

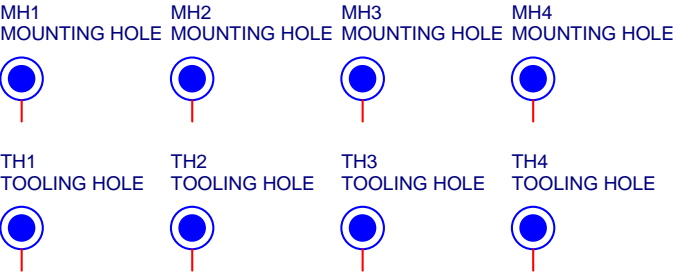
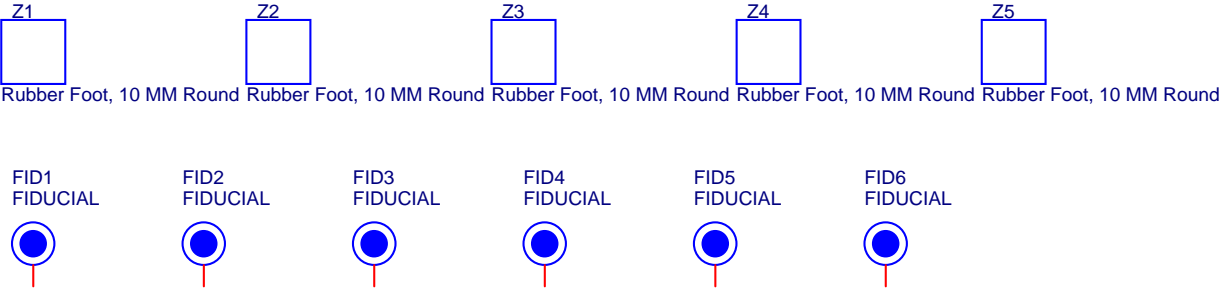
RENESAS DEVELOPMENT KIT FOR RX63N

PAGE	DESCRIPTION
1	INDEX
2	RX63N MCU
3	ETHERNET, BEAGLE/BID HEADER
4	ANALOG, CAN, FLASH, PWR
5	USB PORT
6	PMOD, EXP, LCD, APP HDR, PBTN
7	AUDIO OUT, MICROPHONE
8	uSD, LED, SERIAL, ACCEL
9	SEGGER JLINK-OB

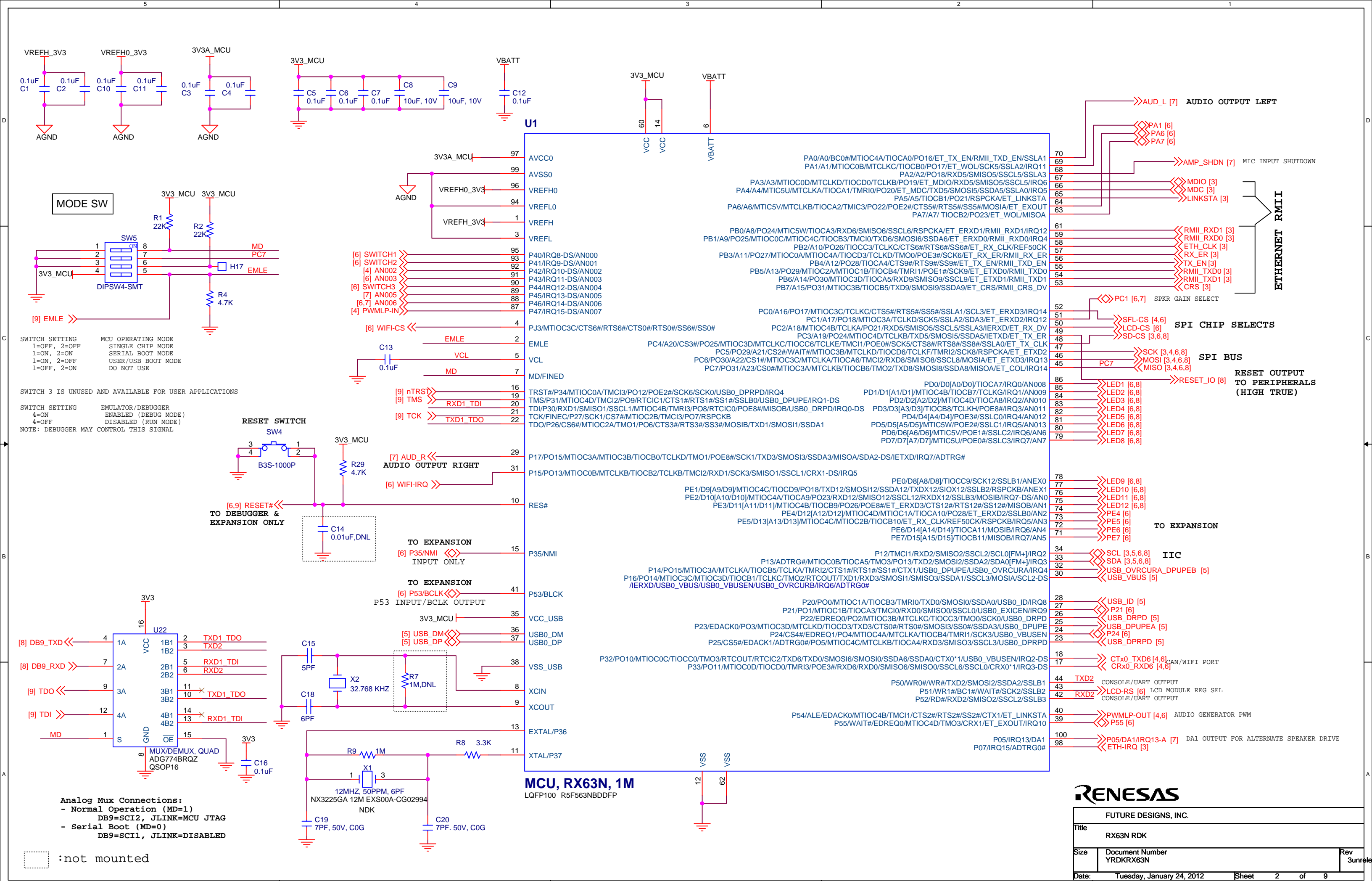
NOTE:
R : FIXED RESISTOR
VR : POTENTIOMETER
U : INTEGRATED CIRCUIT
X : CRYSTAL
SW : PUSHBUTTON/DIP SWITCH
LED : LIGHT EMITTING DIODE
J : CONNECTOR, JUMPER
L : FERRITE BEAD/INDUCTOR
D : DIODE

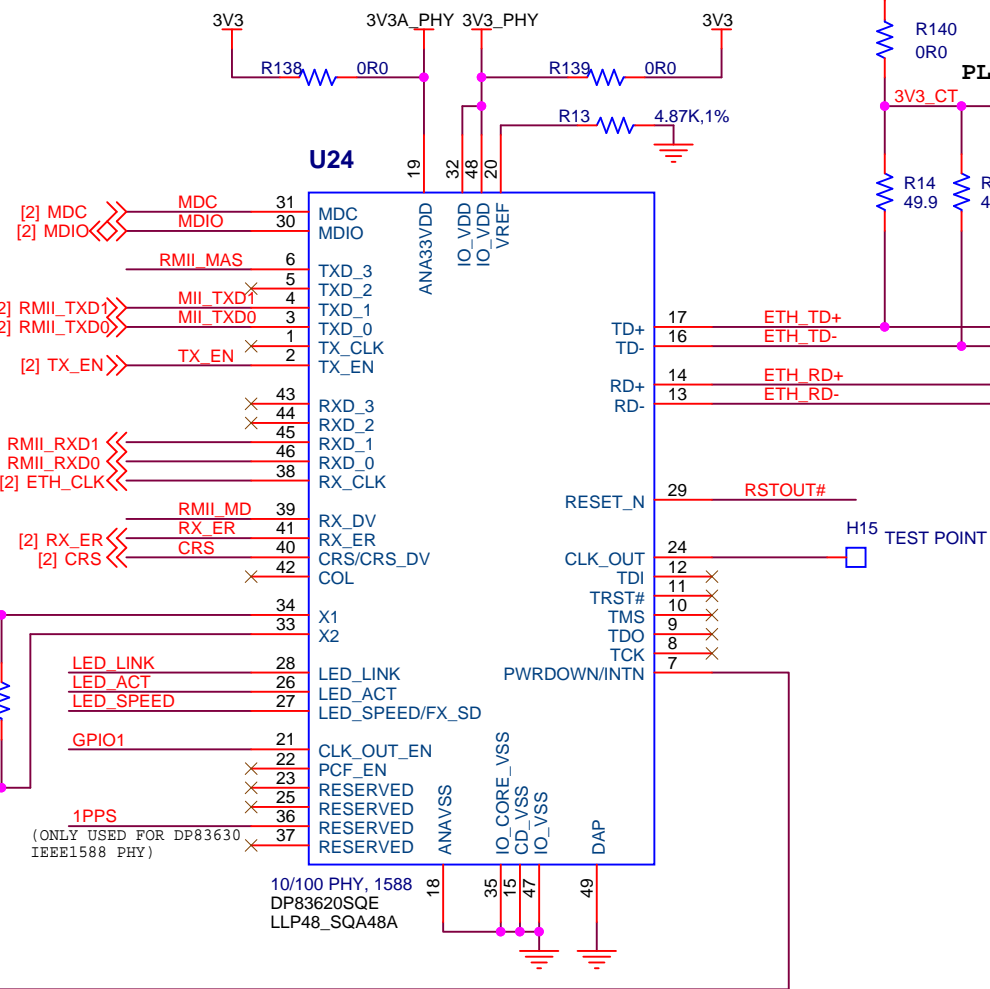
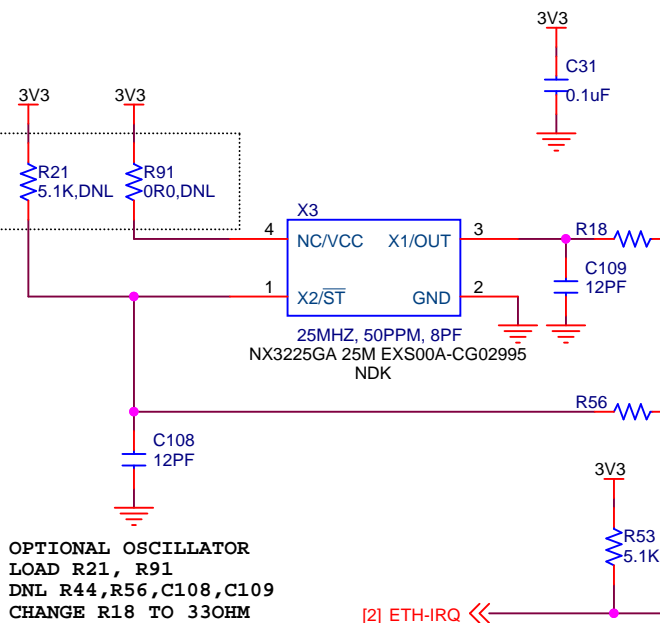
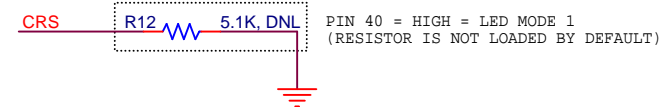
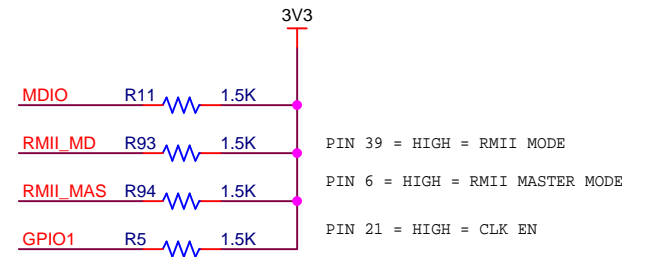
REVISION HISTORY

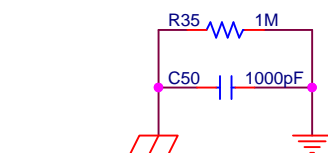
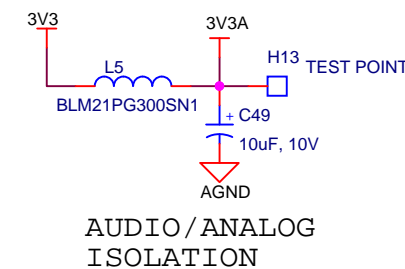
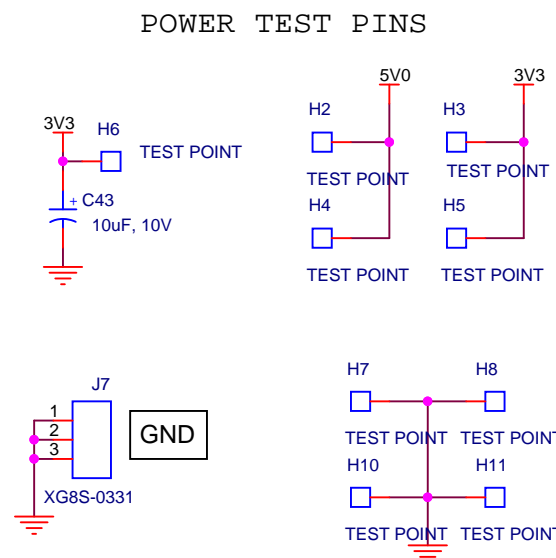
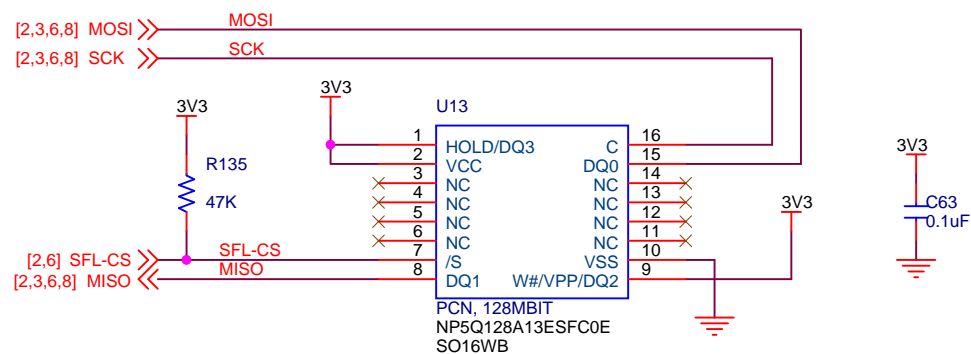
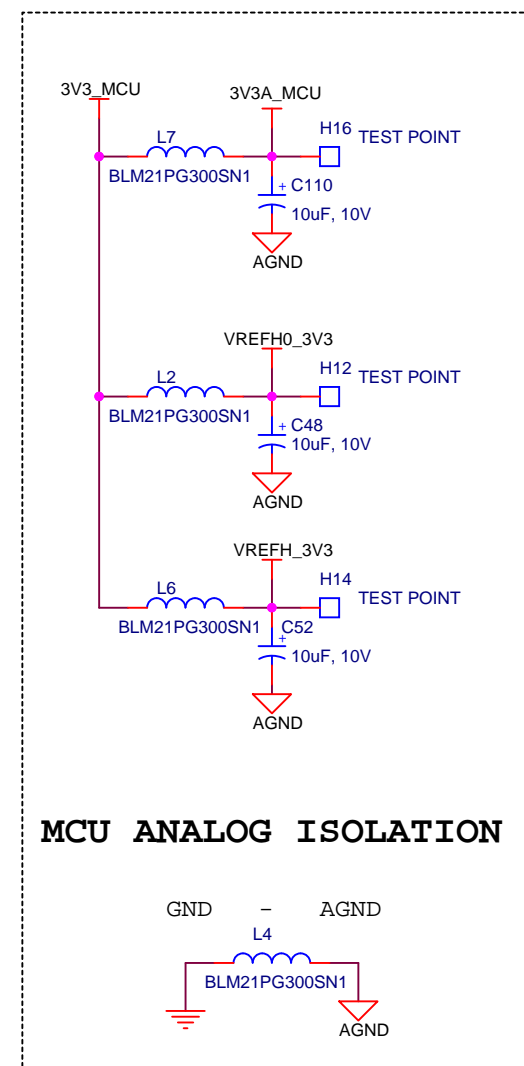
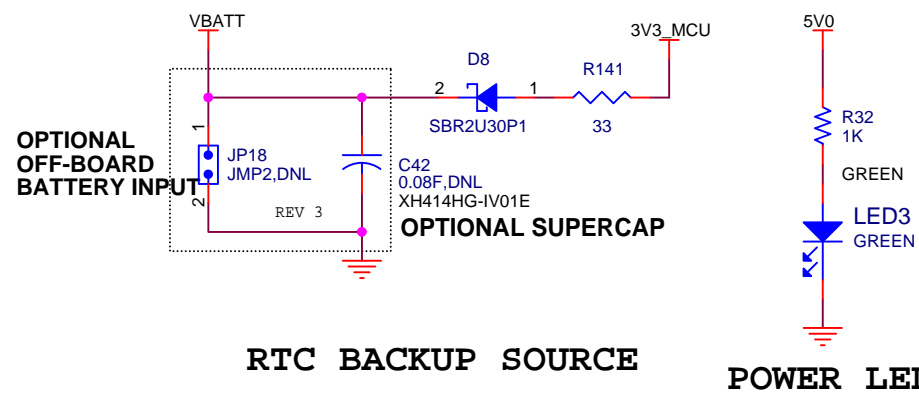
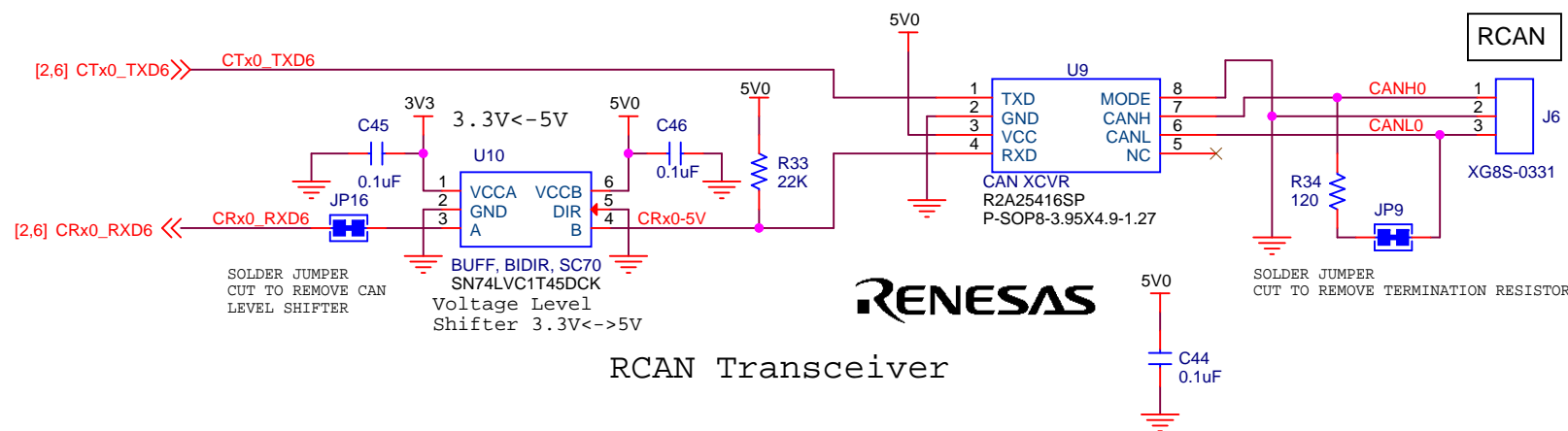
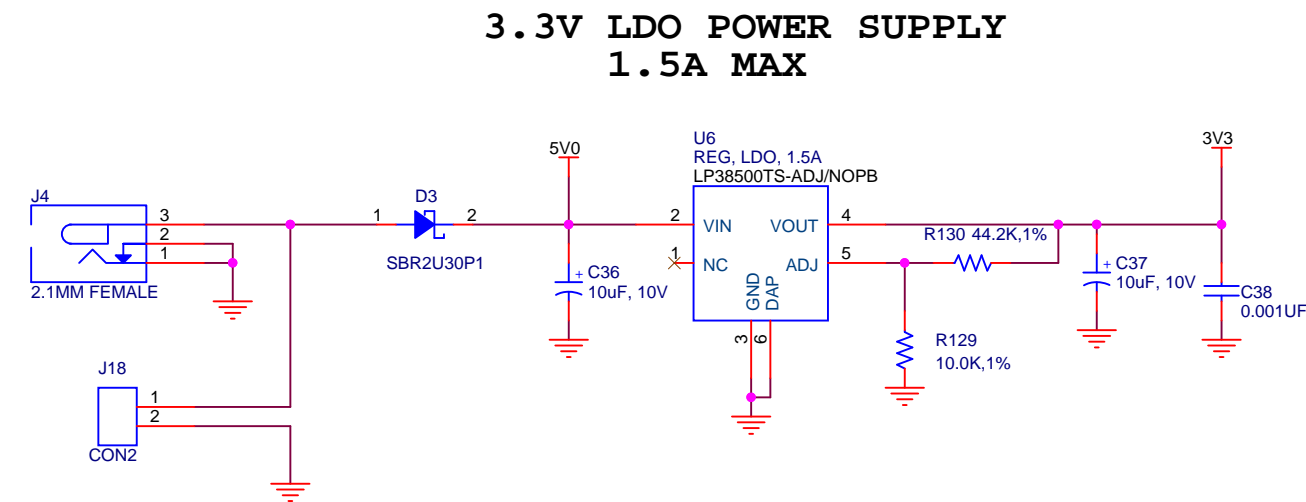
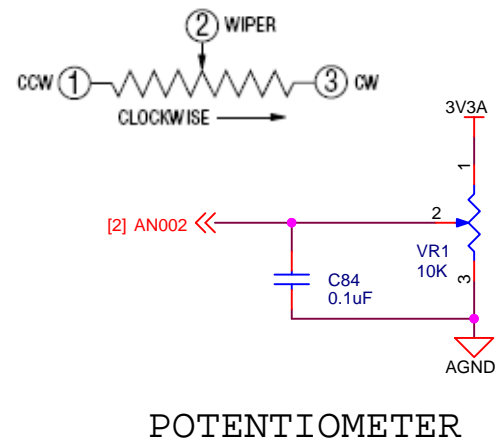
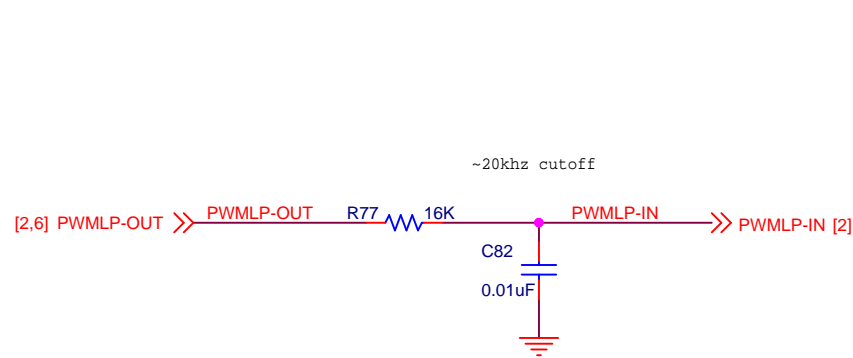
1.0	6/22/2011	PROTOTYPE RELEASE
1.1	7/27/2011	CHANGE USB PWR IC (U12) AND LEFT AUDIO SOURCE
2.0	11/09/2011	CHANGE JLINK TO RX621, CHANGE SPK AMP TO ADI, CORRECT SIGNAL NAMES FOR RX63N, ADD ALT PWR
3.0	01/17/2012	CHANGE TEMP SENSOR AND ADD ALTERNATE TEMP SENSOR, ADD OPTIONAL OFF-BOARD BATTERY INPUT



FUTURE DESIGNS, INC.		
Title RX63N RDK		
Size B	Document Number YRDKRX63N	Rev 3unreleased
Date:	Tuesday, January 24, 2012	Sheet 1 of 9







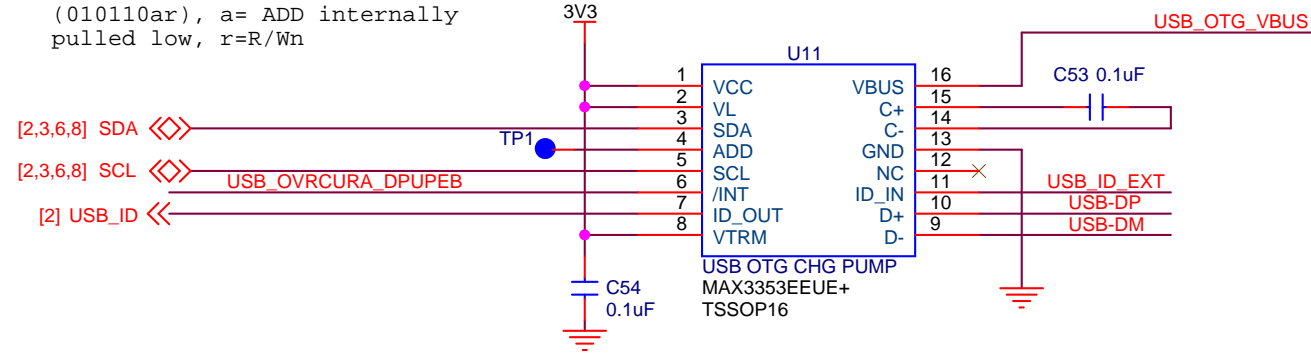
□ :not mounted

RENESAS

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Title		
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Size		
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YRDKRX63N		
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Tuesday, January 24, 2012		
Sheet		
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Rev		
3unrel		

I2C ADDR = 0x58
(010110ar), a= ADD internally
pulled low, r=R/Wn

USB OTG CHARGE PUMP

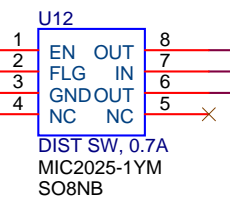


TO CONVERT FROM USB MINI-AB TO USB A
UTILIZE CABLE SHOWN BELOW, AVAILABLE
FROM DIGI-KEY, PN: 10-0003-ND

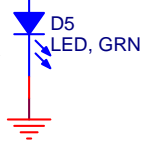


USB HOST CIRCUIT

DIFF FROM RX62N



USB POWER



DIP SWITCH 6 DEFINITION	
FOR USB FUNCTION:	SWITCH 1 & 4 ON / SWITCH 2 & 3 OFF
FOR USB HOST:	SWITCH 3 ON / SWITCH 1, 2, & 4 OFF
FOR USB OTG:	SWITCH 2 ON / SWITCH 1, 3, 4 OFF

USB FUNCTION CIRCUIT

[2] USB_VBUS <<

[2] USB_DPUPEA >>>
USED FOR OTG MODE ONLY.
WHEN IN FUNCTION OR HOST MODE,
SET AS INPUT

[2] USB_DM <<>>

[2] USB_DP <<>>

SIGNAL	USB MODE	DIRECTION	DESCRIPTION
USB_OVRCURA_DPUPEB	FUNCTION	OUTPUT	PULL-UP ENABLE
	HOST	INPUT	OVERCURRENT INDICATOR

[2] USB_DPRPD <<<
[2] USB_DRPD <<<

FOR USB FUNCTION - THESE SIGNALS MUST BE SET INPUT ONLY BY THE SW

FOR USB HOST - THESE SIGNALS MUST BE SET TO OUTPUT, LOW ALL
THE TIME BY THE SW

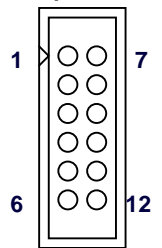
FOR USB OTG - THESE SIGNALS WILL BE UTILIZED UNDER SOFTWARE
CONTROL ACCORDING TO THE USB-ID SIGNAL

USB CIRCUITRY

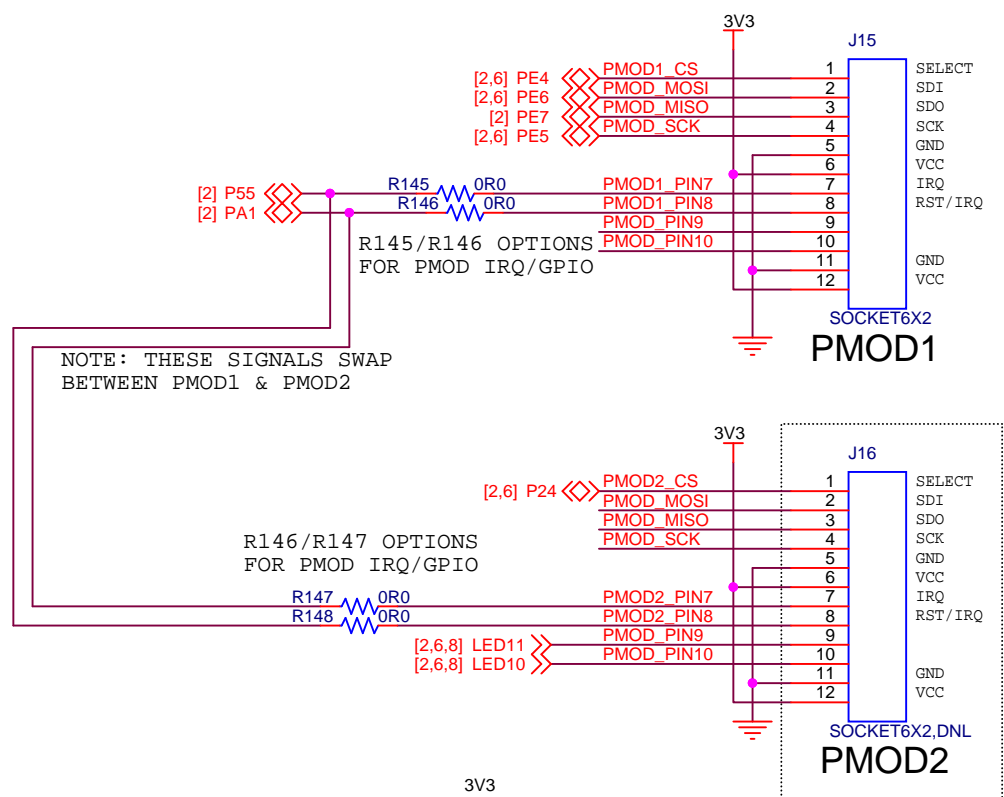
RENESAS

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RX63N RDK		
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Top View



PMOD CONNECTORS

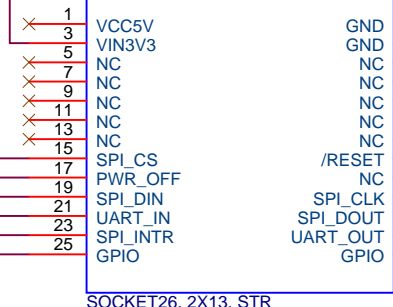


NOTE: THESE SIGNALS SWAP BETWEEN PMOD1 & PMOD2

R146/R147 OPTIONS FOR PMOD IRQ/GPIO

[2,6] P24 <<> PMOD2_CS
PMOD2_MOSI
PMOD2_MISO
PMOD2_SCK

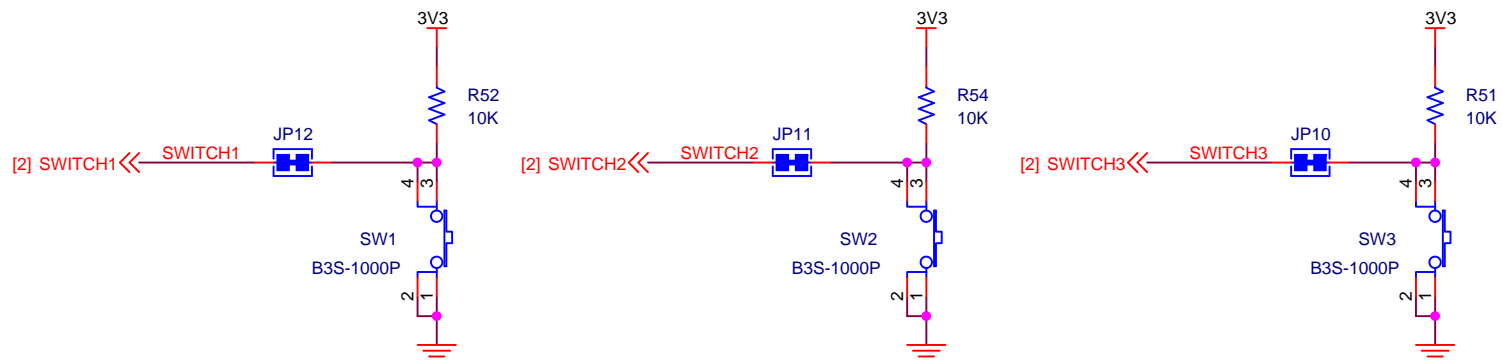
[2,6,8] LED11 >>> PMOD2_PIN7
[2,6,8] LED10 >>> PMOD2_PIN8
PMOD2_PIN9
PMOD2_PIN10



[2] WIFI-CS >>> [2,6] PE4 <<< [2,4,8] MOSI <<< [2,4] CTx0_TXD6 <<< [2] WIFI-IRQ <<< [2,6] PE5 <<<

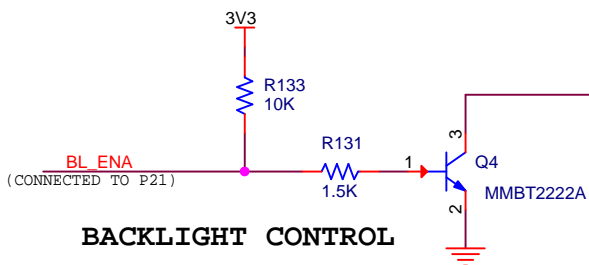
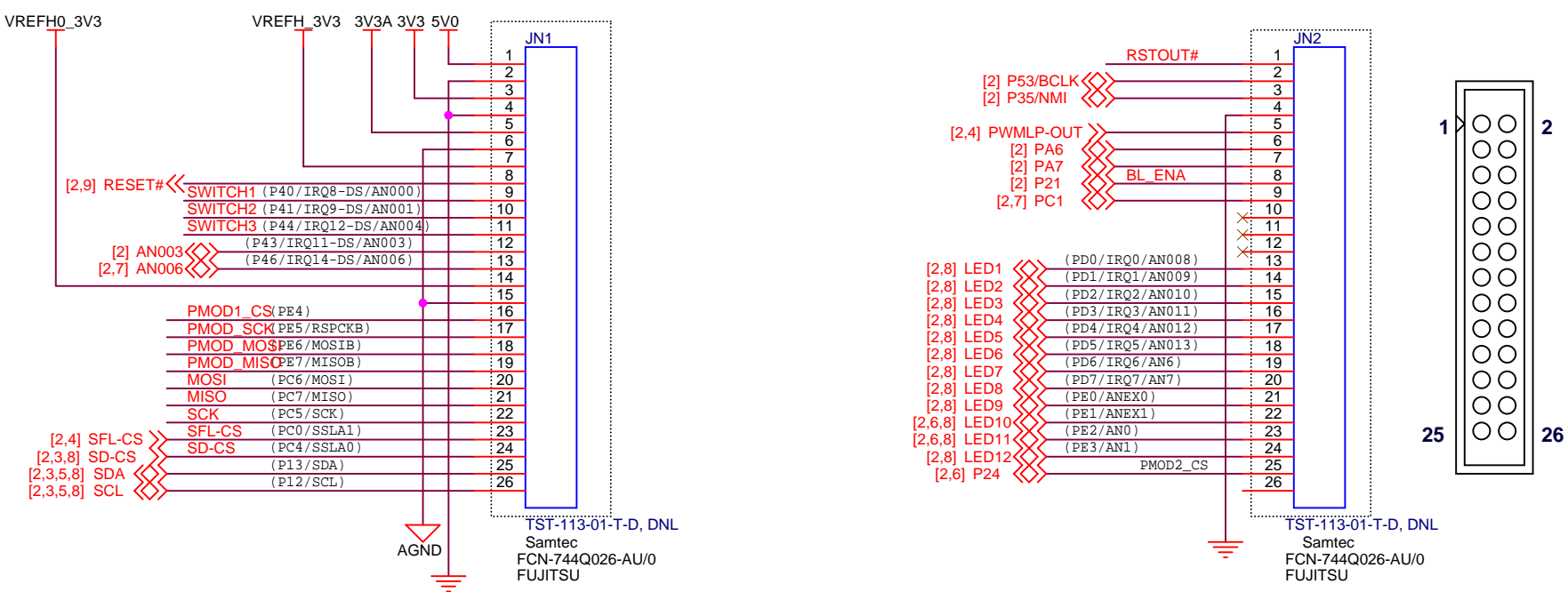
[2,6] PE6 >>> [2,4] CRx0_RXD6 <<< [2,4,8] MISO <<< [2,4,8] SCK >>> [3,6,8] RSTOUT# >>>

APPLICATION HEADER

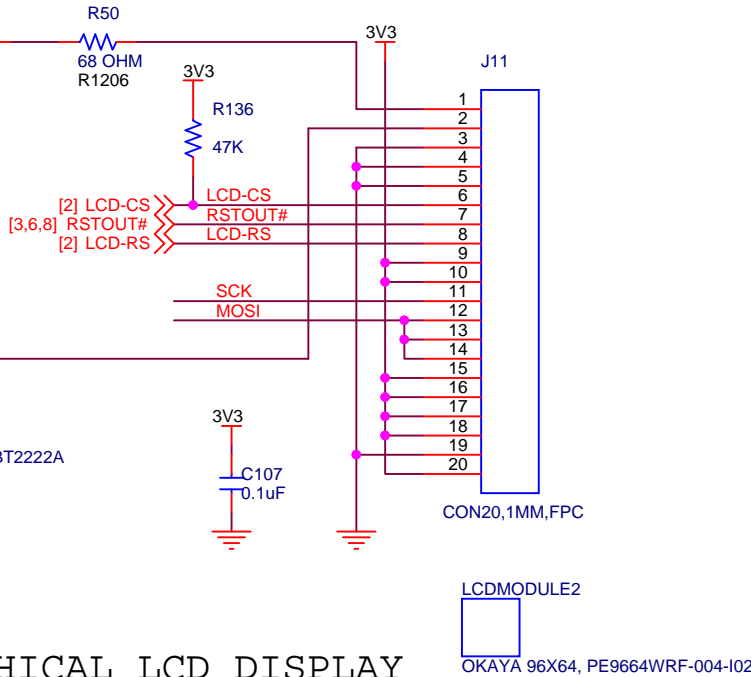


USER PUSHBUTTONS

RX63N Extension Connectors



BACKLIGHT CONTROL

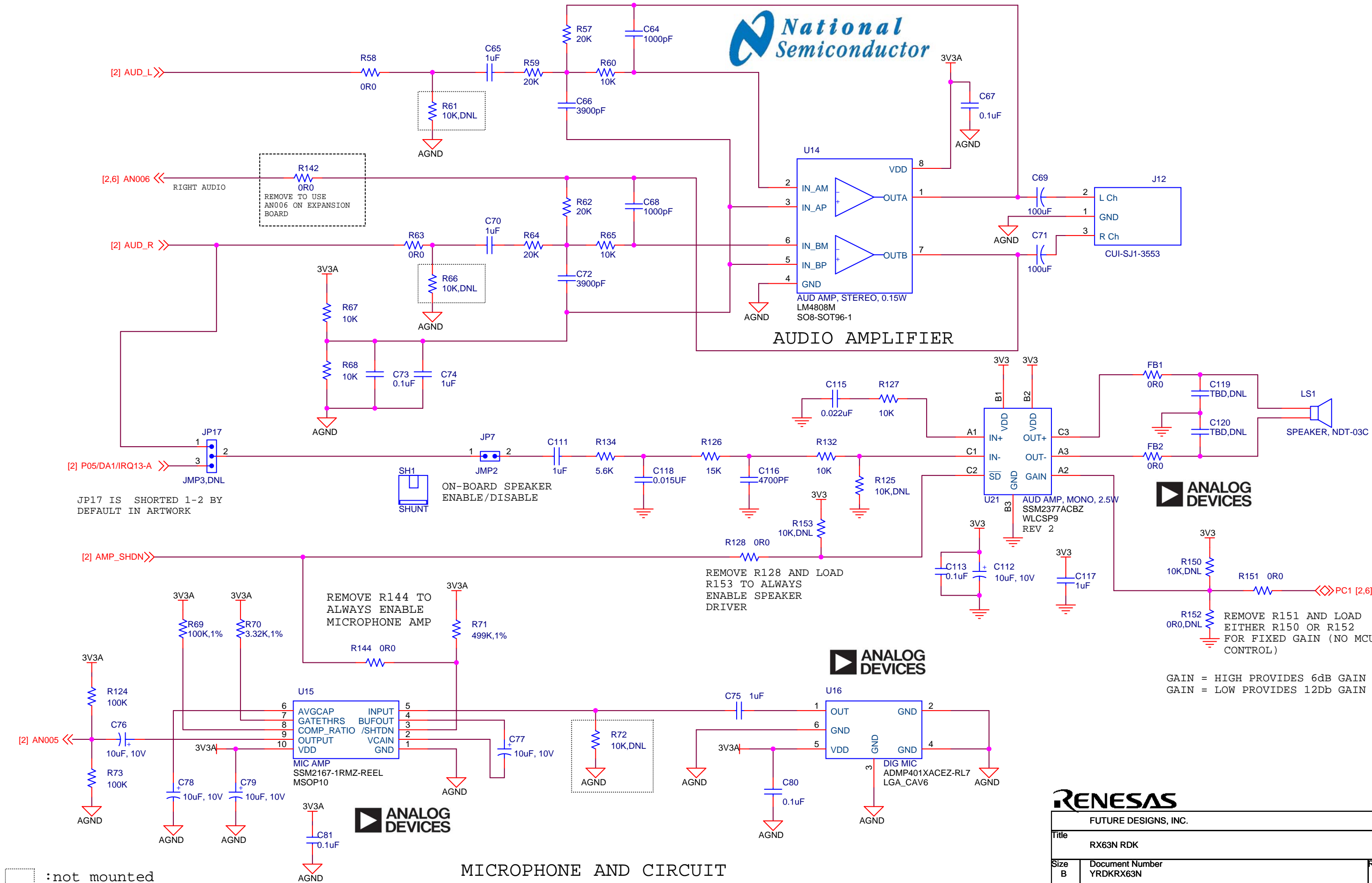


GRAPHICAL LCD DISPLAY

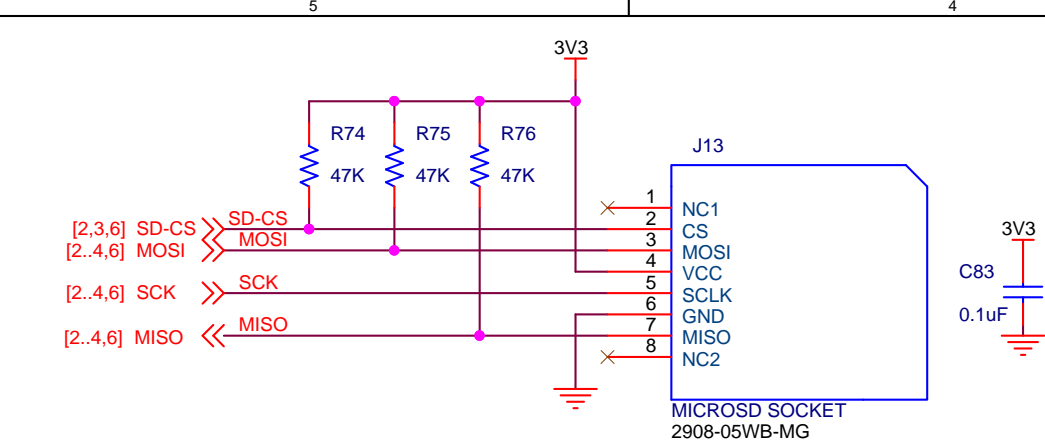


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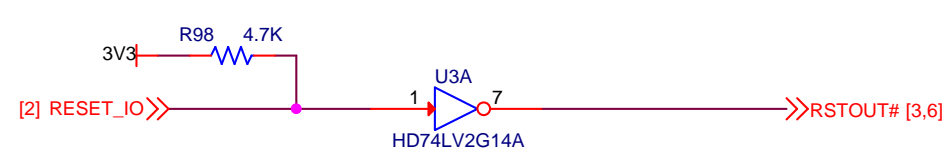
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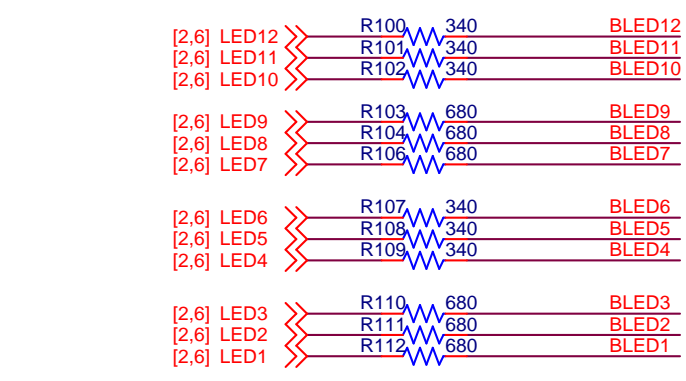
FUTURE DESIGNS, INC.		
Title		
RX63N RDK		
Size	Document Number	Rev
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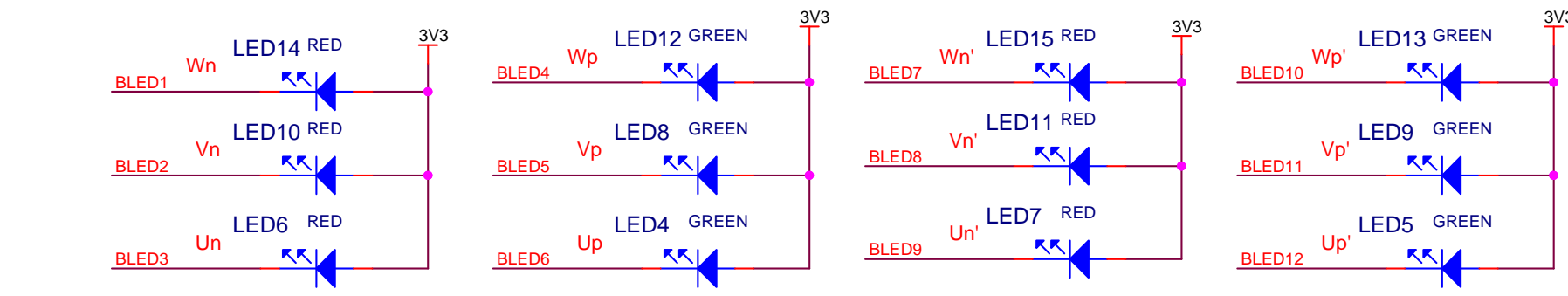
MICRO SD



PERIPHERAL RESET BUFFER

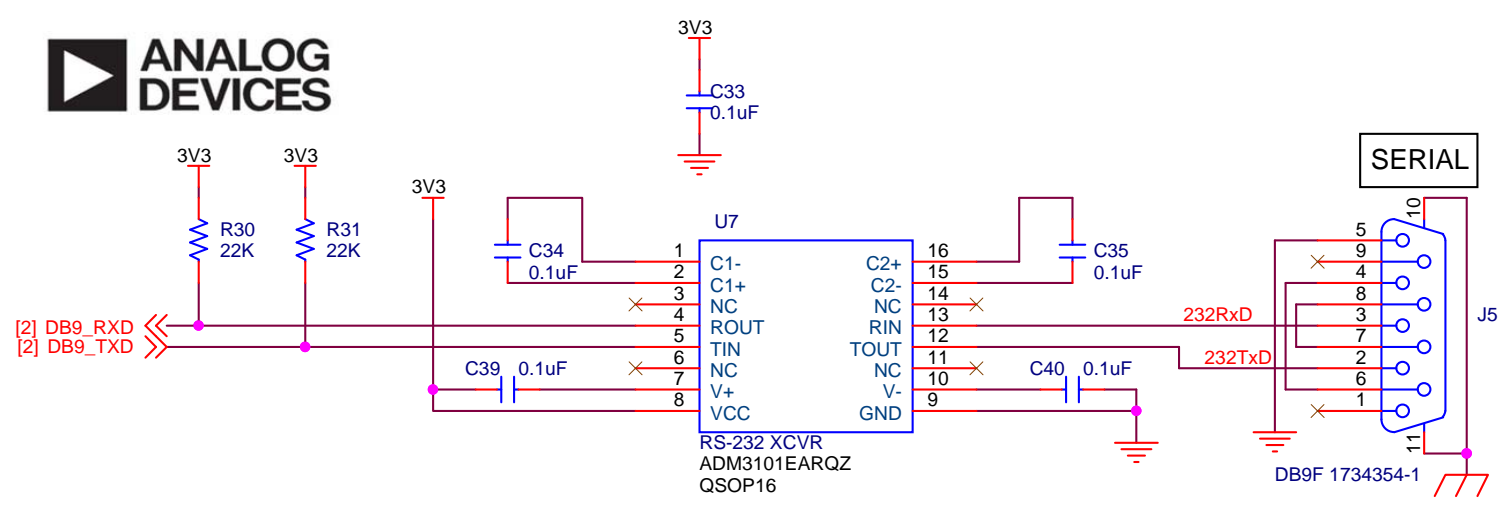


LED RESISTORS

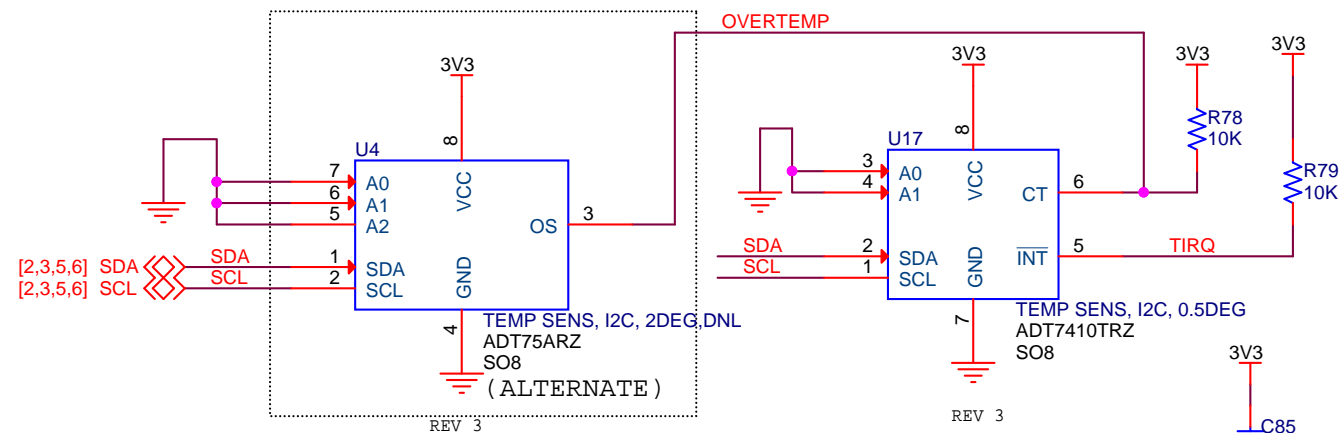


LED ARRAY

:not mounted

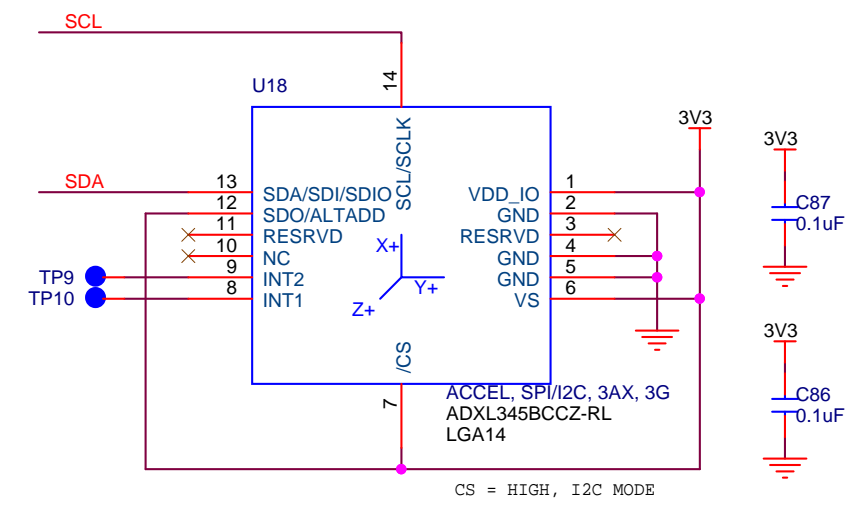


Serial Port Connector(COM)



TEMP SENSOR

I2C ADDR = 0x90
ADT75 = (1001aaar), aaa = A2:A1:A0, r=R/Wn
ADT7410 = (10010aar), aa = A1:A0, r=R/Wn

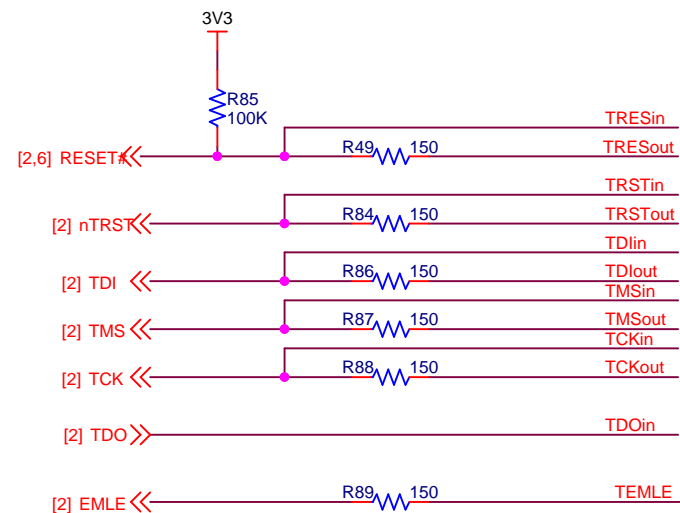
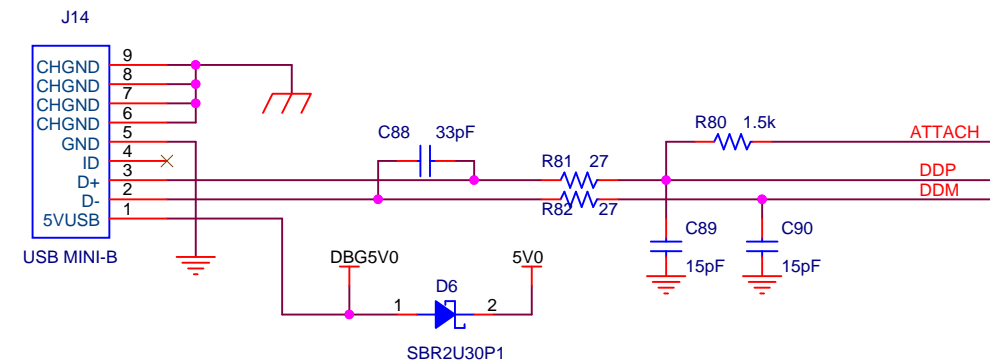


ACCELEROMETER

I2C ADDR = 0x3A
(0011101r), r=R/Wn



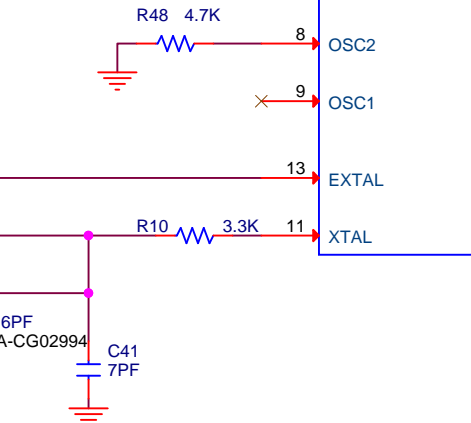
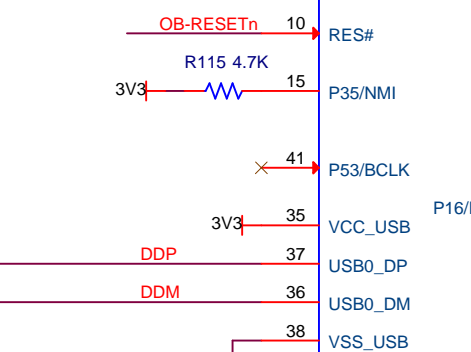
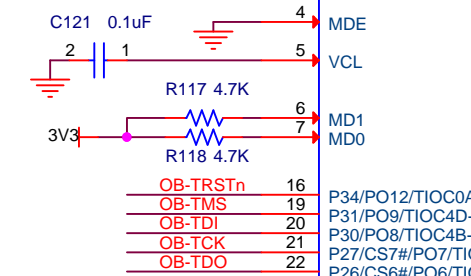
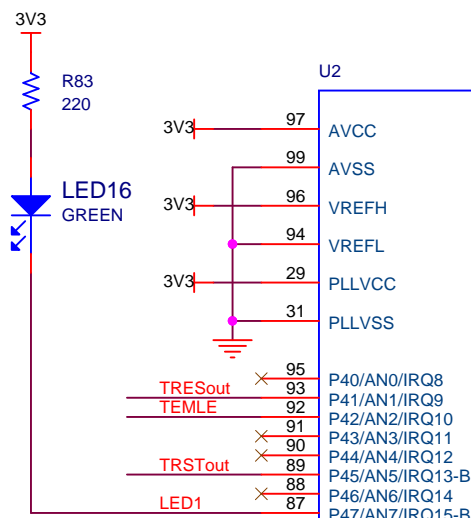
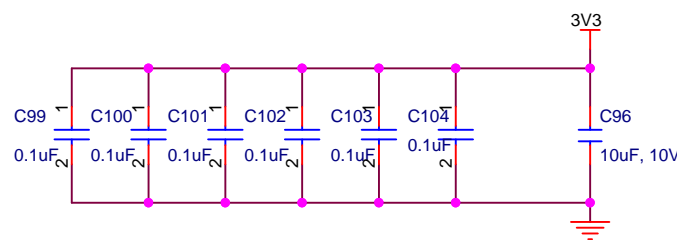
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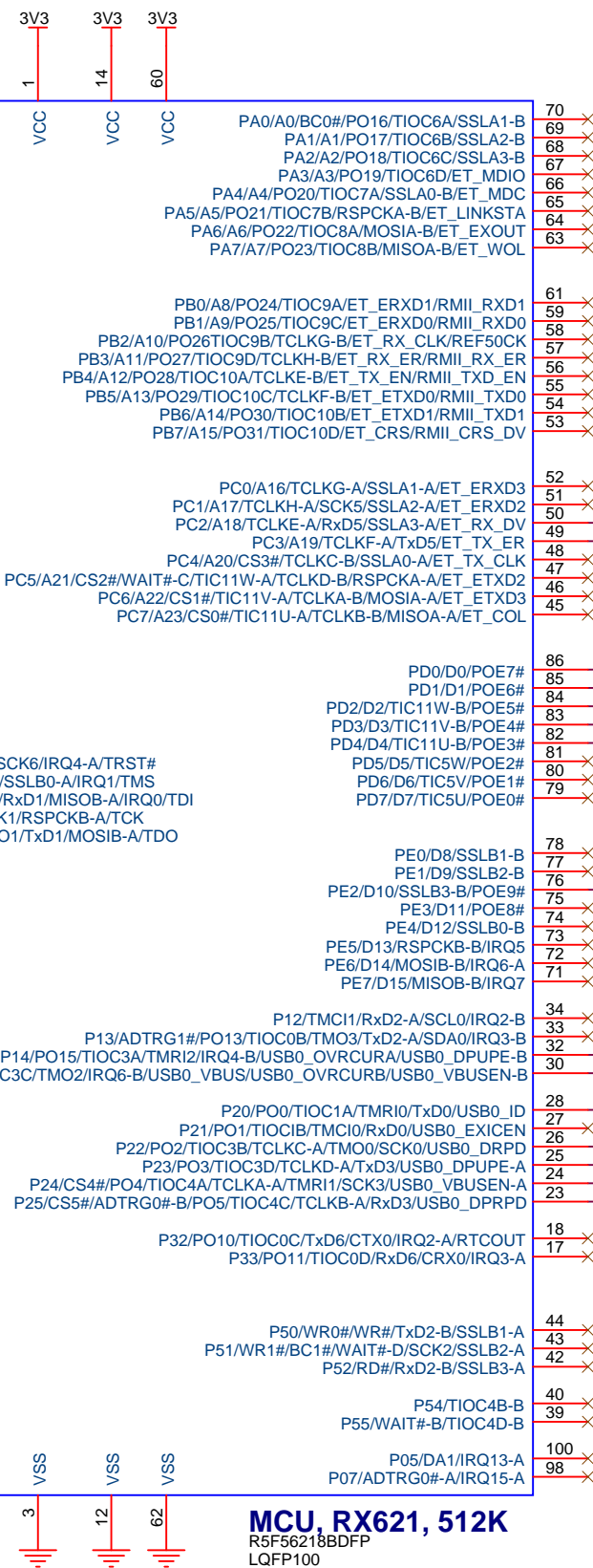
TO RX63N

TO JLINK-OB

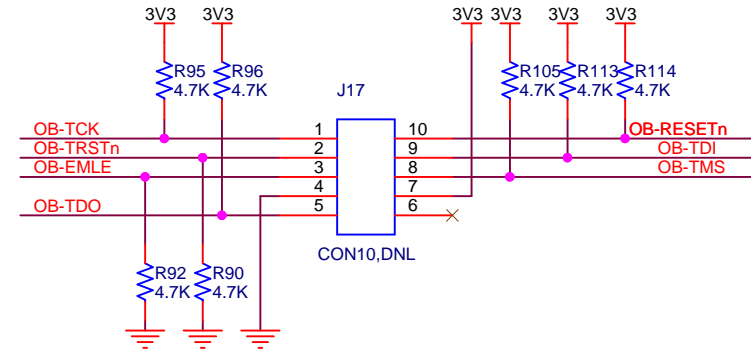
NOTES:
1) PROBABLY DO NOT NEED PULLUP ON RESET# SINCE THERE IS ONE ON THE MCU, PAGE 2



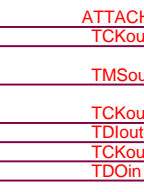
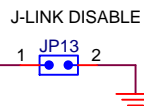
SEGGER J-LINK OB DEBUGGER FOR RX



MCU, RX621, 512K
R5F56218BDFP
LQFP100



JLINK-OB PROGRAMMING



RENESAS

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