Sheet 1/3

Board: Beaglebone Black CAN Cape
Drawn by: Kim Conciliado
Revision date:
Last modified date: not saved!

U5P9
VALUE

Pin	Signal	Signal	Pin
P9-1	GND	UART1_TXD	P9-24 TXCAN
P9-2	GND	GPIO3_21	P9-25
P9-3	DC_3.3V	UART1_RXD	P9-26 RXCAN
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
P9-17	I2C1_SCL	AIN1	P9-40
P9-18	I2C1_SDA	GPIO3_20	P9-41
P9-19	I2C2_SCL	GPIO3_18	P9-42
P9-20	I2C2_SDA	GND	P9-43
P9-21	UART2_TXD	GND	P9-44
P9-22	UART2_RXD	GND	P9-45
P9-23	GPIO1_17	GND	P9-46

+3V3
+5V

U5P8
BEAGLEBONE_BLACK

Pin	Signal	Signal	Pin
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	GPIO1_22	P8-27
P8-5	GPIO1_2	GPIO1_24	P8-28
P8-6	GPIO1_3	GPIO1_23	P8-29
P8-7	TIMER4	GPIO1_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

GND

SV1
BBRX
BBTX

X3
BOM-PART
BBB male header

IC3
FT232RL

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

BBRX
BBTX

+3V3
GND

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

X2
1734035-2

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

GND

CAT24C256WI-GT3

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

+3V3
GND

C10 0.1 uf
R7 2K2
R8 2K2

I2C2_SCL
I2C2_SDA

R5 4K7
R6 4K7
R1 4K7

R10 DNP
R11 DNP

GND

+3V3

V5+

+12V

IC1
LMR14206

VIN
SHDN
GND
CB
SW
FB

C5 0.01uF

L1 18 uH

R3 5.36k 1%

R4 1k 1%

D1

C1 1uF 25V

C2 22 uF

C3 22 uF

GND GND GND GND

D2

IC2
LP38693-3.3/NOPBMP

VIN
VEN
GND
VOUT

C6 10 nF

C8 4.7 nF

+3/3

V5+

GND

GND
CANH
CANL
+12V
SHIELD
GND
X1

TODO: verify X1 pinout against wiki

CANH
CANL
GND
GND
L6

SN65HVD1050
IC8
VCC
CAN H
CAN L
GND
TXD
RXD
GND
+5V
C80
0.1µF

TXCAN
RXCAN
1k
R13
GND
ESD
GND

R38
60
R14
60
C51
4.3 nF
GND

SW21
218-2LPST
SW22
218-2LPST
CANH
CANL

THIS MIGHT BE THE WRONG SWITCH

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