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# TWR-KL43Z48M

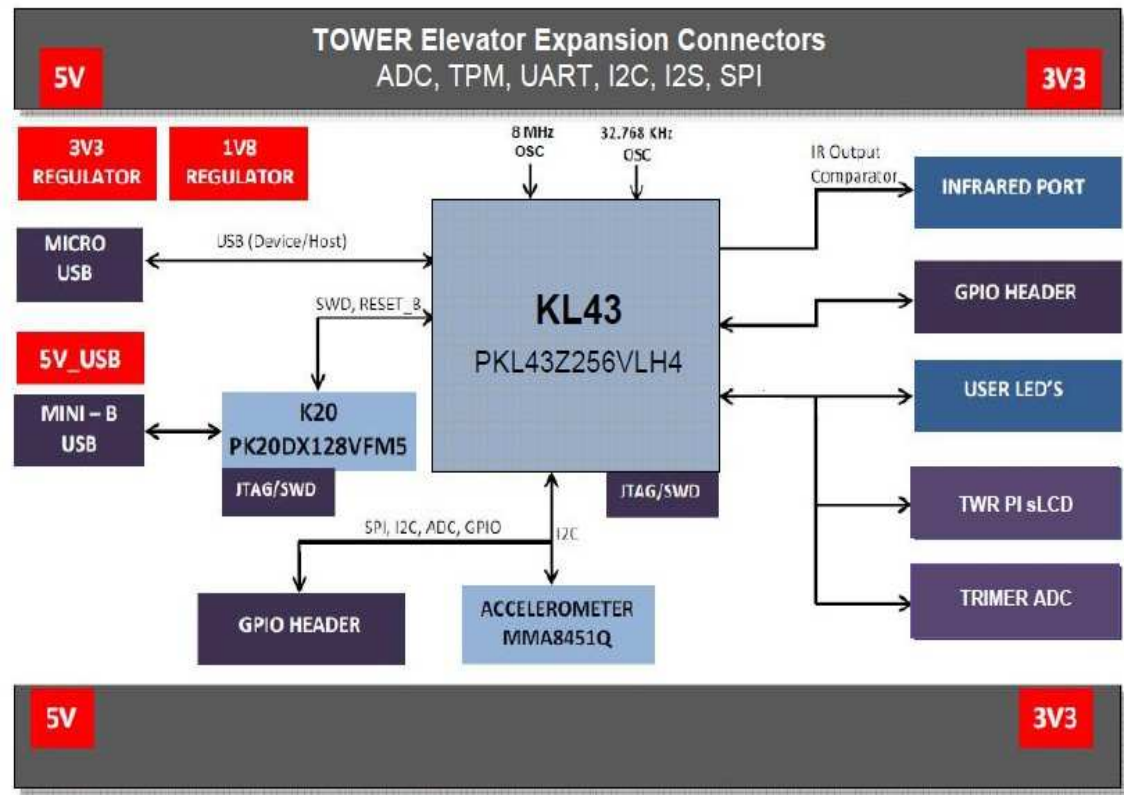
Revisions			
Rev	Description	Date	Approved
X1	Initial Release	18/09/2013	Rastislav Pavlanin
X2	Review Comments updated.	24/09/2013	Rastislav Pavlanin
X3	Elevator Connections updated. A070 Release.	27/09/2013	Rastislav Pavlanin
X4	U510-MCU+Subassembly. U511-344-01992 MCU Part Added as DNP.	04/10/2013	Rastislav Pavlanin
A	211-78997 USB MINI-B (J8) changed to 211-78722 USB_MICRO_AB A085 Release.	18/10/2013	Rastislav Pavlanin
AX1	Z10-75439(J38)1x2 Header added near to VREFH-U16.14 & U15.14 PTE29/KL43_USB_ID-connected R562 (470-75626) 4.7K resistor to GND	23/01/2014	Rastislav Pavlanin
B	A085 Release.	27/01/2014	Rastislav Pavlanin
C	U16(750-77479)MCUSubassembly removed. A085 Release.	07/04/2014	Rastislav Pavlanin

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ICAP Classification: FCP: _____ FBO: X PUB: _____			
Designer: Sandeep Kumar(LNT)	Drawing Title: <b>TWR-KL43Z48M</b>		
Drawn by: Sandeep Kumar(LNT)	Page Title: <b>Table of Contents/Revisions</b>		
Approved: Rastislav Pavlanin	Size C	Document Number SCH-28104 PDF: SPF-28104	Rev C
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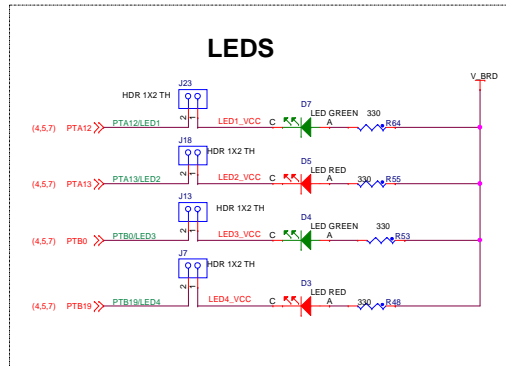
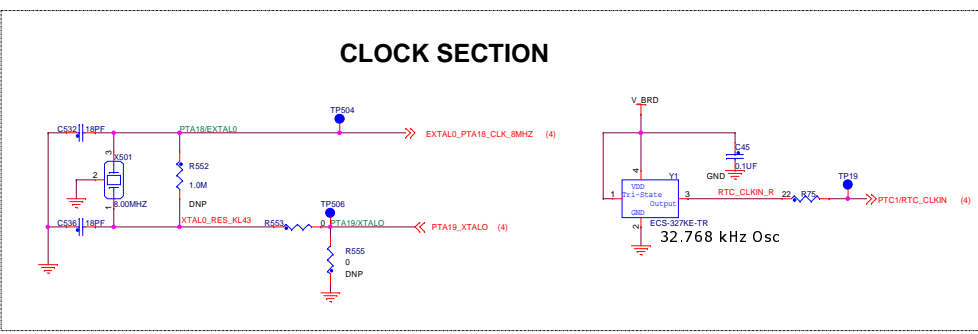
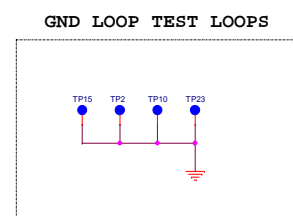
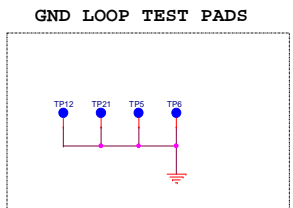
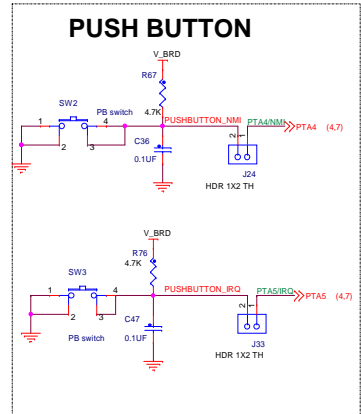
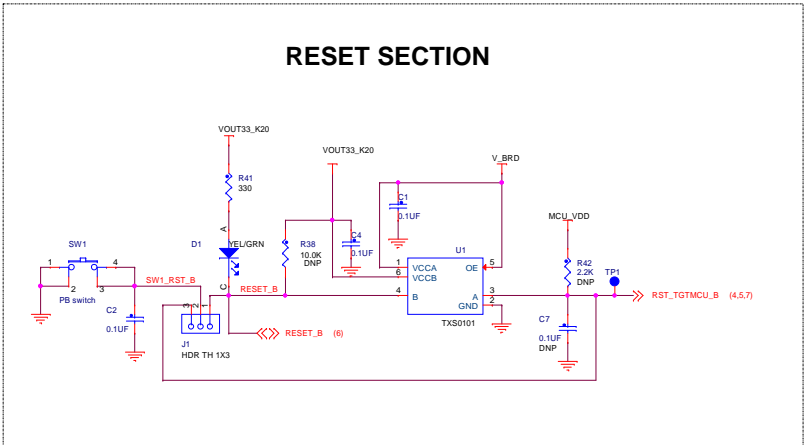
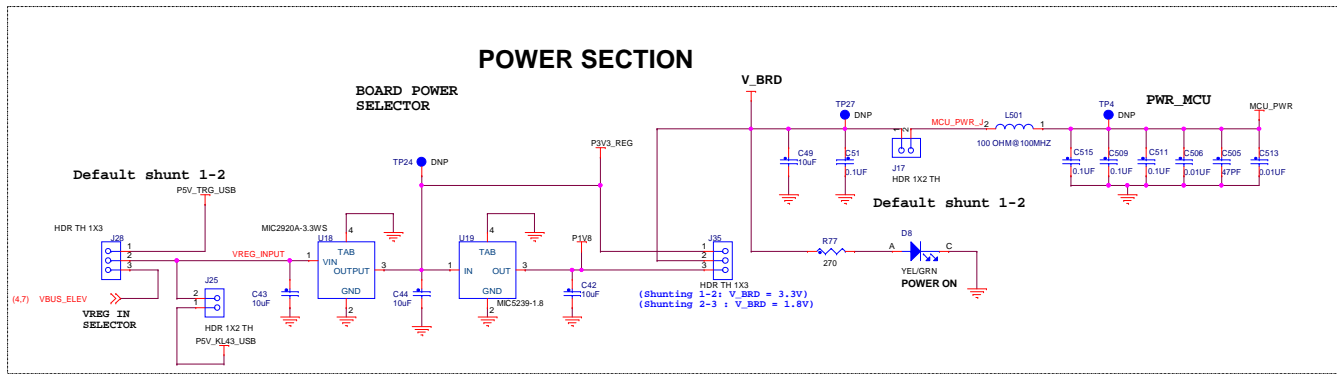
**CAUTION: It is not recommended to used TWRPI analog, TWRPI1, SEGMENT LCD connector, GPIO HDR and ELEV functionality simultaneously. This is required to avoid shortcuts, malfunction, or even in some cases damage elements on or out of the board.**

**Power & Ground Nets**

NET	VOLTAGE	DESCRIPTION
P5V_USB	5V	Primary input power. Filtered from USB connector. Input to USB power switch.
P5V_TRG_USB	5V	Output of USB power switch controlled by the VTRG_EN signal from the JM60 MCU. Provides input to regulator.
P3V3_REG	3.3V	Output of regulator U18 or from the Elevator connector
P1V8	1.8V	Output of regulator U19
V_BRD	3.3V or 1.8V	MCU & Interface circuit input power
VDDA	3.3V	VDDA power for MCU and analog circuits. Filtered from MCU_PWR.
VREFH	3.3V	Upper reference voltage for ADC on the MCU. Filtered from VDDA.
VREFL	0V	Lower reference voltage for ADC on the MCU. Filtered from VSSA.
VSSA	0V	VSSA power for MCU and analog circuits. Filtered from GND.
GND	0V	Digital Ground.



Freescale Device  
 External Connector  
 Interface Circuits  
 Power

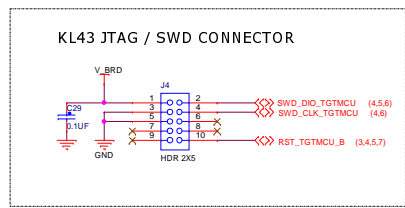
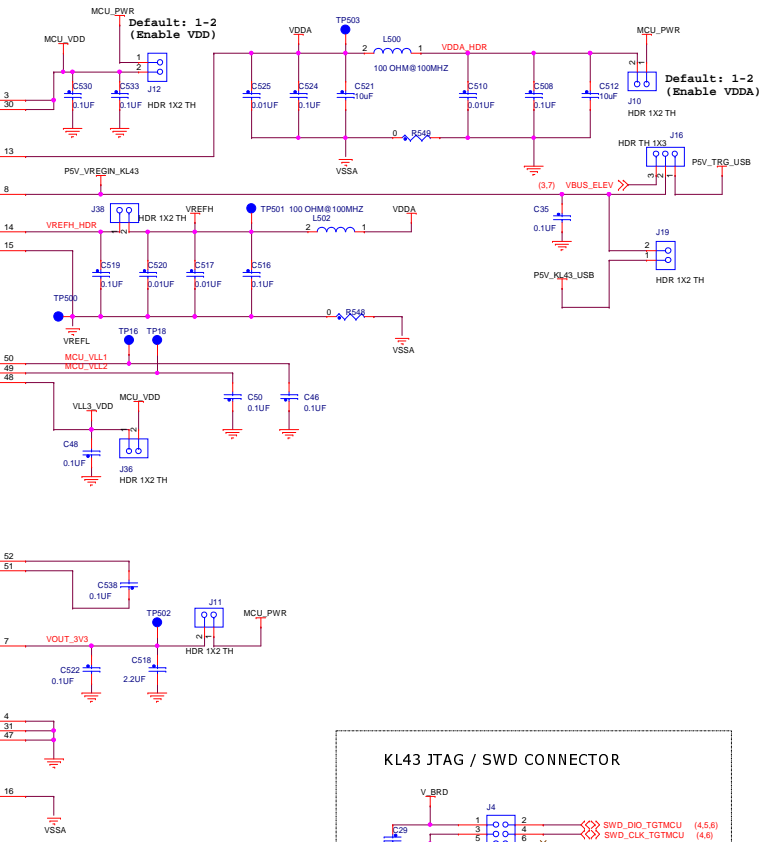
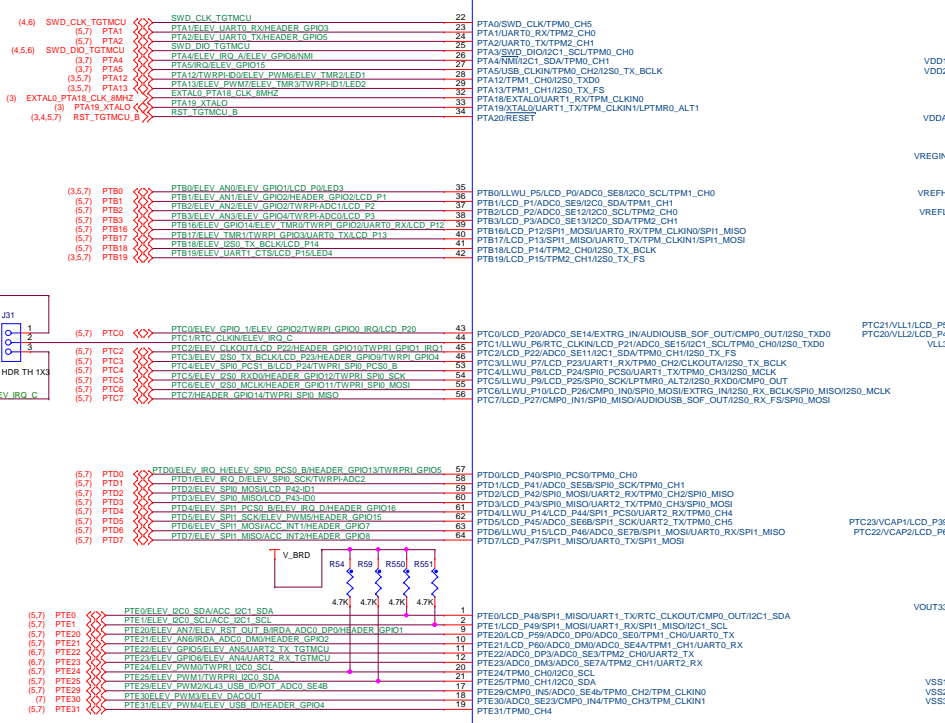


ICAP Classification:	FCP: _____	FIG: X	PUR: _____
Drawing Title:	<b>TWR-KL43Z48M</b>		
Page Title:	<b>POWER, RESET &amp; CLOCK SECTION</b>		
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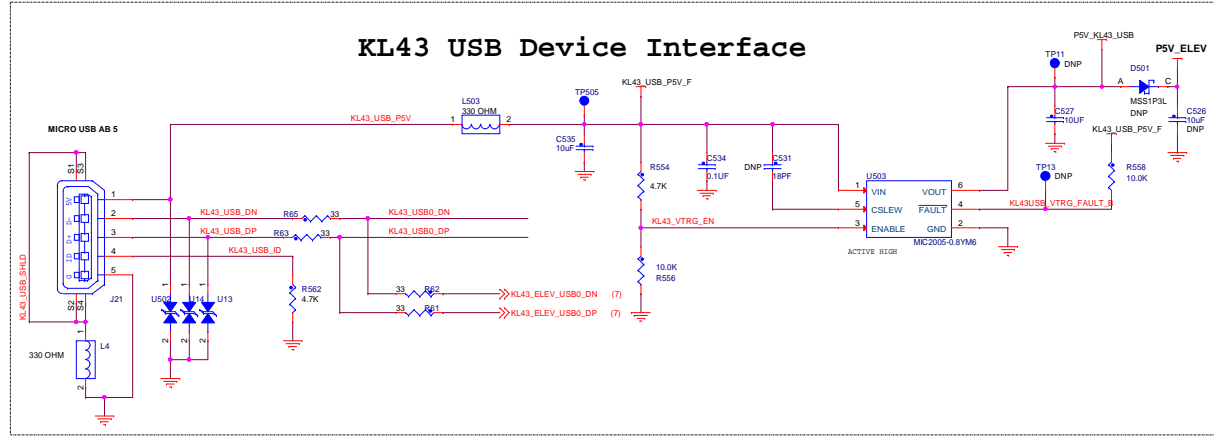


# KL43 - 64 LQFP

U15-MCU PKL43Z256VLH4 (64LQFP)



## KL43 USB Device Interface



**freescale**

ICAP Classification: FCP: \_\_\_\_\_ FILE: X PUR: \_\_\_\_\_

Drawing Title: **TWR-KL43Z48M**

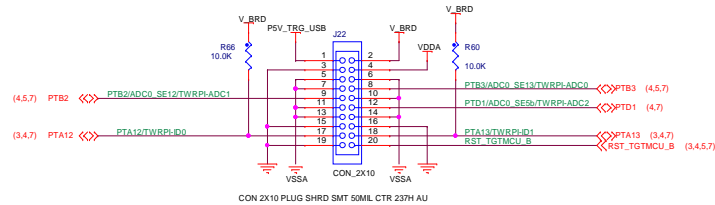
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Size C Document Number SCH-28104 PDF: SPP-28104 Rev C

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**CAUTION: It is not recommended to use TWRPI analog, TWRPI1, SEGMENT LCD connector, GPIO HDR and ELEVE functionality simultaneously. This is required to avoid shortcuts, malfunction, or even in some cases damage elements on or out of the board.**

### TWRPI Analog Connector



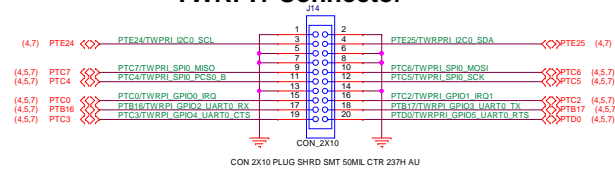
### GENERAL PURPOSE TWRPI 1

Note: The TWRPI connectors are powered by V\_BRD which may be 1.8V or 3.3V.

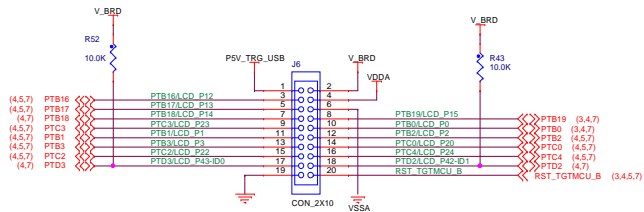
Not all TWRPI boards will work at 1.8V.

Check that the TWRPI board will work at 1.8V before using it when this board is set for 1.8V.

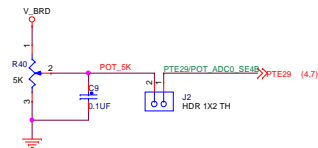
### TWRPI1 Connector



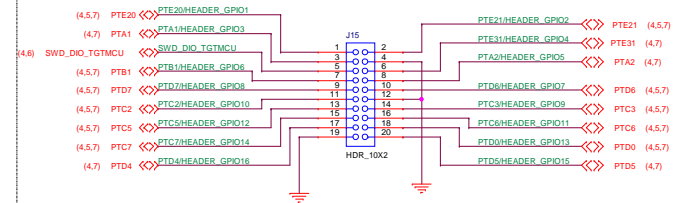
### SEGMENT LCD Connector



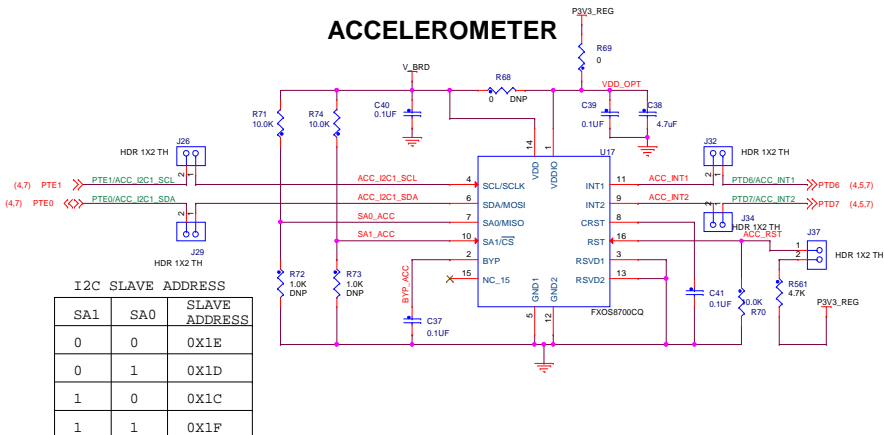
### POTENTIOMETER



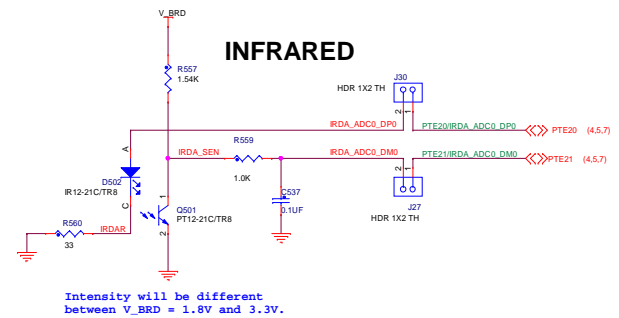
### GPIO HDR



### ACCELEROMETER

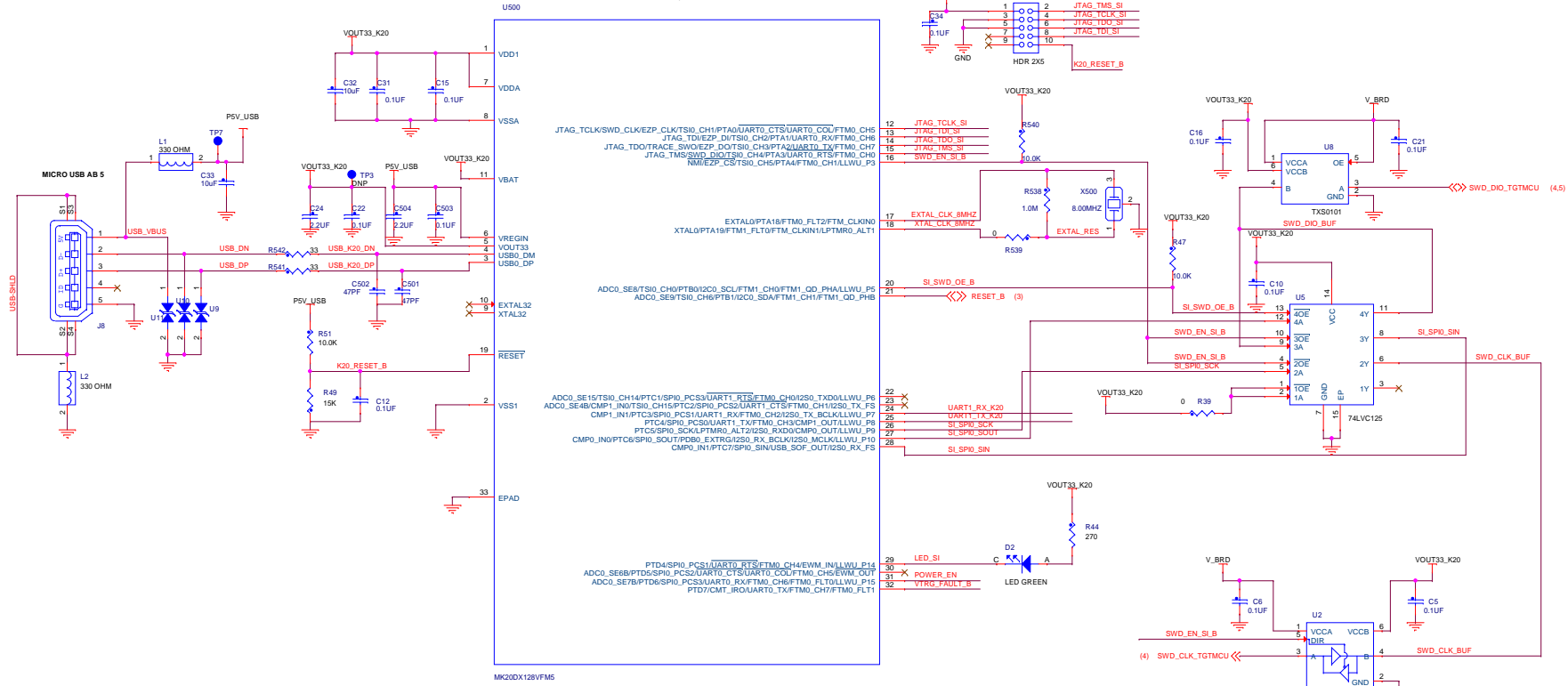


### INFRARED

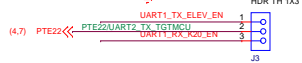
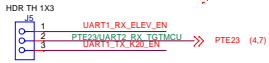
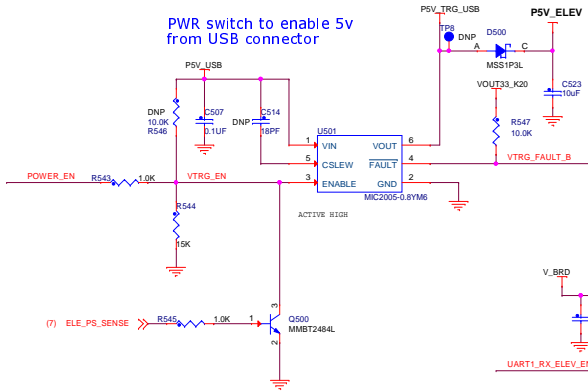


### K20 - 32QFN

### K20 USB-SERIAL INTERFACE JTAG CONNECTOR



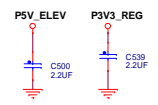
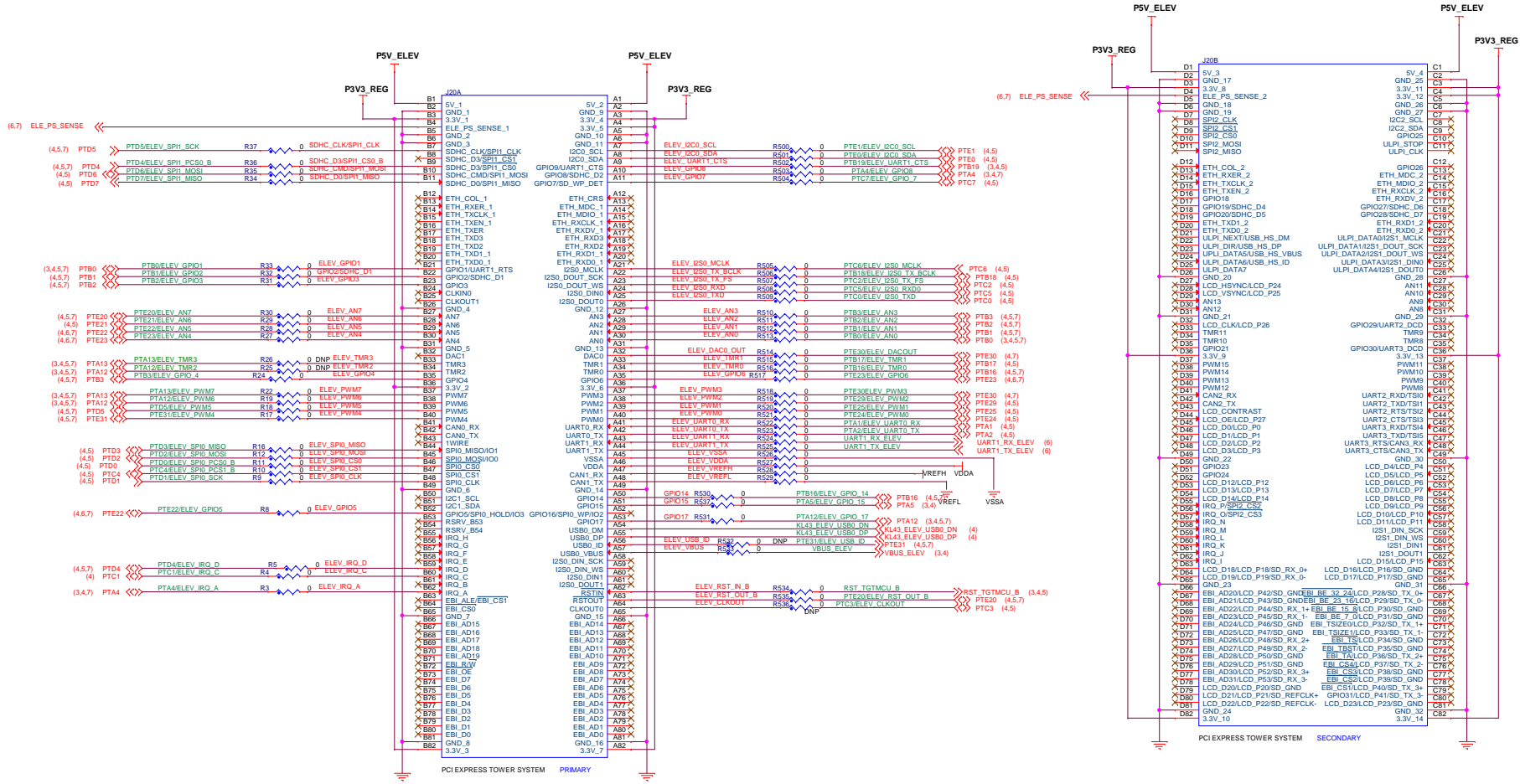
PWR switch to enable 5v from USB connector



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Drawing Title:	<b>TWR-KL43Z48M</b>
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# ELEVATOR CONNECTOR



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