U$1P8  BEAGLEBONE_BLACK

| | | |
|---|---|---|
| P8-1 | GND | GPIO1_1 | P8-24 |
| P8-2 | GND | GPIO1_0 | P8-25 |
| P8-3 | GPIO1_6 | GPIO1_29 | P8-26 |
| P8-4 | GPIO1_7 | GPIO2_22 | P8-27 |
| P8-5 | GPIO1_2 | GPIO2_24 | P8-28 |
| P8-6 | GPIO1_3 | GPIO2_23 | P8-29 |
| P8-7 | TIMER4 | GPIO2_25 | P8-30 |
| P8-8 | TIMER7 | UART5_CTSN | P8-31 |
| P8-9 | TIMER5 | UART5_RTSN | P8-32 |
| P8-10 | TIMER6 | UART4_RTSN | P8-33 |
| P8-11 | GPIO1_13 | UART3_RTSN | P8-34 |
| P8-12 | GPIO1_12 | UART4_CTSN | P8-35 |
| P8-13 | EHRPWM2B | UART3_CTSN | P8-36 |
| P8-14 | GPIO0_26 | UART5_TXD | P8-37 |
| P8-15 | GPIO1_15 | UART5_RXD | P8-38 |
| P8-16 | GPIO1_14 | GPIO2_12 | P8-39 |
| P8-17 | GPIO0_27 | GPIO2_13 | P8-40 |
| P8-18 | GPIO2_1 | GPIO2_10 | P8-41 |
| P8-19 | EHRPWM2A | GPIO2_11 | P8-42 |
| P8-20 | GPIO1_31 | GPIO2_8 | P8-43 |
| P8-21 | GPIO1_30 | GPIO2_9 | P8-44 |
| P8-22 | GPIO1_5 | GPIO2_6 | P8-45 |
| P8-23 | GPIO1_4 | GPIO2_7 | P8-46 |

BBRX 4
BBTX 5
SV1

BBB male header
X3
BOM-PART

U$1P9  VALUE

| | | |
|---|---|---|
| P9-1 | GND | UART1_TXD | P9-24 | RXCAN |
| P9-2 | GND | GPIO3_21 | P9-25 | |
| P9-3 | DC_3.3V | UART1_RXD | P9-26 | TXCAN |
| P9-4 | DC_3.3V | GPIO3_19 | P9-27 | |
| P9-5 | VDD_5V | SPI1_CS0 | P9-28 | |
| P9-6 | VDD_5V | SPI1_D0 | P9-29 | |
| P9-7 | SYS_5V | SPI1_D1 | P9-30 | |
| P9-8 | SYS_5V | SPI1_SCLK | P9-31 | |
| P9-9 | PWR_BUT | VADC | P9-32 | |
| P9-10 | SYS_RESETN | AIN4 | P9-33 | |
| P9-11 | UART4_RXD | AGND | P9-34 | |
| P9-12 | GPIO1_28 | AIN6 | P9-35 | |
| P9-13 | UART4_TXD | AIN5 | P9-36 | |
| P9-14 | EHRPWM1A | AIN2 | P9-37 | |
| P9-15 | GPIO1_16 | AIN3 | P9-38 | |
| P9-16 | EHRPWM1B | AIN0 | P9-39 | |
| P9-18 | I2C1_SCL | AIN1 | P9-40 | |
| P9-17 | I2C1_SCA | GPIO3_20 | P9-41 | |
| P9-20 | I2C2_SCL | GPIO3_18 | P9-42 | |
| P9-19 | I2C2_SCA | GND | P9-43 | |
| P9-21 | UART2_TXD | GND | P9-44 | |
| P9-22 | UART2_RXD | GND | P9-45 | |
| P9-23 | GPIO1_17 | GND | P9-46 | |

IC3
FT232RL

| | | |
|---|---|---|
| 20 | VCC | TXD | 1 | BBRX |
| 4 | VCCIO | RXD | 5 | BBTX |
| | | RTS | 3 | |
| 19 | RESET | CTS | 11 | |
| | | DTR | 2 | |
| 27 | OSCI | DSR | 9 | |
| 28 | OSCO | DCD | 10 | |
| | | RI | 6 | |
| 17 | 3V3OUT | CBUS0 | 23 | |
| | | CBUS1 | 22 | |
| 15 | USBDP | CBUS2 | 13 | |
| 16 | USBDM | CBUS3 | 14 | |
| | | CBUS4 | 12 | |
| 25 | GND3 | TEST | 26 | |
| | | GND0 | 7 | |
| | | GND1 | 18 | |
| | | GND2 | 21 | |

X2
1734035-2

| | |
|---|---|
| 1 | VBUS |
| 2 | D+ |
| 3 | D- |
| 4 | ID |
| 5 | GND |

C7 0.1 uf
C8 0.1 uf
C11 10 uf
C9 0.1 uf
C10 0.1 uf

CAT24C256WI-GT3

| | | |
|---|---|---|
| 1 | A0 | VCC | 8 |
| 2 | A1 | WP | 7 |
| 3 | A2 | SCL | 6 |
| 4 | VSS | SDA | 5 |

R7 4k75
R6 4k75
R5 4k75
R10 DNP
R11 DNP
R8 5k6
R9 5k6

I2C2_SCL
I2C2_SCA

+12V

D2

IC1
LMR14206

| 5 | VIN | CB | 1 |
| 4 | SHDN | SW | 6 |
| 2 | GND | FB | 3 |

C1
1 uF 25V

GND

C2
0.1 uF

L1
18 uH

+5V

D1

GND

R3
5.6k 1%

R4
1k 1%

C3
22 uF

C4
22 uF

GND

GND

GND

+5V

IC2
LP38693-3.3/NOPBMP

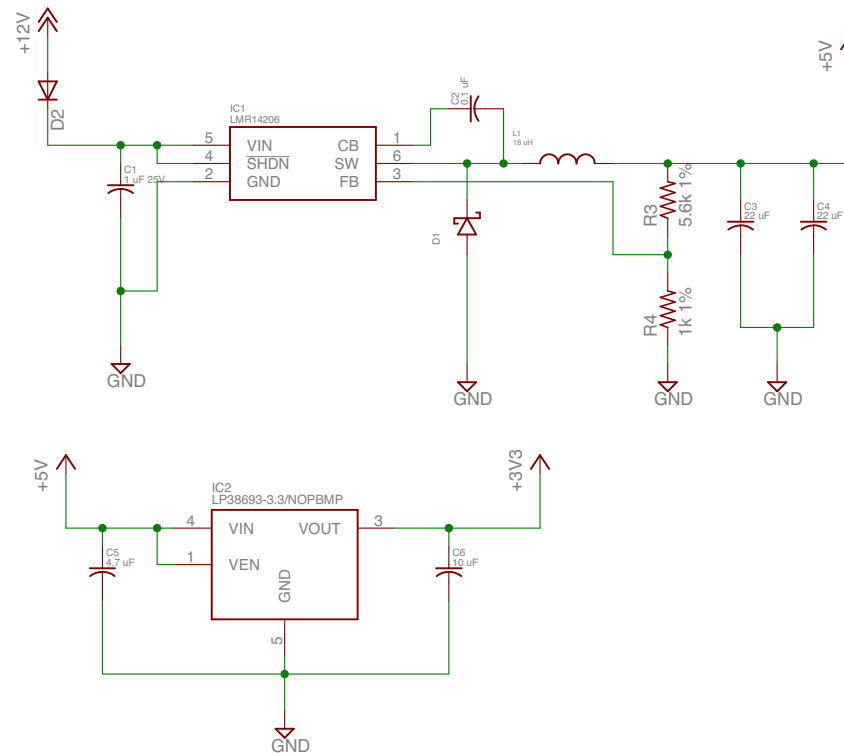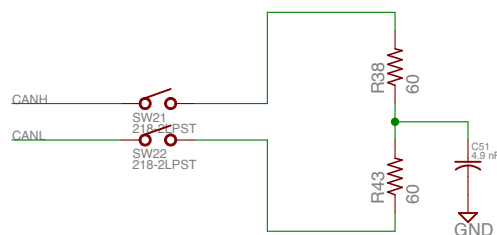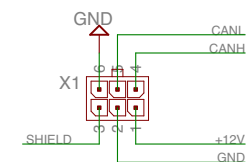| 4 | VIN | VOUT | 3 |
| 1 | VEN | | |
| | GND | | |

C5
4.7 uF

C6
10 uF

+3V3

5

GND

Board: Beaglebone Black CAN Cape v2.2
Drawn by Kim Concillado
Revision date: 2015-02-26
Last modified date: 2/26/15 2:31 PM

RXCAN
TXCAN

.1 uF
C50

IC8
SN65HVD1050

GND
VCC
TXD
RXD
S
CANH
CANL

+5V

GND

GND

D29
3V

1k
R13

GND

SMBJ30CALFCT-ND
D7

SMBJ30CALFCT-ND
D6

GND

GND

L6

CANH
CANL

GND

X1

SHIELD

CANL
CANH

+12V
GND

CANH
CANL

SW21
218-2LPST
SW22
218-2LPST

R38
60

R43
60

C51
4.9 nF

GND

Board: Beaglebone Black CAN Cape v2.2
Drawn by Kim Concillado
Revision date: 2015-02-26
Last modified date: 2/26/15 2:31 PM