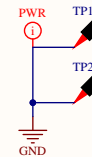
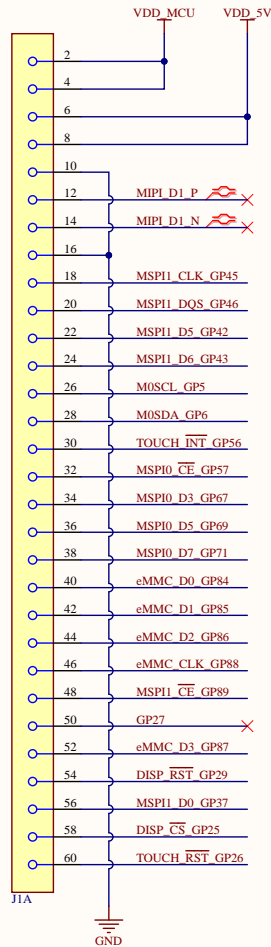
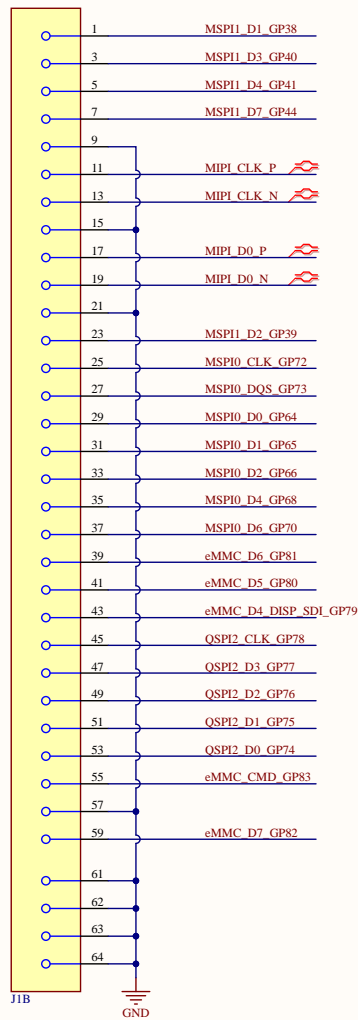
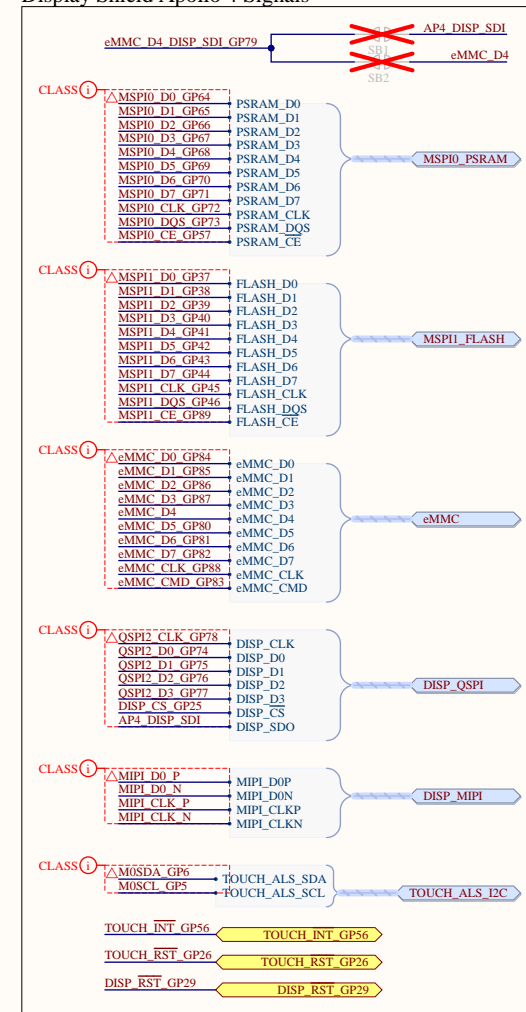
 <b>ambiq</b>		Title <b>Apollo4 Display Shield</b>	
		Size <b>A</b>	Number <b>AMAP4DISP</b>
6500 River Place Boulevard Building 7, Suite 200 Austin, TX 78730 +1 (512) 879-2850		Revision <b>1</b>	Sheet 1 of 9
		Date <b>7/21/2021</b>	Drawn By <b>DLanzone</b> Aprvd By <b>DLanzone</b>
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## Display Shield Apollo 4 Signals



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Title: Apollo4 Display Shield

Size: A

Number: AMAP4DISP

Revision: 1

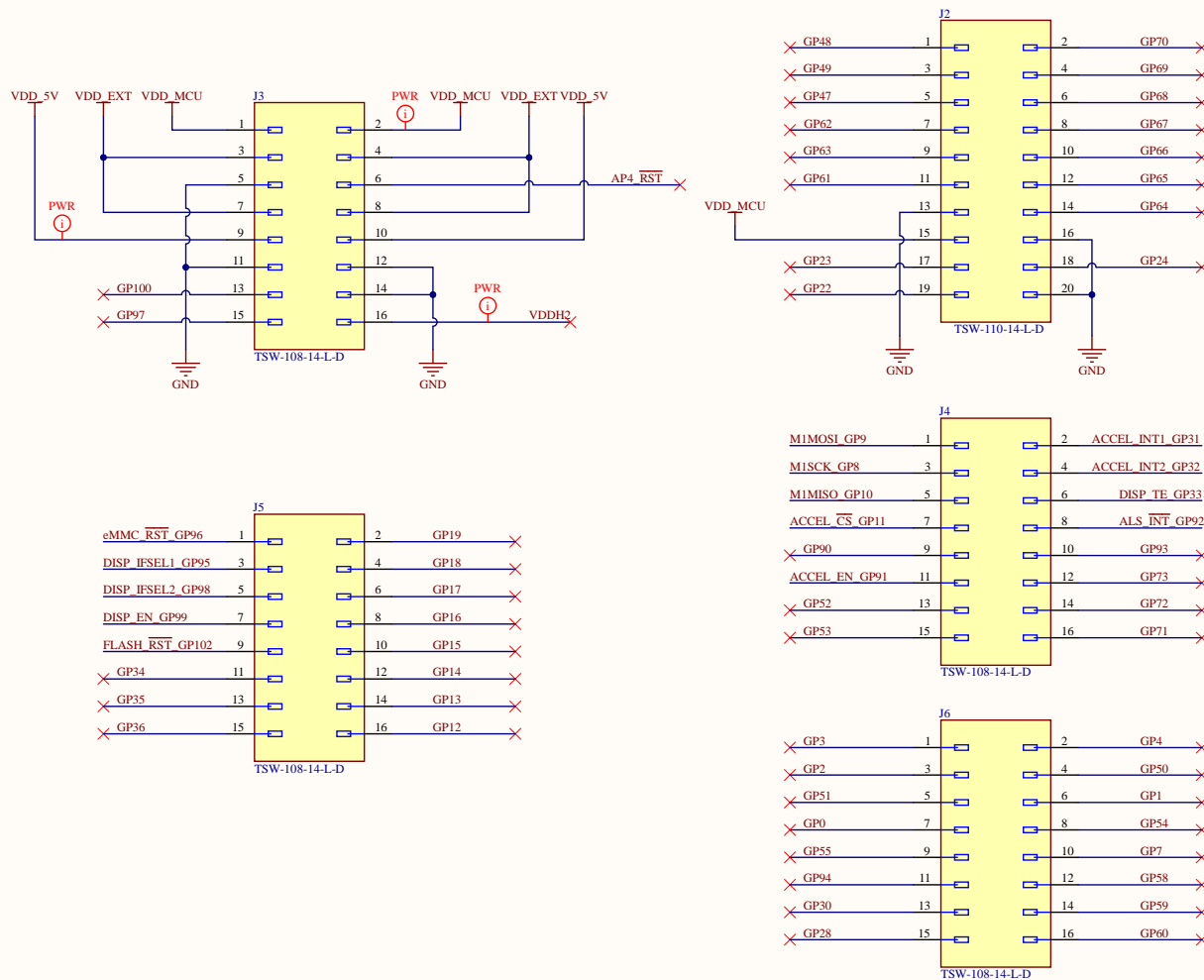
Sheet 2 of 8

Date: 7/21/2021

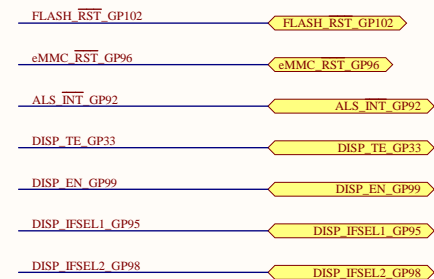
Drawn By: DLanzone

Aprvd By: DLanzone

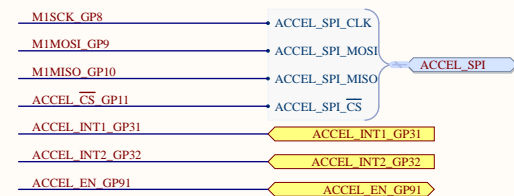
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### General Display Shield Apollo 4 Signals



### Accelerometer Signals



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Title: Apollo4 Display Shield

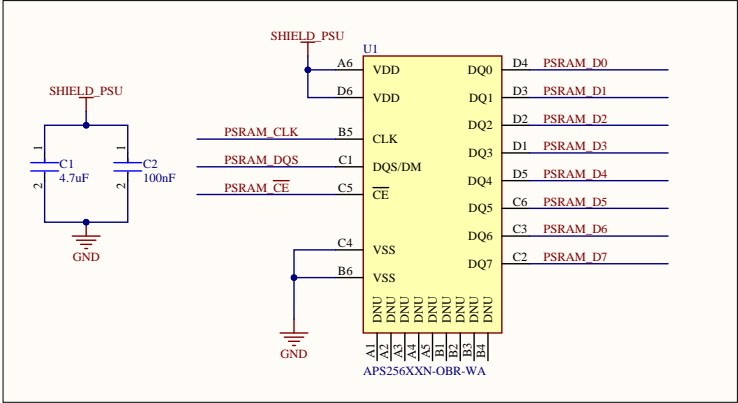
Size	Number	Revision	Sheet
A	AMAP4DISP	1	3 of 9

Date: 7/21/2021

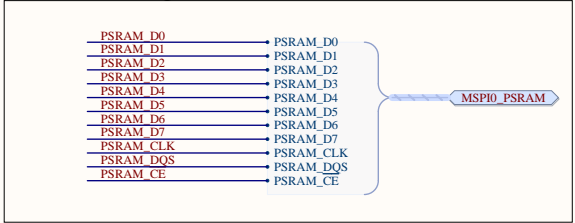
Drawn By: DLanzone  
Aprvd By: DLanzone

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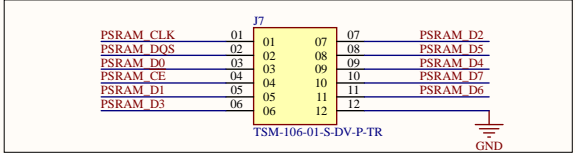
PSRAM




PSRAM MSPI Signals



PSRAM MSPI Signal Header





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Title  
Apollo4 Display Shield

Size	Number	Revision	Sheet
A	AMAP4DISP	1	4 of 8

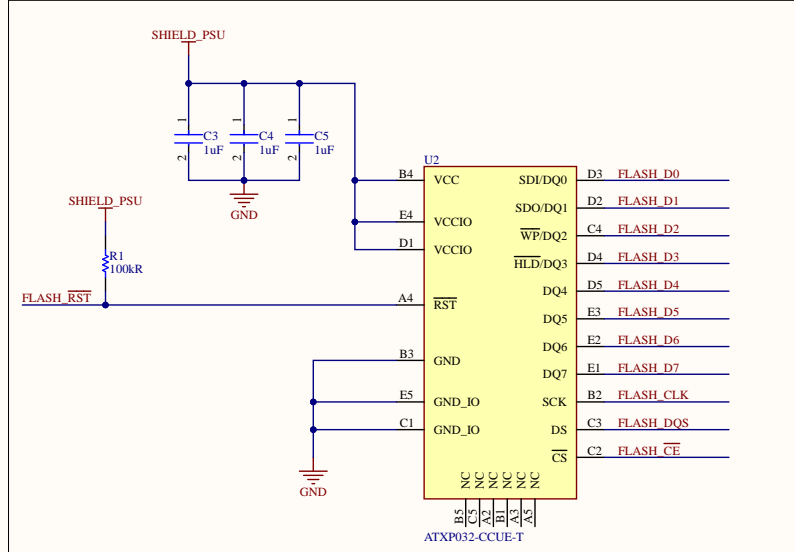
Date  
7/21/2021

Drawn By  
DLanzone

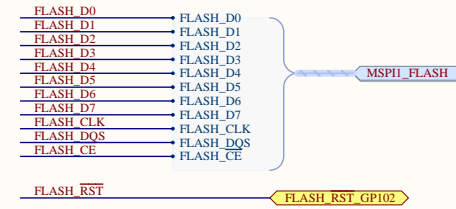
Aprvd By  
DLanzone

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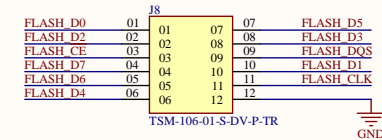
## NOR Flash




## MSPI Flash Signals

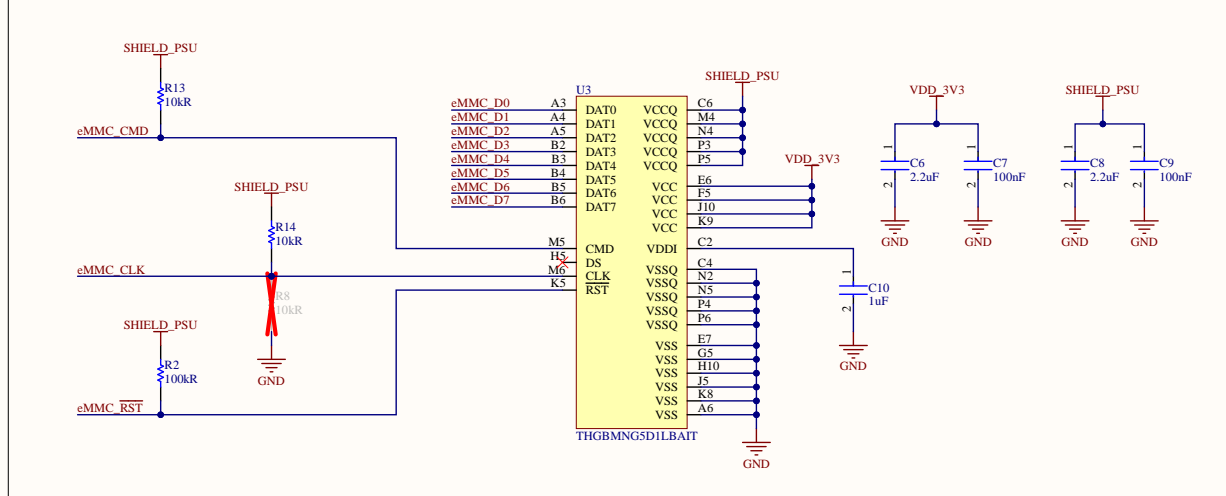


## MSPI Flash Signal Header

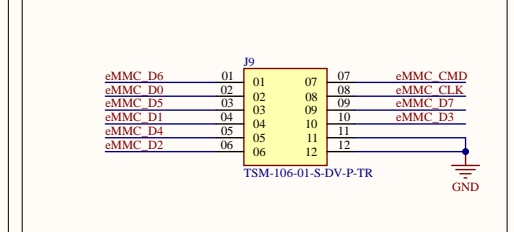


		Title	
		Apollo4 Display Shield	
Size	Number	Revision	Sheet 5 of 8
A	AMAP4DISP	1	
Date	Drawn By	Dlanzone	
7/21/2021	Aprvd By	Dlanzone	
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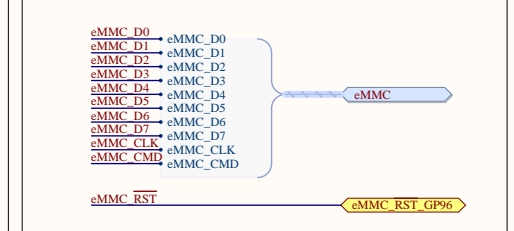
# eMMC



# eMMC Signal Header



# eMMC Signals



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Title

Apollo4 Display Shield

Size	Number	Revision	Sheet
A	AMAP4DISP	1	6 of 8

Date

7/21/2021

Drawn By

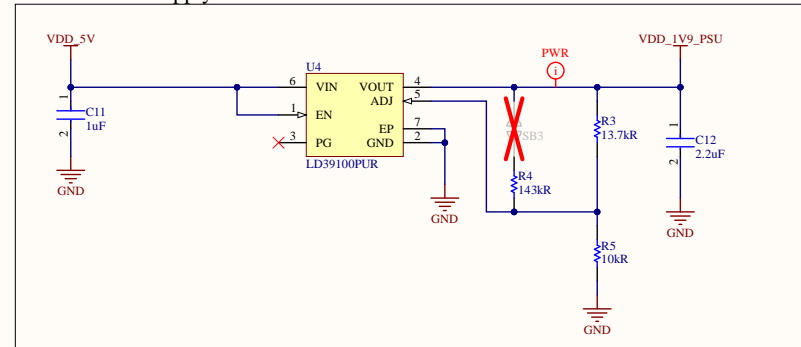
DLanzone

Aprvd By

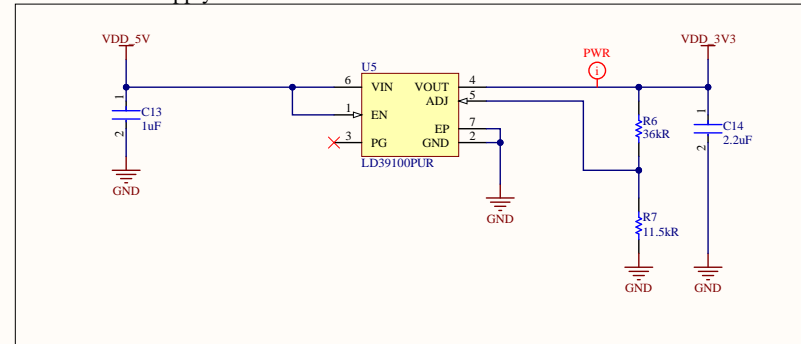
DLanzone

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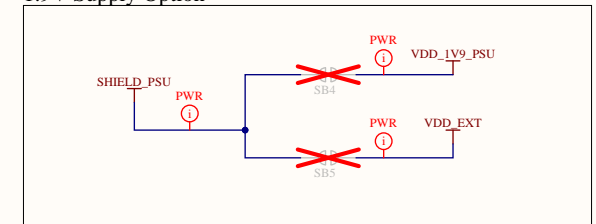
### Onboard 1.9V Supply




### Onboard 3.3V Supply



### 1.9V Supply Option



		Title	
		Apollo4 Display Shield	
Size	Number	Revision	Sheet
A	AMAP4DISP	1	7 of 8
Date	Drawn By	Aprvd By	
7/21/2021	DLanzone	DLanzone	
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[illegible]

The diagram shows the J11 module with the following connections:

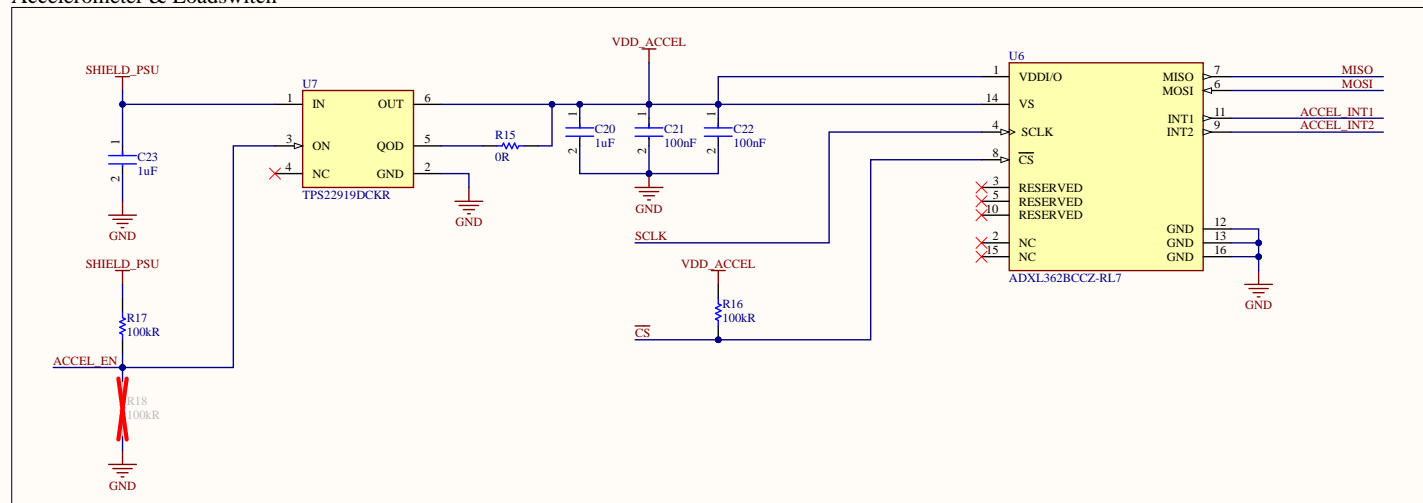
- SHIELD\_PSU** (red) connected to pin 6 (TOUCH\_RST).
- TOUCH\_RST** (blue) connected to pin 6.
- VDD\_3V3** (blue) connected to pin 8.
- PWR** (red) connected to pin 9.
- TOUCH\_ALS\_M0SDA** (blue) connected to pin 1.
- TOUCH\_ALS\_M0SCL** (blue) connected to pin 2.
- TOUCH\_INT** (blue) connected to pin 3.
- ALS\_INT** (blue) connected to pin 5.
- NC** (red) connected to pins 4, 11, 12, 13, and 14.

MIPI\_D0\_P → MIPI\_D0P  
MIPI\_D0\_N → MIPI\_D0N  
MIPI\_CLK\_P → MIPI\_CLKP  
MIPI\_CLK\_N → MIPI\_CLKN  
DISP\_SCL → DISP\_CLK  
DISP\_SDI AP4\_SDO\_QSPI\_D0 → DISP\_D0  
DISP\_DCX\_QSPI\_D1 → DISP\_D1  
DISP\_QSPI\_D2 → DISP\_D2  
DISP\_QSPI\_D3 → DISP\_D3  
DISP\_CSX → DISP\_CS  
DISP\_SDO AP4\_SDI → DISP\_SDO  
TOUCH\_ALS\_M0SDA → TOUCH\_ALS\_SDA  
TOUCH\_ALS\_M0SCL → TOUCH\_ALS\_SCL  
TOUCH\_INT → TOUCH\_INT\_GP56  
ALS\_INT → ALS\_INT\_GP92  
TOUCH\_RST → TOUCH\_RST\_GP26  
DISP\_RST → DISP\_RST\_GP29  
DISP\_TE → DISP\_TE\_GP33

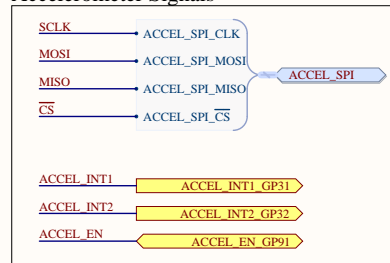
Figure 10 shows the pin connections for the TSM-105-01-S-DV connector. The diagram includes two connector headers, J12 and J13, both labeled 'TSM-105-01-S-DV'. J12 has 10 pins with the following connections: 1 to DISP\_SCL\_K, 3 to DISP\_DC\_X QSPI D1, 5 to DISP\_SDI AP4 SDO QSPI D0, 7 to DISP\_TE, 9 to DISP\_RST, 2 to DISP\_CS\_X, 4 to DISP\_SDO AP4 SDI, 6 to DISP\_QSPI D3, 8 to DISP\_QSPI D2, and 10 to VCL\_EN. J13 has 10 pins with the following connections: 1 to TOUCH\_ALS\_M0SDA, 3 to TOUCH\_ALS\_M0SCL, 5 to ALS\_INT, 7 to IM1, 9 to VDD\_3V3, 2 to TOUCH\_INT, 4 to TOUCH\_RST, 6 to IM2, and 8 to IM2. A SHIELD\_PSU pin is connected to the top of J13, and a GND pin is connected to the bottom of J13.




## Accelerometer & Loadswitch



## Accelerometer Signals



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		Apollo4 Display Shield	
Size	Number	Revision	Sheet
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Date	Drawn By	Aprvd By	
7/21/2021	DLanzone	DLanzone	
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