

# 01. Cover

## VAR-AM43CustomBoard v1.1



### CONTENT


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### Disclaimer:

SchematicS are for reference only.  
Variscite LTD provides no warranty for the use of  
these schematics.  
Schematics are subject to change without notice.

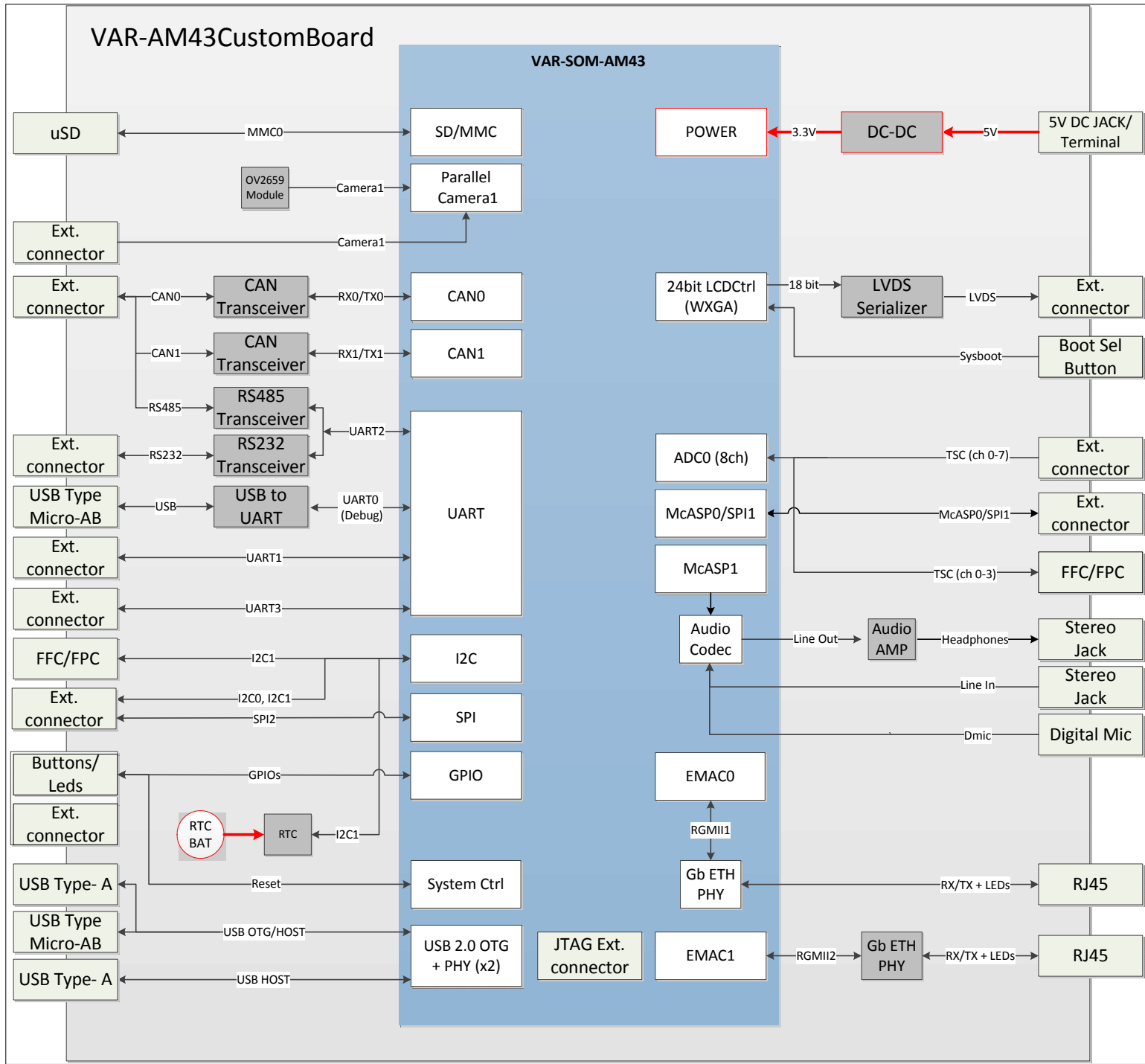
### Revision History

Rev 1.0	Initial
Rev 1.1	Production



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# 02. Block Diagram

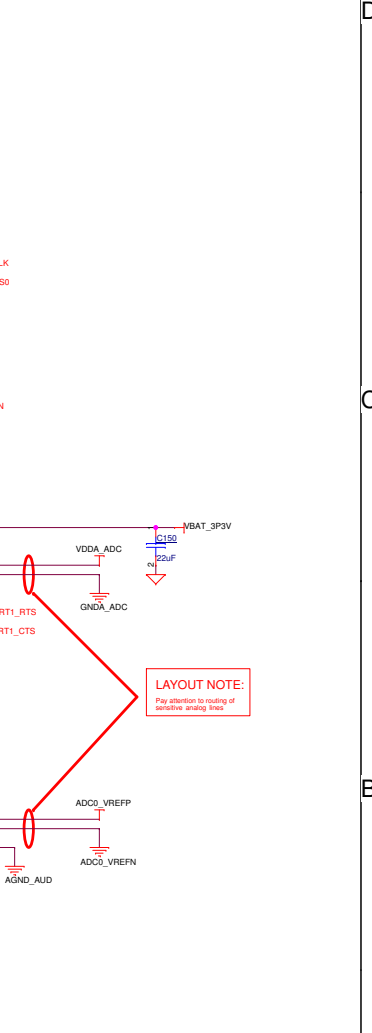


D

C

B

A



Notes:

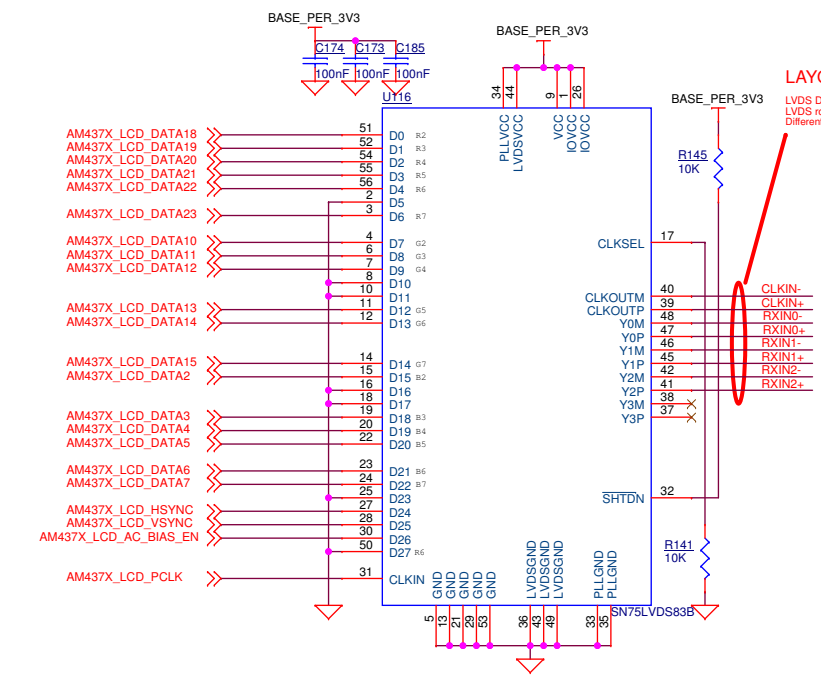
[1] VDDSHV11- 1.8V rail

[2] The following pins are referenced to 1.8V:  
 1, 3, 5, 7, 9, 11, 12, 14, 16, 18, 20, 22,  
 116, 131, 135, 151, 150

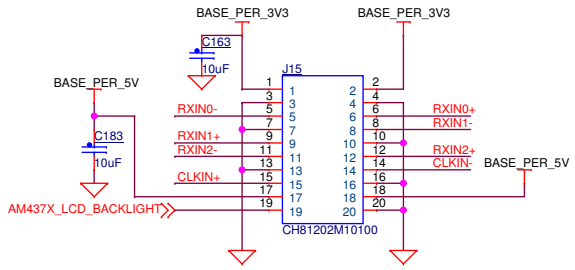
File: 03. VAR-SOM-AM437X			
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# 04. Display, Touch, Camera

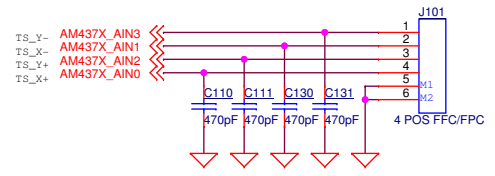
## LVDS



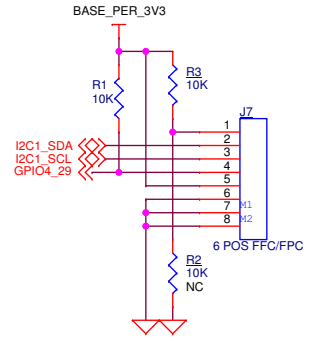
## LVDS Connector



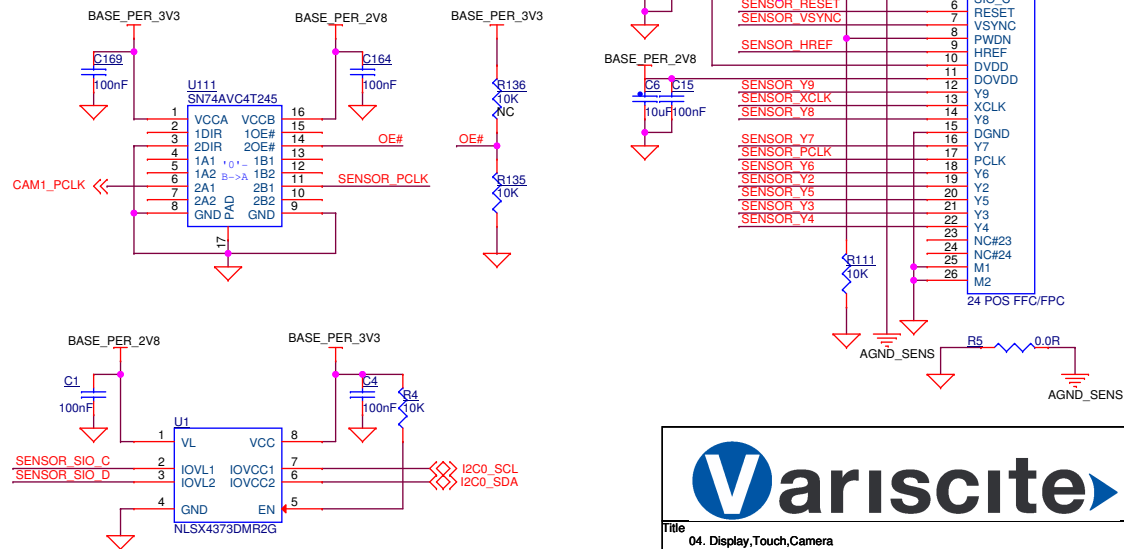
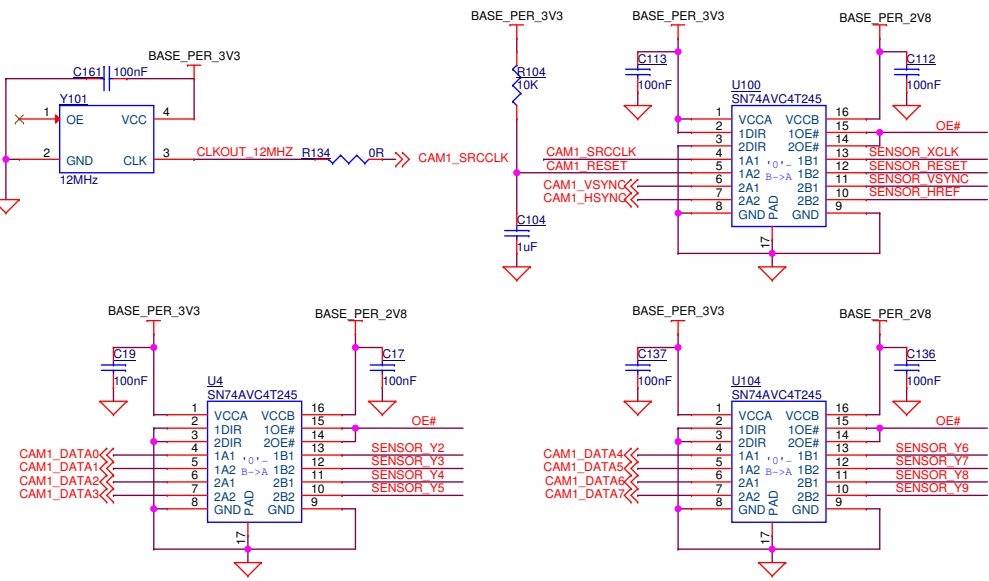
## Touch Resistive



## Capacitive



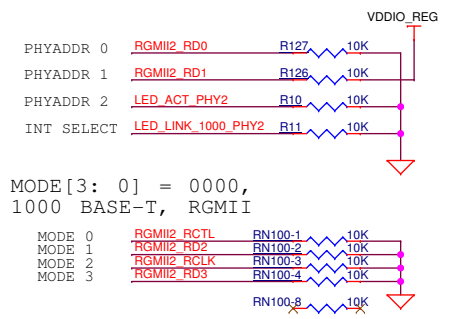
## Camera



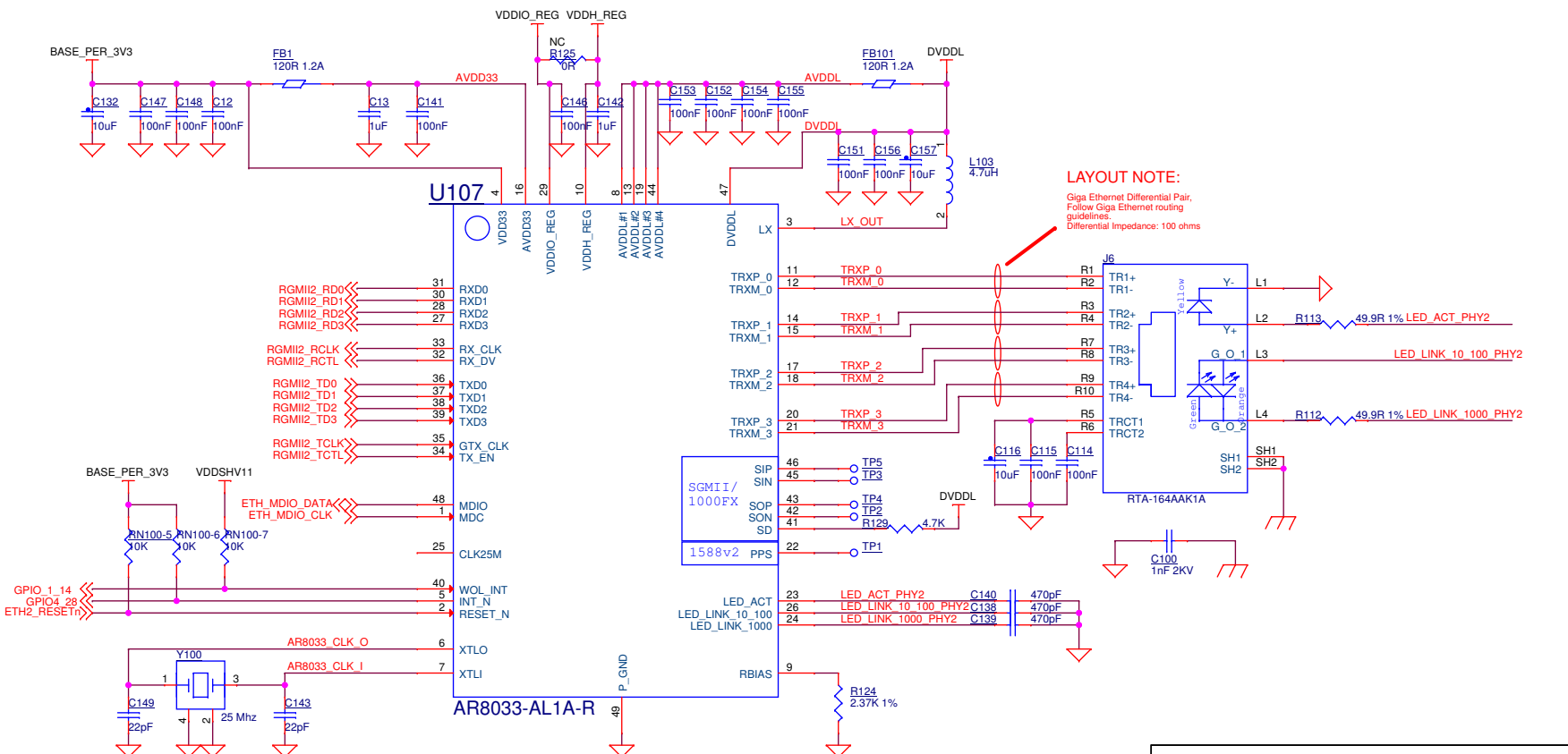
Title 04. Display, Touch, Camera			
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# 06. G. Ethernet

LEDs - active HIGH, address 00010b



## Ethernet PHY



**LAYOUT NOTE:**  
Giga Ethernet Differential Pair.  
Follow Giga Ethernet routing guidelines.  
Differential Impedance: 100 ohms

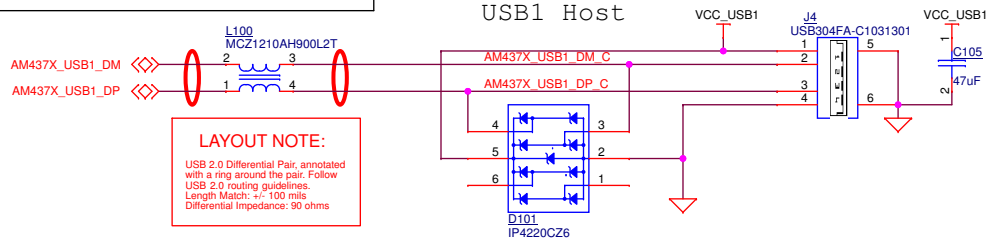
<b>Variscite</b>			
Title: 05. G. Ethernet			
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# 07. USB, Audio

USB

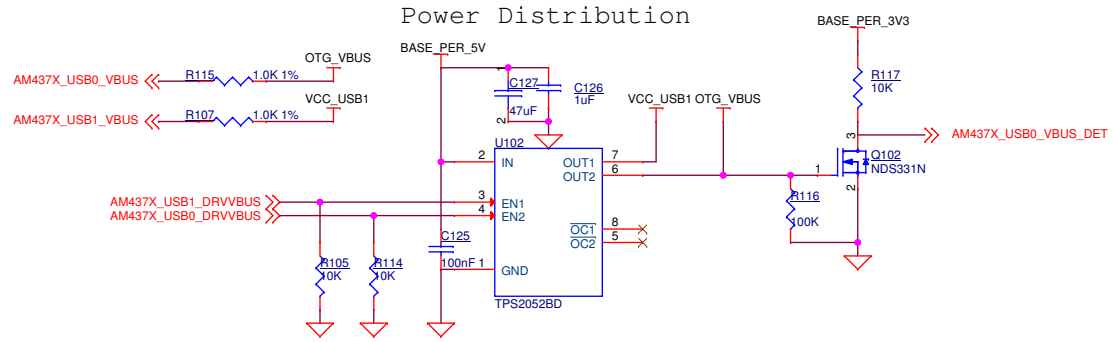
AUDIO

## USB1 Host

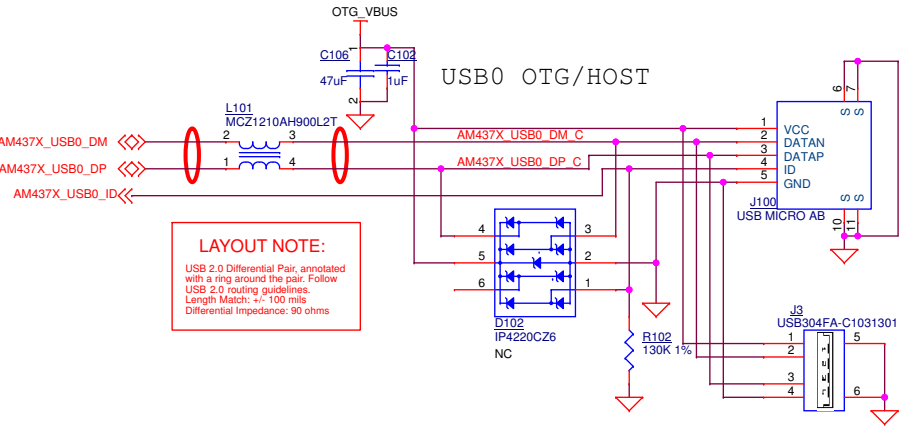


**LAYOUT NOTE:**  
USB 2.0 Differential Pair, annotated with a ring around the pair. Follow USB 2.0 routing guidelines. Length Match: +/- 100 mils. Differential Impedance: 90 ohms

## Power Distribution

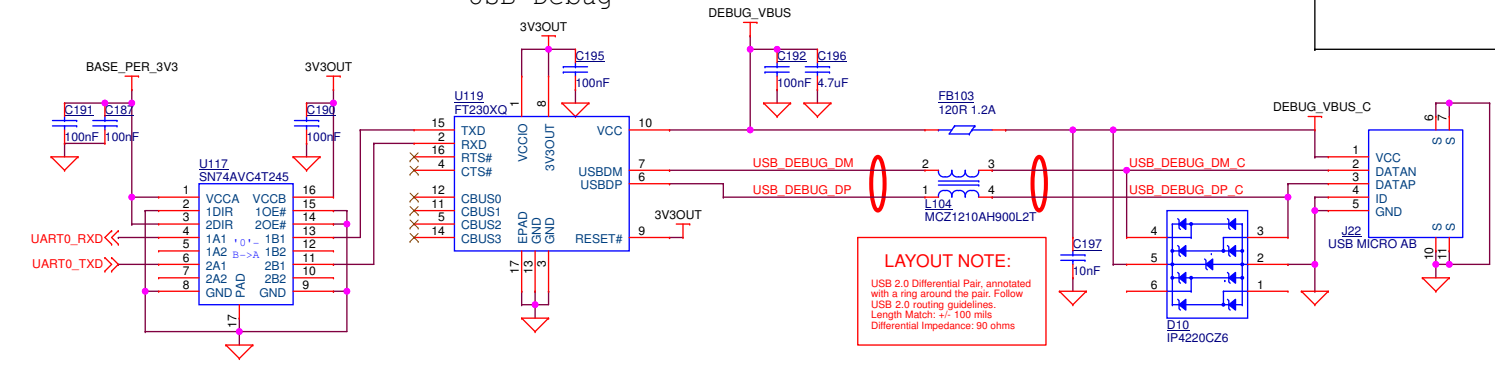


## USB0 OTG/HOST



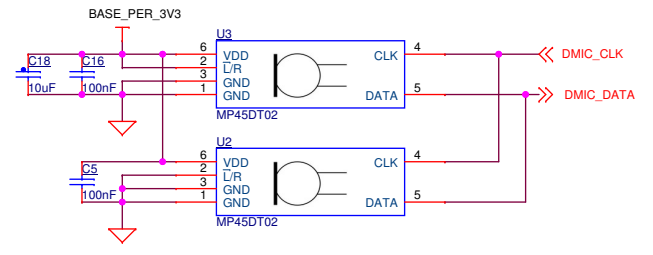
**LAYOUT NOTE:**  
USB 2.0 Differential Pair, annotated with a ring around the pair. Follow USB 2.0 routing guidelines. Length Match: +/- 100 mils. Differential Impedance: 90 ohms

## USB Debug

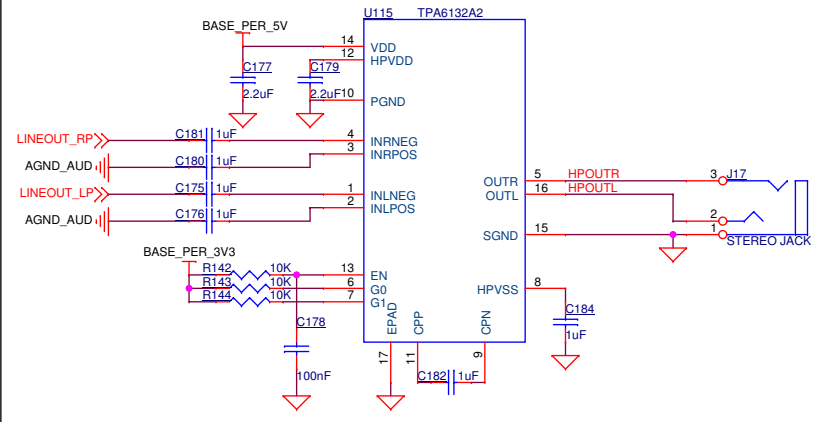


**LAYOUT NOTE:**  
USB 2.0 Differential Pair, annotated with a ring around the pair. Follow USB 2.0 routing guidelines. Length Match: +/- 100 mils. Differential Impedance: 90 ohms

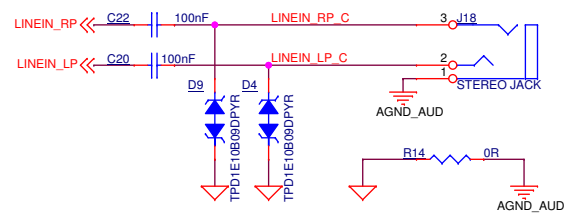
## Digital Microphone



## Headphones



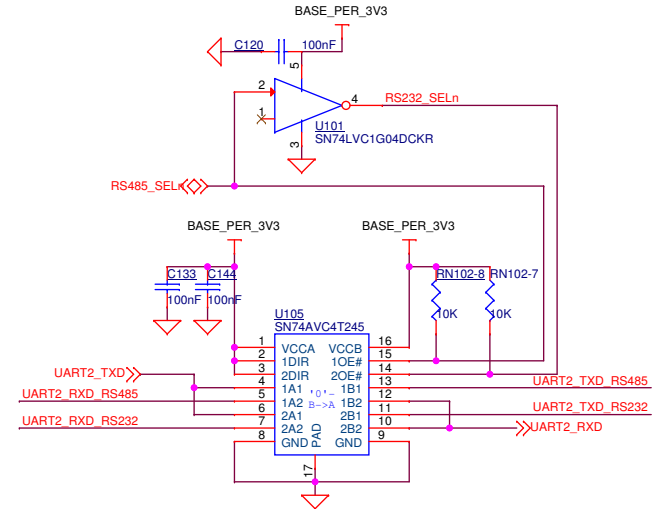
## Line In



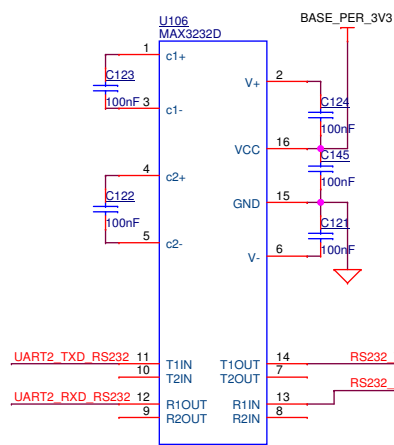
Title			
06. USB, Audio			
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# 08. Peripherals

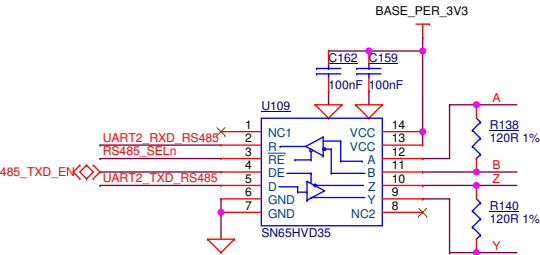
## RS232/RS485



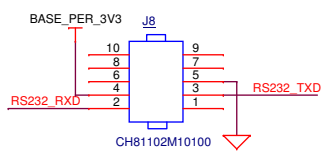
## RS-232 TRX



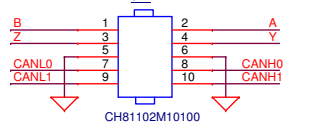
## RS-485 TRX



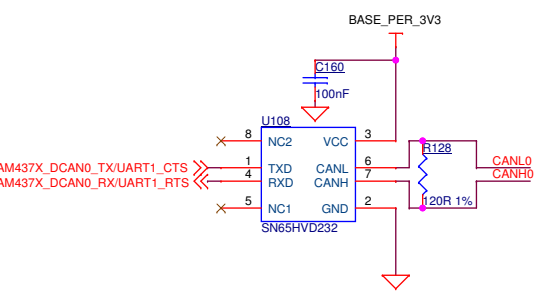
## RS232 Header



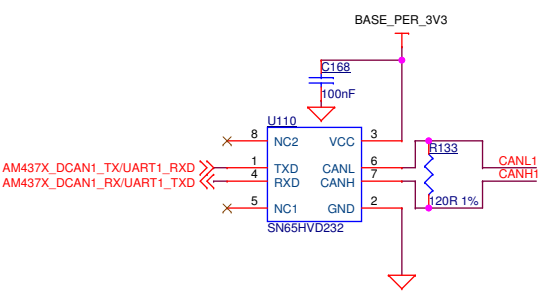
## CAN/RS485 Header



## CAN0



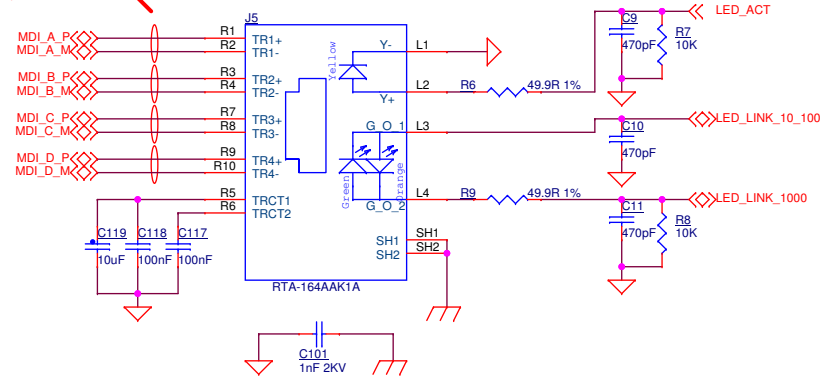
## CAN1



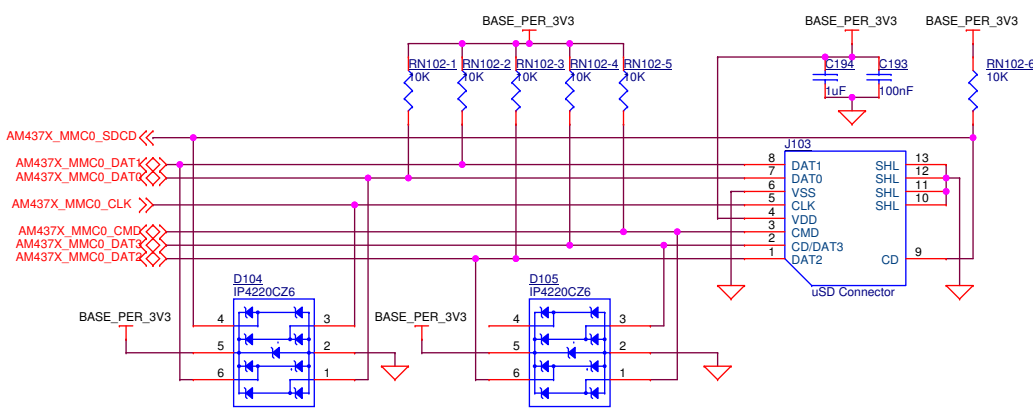
## LAYOUT NOTE:

Giga Ethernet Differential Pair, Follow Giga Ethernet routing guidelines. Differential Impedance: 100 ohms

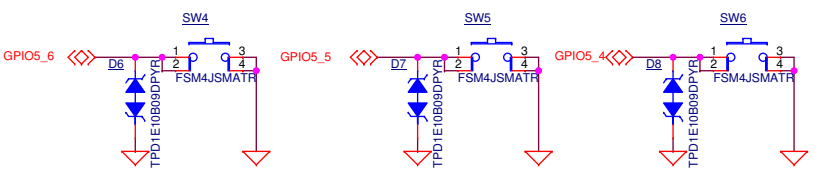
## RJ45



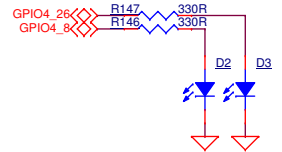
## uSD CARD



## USER BUTTONS

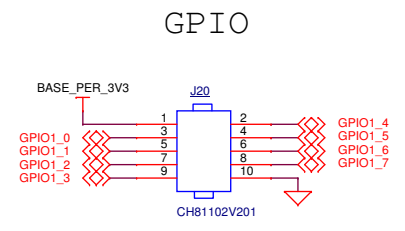
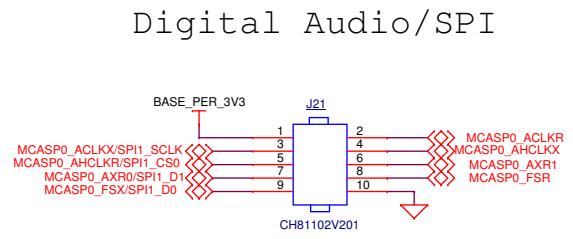
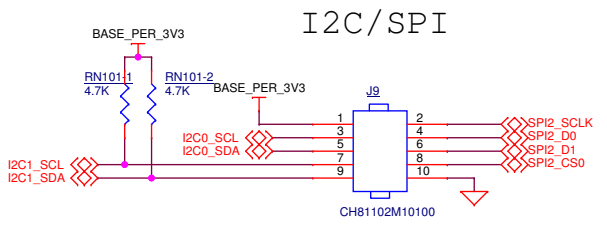


## GP LED



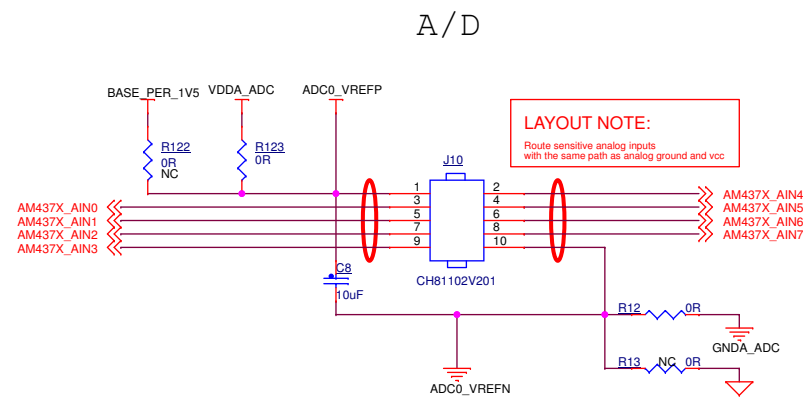
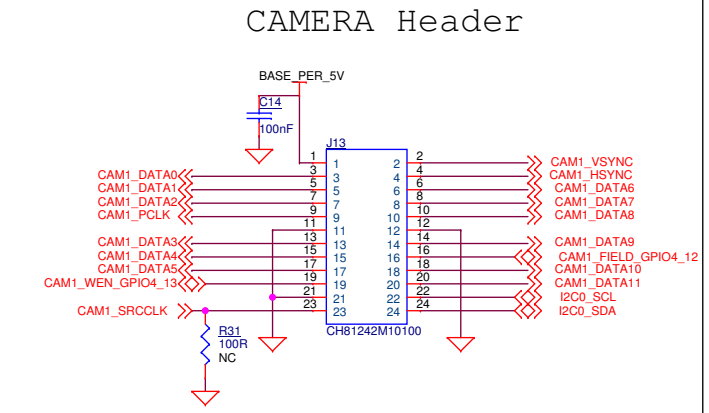
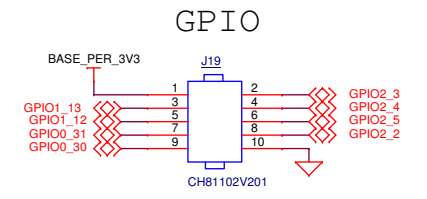
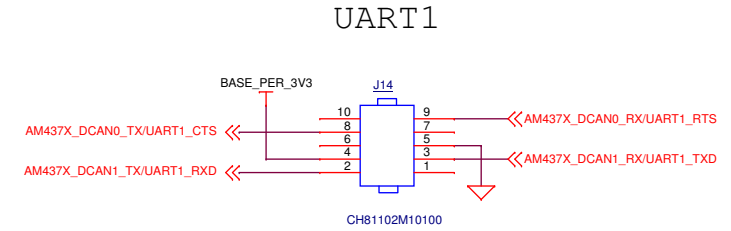
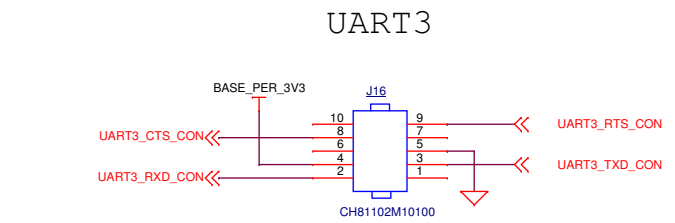
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# 09. DVK Exp Connectors



Note:  
 (\*) Pins 2-9 are Muxed with NAND interface and cannot be used with on SOM NAND simultaneously

Note:  
 (\*) Pins 2,4,6,8 are Muxed with NAND interface and cannot be used with on SOM NAND simultaneously  
 (\*\*) Pins 3,5,7,9 are Referenced to 3.3V or 1.8V rail SOM with WiFi -3.3V, SOM without WiFi -1.8V



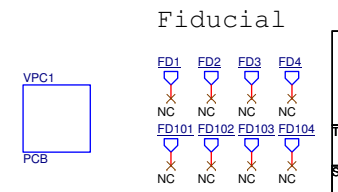
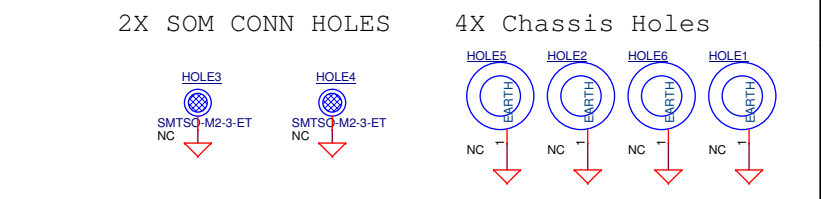
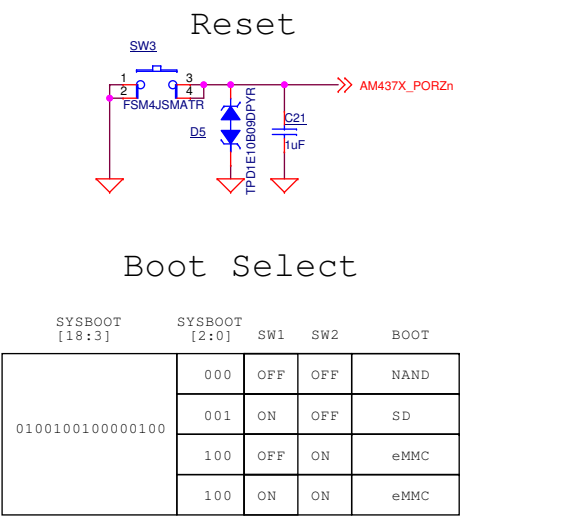
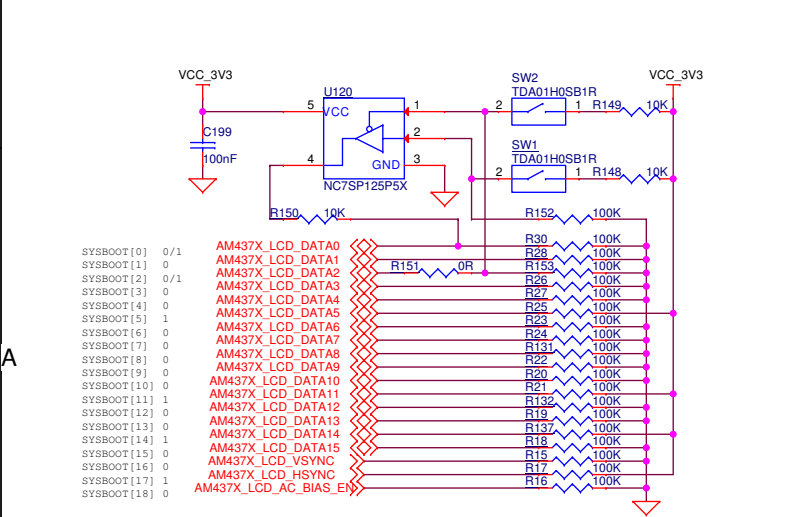
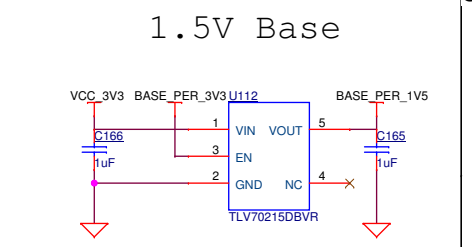
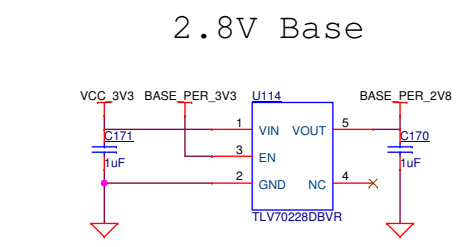
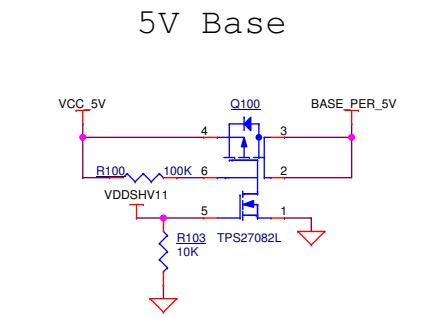
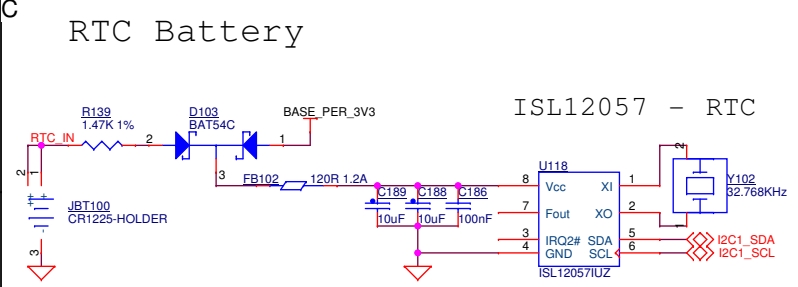
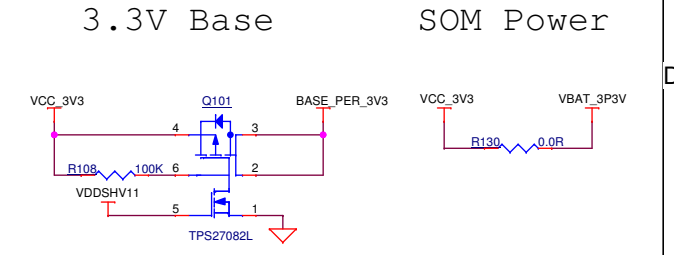
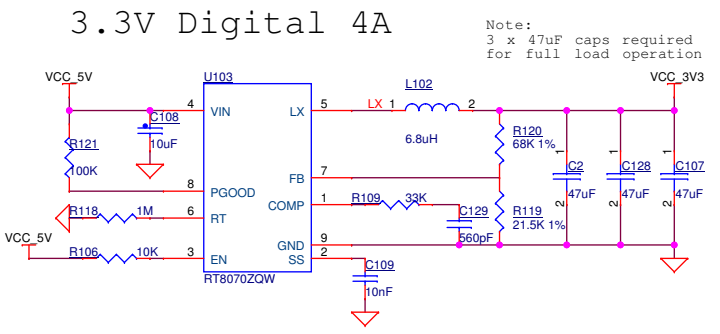
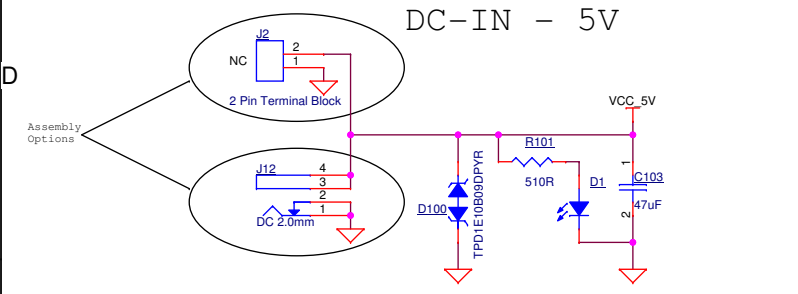
Note:  
 ADC0\_VREFP can be supplied by SOM's VDDA\_ADC Rail or by on board 1.5V LDO

Title: 08. DVK Exp Connectors

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# 10. Power, Mechanics



**Variscite**  
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