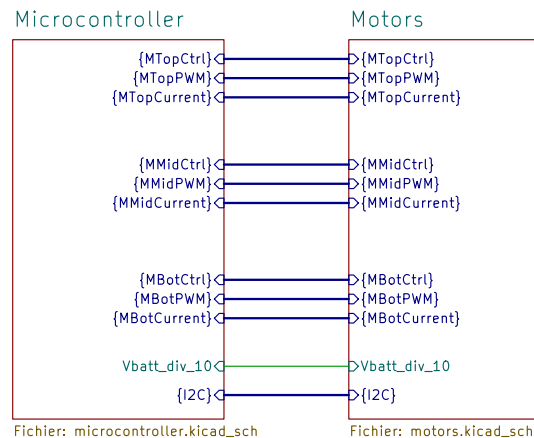
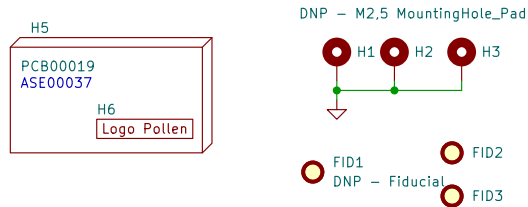


Release	Date	Designer	Check	Comments
A1	06/01/2023	EB	SN	Initial drawing
B1	22/03/2023	EB	SN	[added] Link Vbus and 5V with a OR (DNP) [changed] Boot switch -> press-button [changed] OR configuration points on SimpleFOC operation (EXTI) [changed] Test points got drilled (0,4 mm)
C1	13/04/2023	EB	SN	[fixed] SW1 was not operating (stucked in boot mode) [fixed] remove OR between V_bus & 5V (useless) <ul style="list-style-type: none"> <li>- [not fixed] freezing bug à l'init. UART ? EXTI ?</li> <li>- [??] changer connecteur flex 10 cts pour un sliding</li> <li>- [??] changer connecteur flex 40 cts pour un sliding</li> <li>- [later] UART connector -&gt; Dynamixel (<a href="https://emanual.robotis.com/docs/en/dxl/mx/mx-28/#connector-information">https://emanual.robotis.com/docs/en/dxl/mx/mx-28/#connector-information</a>)</li> </ul>

Houston board is basically a STM32G4 microcontroller that focuses on driving 3 BLDC motors. It gets 3 Hall effects or encoders on motors and absolute positions behind reduction through SPI encoders.



EXTI use:

- 0: botHallC PC0\_15 (PE4\_3 on rev. A1)
- 1
- 2: botHallA PE2
- 3: midMotnFlt PC3\_18
- 4: midHallB PD4\_86
- 5:
- 6: botHallB PE6\_5 (PE3\_2 on rev. A1)
- 7: midHallC PD7
- 8: topHallA PA8
- 9: topHallB PA9
- 10: topHallC PA10
- 11: topMotnFlt PD11
- 12: botMotnFlt PE12
- 13
- 14
- 15: midHallA PA15



**POLLEN** ROBOTICS

Pollen Robotics

Sheet: /  
File: carte\_Houston.kicad\_sch

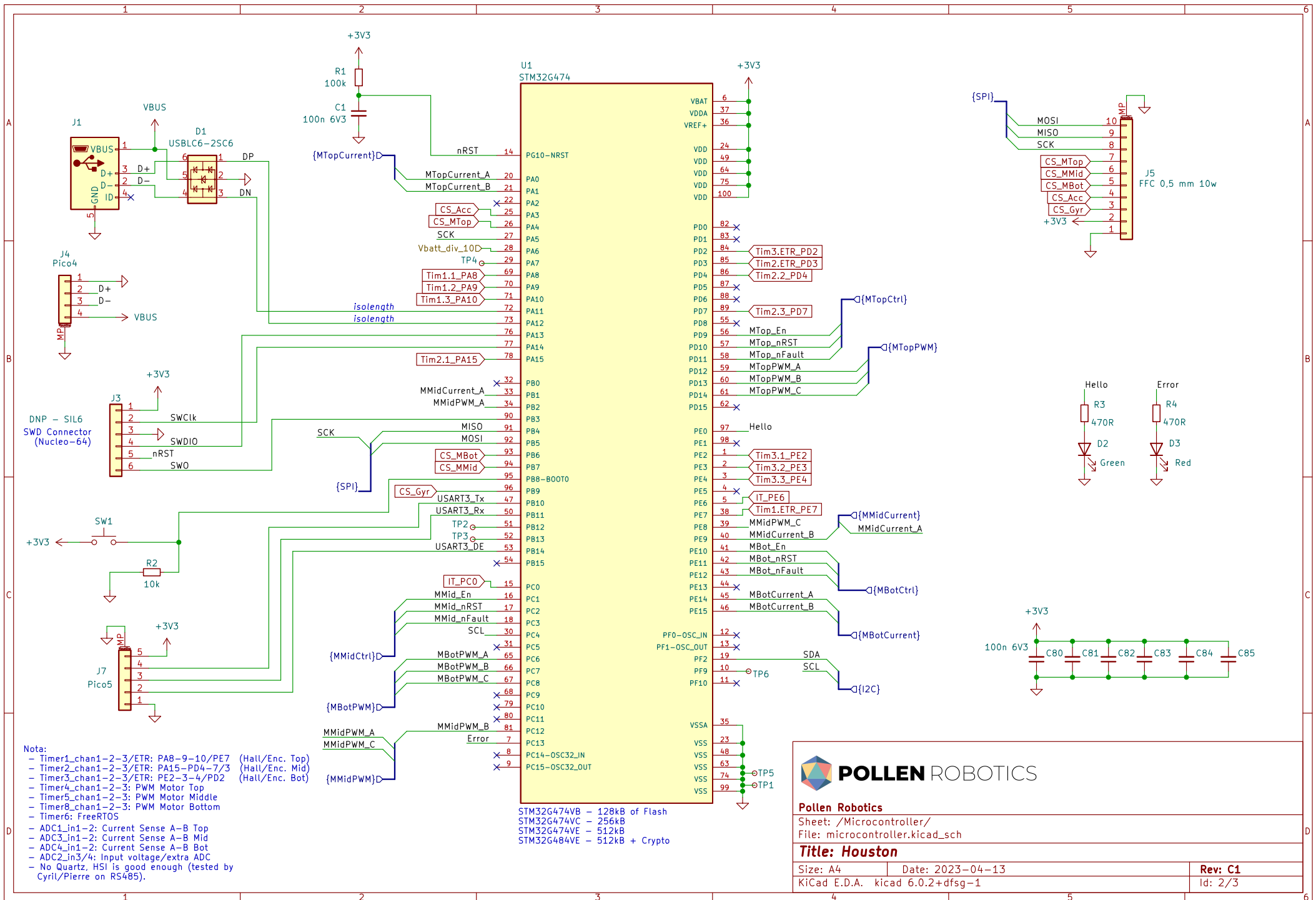
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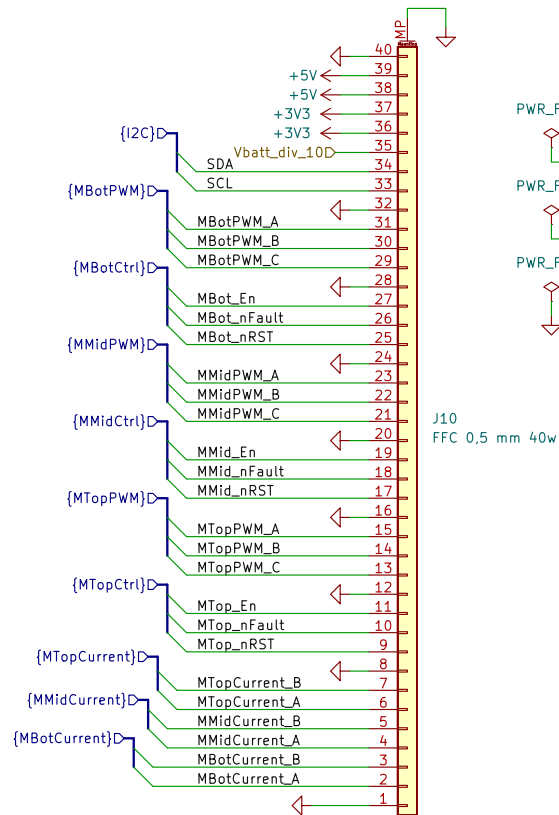
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KiCad E.D.A. kicad 6.0.2+dfsg-1

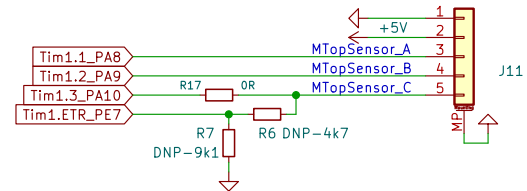
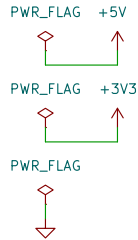
**Rev: C1**

Id: 1/3





Nota: /!\ J1 is inverted in regards to the facing connector (J10 on Major Tom).

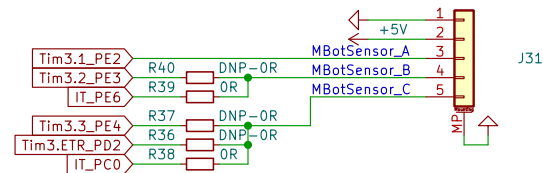
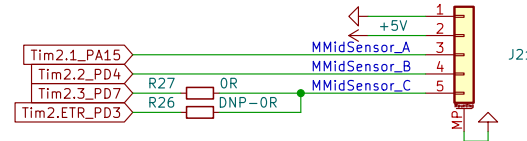


Pico5 53261-0571

Mating:

- 51021-0500 (Fem. housing)
- 50079-8000 (Contacts)
- 92001-1198 (300 mm cable)

5 Volts-tolerant inputs  
(5V->3V3 conversion for PE7)



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Sheet: /Motors/  
File: motors.kicad\_sch

Title: Houston

Size: A4 Date: 2023-04-13

KiCad E.D.A. kicad 6.0.2+dfsg-1

Rev: C1

Id: 3/3