

RaspberryPi Frigorus Sheild

Frigorus System

Frigorus

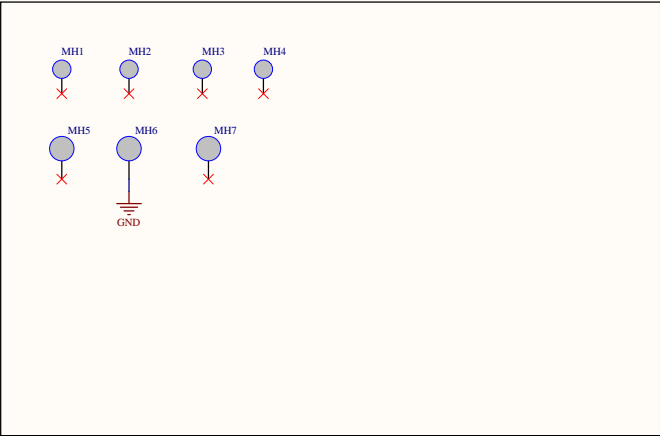
Revision 1.0

Date: 2023-02-10

Revision history	

Package size conversion	
<i>Metric</i>	<i>Imperial</i>
1005	0402
1608	0603
2012	0805
3216	1206
3225	1210
6432	2512

Élément mécaniques



Project Title		
RaspberryPi Frigorus Sheild		
Global Project		
<i>Frigorus System</i>		
Size	Group	Revision
11x17	Frigorus	1.0
Date	2023-02-10	Sheet 1 of 5
Filename	rasp_shield_title.SchDoc	Designers Julien Roy-Sabourin

The image displays three circuit diagrams for the PS1 K7805-3AR3 voltage regulator, which is a 5V, 3A linear regulator. The diagrams show the input, regulator, and output stages.

Diagram 1: Input Stage

- Input: 12V
- Component 1: 732-10955-ND (J6, 691137710002) - Input connector
- Component 2: 478-2865-1-ND (F1, F0603E1R75FSTR, 1.75A) - Input filter capacitor
- Component 3: 641-1698-6-ND (D1, CDBA240LL-HF) - Input diode
- Output: 12V

Diagram 2: Regulator Stage

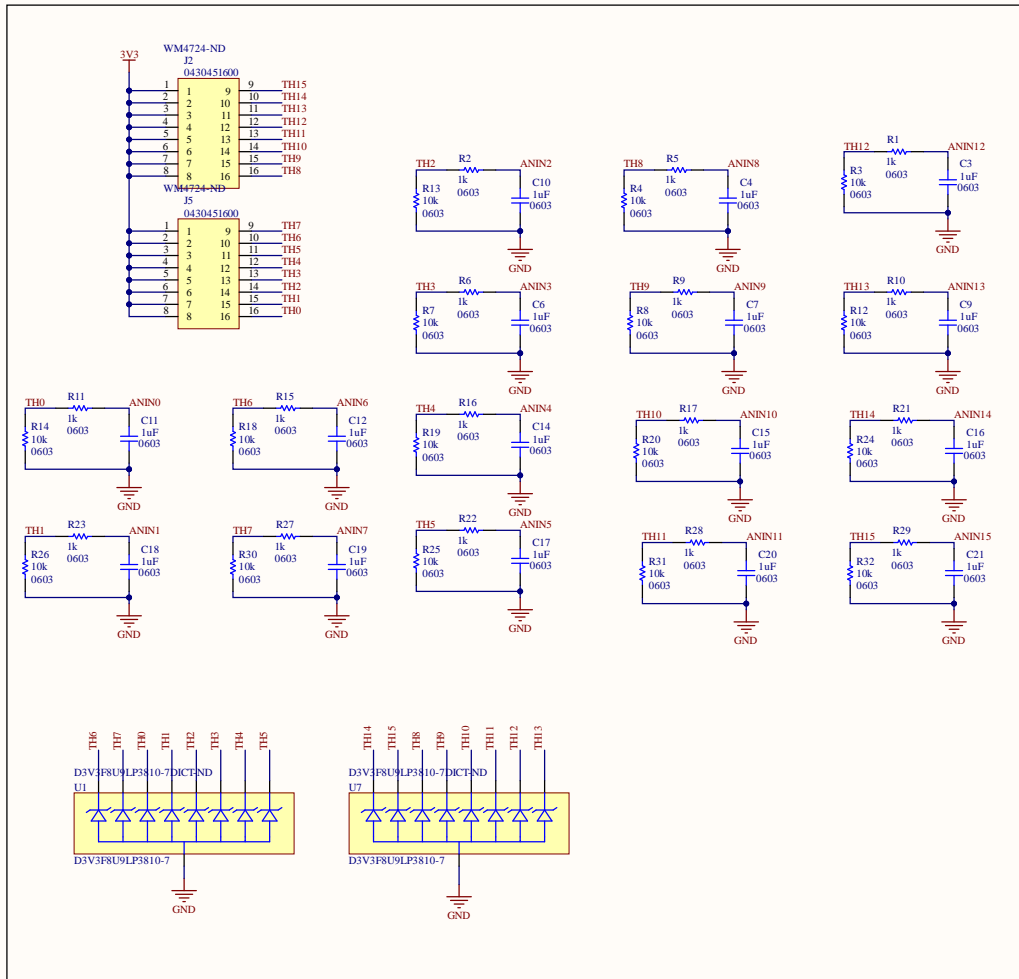
- Input: 12V
- Component 1: 1276-3387-1-ND (C1, 50V, 1210, 10nF) - Input capacitor
- Component 2: 1276-1935-1-ND (C13, 50V, 0603, 0.1uF) - Input capacitor
- Regulator: PS1 K7805-3AR3
- Output: 5V
- Component 3: 1276-1274-1-ND (C2, 10V, 0603, 22uF) - Output capacitor
- Component 4: 1276-1274-1-ND (C3, 10V, 0603, 0.1uF) - Output capacitor

Diagram 3: Output Stage

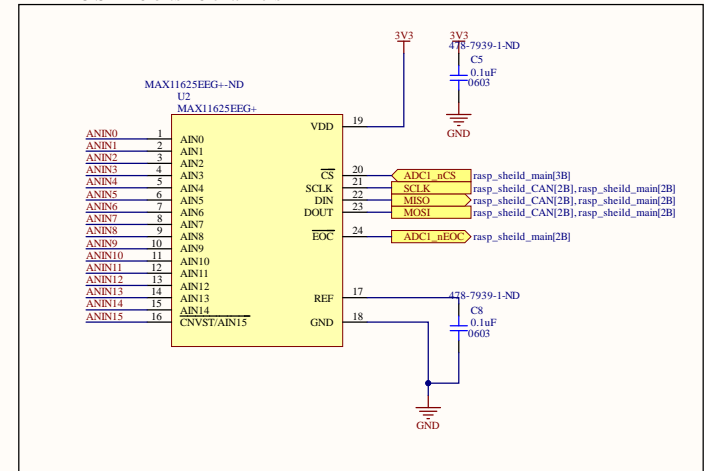
- Input: 5V
- Component 1: 732-4979-1-ND (D6, 15006060S75000) - Output diode
- Component 2: 732-4979-1-ND (D7, 15006060S75000) - Output diode
- Component 3: 732-4979-1-ND (D8, 15006060S75000) - Output diode
- Output: 3V3

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Filename				Designers	
rasp_sheild_main.SchDoc				Julien Roy-Sabourin	

Interface thermistances



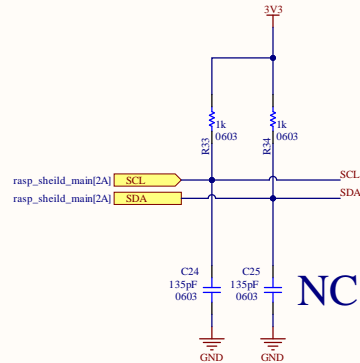
ADC SPI 10 bits 16 channels



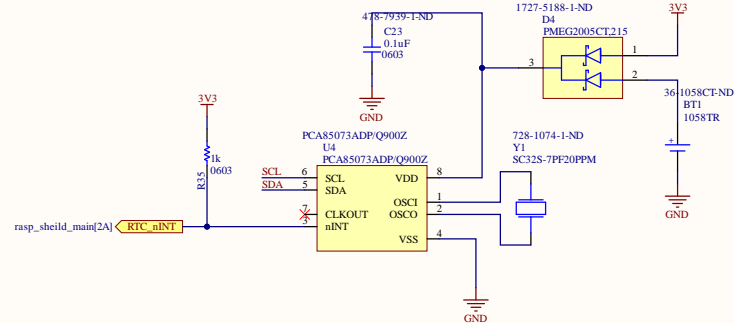
Total Power
50mA @ 3V3

Sheet Name		
Lecture analogue thermistances		
Project Title		
RaspberryPi Frigorus Shield		
Global Project		
Frigorus System		
Size	Group	Revision
11x17	Frigorus	1.0
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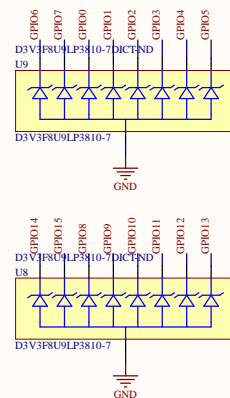
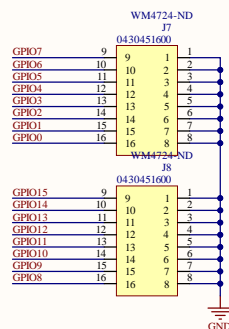
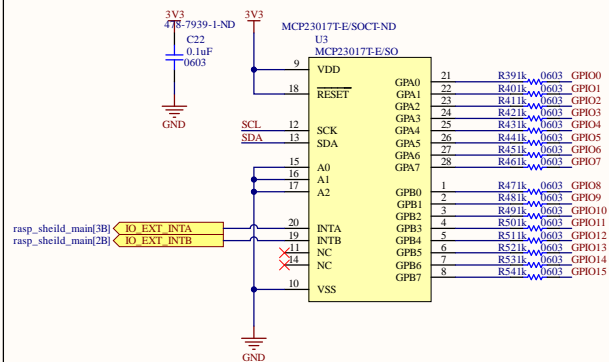
Bus SPI



Real Time Clock



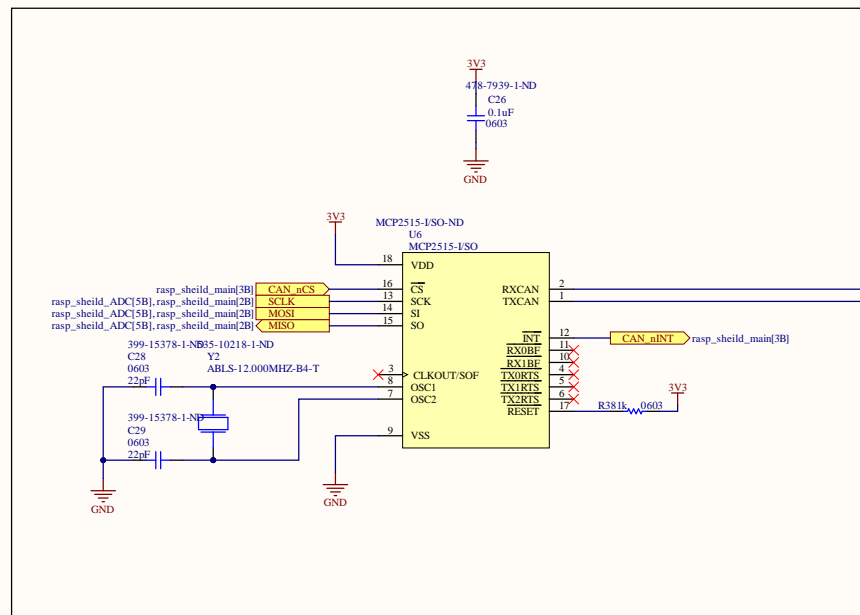
I/O Expander



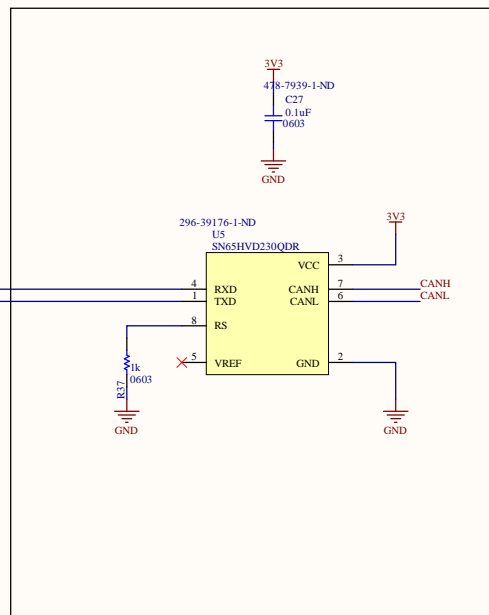
Total Power
50mA @ 3V3

Sheet Name		Périphériques i2c	
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11x17	Frigorus	1.0	
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rasp_shield_i2c.SchDoc		Julien Roy-Sabourin	

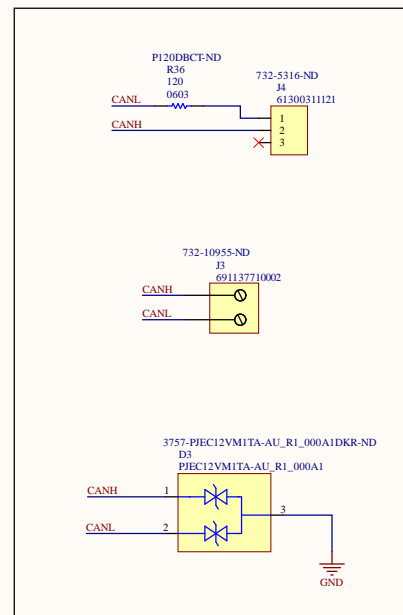
CAN Controller



CAN Transiver



Termaison et connecteur



Total Power
27mA @ 3V3

Sheet Name		Comminication CAN	
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rasp_sheild_CAN.SchDoc		Julien Roy-Sabourin	