

Watchdog AVR - ATmega324PA

Port A

PA0(ADC0/PCINT0) 37 BATT_ADC
PA1(ADC1/PCINT1) 36 BONE_INT/WAVRO
PA2(ADC2/PCINT2) 35 BB_INT
PA3(ADC3/PCINT3) 34 GAVR_INT
PA4(ADC4/PCINT4) 33 BB_EN
PA5(ADC5/PCINT5) 32 LCD_EN
PA6(ADC6/PCINT6) 31 GAVR_EN
PA7(ADC7/PCINT7) 30 GPS_EN

Pins 37-30

IC1A

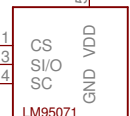
Port B

PB0(XCK0/T0/PCINT8) 40 TFP_EN
PB1(T1/CLK0/PCINT9) 41 WIO6/BB8_8
PB2(AIN0/INT2/PCINT10) 42 WAVRI2/BBO
PB3(AIN1/OC0A/PCINT11) 43 GAVRI0/WAVRO
PB4(SS/OC0B/PCINT12) 44
PB5(MOSI/ICP3/PCINT13) 1 MOSI_WAVR
PB6(MISO/OC3A/PCINT14) 2 MISO_WAVR
PB7(SCK/OC3B/PCINT15) 3 SCK_WAVR

Pins 41-44, 1-3

IC1B

TI Temp Sensor



Port C

PC0(SCL/PCINT16) 19 MAIN_BATT_EN
PC1(SDA/PCINT17) 20 WAVR_PCINT17
PC2(TCK/PCINT18) 21 STATUS_LED
PC3(TMS/PCINT19) 22 WIO0/BB8_9
PC4(TDO/PCINT20) 23 WIO1/BB8_10
PC5(TDI/PCINT21) 24 WIO2/BB8_11
PC6(TOSC1/PCINT22) 25
PC7(TOSC2/PCINT23) 26

Pins 19-26

IC1C

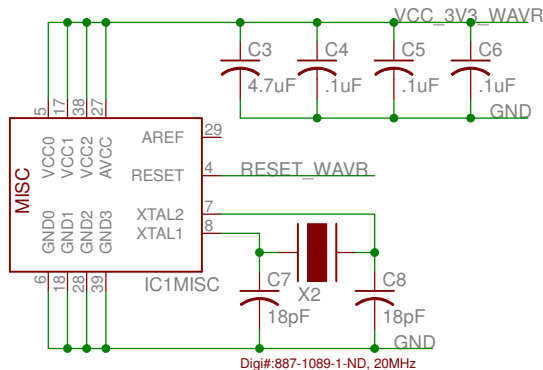
Digi# 535-11898-1-ND, 32.768kHz

Port D

PD0(RXD0/T3/PCINT24) 9 RX0_WAVR/TX1_BONE
PD1(TXD0/PCINT25) 10 TX0_WAVR/RX1_BONE
PD2(RXD1/INT0/PCINT26) 11 TX1_GAVR/RX1_WAVR
PD3(TXD1/INT1/PCINT27) 12 RX1_GAVR/TX1_WAVR
PD4(XCK1/OC1B/PCINT28) 13 WIO3/GIO0
PD5(OC1A/PCINT29) 14 WIO4/GIO1
PD6(IICP/OC2B/PCINT30) 15 WIO5/GIO2
PD7(OC2A/PCINT31) 16 SLEEP_LED

Pins 9-16

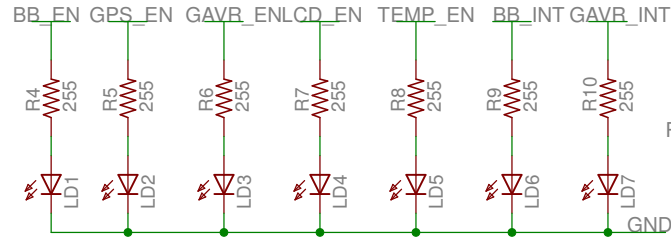
IC1D



Digi# 887-1089-1-ND, 20MHz

Note: 8.58V maps to 1.1V

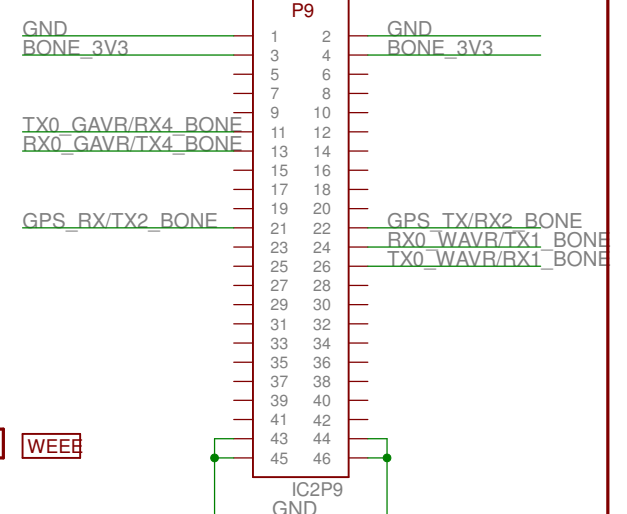
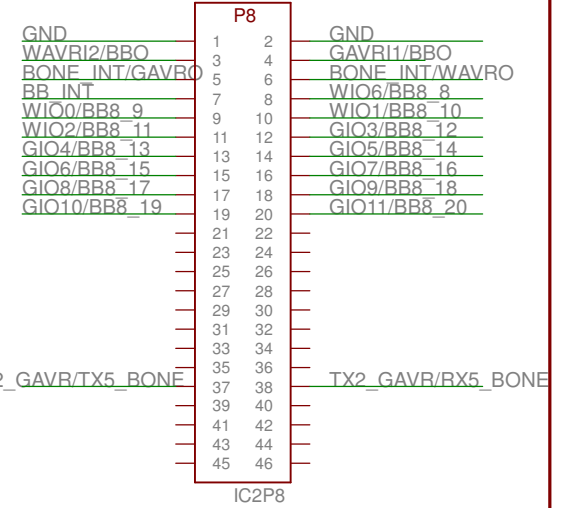
LED_DEBUG Array



LEDS: Enable are Green-LNJ347W83RA
Red are INT--LNJ247W82RACT-ND

LED: Status is green, Sleep is Red

BeagleBone Cape



Boston University

ReCycle

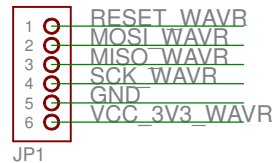
LG3

ROHS

ROHS CHINA

WEEE

WAVR Programming Header



Re.Cycle

SHEET: Watchdog AVR, Bone Cape

TITLE: Re.Cycle

Doc#:

Date: February 14, 2013

Engineer: TMS

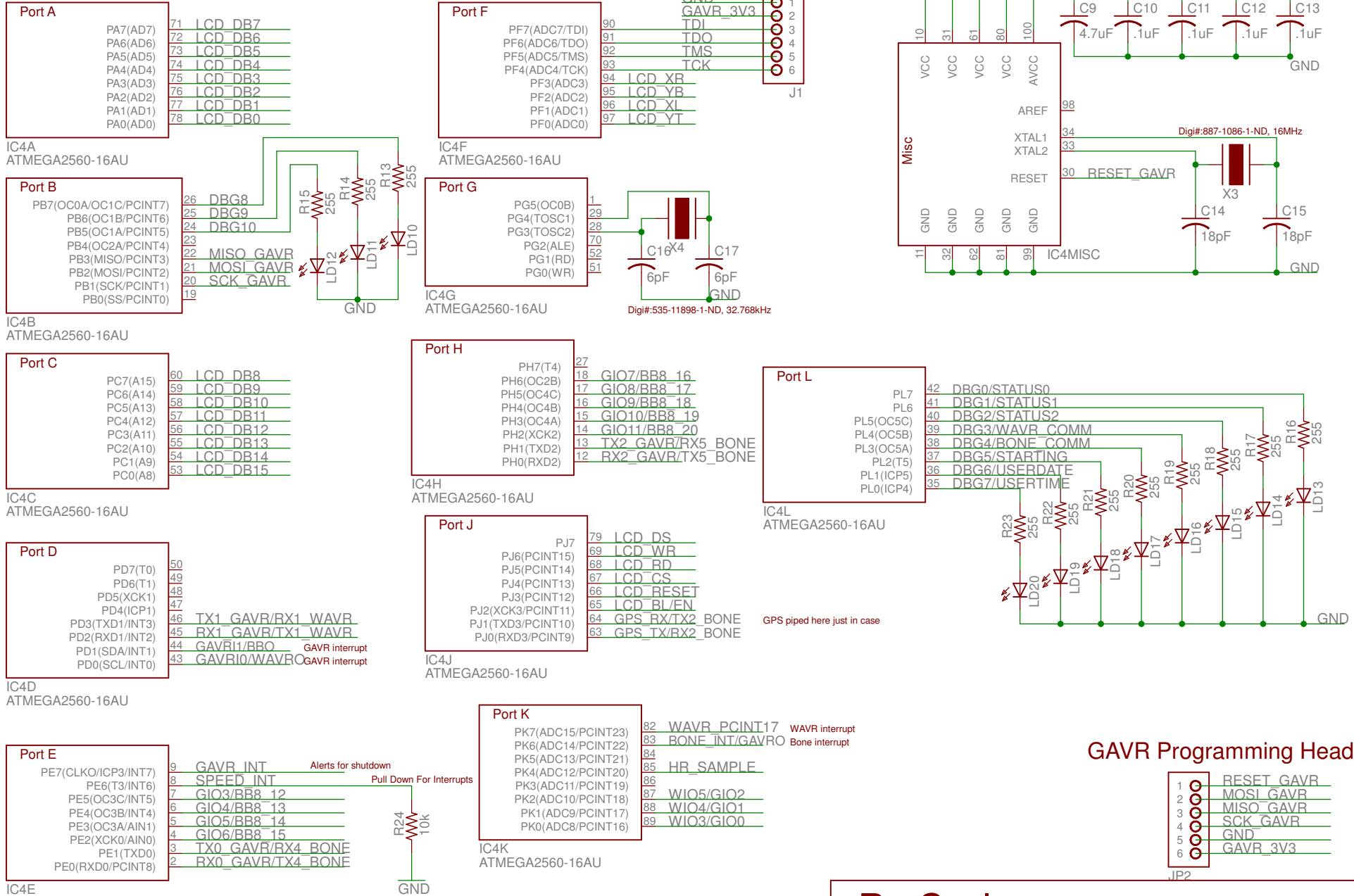
Author: TMS

Rev: A

Sheet: 1/4

Graphics AVR- ATmeag1280/2560

JTAG Header



Re.Cycle

Engineer: TMS

SHEET: Graphics AVR

Author: TMS

TITLE: Re.Cycle

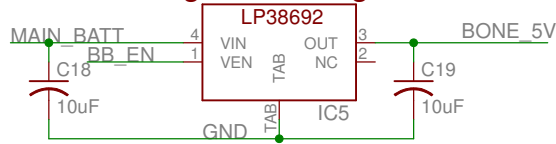
Rev: A

Doc#:

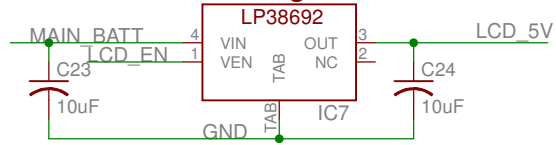
Date: February 14, 2013

Sheet: 2/4

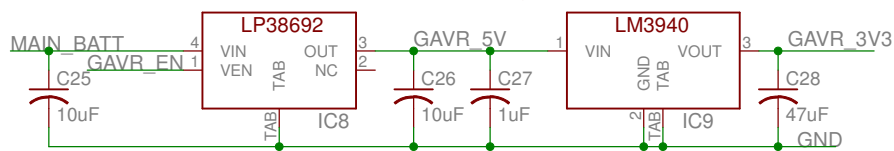
BeagleBone Regulators



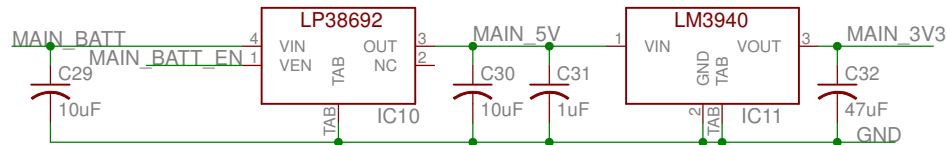
LCD Regulators



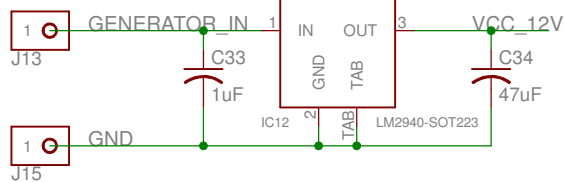
GAVR Regulators



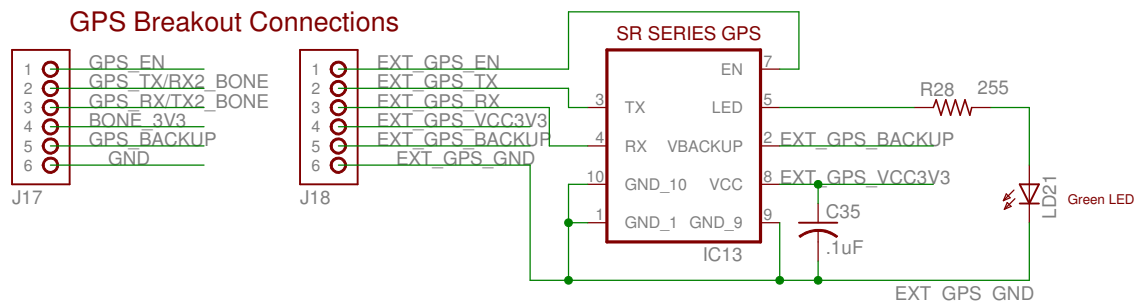
WAVR Regulators



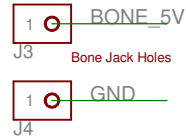
12V LDO



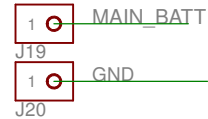
GPS Module



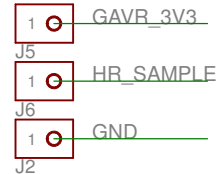
Bone Jumper



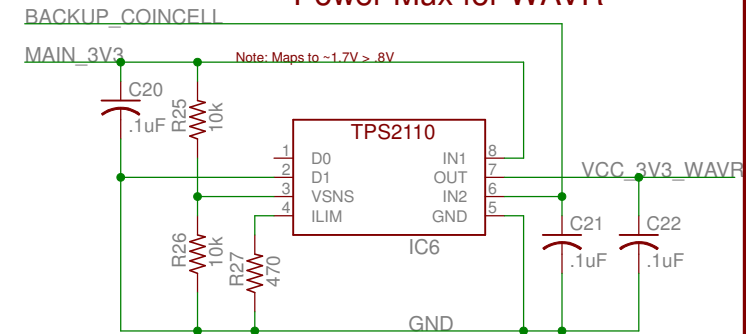
Error Jumper



HR Connection

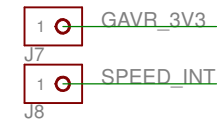


Power Mux for WAVR

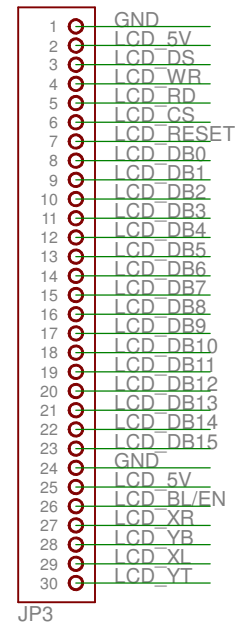


May need to be flipped to bottom for femail config.

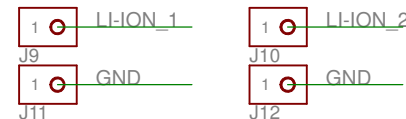
Speed Magnet Connection



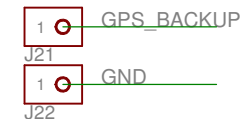
LCD Header



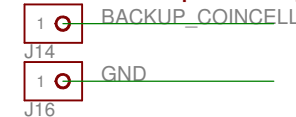
Battery Connections



GPS Backup Battery



Backup Battery



Battery=CR2477
Case: Digikey#:105K-ND



Re.Cycle

Engineer: TMS

SHEET: Power, GPS, LCD and External Headers

Author: TMS

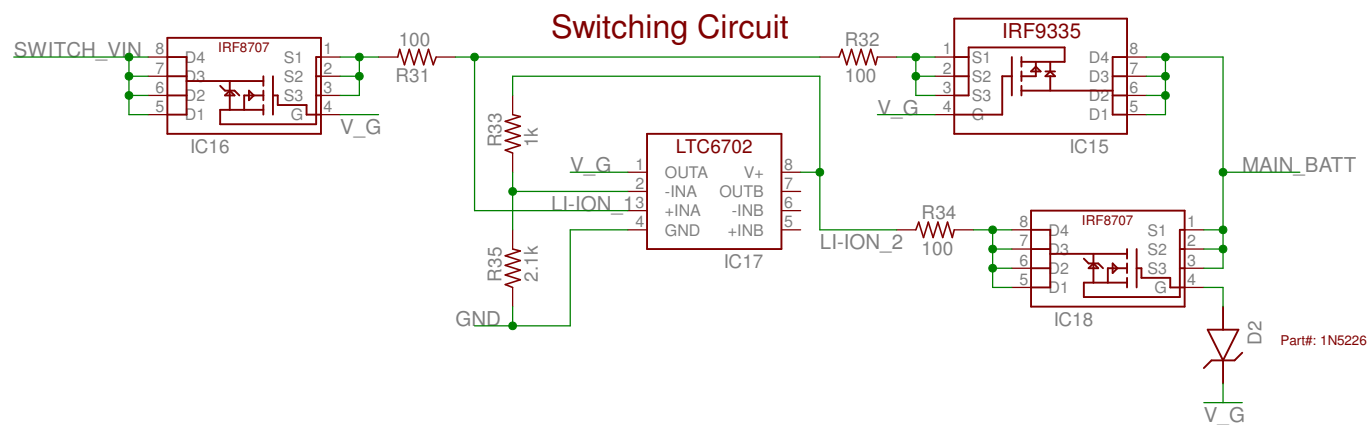
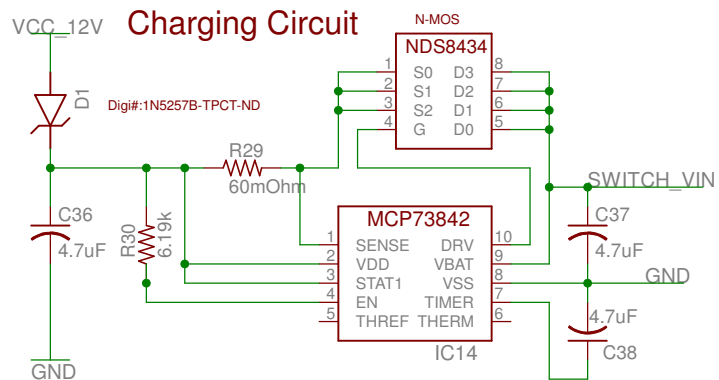
TITLE: Re.Cycle

Rev: A

Doc#:

Date: February 14, 2012

Sheet: 3/4



Re.Cycle

Engineer: TMS

SHEET: Battery Charging and Switching

Author: TMS

TITLE: Re.Cycle

Rev: A

Doc#:

Date: February 18, 2013

Sheet: 4/4