TITLE PAGE

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IMPORTANT NOTES ABOUT THIS SCHEMATIC

DESIGN NOTE: Example text for the design note to show the note inside the colored box.

1) DESIGN NOTES in grey are information notes.

DESIGN NOTE: Example text for the design note to show the note inside the colored box.

2) DESIGN NOTES in red are critical, and must be understood and followed.

3) A red X indicates suppression of error checking on a pin/net. Commonly suppressed errors include: single-pin net, no driving source, etc.

4) All unique components in this schematic should have a manufacturer's part number displayed; exceptions to this rule are commodity passives such as resistors and capacitors.

5) Finally, population vs. non-population intent is indicated by adding "NP" next to the part. All parts with "NP" next to the part are intended to be unplaced during assembly.

NimbeLink		www.nimbelink.com MINNEAPOLIS	
Title: TITLE			
Project: Skywire Beaglebone Cape Lite		Size: B	Sheet 1 of 5
Number: 20057	Rev: B	Modified: 2/21/2017	1:25:45 PM
Prepared for: Nimbelink			

Fiducial
Fiducial
Fiducial
Fiducial
Fiducial
Fiducial

DESIGN NOTE: VCC_5V0_IN is the raw 5V input to the beaglebone PMIC from the beaglebones 5V barrel jack. The VCC_5V0_SYS is the 5V0 output from the Beaglebones PMIC.

Skywire
Skywire.SchDoc

VCC_3V3
SKY_VREF
SKY_DOUT — R31 0.0 NP — UART4_RXD
SKY_DIN — R33 0.0 NP — UART4_TXD
SKY_RTS — R35 0.0 NP — UART4_RTS
SKY_CTS — R37 0.0 NP — UART4_CTS
SKY_DIO2 — R15 0.0 NP — UART1_RXD
SKY_DIO3 — R16 0.0 NP — UART1_TXD
SKY_DTR — R17 0.0 NP — GPIO1_28
SKY_ADC — R39 0.0 NP — GPIO1_17
Sky_ON_OFF_SW — R21 0.0 NP — GPIO3_19
SKY_RESET — R25 0.0 NP — GPIO1_16
SKY_ONSLEEP

DESIGN NOTE: 0 ohm resistors R27, R26, R32, R31, R33, R35, R37, R17, R21, and R25 have a short through them to allow the 0 ohm resistors not to be placed. If users need to reroute a signal cut the trace inbetween the resistor pads, this will allow for the signal to be easily reconnected if needed.

Power
Power.SchDoc

SKY_PWR_EN — R26 0.0 NP — GPIO0_27
SKY_PWR_PG — R32 0.0 NP — GPIO1_29

J13

VCC_5V0_IN	1	2	VCC_5V0_IN
GND	3	4	GND
	5	6	
VCC_5V0_SYS	7	8	VCC_5V0_SYS
	9	10	SYS_RESETn
UART4_RXD	11	12	GPIO1_28
UART4_TXD	13	14	
GPIO1_16	15	16	
I2C1_SCL	17	18	I2C1_SDA
I2C2_SCL	19	20	I2C2_SDA
	21	22	
GPIO1_17	23	24	UART1_RXD
GPIO3_21	25	26	UART1_TXD
GPIO3_19	27	28	
	29	30	
	31	32	
	33	34	
	35	36	
	37	38	
	39	40	
	41	42	
	43	44	
	45	46	

PRPC023DFBN-RC

J10

GND	1	2	GND
	3	4	
	5	6	
	7	8	
	9	10	
	11	12	
	13	14	
	15	16	
GPIO0_27	17	18	
	19	20	
	21	22	
	23	24	
	25	26	GPIO1_29
	27	28	
	29	30	
	31	32	
UART4_RTS	33	34	
UART4_CTS	35	36	
UART5_TXD	37	38	UART5_RXD
	39	40	
	41	42	
	43	44	
	45	46	

PRPC023DFBN-RC

DESIGN NOTE: J10 is connected to theBeaglebone P8 connector.

J13 is connected to the Beaglebone P9 connector.

DESIGN NOTE: EEPROM address is: 0x56

EEPROM_WP is for programing use and should be pulled high at all times to ensure Write Protection on U3

VCC_3V3
R19 10K
R20 10K
R18 10K NP
R24 10K
C17 0.1µF
GND

U3
VCC — SCL — I2C2_SCL
SDA — I2C2_SDA
WP
A0
A1
A2 — GND
CAT24C256YI-GT3

VCC_3V3
R29 4.7k
R30 4.7k

GPIO3_21 — R27 0.0 NP

R22 10K NP
R23 10K NP
R28 10K NP
GND

Memory Image
500017 Rev A

J15

1	1	UART5_RXD
2	2	UART5_TXD
3	3	
4	4	

S4B-PH-K-S(LF)(SN)
NP
GND
VCC_3V3

J16

1	1	I2C1_SCL
2	2	I2C1_SDA
3	3	
4	4	

S4B-PH-K-S(LF)(SN)
NP
GND
R2 4.7k NP
R6 4.7k NP
VCC_3V3

SW1
SYS_RESETn — 2
3 — CASE
1
TL3330AF260QG
GND
C21 0.1µF
GND
GND

PCB
20057 Rev B

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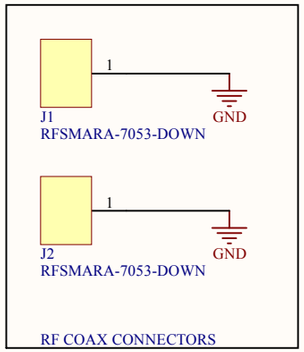
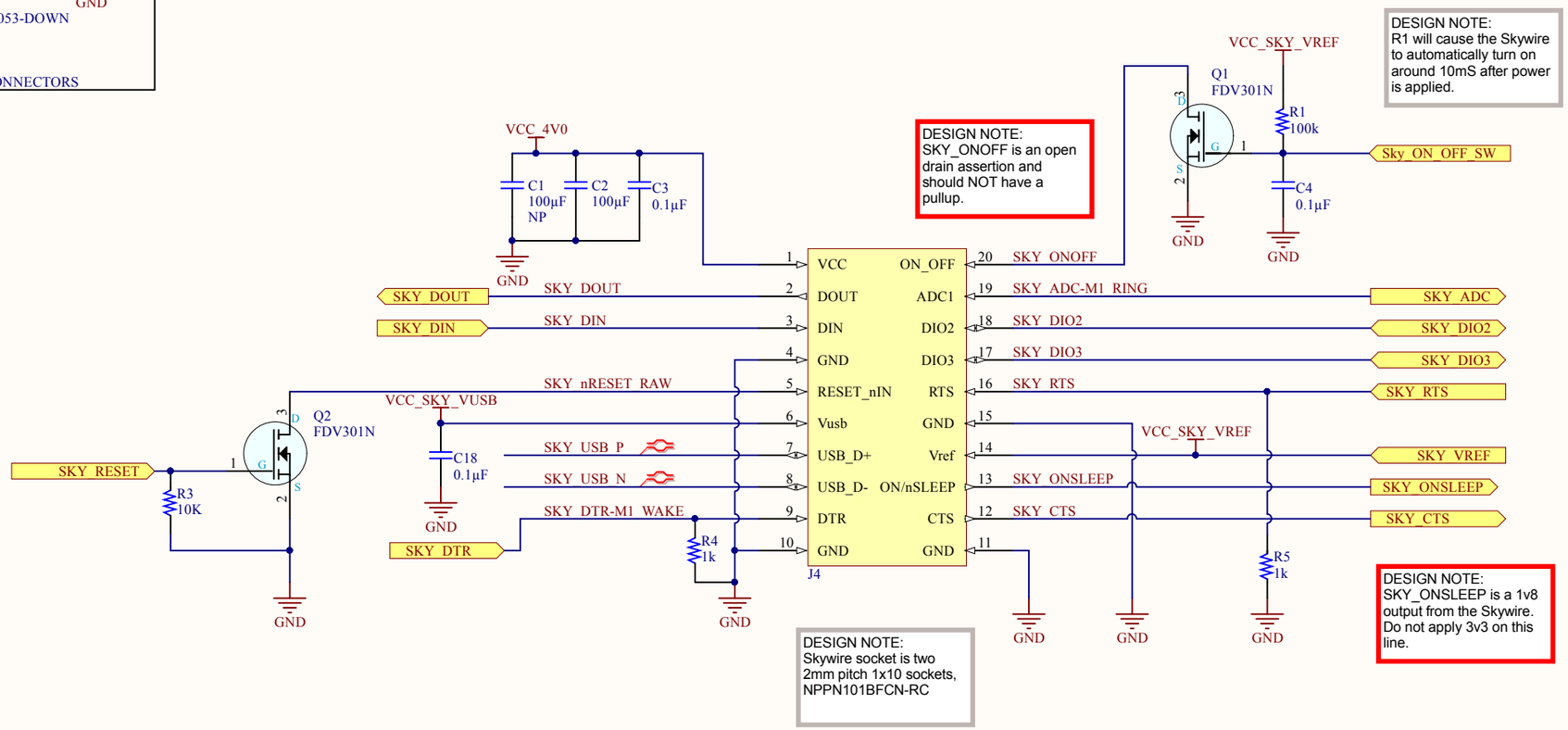
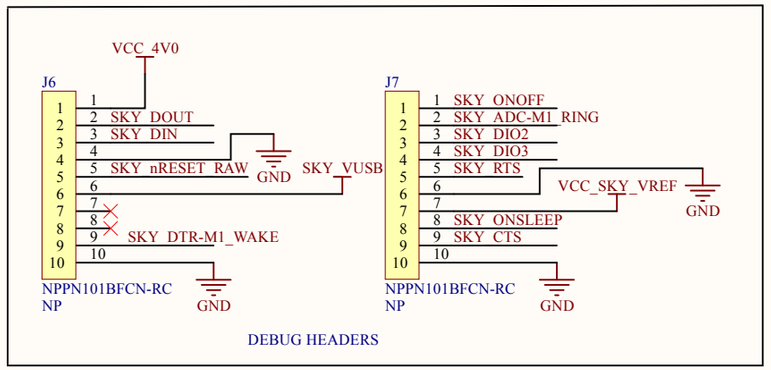
Prepared for: Nimbelink			







DESIGN NOTE:
Sky USB DM and DP are not connected to the debug headers.

NimbeLink	www.nimbelink.com MINNEAPOLIS		
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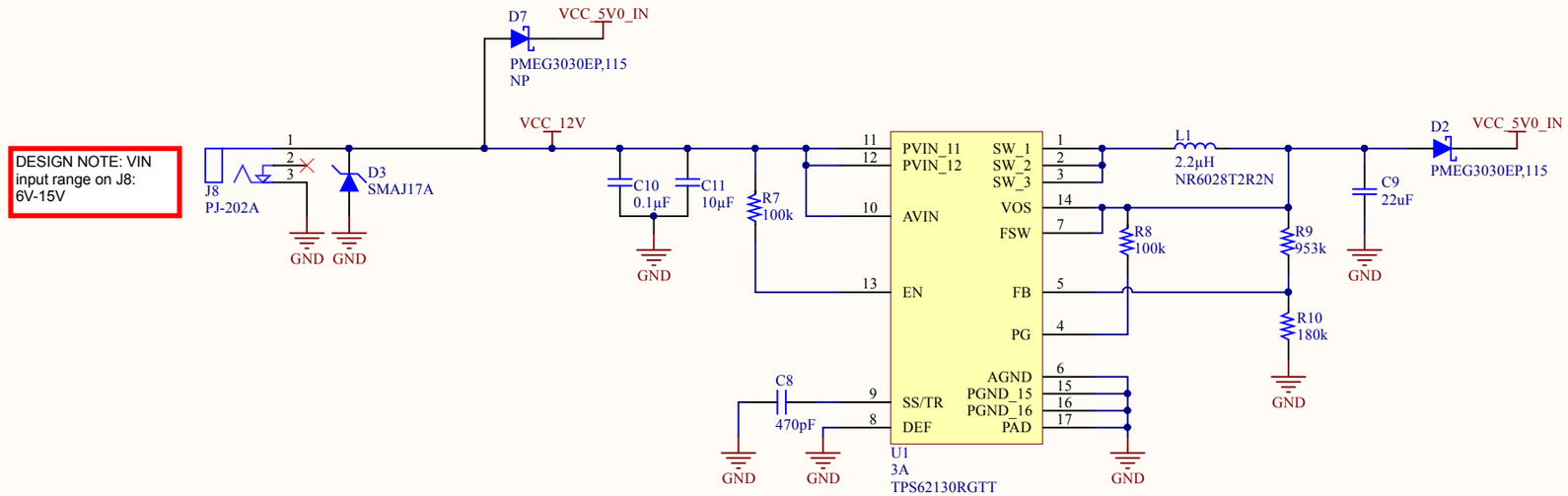
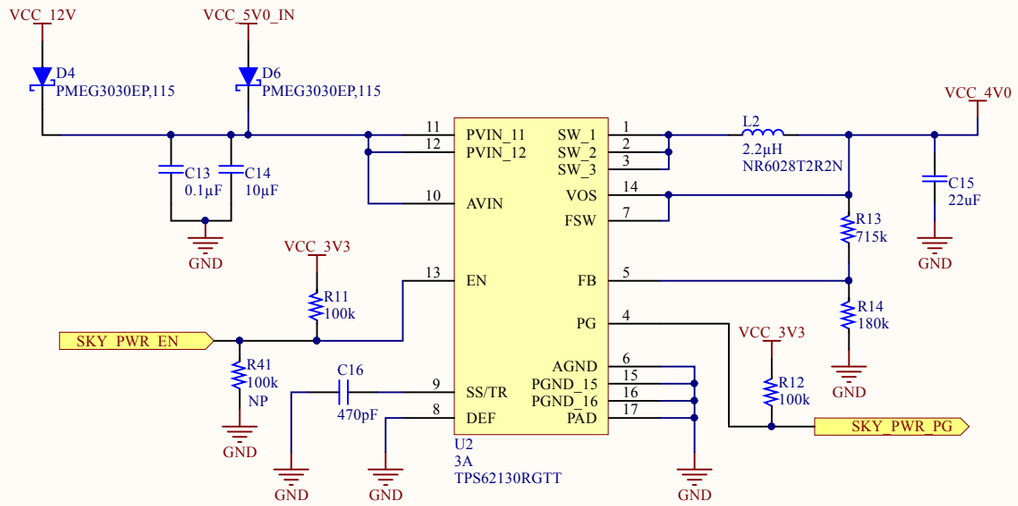
POWER

DESIGN NOTE: D7 footprint placed to allow no-pop of U1 for 5V system input. If D7 is populated do not use 12V input.

DESIGN NOTE: VIN input range on J8: 6V-15V





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ECO LIST

Revision Control			
Assy Part Number	Rev	Description of Change	Date
20057	A	Alpha Engineering Release	2017-01-09
20057	B	Initial Release	2017-02-21

Revision Control			
Assy Part Number	Rev	Description of Change	Date

NimbeLink		www.nimbelink.com MINNEAPOLIS	
Title: ECO LIST			
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