J3 J2 Voltage Supply GPIO GPIO2/SDA1 GPIO3/SCL1 GPIO4/GPCLKO PI_TX PI RX GPI017 GPI027 GPI022 GPI018/PCM.CLK 12 GPI023 15 16 GPI024 17 18 GPI010/SPI0.MOSI GPI09/SPI0.MISO GPI025 GPI011/SPI0.SCLK 23 25 27 GPI08/SPI0.CEQ J4 GPI07/SPI0.CE1 26 Motor Controllers GPI05 GPI06 28 ID_SCL 29 31 30 32 GPI012/PWMQ, GPI013/PWM1 GPI019/PCM.FS GPI026 12 33 I2C_SDA 35 GPI016 37 38 GPI020/PCM.DIN I2C_SCL GPI021/PCM.DOUT

Raspberry Pi HAT header connector + Power Supply

+5٧ Nano_TX Nano_RX Pull-up Resistor Values to be decided (0-10k if AREF 18 needed) A0 19 A1 20 A2 21 A3 22 A3 27 I2C_SCL Arduino_Nano Motor Control Hub Arduino to be connected via Serial USB to Raspberry Pi

Motor Controller Command Bridge: Control Relay passing instructions from Raspberry Pi to Slave Controllers

R7, R8: Mouser CR0402AJW-472GAS J2: Digikey SFH11-PBPC-D20-ST-BK J3: Digikey SFH11-PBPC-D05-ST-BK J4: Digikey SBH11-PBPC-D07-ST-BK

Author: Ilyas Asmouki

V2.1 : - Header for Motor Controllers, socket for Power Supply

V2.0 : - Motor Control Hub gets its own PCB

Update: Added Raspberry Pi Connector (to be mounted as HAT)

EPFL Xplore

Sheet: /

File: Motor Control Hub.kicad sch

Title: Motor Controller Hub		
Size: A4	Date: 2024-03-27	Rev: 2.1
KiCad E.D.A. kicad 7.0.9		ld: 1/1

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