


**Table of Contents**

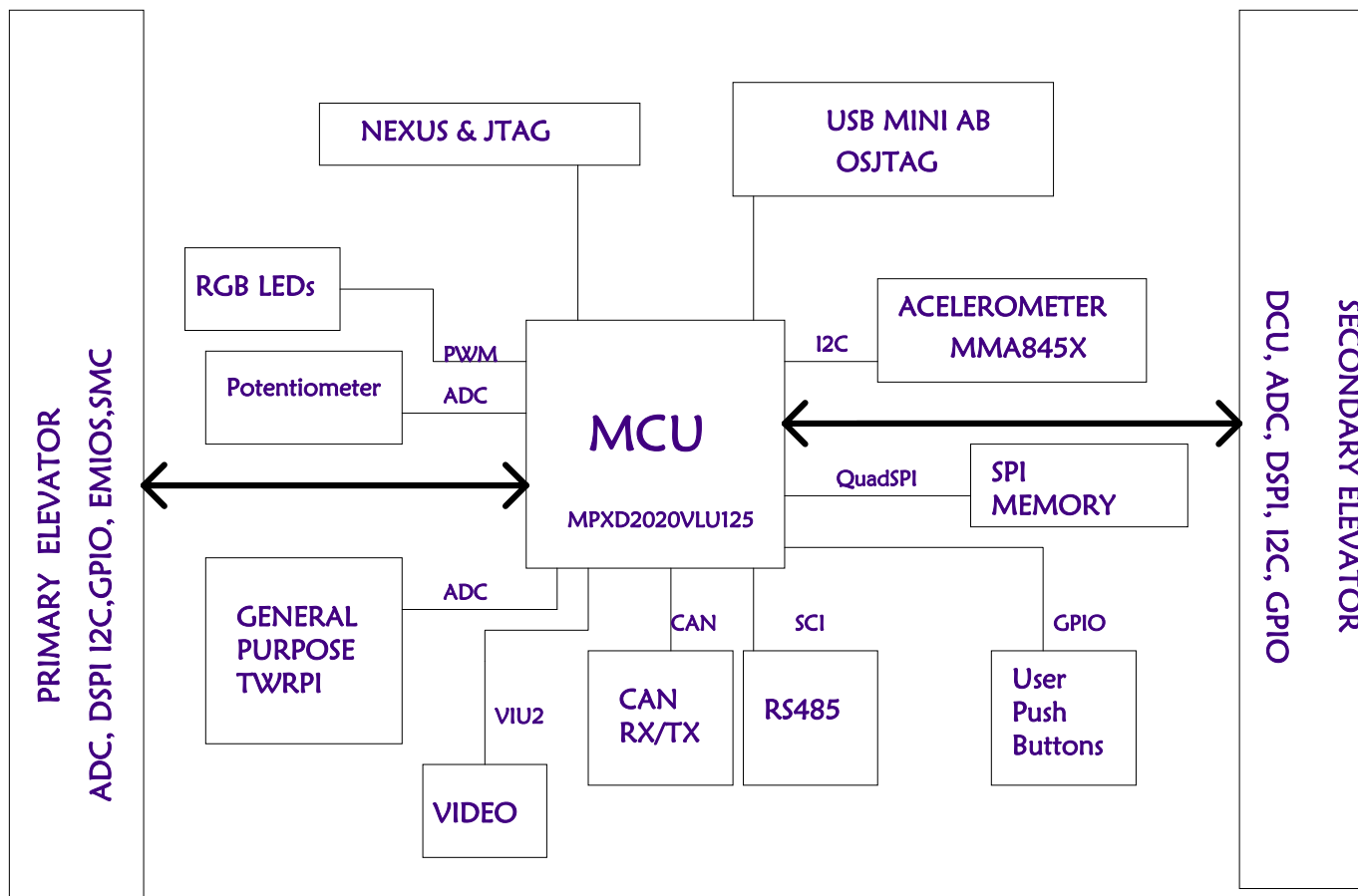
1	TITLE
2	BLOCK DIAGRAM
3	MCU
4	CAN / SCI / SPI_MEM
5	ADC/TWRPI
6	USB/OSJTAG
7	ELEVATORS
8	VIDEO

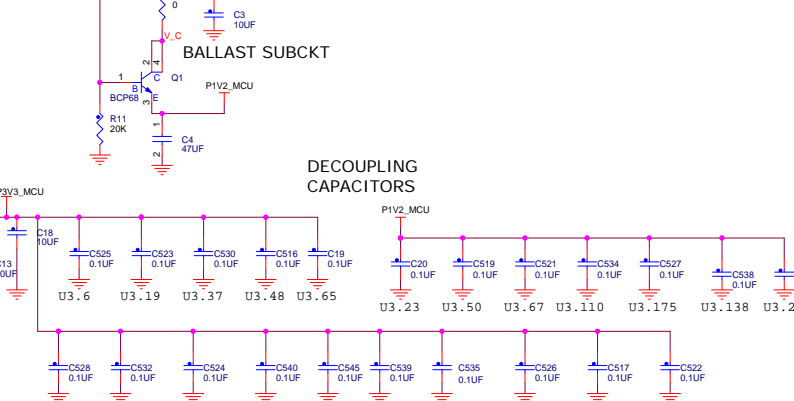
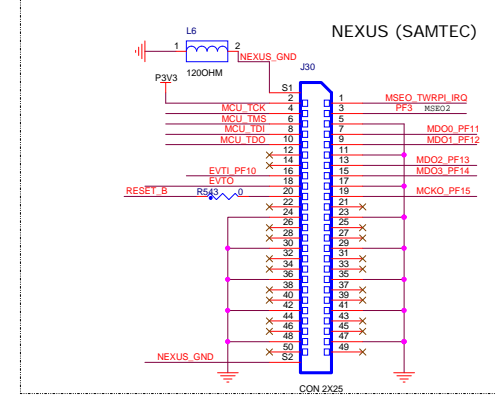
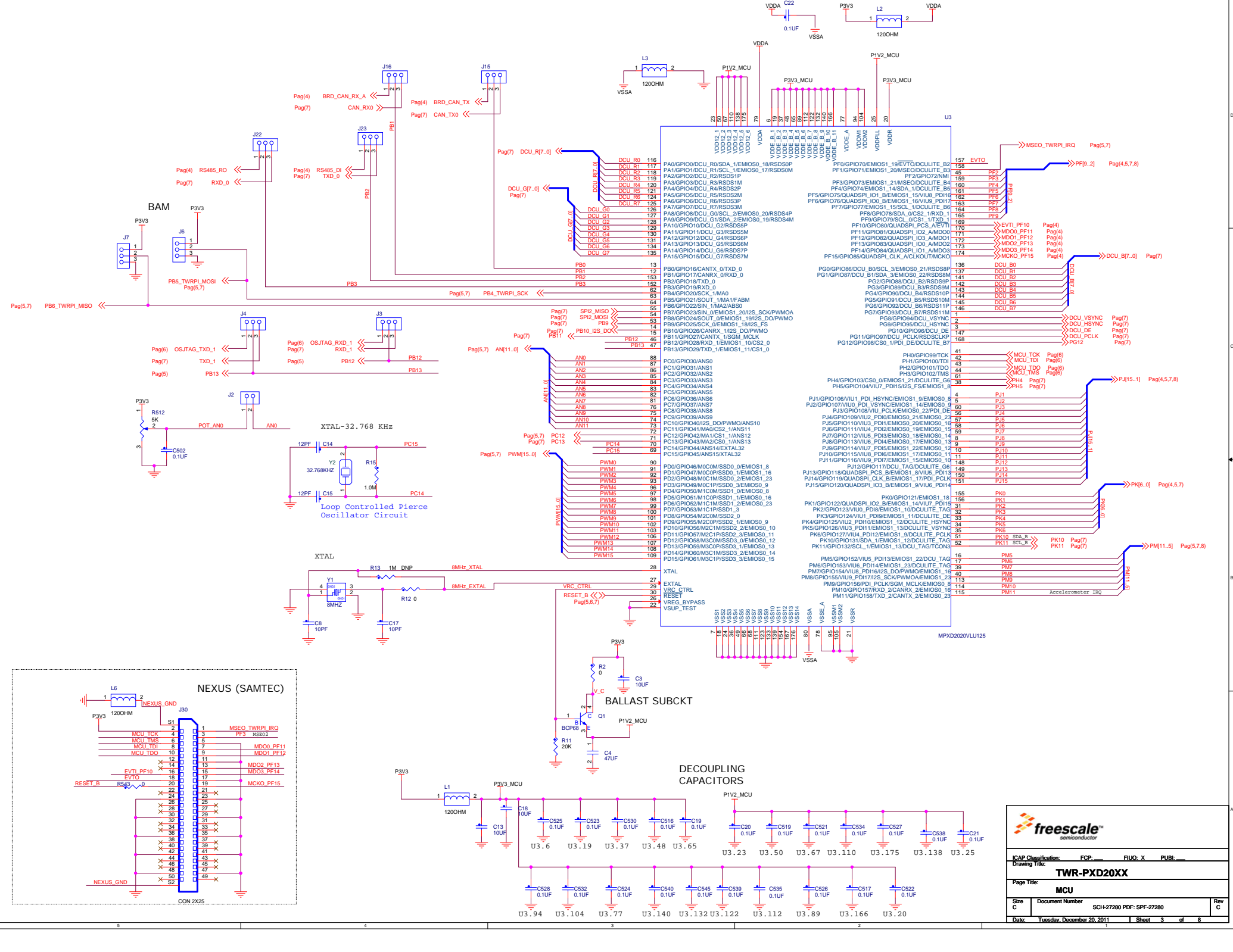
**Revisions**

Rev	Description	Date	Approved
X1	Initial Draft	25/08/11	JR
X2	LED D3 change input signals to: PWM8 PWM10 PWM12 Add 0 ohm resistor between PB12 and TWRPI (populated) Add ohm resistor between PB13 and TWRPI (populated)move MSEO_TWRPI_IRQ to pin 15 instead of 16 PH5 is not required on TWRPI, the 2nd IRQ signal is NC  PK0 mapped to GPIO5 PM10 is removed GPIO5 connection  Connect LED's to PJ12 and PF7 connect PF3 and PF4 to RS485 HW flow control pins, use isolation jumpers RS-485 transceiver PN changed to support 3.3v as voltage supply	25/08/11	JR
A	Release to Production	05/09/11	JR
A1	VIU pins reassignment	06/09/11	JR
A2	VIU pins 2nd reassignment	07/09/11	JR
B	Release to Production	09/09/11	JR
BX1	OSJTAG DM and DP lines swapped Change microcontroller part number to MPXD2020VLU125 Change SPI0 and SPI2 data(MISO & MOSI) lines Change R513 and R506 to 16 ohm instead of 16K ohm TWRPI connectors fixed Change PK6 MCU signal to GPIO25 (c9) on secondary elevator Add 4.7Kohm pull-up resistors on the I2C lines: I2C2_SCL (C7) and I2C2_SDA (C8) LCD lines re-assigned.	02/12/11	JR
C	Release to Production	19/12/11	JR

		<b>Microcontroller Solutions Group</b> 6501 William Cannon Drive West Austin, TX 78735-5598	
<small>This document contains information proprietary to Freescale Semiconductor and shall not be used for engineering design, procurement or manufacture in whole or in part without the express written permission of Freescale Semiconductor.</small>			
Designer: Dafne Sanchez		ICAP Classification: FCP: FUG: X PUB:	
Drawing Title: <b>TWR-PXD20XX</b>		Page Title: <b>TITLE PAGE</b>	
Drawn by: Dafne Sanchez		Size C Document Number SCH-27280 PDF: SPF-27280	
Approved: Jose Ruiz		Date: Tuesday, December 20, 2011 Sheet 1 of 8	

- Unless Otherwise Specified:  
 All resistors are in ohms, 5%, 1/8 Watt  
 All capacitors are in uF, 20%, 50V  
 All voltages are DC  
 All polarized capacitors are aluminum electrolytic
- Interrupted lines coded with the same letter or letter combinations are electrically connected.
- Device type number is for reference only. The number varies with the manufacturer.
- Special signal usage:  
 \_B Denotes - Active-Low Signal  
 <> or [] Denotes - Vectored Signals
- Interpret diagram in accordance with American National Standards Institute specifications, current revision, with the exception of logic block symbology.





**freescale**  
 semiconductor

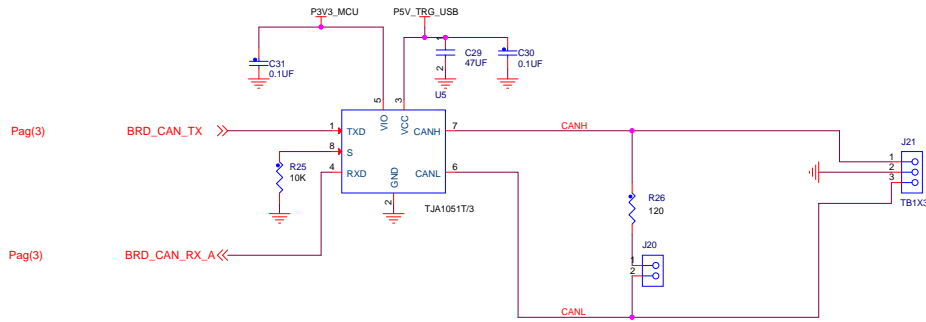
ICAP Classification: FCP: \_\_\_\_\_ FUC: X PUBL: \_\_\_\_\_  
 Drawing Title: **TWR-PXD20XX**

Page Title: **MCU**

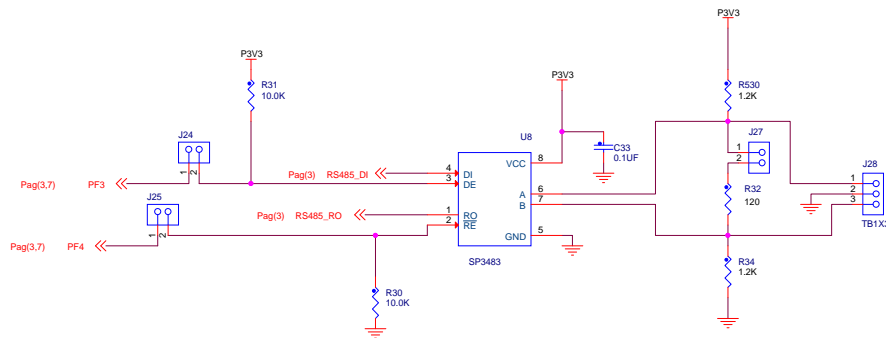
Size C Document Number SCH-27280 PDF: SPF-27280 Rev C

Date: Tuesday, December 20, 2011 Sheet 3 of 8

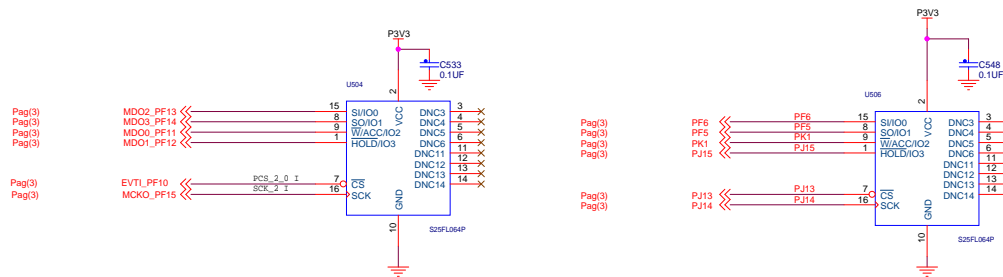
### NXP CAN Transceiver



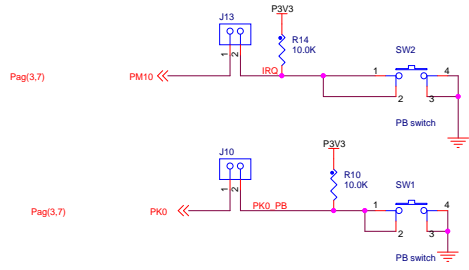
### RS-485 HALF DUPLEX TRANSCEIVER



### QSPI MEMORIES

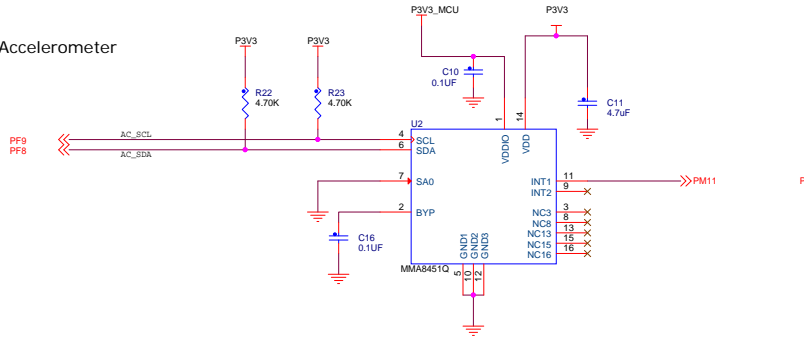


### User Push Buttons

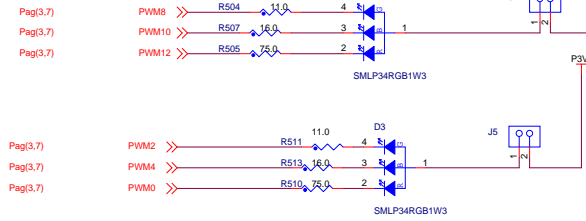


### MMA8451Q Accelerometer

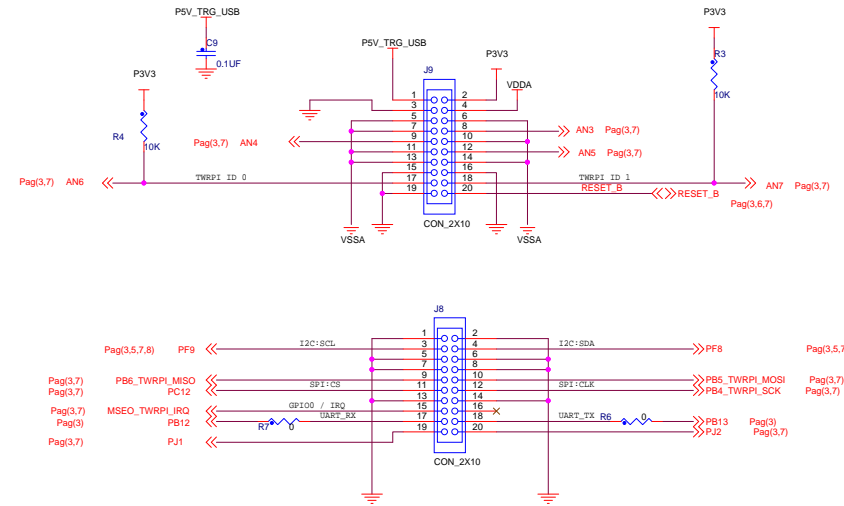
Pag(3.5,7,8)  
Pag(3.5,7,8)



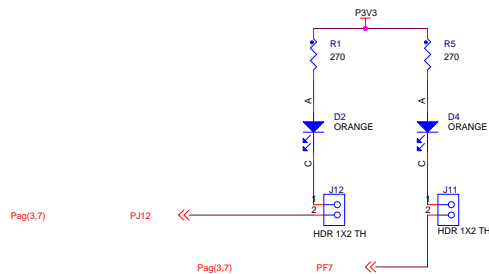
### RGB LED's



### General Purpose TWRPI Socket



### GPIO's ->LED



ICAP Classification: FCP: FIUC: X PUBI:

Drawing Title:

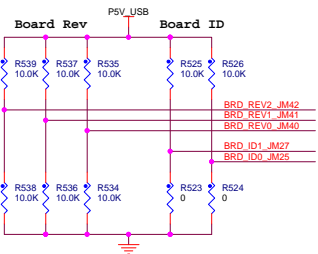
**TWR-PXD20XX**

Page Title:

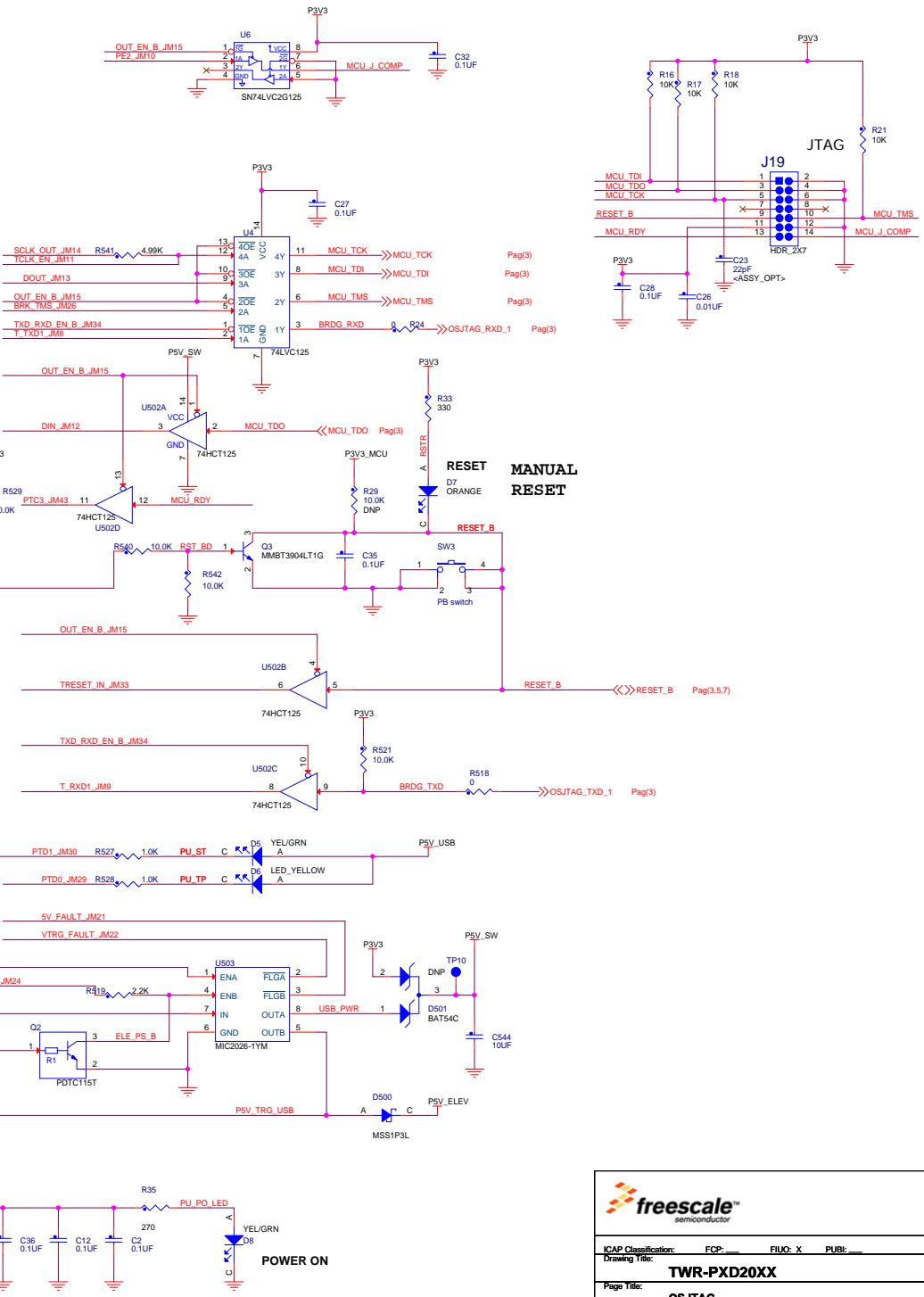
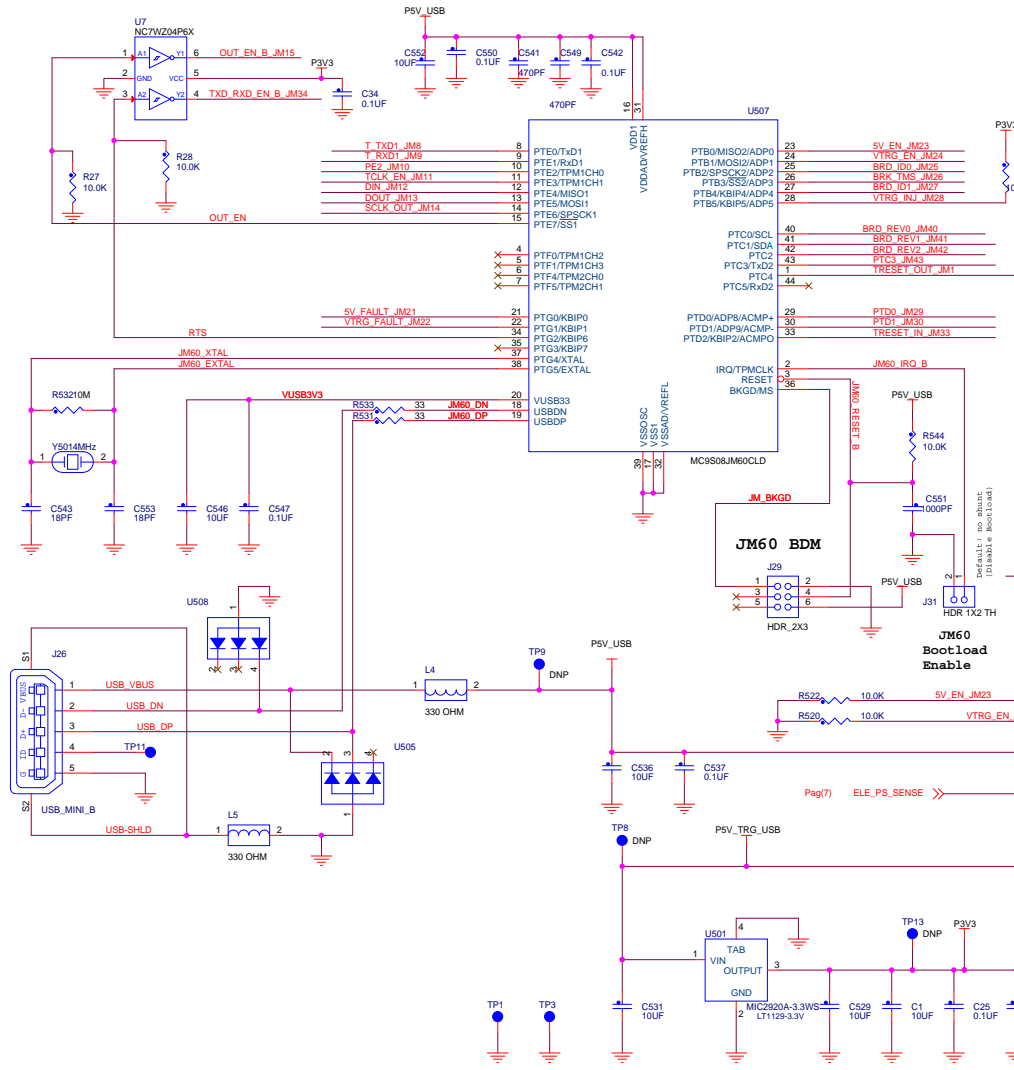
**ADC/TWRPI/GPIO**

Size Document Number SCH-27280 PDF: SPF-27280 Rev C

Date: Tuesday, December 20, 2011 Sheet 5 of 8



### On Board OSBDM/Serial Bridge



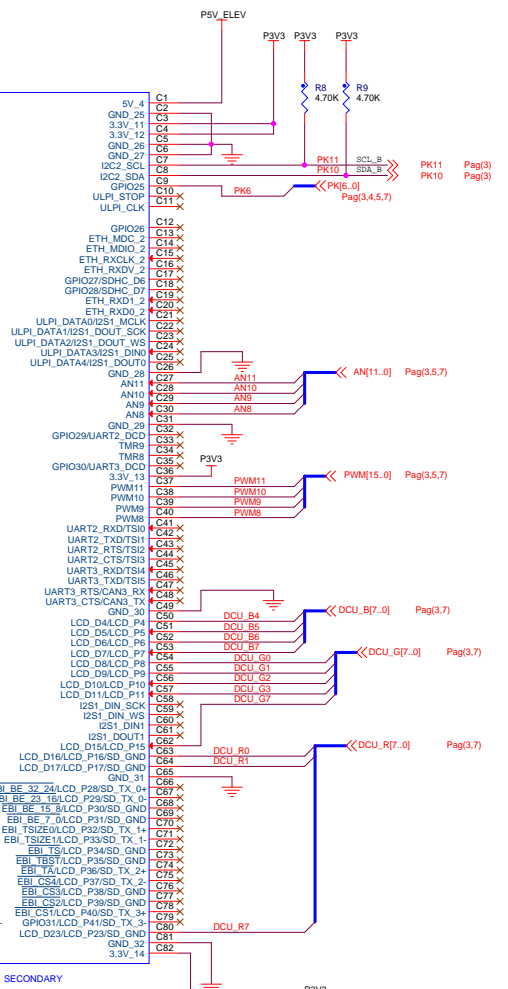
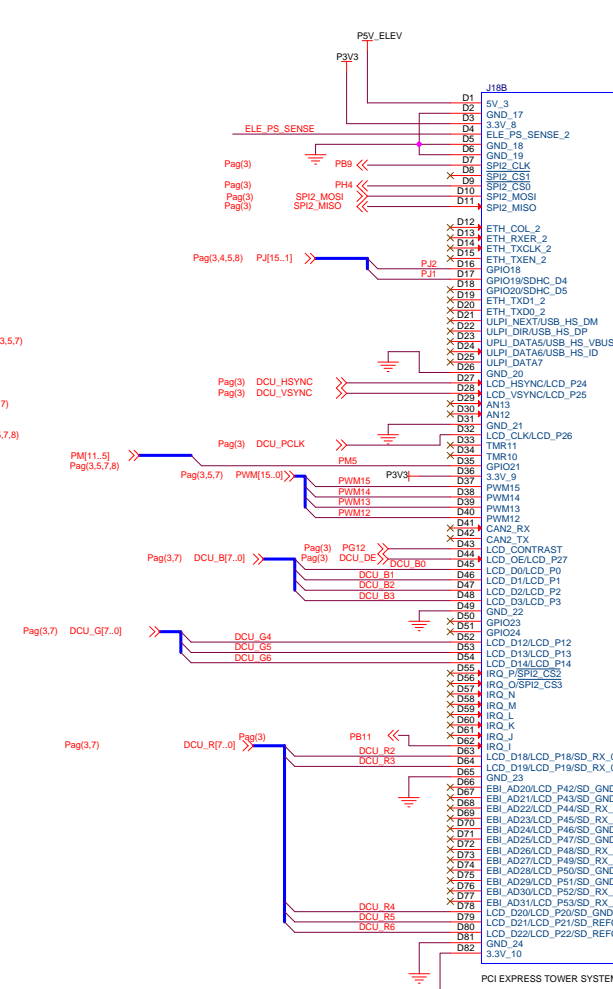
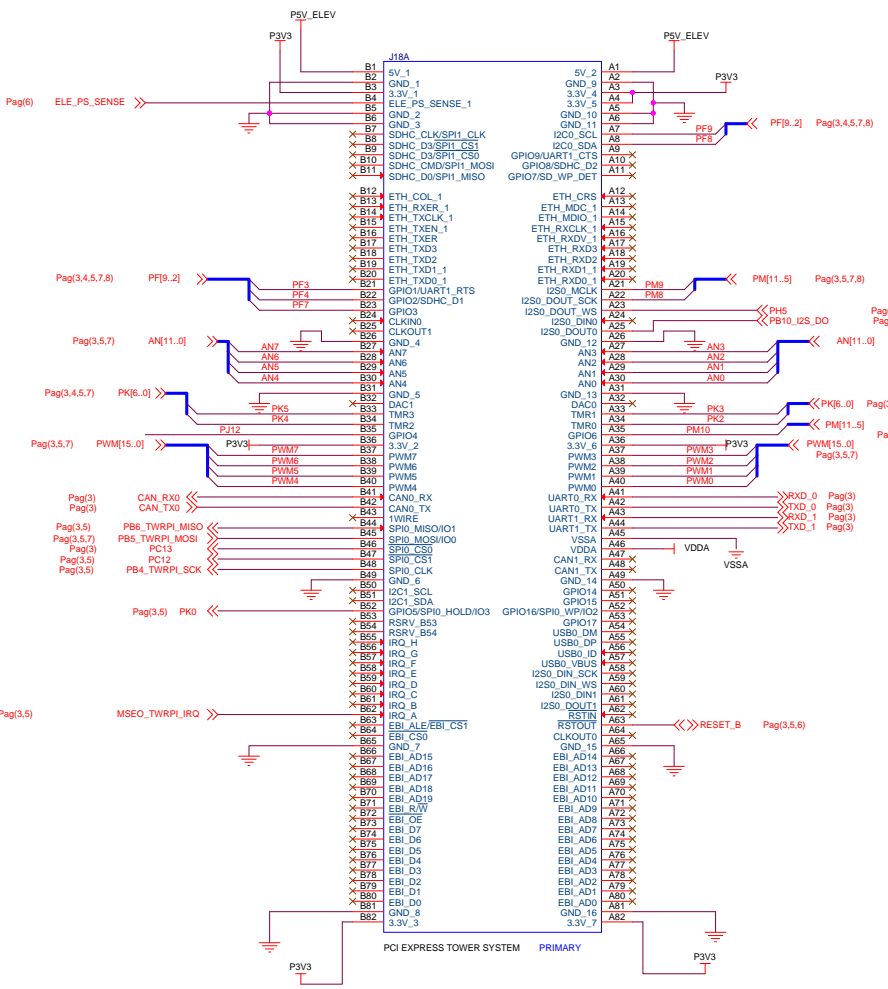
**freescale**  
semiconductor

ICAP Classification: FCP: \_\_\_\_\_ FIUC: X PUBL: \_\_\_\_\_  
Drawing Title: **TWR-PXD20XX**

Page Title: **OSJTAG**

Size C	Document Number SCH-27280 PDF: SPF-27280	Rev C
--------	--	-------

Date: Tuesday, December 20, 2011 Sheet 6 of 8



ICAP Classification: FCP: _____ FIUC: X PUBL: _____	
Drawing Title: <b>TWR-PXD20XX</b>	
Page Title: <b>ELEVATORS</b>	
Size C	Document Number SCH-27280 PDF: SPF-27280
Date: Tuesday, December 20, 2011	Sheet 7 of 8

