

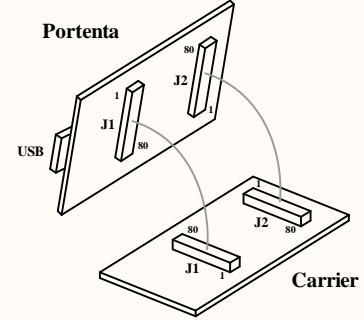
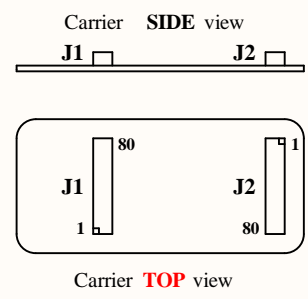
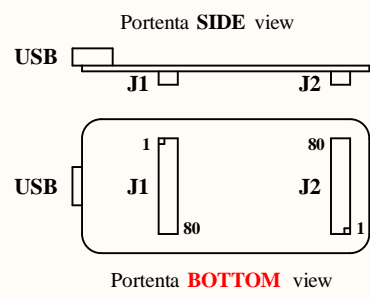
- GPIO02\_SDA → GPIO02\_SDA
- GPIO03\_SCL → GPIO03\_SCL
- GPIO04\_I2C → GPIO04\_I2C
- GPIO05 → GPIO05
- GPIO06 → GPIO06
- GPIO07\_SPI\_CE1\_N → GPIO07\_SPI\_CE1\_N
- GPIO08\_SPI\_CE0\_N → GPIO08\_SPI\_CE0\_N
- GPIO09\_SPI\_MISO → GPIO09\_SPI\_MISO
- GPIO10\_SPI\_MOSI → GPIO10\_SPI\_MOSI
- GPIO11\_SPI\_SCLK → GPIO11\_SPI\_SCLK
- GPIO12 → GPIO12
- GPIO13 → GPIO13
- GPIO14\_TX → GPIO14\_TX
- GPIO15\_RX → GPIO15\_RX
- GPIO16 → GPIO16
- GPIO17 → GPIO17
- GPIO18\_PCM\_CLK → GPIO18\_PCM\_CLK
- GPIO19 → GPIO19
- GPIO20 → GPIO20
- GPIO21 → GPIO21
- GPIO22 → GPIO22
- GPIO23 → GPIO23
- GPIO24 → GPIO24
- GPIO25 → GPIO25
- GPIO26 → GPIO26
- GPIO27 → GPIO27

HEADERS\_GPIO

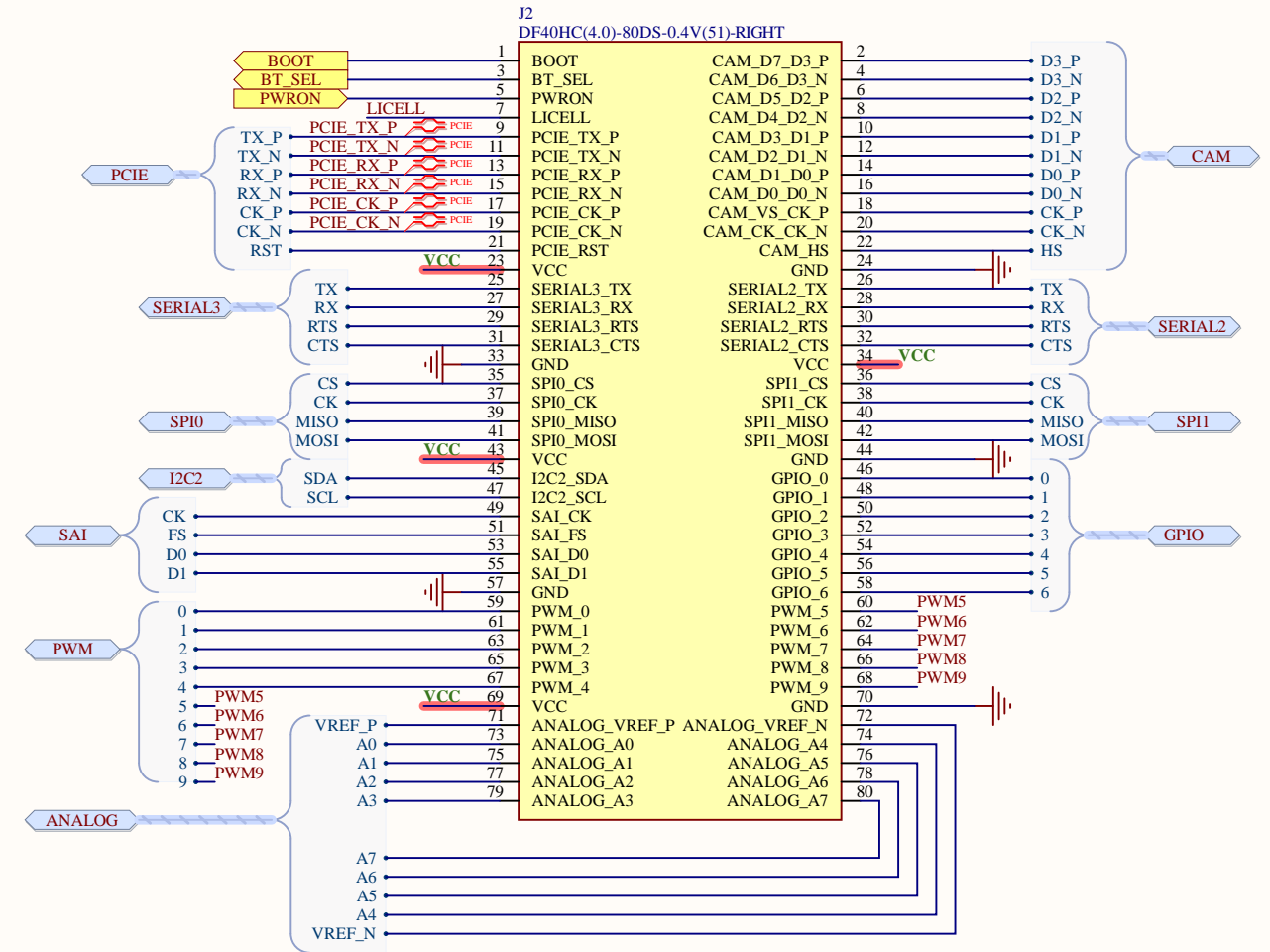
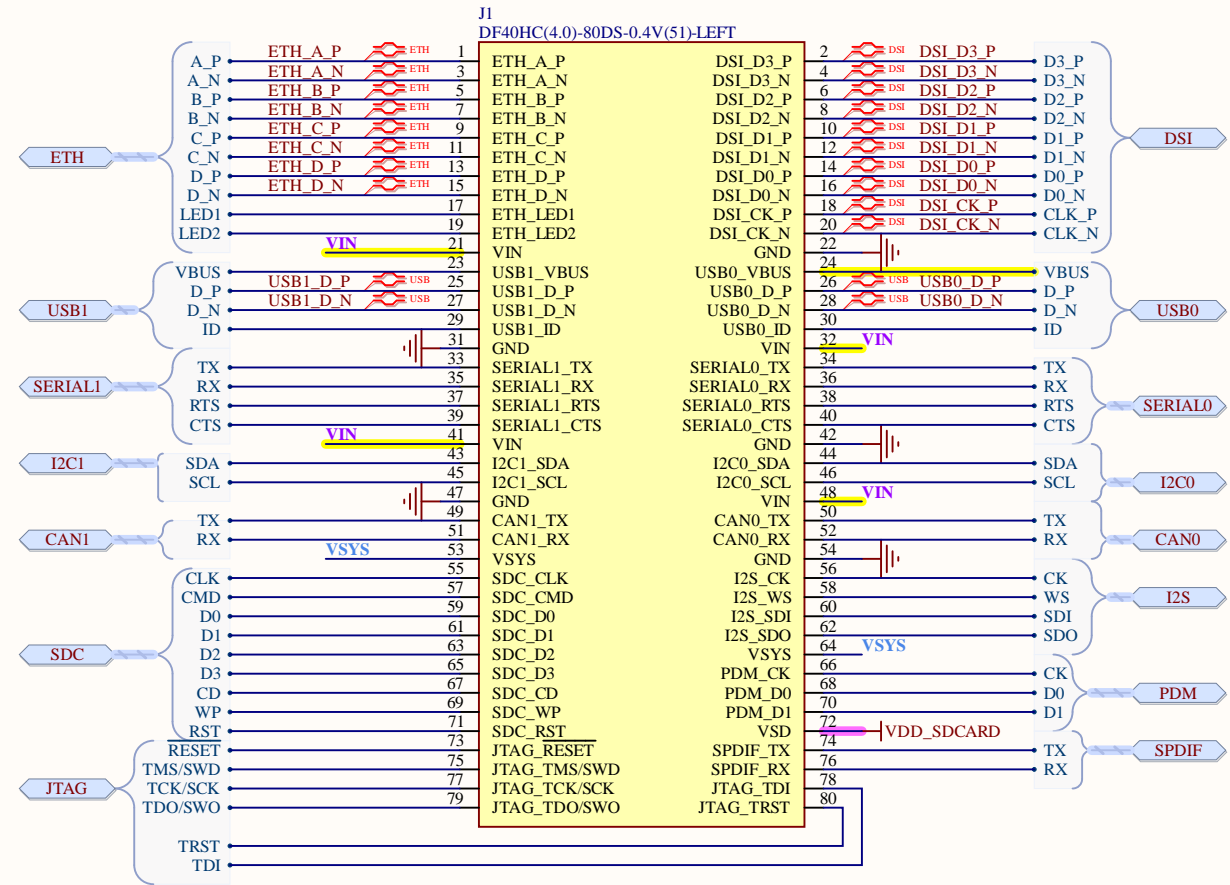
HEADERS\_GPIO

Reference Designs ARE PROVIDED "AS IS" AND "WITH ALL FAULTS. Arduino SA DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, REGARDING PRODUCTS, INCLUDING BUT NOT LIMITED TO, ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Arduino SA may make changes to specifications and product descriptions at any time, without notice. The Customer must not rely on the absence or characteristics of any features or instructions marked "reserved" or "undefined". Arduino SA reserves these for future definition and shall have no responsibility whatsoever for conflicts or incompatibilities arising from future changes to them. The product information on the Web Site or Materials is subject to change without notice. Do not finalize a design with this info. ARDUINO and other Arduino brands and logos and Trademarks of Arduino SA. All Arduino SA Trademarks cannot be used without owner's formal permission.

<b>Title: RASP HEADERS</b>				
ID: ASX00049	Version: V1.1			
Date: 10/23/2023	Time: 10:48:30 PM	Sheet 2 of 10		
File: Headers.SchDoc	Author: Silvio Navaretti	RevAuthor: Silvio Navaretti		



HD Connectors on the carrier are mirrored



**SHARED PINS TABLE**

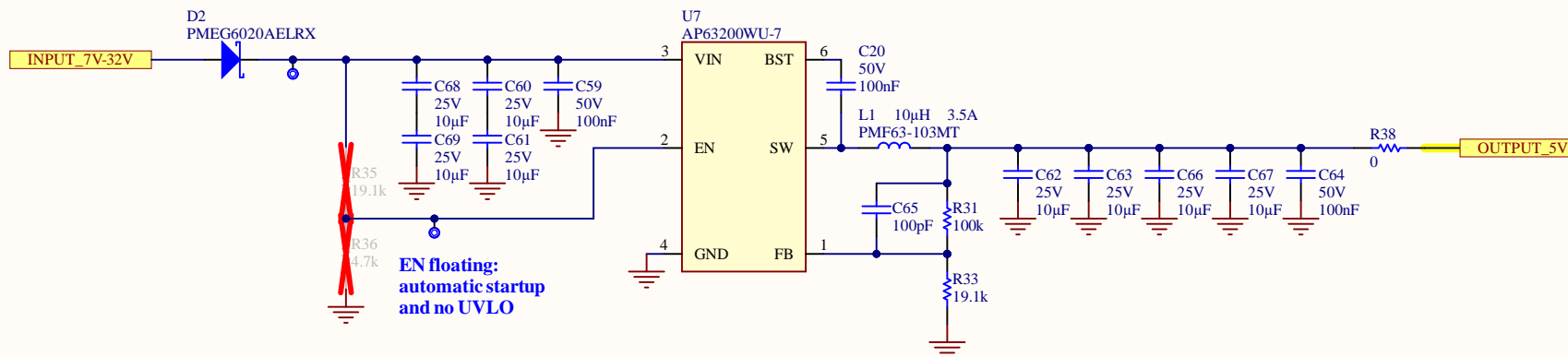
NET	BUS 1	BUS 2
<del>PB3</del>	JTAG	SDC2
<del>PH11</del>	CAM	I2C4
<del>PH12</del>	CAM	I2C4
<del>PI5</del>	CAM	SAI2A
<del>PI6</del>	CAM	SAI2A
<del>PI7</del>	CAM	SAI2A
<del>PA4</del>	CAM	ANALOG
<del>PA6</del>	CAM	ANALOG
<del>PC2</del>	ANALOG	SPI2
<del>PC3</del>	ANALOG	SPI2

**POWER NETS TABLE**



NET	TYPE	RANGES	DESCRIPTION
VIN	PORTENTA INPUT	4.1V to 6V.	Default 3.3V, PMIC (U10) programmable output.
VCC	PORTENTA OUTPUT	1.1V to 3.3V in steps, max 1A.	Default 3.3V, PMIC (U10) programmable output.
VSYS	PORTENTA RESERVED OUTPUT	<b>RESERVED, DO NOT USE</b> 3.5V to 4.2V, max 600mA.	Default 4.2V, PMIC (U10) programmable output which is also the input voltage of the bucks inside the PMIC itself.
LICELL	PORTENTA INPUT	Coinc cell max 3.6V, max 46uA.	Max 4uA with PMIC (U10) in coin cell mode, max 46uA with PMIC in standby/suspend mode.

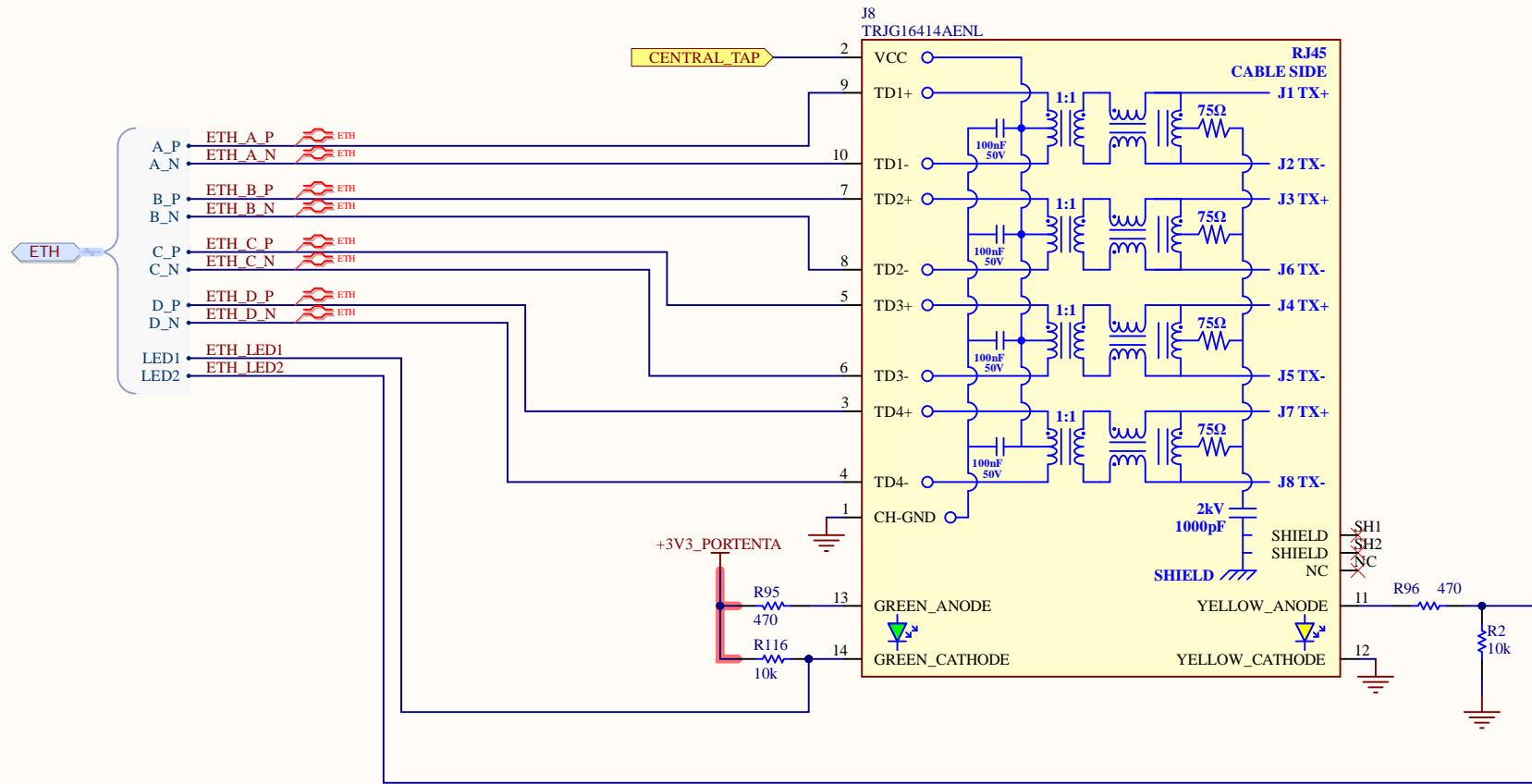
Reference Designs ARE PROVIDED "AS IS" AND "WITH ALL FAULTS. Arduino SA DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, REGARDING PRODUCTS, INCLUDING BUT NOT LIMITED TO, ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.  
 Arduino SA may make changes to specifications and product descriptions at any time, without notice. The Customer must not rely on the absence or characteristics of any features or instructions marked "reserved" or "undefined".  
 Arduino SA reserves these for future definition and shall have no responsibility whatsoever for conflicts or incompatibilities arising from future changes to them. The product information on the Web Site or Materials is subject to change without notice.  
 Do not finalize a design with this info. ARDUINO and other Arduino brands and logos and Trademarks of Arduino SA. All Arduino SA Trademarks cannot be used without owner's formal permission.

**5V STEP DOWN  
VIN MAX 32V  
MAX OUT CURRENT 1.5A  
REVERSE POLARITY PROTECTION**



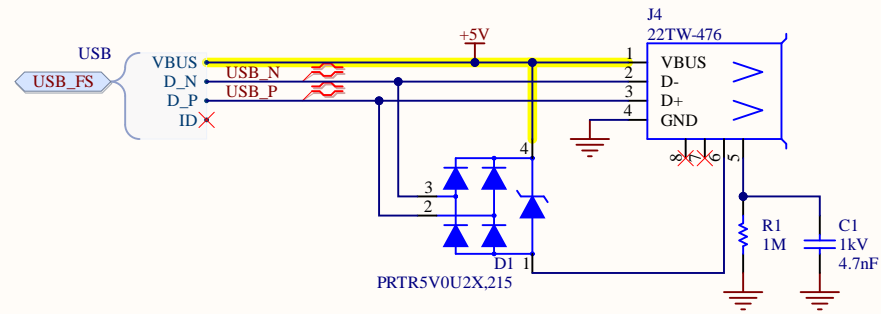
Reference Designs ARE PROVIDED "AS IS" AND "WITH ALL FAULTS". Arduino SA DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, REGARDING PRODUCTS, INCLUDING BUT NOT LIMITED TO, ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.  
 Arduino SA may make changes to specifications and product descriptions at any time, without notice. The Customer must not rely on the absence or characteristics of any features or instructions marked "reserved" or "undefined". Arduino SA reserves these for future definition and shall have no responsibility whatsoever for conflicts or incompatibilities arising from future changes to them. The product information on the Web Site or Materials is subject to change without notice.  
 Do not finalize a design with this info. ARDUINO and other Arduino brands and logos and Trademarks of Arduino SA. All Arduino SA Trademarks cannot be used without owner's formal permission.

<b>Title: POWER EXTERNAL</b>			
ID: ASX00049	Version: V1.1		
Date: 10/23/2023	Time: 10:49:13 PM	Sheet 4 of 10	
File: DCDC_CONVERTER.SchDoc	Author: Silvio Navaretti	RevAuthor: Silvio Navaretti	





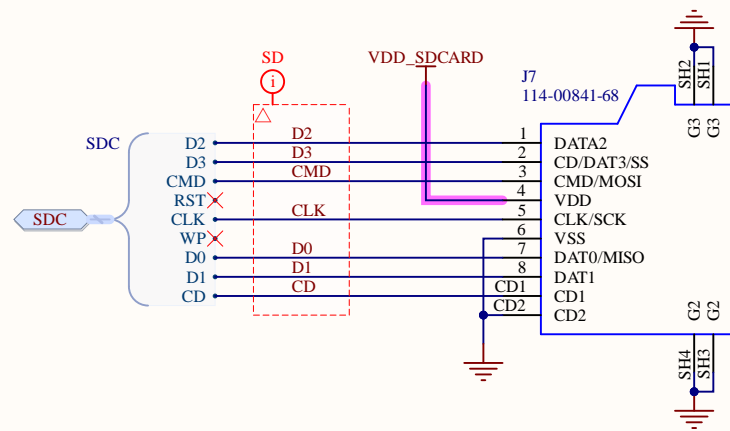
Reference Designs ARE PROVIDED "AS IS" AND "WITH ALL FAULTS". Arduino SA DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, REGARDING PRODUCTS, INCLUDING BUT NOT LIMITED TO, ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.  
 Arduino SA may make changes to specifications and product descriptions at any time, without notice. The Customer must not rely on the absence or characteristics of any features or instructions marked "reserved" or "undefined". Arduino SA reserves these for future definition and shall have no responsibility whatsoever for conflicts or incompatibilities arising from future changes to them. The product information on the Web Site or Materials is subject to change without notice.  
 Do not finalize a design with this info. ARDUINO and other Arduino brands and logos and Trademarks of Arduino SA. All Arduino SA Trademarks cannot be used without owner's formal permission.

<b>Title:</b> ETHERNET				
<b>ID:</b> ASX00049	<b>Version:</b> V1.1			
<b>Date:</b> 10/23/2023	<b>Time:</b> 10:49:36 PM	<b>Sheet</b> 5 of 10		
<b>File:</b> ETH_CONNECTOR.SchDoc		<b>Author:</b> Silvio Navaretti	<b>RevAuthor:</b> Silvio Navaretti	





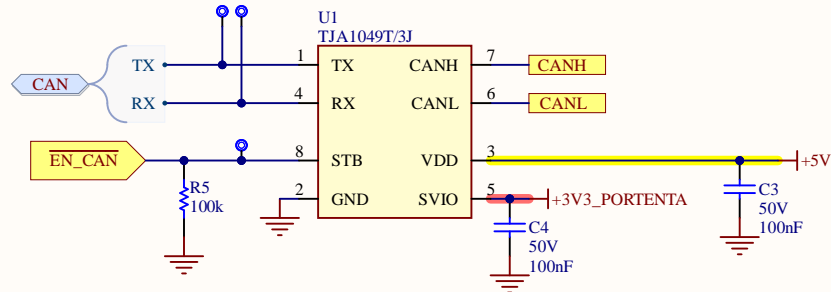
Reference Designs ARE PROVIDED "AS IS" AND "WITH ALL FAULTS. Arduino SA DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, REGARDING PRODUCTS, INCLUDING BUT NOT LIMITED TO, ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.  
 Arduino SA may make changes to specifications and product descriptions at any time, without notice. The Customer must not rely on the absence or characteristics of any features or instructions marked "reserved" or "undefined". Arduino SA reserves these for future definition and shall have no responsibility whatsoever for conflicts or incompatibilities arising from future changes to them. The product information on the Web Site or Materials is subject to change without notice.  
 Do not finalize a design with this info. ARDUINO and other Arduino brands and logos and Trademarks of Arduino SA. All Arduino SA Trademarks cannot be used without owner's formal permission.

<b>Title: USB</b>		 	
ID: ASX00049	Version: V1.1		
Date: 10/23/2023	Time: 10:50:02 PM	Sheet 6 of 10	
File: USB.SchDoc	Author: Silvio Navaretti	RevAuthor: Silvio Navaretti	





Reference Designs ARE PROVIDED "AS IS" AND "WITH ALL FAULTS. Arduino SA DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, REGARDING PRODUCTS, INCLUDING BUT NOT LIMITED TO, ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.  
 Arduino SA may make changes to specifications and product descriptions at any time, without notice. The Customer must not rely on the absence or characteristics of any features or instructions marked "reserved" or "undefined". Arduino SA reserves these for future definition and shall have no responsibility whatsoever for conflicts or incompatibilities arising from future changes to them. The product information on the Web Site or Materials is subject to change without notice.  
 Do not finalize a design with this info. ARDUINO and other Arduino brands and logos and Trademarks of Arduino SA. All Arduino SA Trademarks cannot be used without owner's formal permission.

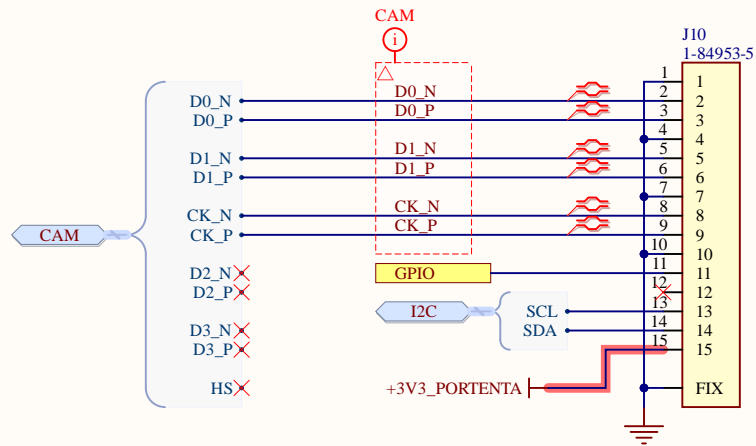
<b>Title: SD card</b>			
ID: ASX00049	Version: V1.1		
Date: 10/23/2023	Time: 10:50:29 PM	Sheet 7 of 10	
File: SDcard.SchDoc	Author: Silvio Navaretti	RevAuthor: Silvio Navaretti	





Reference Designs ARE PROVIDED "AS IS" AND "WITH ALL FAULTS". Arduino SA DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, REGARDING PRODUCTS, INCLUDING BUT NOT LIMITED TO, ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.  
 Arduino SA may make changes to specifications and product descriptions at any time, without notice. The Customer must not rely on the absence or characteristics of any features or instructions marked "reserved" or "undefined". Arduino SA reserves these for future definition and shall have no responsibility whatsoever for conflicts or incompatibilities arising from future changes to them. The product information on the Web Site or Materials is subject to change without notice.  
 Do not finalize a design with this info. ARDUINO and other Arduino brands and logos and Trademarks of Arduino SA. All Arduino SA Trademarks cannot be used without owner's formal permission.

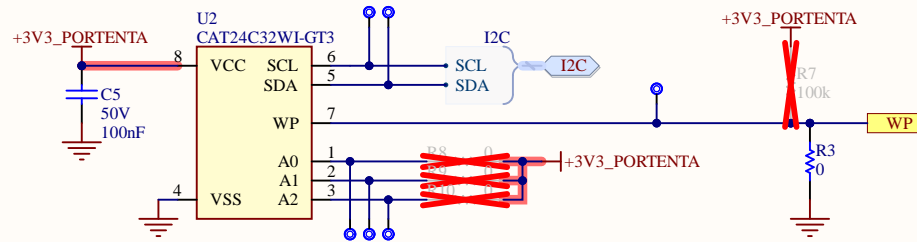
<b>Title:</b> CAN PHY		 	
<b>ID:</b> ASX00049	<b>Version:</b> V1.1		
<b>Date:</b> 10/23/2023	<b>Time:</b> 10:50:35 PM	<b>Sheet:</b> 8 of 10	
<b>File:</b> CAN_PHY.SchDoc		<b>Author:</b> Silvio Navaretti	<b>RevAuthor:</b> Silvio Navaretti





Reference Designs ARE PROVIDED "AS IS" AND "WITH ALL FAULTS. Arduino SA DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, REGARDING PRODUCTS, INCLUDING BUT NOT LIMITED TO, ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.  
 Arduino SA may make changes to specifications and product descriptions at any time, without notice. The Customer must not rely on the absence or characteristics of any features or instructions marked "reserved" or "undefined". Arduino SA reserves these for future definition and shall have no responsibility whatsoever for conflicts or incompatibilities arising from future changes to them. The product information on the Web Site or Materials is subject to change without notice.  
 Do not finalize a design with this info. ARDUINO and other Arduino brands and logos and Trademarks of Arduino SA. All Arduino SA Trademarks cannot be used without owner's formal permission.

<b>Title:</b> CAMERA		 	
<b>ID:</b> ASX00049	<b>Version:</b> V1.1		
<b>Date:</b> 10/23/2023	<b>Time:</b> 10:50:40 PM	<b>Sheet</b> 9 <b>of</b> 10	
<b>File:</b> CAMERA.SchDoc		<b>Author:</b> Silvio Navaretti	<b>RevAuthor:</b> Silvio Navaretti



CAT24C32WI-GT3 address bits

1	0	1	0	A2	A1	A0	R/W
<p>A2, A1, A0 can be pulled HIGH or LOW. They have an internal pulldown.</p>							

Reference Designs ARE PROVIDED "AS IS" AND "WITH ALL FAULTS. Arduino SA DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, REGARDING PRODUCTS, INCLUDING BUT NOT LIMITED TO, ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.  
 Arduino SA may make changes to specifications and product descriptions at any time, without notice. The Customer must not rely on the absence or characteristics of any features or instructions marked "reserved" or "undefined". Arduino SA reserves these for future definition and shall have no responsibility whatsoever for conflicts or incompatibilities arising from future changes to them. The product information on the Web Site or Materials is subject to change without notice.  
 Do not finalize a design with this info. ARDUINO and other Arduino brands and logos and Trademarks of Arduino SA. All Arduino SA Trademarks cannot be used without owner's formal permission.

<b>Title: EEPROM</b>		 	
ID: ASX00049	Version: V1.1		
Date: 10/23/2023	Time: 10:50:46 PM	Sheet 10 of 10	
File: EEPROM.SchDoc	Author: Silvio Navaretti	RevAuthor: Silvio Navaretti	