

# IMXRT106F - Connected Module

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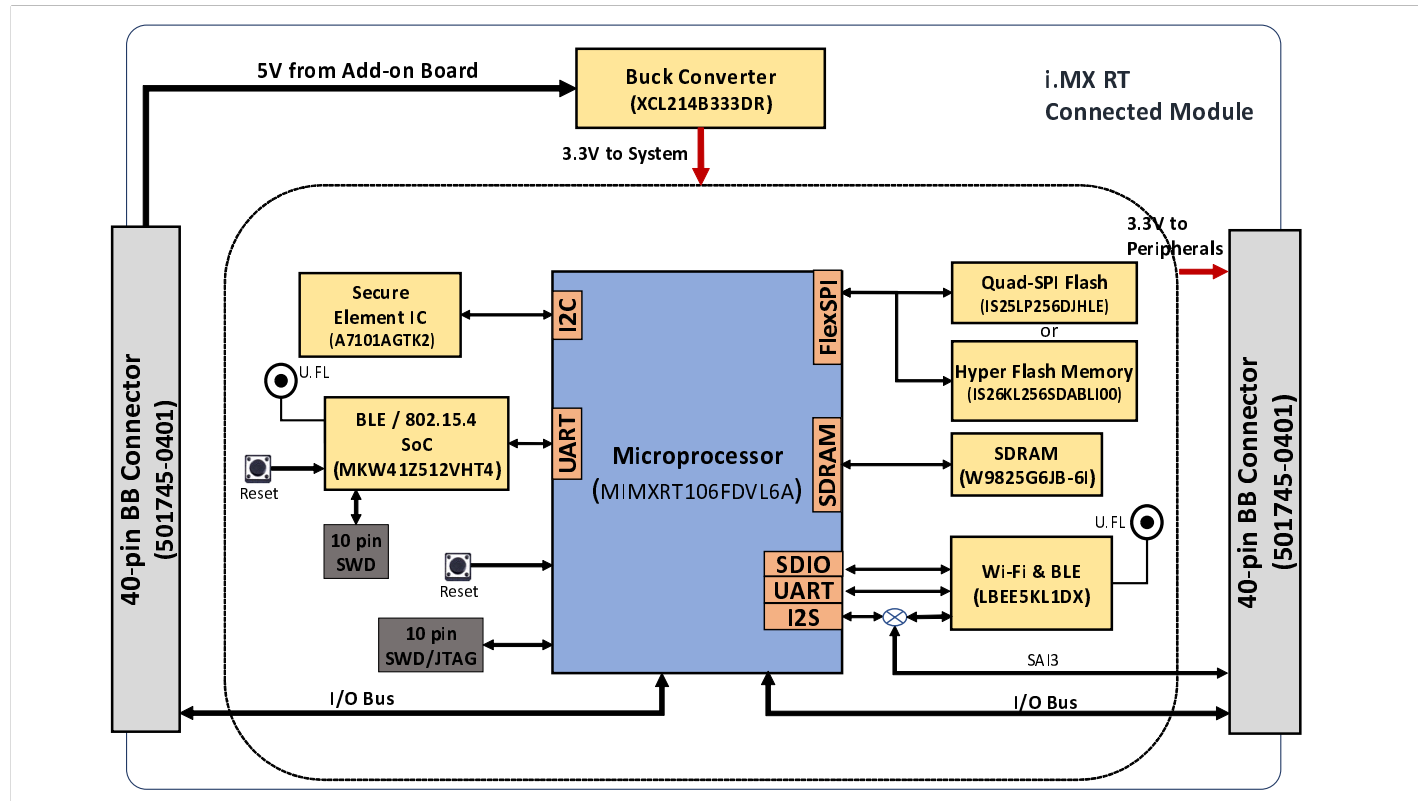
## REVISION HISTORY

REVISION	DESCRIPTION OF CHANGE	DATE	Author	Reviewer
D3	Initial production version	23-Oct-19	-	-



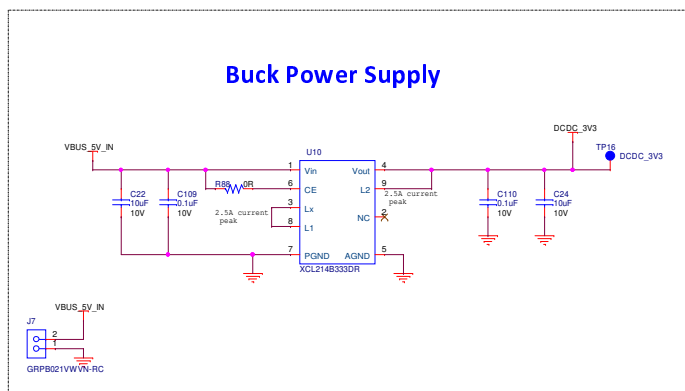
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Drawing Title: <b>i.MXRT Connected Module</b>				
Page Title: <b>Cover Page</b>				
Size C	Document Number SCH-SOL0001, PDF-SPF: SOL0001			Rev D3
Date:	Thursday, November 05, 2020		Sheet 1 of 9	

# IMXRT106F - Connected Module Block Diagram

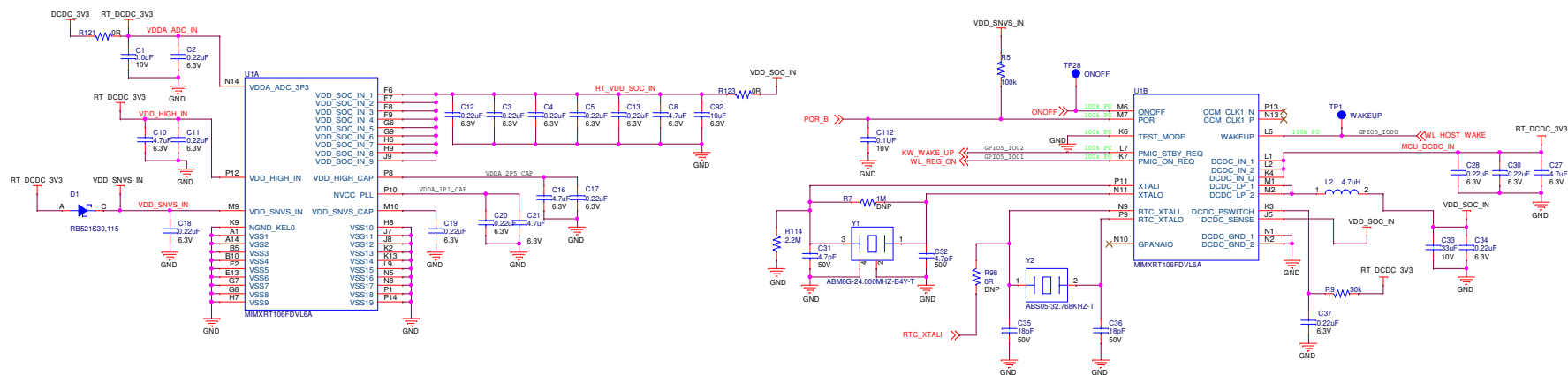
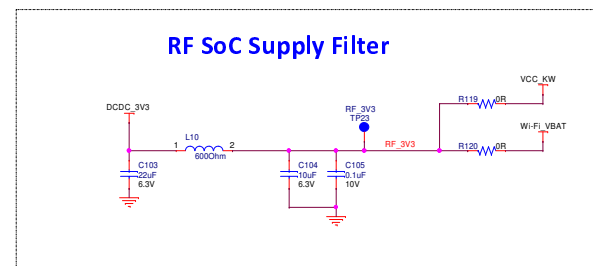


## iMXRT Connected Module Power Section

## Buck Power Supply



## RF SoC Supply Filter

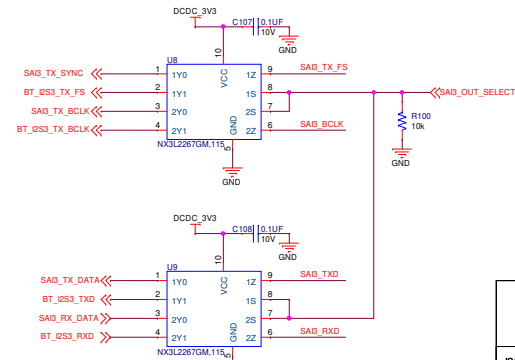
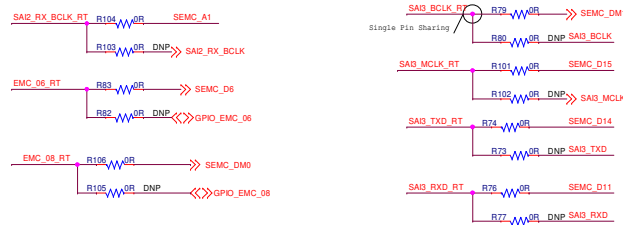
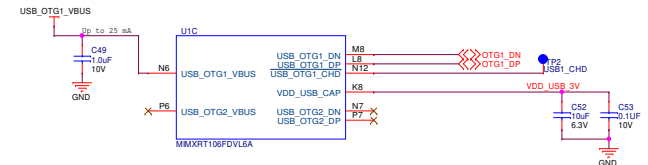
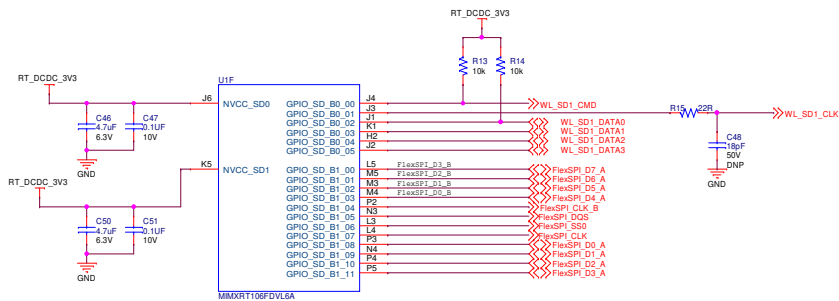
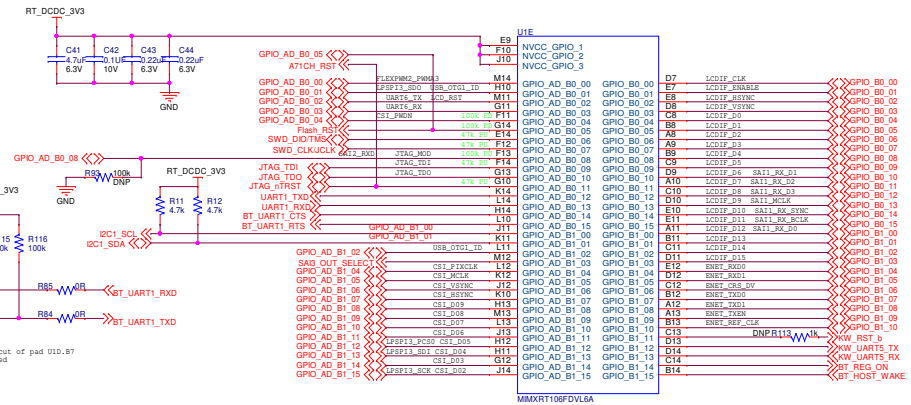
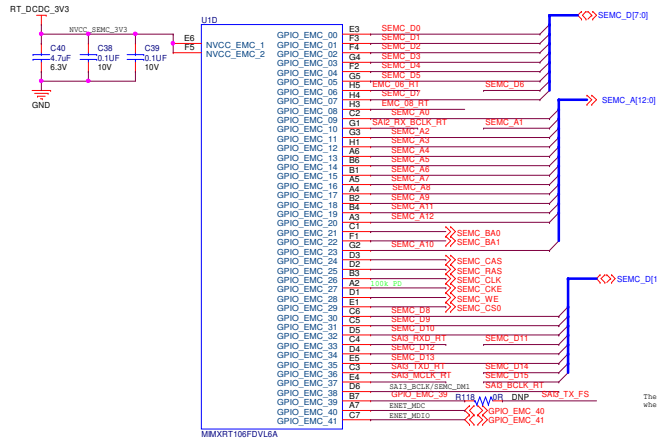


## Ground Test Points



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<b>Power Section</b>				
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# i.MXRT Section



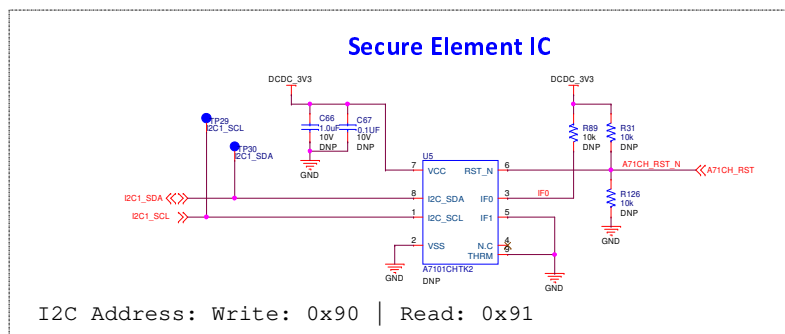
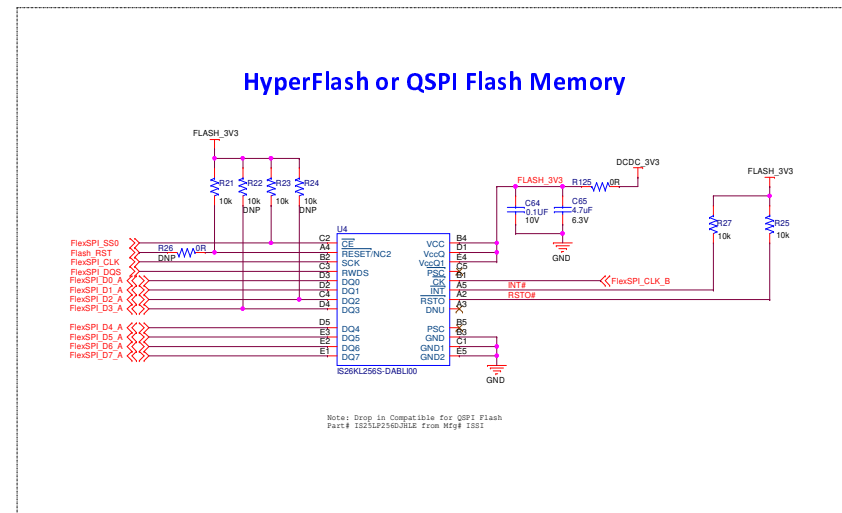
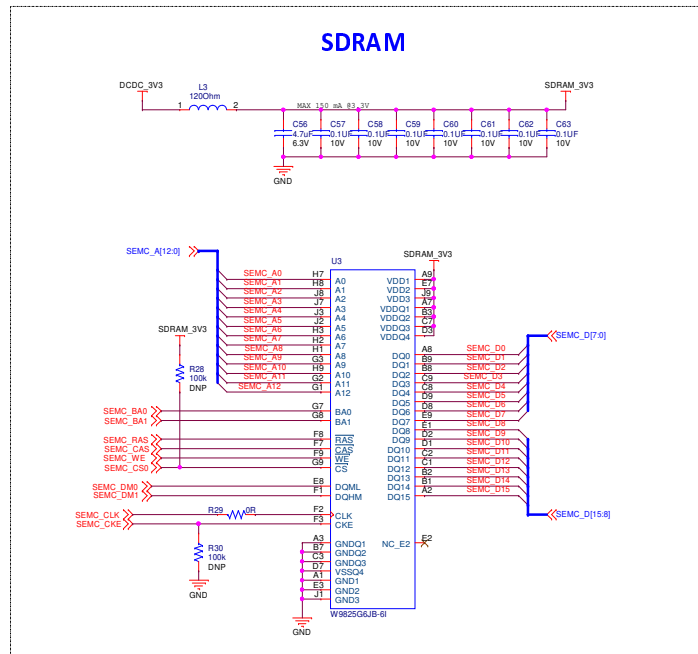
Note: Default resistor configuration is used to have SDRAM interface.  
- Need to swap DNP components to use SA13 (Audio) interface

Note: Further default SA13 is selected for external Audio interface on ADD-on-Board.  
- Need to Toggle SA13\_OUT\_SELECT signal "High" to use SA13 for onboard BT

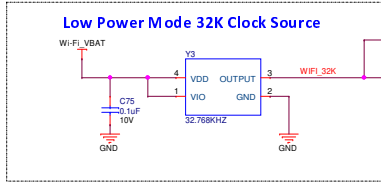
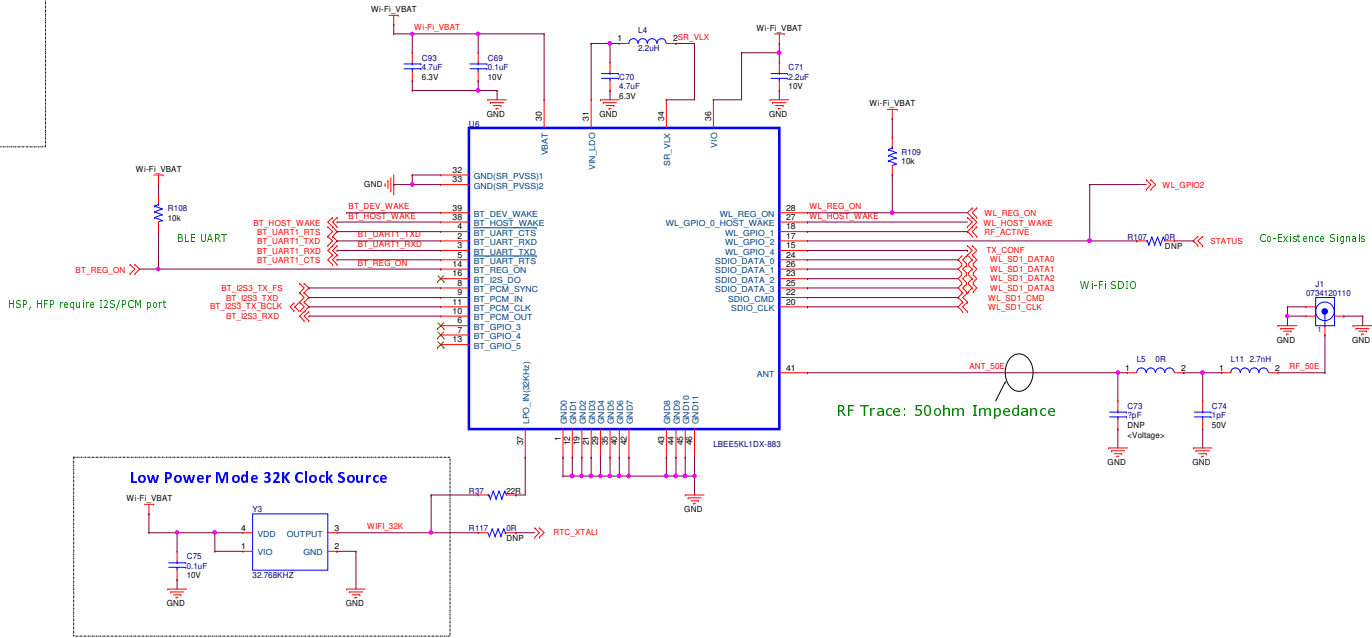
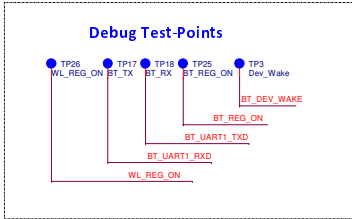


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Drawing Title:		i.MXRT Connected Module		
Page Title:		i.MXRT Section		
Size C	Document Number	SCH-SOL0001, PDF-SPF-SOL0001		Rev D3
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## Memory Section



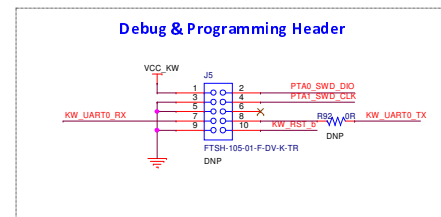
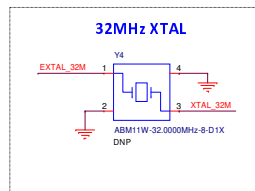
## Wi-Fi & BT/BLE Module Section



The image displays a detailed PCB layout for the i.MXRT1010 module. The main board features the i.MXRT1010 microcontroller (U7) with various pins connected to external components. Key components include:

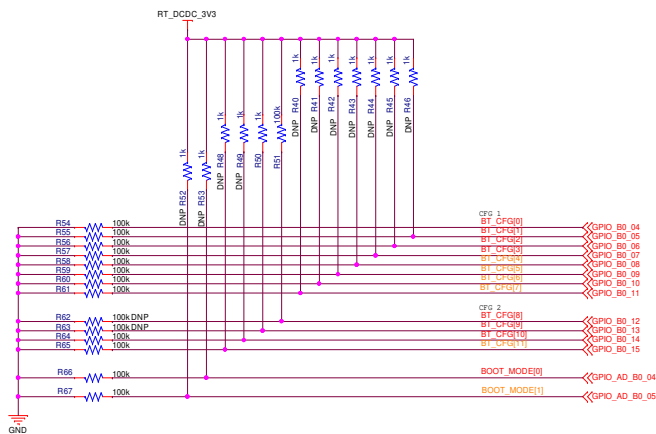
- Crystals:**
  - 32.768kHz XTAL:** Located at the bottom left, connected to pins XTAL\_32K and XTAL\_32M.
  - 32MHz XTAL:** Located at the bottom middle, connected to pins XTAL\_32K and XTAL\_32M.
- Debug & Programming Header:** Located at the bottom right, connected to pins J5 and J6.
- RF Trace:** A detailed section on the right side of the board, showing a 50ohm impedance trace for the RF signal. It includes components like C98, C99, C100, and C101, and is labeled "RF Trace: 50ohm Impedance".
- Other Components:** Various capacitors (C77, C78, C79, C80, C81, C82, C83, C84, C85, C86, C87, C88, C89, C90, C91, C92, C93, C94, C95, C96, C97, C98, C99, C100, C101), resistors (R38, R39, R40, R41, R42, R43, R44, R45, R46, R47, R48, R49, R50, R51, R52, R53, R54, R55, R56, R57, R58, R59, R60, R61, R62, R63, R64, R65, R66, R67, R68, R69, R70, R71, R72, R73, R74, R75, R76, R77, R78, R79, R80, R81, R82, R83, R84, R85, R86, R87, R88, R89, R90, R91, R92, R93, R94, R95, R96, R97, R98, R99, R100), and connectors (J1, J2, J3, J4, J5, J6).

The layout is color-coded: red for power and ground, blue for signal, and green for RF. The board is labeled "MKW41Z512VHT4" and "i.MXRT1010".

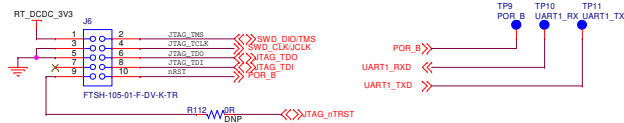


# Boot Configuration & Debug Interface

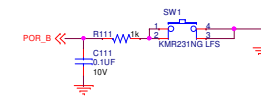
## Boot Configuration



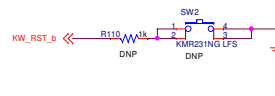
## i.MXRT Debug & Programming



## i.MXRT Reset Button



## KW21z Reset Button



## FUSE MAP

	0	0	1	1	0	0	0	0	0	0	0	0
TYPE	BOOT_CFG[11]	BOOT_CFG[10]	BOOT_CFG[9]	BOOT_CFG[8]	BOOT_CFG[7]	BOOT_CFG[6]	BOOT_CFG[5]	BOOT_CFG[4]	BOOT_CFG[3]	BOOT_CFG[2]	BOOT_CFG[1]	BOOT_CFG[0]
FlexSPI1 - Serial NOR	Infinite-Loop: (Debug USE only) 0 - Disable 1 - Enable	FLASH_TYPE 000-Device supports 3B read by default 001-Device supports 4B read by default 010-HyperFlash 1V8 011-HyperFlash 3V3 100-MXIC Octal DDR			0	0	0	0	HOLD TIME: 00 - 500us 01 - 1ms 10 - 3ms 11 - 10ms		EncryptedXIP 0 - Disabled 1 - Enabled	Reserved
SD	Infinite-Loop: (Debug USE only) 0 - Disable 1 - Enable	Reserved	Bus Width: 0 - 1-bit 1 - 4-bit	SD1 VOLTAGE SELECTION: 0 - 3.3V 1 - 1.8V	0	1	SD/SDXC Speed: 00 - Normal/SDR12 01 - High/SDR25 10 - SDR50 11 - SDR104	SD Power Cycle Enable: 0' - No power cycle 1' - Enabled via USDHC_RST pad	SD Loopback Clock Source Sel: (for SDR50 and SDR104 only) 0' - through SD 1' - direct	Port Select: 0 - eSDHC1 1 - eSDHC2	Fast Boot: 0 - Regular 1 - Fast Boot	





# B2B Connector

