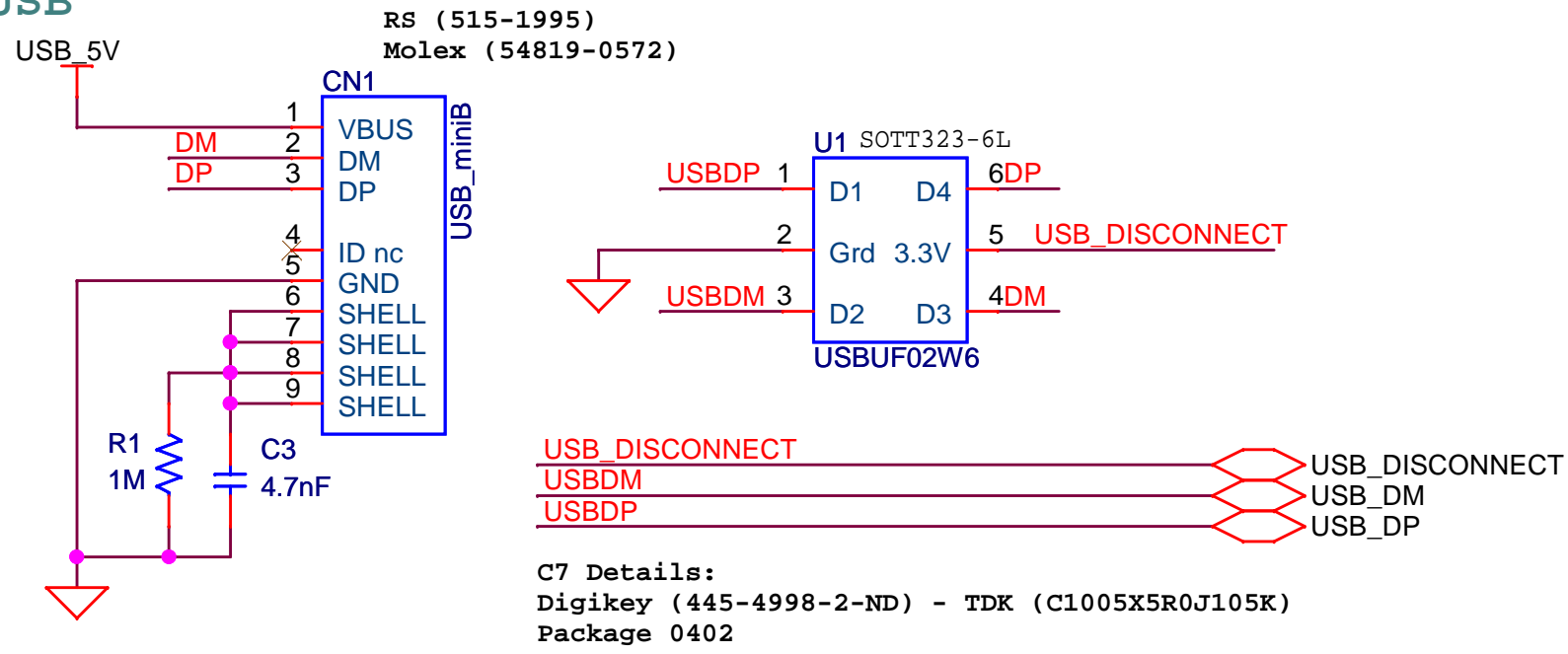
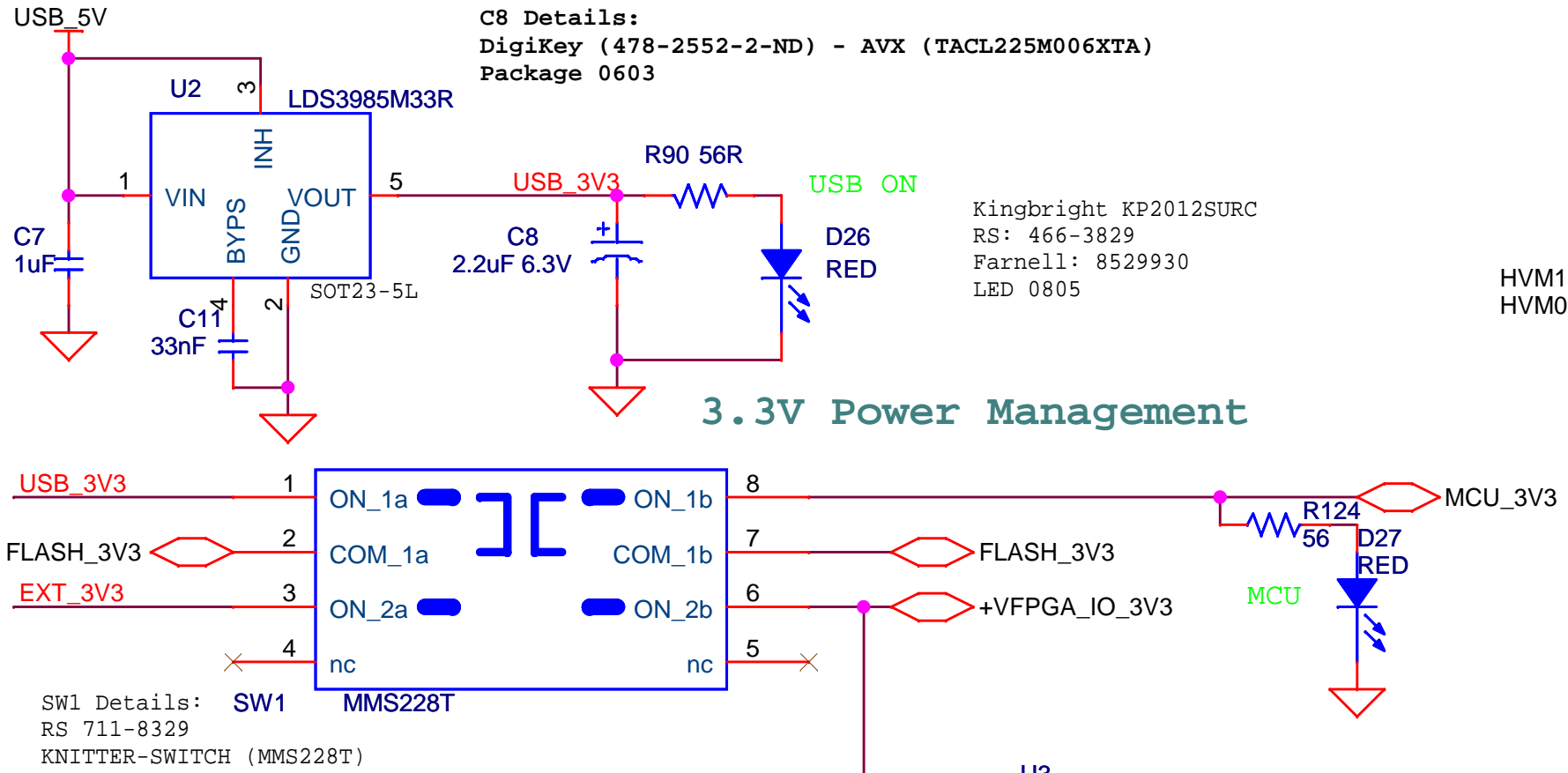


Title		
STEVAL-IME0003V1 STMicroelectronics		
Size	Document Number	Rev
Custom	STHV748 Demonstration Board	1.01
Date:	Thursday, December 22, 2011	Sheet 1 of 9

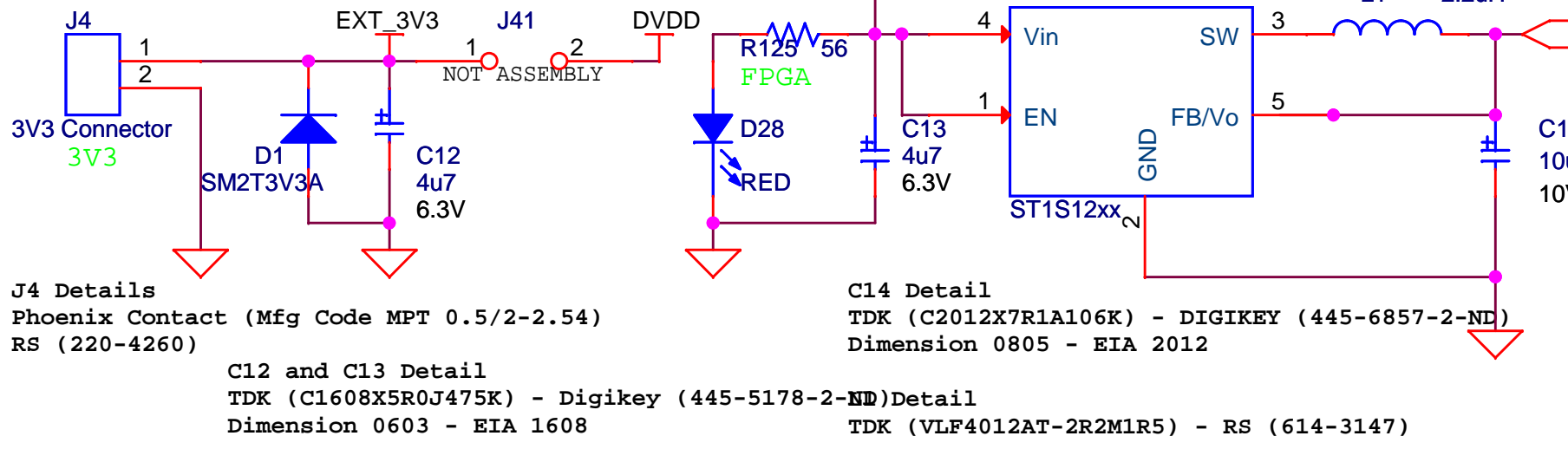
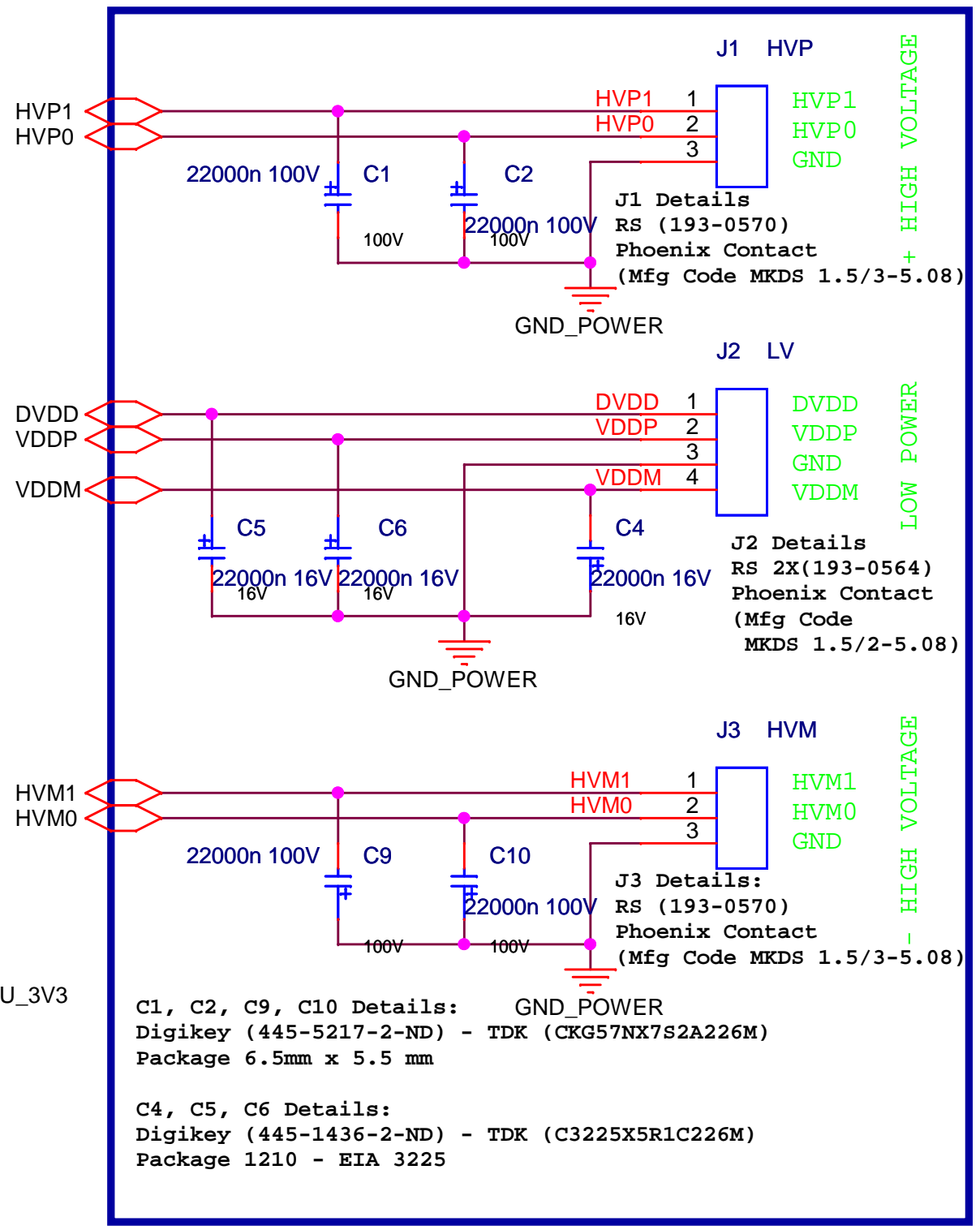
USB



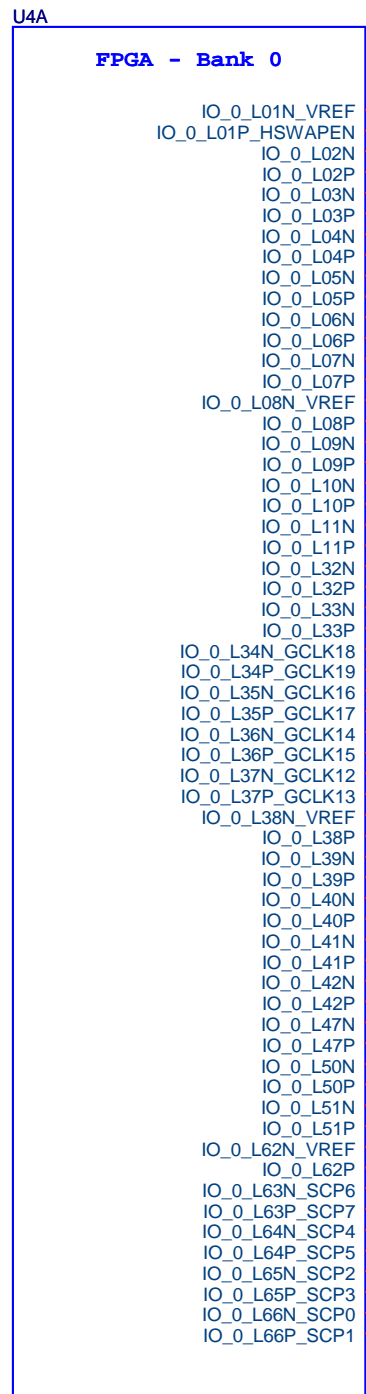
3.3V Power Management



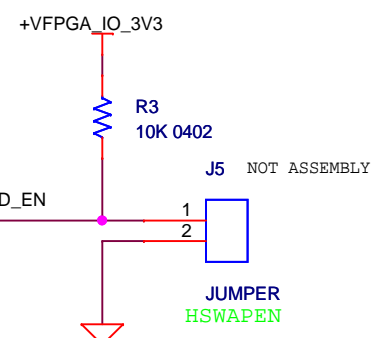
STHV748 Power Management



Title		
STEVAL-IME0003V1 STMicroelectronics		
Size A	Document Number	Rev
	STHV748 Demonstration Board	1.01
Date:	Thursday, December 22, 2011	Sheet 2 of 9

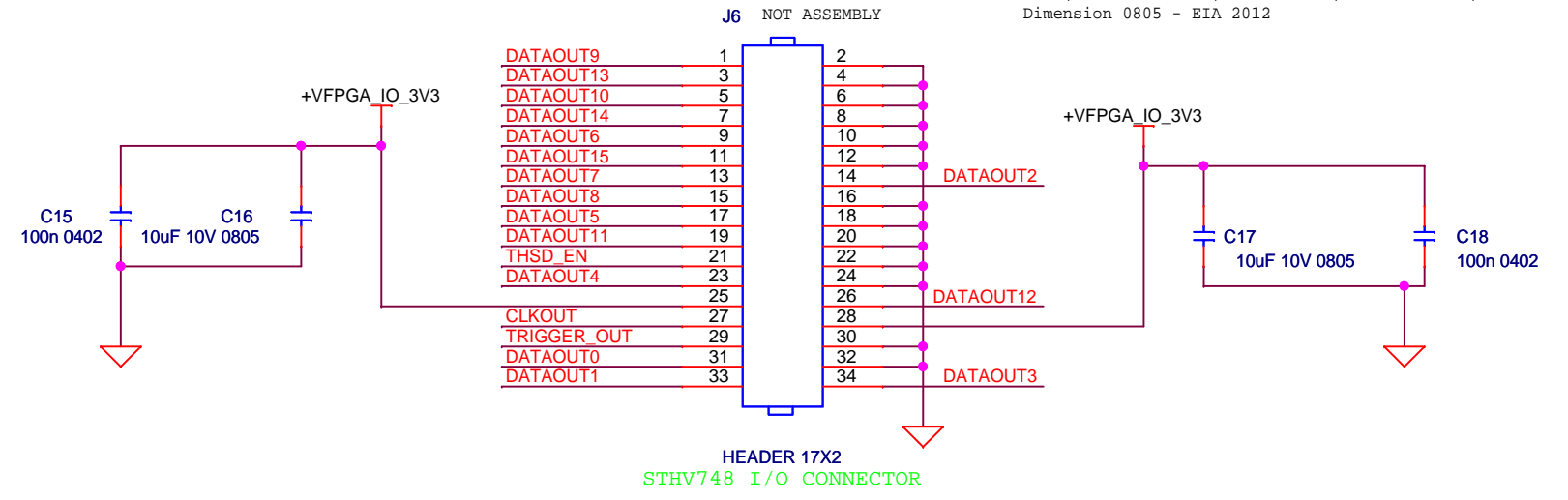


XC6SLX16-2CSG324C

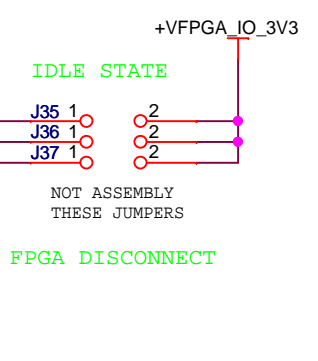


Jumper J5 is used to control I/O pullups during FPGA configuration.

Open (default) to float I/O output during FPGA configuration.
Set jumper 1:2 to enable I/O pullups during FPGA configuration.



C16 and C17 Details:
TDK (C2012X7R1A106K) - DIGIKEY (445-6857-2-ND)
Dimension 0805 - EIA 2012



Jumpers J35, J36 and J37 are used to set dataout output state.

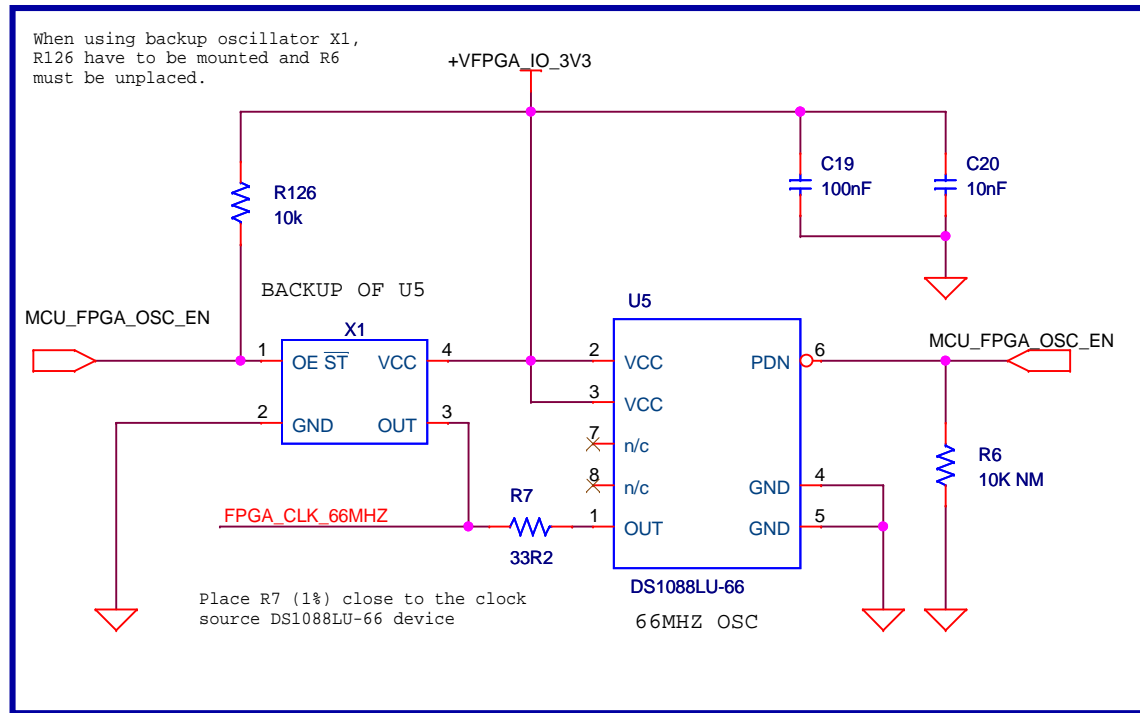
Configure J35 and J36 to setup outputs idle state as follows:

- 00 - (J35 and J36 open) --> High-Z (default)
- 01 - (J35 closed and J36 open) --> Clamp/HVR_SW
- 11 - (J35 and J36 closed) --> High-Z
- 10 - (J35 open and J36 closed) --> Clamp

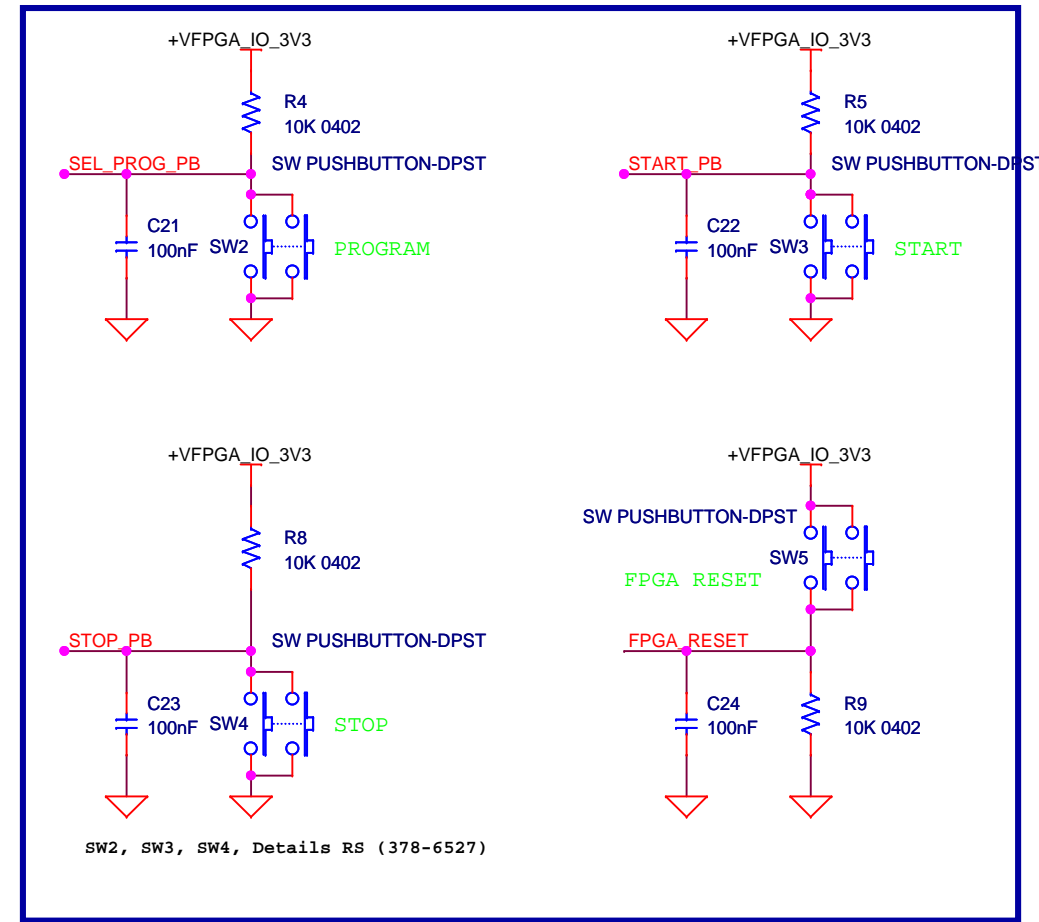
Open J37 (default) to connect FPGA outputs
Close J37 to disconnect outputs (High-Z)

Title		
STEVAL-IME003V1 - STMicroelectronics		
Size B	Document Number STHV748 Demonstration Board	Rev 1.01
Date:	Thursday, December 22, 2011	Sheet 3 of 9

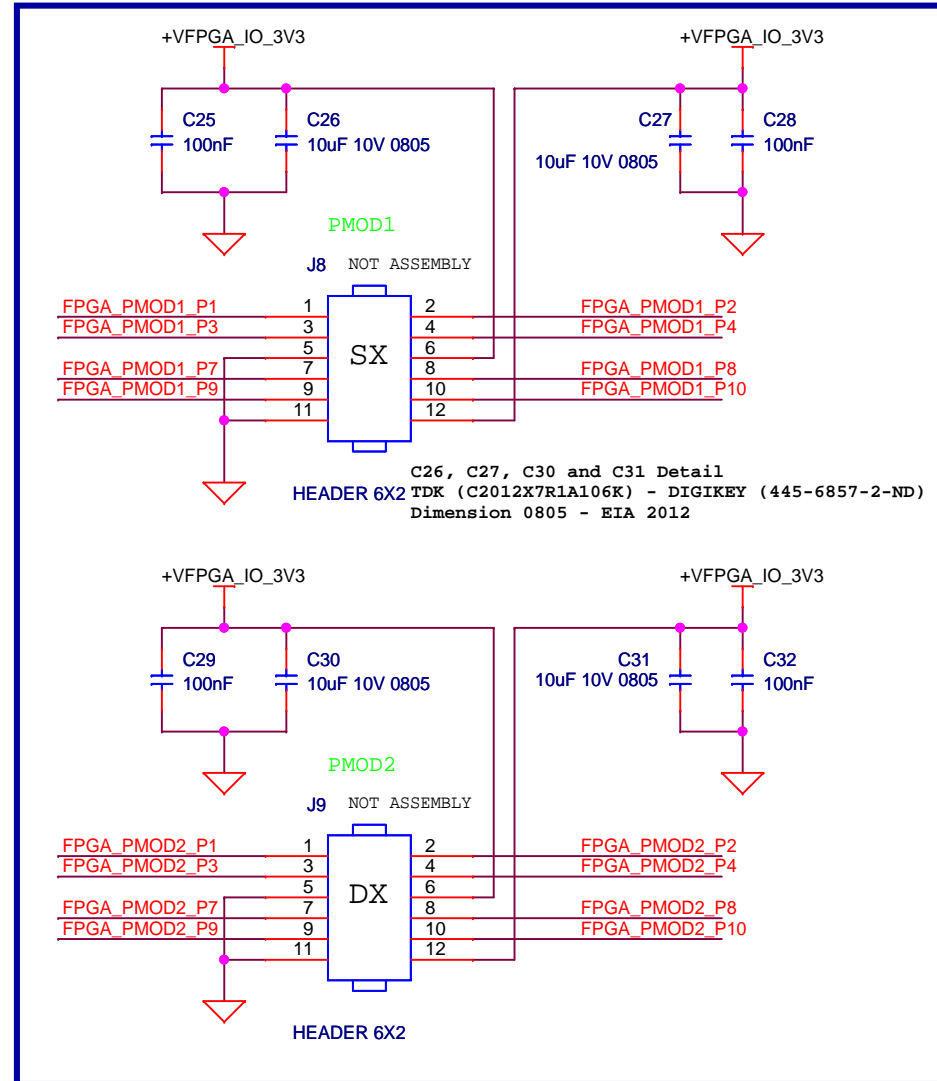
66MHZ EXTERNAL OSCILLATOR



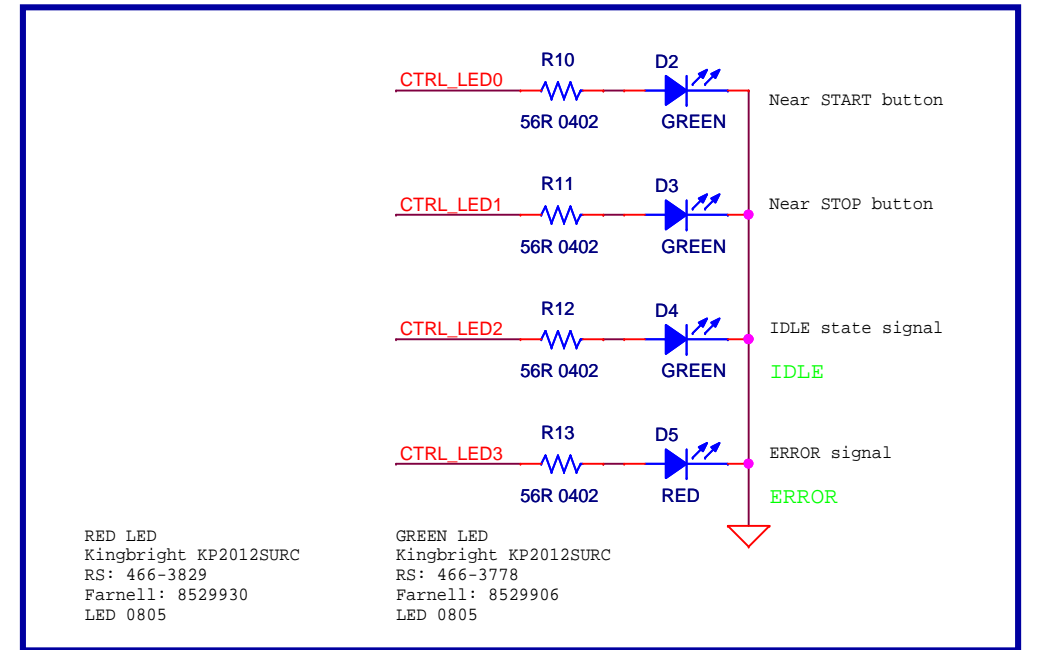
PUSHBUTTONS



PERIPHERAL MODULE (PMOD)



CTRL LED



U4B

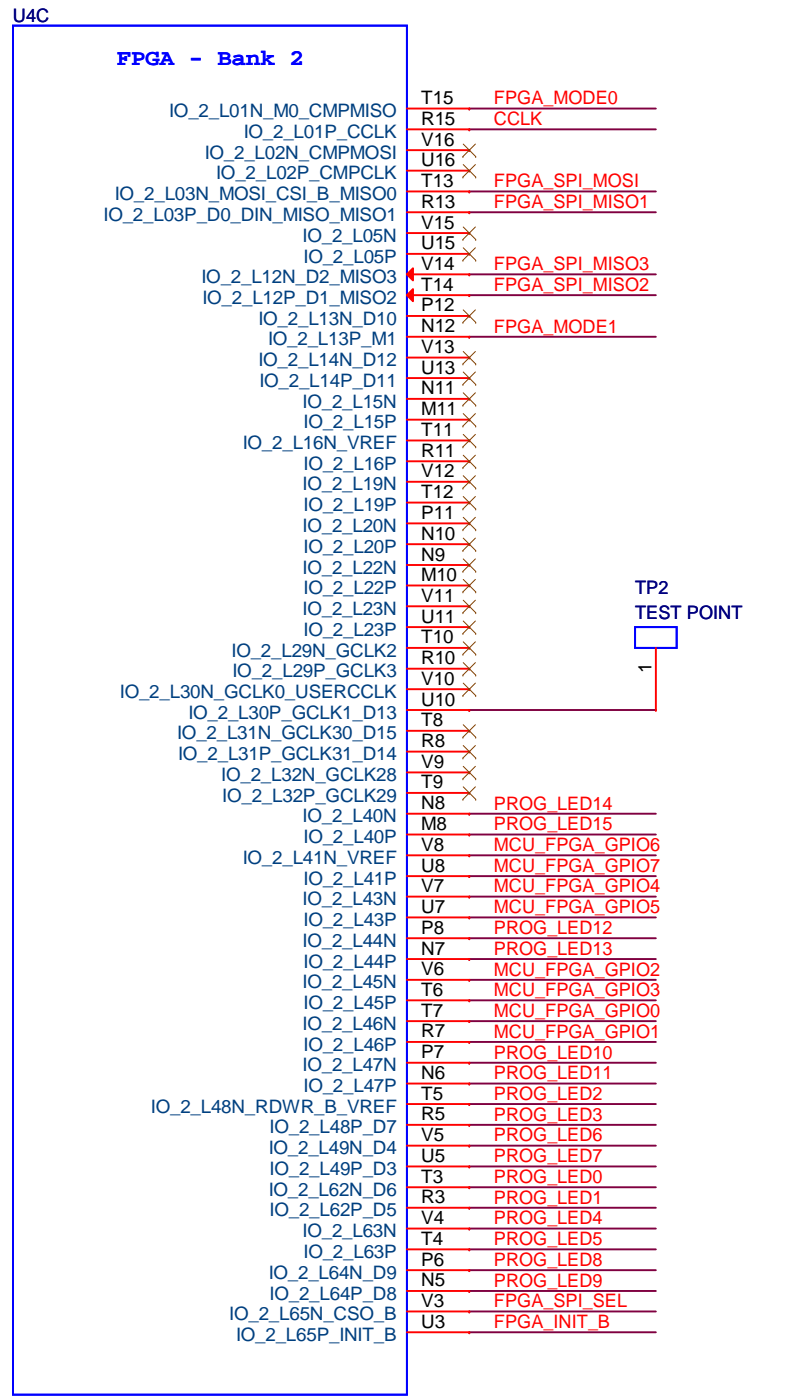
FPGA - Bank 1

IO_1_L01N_A24_VREF	F16	FPGA_PMOD1_P2
IO_1_L01P_A25	F15	FPGA_PMOD1_P1
IO_1_L29N_A22_M1A14	C18	FPGA_PMOD1_P4
IO_1_L29P_A23_M1A13	C17	FPGA_PMOD1_P3
IO_1_L30N_A20_M1A11	G14	FPGA_PMOD1_P8
IO_1_L30P_A21_M1RESET	F14	FPGA_PMOD1_P7
IO_1_L31N_A18_M1A12	D18	FPGA_PMOD1_P10
IO_1_L31P_A19_M1CKE	D17	FPGA_PMOD1_P9
IO_1_L32N_A16_M1A9	G13	FPGA_PMOD2_P2
IO_1_L32P_A17_M1A8	H12	FPGA_PMOD2_P1
IO_1_L33N_A14_M1A4	E18	FPGA_PMOD2_P4
IO_1_L33P_A15_M1A10	E16	FPGA_PMOD2_P3
IO_1_L34N_A12_M1BA2	K13	FPGA_PMOD2_P8
IO_1_L34P_A13_M1WE	K12	FPGA_PMOD2_P7
IO_1_L35N_A10_M1A2	F18	FPGA_PMOD2_P10
IO_1_L35P_A11_M1A7	F17	FPGA_PMOD2_P9
IO_1_L36N_A8_M1BA1	H14	
IO_1_L36P_A9_M1BA0	H13	
IO_1_L37N_A6_M1A1	H16	
IO_1_L37P_A7_M1A0	H15	
IO_1_L38N_A4_M1CLKN	G18	
IO_1_L38P_A5_M1CLK	G16	
IO_1_L39N_M1ODT	K14	CTRL_LED1
IO_1_L39P_M1A3	J13	CTRL_LED0
IO_1_L40N_GCLK10_M1A6	L13	SEL_PROG_PB
IO_1_L40P_GCLK11_M1A5	L12	FPGA_CLK_66MHZ
IO_1_L41N_GCLK8_M1CASN	K16	START_PB
IO_1_L41P_GCLK9_IRDY1_M1RASN	K15	
IO_1_L42N_GCLK6_TRDY1_M1LDM	L16	STOP_PB
IO_1_L42P_GCLK7_M1UDM	L15	
IO_1_L43N_GCLK4_M1DQ5	H18	FPGA_RESET
IO_1_L43P_GCLK5_M1DQ4	H17	
IO_1_L44N_A2_M1DQ7	J18	FPGA_USER_IO_0
IO_1_L44P_A3_M1DQ6	J16	FPGA_USER_IO_1
IO_1_L45N_A0_M1DQSN	K18	FPGA_USER_IO_2
IO_1_L45P_A1_M1DQ5	K17	FPGA_USER_IO_3
IO_1_L46N_FOE_B_M1DQ3	L18	FPGA_USER_IO_4
IO_1_L46P_FCS_B_M1DQ2	L17	FPGA_USER_IO_5
IO_1_L47N_LDC_M1DQ1	M18	FPGA_USER_IO_6
IO_1_L47P_FWE_B_M1DQ0	M16	FPGA_USER_IO_7
IO_1_L48N_M1DQ9	N18	FPGA_USER_IO_8
IO_1_L48P_HDC_M1DQ8	N17	FPGA_USER_IO_9
IO_1_L49N_M1DQ11	P18	FPGA_USER_IO_10
IO_1_L49P_M1DQ10	P17	FPGA_USER_IO_11
IO_1_L50N_M1UDQSN	N16	FPGA_USER_IO_12
IO_1_L50P_M1UDQS	N15	FPGA_USER_IO_13
IO_1_L51N_M1DQ13	T18	FPGA_USER_IO_14
IO_1_L51P_M1DQ12	T17	FPGA_USER_IO_15
IO_1_L52N_M1DQ15	U18	CTRL_LED3
IO_1_L52P_M1DQ14	U17	CTRL_LED2
IO_1_L53N_VREF	N14	
IO_1_L53P	M14	
IO_1_L61N	M13	
IO_1_L61P	L14	
IO_1_L74N_DOUT_BUSY	P16	FPGA_DOUT_BUSY
IO_1_L74P_AWAKE	P15	FPGA_AWAKE

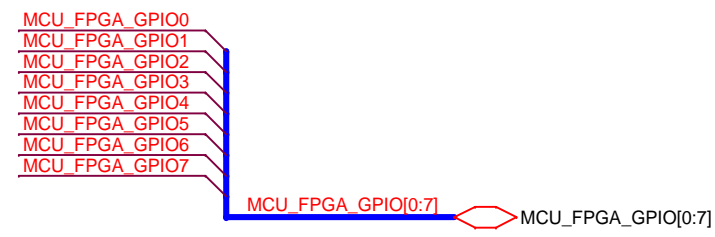
XC6SLX16-2CSG324C

Two right-angle, 12-pin (2 x 6 female) Peripheral Module (PMOD) headers (J8, J9) are interfaced to the FPGA, with each header providing 3.3 V power, ground, and eight I/O's. These headers may be utilized as general-purpose I/Os or may be used to interface to PMODs. J6 and J8 are placed in close proximity (0.9" centers) on the PCB in order to support dual PMODs.

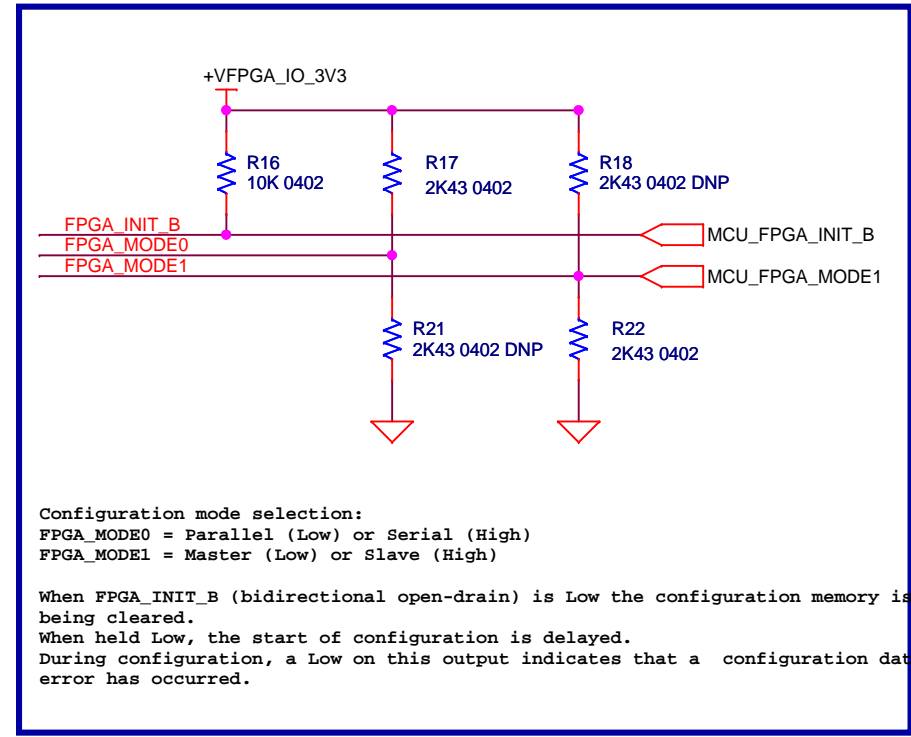
Title		
STEVAL-IME003V1 - STMicroelectronics		
Size B	Document Number STHV748 Demonstration Board	Rev 1.01
Date:	Thursday, December 22, 2011	Sheet 4 of 9



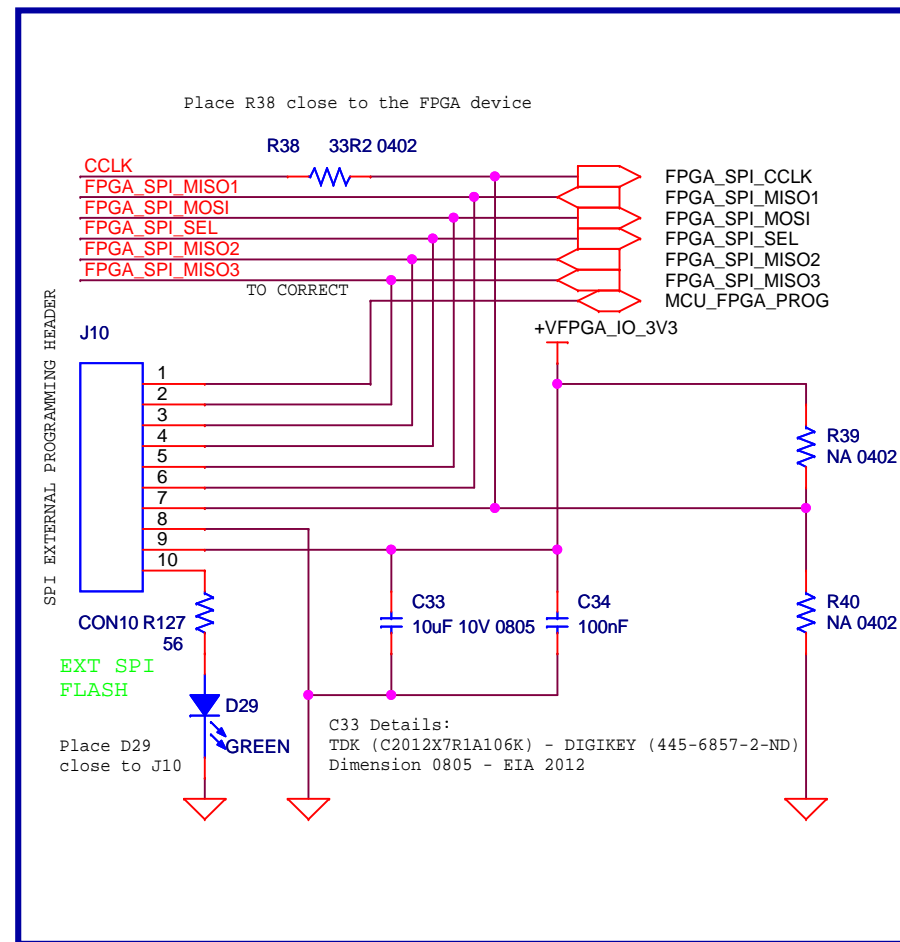
XC6SLX16-2CSG324C



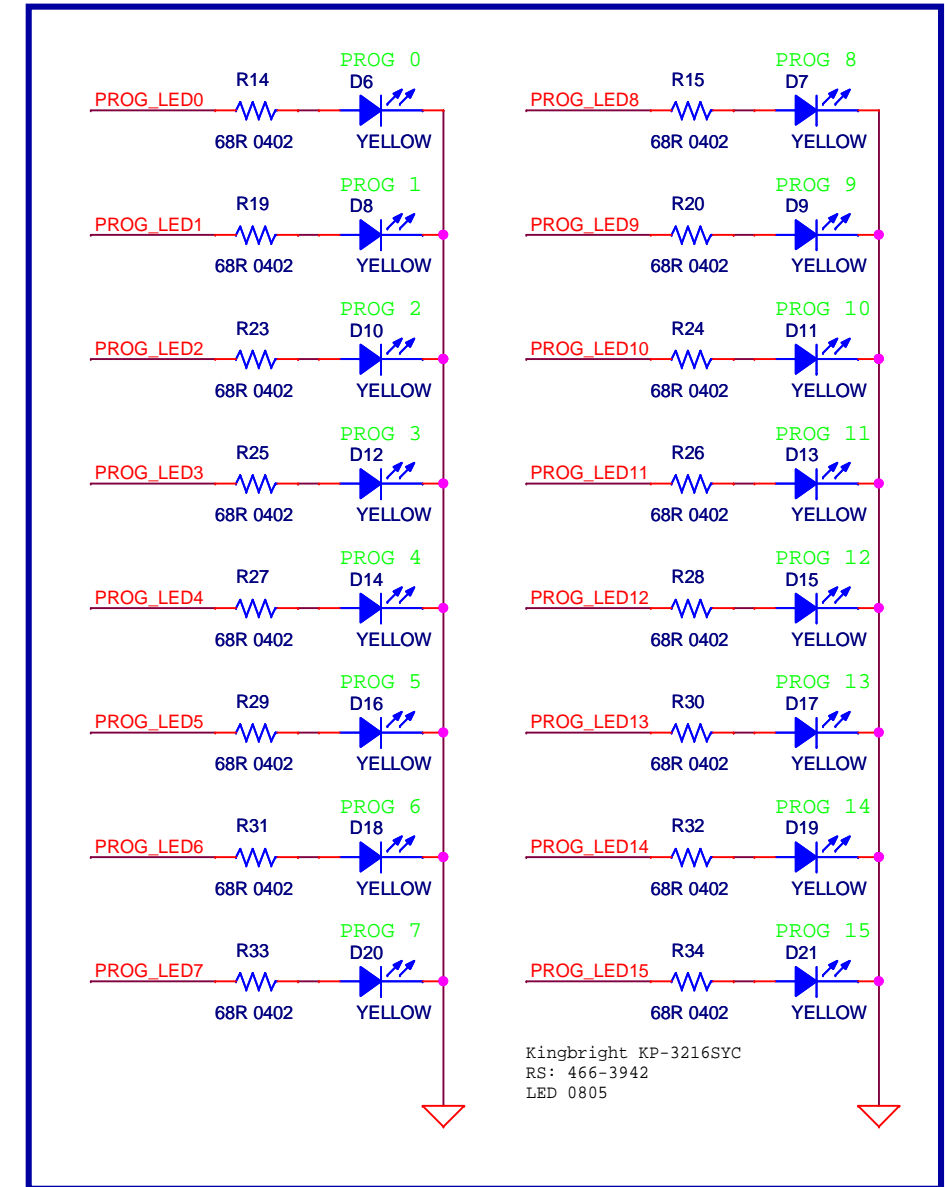
FPGA CONFIGURATION



SPI FLASH CTRL SIGNALS



PROGRAM SELECTOR LEDS



Title		
STEVAL-IME003V1 - STMicroelectronics		
Size B	Document Number STHV748 Demonstration Board	Rev 1.01
Date:	Thursday, December 22, 2011	Sheet 5 of 9

U4D

FPGA - Bank 3

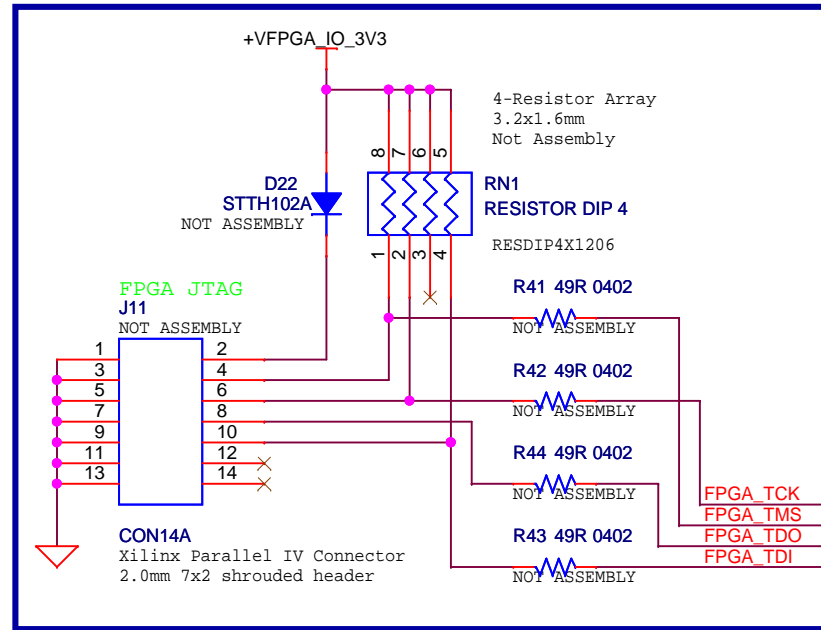
- IO_3_L01N_VREF N3
- IO_3_L01P N4
- IO_3_L02N P3
- IO_3_L02P P4
- IO_3_L31N_VREF M5
- IO_3_L31P L6
- IO_3_L32N_M3DQ15 U1
- IO_3_L32P_M3DQ14 U2
- IO_3_L33N_M3DQ13 T1
- IO_3_L33P_M3DQ12 T2
- IO_3_L34N_M3UDQSN P1
- IO_3_L34P_M3UDQS P2
- IO_3_L35N_M3DQ11 N1
- IO_3_L35P_M3DQ10 N2
- IO_3_L36N_M3DQ9 M1
- IO_3_L36P_M3DQ8 M3
- IO_3_L37N_M3DQ1 L1
- IO_3_L37P_M3DQ0 L2
- IO_3_L38N_M3DQ3 K1
- IO_3_L38P_M3DQ2 K2
- IO_3_L39N_M3LDQSN L3
- IO_3_L39P_M3LDQS L4
- IO_3_L40N_M3DQ7 J1
- IO_3_L40P_M3DQ6 J3
- IO_3_L41N_GCLK26_M3DQ5 H1
- IO_3_L41P_GCLK27_M3DQ4 H2
- IO_3_L42N_GCLK24_M3LDM K3
- IO_3_L42P_GCLK25_TRDY2_M3UDM K4
- IO_3_L43N_GCLK22_IRDY2_M3CASN K5
- IO_3_L43P_GCLK23_M3RASN L5
- IO_3_L44N_GCLK20_M3A6 H3
- IO_3_L44P_GCLK21_M3A5 H4
- IO_3_L45N_M3ODT K6
- IO_3_L45P_M3A3 L7
- IO_3_L46N_M3CLKN G1
- IO_3_L46P_M3CLK G3
- IO_3_L47N_M3A1 J6
- IO_3_L47P_M3A0 J7
- IO_3_L48N_M3BA1 F1
- IO_3_L48P_M3BA0 F2
- IO_3_L49N_M3A2 H5
- IO_3_L49P_M3A7 H6
- IO_3_L50N_M3BA2 E1
- IO_3_L50P_M3WE E3
- IO_3_L51N_M3A4 F3
- IO_3_L51P_M3A10 F4
- IO_3_L52N_M3A9 D1
- IO_3_L52P_M3A8 D2
- IO_3_L53N_M3A12 G6
- IO_3_L53P_M3CKE H7
- IO_3_L54N_M3A11 D3
- IO_3_L54P_M3RESET E4
- IO_3_L55N_M3A14 F5
- IO_3_L55P_M3A13 F6
- IO_3_L83N_VREF C1
- IO_3_L83P C2

FPGA BANK 3 NOT USED

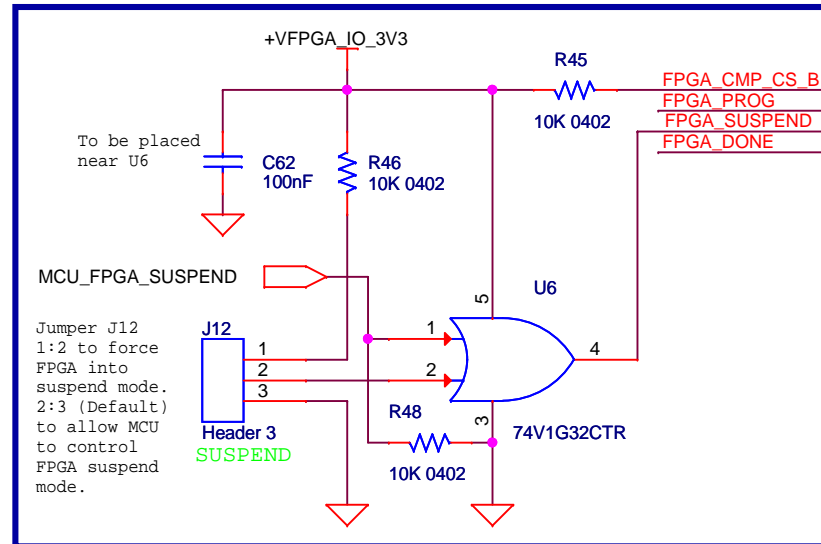
XC6SLX16-2CSG324C

Title		
STEVAL-IME0003V1 STMicroelectronics		
Size	Document Number	Rev
B	STHV748 Demonstration Board	1.01
Date:	Thursday, December 22, 2011	Sheet 6 of 9

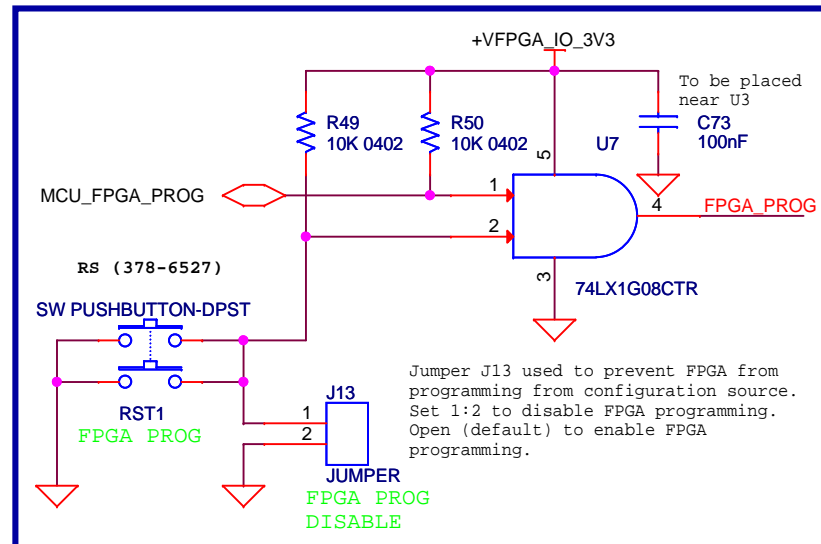
FPGA JTAG



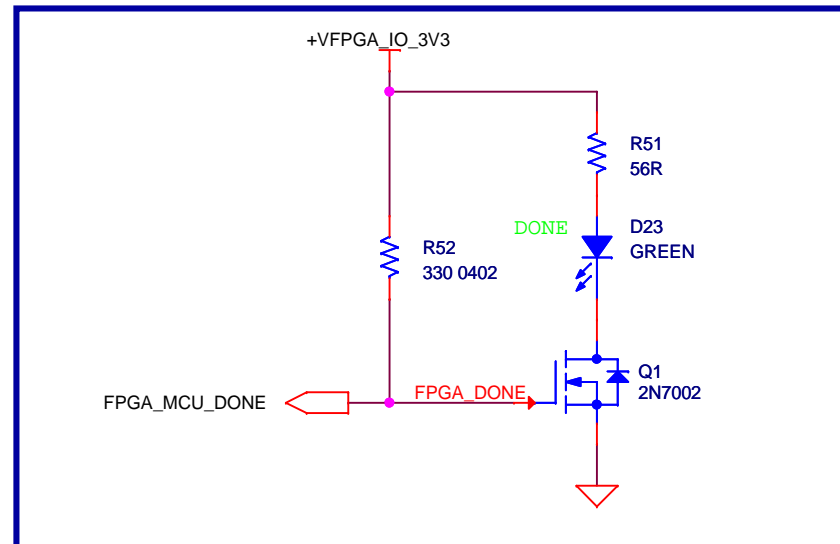
SUSPEND & CMPCS_B



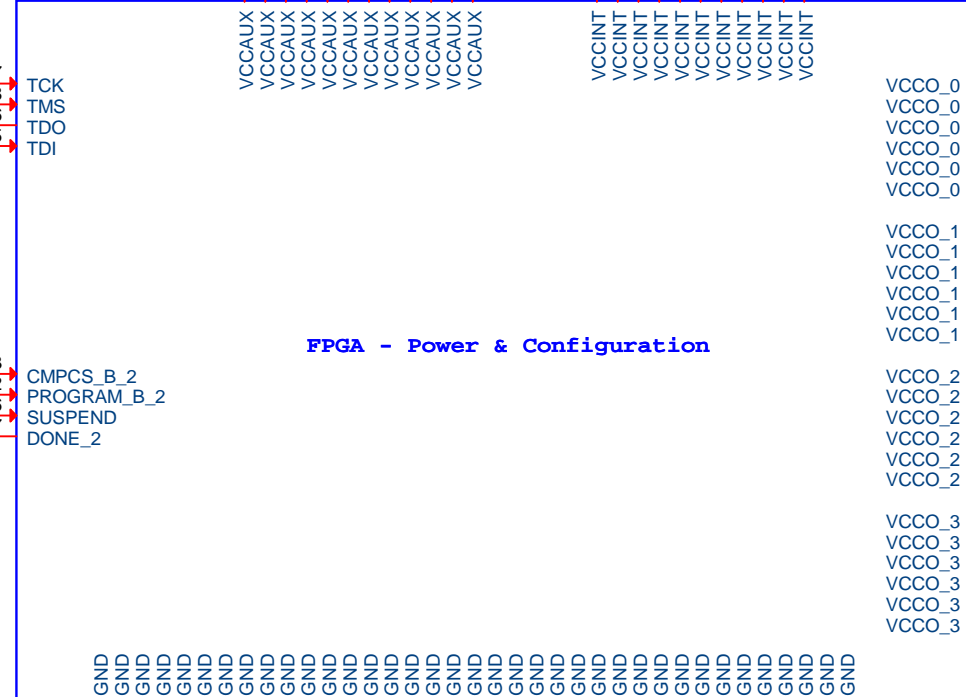
PROGRAM_B



DONE



U4E XC6SLX16-2CSG324C



FPGA - Power & Configuration

XC6SLX16-3CSG324C

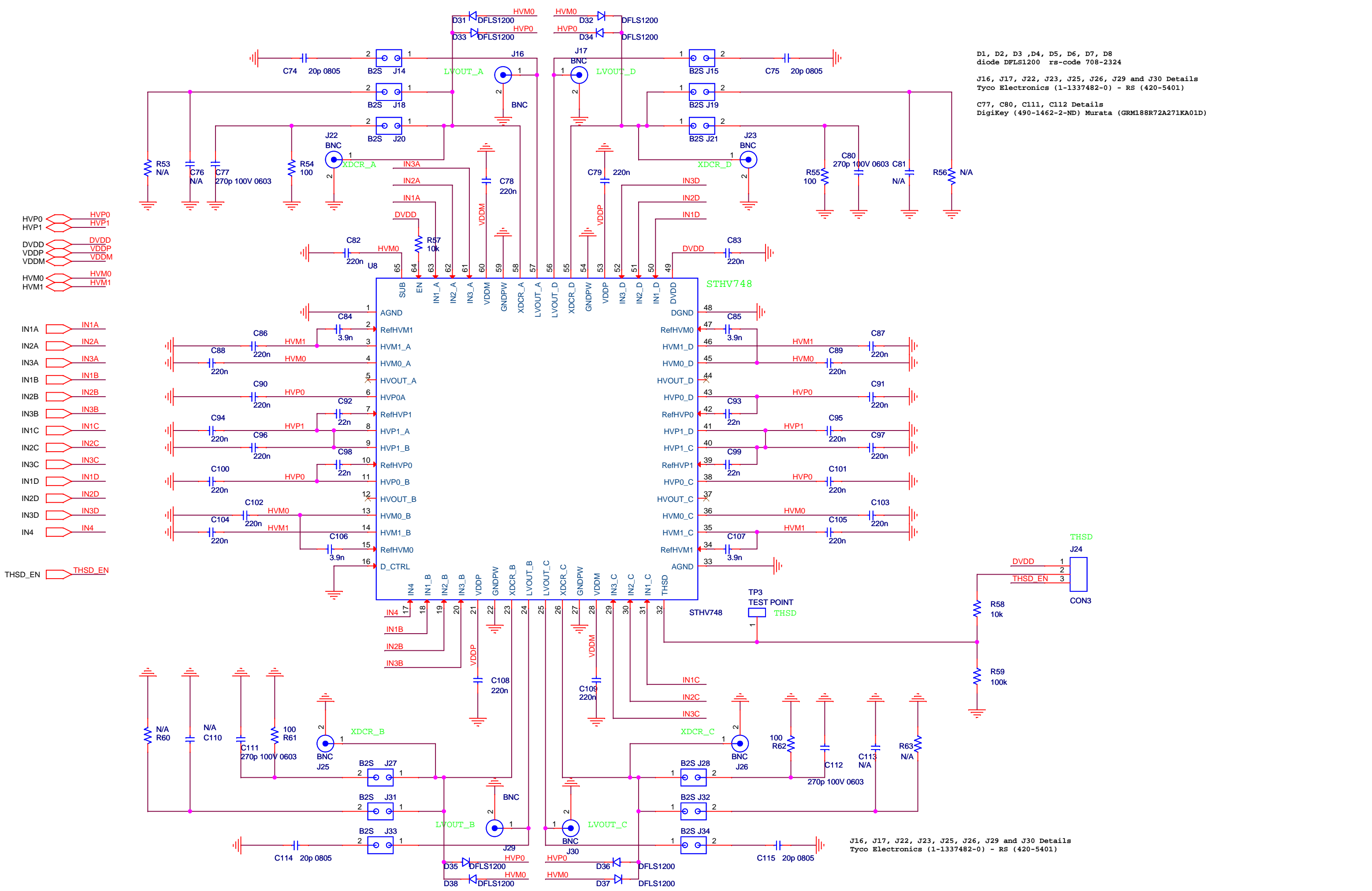


FPGA BANK 3
NOT USED

C35, C40, C51, C58, C66 Details
Murata (GRM31CR60J107ME39L) - Digikey (490-4539-1-ND7DK (C1608X5R0J475K) - Digikey (445-5178-2-ND)
Dimension 1206 - EIA 3216

C36, C37, C38, C41, C42, C52, C53, C59, C60, C67, C68 Details
Dimension 0603 - EIA 1608

Title		
STEVAL-IME0003V1 STMicroelectronics		
Size B	Document Number	Rev
	STHV748 Demonstration Board	1.01
Date:	Thursday, December 22, 2011	Sheet 7 of 9



D1, D2, D3 ,D4, D5, D6, D7, D8
 diode DFLS1200 rs-code 708-2324

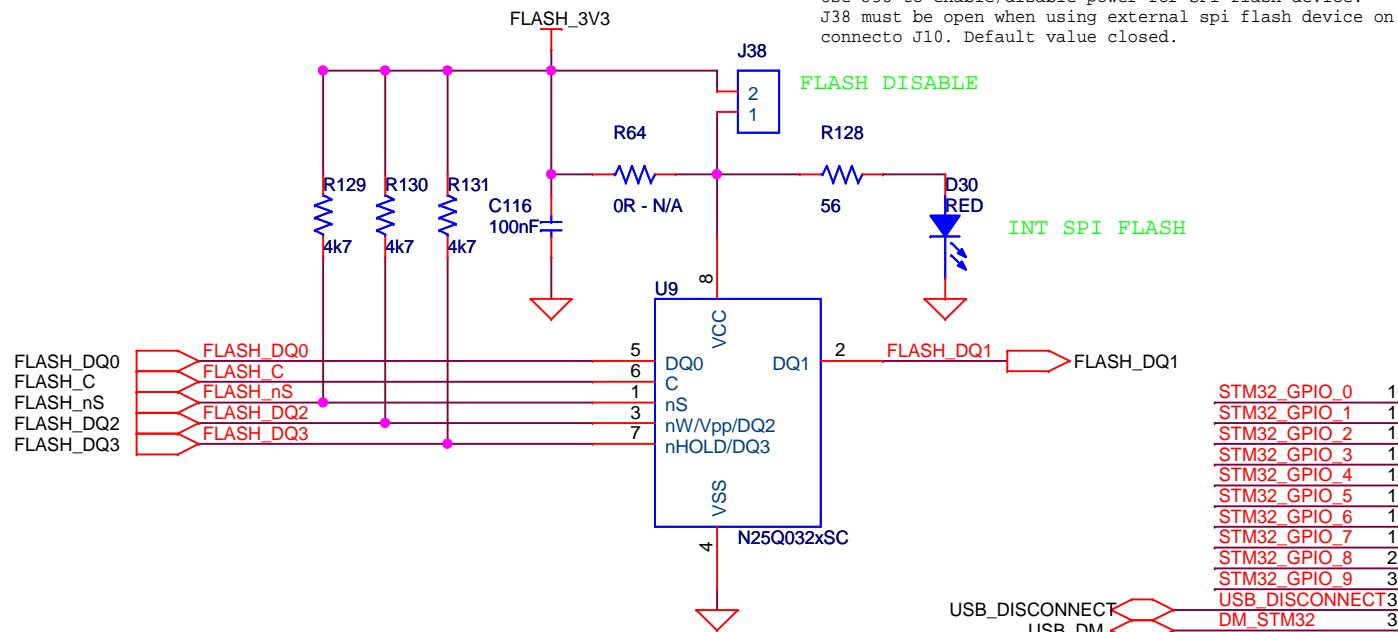
J16, J17, J22, J23, J25, J26, J29 and J30 Details
 Tyco Electronics (1-1337482-0) - RS (420-5401)

C77, C80, C111, C112 Details
 DigiKey (490-1462-2-ND) Murata (GRM188R72A271KA01D)

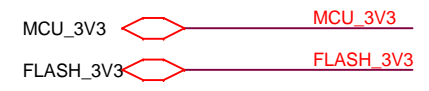
- HVP0 HVP0
- HVP1 HVP1
- DVDD DVDD
- VDDP VDDP
- VDDM VDDM
- HVM0 HVM0
- HVM1 HVM1
- IN1A IN1A
- IN2A IN2A
- IN3A IN3A
- IN1B IN1B
- IN2B IN2B
- IN3B IN3B
- IN1C IN1C
- IN2C IN2C
- IN3C IN3C
- IN1D IN1D
- IN2D IN2D
- IN3D IN3D
- IN4 IN4
- THSD_EN THSD_EN

Title		
STEVAL-IME003V1 STMICROELECTRONICS		
Size	Document Number	Rev
A3	STHV748 Demonstration Board	1.01
Date:	Thursday, December 22, 2011	Sheet 8 of 9

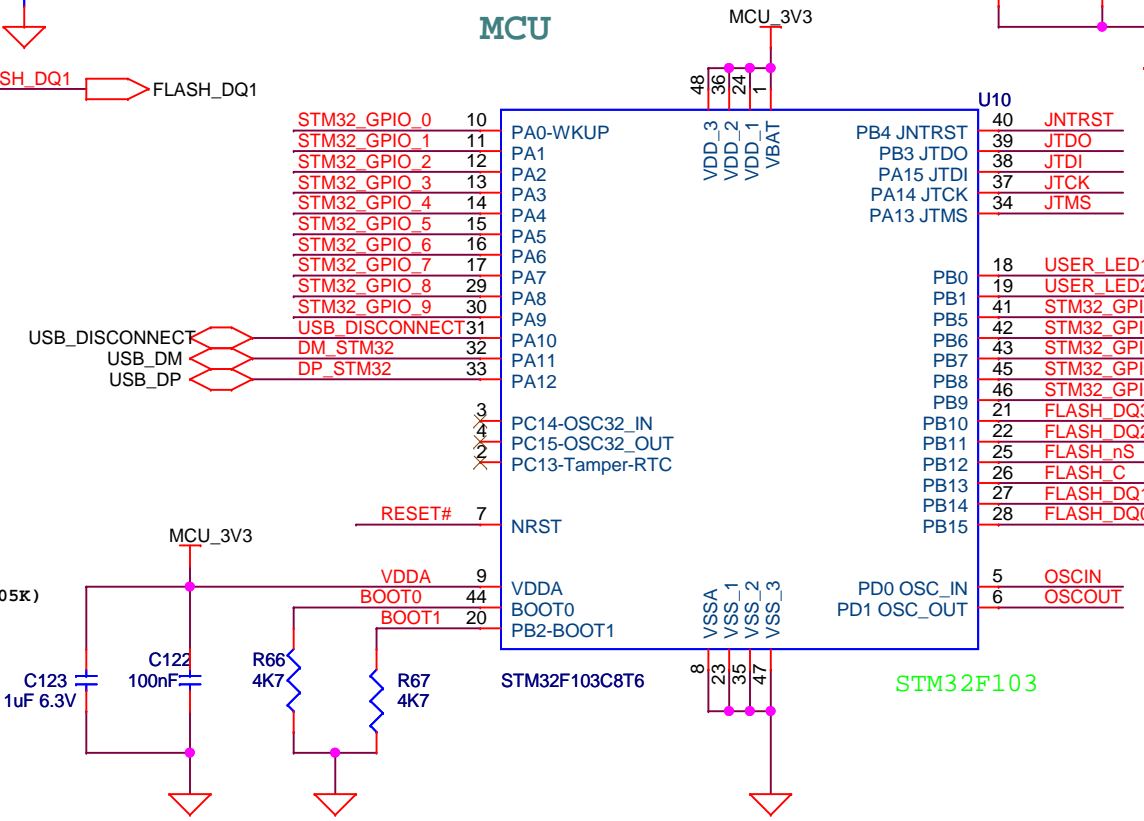
SPI FLASH



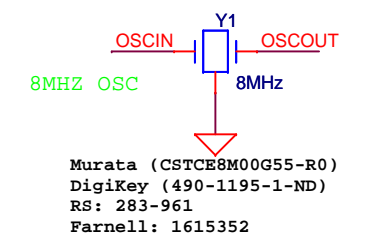
C123 Details:
 Digkey (445-4998-2-ND) - TDK (C1005X5R0J105K)
 Package 0402



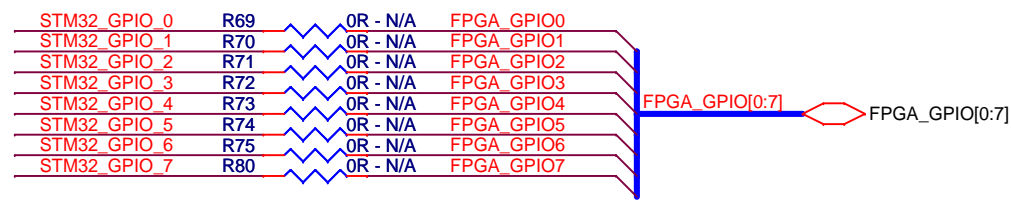
MCU



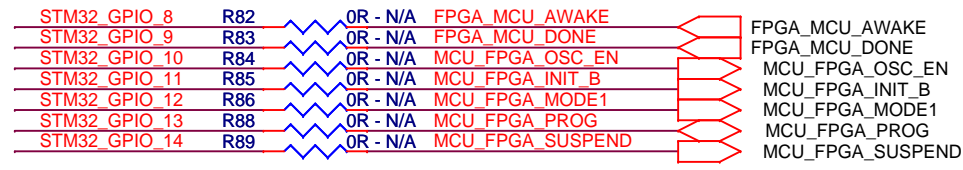
OSCILLATOR



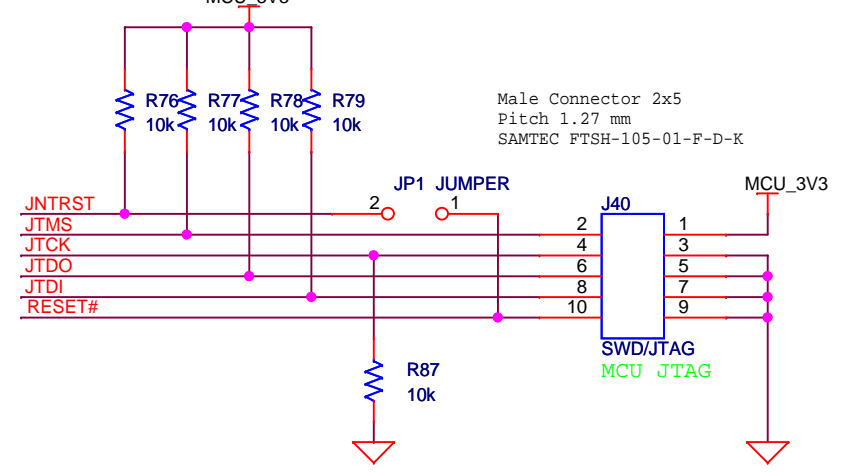
OPTIONAL FPGA I/O



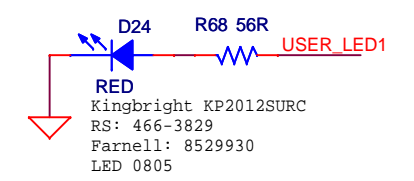
OPTIONAL FPGA CONFIGURATION SIGNALS



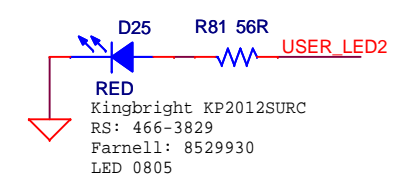
JTAG/SWD



DOWNLOAD



FLASH READY



Title		
STEVAL-IME003V1 STMicroelectronics		
Size B	Document Number STHV748 Demonstration Board	Rev 1.01
Date:	Thursday, December 22, 2011	Sheet 9 of 9