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1Revisions			
Rev	Description	Date	Approved
A	Initial Release	08/05/2015	

# FRDM-KW24D



**Wireless Connectivity Operation**  
6501 William Cannon Drive West  
Austin, TX 78735-8598

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ICAP Classification: FCP: X FIUQ: PUBI:

Designer: A. Quiroz	Drawing Title: <b>FRDM-KW24D</b>		
Drawn by: R. Gruich	Page Title: <b>TITLE PAGE</b>		
Approved: A. Quiroz	Size C	Document Number <b>SCH-28684</b>	Rev A
Date: Wednesday, August 05, 2015		Sheet 1 of 7	


1. 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

2. Interrupted lines coded with the same letter or letter combinations are electrically connected.

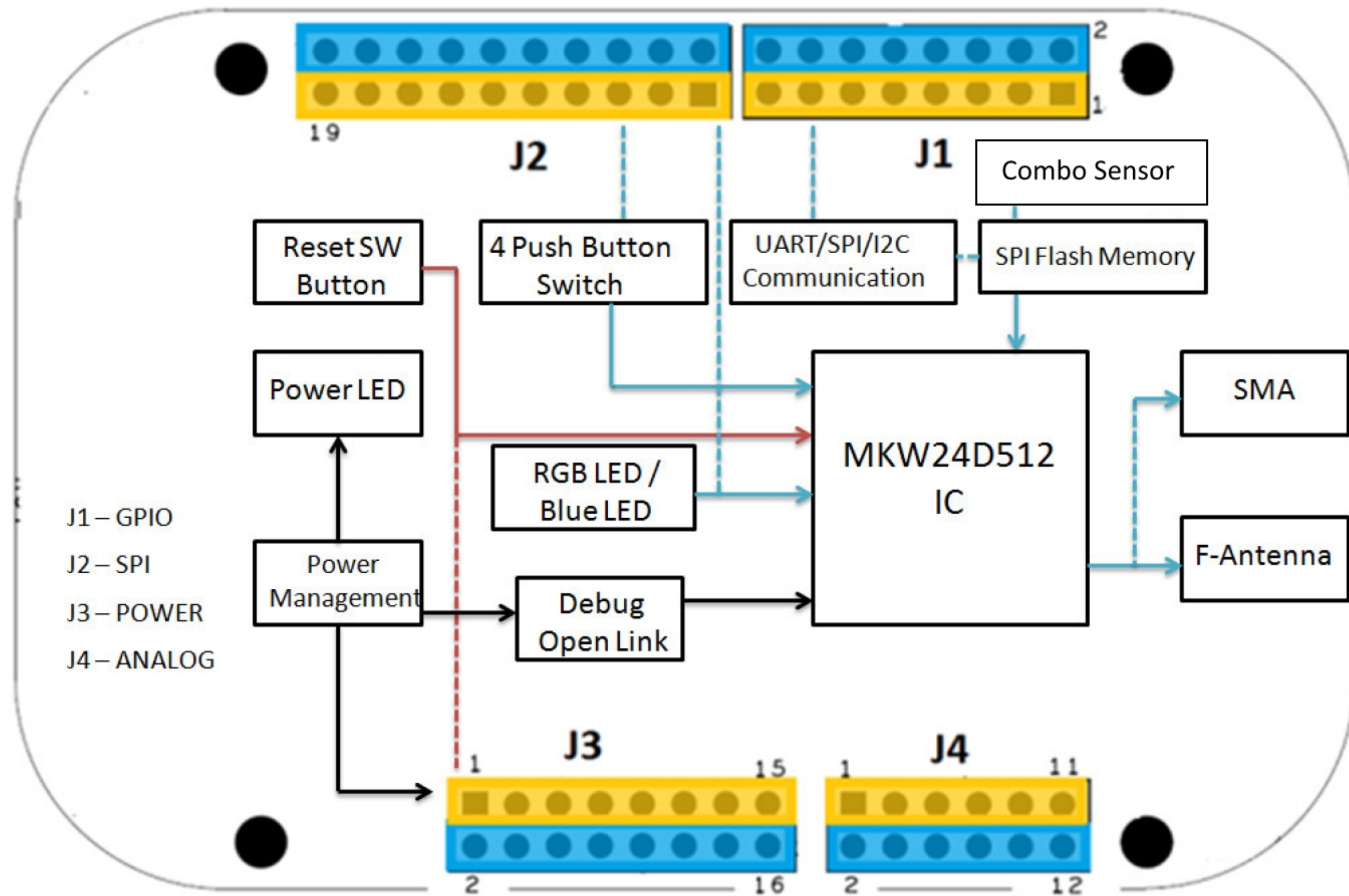
3. Device type number is for reference only. The number varies with the manufacturer.

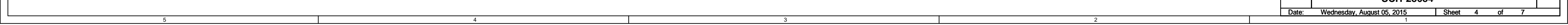
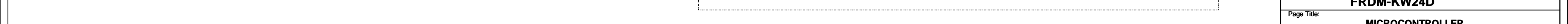
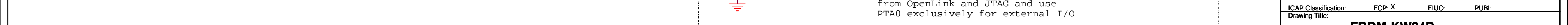
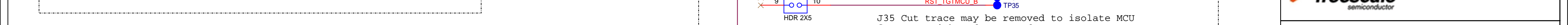
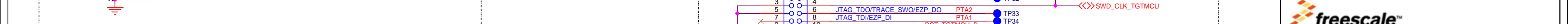
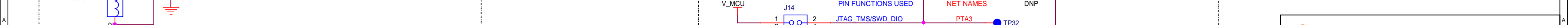
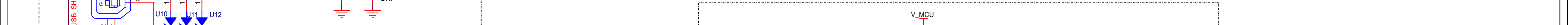
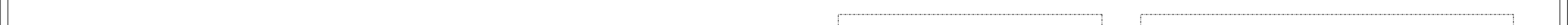
4. Special signal usage:  
\_B Denotes - Active-Low Signal  
<> or [] Denotes - Vectored Signals

5. Interpret diagram in accordance with American National Standards Institute specifications, current revision, with the exception of logic block symbology.



ICAP Classification: FCP: X FIUO: PUBI:		
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## LEDs

The schematic diagram illustrates the LED connections on the P3V3\_BRD board. It features two LED modules: D17 (CLV1A-FKB-CJ1M1F1BB7R4S3) and D8 (BLUE). D17 is connected to PTD4\_RTS, PTD5\_CTS, and PTD6\_RX through resistors R11, R28, and R29. D8 is connected to PTD7\_TX through resistor R30. Test points TP18, TP19, and TP20 are also shown.

## PUSH BUTTONS / GPIO

The diagrams illustrate the wiring for four push buttons (SW1, SW2, SW3, SW4) connected to GPIO pins. Each circuit includes a 10k pull-up resistor (R556, R559, R557, R558) connected to P3V3\_BRD, a 1000pF capacitor (C51, C54, C52, C53) to ground, and a TL1015AF160QG switch. The pins are PTE4, PTE3\_RTS, PTD1, and PTA19. Test points TP23, TP24, and TP29 are also indicated.

## COMBO SENSOR

The schematic diagram illustrates the COMBO SENSOR circuit. The central component is the FXOS8700CQ (U16) sensor. The circuit includes various power supply connections (P3V3\_BRD, GND), resistors (R32, R35, R36, R37, R38, R39, R40, R41, R96), capacitors (C60, C61, C62, C63, C64), and test points (TP505, TP513, TP514, TP515). The sensor's pins are connected to I2C lines (PTD2\_I2C\_SCL, PTD3\_I2C\_SDA), reset lines (RST, C\_RST), and other control lines (INT1, INT2, BYP, RES, NC). The sensor is also connected to PTA4 and PTD1 through R117 and R116 (DNP) respectively.

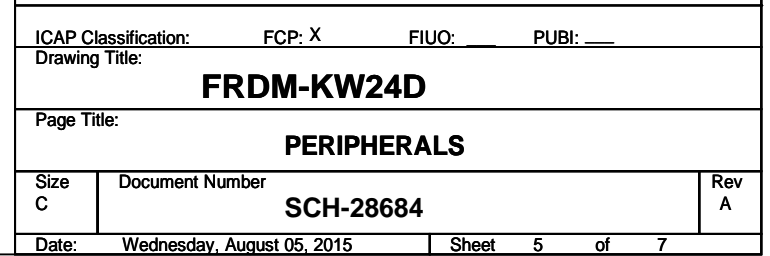
**SPI FLASH**

U13: AT45DB161E-SSHD

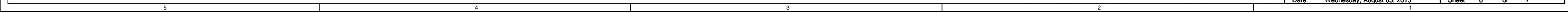
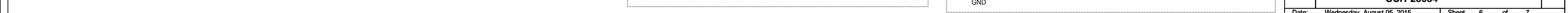
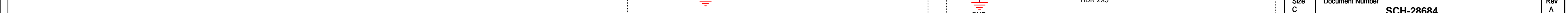
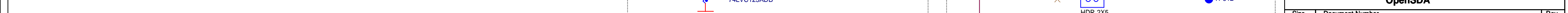
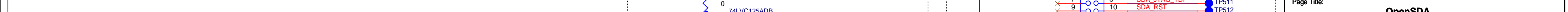
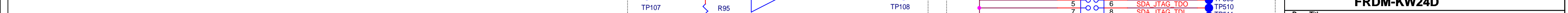
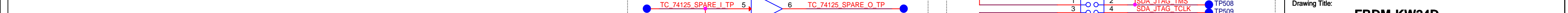
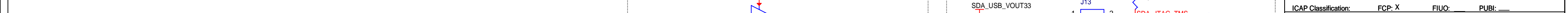
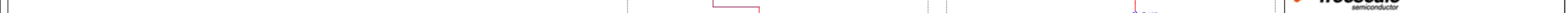
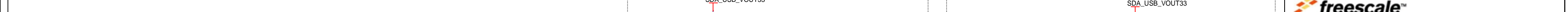
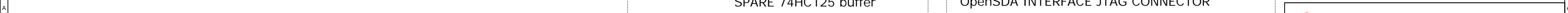
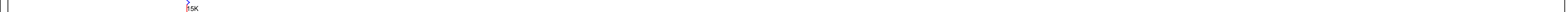
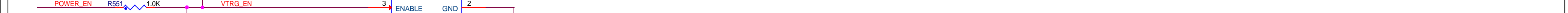
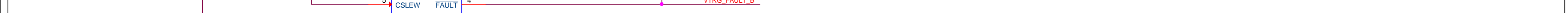
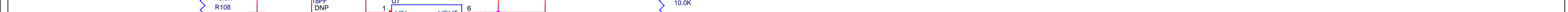
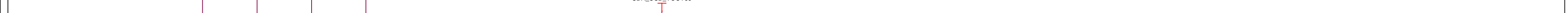
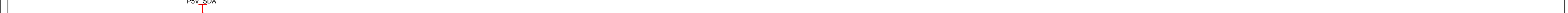
Connections:

- PTC6\_SPI\_SOUT to SH24 (SPI0\_SOUT)
- PTC6\_SPI\_CLK to SH30 (SPI0\_SCK)
- PTC4\_SPI\_SS to SH31 (SPI0\_PCS0)
- P3V3\_BRD to SI (1)
- R563 (10.0K) between P3V3\_BRD and SI
- SI to SCK (4)
- SCK to CS (3)
- CS to RESET (5)
- RESET to WP
- SO (8) to PTC7\_SPI\_SIN (via SH32)
- P3V3\_BRD to VCC (6)
- GND to GND (7)

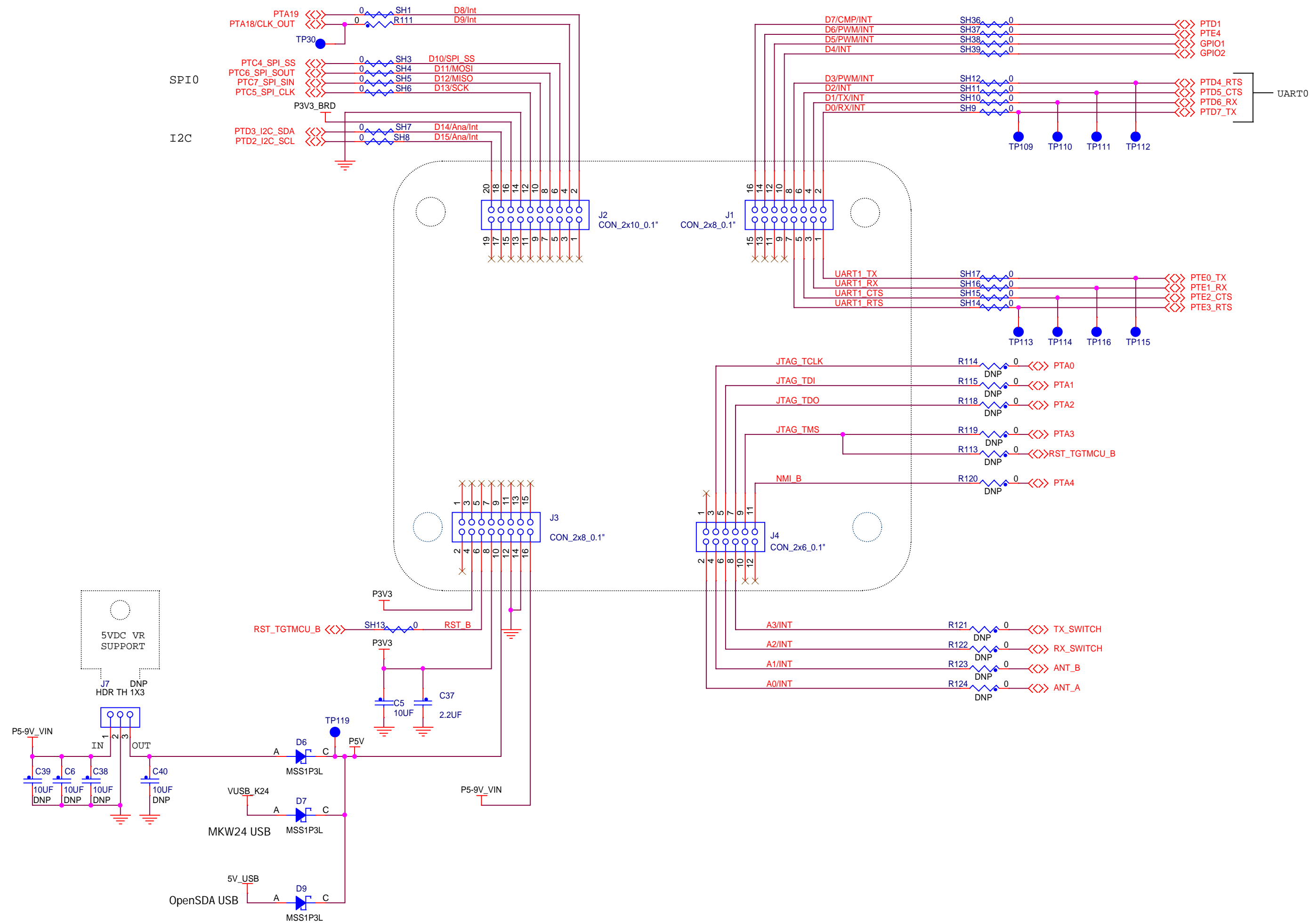
Test Points: TP502, TP504, TP505, TP506, TP501







## FRDM HEADERS



## POWER MANAGEMENT

