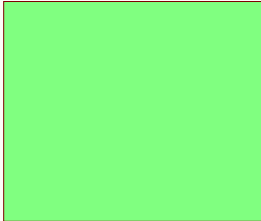


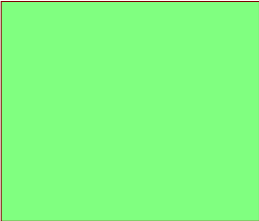
TABLE OF CONTENTS	
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4	Power
5	Application Interfaces
6	ECO LIST

TITLE PAGE

TOP
TOP.SchDoc



ECO
ECO LIST.SchDoc



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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.

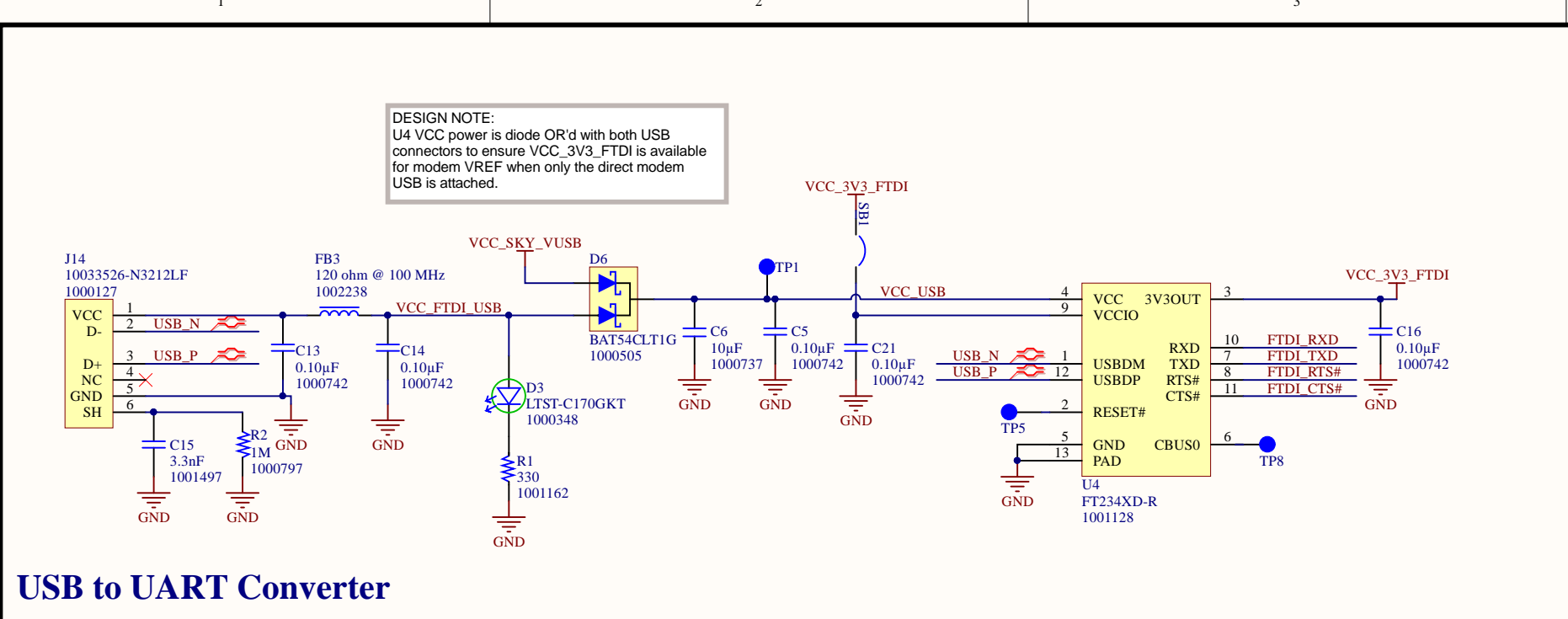
✗ 3) A red X indicates suppression of error checking on a pin/net. Commonly suppressed errors include: single-pin net, no driving source, etc.

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.

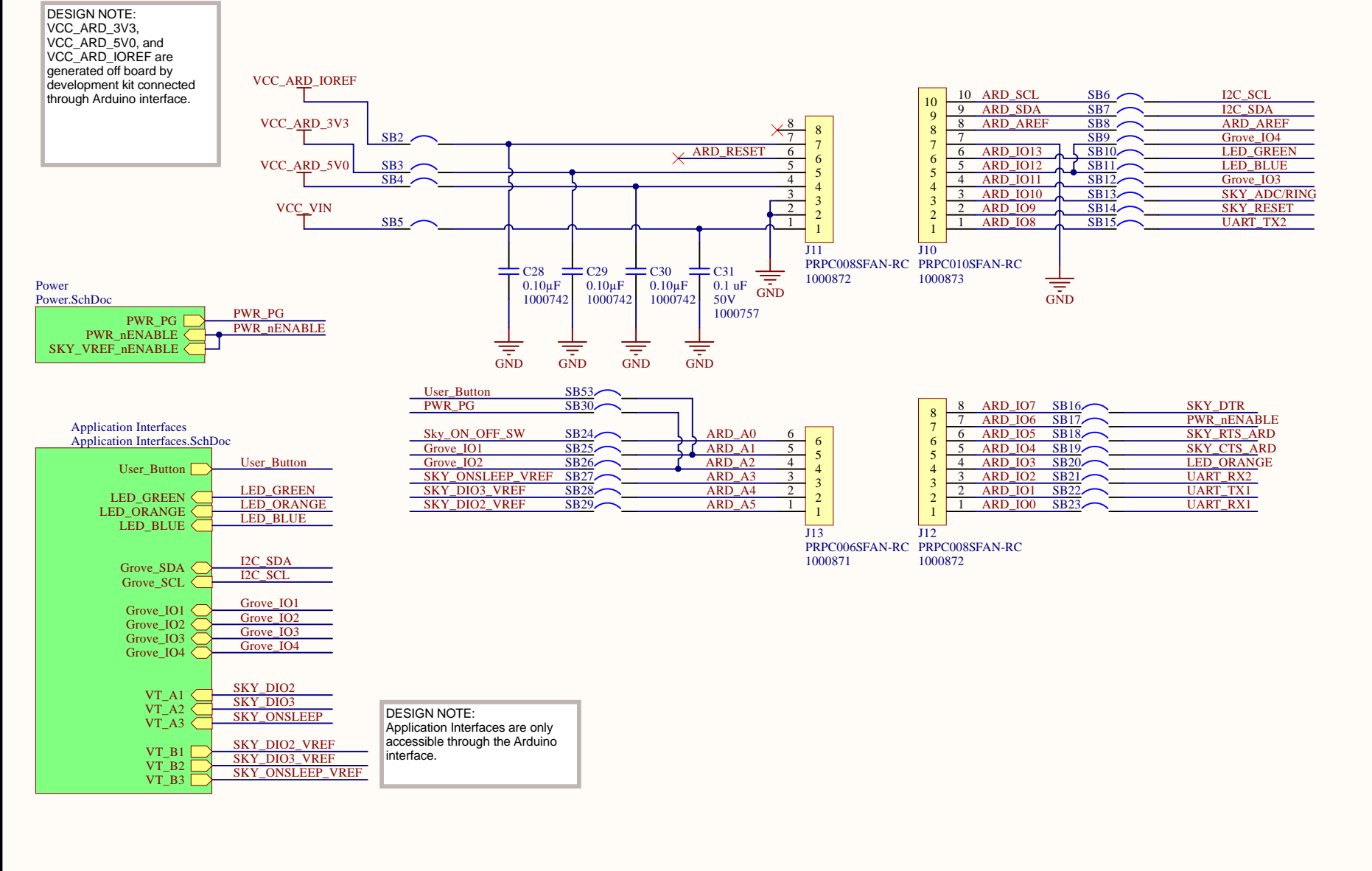
5) Finally, population vs. non-population intent is indicated by adding "NP" next to the part. All parts with "NP" next to the part are intended to be unplaced during assembly.

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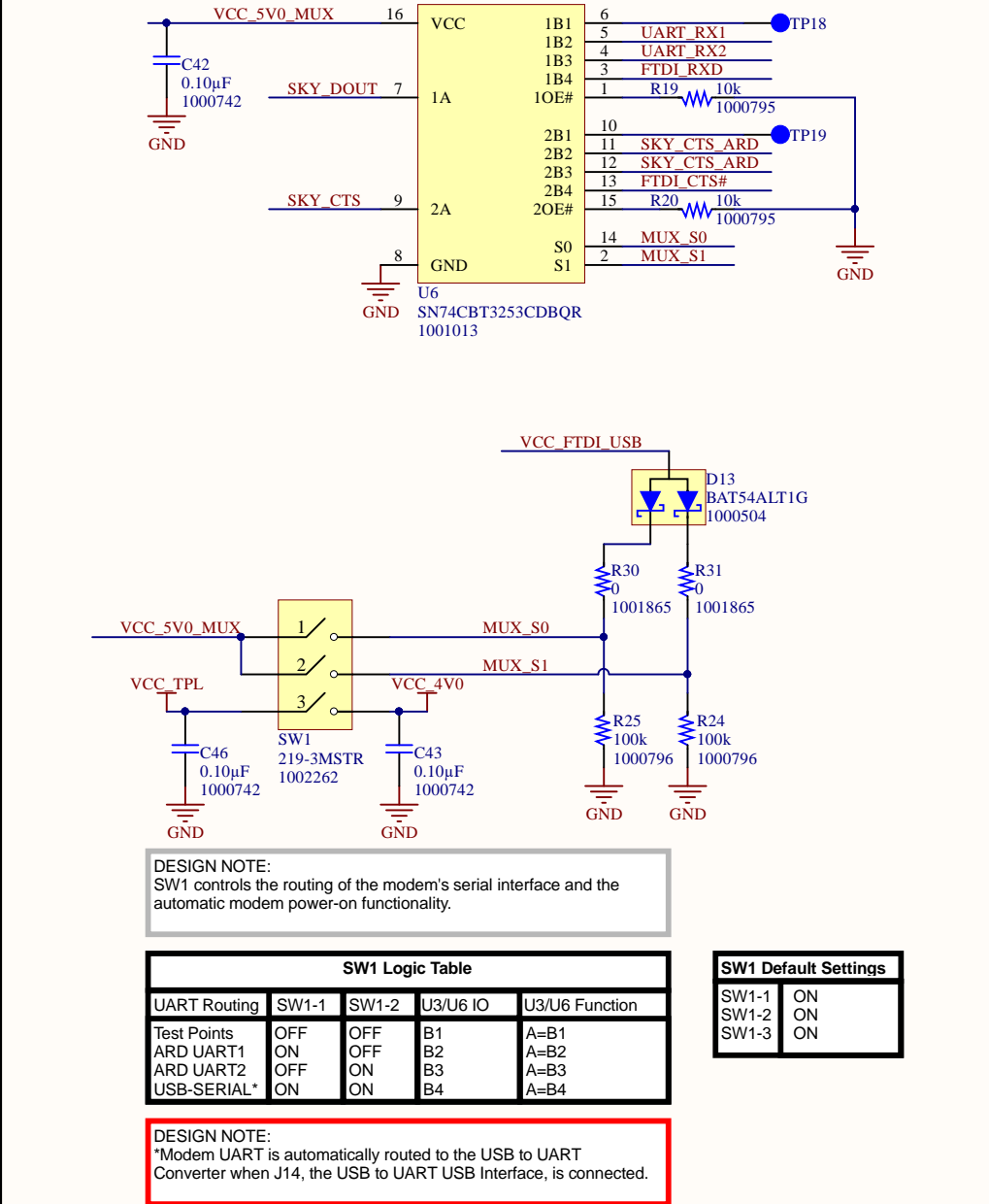
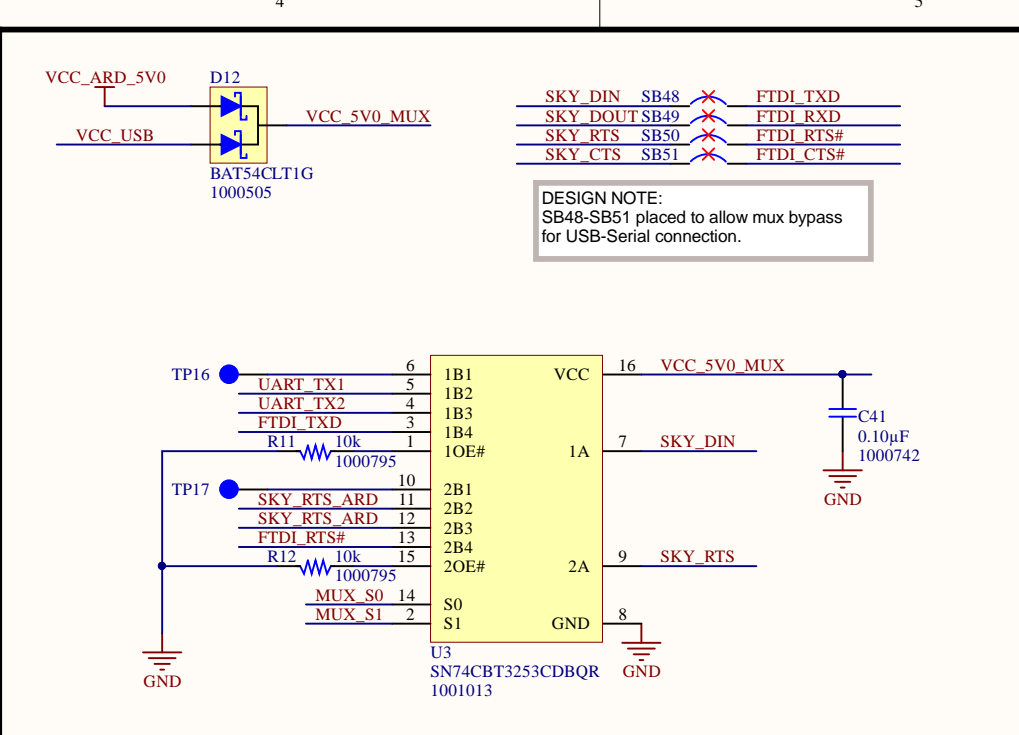
		www.nimbelink.com			
		MINNEAPOLIS			
Title: TITLE					
Project: Dev Kit, SWDK2			Size: B	Sheet 1	of 6
Number: 1002211		Rev: E	Modified: 9/2/2020	3:32:58 PM	
Prepared for: SWDK2 Dev Kit					



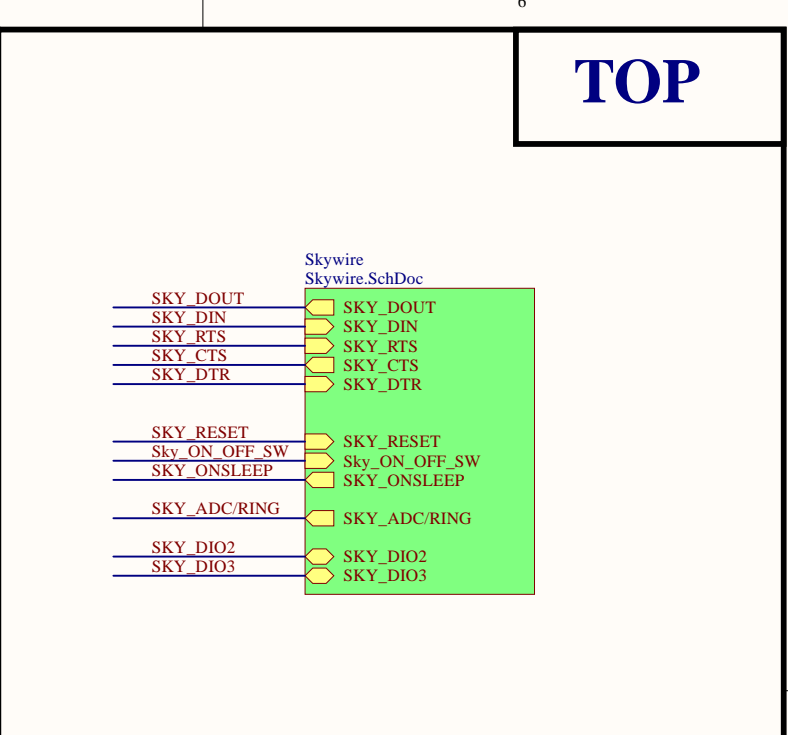
USB to UART Converter



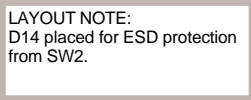
Arduino Interface



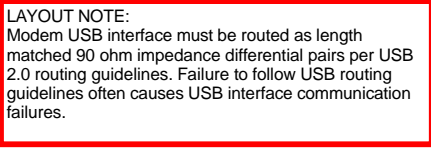
UART Interface Selection



Skywire

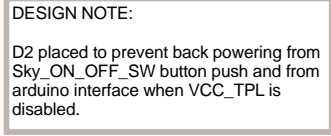


Skywire Interface



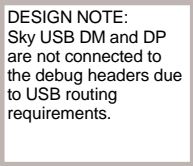
DESIGN NOTE:
A Common Mode Choke (L2) may be required to reduce noise coming in from the USB cabling in customer design. Implementing a CMC should be considered on a case-by-case basis.

DESIGN NOTE:
Customers should place ESD protection on the Skywire's USB interface whenever the USB signals are routed off board or when the design exposes the modems USB interface for field use.



DESIGN NOTE:
U1 will automatically turn on modem when power is applied and IC is enabled.
IC will toggle Sky_ON_OFF_SW signal high for 8.5 seconds upon IC power up.
U1 enable is controlled by SW1-3.

Skywire USB Interface

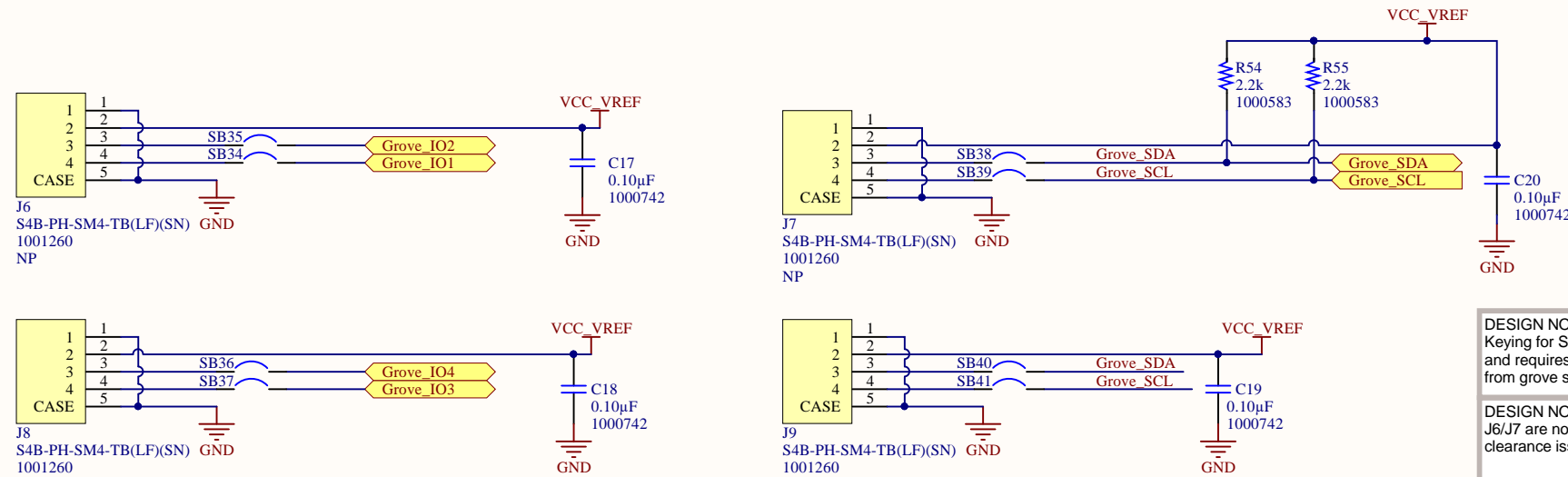


0.1" DEBUG HEADERS



Skywire Auto ON Circuitry

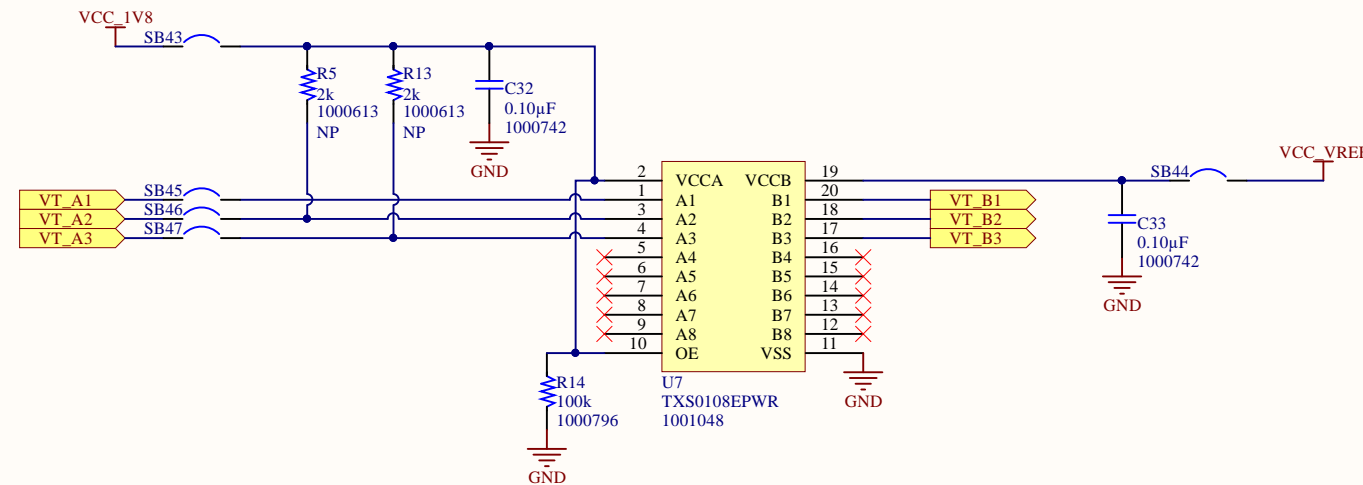
Application Interfaces



DESIGN NOTE:
Keying for SMT Grove connectors is reversed and requires the pin interface to be mirrored from grove standard.

DESIGN NOTE:
J6/J7 are not populated due to potential clearance issue with some Skywire modems.

Grove Connectors

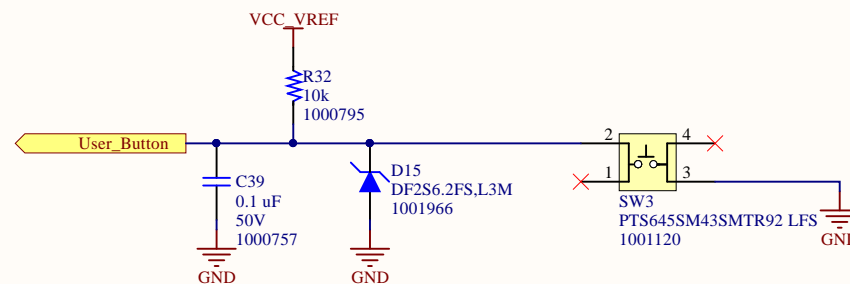


DESIGN NOTE:
Use of U7 in end designs is optional. U7 placed to allow for easy level translation of 1.8V Skywire signals for Arduino interface and to allow for compatibility across multiple development kits. Level shifting is not required for these signals for processor IO that support 1.8V IO or for designs that are not using these pins.

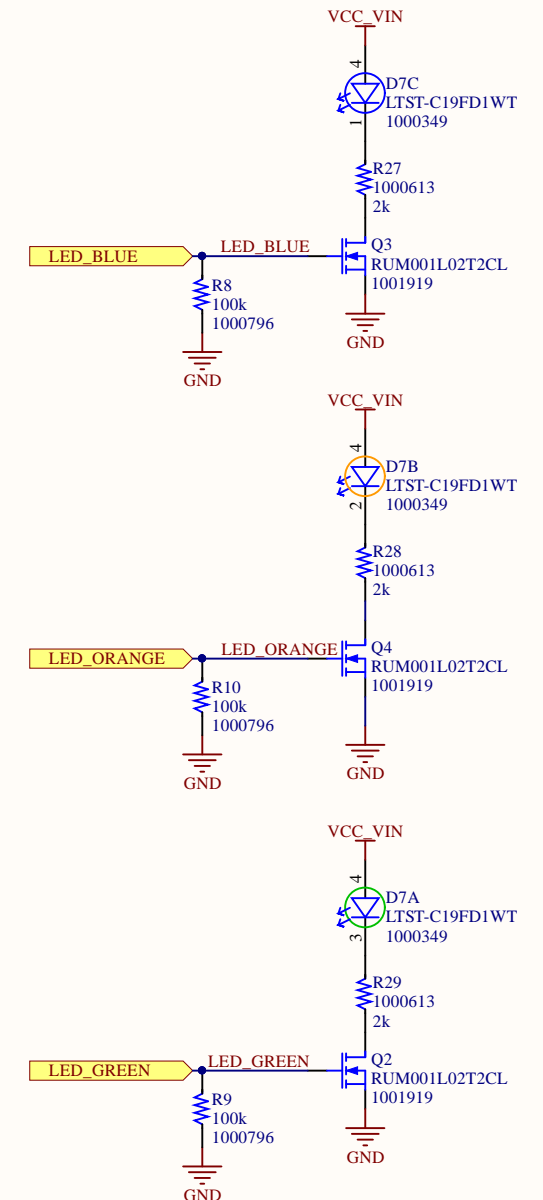
DESIGN NOTE:
Disconnect SB43-SB47, and SB42 (Power Page) for low power testing.

R5 and R13 Pullup footprints are placed to support QBG96 I2C interface.

1.8V IO Level Shifter




User Button



LED's

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 www.nimbelink.com MINNEAPOLIS	
Title: APPLICATION INTERFACES	
Project: Dev Kit, SWDK2	Size: B Sheet 5 of 6
Number: 1002211	Rev: E Modified: 9/2/2020 3:32:59 PM
Prepared for: SWDK2 Dev Kit	

ECO LIST

Revision Control			
Assy Part Number	Rev	Description of Change	Date
1002211	A	Alpha Release	2019-10-02
1002211	B	-Changed C6 to use 0402 10uF -Changed R16,R35 to 100k -Changed R30/31 to R54/R55	2019-12-17
1002211	C	-Added R30, R31, R32, D14, D15, C46. -Tied VCC_TPL to 4V through SW1. -Corrected Arduino analog pin names. -Change PWRGD to A2 Arduino IO. -Moved User Button IO to Arduino A1. -Moved Sky_DIO2_VREF to Arduino A5, moved Sky_DIO3_VREF to Arduino A4 to allow for use of QBG95 nmea UART with ST Nucleo Boards. -Moved SKY_ONSLEEP_VREF to A3. -Moved Sky_ADC/RING to D10 and GROVE_IO2 to A2, GROVE_IO1 to A1. -Moved Grove_IO4 to Arduino D12. -Removed C40. -Changed SW3 circuit to use pullup resistor.	2020-04-20
1002211	D	-Added C40,C47. -Changed R21 to 10k ohm.	2020-06-19
1002211	E	-Grounded U1 Pin 4.	2020-07-29

Revision Control			
Assy Part Number	Rev	Description of Change	Date

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