

HW-S7-SP701 Rev 01

SP701 EVALUATION BOARD. (XC7S100-2FGGA676C)

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2100 Logic Drive

San Jose, CA 95124

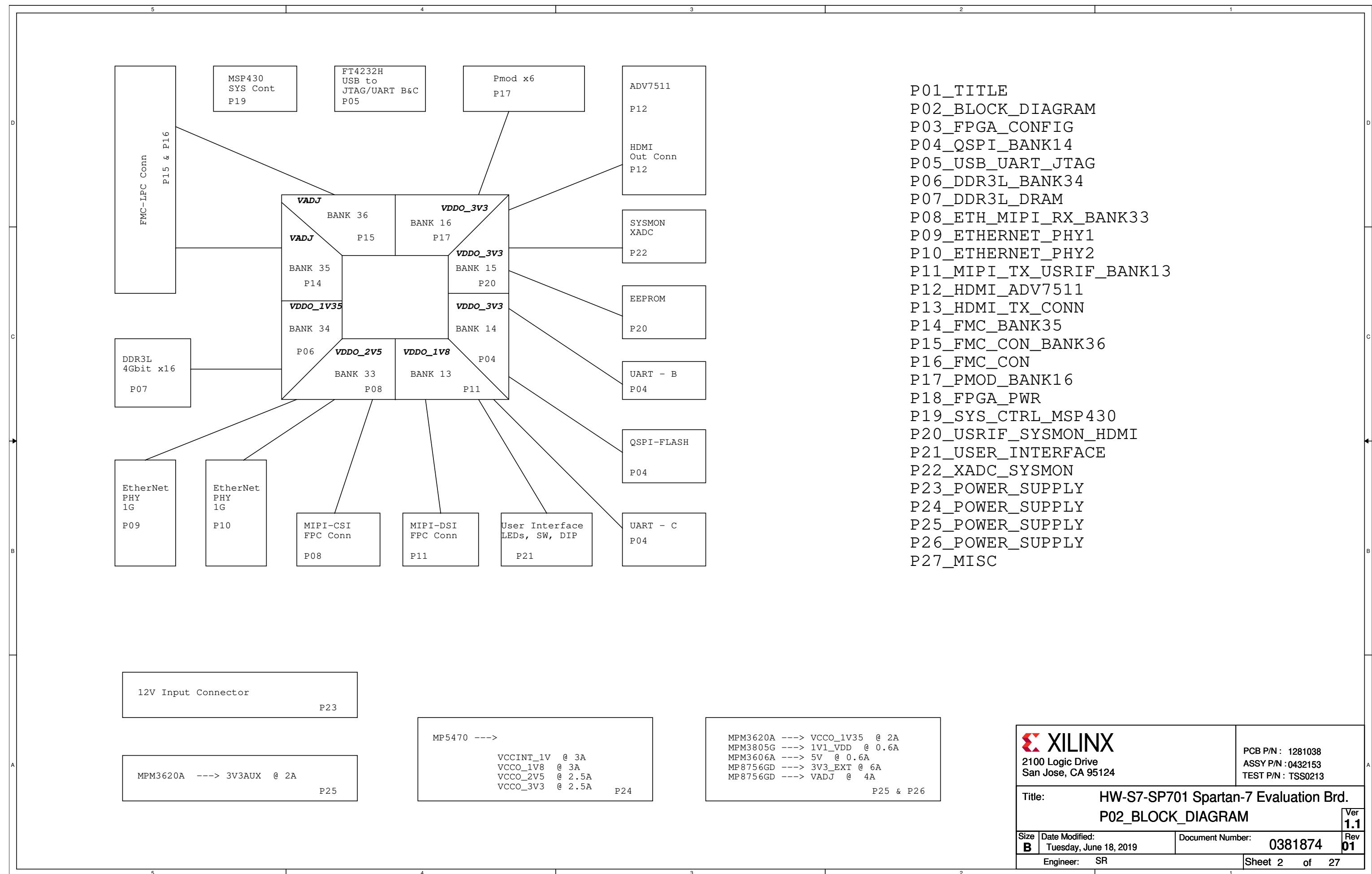
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ASSY P/N : 0432153
TEST P/N : TSS0213

Title: HW-S7-SP701 Spartan-7 Evaluation Brd.
P01_TITLE

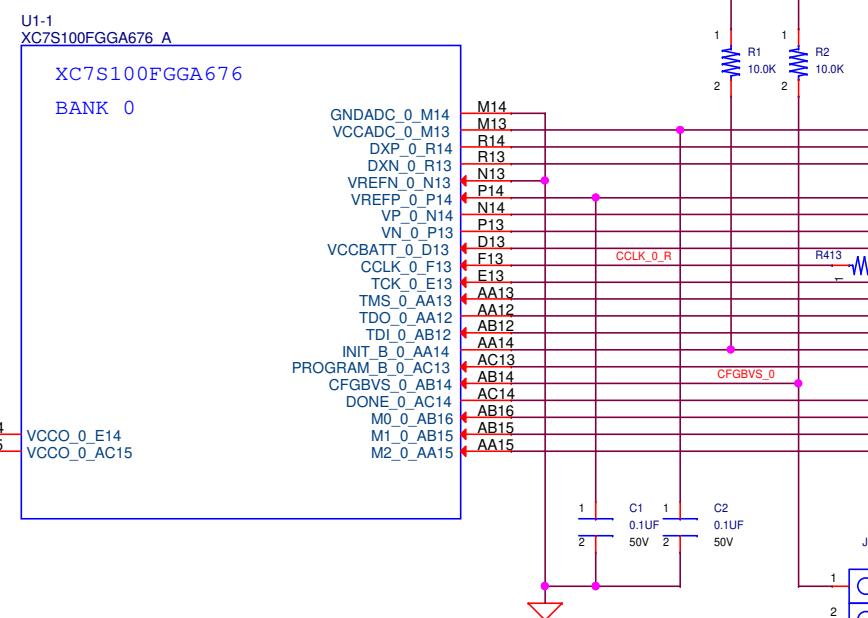
Ver
1.1

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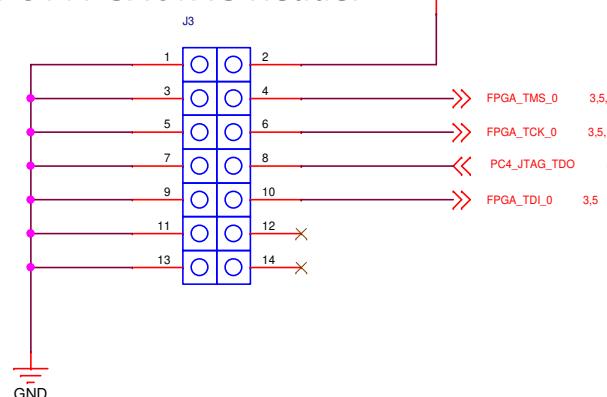
Rev
01



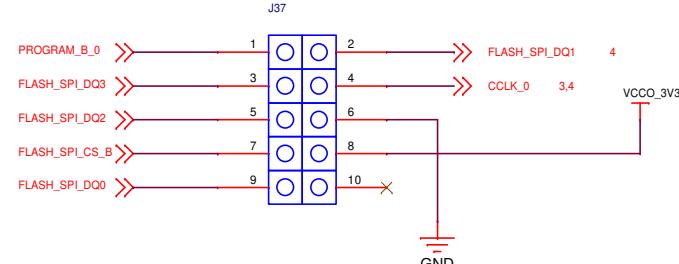
Bank 0 Dedicated Configuration Pins



PC4 FPGA JTAG Header

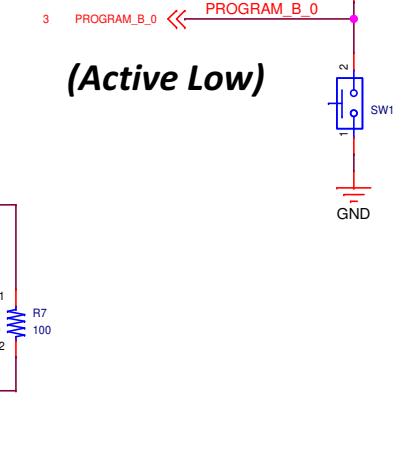


Direct QSPI Flash Program Header



PROGRAM_B SW

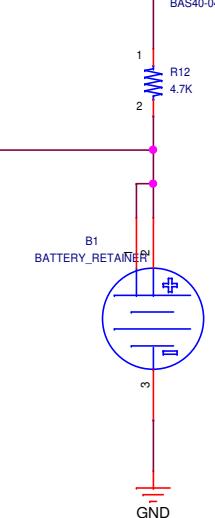
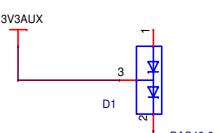
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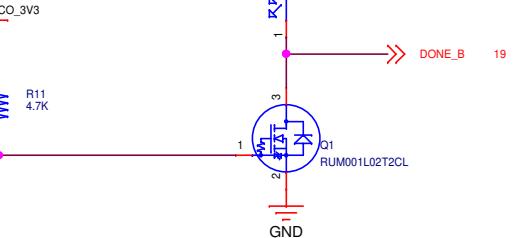
Sch Note: Switch on 1st Pos DIP SW to stall FPGA on power on configuration during Direct SPI FLASH Programming

Configuration Mode	M[2:0]	Status
Master SPI	001	
JTAG	101	Default

Sch Note: INIT_B can externally be held Low during power-up to stall the power-on configuration sequence at the end of the initialization process. And it can be useful while Direct Programming of SPI FLSH



DONE



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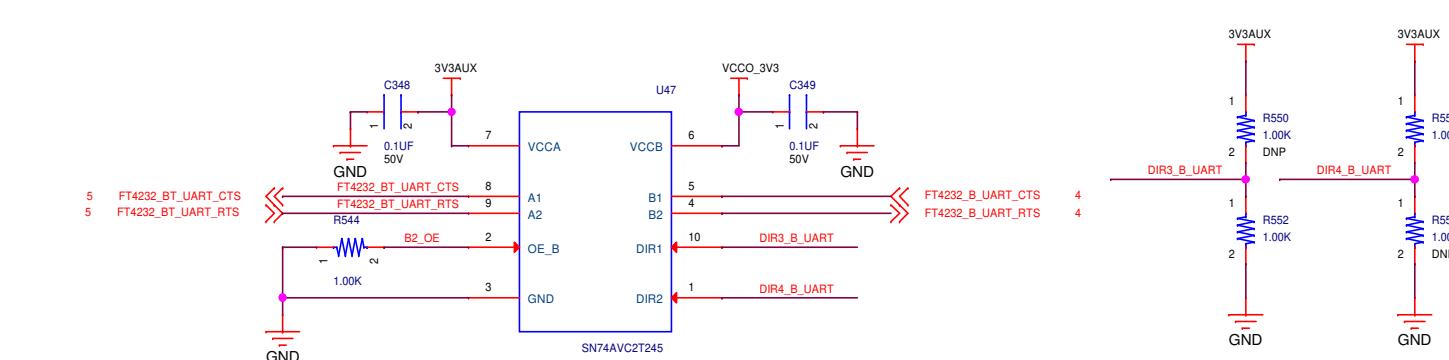
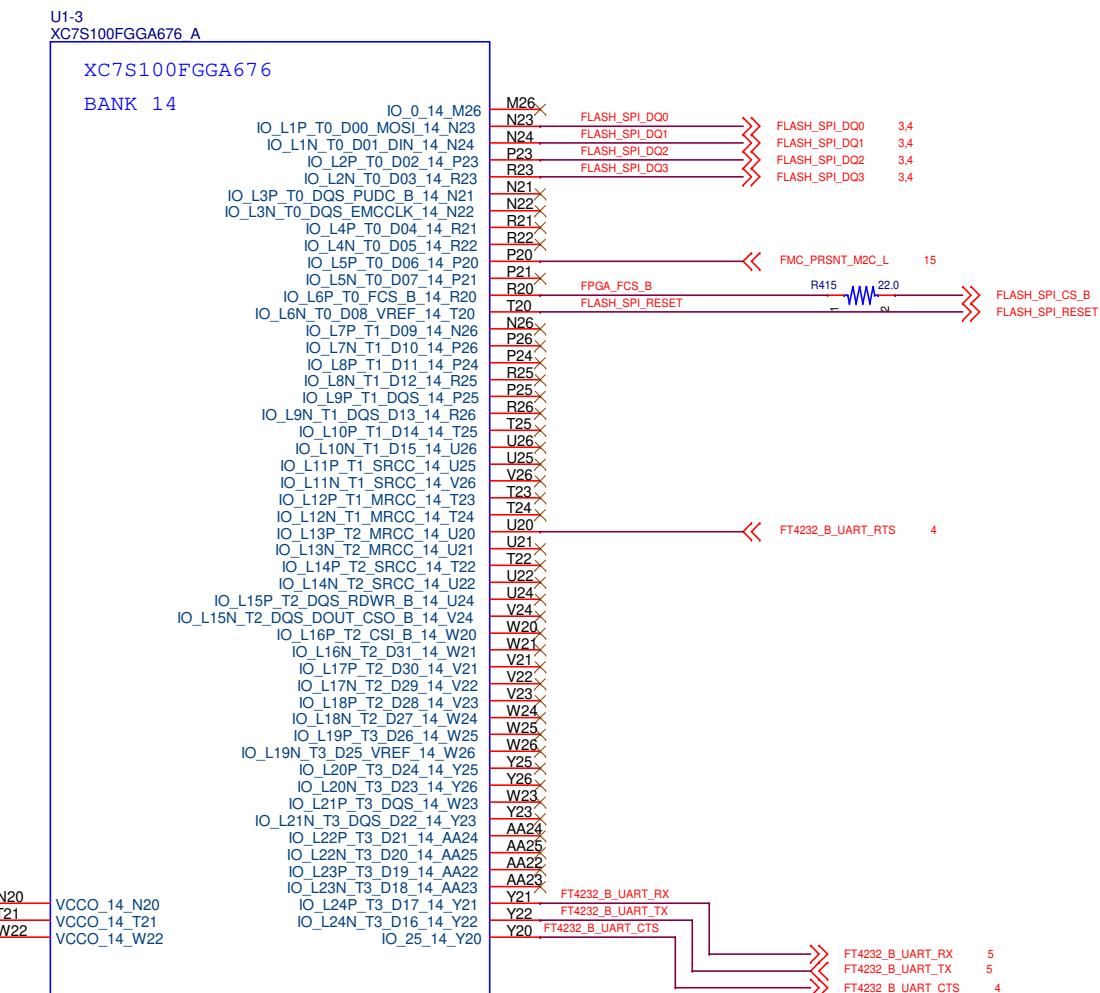
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 P03_FPGA_CONFIG

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 Rev 01

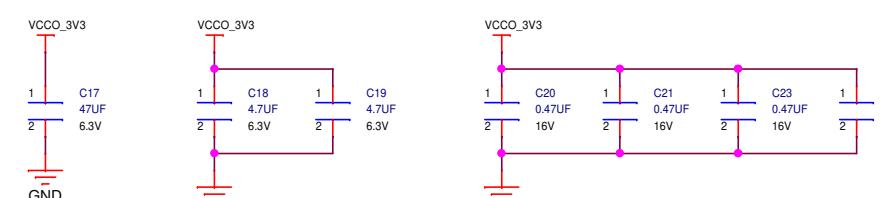
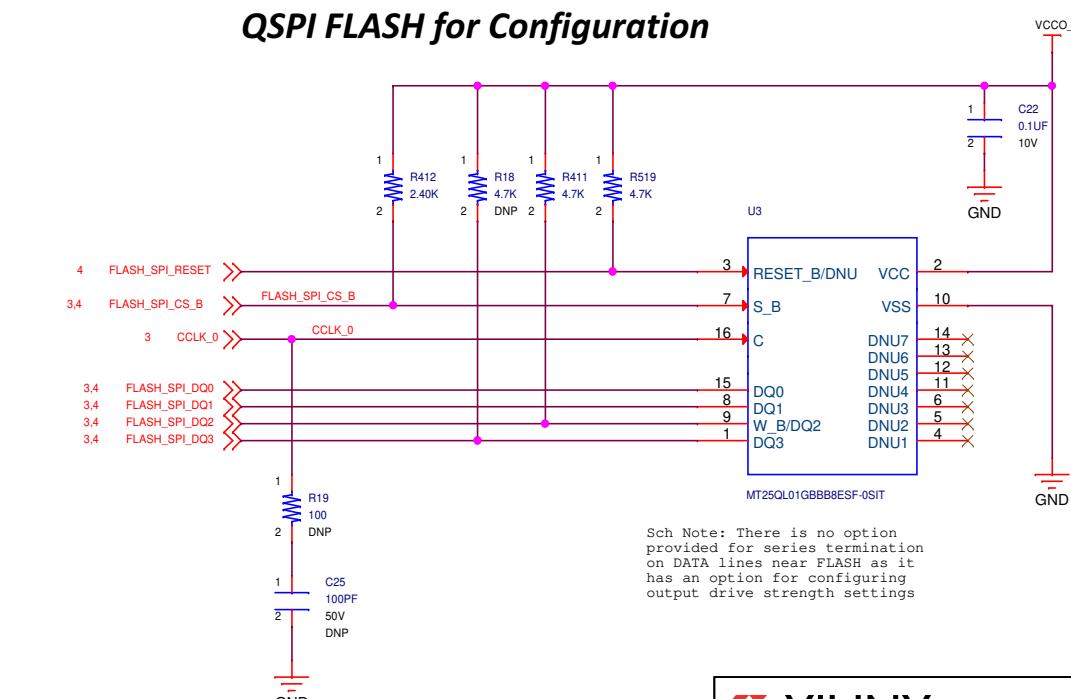
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Bank 14 : QSPI Flash for FPGA Configuration

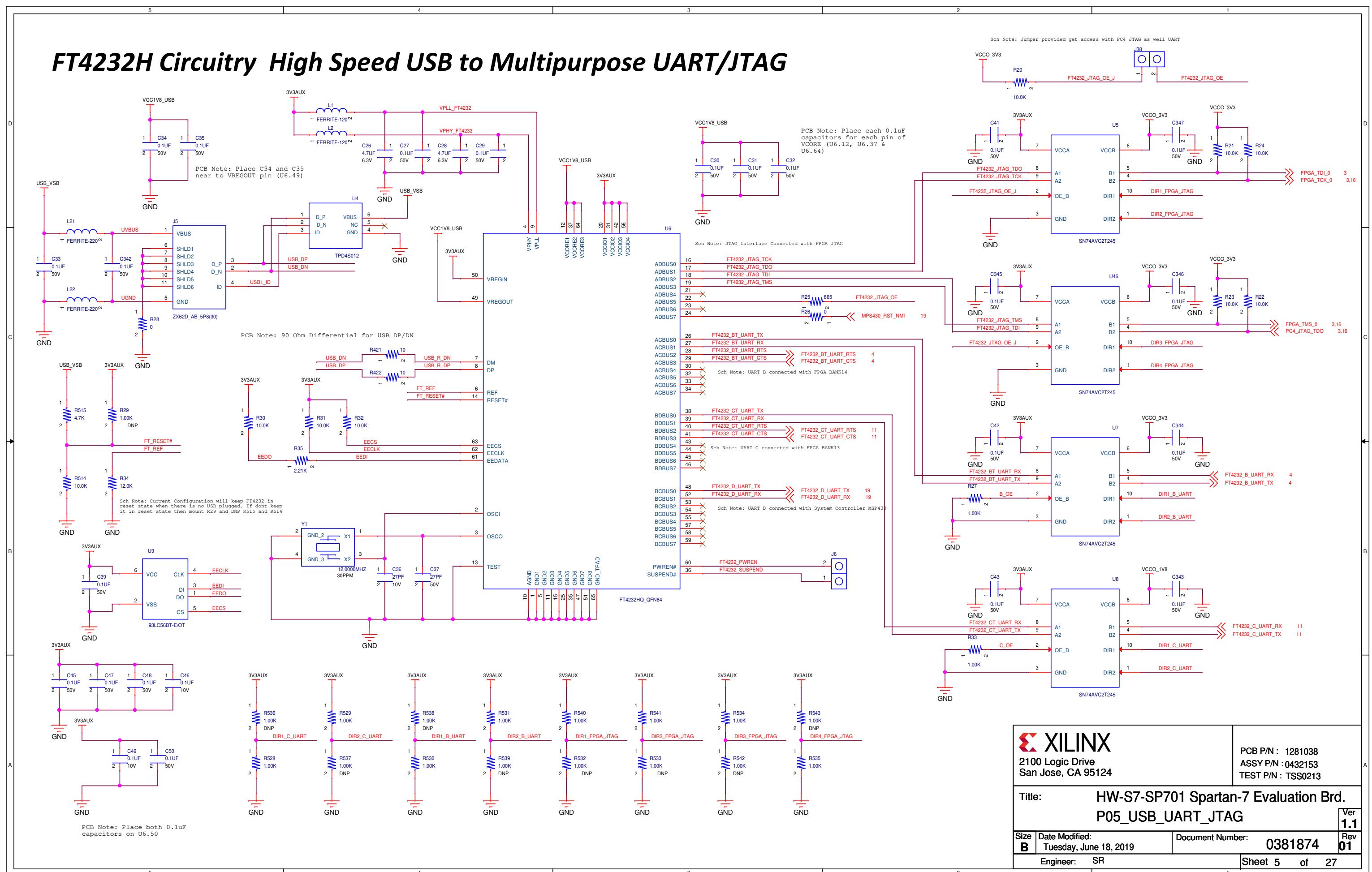


QSPI FLASH for Configuration



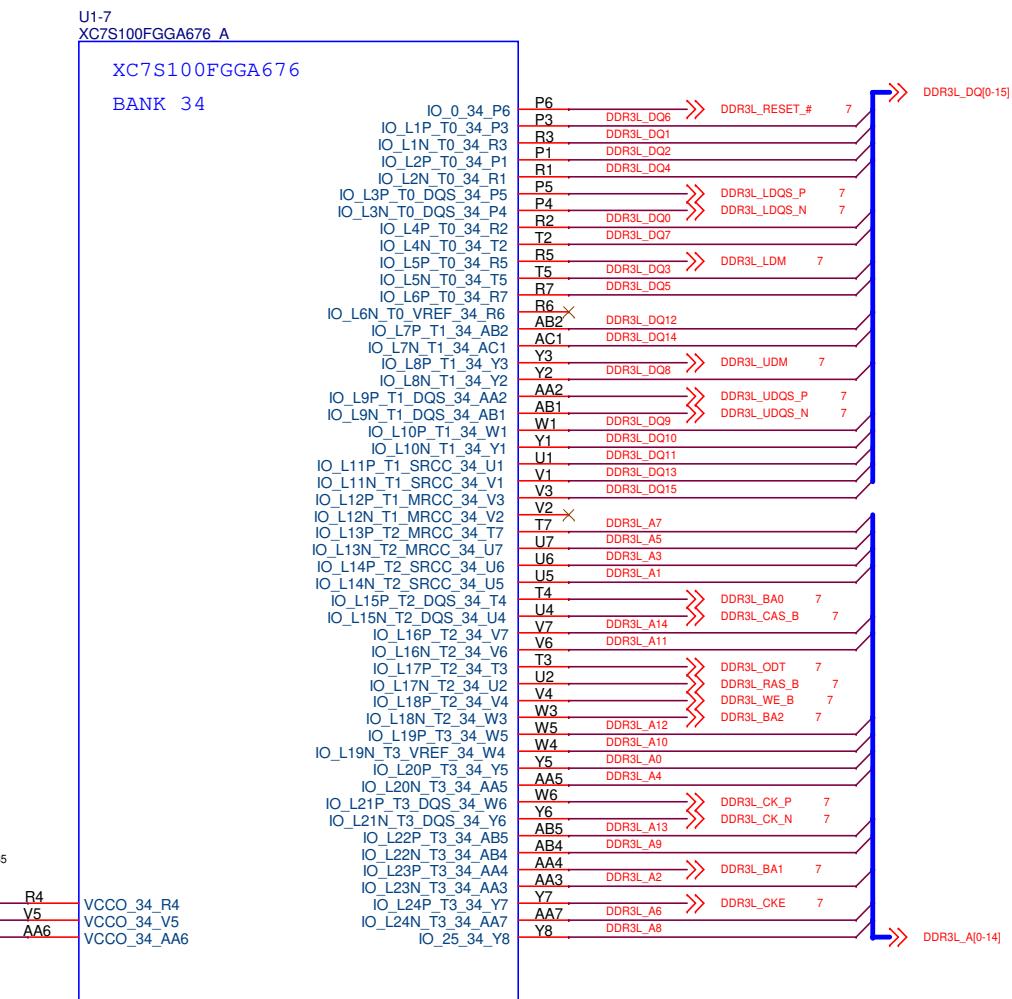
XILINX		PCB P/N : 1281038
2100 Logic Drive San Jose, CA 95124		ASSY P/N : 0432153
TEST P/N : TSS0213		
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Size: B	Date Modified: Tuesday, June 18, 2019	Document Number: 0381874 Rev 01
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FT4232H Circuitry High Speed USB to Multipurpose UART/JTAG

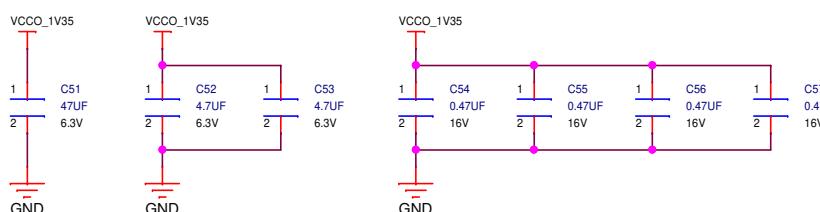
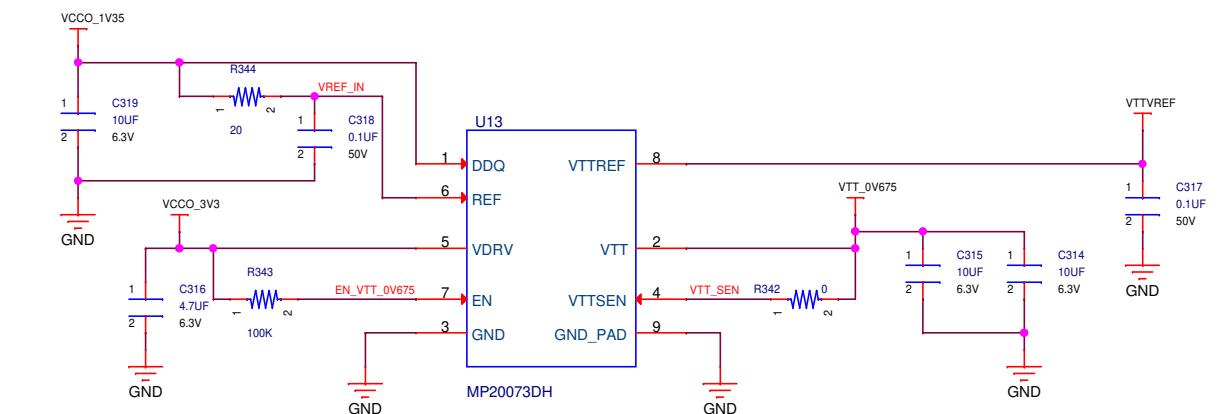


DDR3L Controller

Sch Note: Shall use Internal VREF because Spartan 7S100 support only 800 Mb/s data rate. So external Reference not provided as per UG586_7Series_MIS.



DDR3L VTT and VREF Power Supply



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TEST P/N : TSS0213

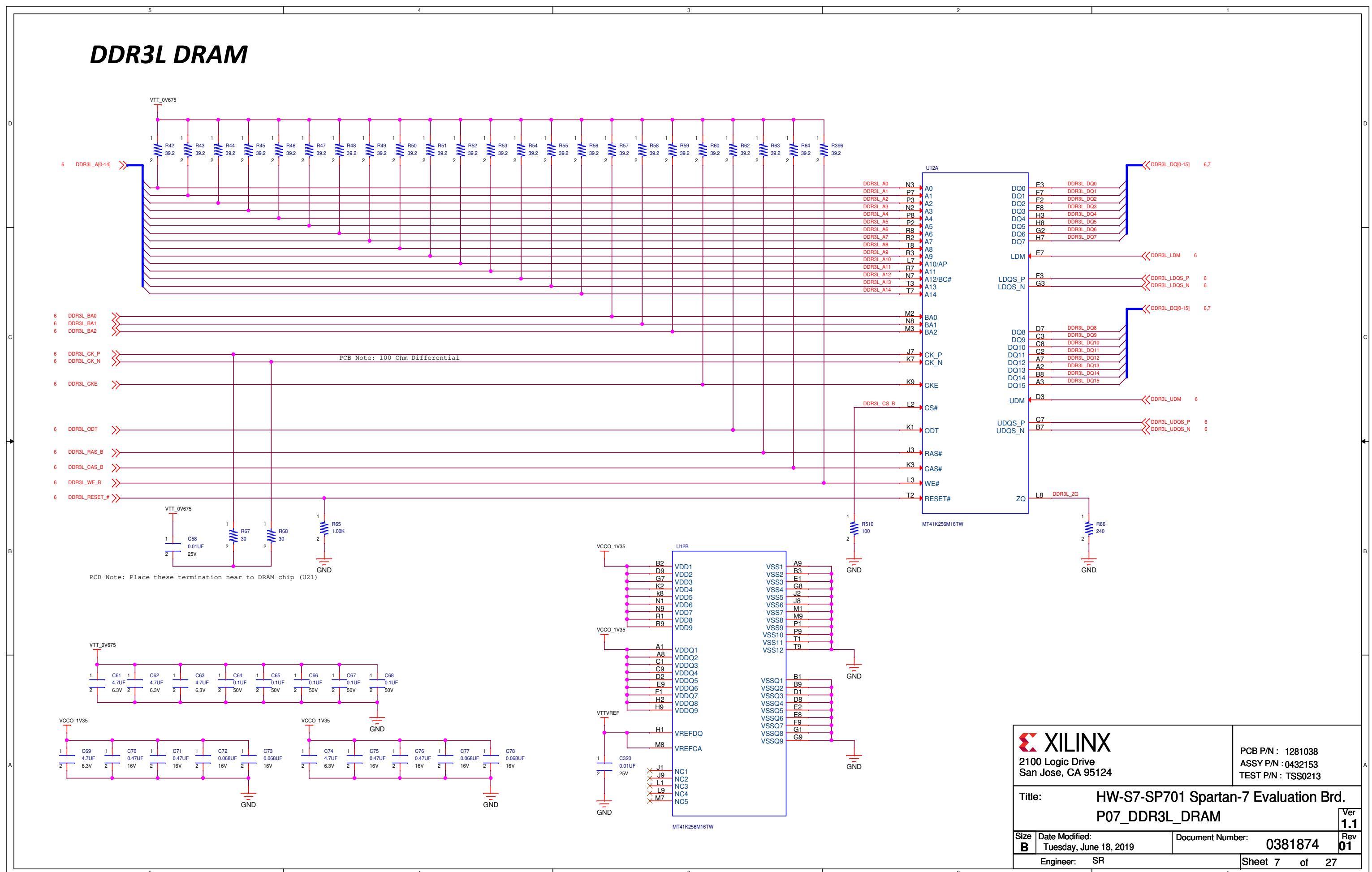
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P06_DDR3L_BANK34

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Rev 01

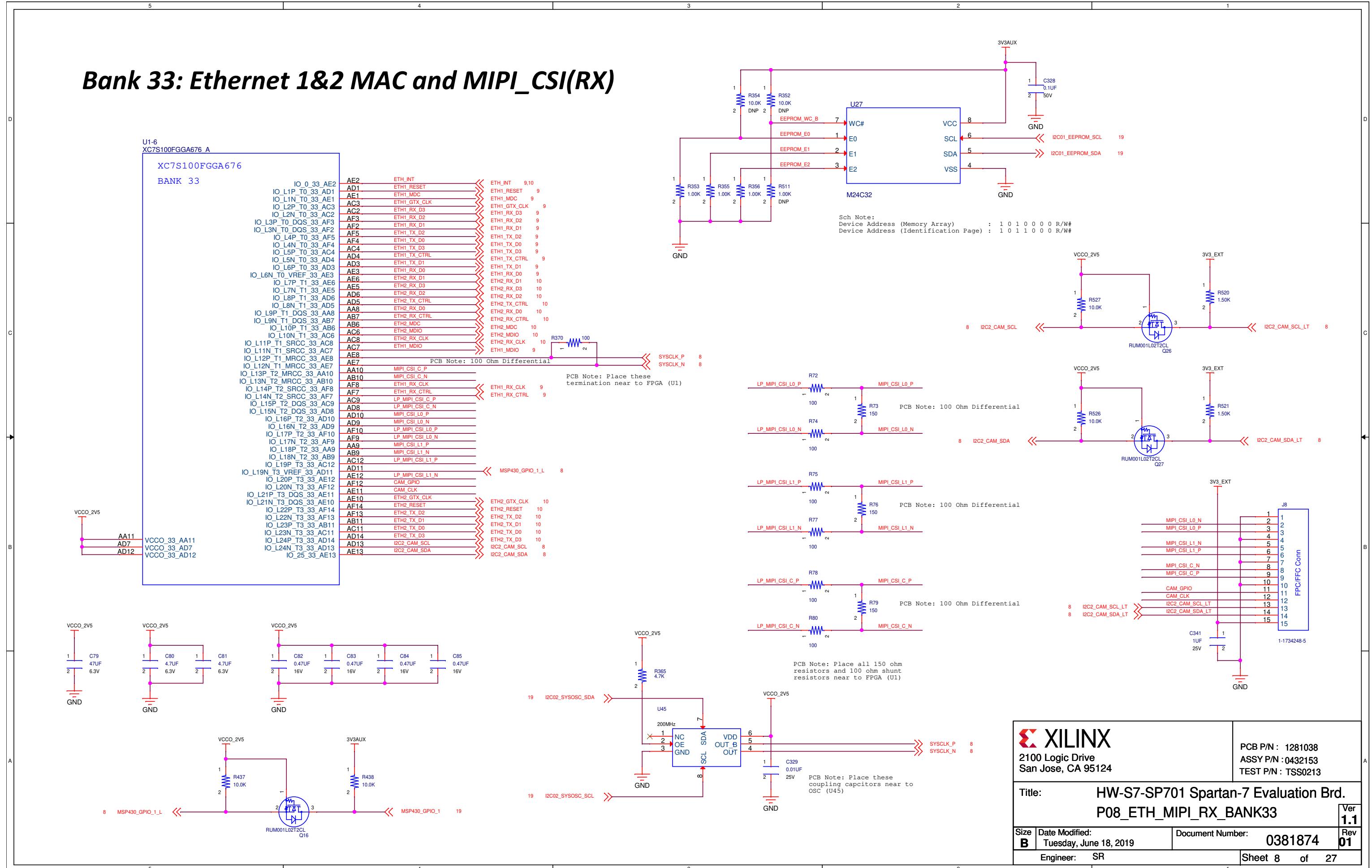
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DDR3L DRAM



Bank 33: Ethernet 1&2 MAC and MIPI_CSI(RX)



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PCB P/N : 1281038
ASSY P/N : 0432153
TEST P/N : TSS0213

Title: HW-S7-SP701 Spartan-7 Evaluation Brd.
P08_ETH_MIPI_RX_BANK33

Ver 1.1

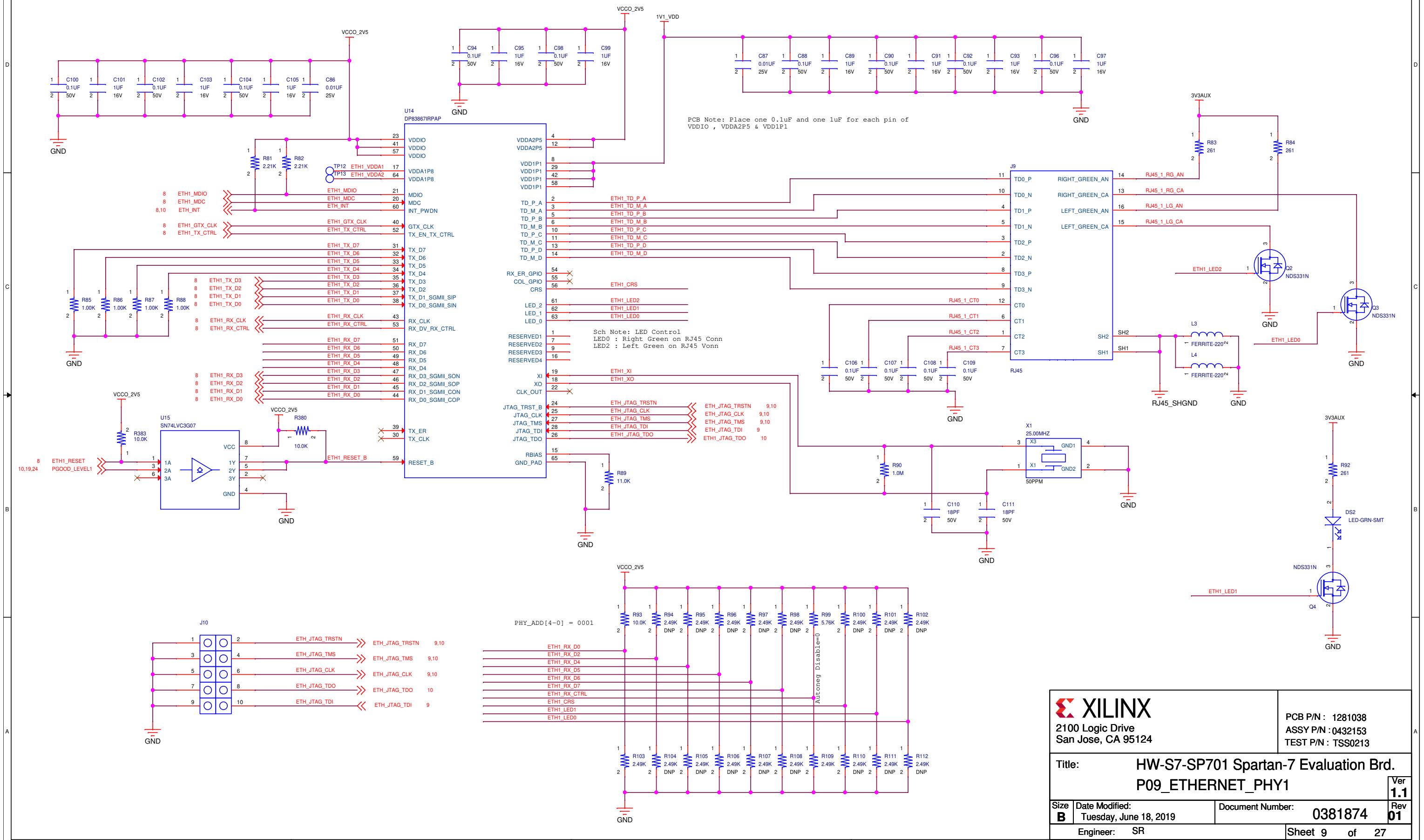
Size Date Modified: Tuesday, June 18, 2019 Document Number: 0381874

Rev 01

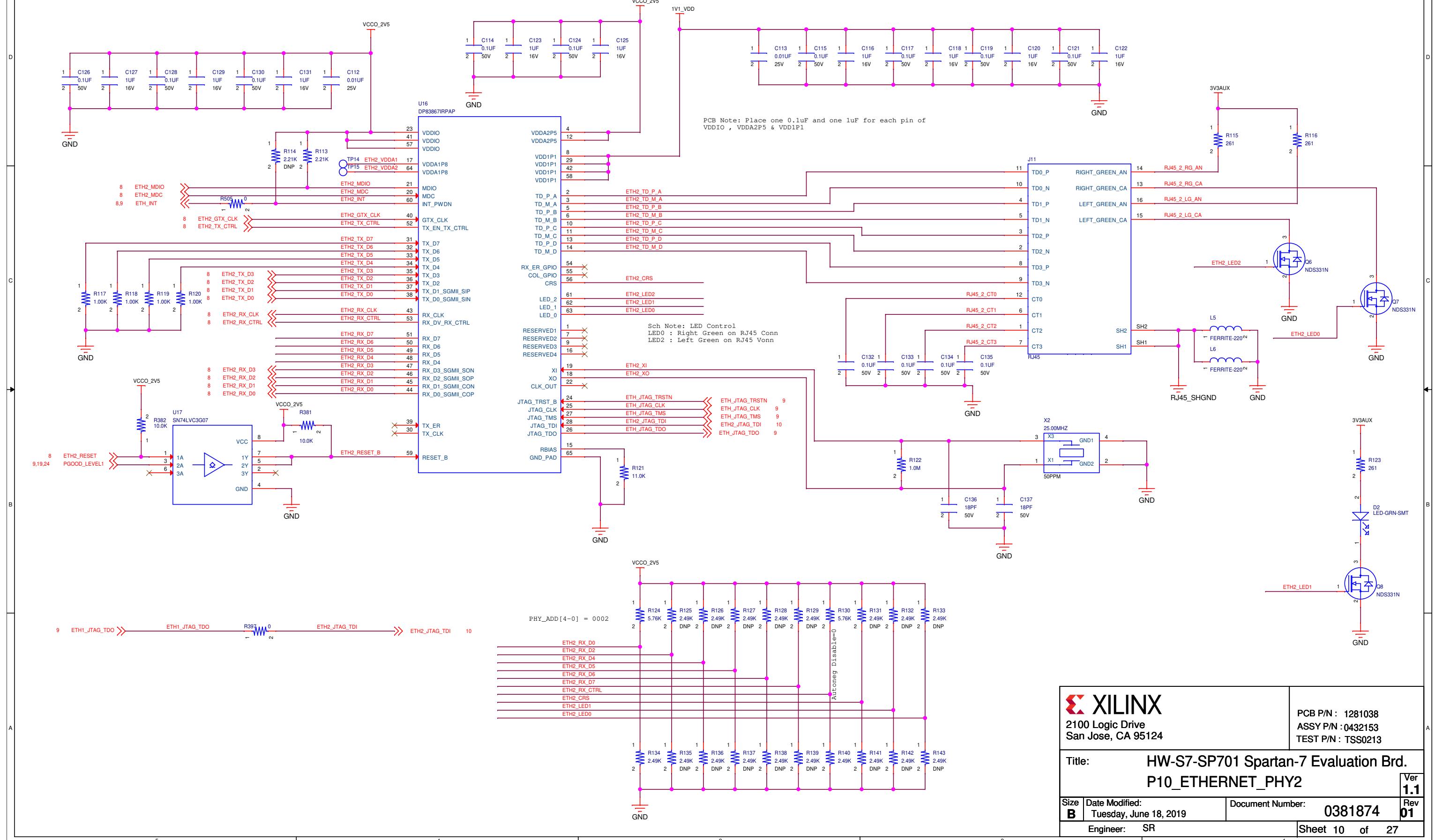
Engineer: SR

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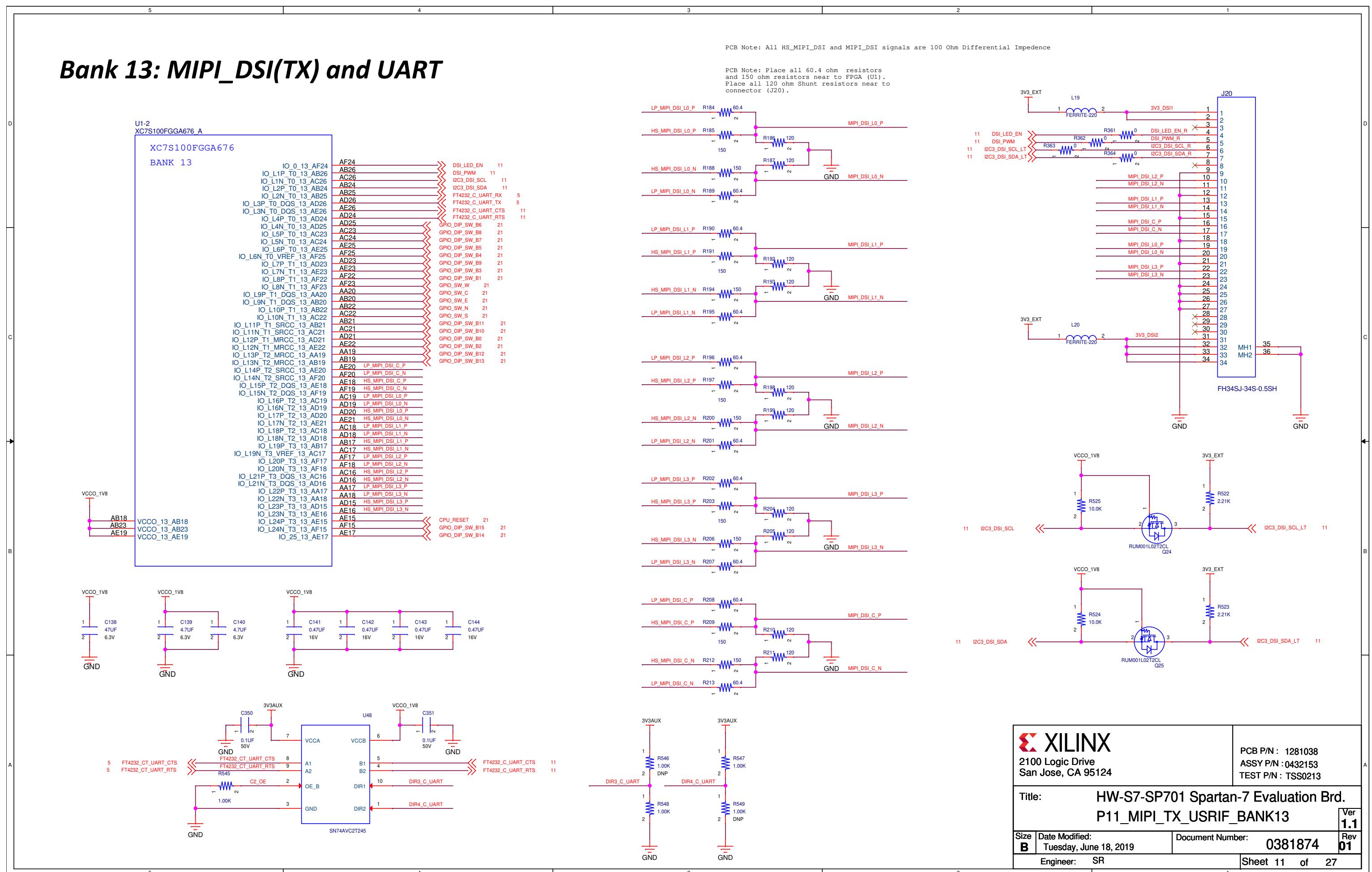
Ethernet 1 PHY and RJ45 with Magnetics



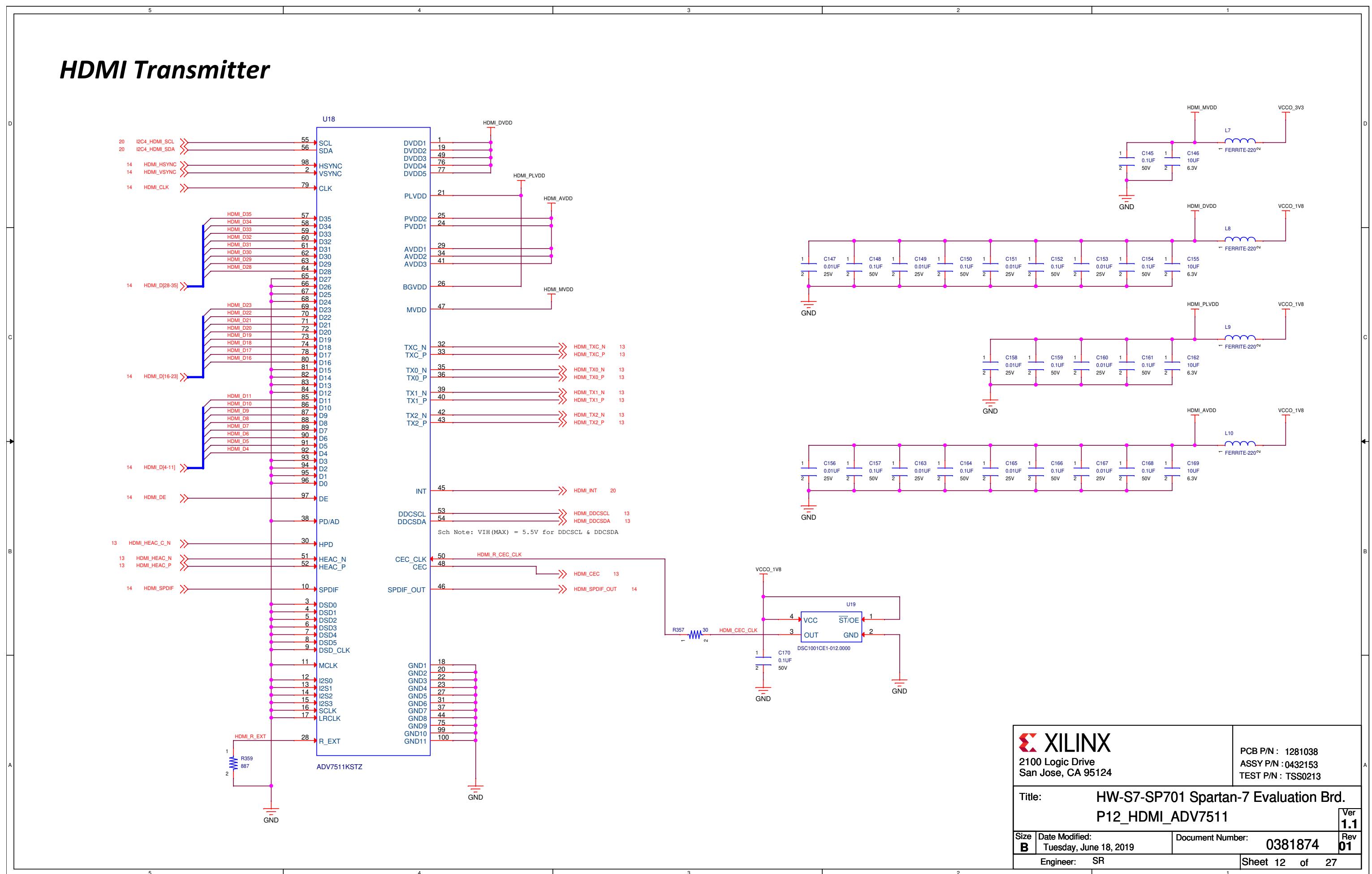
Ethernet 2 PHY and RJ45 with Magnetics



Bank 13: MIPI_DSI(TX) and UART



HDMI Transmitter

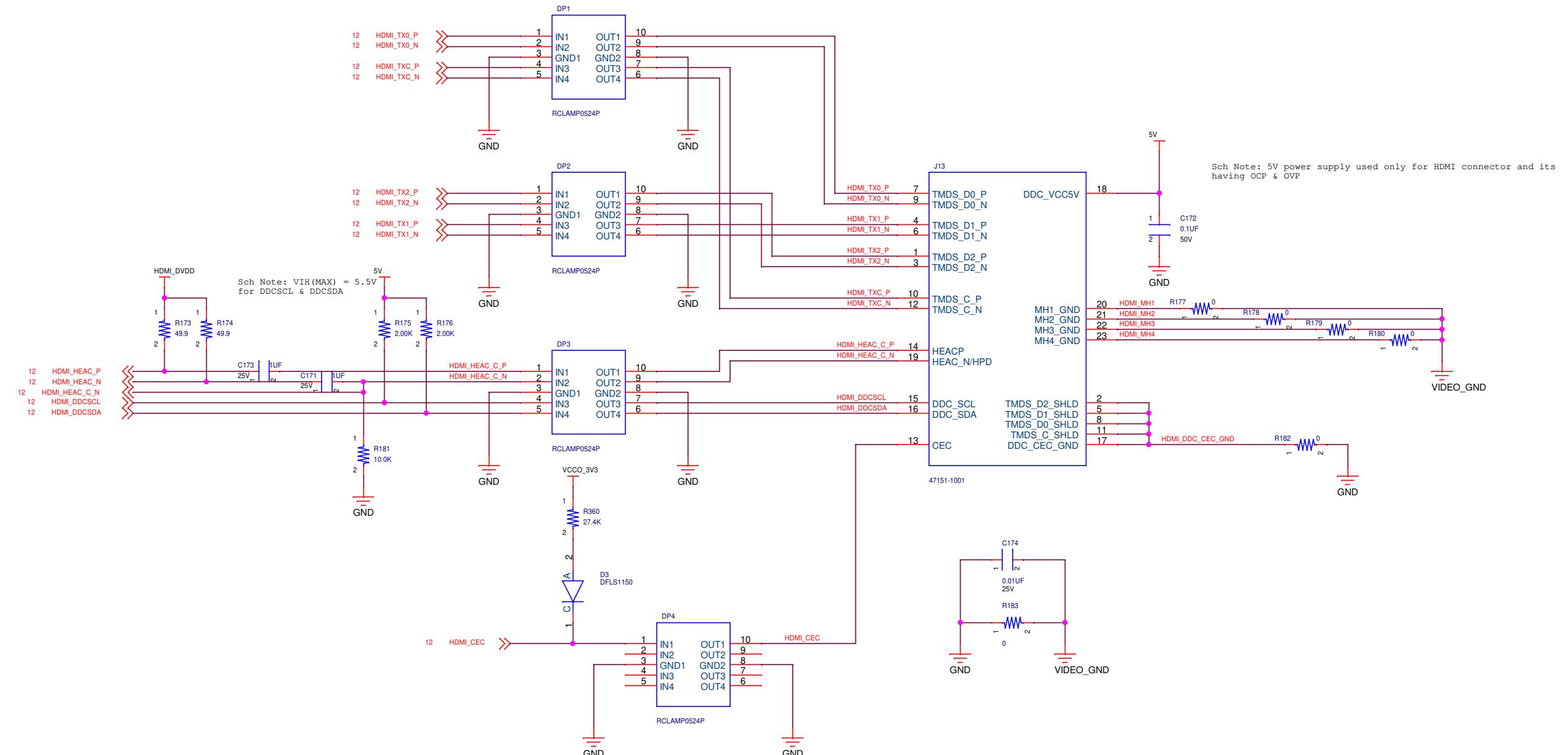


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PCB P/N : 1281038
ASSY P/N : 0432153
TEST P/N : TSS0213

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HDMI Out Connector



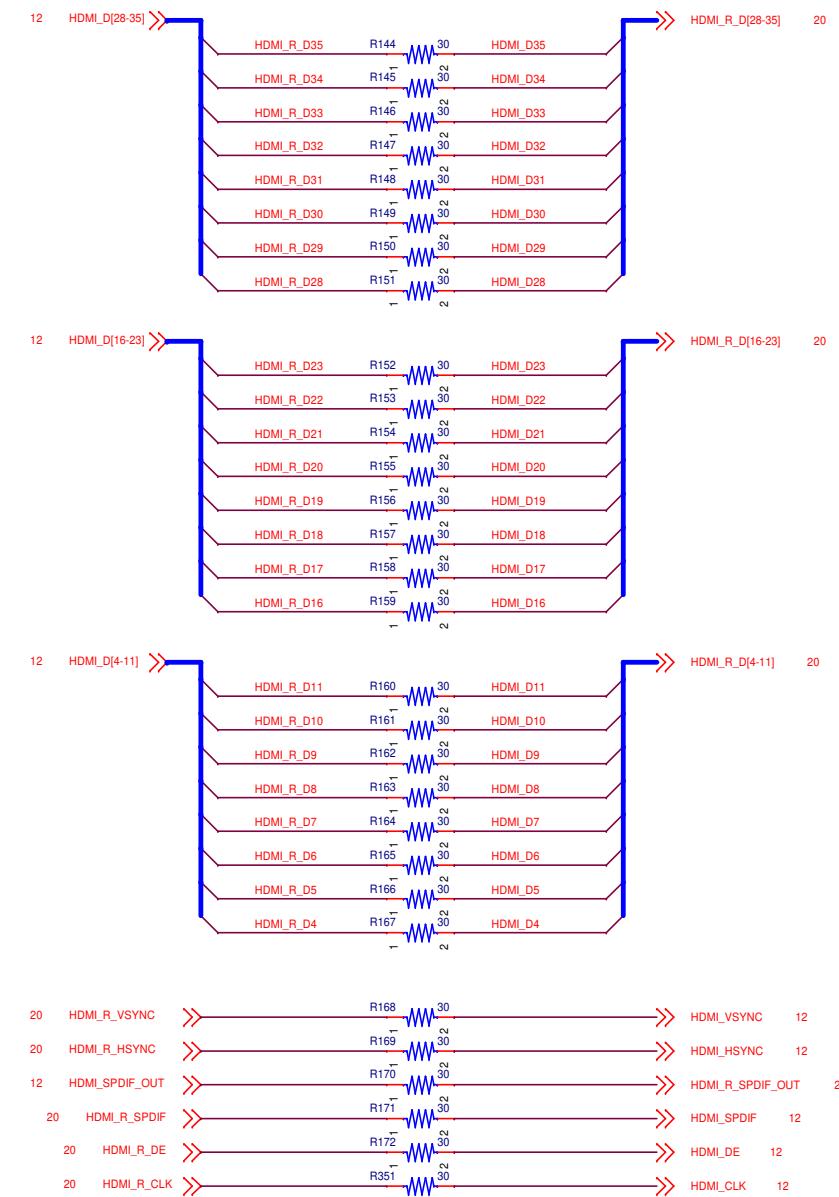
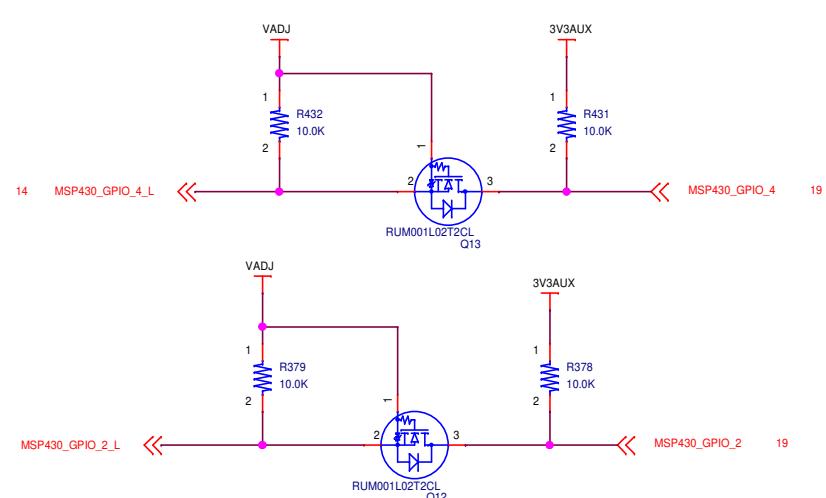
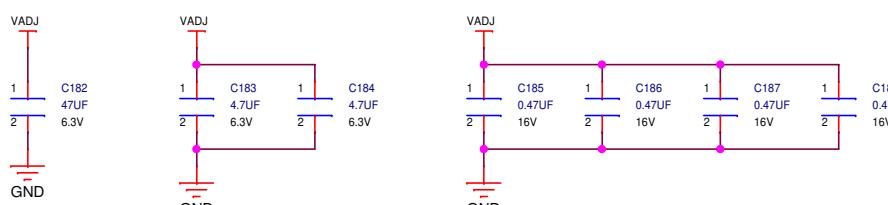
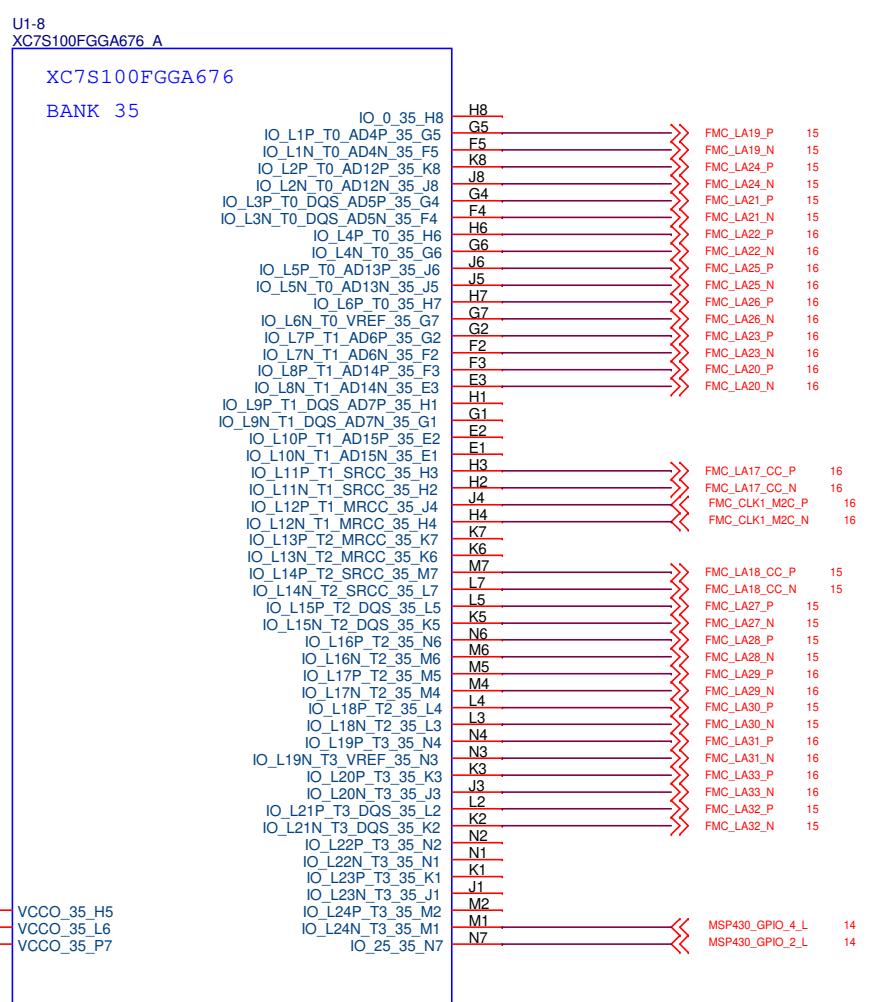
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PCB P/N : 1281038
ASSY P/N : 0432153
TEST P/N : TSS0213

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Bank 35: FMC LPC Signals

HDMI Signals



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PCB P/N : 1281038
ASSY P/N : 0432153
TEST P/N : TSS0213

Title: HW-S7-SP701 Spartan-7 Evaluation Brd.
P14_FMC_BANK35

Ver 1.1

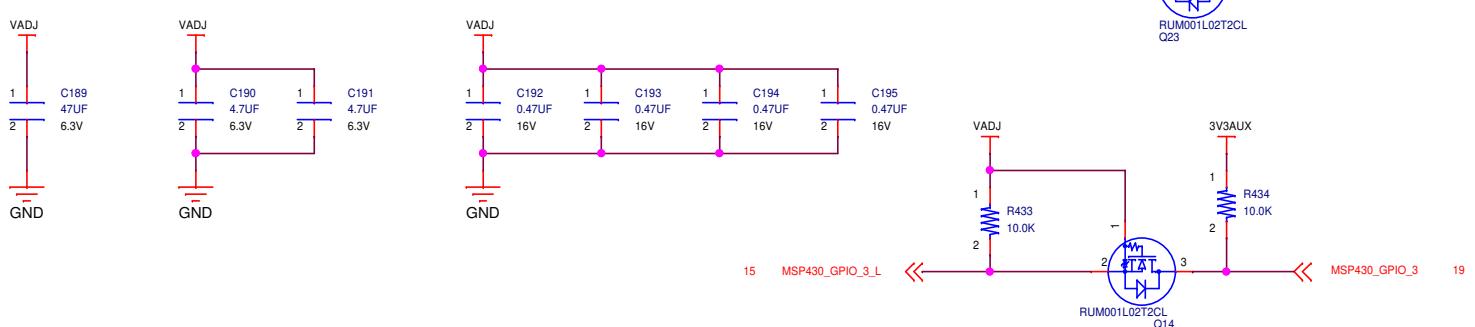
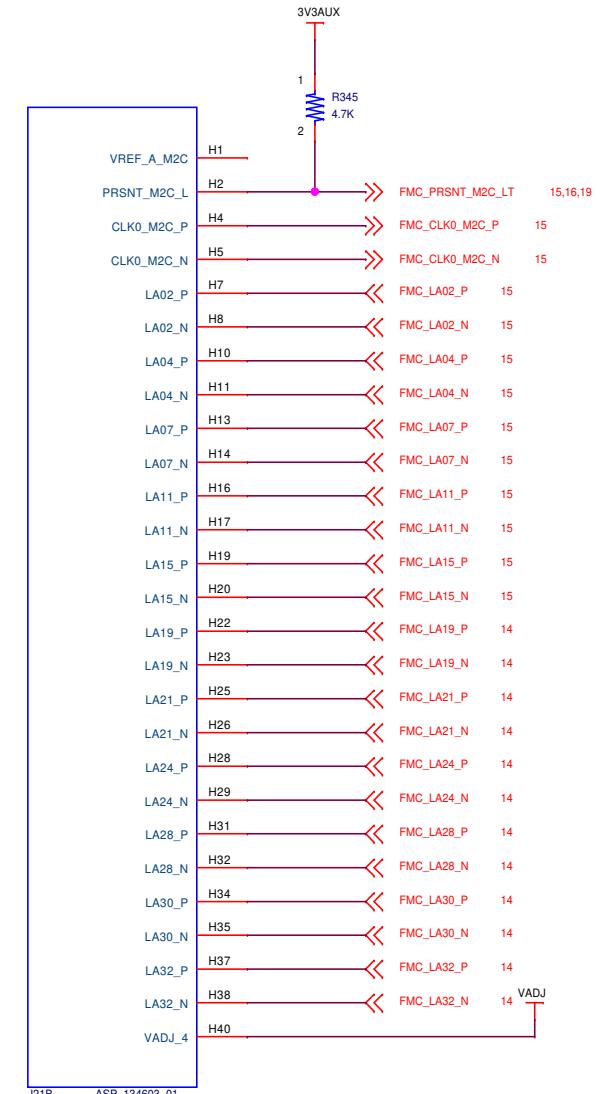
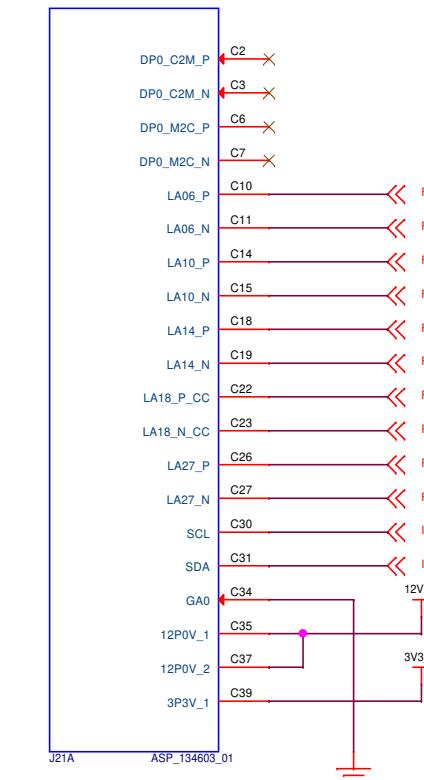
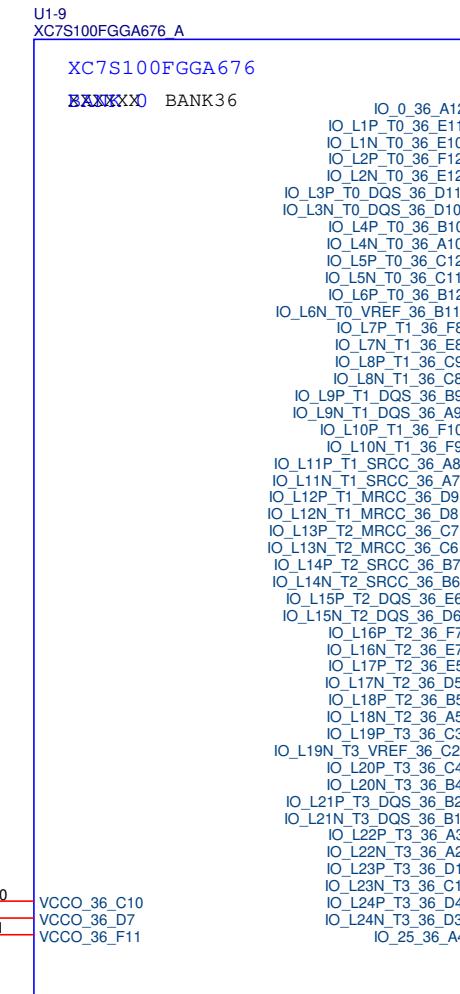
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Bank 36: FMC LPC Signals

FMC LPC Connector



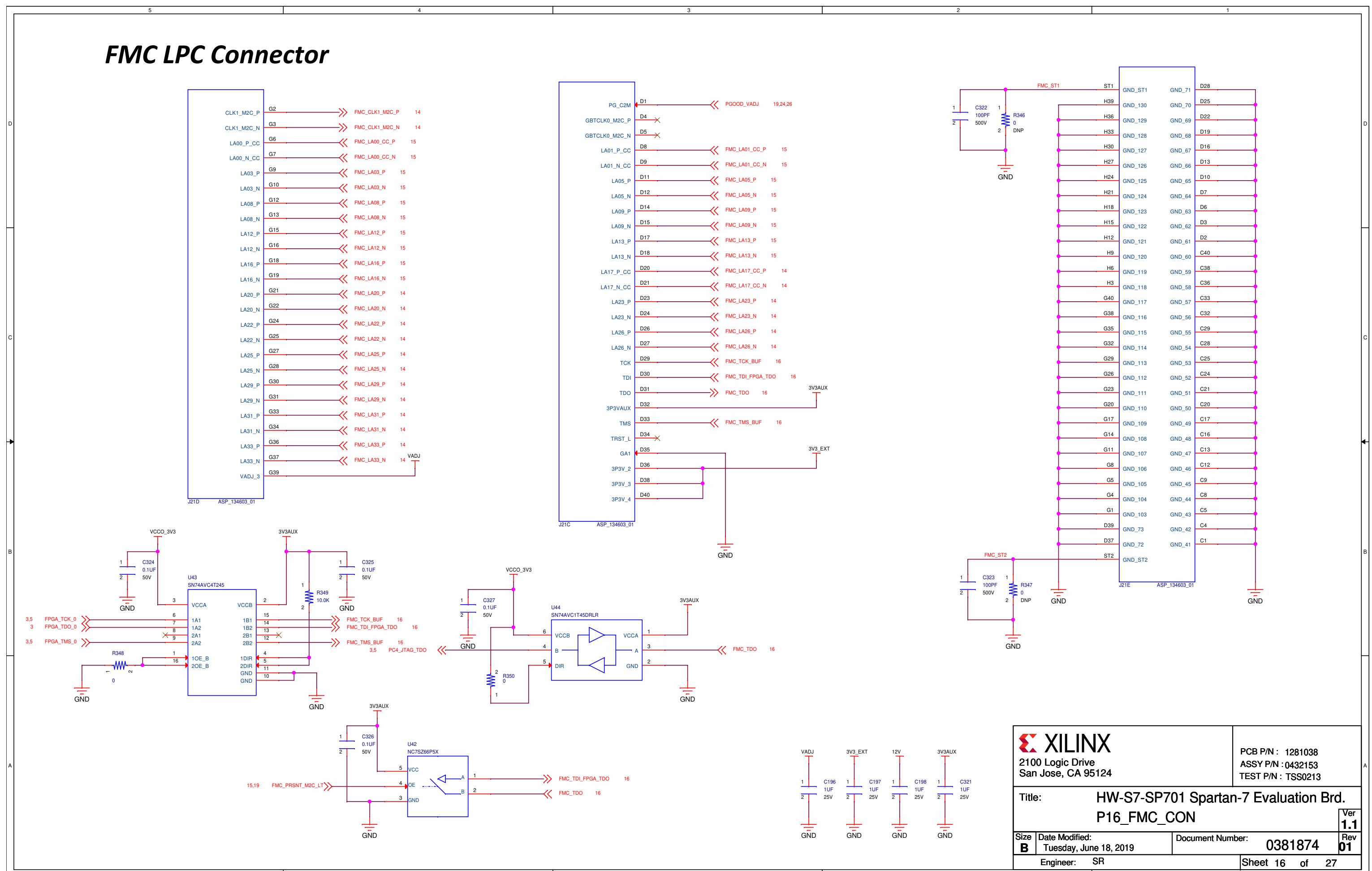
XILINX
2100 Logic Drive
San Jose, CA 95124

PCB P/N : 1281038
ASSY P/N : 0432153
TEST P/N : TSS0213

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P15_FMC_CON_BANK36

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FMC LPC Connector



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PCB P/N : 1281038
ASSY P/N : 0432153
TEST P/N : TSS0213

Title: HW-S7-SP701 Spartan-7 Evaluation Brd.
P16_FMC_CON

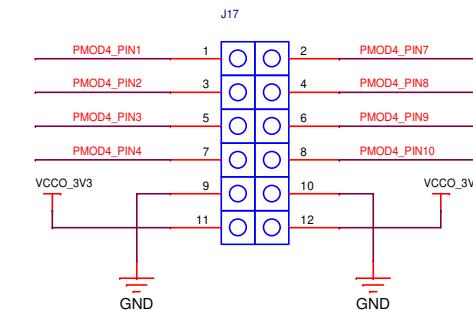
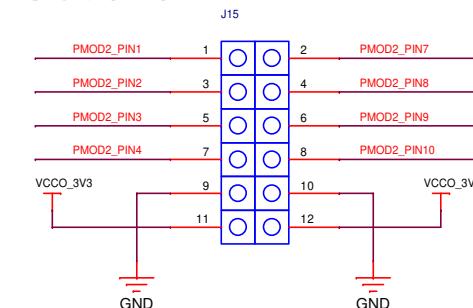
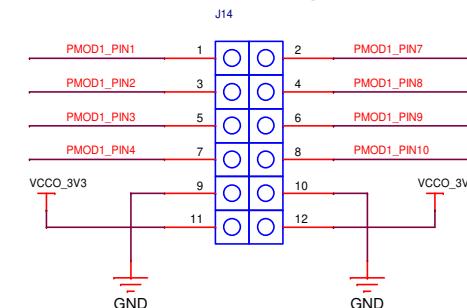
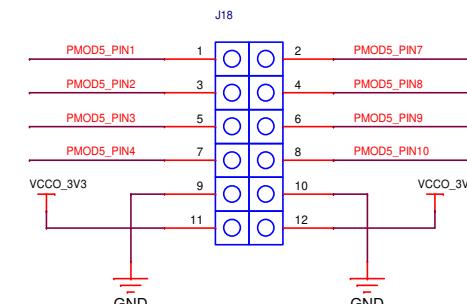
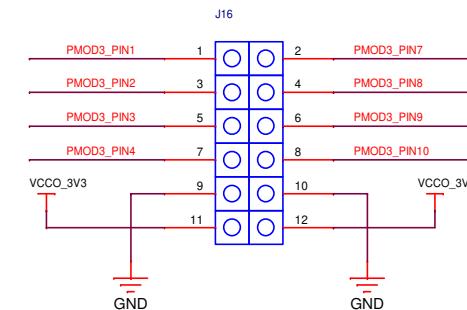
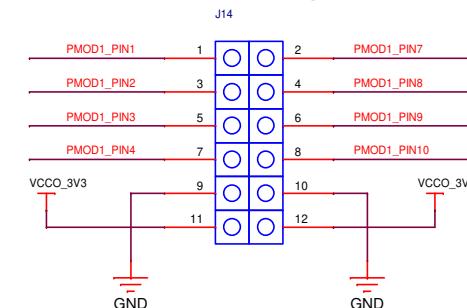
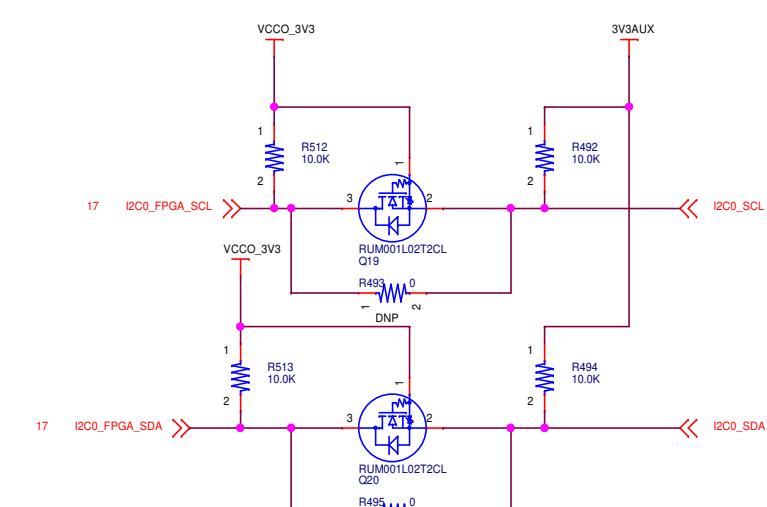
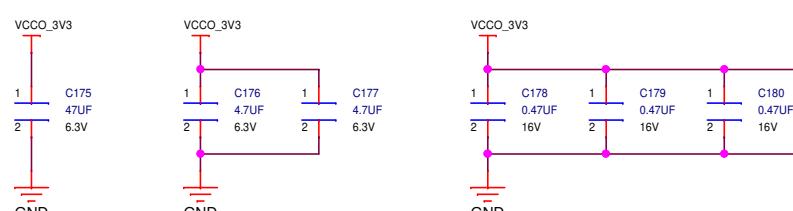
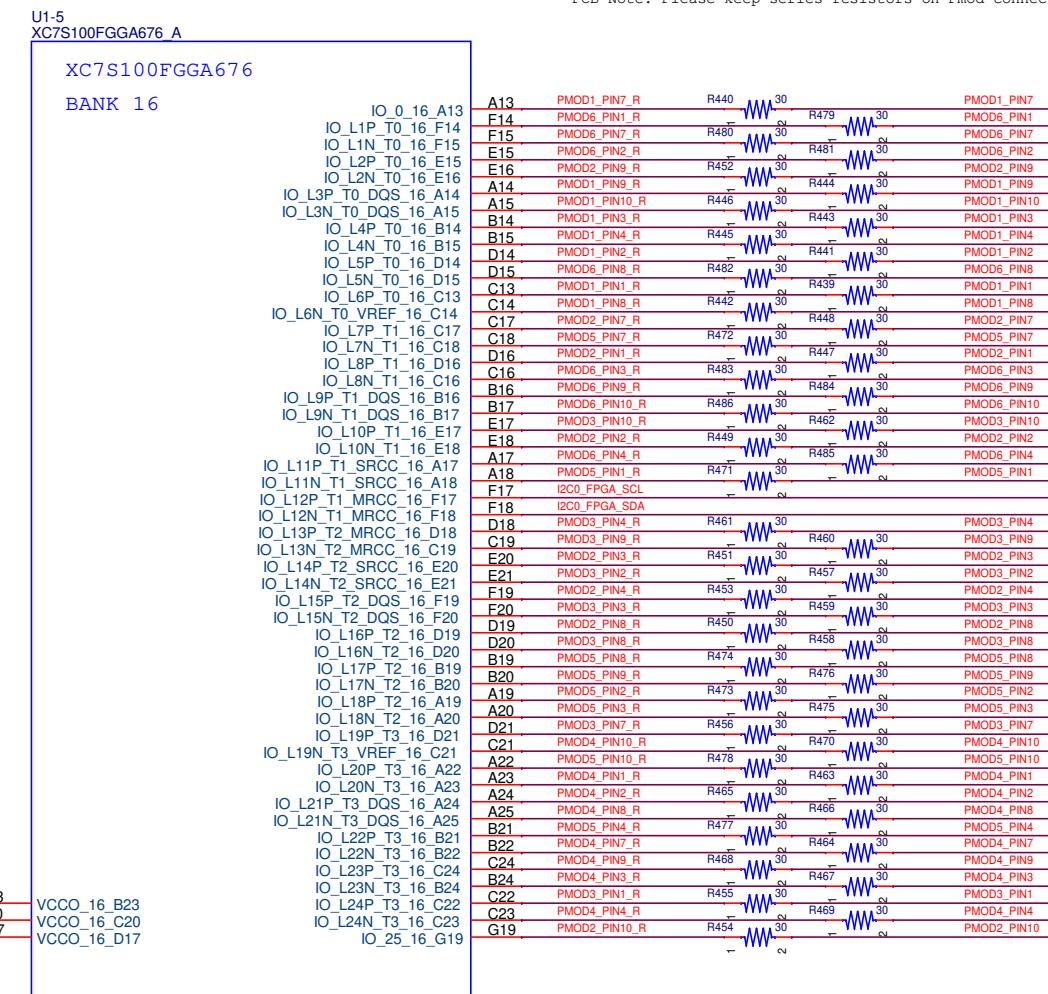
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Rev 01

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Bank 16: Pmod Signal



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PCB P/N : 1281038
ASSY P/N : 0432153
TEST P/N : TSS0213

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P17_PMOD_BANK16

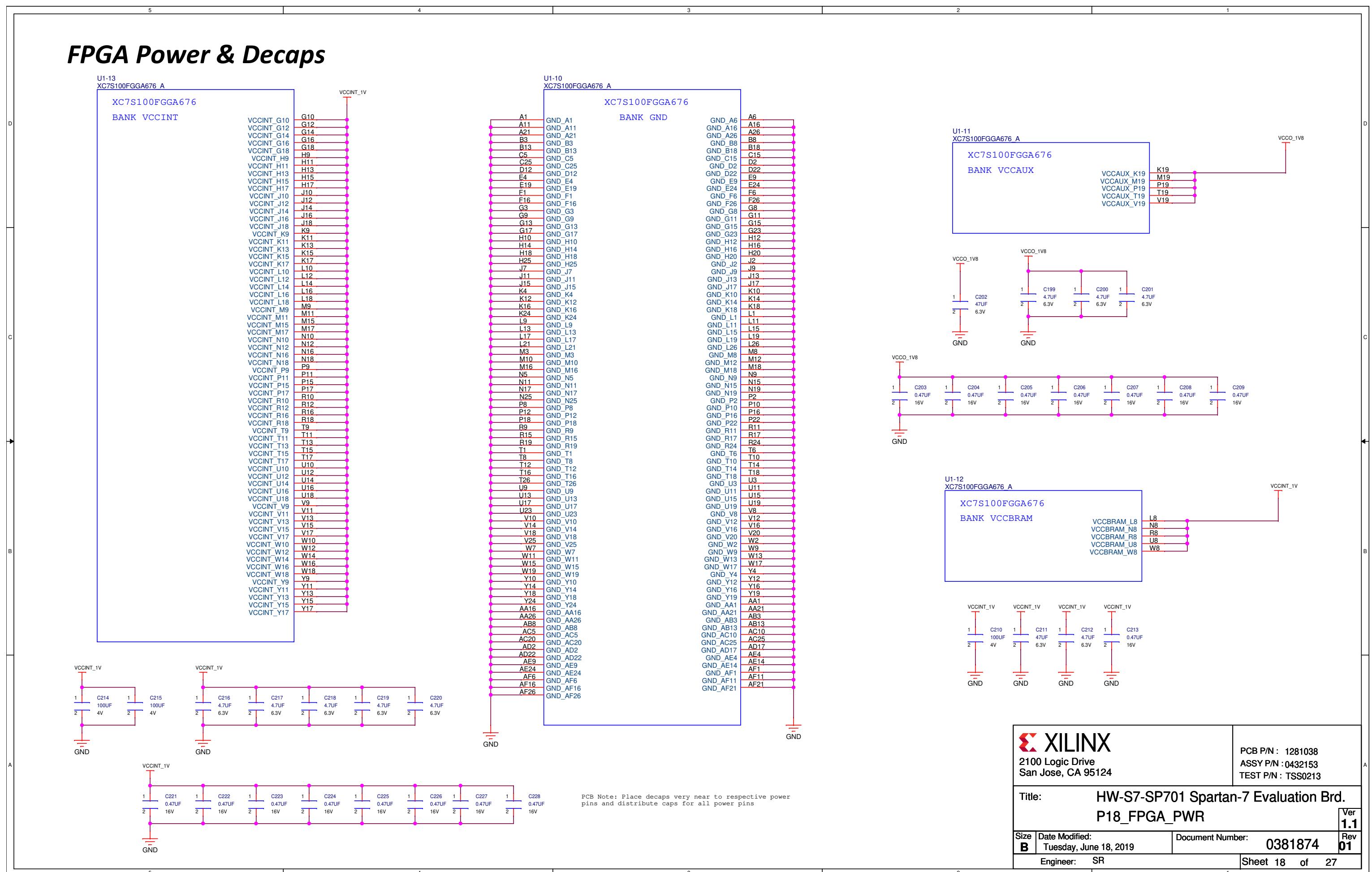
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FPGA Power & Decaps



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PCB P/N : 1281038
ASSY P/N : 0432153
TEST P/N : TSS0213

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P18_FPGA_PWR

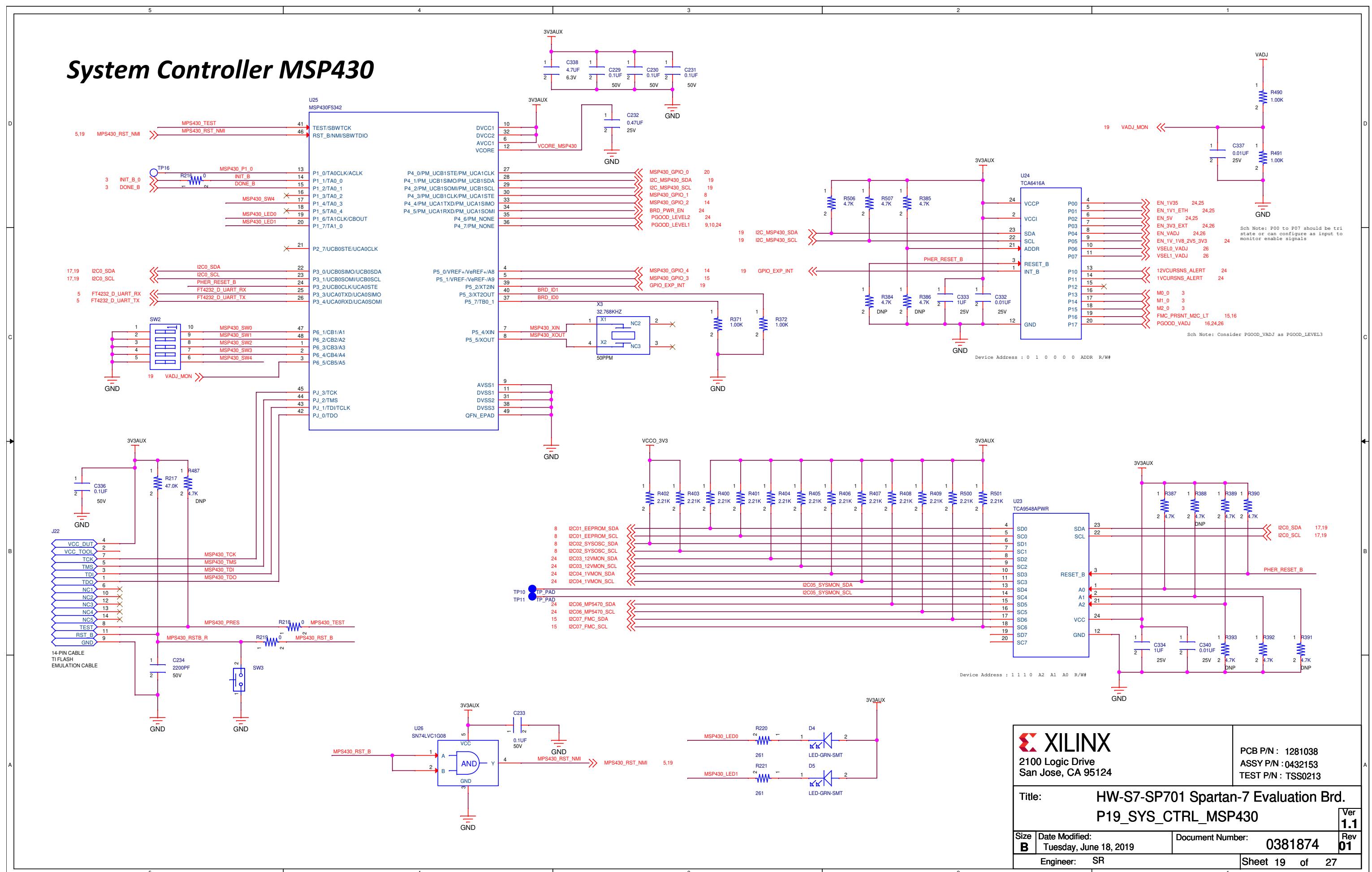
Ver 1.1
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Engineer: SR

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System Controller MSP430



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San Jose, CA 95124

PCB P/N : 1281038
ASSY P/N : 0432153
TEST P/N : TSS0213

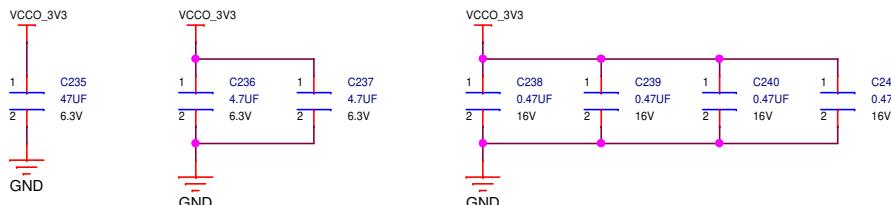
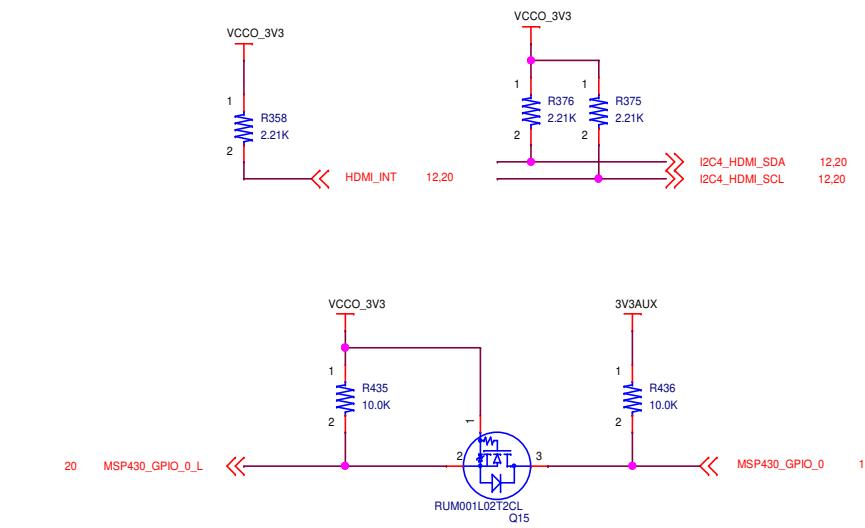
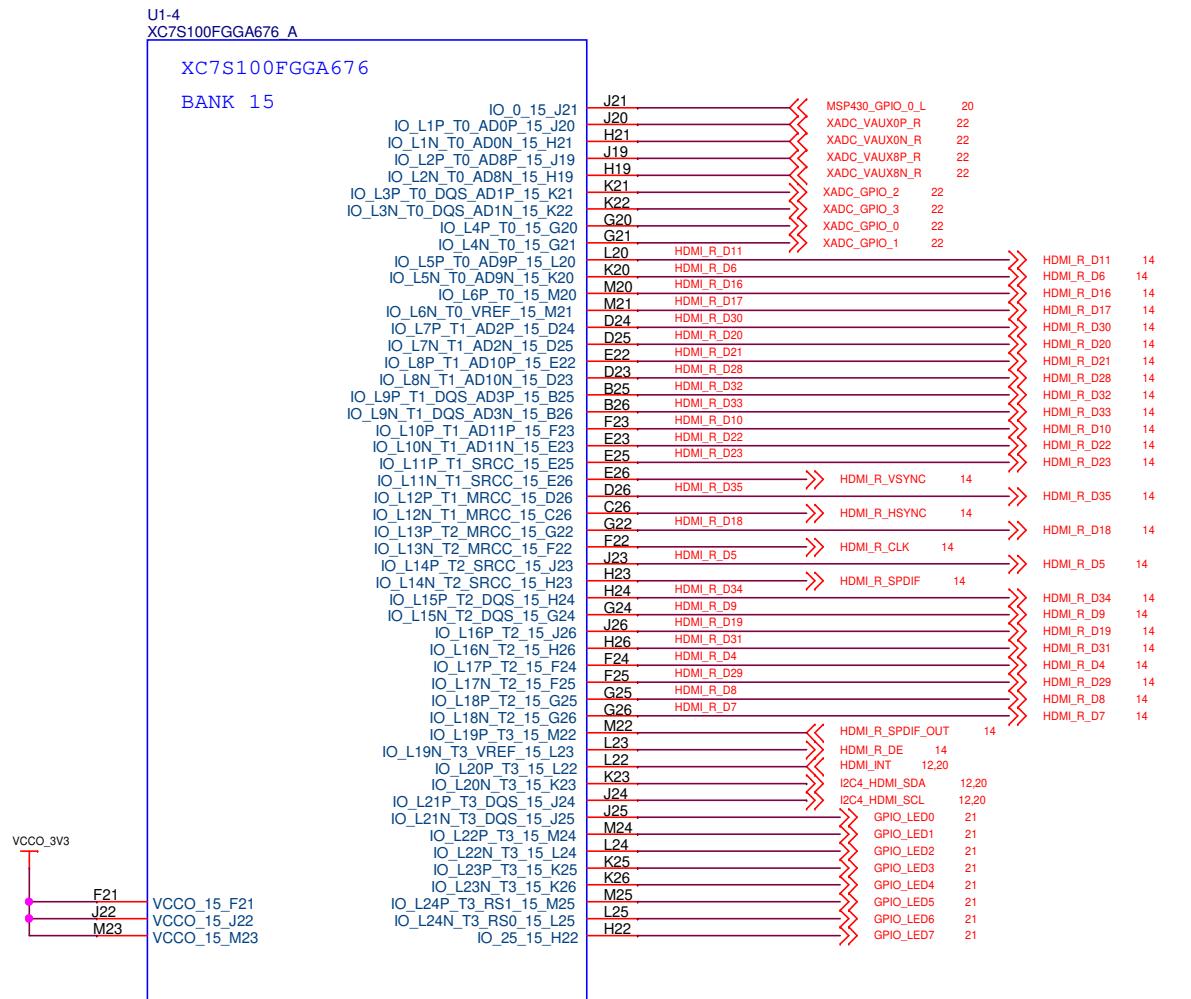
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P19_SYS_CTRL_MSP430

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Banks 15: User Interface, XADC (System Monitor) and HDMI



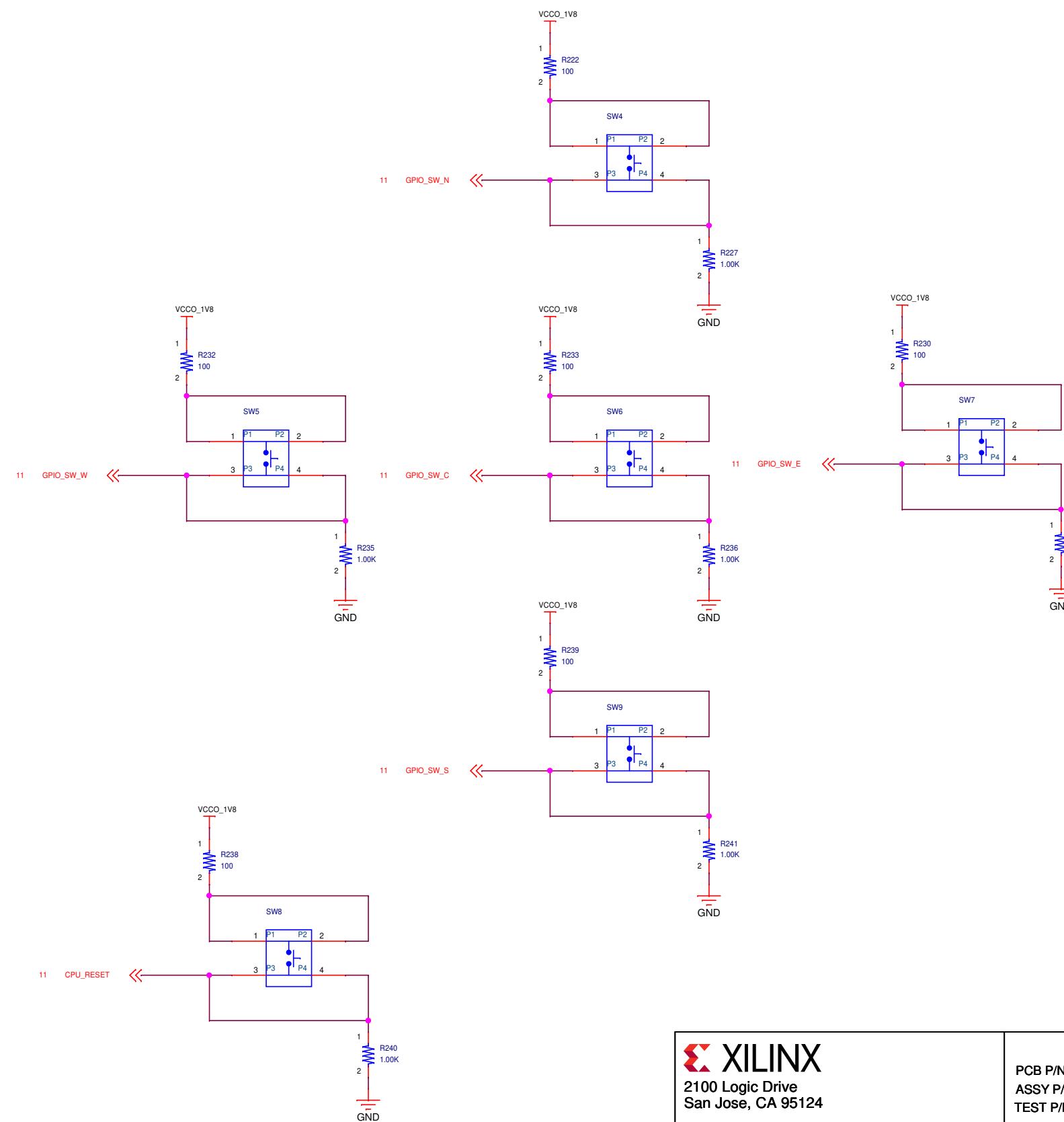
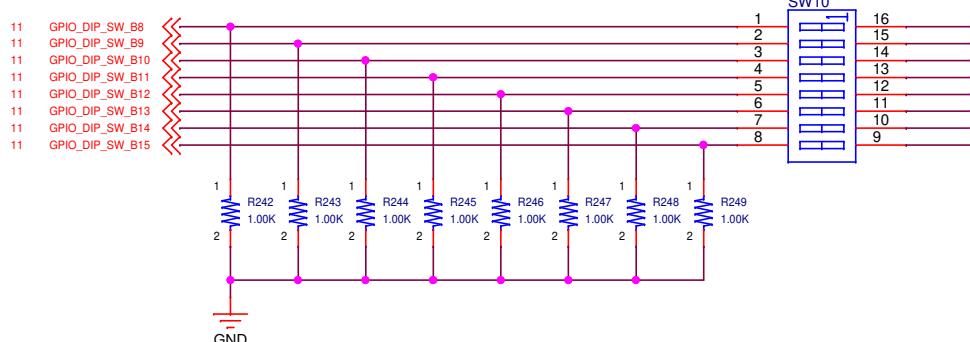
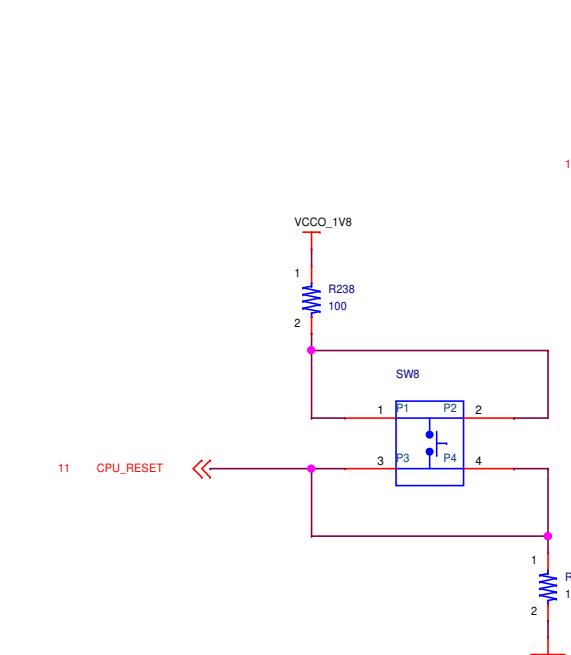
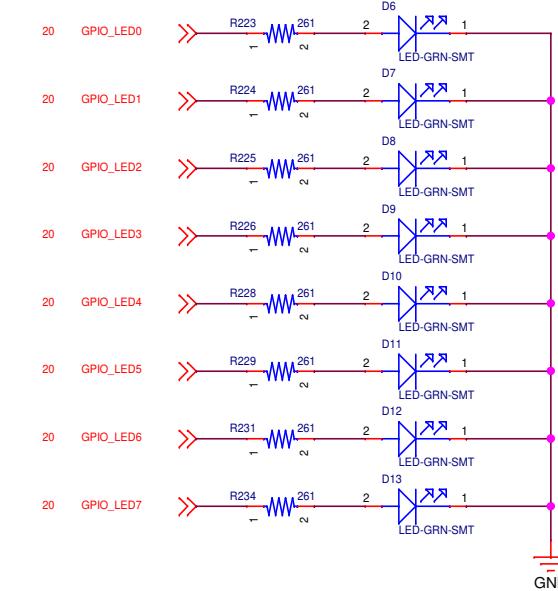
XILINX
2100 Logic Drive
San Jose, CA 95124

PCB P/N : 1281038
ASSY P/N : 0432153
TEST P/N : TSS0213

Title: HW-S7-SP701 Spartan-7 Evaluation Brd.
P20_USRIF_SYSMON_HDMI Ver 1.1

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User Interface (Switches and LEDs)



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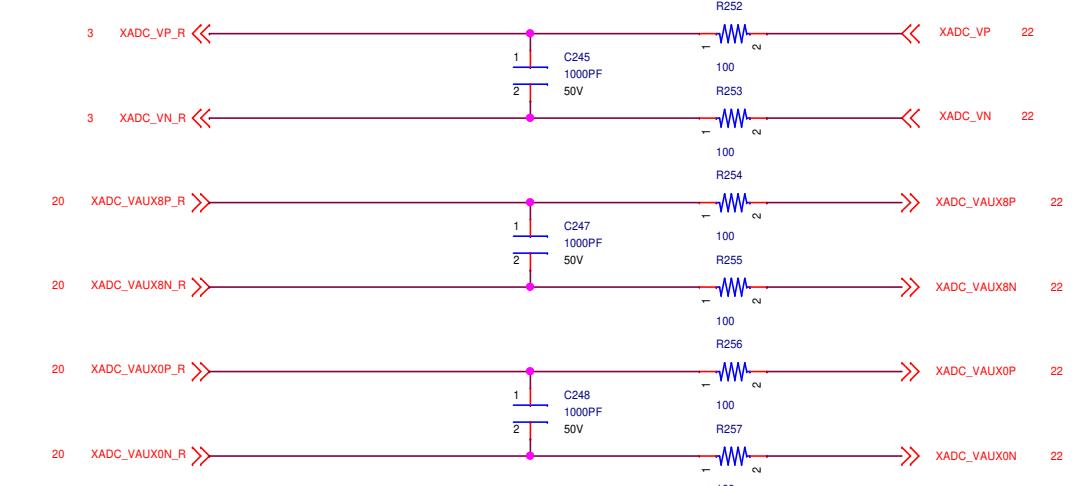
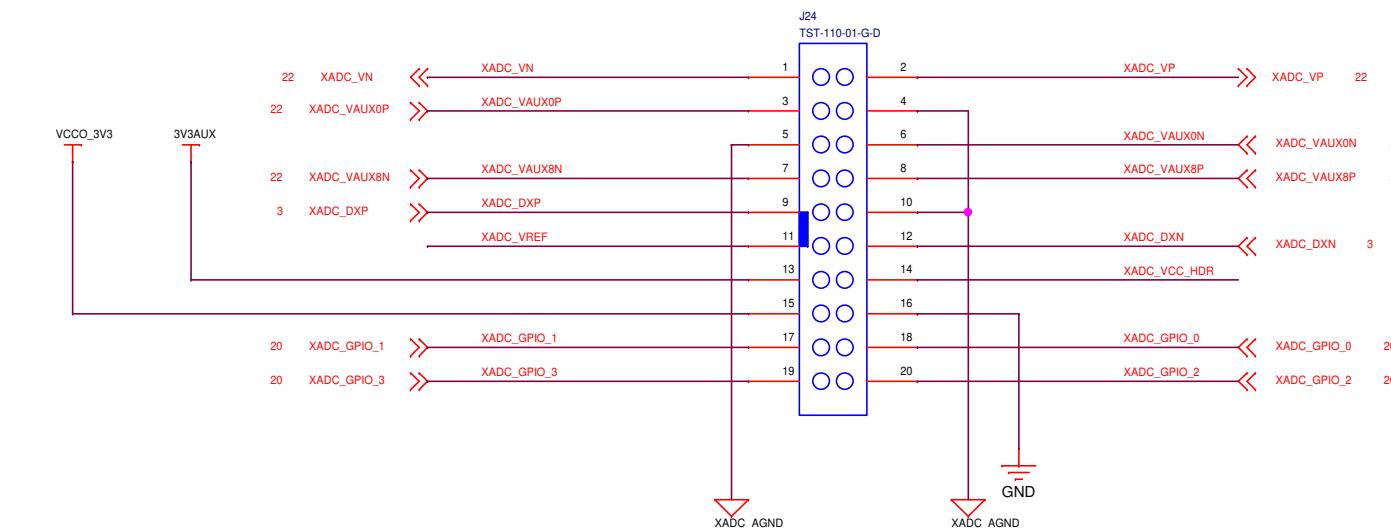
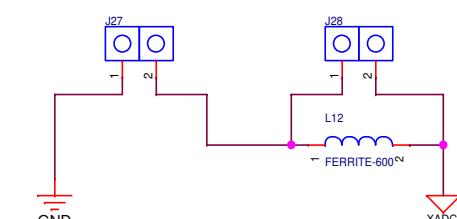
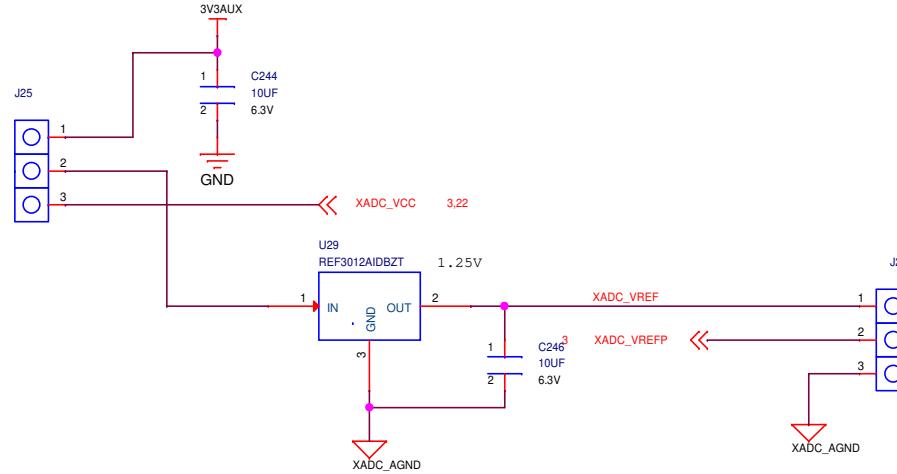
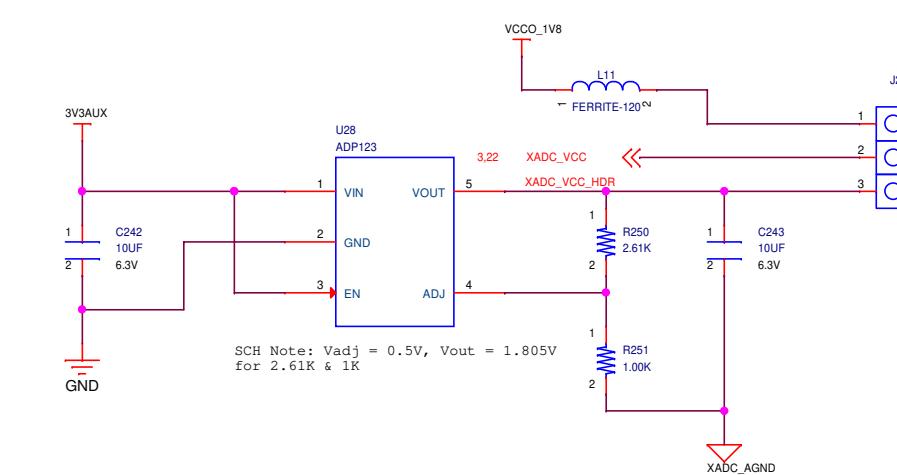
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ASSY P/N : 0432153
TEST P/N : TSS0213

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P21_USER_INTERFACE	
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XADC Header (System Monitor)

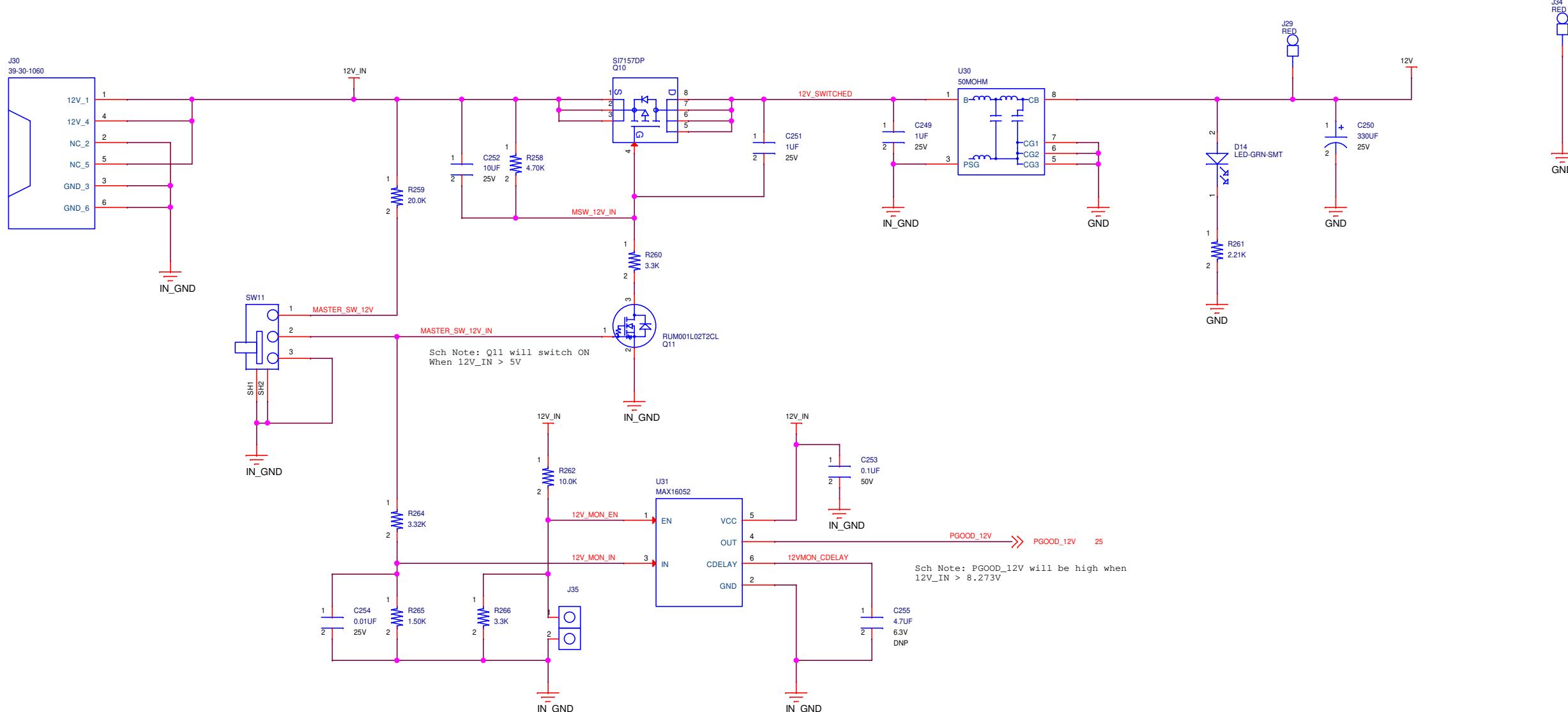


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PCB P/N : 1281038
ASSY P/N : 0432153
TEST P/N : TSS0213

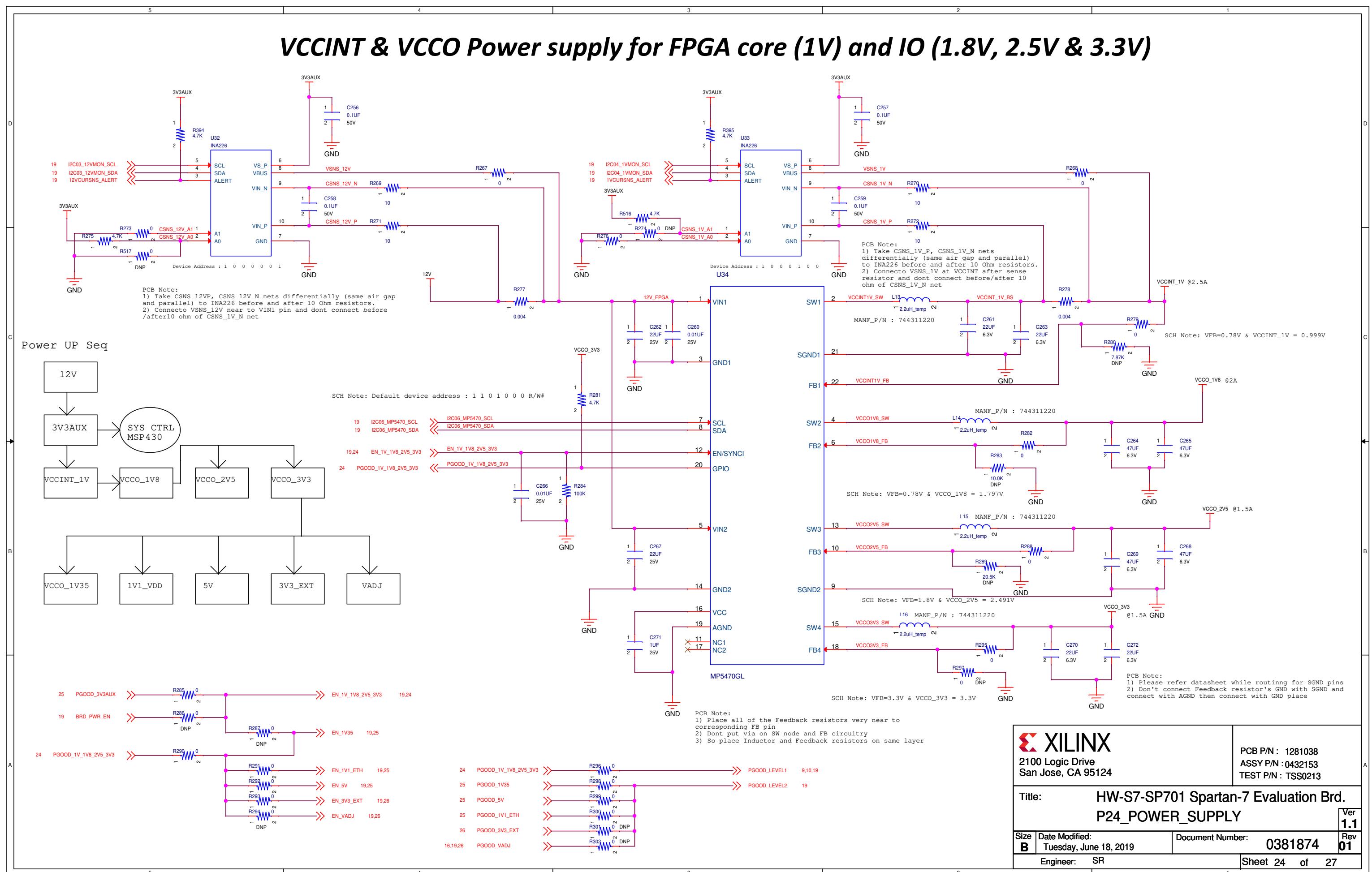
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Size	Date Modified:	Document Number:
B	Tuesday, June 18, 2019	0381874
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12V Input Power

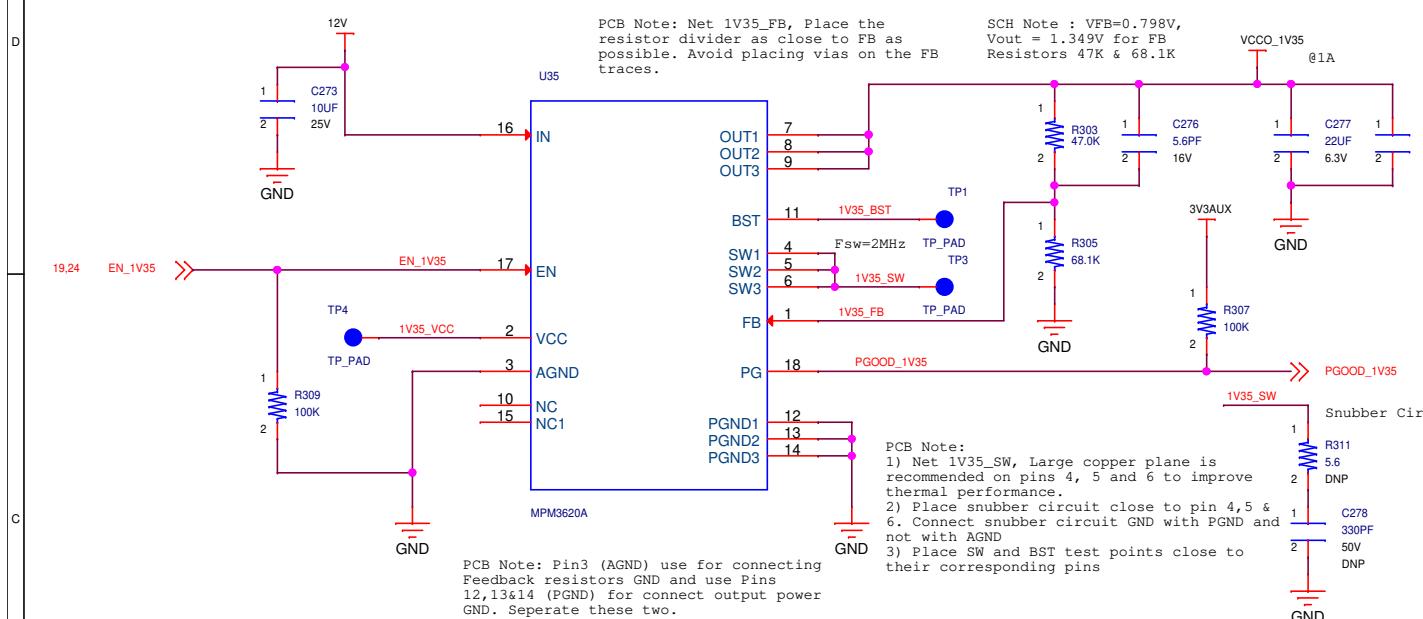


		XILINX	PCB P/N : 1281038
2100 Logic Drive		ASSY P/N : 0432153	
San Jose, CA 95124		TEST P/N : TSS0213	
Title: HW-S7-SP701 Spartan-7 Evaluation Brd.			Ver 1.1
P23_POWER_SUPPLY			Rev 01
Size	Date Modified: B Tuesday, June 18, 2019	Document Number: 0381874	Rev 01
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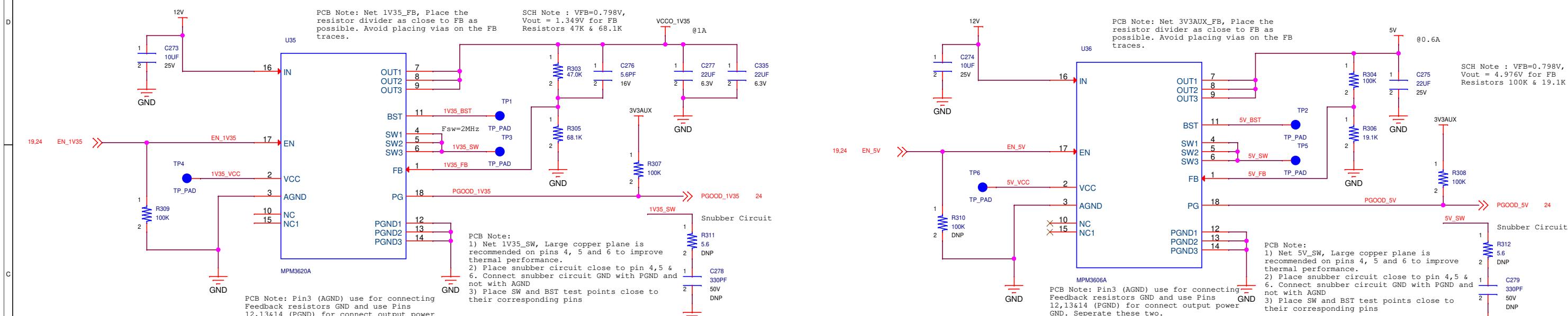
VCCINT & VCCO Power supply for FPGA core (1V) and IO (1.8V, 2.5V & 3.3V)



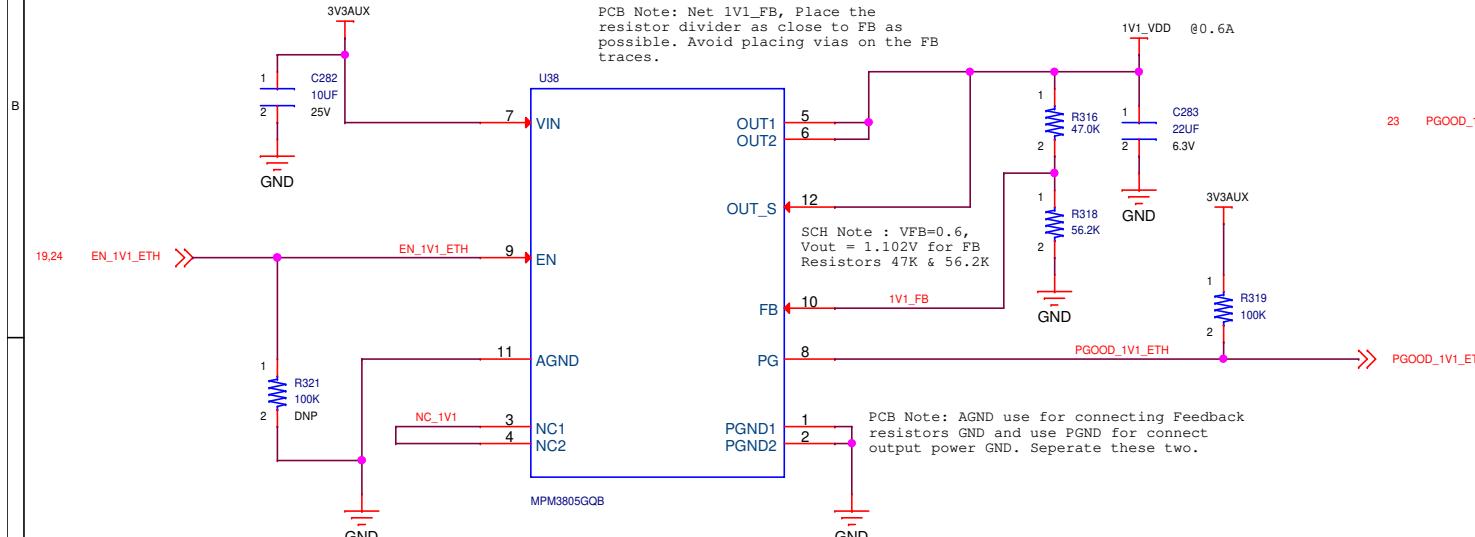
DDR3L Core/IO (1.35) Power Supply



5V Power Supply for HDMI Tx Connector



ETH PHY1/2 Core (1.1V) Power Supply



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2100 Logic Drive
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PCB P/N : 1281038
ASSY P/N : 0432153
TEST P/N : TSS0213

Title: HW-S7-SP701 Spartan-7 Evaluation Brd.
P25_POWER_SUPPLY

Ver 1.1

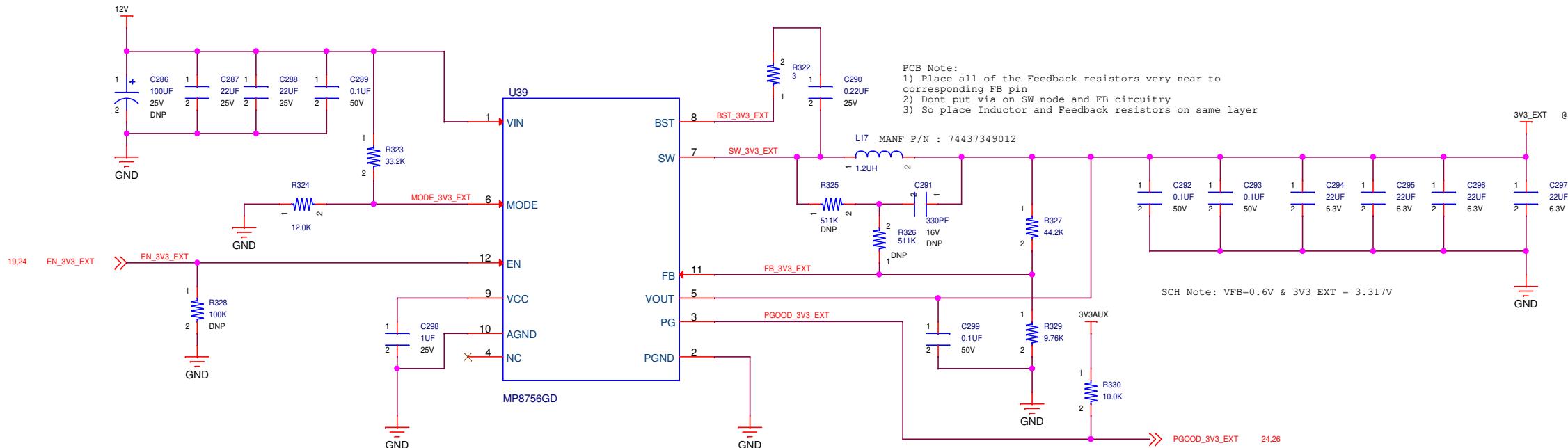
Size Date Modified: B Tuesday, June 18, 2019 Document Number: 0381874

Rev 01

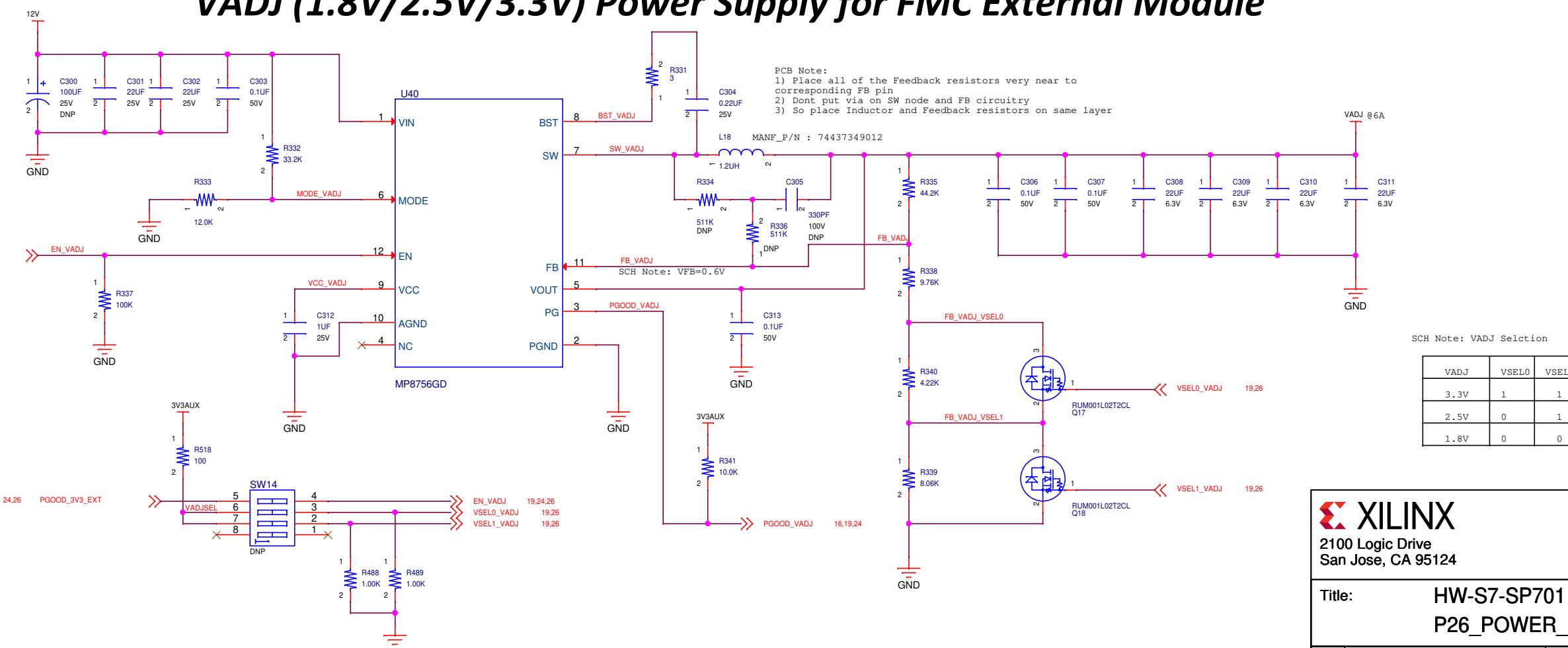
Engineer: SR

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3.3V Power Supply for External Modules like MIPI Camera/LCD and FMC module



VADJ (1.8V/2.5V/3.3V) Power Supply for FMC External Module



XILINX

2100 Logic Drive
San Jose, CA 95124

PCB P/N : 1281038
ASSY P/N : 0432153
TEST P/N : TSS0213

Title: HW-S7-SP701 Spartan-7 Evaluation Brd.
P26_POWER_SUPPLY

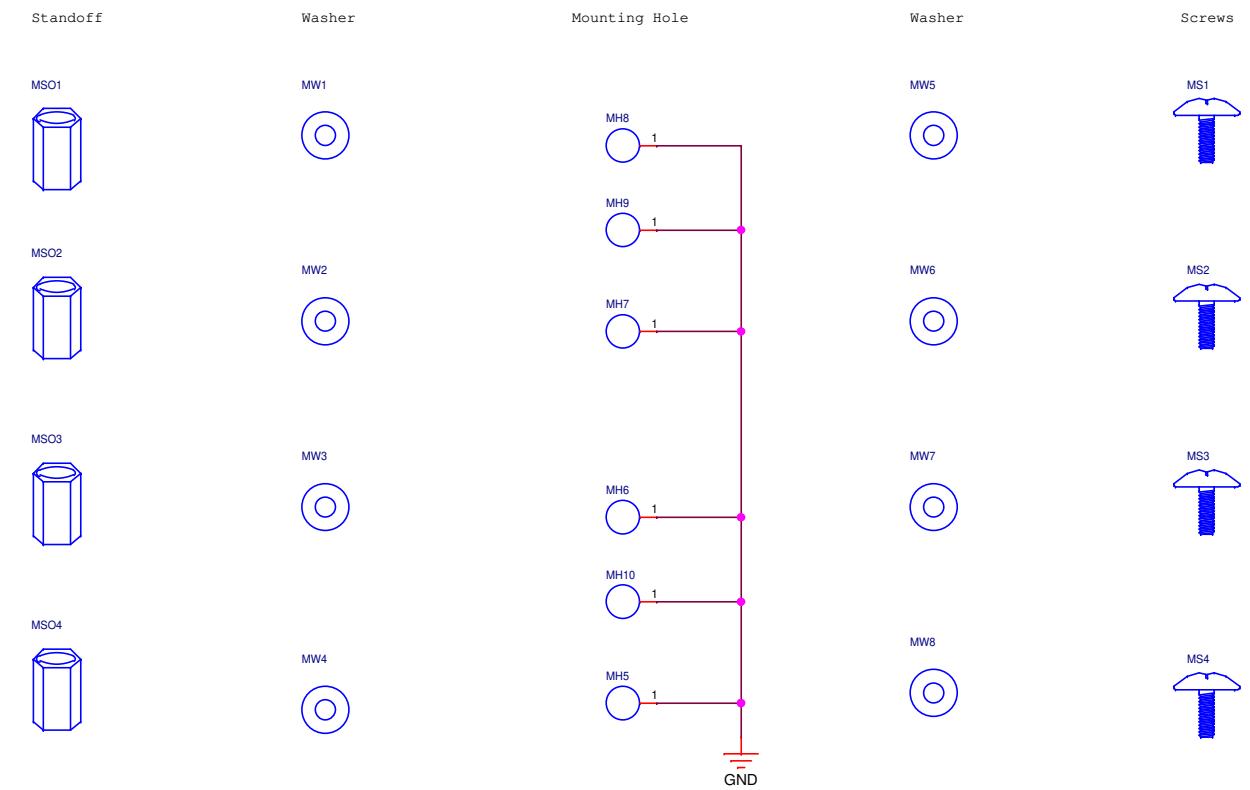
Ver 1.1
Rev 01

Size Date Modified: Tuesday, June 18, 2019 Document Number: 0381874

Engineer: SR

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Screws, Standoff and Monting Hole



Default Short Jumper Positions

RefDes	Jumper Required	Jumper Position Pin#
J2 (2pins)	No	--
J6 (2Pins)	No	--
J23 (3Pins)	Yes	Pin#2 & Pin#3
J25 (3Pins)	Yes	Pin#1 & Pin#2
J26 (3Pins)	Yes	Pin#1 & Pin#2
J27 (2Pins)	Yes	Pin#1 & Pin#2
J28 (2Pins)	No	--
J35 (2Pins)	No	--
J38 (2Pins)	YES	Pin#1 & Pin#2

XILINX 2100 Logic Drive San Jose, CA 95124		PCB P/N : 1281038 ASSY P/N : 0432153 TEST P/N : TSS0213
Title: HW-S7-SP701 Spartan-7 Evaluation Brd. P27_MISC		
Size	Date Modified: B Tuesday, June 18, 2019	Document Number: 0381874
Ver	Rev	1.1 01
Engineer:	SR	Sheet 27 of 27