CUI: PDQ30-Q24-S5-D DigiKey: 102-3892-ND 5V @ 6 Amps \$34.98 GE: EHHD015A0A DigiKey: 555-1266-ND 5V @ 15 Amps \$29.77 GE: SHHD003A0A DigiKey: 555-1312-ND 5V @ 3Amps \$18.73 Isolated +5V @ 6 Amps PDQ30-Q24-S5-D PowerBoost 1000 Power Input RJ12 SHIELD_1 U7 LT1129CST-3.3 +3.3VA 5Vout +24V + C9 2 GND 10 2 2 l Vout+ _____ LowBattery GND C25 T_{10uF} ᆵᄶ 4 GND C12 C23 GŇD _5__EN 0.1uF 220uF Sheet: IDEAL_DIODE_2 6 On_Off | Vout-24V_Rtr __6___Vsh GNDGND SANODE CATHODED GND GND _______LiPo GND File: IDEAL_DIODE.sch C22 8 USB5V GND U4 ____ 0.1uF Sheet: IDEAL_DIODE_1 - 51 + C5 +5∨ _**→** Vcc RO DANODE CATHODED 510 R4 File: IDEAL_DIODE.sch 4 GND MAX488 GND LED1 Z LED1 GND SPI INTERFACE SCLK,MISO, MOSI, RESET Supply_monitor 4 - CHIP SELECTS GND OR 8 GPIO +3.3V +5V OR 4 INCREMENTAL ENCODERS 0.1uF C14 0.1u 0.1uF ADAFRUIT_TXB0104 0.1uF P10 2 3 4 5 4 5 8 C5 b 9 N 10 C5 C 11 13 14 enable_battery 0.1uF GND GND 0.1uF GND Rpi_mosi GND GND mosi +3.3VA Y2 10 Rpi_miso sclk RESET 4 A3 GND Rpi_sclk PSOC_5LP U6 Rpi_ss SDA_1 1 P2.0 P2.1 led VDD 52 GND 51 CONN_01X04 3 P2.2 sw1 RST 50 _6 EN ADAFRUIT_TXB0104 GND ²₄ Rpi_mosi 4 P2.3 P0.7 49 SPI INTERFACE cs a Vcca < Vccy Rpi_miso 5 P2.4 P0.6 48 SCLK,MISO, MOSI, RESET cs_b BI-DIRECTIONAL LOGIC P0.5 47 Rpi_sclk 6 P2.5 4 - CHIP SELECTS LEVEL SHIFTER Rpi_ss 7 P2.6 cap PO.4 46 C20 enable_battery P2.7 cap PO.3 45 delSig_bypass OR 8 GPIO 3 A2 cap PO.2 44 sar_1_bypass P11 2 GND

3 0 6 cs 1a

7 0 8 cs 1b

9 2 10 cs 1c

11 0 12

13 14 enable_ls 9 P12.7 0.1uF + C6 slush_inta10 P12.6 P0.1 43 8 rpi_intb miso 10uF P0.0 42 slush_intb 11 P12.5 mosi rpi_inta 12 P12.4 P12.3 MISO_1GND MOSI_1 P15.5 41 sclk cap P15.4 40 sar_in4 _6__EN +3.3VA GND GND cs_1a 14 P12.2 P15.3 39 sar_in3 Vcca < Vccy cs_1b 15 P12.1 cs_1c 16 P12.0 SLUSH ENGINE CONNECTOR P15.2 P15.1 38 37 P15.1 76 RASPBERRY PI CONNECTION sar_in2 17 P1.0 P15.0 36 sar_in1 RESET 3 GPI02/I2C1_SDA GPI02/I2C1_SDA VPP_(5v) 18 P1.1 19 P1.2 P3.7 P3.6 35 34 5 GPI03/I2C1_SCL GPI03/I2C1_SCL VPP_(5v) INT_1 MISO_1 P3.5 33 + C13 C15 MOSI_1 SCLK_1 SDA_2 20 P1.3 ____pwm_a 21 P1.4 P3.4 32 10uF 0.1uF VDD_(3.3v) GPI014/UART_TXD GPI014/HART TXD VDD_(3.3v) P3.3 31 SDA_2 30 delta_sig_in P3.1 29 Supply_monitor 10 GPIO15/UART_RXD 17 VDD_(3.3V) 17 ____pwm_b 22 P1.5 10 GPI015/UART_RXD VDD_(3.3V) 23 P1.6 P1.7 C21 GND + C1 0.1 uF 0.1uF P12 1 2 3 4 5 6 7 8 9 10 19 GPI010/SPI_MUSI GPI09/SPI_MISO GPI011/SPI_SCLK GPI08/SPI_CE0 GPI07/SPI_CE1 GPI010/SPI_M0SI GND GND P3.0 28 SCL_2 25 GND GPI09/SPI_MIS0

GPI011/SPI_SCLK

CD106 (57) GND 27 26 VCC 14 GND 20 GND 30 GND 34 GND GND 0.1uF GPIO8/SPI_CEO 24 20 GND GND 12C INTERFACE GPIO7/SPI_CE1 26 GND GND GND 34 GND 34 GND CONN_02X05 GND 39 GND 39 GND GPI04/GPCLK0 GPIO4/GPCLKO 29 GPI05 GPI05 29 GPI06 31 31 GPI05 32 GPI06 32 GPI012 GPI013 GPI012 32 sar_in2 GPI013 33 1 2 3 4 5 6 7 8 GPI016 36 36 GPI016 11 GPI017 12 GPI018 GPI017 11 ID_SC ID_SC 12C INTERFACE 27 ID_SD GPI018 12 ID_SD 27 v24in 9 10 35 GPI019 GPI019 35 GPI020 38 CONN_02X05 38 GPI020 v24in 40 GPI021 15 GPI022 GPI021 pwm_a 1 P4 NO X sar_in3 GPI022 GPI023 | 16 16 GPI023 GPI024 18 18 GPI024 Δ<u>₹</u> 22 GPI025 37 GPI026 GPI025 22 <u>v24i</u>n 13 GPI027 v24in GPI027 Raspberry_Pi_+_Conn Raspberry_Pi_+_Conn sar_in4 1 P9 S Sheet: / File: RPiMibRev3.sch Title: RPIMIB Rev.3 Schematic v24in **Rev:** 3 Size: B v24in KiCad E.D.A. kicad (5.0.0)



