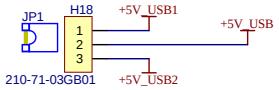
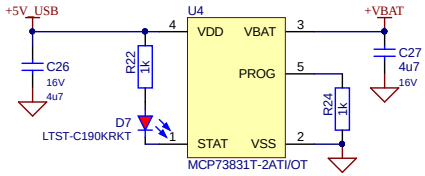
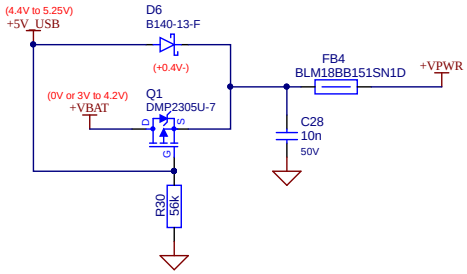
USB input power selector (jumper)



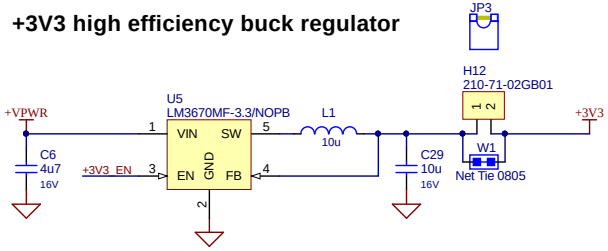
Li-Po Battery Charger



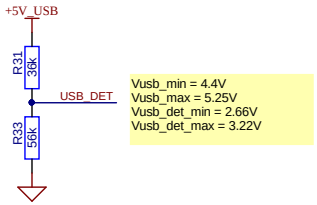
Automatic power path selection



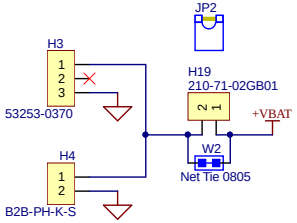
+3V3 high efficiency buck regulator



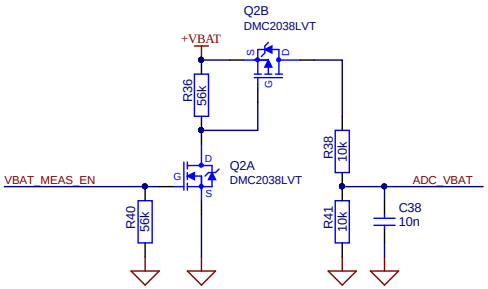
USB power detect



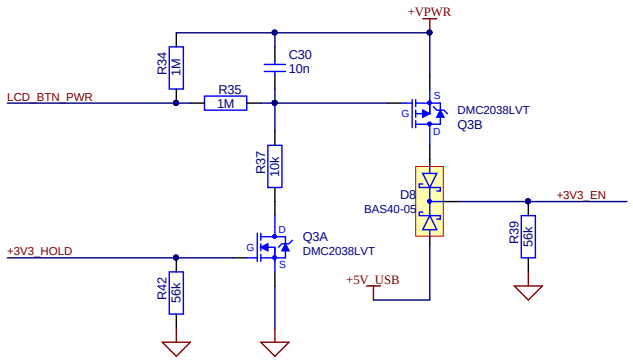
Li-Po Battery Connector (Molex or JST)



Battery Voltage Measurement



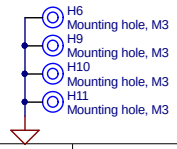
Power on button and microcontroller hold (always on when USB connected)



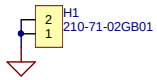
Fiducials

- H5 Fiducial 1mm
- H8 Fiducial 1mm
- H13 Fiducial 1mm
- H14 Fiducial 1mm

Mounting Holes



GND Test Points



BOM

PCB1

P0014-A

PCB NAME: Hero Board		PCB NUMBER: P0012
SCH PAGE TITLE: Power Supply		PCB REV: C
SHEET: 1 OF 3	DATE: 2018-10-30	VARIANT: [No Variations]
DRAWN BY: Pieter Conradie	PROJECT E NGINEER: Pieter Conradie	TEMPLATE REV: 02

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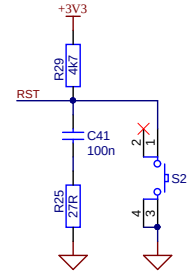
ARM Cortex M0+ Microcontroller

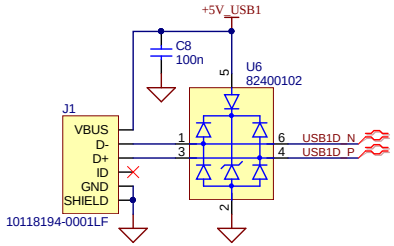
32kHz Crystal

Boot select

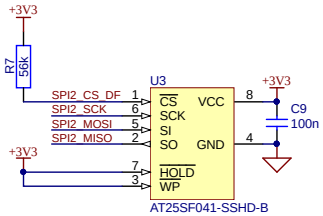
Reset Button



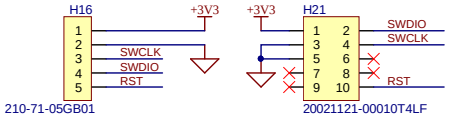
USB Device Port



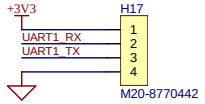
DataFlash



Program & Debug



UART Header



PCB NAME: Hero Board			PCB NUMBER: P0012
SCH PAGE TITLE: Microcontroller			PCB REV: C
SHEET: 2 OF 3	DATE: 2018-10-30		VARIANT: [No Variations]
DRAWN BY: Pieter Conradie	PROJECT E NGINEER: Pieter Conradie		TEMPLATE REV: 02

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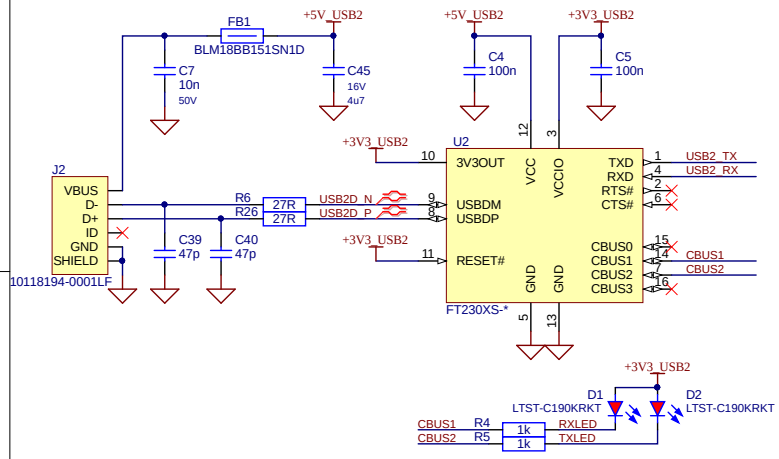
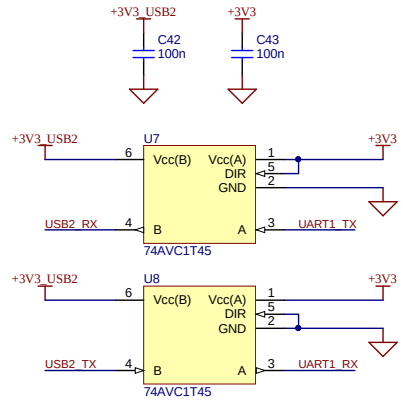
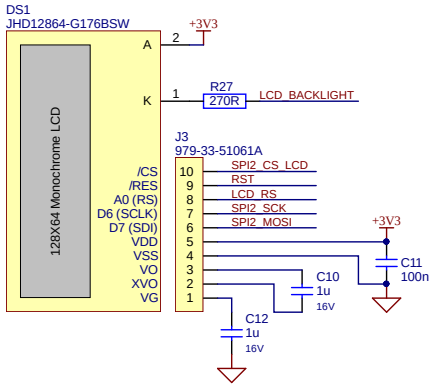
USB-Serial bridge



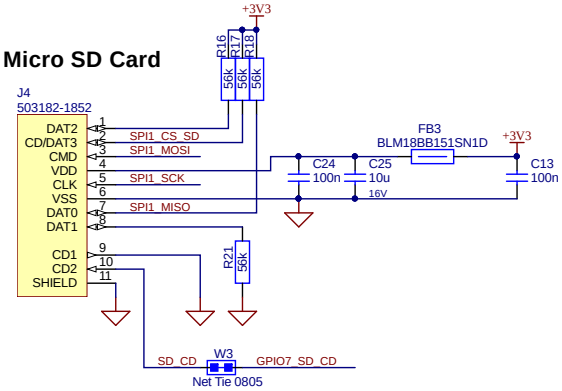
USB-Serial level translation and isolation (USB2 disconnected)



LCD

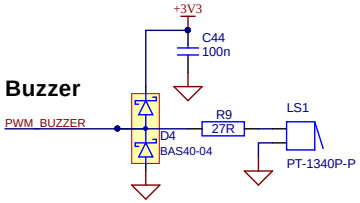


Micro SD Card

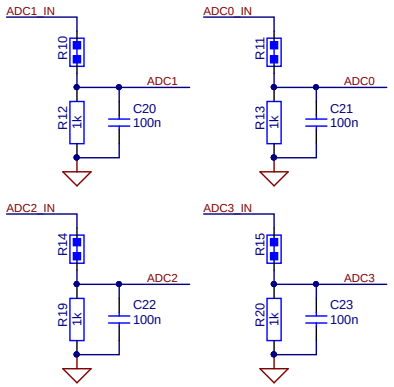


(option to disconnect SD CD from GPIO7)

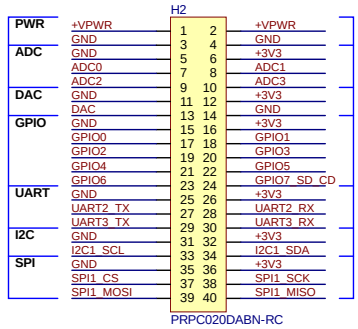
Buzzer



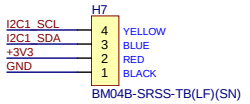
Optional ADC scale and filter circuitry



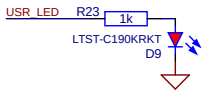
Peripheral connector



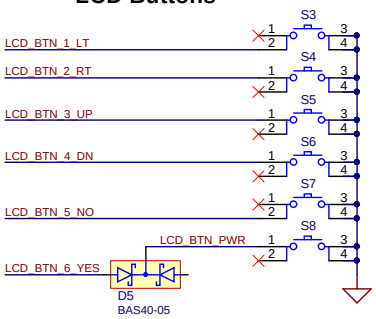
Sparkfun QWIIC Connector



LCD LED

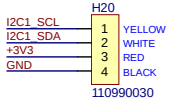


LCD Buttons



(pull-up resistors on micro must be enabled)

Seeed Grove I2C Connector



PCB NAME: Hero Board			PCB NUMBER: P0012
SCH PAGE TITLE: Peripherals			PCB REV: C
SHEET: 3 OF 3	DATE: 2018-10-30		VARIANT: [No Variations]
DRAWN BY: Pieter Conradie	PROJECT E NGINEER: Pieter Conradie		TEMPLATE REV: 02

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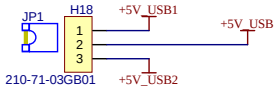
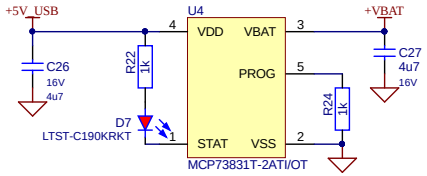
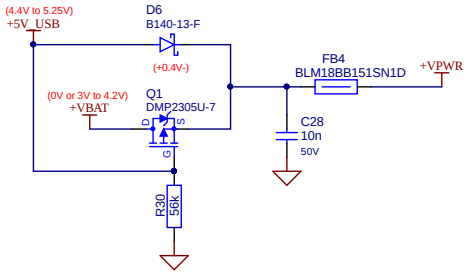
USB input power selector (jumper)



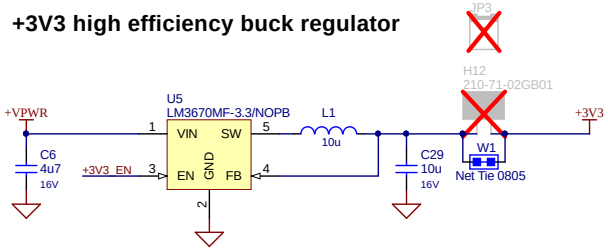
Li-Po Battery Charger



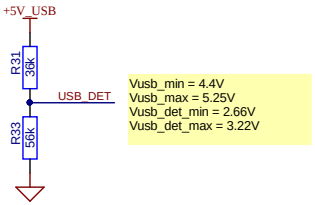
Automatic power path selection



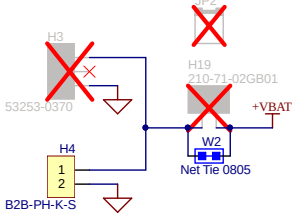
+3V3 high efficiency buck regulator



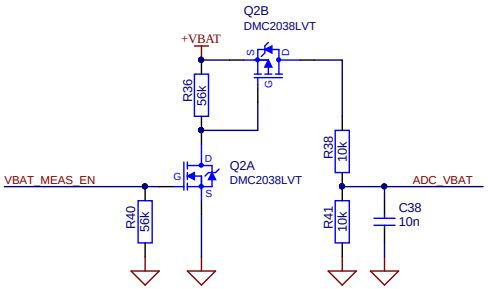
USB power detect



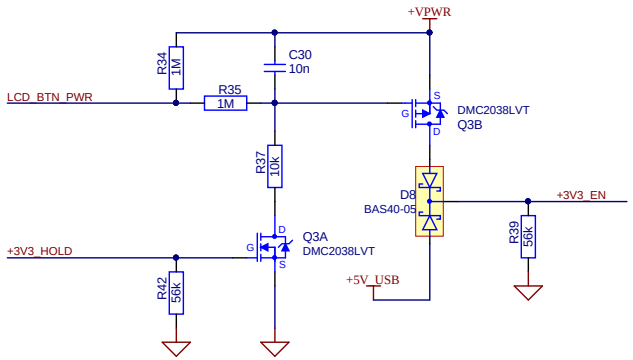
Li-Po Battery Connector (Molex or JST)



Battery Voltage Measurement



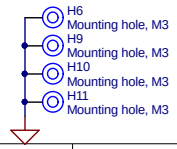
Power on button and microcontroller hold (always on when USB connected)



Fiducials

- H5 Fiducial 1mm
- H8 Fiducial 1mm
- H13 Fiducial 1mm
- H14 Fiducial 1mm

Mounting Holes



GND Test Points

BOM

PCB1

P0014-A

PCB NAME: Hero Board			PCB NUMBER: P0012
SCH PAGE TITLE: Power Supply			PCB REV: C
SHEET: 1 OF 3	DATE: 2018-10-30		VARIANT: deluxe edition
DRAWN BY: Pieter Conradie	PROJECT E NGINEER: Pieter Conradie		TEMPLATE REV: 02

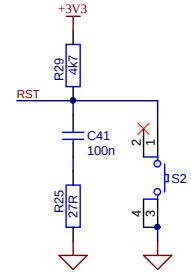
PRINT 2018-11-19 09:41:22 AM

ARM Cortex M0+ Microcontroller

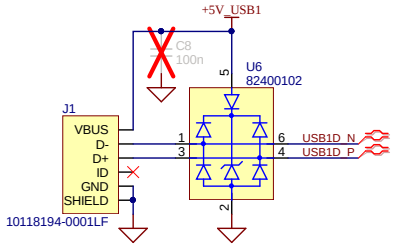
32kHz Crystal

Boot select

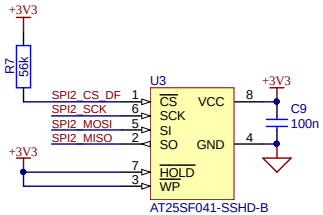
Reset Button



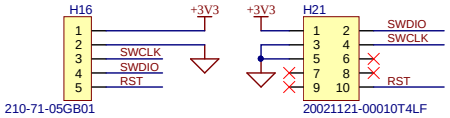
USB Device Port



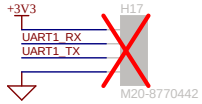
DataFlash



Program & Debug



UART Header



PCB NAME: Hero Board			PCB NUMBER: P0012
SCH PAGE TITLE: Microcontroller			PCB REV: C
SHEET: 2 OF 3	DATE: 2018-10-30		VARIANT: deluxe edition
DRAWN BY: Pieter Conradie	PROJECT E NGINEER: Pieter Conradie		TEMPLATE REV: 02

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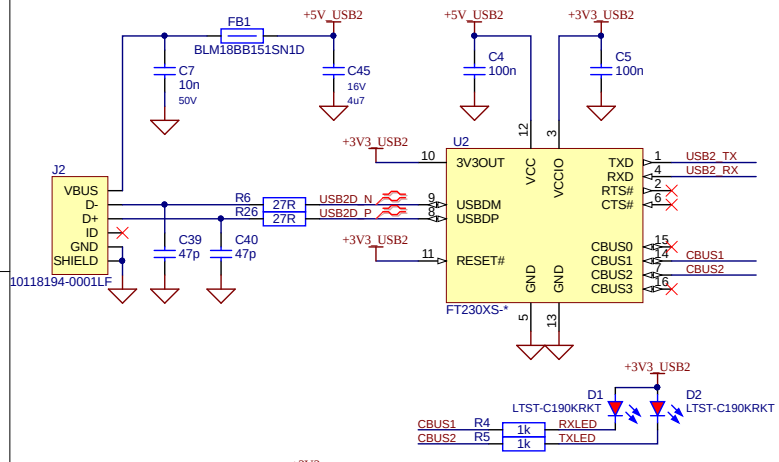
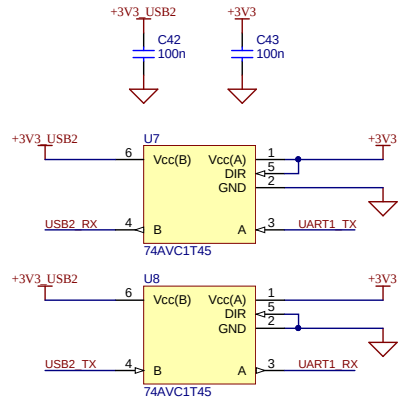
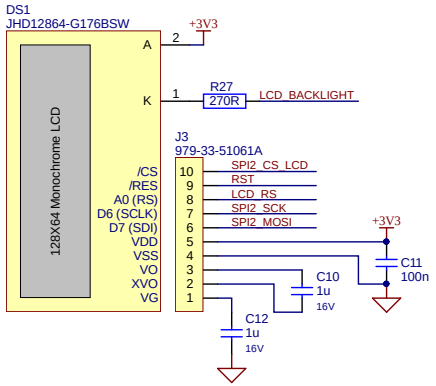
USB-Serial bridge



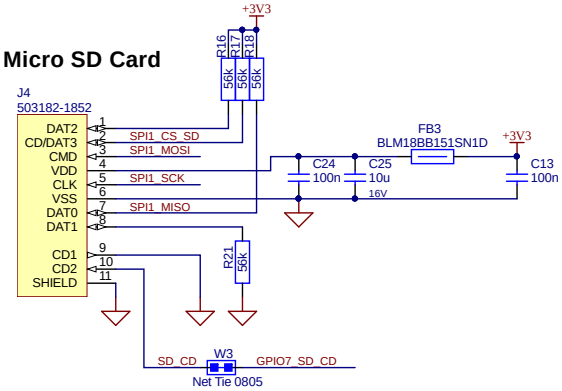
USB-Serial level translation and isolation (USB2 disconnected)



LCD

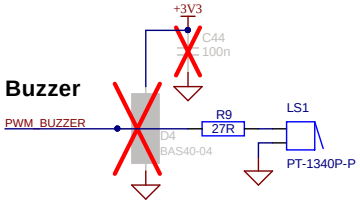


Micro SD Card

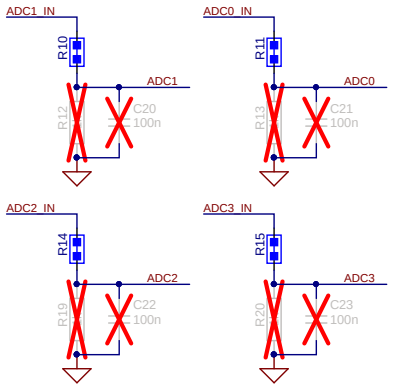


(option to disconnect SD CD from GPIO7)

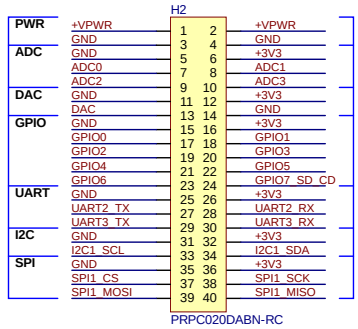
Buzzer



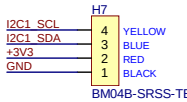
Optional ADC scale and filter circuitry



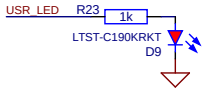
Peripheral connector



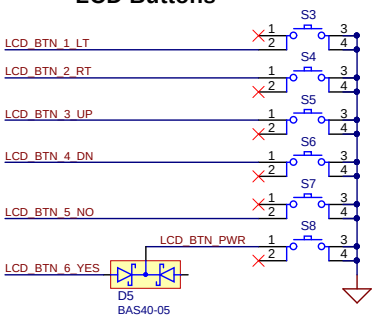
Sparkfun QWIIC Connector



LCD LED

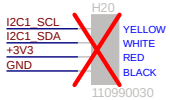


LCD Buttons



(pull-up resistors on micro must be enabled)

Seeed Grove I2C Connector



PCB NAME: Hero Board			PCB NUMBER: P0012
SCH PAGE TITLE: Peripherals			PCB REV: C
SHEET: 3 OF 3	DATE: 2018-10-30		VARIANT: deluxe edition
DRAWN BY: Pieter Conradie	PROJECT E NGINEER: Pieter Conradie		TEMPLATE REV: 02

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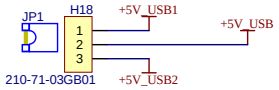
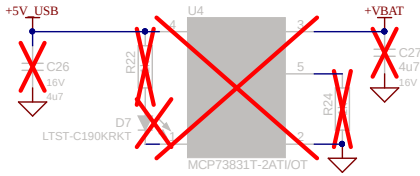
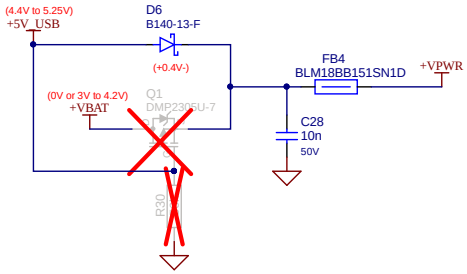
USB input power selector (jumper)



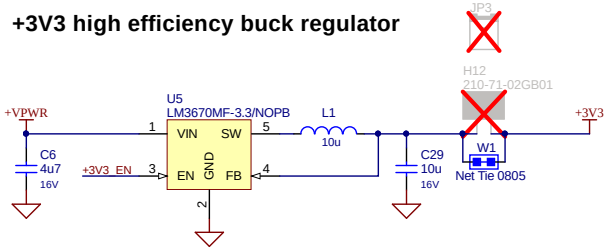
Li-Po Battery Charger



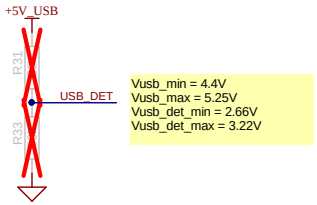
Automatic power path selection



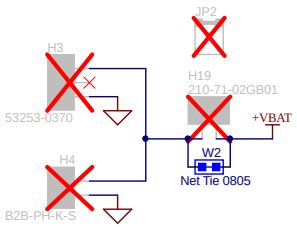
+3V3 high efficiency buck regulator



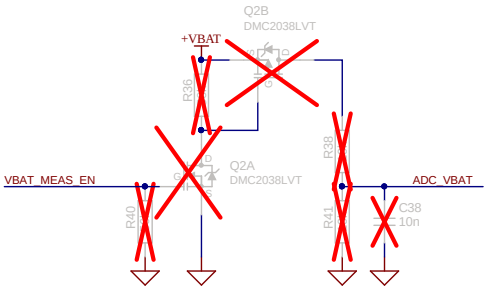
USB power detect



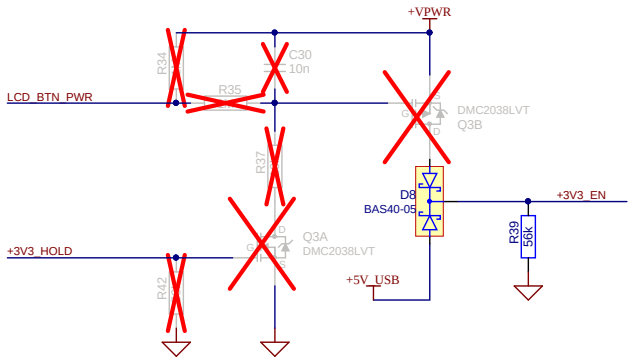
Li-Po Battery Connector (Molex or JST)



Battery Voltage Measurement



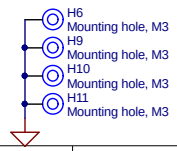
Power on button and microcontroller hold (always on when USB connected)



Fiducials

- H5 Fiducial 1mm
- H8 Fiducial 1mm
- H13 Fiducial 1mm
- H14 Fiducial 1mm

Mounting Holes



GND Test Points

BOM

PCB1

P0014-A

PCB NAME: Hero Board			PCB NUMBER: P0012
SCH PAGE TITLE: Power Supply			PCB REV: C
SHEET: 1 OF 3	DATE: 2018-10-30		VARIANT: lite edition
DRAWN BY: Pieter Conradie	PROJECT E NGINEER: Pieter Conradie		TEMPLATE REV: 02

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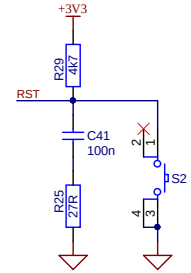
ARM Cortex M0+ Microcontroller

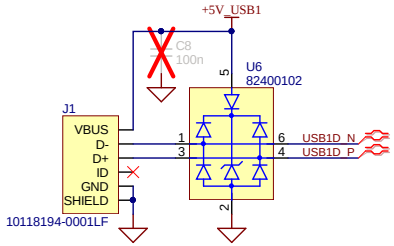
32kHz Crystal

Boot select

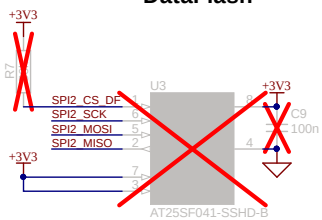
Reset Button



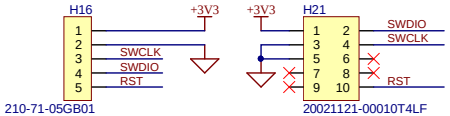
USB Device Port



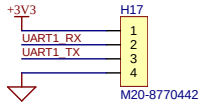
DataFlash



Program & Debug



UART Header



PCB NAME: Hero Board			PCB NUMBER: P0012
SCH PAGE TITLE: Microcontroller			PCB REV: C
SHEET: 2 OF 3	DATE: 2018-10-30		VARIANT: lite edition
DRAWN BY: Pieter Conradie	PROJECT E NGINEER: Pieter Conradie		TEMPLATE REV: 02

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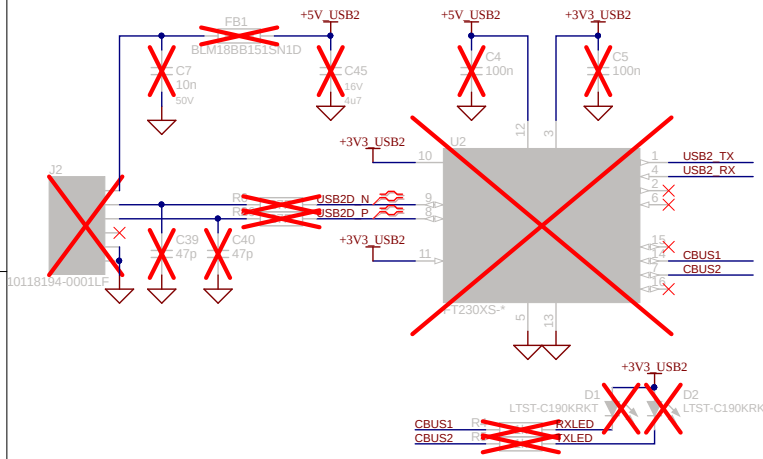
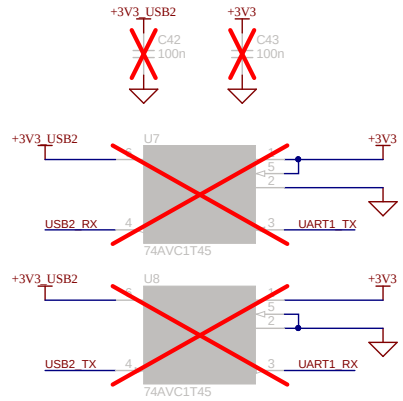
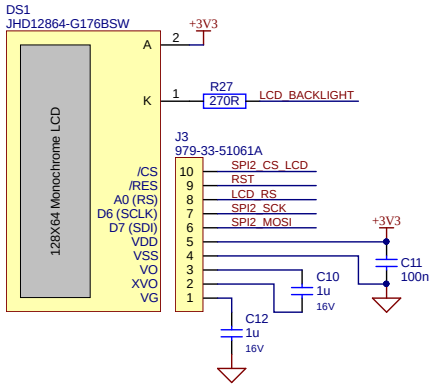
USB-Serial bridge



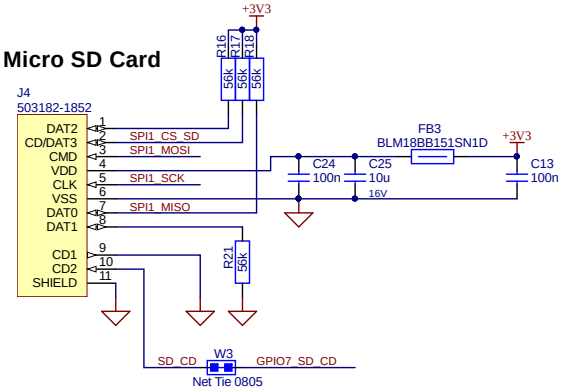
USB-Serial level translation and isolation (USB2 disconnected)



LCD

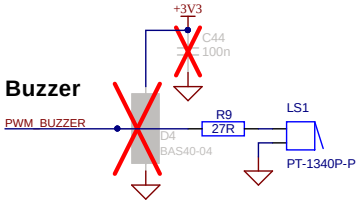


Micro SD Card

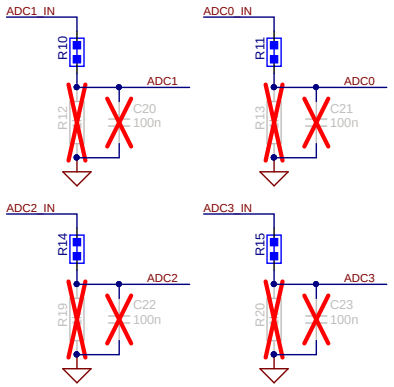


(option to disconnect SD CD from GPIO7)

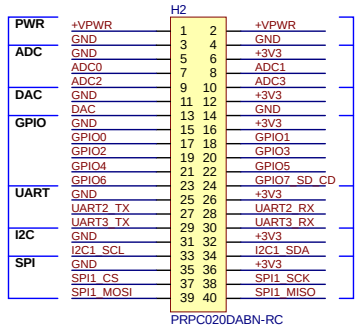
Buzzer



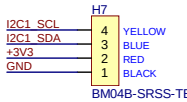
Optional ADC scale and filter circuitry



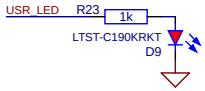
Peripheral connector



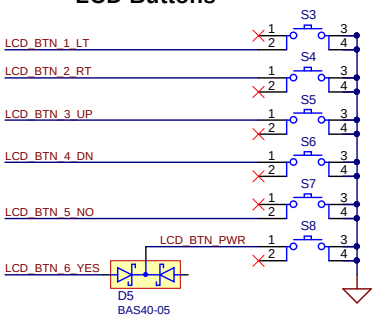
Sparkfun QWIIC Connector



LCD LED



LCD Buttons



(pull-up resistors on micro must be enabled)

Seeed Grove I2C Connector

PCB NAME: Hero Board			PCB NUMBER: P0012
SCH PAGE TITLE: Peripherals			PCB REV: C
SHEET: 3 OF 3	DATE: 2018-10-30		VARIANT: lite edition
DRAWN BY: Pieter Conradie	PROJECT E NGINEER: Pieter Conradie		TEMPLATE REV: 02

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