POWER Section

TPS63051 Single Inductor Buck-Boost With 1-A Switches
Vin = 2.5 V to 5.5 V
Vout = 3.3 V
Iout = 500 mA (boost mode) or 1 A (buck mode)

VOUT_XBEE

DNM
R6
L1 1.5uH
TPS63051
U1

L1, VIN, EN, ILIMO, PFM/PWM, GND
L2, VOUT, FB, PG, GND, SS
R8

CC1310_VIN
C1 10uF
C6 1nF
C8 10uF
C9 10uF
GND

FL1
BLM18HE152SN1
VDDS

VDDS Decoupling Capacitors
C11 DNM
C12 100nF
C14 100nF
C16 100nF
C17 22uF
C20 100uF
C22 NC
GND

DCDC_SW
L6 6.8uH
VDDR

VDDR Decoupling Capacitors
C25 22uF
C26 100nF
C28 100nF
C31 DNM
GND

Place L6 and C25 close to pin 33 (DCDC_SW)
Low inductance ground for C25

OPTIONAL POWER Section

VOUT_XBEE
TPS782
U6
IN, EN, GND, OUT, GND
C33 1uF
C34 1uF
CC1310_VIN
GND

cc2650_7x7 U2

VDDS
R5 100K
nRESET
C3 100nF
GND

SCL, TX, RX, DIO_1, JTAG_TMS, JTAG_TCK, DCDC_SW

DIO_4, DIO_3, DIO_2, DIO_1, JTAG_TMSC, JTAG_TCKC, RESET_N, DCDC_SW, X32K_Q1, X32K_Q2, DCOUPL, GND

DIO_5, DIO_6, DIO_7, DIO_8, DIO_9, DIO_10, DIO_11, DIO_12, DIO_13, DIO_14, DIO_15, DIO_16

VDDS2, VDDS3, VDDS, VDDS_DCDC, VDDR, VDDR_RF, RF_P, RF_N, DIO_0, X24M_N, X24M_P, DIO_30

VDDS, VDDR

SDA, ORANGE_LED, GREEN_LED, SPI_MISO, SPI_MOSI, SPI_CLK, BSL, PWM2, INTR, SPI_nCS, PWM3, JTAG_TDO

DIO_17, DIO_18, DIO_19, DIO_20, DIO_21, DIO_22, DIO_23, DIO_24, DIO_25, DIO_26, DIO_27, DIO_28

JTAG_TDI, PWM0, PWM1, YELLOW_LED, RED_LED, AD3, AD2, AD1

32.768 KHz
Y1
C2 12pF
C4 12pF
C7 1uF
GND

Y2 24 MHz
C13 DNM
C15 DNM
GND

DIO_0
AD0
DIO_30

TH wire connector should also be provisioned along with EDGE SMA Connector

EDGE_SMA
U7
GND

0E R10
R11 0E
W1 TEST_POINT

U5 2450BM14G0011
BP1, BP2, GND, GND, GND
UBP, NC
GND

GPIO PIN MAPPING

TX: DIO_3   SPI_MOSI: DIO_9   SDA: DIO_5   AD0: DIO_30   PWM0: DIO_18
RX: DIO_2   SPI_MISO: DIO_8   SCL: DIO_4   AD1: DIO_29   PWM1: DIO_19
               SPI_CLK: DIO_10   INTR: DIO_13 AD2: DIO_28   PWM2: DIO_12
               SPI_nCS: DIO_14   AD3: DIO_26   PWM3: DIO_15

Peripheral Section

RED_LED, YELLOW_LED, GREEN_LED, ORANGE_LED
VDDS
R7 1K
nRESET
VDDS
R9 1K
BSL

D1 RED, D2 YELLOW, D3 GREEN, D4 ORANGE
R1 680R, R2 680R, R3 680R, R4 680R
GND

SW1 RESET
C5 15nF
SW2 USER_BUTTON
C10 15nF
GND

Si7006
U4
SDA, GND, DNC, SCL, VDD, DNC
SCL, VDDS
GND
To be placed on top layer

LTR-303ALS
U3
SDA, NC, GND, SDA, INT, SCL
VDDS
SDA, INTR, SCL
GND To be placed on top layer

Connector Section

P1 CONN_02X04
VDDS, DIO_1, DIO_20, DIO_23
DIO_0, DIO_22, DIO_23, DIO_24

To be placed on top layer depending on the routing
1.27/2.0mm Male Right Angle SMD

JTAG
P2
V_REF, GND, GND, KEY, GND
SWDIO/TMS, SWDCLK/TCK, SWO/TDO, TDI, nRESET
VDDS
JTAG_TMS, JTAG_TCK, JTAG_TDO, JTAG_TDI, nRESET
GND

Place on the bottom layer to match the position of Base Board
2x5 1.27mm male Right Angle SMD

XBee Header Section

Place on Top layer
2x10 2.00 mm TH male

VDDS
R13 3.3K
R14 3.3K

XBEE P3
VOUT_XBEE, TX, RX, SPI_MOSI, nRESET, PWM0, PWM1, RESERVED, SPI_MISO, GND
VCC, DOUT, DIN, DO8, RESET, PWM0/RSSI, PWM1, RESERVED, DTR/DI8, GND
AD0/DIO0, AD1/DIO1, AD2/DIO2, AD3/DIO3, RTS/AD6/DIO6, AD5/DIO5, VREF, ON/SLEEP, CTS/DIO7, AD4/DIO4
SDA, SCL, AD0, AD1, AD2, SPI_CLK, PWM3, INTR, SPI_nCS, AD3
R12 DNM, R15 DNM, PWM2
GND