+5V/1

+5V

+3V3

GND

+3V3

R7 4k75   R6 4k75   R5 4k75

CAT24C256WI-GT3

R10 DNP
R11 DNP

GND

+3V3

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

GND

R8 5k6   R9 5k6

C10 0.1 uf

GND

I2C2_SCL

I2C2_SCA

GND

U$1P9   VALUE

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

I2C2_SCL

I2C2_SCA

RXCAN

TXCAN

GND

GND

U$1P8   BEAGLEBONE_BLACK

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

WAKE

WAKE

BBB male header

X3

BOM-PART

LED1_G_FF
LED1_R_FF
LED2_G_SW
LED2_R_SW

SV1

BBRX
BBTX

GND

IC3
FT232RL

+3V3

X2
1734035-2

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

GND

C7 0.1 uf   C8 0.1 uf

C11 10 uf

GND

C9 0.1 uf

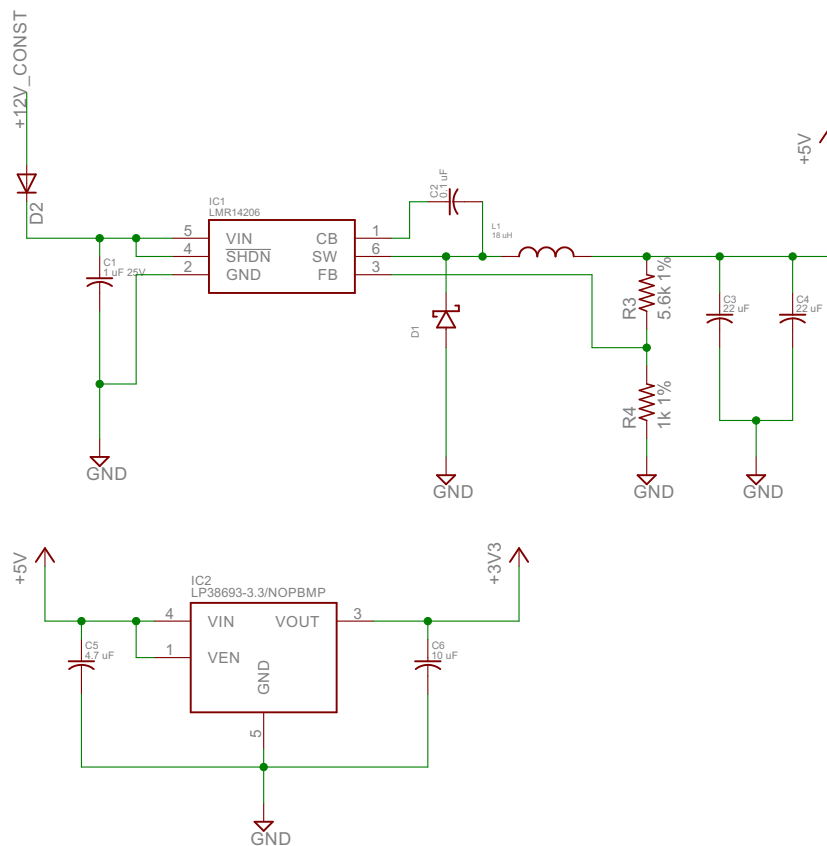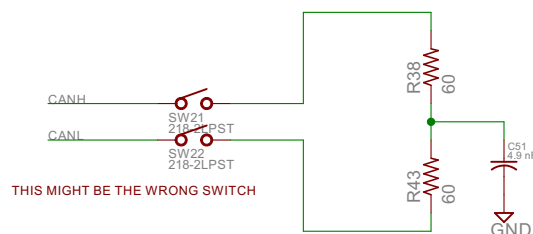| 20 | VCC | TXD | 1 |
4	VCCIO	RXD	5
		RTS	3
19	RESET	CTS	11
		DTR	2
27	OSCI	DSR	9
28	OSCO	DCD	10
		RI	6
17	3V3OUT	CBUS0	23
		CBUS1	22
		CBUS2	13
15	USBDP	CBUS3	14
16	USBDM	CBUS4	12
25	GND3	TEST	26
		GND0	7
		GND1	18
		GND2	21

BBRX
BBTX

GND

Board: Beaglebone Black CAN Cape

Drawn by Kim Concillado

Revision date:
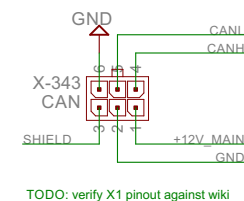
Last modified date: 4/5/2015 10:07:18 PM

+12V_CONST

D2

IC1
LMR14206

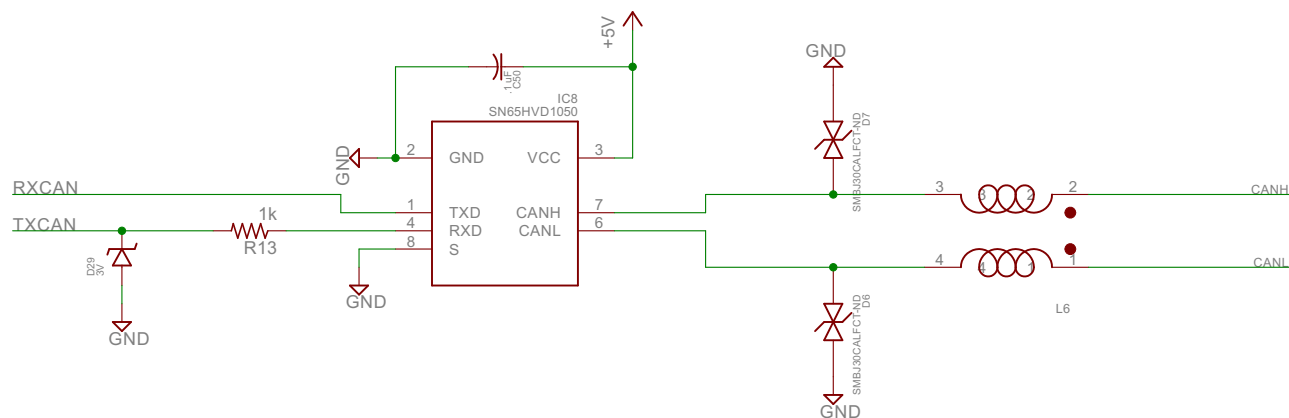VIN   CB
SHDN   SW
GND   FB

5
4
2

1
6
3

C1
1 uF 25V

GND

C2
0.1 uF

L1
18 uH

D1

GND

+5V

R3
5.6k 1%

R4
1k 1%

GND

C3
22 uF

C4
22 uF

GND

GND

+5V

IC2
LP38693-3.3/NOPBMP

VIN   VOUT
VEN
       GND

4
1

3

5

C5
4.7 uF

C6
10 uF

+3V3

GND

Board: Beaglebone Black CAN Cape
Drawn by Kim Concillado
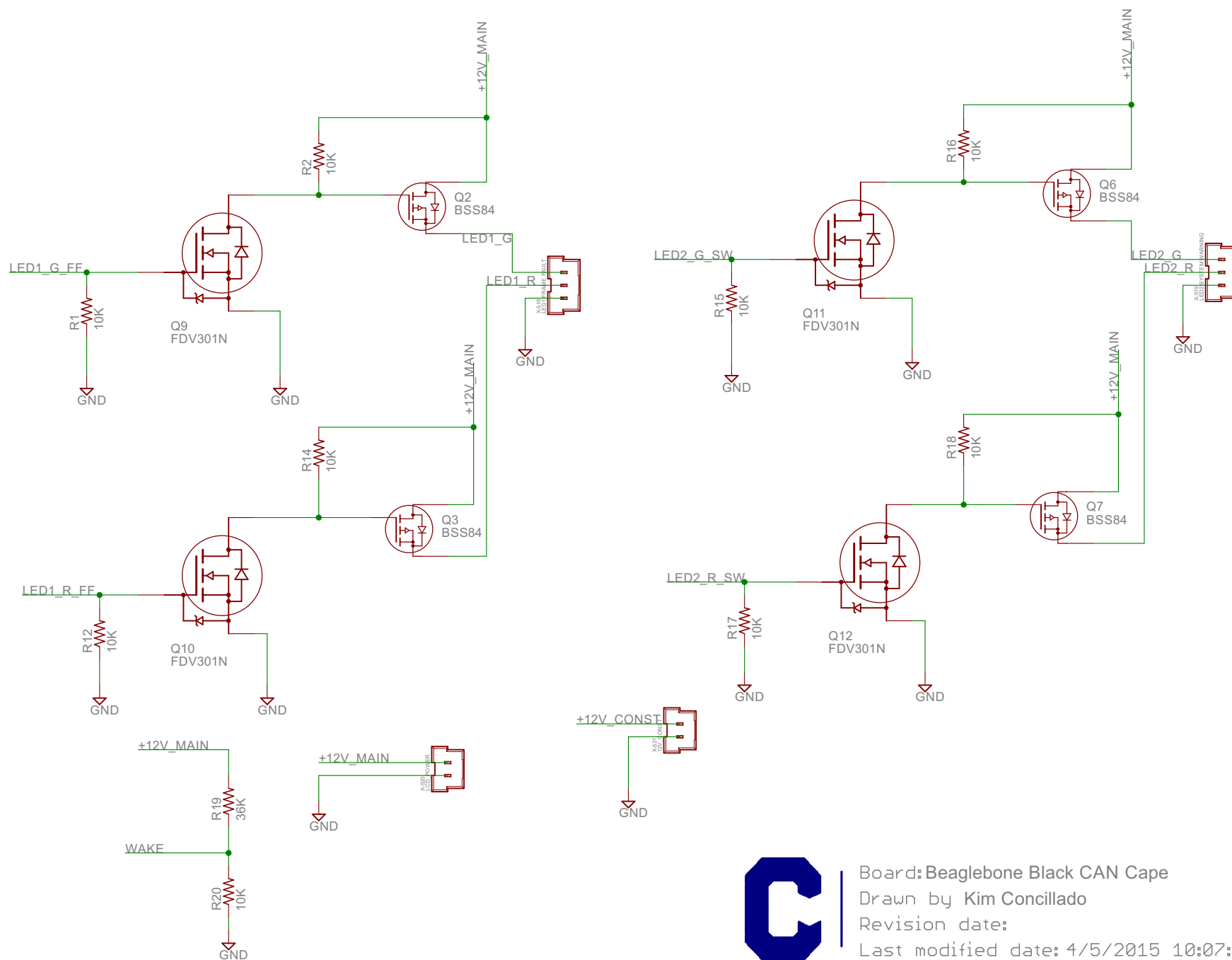Revision date:
Last modified date: 4/5/2015 10:07:18 PM

+5V

.1uF
C50

IC8
SN65HVD1050

GND

RXCAN

TXCAN

D29
3V

1k
R13

GND

2	GND	VCC	3
1	TXD	CANH	7
4	RXD	CANL	6
8	S		

GND

GND

GND

SMBJ30CALFCT-ND
D7

SMBJ30CALFCT-ND
D6

3 | 2
4 | 1

L6

CANH

CANL

GND

GND

X-343
CAN

GND

CANL
CANH

+12V_MAIN
GND

SHIELD

TODO: verify X1 pinout against wiki

CANH

CANL

SW21
218-2LPST

SW22
218-2LPST

THIS MIGHT BE THE WRONG SWITCH

R38
60

R43
60

C51
4.9 nF

GND

C

Board: Beaglebone Black CAN Cape
Drawn by Kim Concillado
Revision date:
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+12V_MAIN

R2
10K

Q2
BSS84

LED1_G

LED1_G_FF

R1
10K

Q9
FDV301N

GND

GND

+12V_MAIN

R14
10K

Q3
BSS84

LED1_R

LED1_R_FF

R12
10K

Q10
FDV301N

GND

GND

LED1_R

X-618
LED1 FRAME RUN

GND

+12V_MAIN

R16
10K

Q6
BSS84

LED2_G_SW

R15
10K

Q11
FDV301N

GND

GND

LED2_G

LED2_R

X-619
LED2 SYSTEM WARNING

GND

+12V_MAIN

R18
10K

Q7
BSS84

LED2_R_SW

R17
10K

Q12
FDV301N

GND

GND

+12V_CONST

X-521
12V CONST

GND

+12V_MAIN

R19
36K

WAKE

R20
10K

GND

+12V_MAIN

X-520
LCD POWER

GND