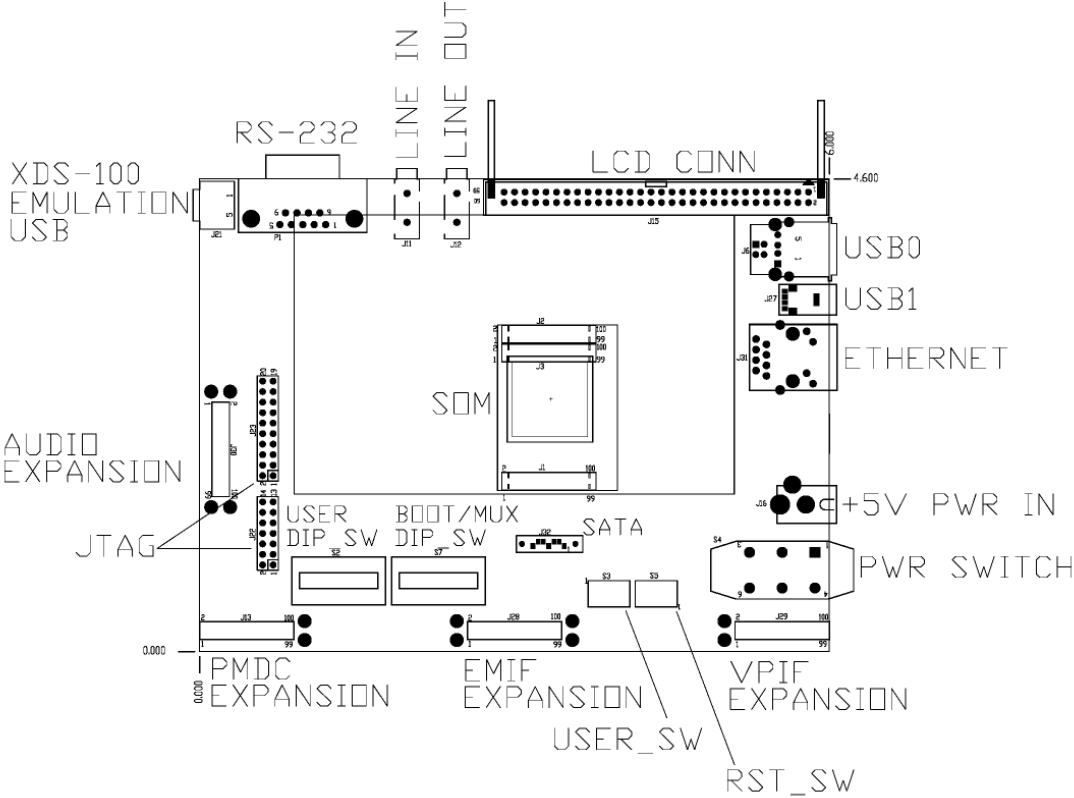


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13	USB, SATA
14	USER LEDS, SWITCHES
15	ECO LIST

IMPORTANT NOTES ABOUT THIS SCHEMATIC

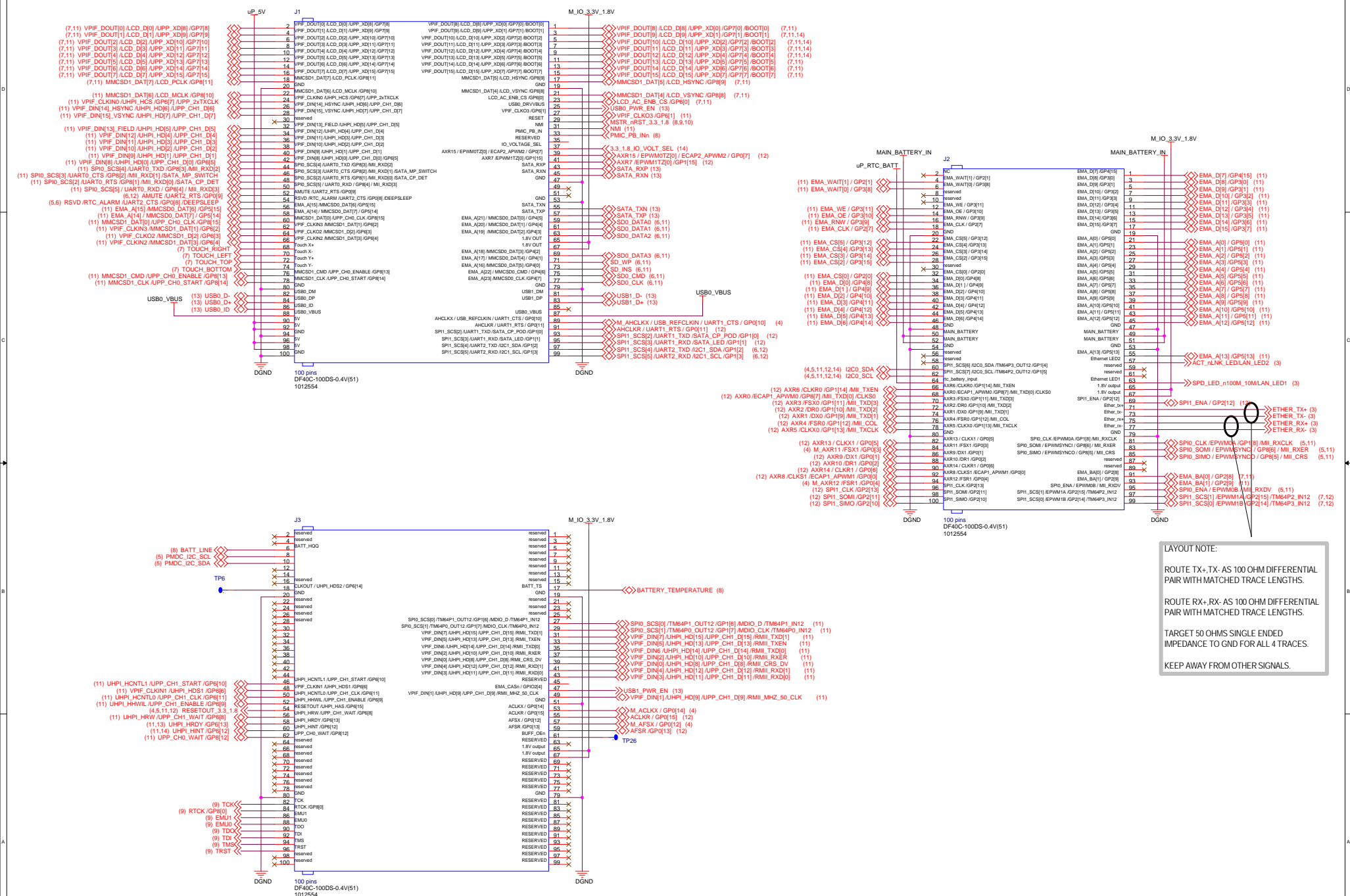
- DESIGN NOTE: Example text for the design note to show the note inside the colored box.
- DESIGN NOTE: Example text for the design note to show the note inside the colored box.
- DESIGN NOTE: Example text for the design note to show the note inside the colored box.
- 1) DESIGN NOTES in grey are information notes.
- 2) DESIGN NOTES in yellow are notes of caution.
- 3) DESIGN NOTES in red are critical, and must be understood and followed.



IMPORTANT NOTICE:

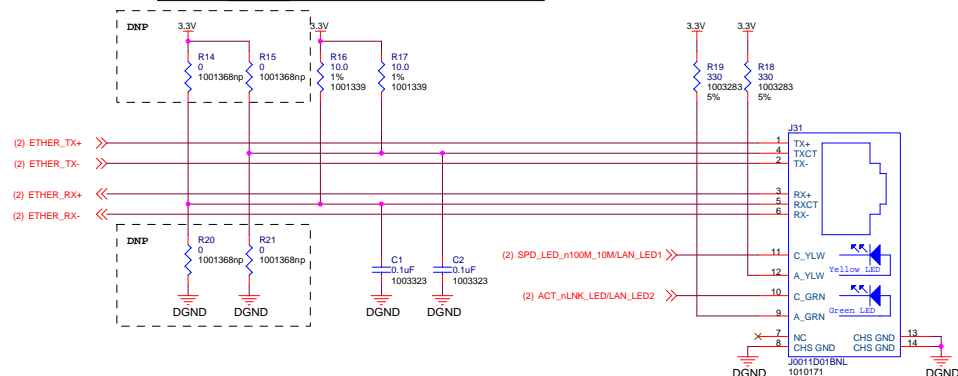
1. THIS DOCUMENT MAY NOT REFLECT THE MOST RECENT CHANGES IN BOARD DEVELOPMENT AND DEBUG. ANY DEVELOPER INTENDING TO USE THIS SCHEMATIC AS A REFERENCE SHOULD CONTACT THEIR THE LPD WEBSITE (WWW.LOGICPD.COM), REGIONAL SALES OFFICE, OR PROGRAM MANAGER FOR SCHEMATIC UPDATES, DESIGN RECOMMENDATIONS AND PCB LAYOUT GUIDELINES. LPD ALSO RECOMMENDS A DESIGN REVIEW OF BOTH THE SCHEMATIC DIAGRAM AND PCB LAYOUT BEFORE CONSIDERING PRODUCTION.
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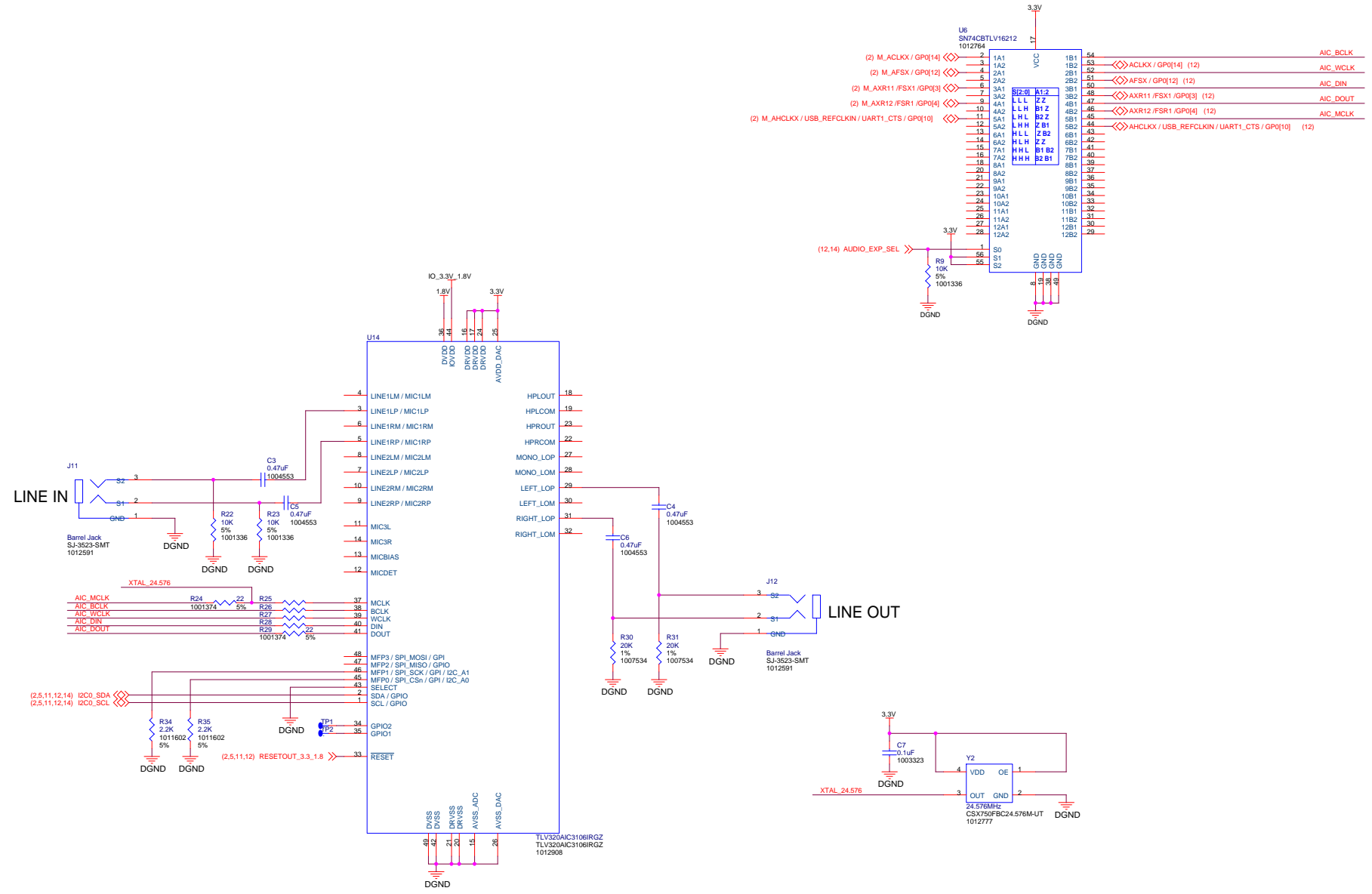
02 - MODULE BUS

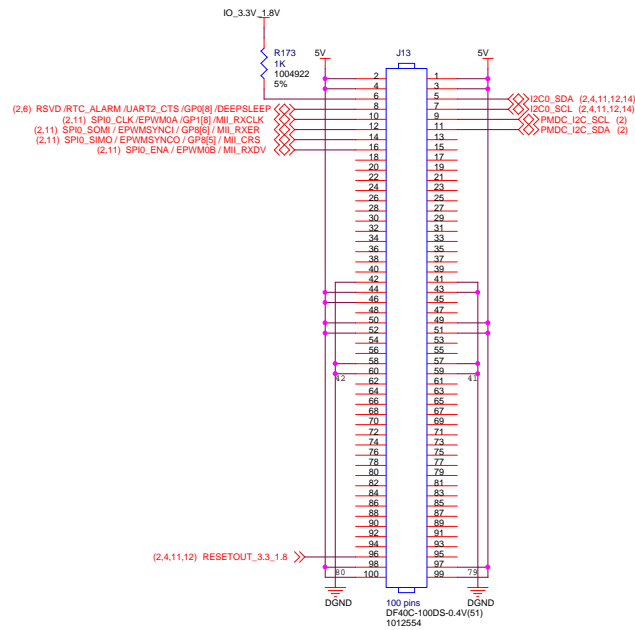


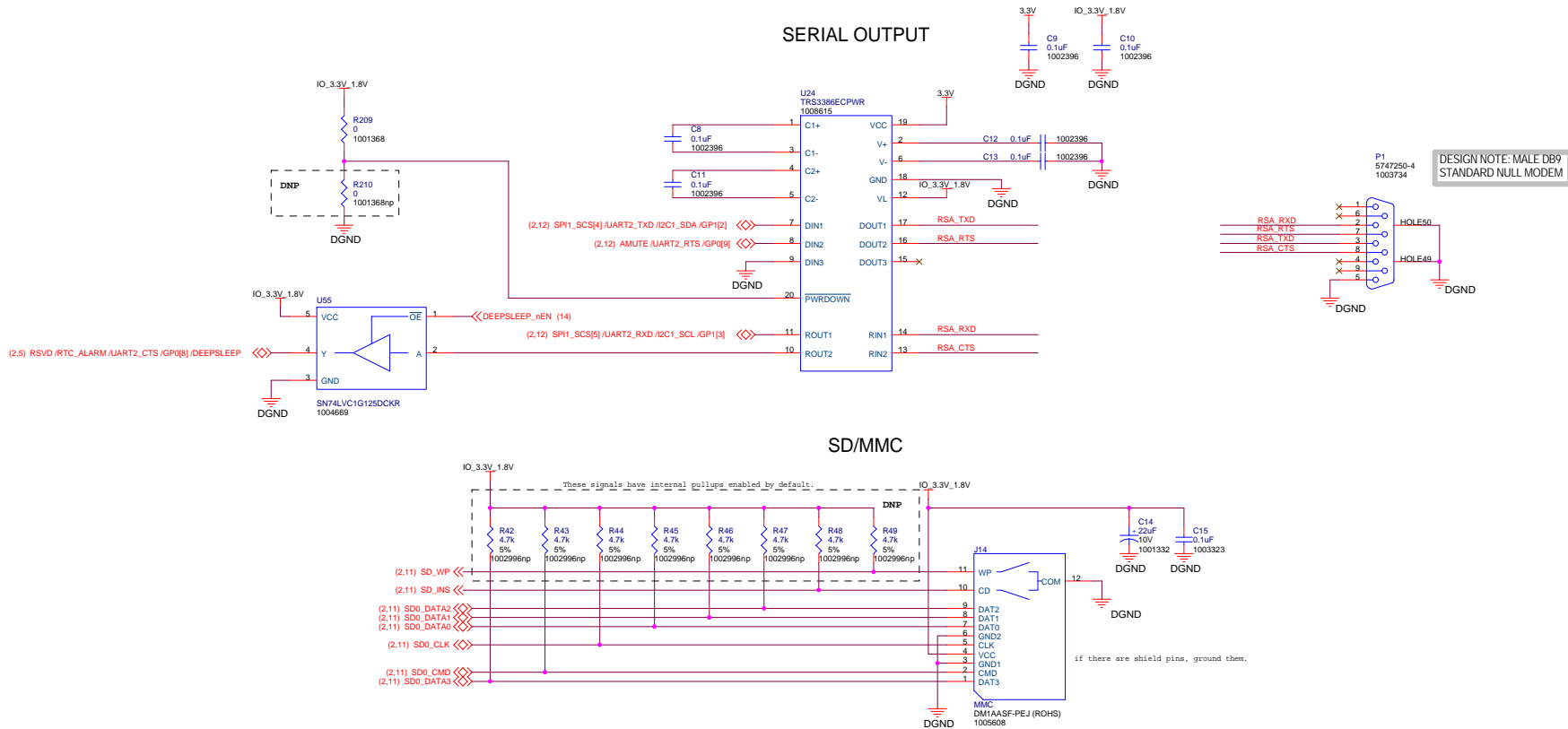
POPULATION CHART BY ETHERNET CHIP ON MODULE		
LAN8710	R16, R17	ALL OTHER NO POPULATED

DESIGN NOTE: The Ethernet signals are differential pairs with a differential impedance of 100 Ohms. Each pair must be length matched and have a target impedance of 100 Ohms +/- 10%.







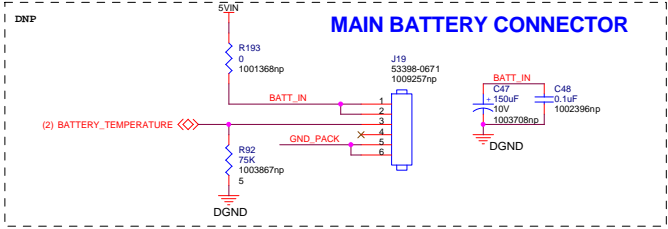
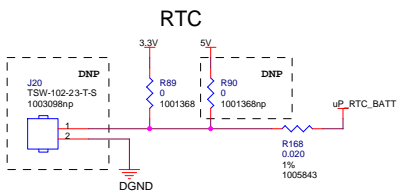
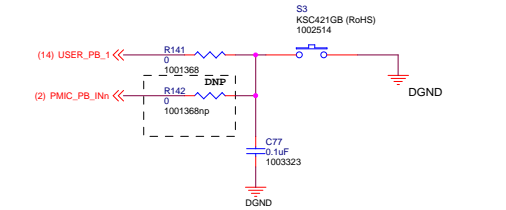
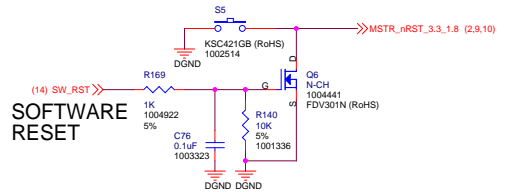
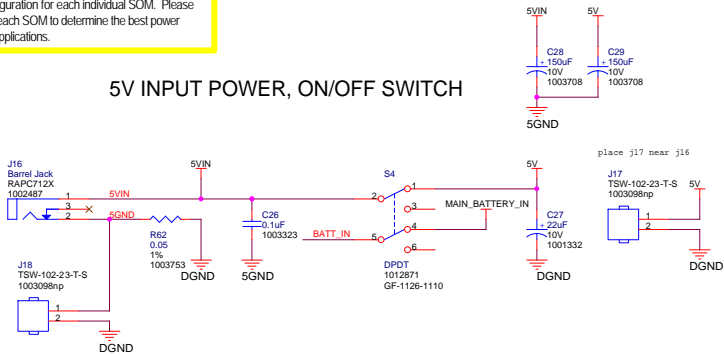




DESIGN NOTE: THIS CONNECTOR IS ACTUALLY A 30X2 DUAL ROW .100" PITCH, .025" SQ POST MALE HEADER. IT IS REPRESENTED SYMBOLICALLY AS A SINGLE ROW CONNECTOR TO ILLUSTRATE HOW THE SIGNALS WILL ROUTE THROUGH THE RIBBON CABLE.

DESIGN NOTE: The power supplies on this page were designed to work with multiple SOMs. They are not designed for maximum efficiency nor are they necessarily the best configuration for each individual SOM. Please consult the documentation for each SOM to determine the best power supply scheme for individual applications.

5V INPUT POWER, ON/OFF SWITCH



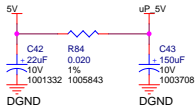
For Freon Only:
Applying power to MAIN_BATTERY_IN will not cause SOM to power up immediately. SOM will power up when power is supplied to MAIN_BATTERY_IN, and then PB_IN is pulled low. PB_IN must be pulled low AFTER power is applied to MAIN_BATTERY_IN. MAIN_BATTERY_IN voltage must be within allowable ranges described below.

For startup, MAIN_BATTERY_IN range is:
3.6V < MAIN_BATTERY_IN < 4.2V

At runtime, MAIN_BATTERY_IN range is:
UVLO < MAIN_BATTERY_IN < 4.2V

UVLO = UnderVoltage LockOut
UVLO = 3.0V (default)
2.8V < UVLO < 3.25V (programmable)

SOM POWER

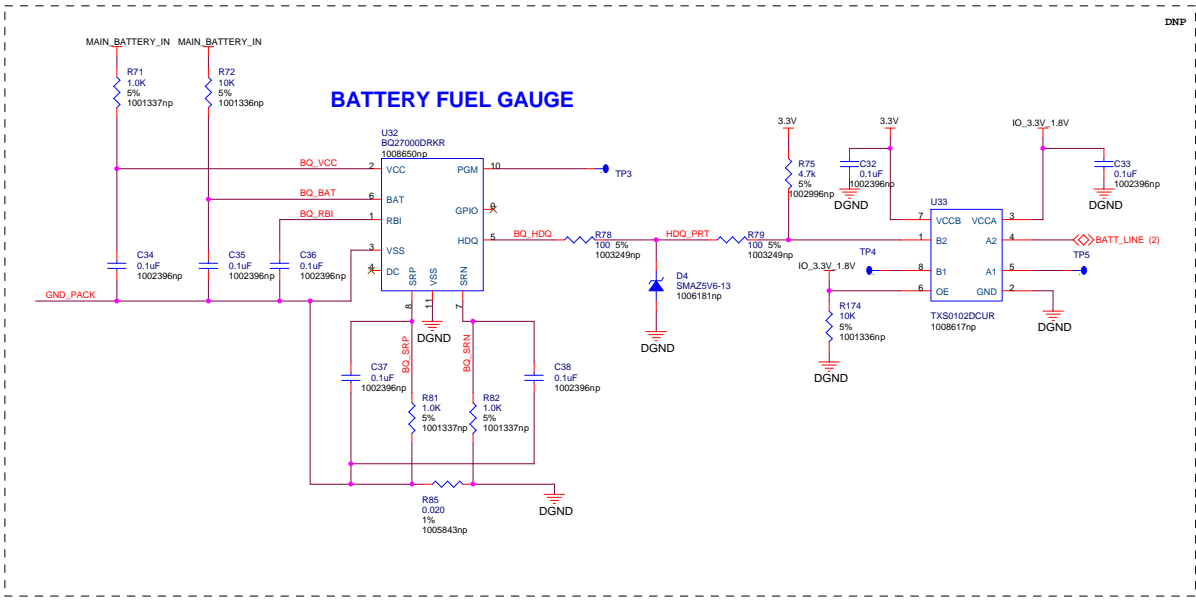


For Freon Only:
Applying power to uP_5V will cause SOM to power up immediately.

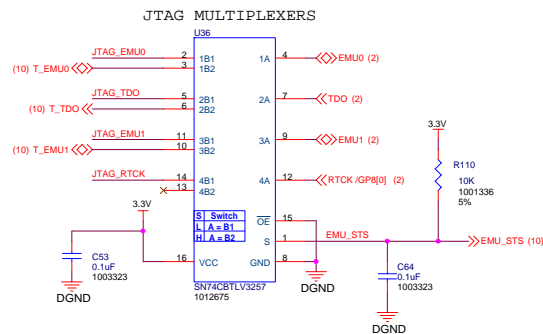
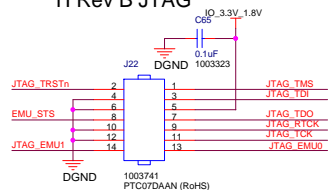
For startup, uP_5V range is:
3.6V < uP_5V < 5.8V

At runtime, uP_5V range is:
UVLO < uP_5V < 5.8V

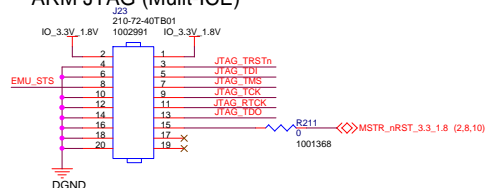
UVLO = UnderVoltage LockOut
UVLO = 3.0V (default)
2.8V < UVLO < 3.25V (programmable)



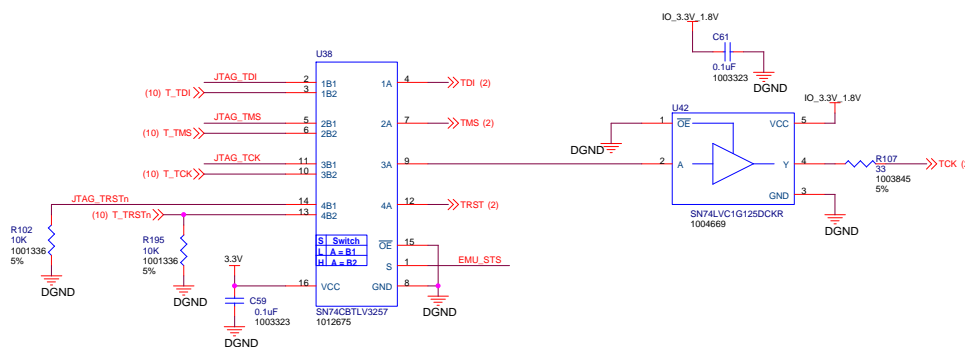
TI Rev B JTAG



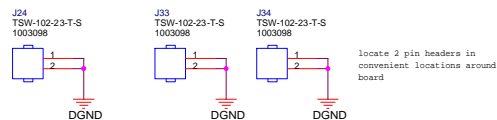
ARM JTAG (Mult-ICE)



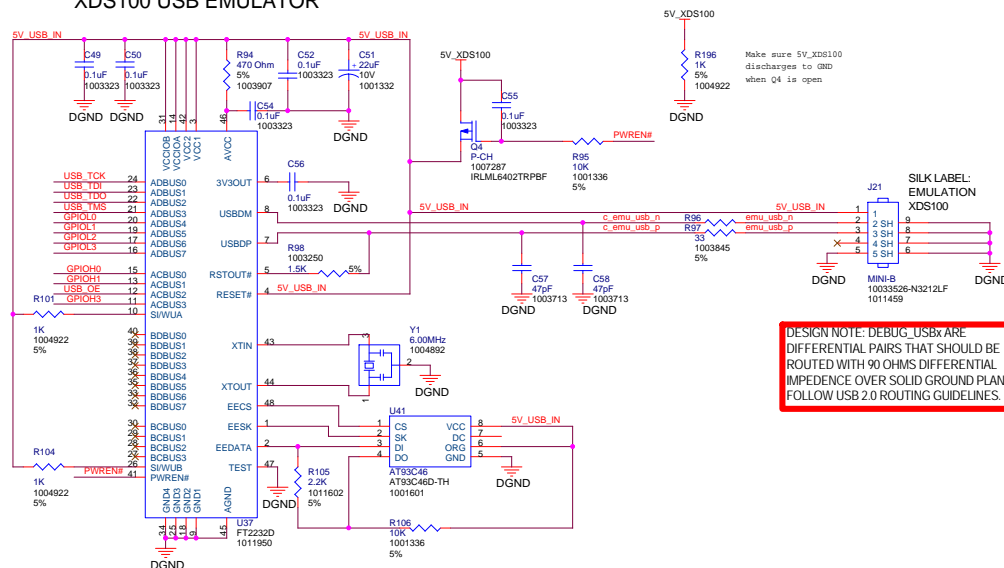
FET MUXES TOGGLE JTAG LINES BETWEEN ON-BOARD EMULATION (XDS100) AND OFF-BOARD EMULATORS (14 PIN OR 20 PIN HEADERS). THE MUX CONTROL SIGNAL (EMU_STX) IS PULLED HIGH BY DEFAULT, WHICH SELECTS THE ON-BOARD EMULATION. WHEN ANOTHER EMULATOR IS CONNECTED TO EITHER THE 14 OR 20 PIN CONNECTORS, EMU_STX SHOULD BE PULLED TO GROUND BY THE EMULATOR.



PROBE GND CONNECTOR

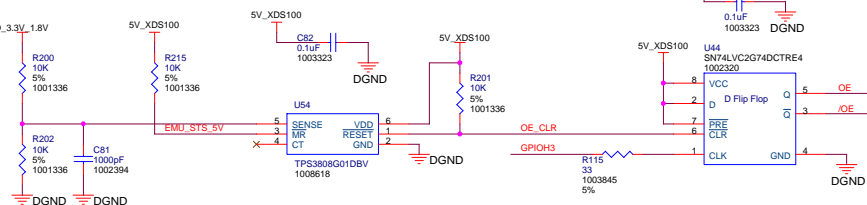


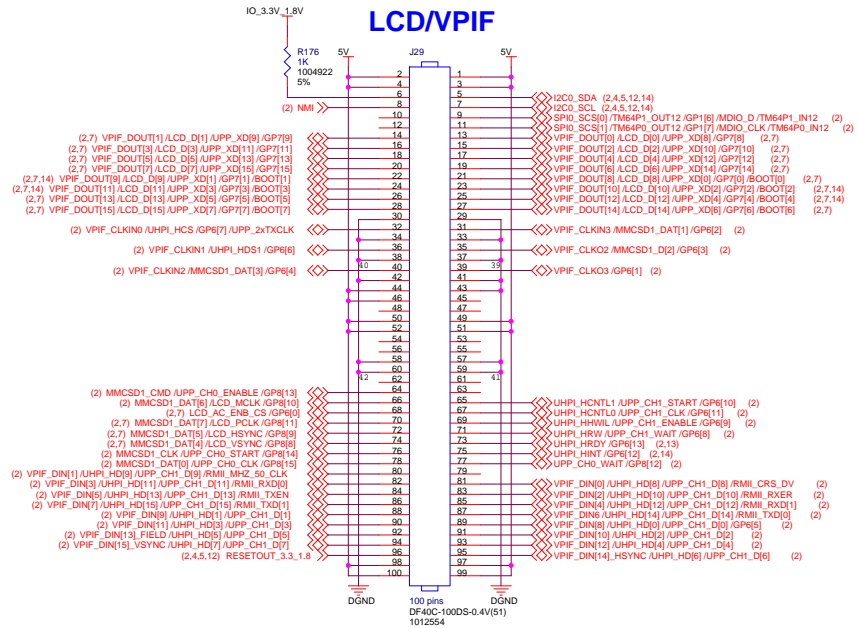
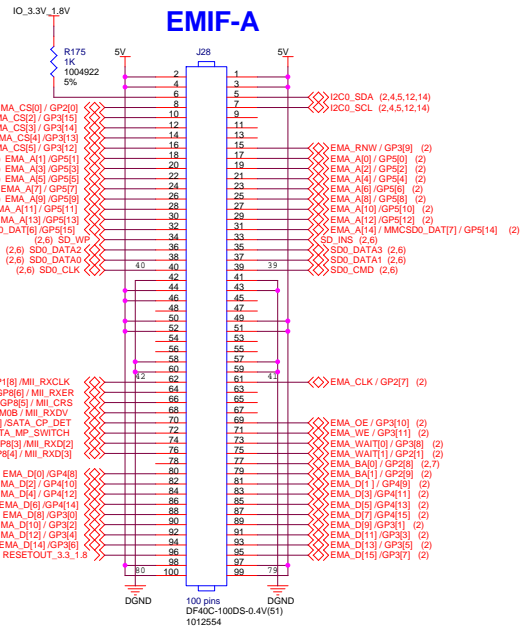
XDS100 USB EMULATOR

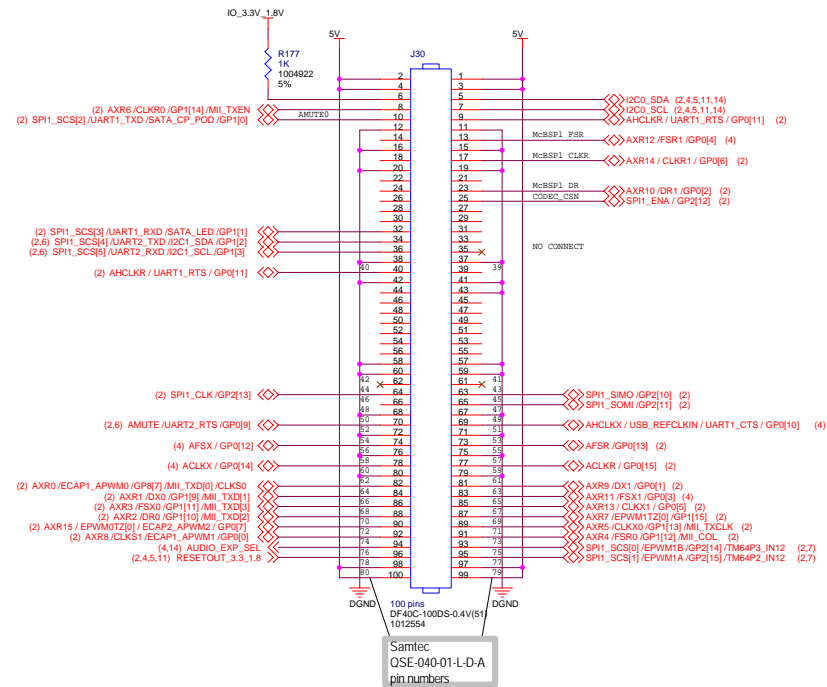


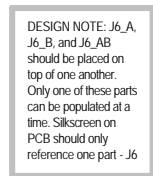
DESIGN NOTE: DEBUG_USBx ARE DIFFERENTIAL PAIRS THAT SHOULD BE ROUTED WITH 90 OHMS DIFFERENTIAL IMPEDENCE OVER SOLID GROUND PLANE. FOLLOW USB 2.0 ROUTING GUIDELINES.

XDS100 OUTPUT ENABLE



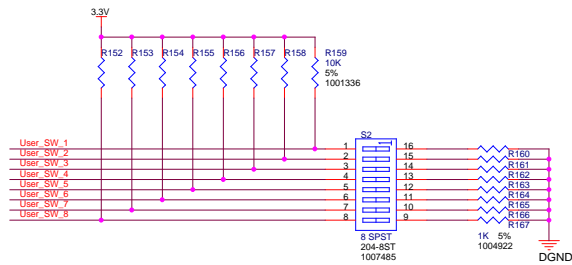




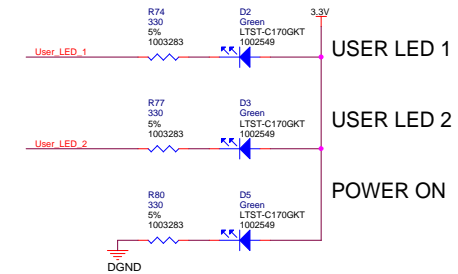
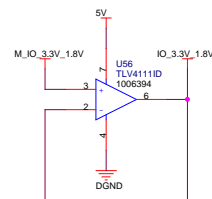
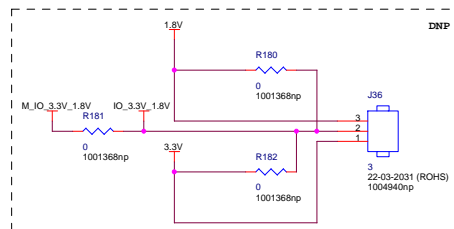
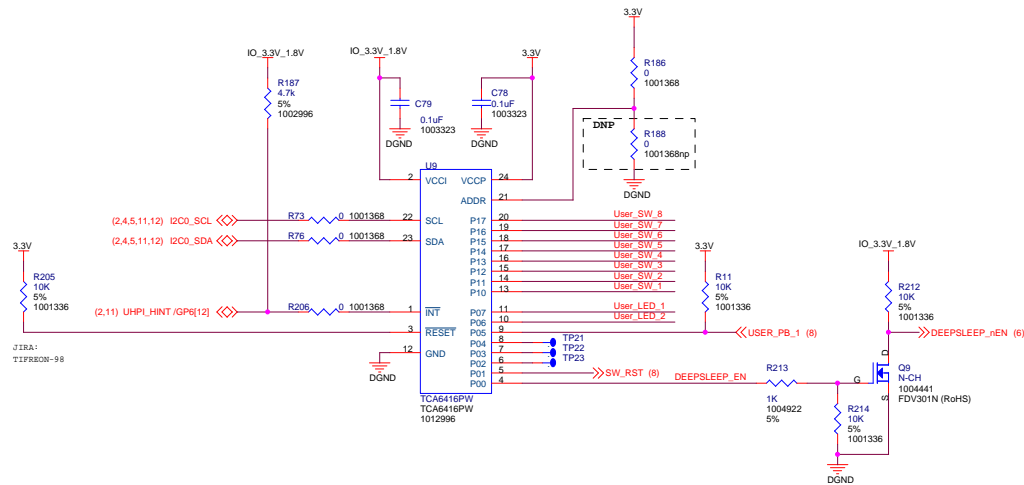


STATUS/USER LEDS

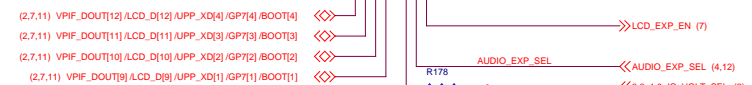
USER DIP SWITCHES



IO EXPANDER



BOOT MODE



A default boot mode has been defined by pulling all boot pins (BOOT[0:7]) to a default state on the SOM. The default boot mode is SPI1 Flash. Other boot modes can be selected as follows:

	Boot Mode	Electrical/Software State BOOT[7:0]		DIP Switch Setting – S7[5:8]				
		Binary	Hex	BOOT[4]	BOOT[3]	BOOT[2]	BOOT[1]	BOOT[0]
				S7:8	S7:7	S7:6	S7:5	S7:5
	NOR EMIFA	0000 0010	02	OFF	ON	ON	ON	ON
	NAND-8 EMIFA	0000 1110	0E	OFF	OFF	OFF	ON	ON
	SPi0 Flash	0000 1010	0A	OFF	OFF	ON	ON	ON
Default	SP1 Flash	0000 1100	0C	OFF	OFF	OFF	OFF	OFF
	UART0	0001 0110	16	ON	ON	OFF	ON	ON
	EMU Debug	0001 1110	1E	ON	OFF	OFF	ON	ON

