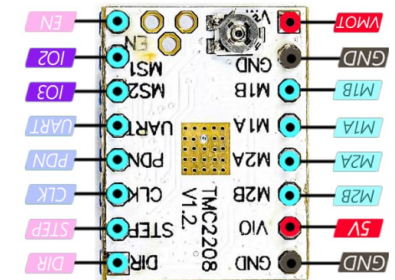
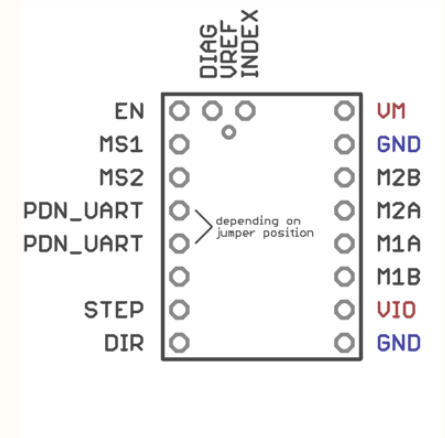
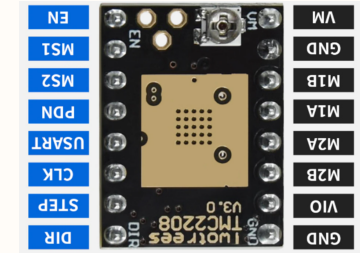
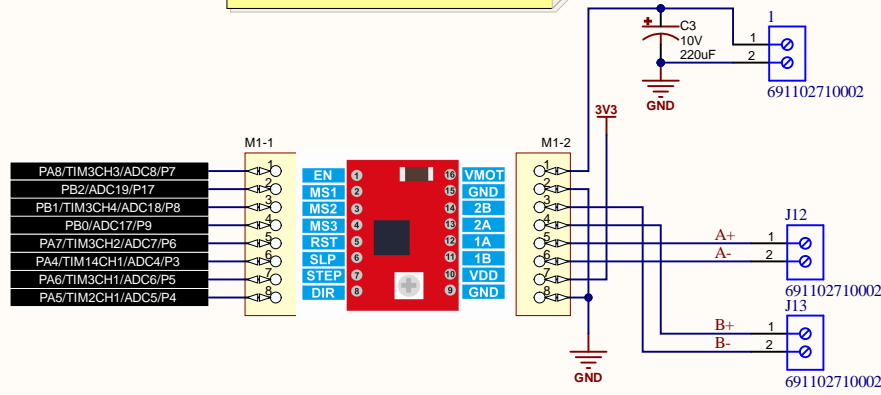


A  
 \$0.70 A4988 Red/green 35V 2A  
 \$1.50 DRV8825 purple 45V 2.5A @24v  
 \$1.80 TMC2208 white 1A 36V UART \$3.00  
 TMC2209 black: 2.8A 29V UART

all 15x20mm 500mil spacing



Title: *StepDrive P1*

Part #: GDL-ACSTEPDRIVEP1-A

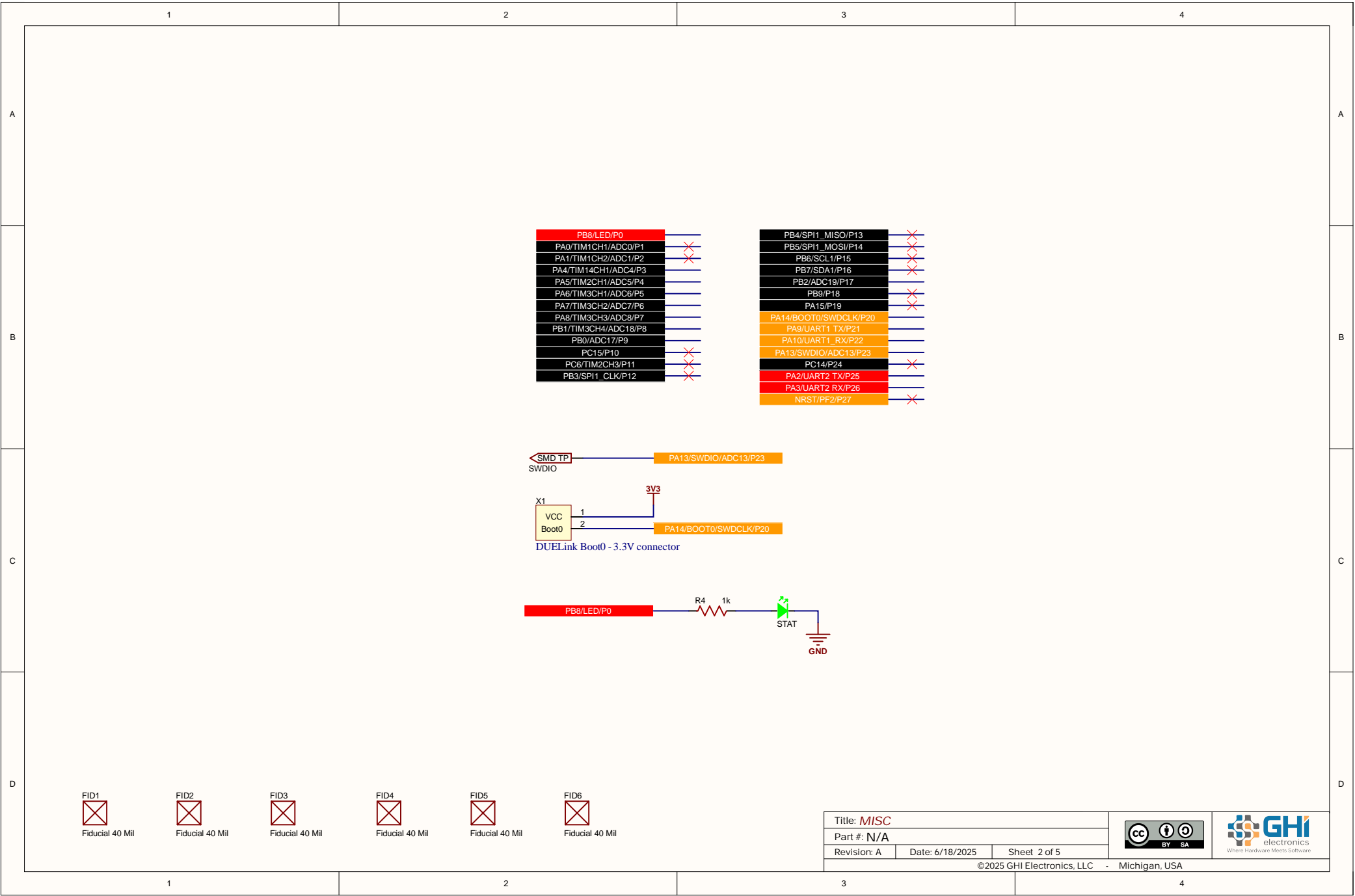
Revision: A

Date: 6/18/2025

Sheet 1 of 5

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FID1

Fiducial 40 Mil

FID2

Fiducial 40 Mil

FID3

Fiducial 40 Mil

FID4

Fiducial 40 Mil

FID5

Fiducial 40 Mil

FID6

Fiducial 40 Mil

Title: MISC

Part #: N/A

Revision: A

Date: 6/18/2025

Sheet 2 of 5

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Where Hardware Meets Software

Software Features:

ADC: P1, P2, P3, P4, P5, P6, P7, P8, P9, P17

Pulse feedback: Can be any pin but hardware need 100pF+ 1Mohm

HW PWM: P1, P2, P3, P4, P5, P6, P7, P8, P11

- \* P1, P2: TIM1
- \* P3: TIM14
- \* P4, P11: TIM2
- \* P5, 6, 7, 8: TIM3

SW PWM: Any pin

SW UART: Pins 1 RX, 2 TX, 3 DBG

Wakeup Pins: P1, P3

Interrupts on: P1, P2, P3, P4, P5, P6, P7, P12, ....

Output compare: P2 (PA1)

Input capture: TBD

Neopixel: Any pin (blocking mode)

IR reciever: P1

// PB8 - P0 -> LED

// PA0 - P1 -> TIM1\_CH1 ADC0

// PA1 - P2 -> TIM1\_CH2 ADC1

// PA4 - P3 -> TIM14\_CH1 ADC4

// PA5 - P4 -> TIM2\_CH1 ADC5

// PA6 - P5 -> TIM3\_CH1 ADC6

// PA7 - P6 -> TIM3\_CH2 ADC7

// PA8 - P7 -> TIM3\_CH3 ADC8

// PB1 - P8 -> TIM3\_CH4 ADC18

// PB0 - P9 -> ADC17

// PC15 - P10

// PC6 - P11

// PB3 - P12 -> SPI1\_CLK

// PB4 - P13 -> SPI1\_MISO

// PB5 - P14 -> SPI1\_MOSI

// PB6 - P15 -> I2C1\_SCL

// PB7 - P16 -> I2C1\_SDA

// PB2 - P17 -> ADC19

// PB9 - P18

// PA15 - P19

// PA14 - P20 -> SWCLK BOOT0

// PA9 - P21 -> UART1 TX - Can be used when no Upstream

// PA10 - P22 -> UART1 - Can be used when no Upstream

// PA13 - P23 -> SWDIO ADC13

// PF2 - P24 -> NRST - Reserved for emergency

UART1 is available when not used in upstream

PA12 can be UART1\_CK

Sheet order priority:

- MCU.schDoc
- Downstream.schDoc
- Upstream.schDoc
- Misc.
- project\_name.schDoc





