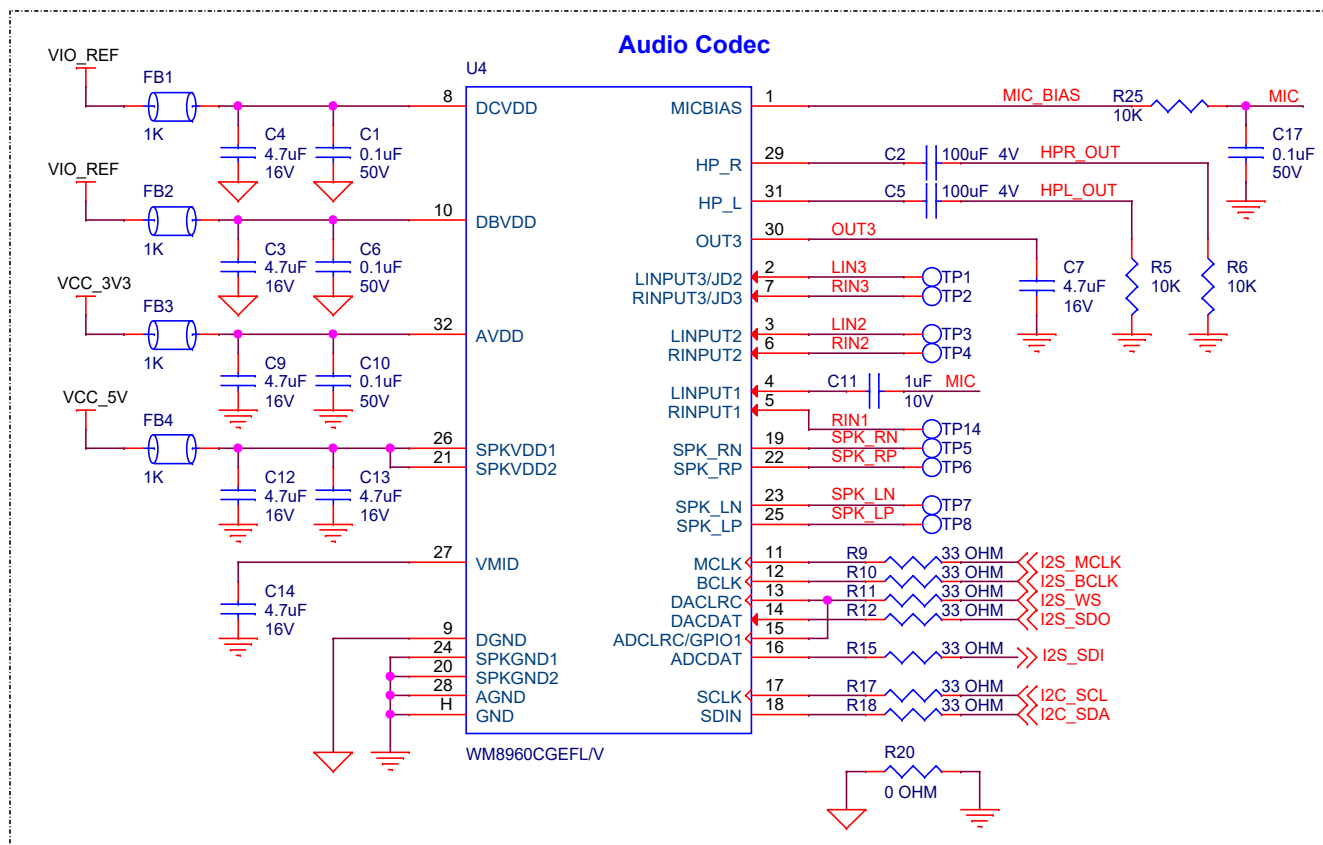
**Legal Disclaimer :**  
The information given in this document shall in no event be regarded as a guarantee of conditions or characteristics. With respect to any examples or hints given herein, any typical values stated herein and/or any information regarding the application of the device, Infineon 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 : CY8CKIT-028-SENSE IoT sense expansion kit**

**Page Title : Functional Block Diagram**

Size <b>A4</b>	Document Number <b>630-60608-01</b>	Drawn By <b>VAKI</b>	Approved By <b>RKAD</b>	Rev <b>2.0</b>
Date: Friday, May 28, 2021	Sheet <b>2</b> of <b>7</b>			



**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.



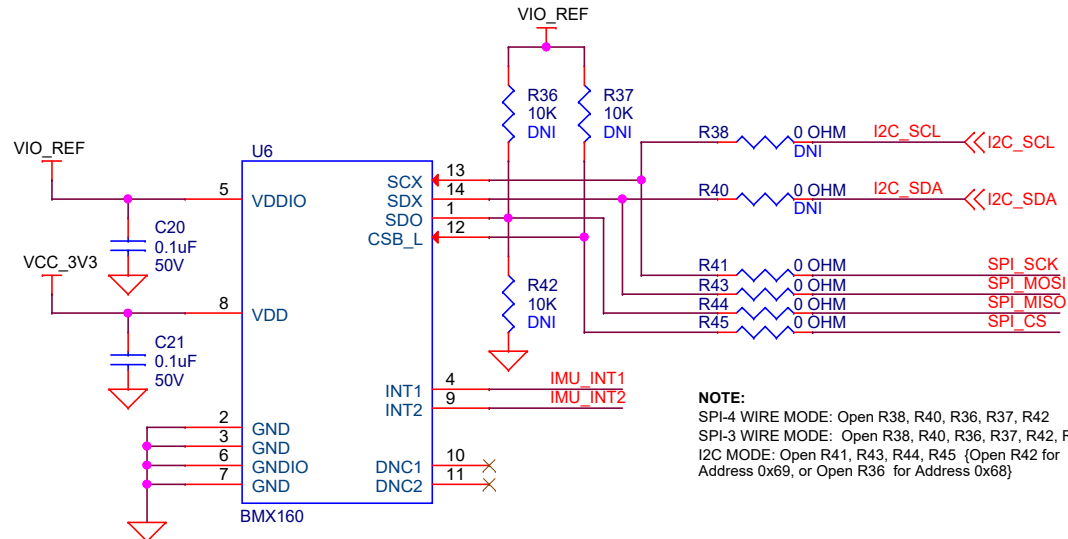
**SCH Title : CY8CKIT-028-SENSE IoT sense expansion kit**

**Page Title: Audio Codec and PDM Mic interface**

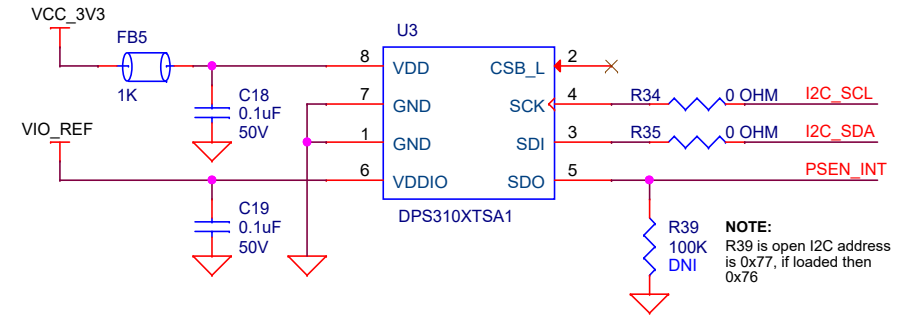
Size	Document Number	Drawn By	Approved By	Rev
A4	630-60608-01	VAKI	RKAD	2.0

Date: Friday, May 28, 2021 Sheet 3 of 7

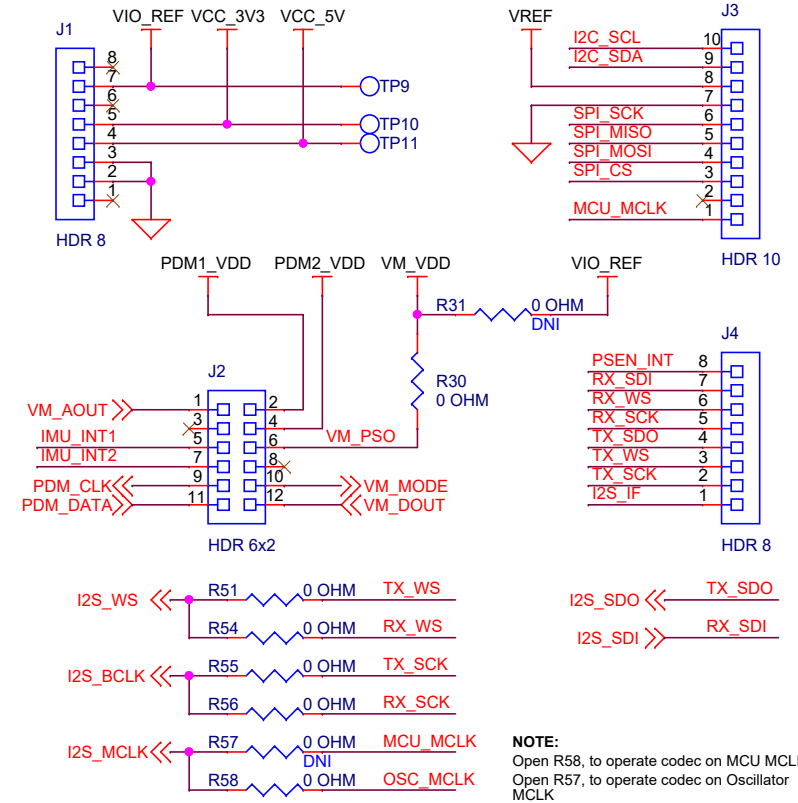
## 9-axis Absolute Orientation Sensor



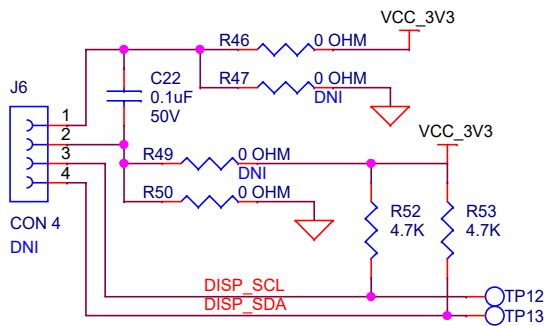
## Digital Barometric Pressure Sensor



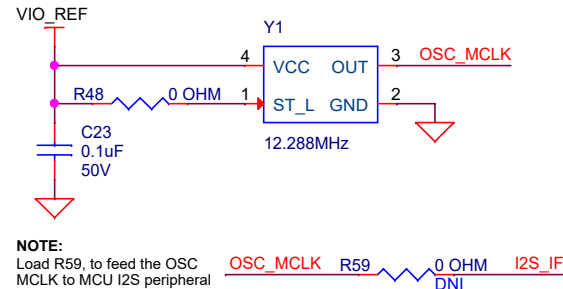
## Arduino Pinout



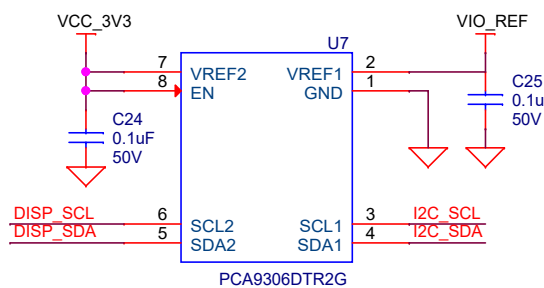
## OLED Display I2C Interface



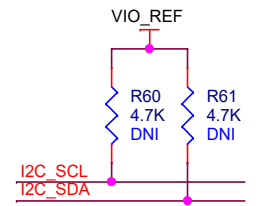
## MCLK Crystal Oscillator



## I2C Level Translator



## I2C Pull Ups



### 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 : CY8CKIT-028-SENSE IoT sense expansion kit**

**Page Title : Arduino Shield, IMU, Pressure Sensor Interface**

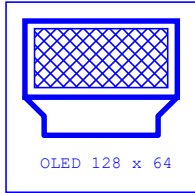
Size	Document Number	Drawn By	Approved By	Rev
A4	630-60608-01	VAKI	RKAD	2.0

Date: Friday, May 28, 2021 Sheet 4 of 7

## ACCESSORIES

### OLED Display Module

ACC6



OLED 128 x 64

OLED DISPLAY

#### 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 : CY8CKIT-028-SENSE IoT sense expansion kit**

**Page Title: Accessories**

Size	Document Number	Drawn By	Approved By	Rev
A4	630-60608-01	VAKI	RKAD	2.0
Date:	Friday, May 28, 2021		Sheet	5 of 7

## REVISION HISTORY

REV	DESCRIPTION OF CHANGE	ORIG. OF CHANGE	DATE
01	Initial Release	VAKI	11/2/2021
02	1. Added Preamplifier Circuit to Analog Mic 2. Rearranged the pin assignment of Arduino Pin Out	VAKI	09/3/2021

**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 : CY8CKIT-028-SENSE IoT sense expansion kit****Page Title: Revision History**

Size	Document Number	Drawn By	Approved By	Rev
A4	630-60608-01	VAKI	RKAD	2.0
Date: Friday, May 28, 2021			Sheet	6 of 7