

Virtex-II Development Board**Kokerboom**

Avnet Design Services

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Revision 1		
Zone	Rev.	Description
1A	B	CHANGED DOCUMENT NO TO H294-APPS-KKB-1102

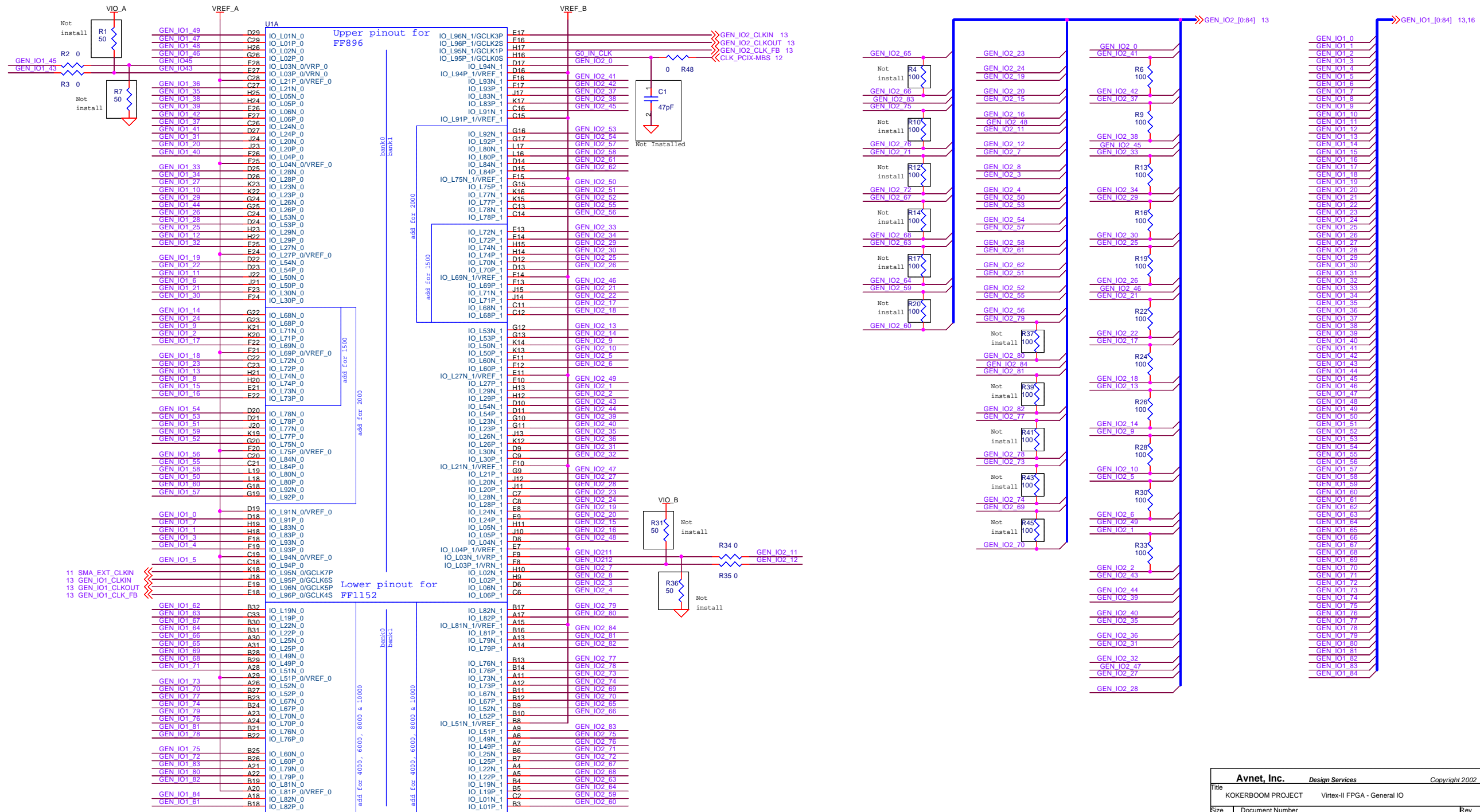
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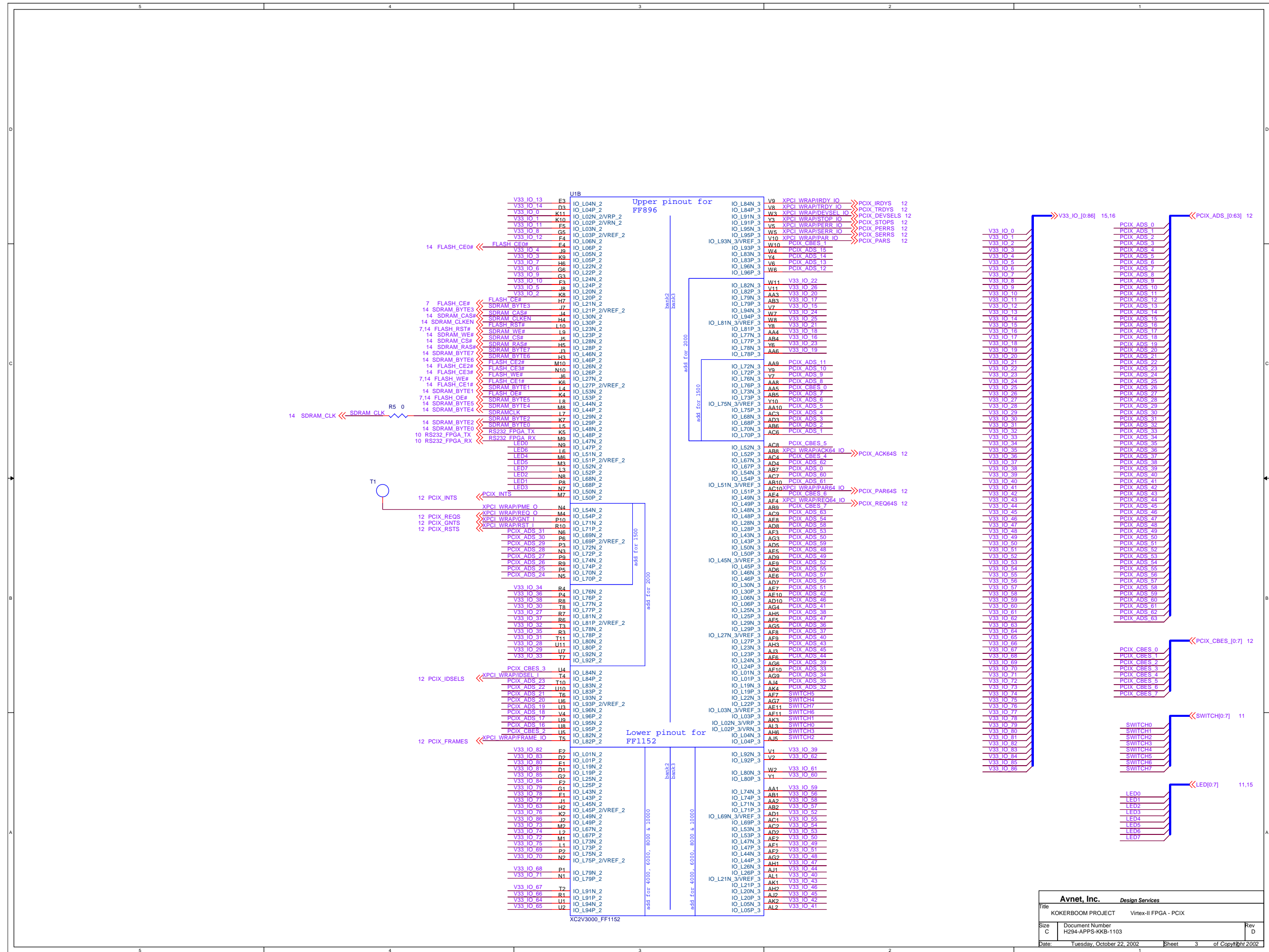
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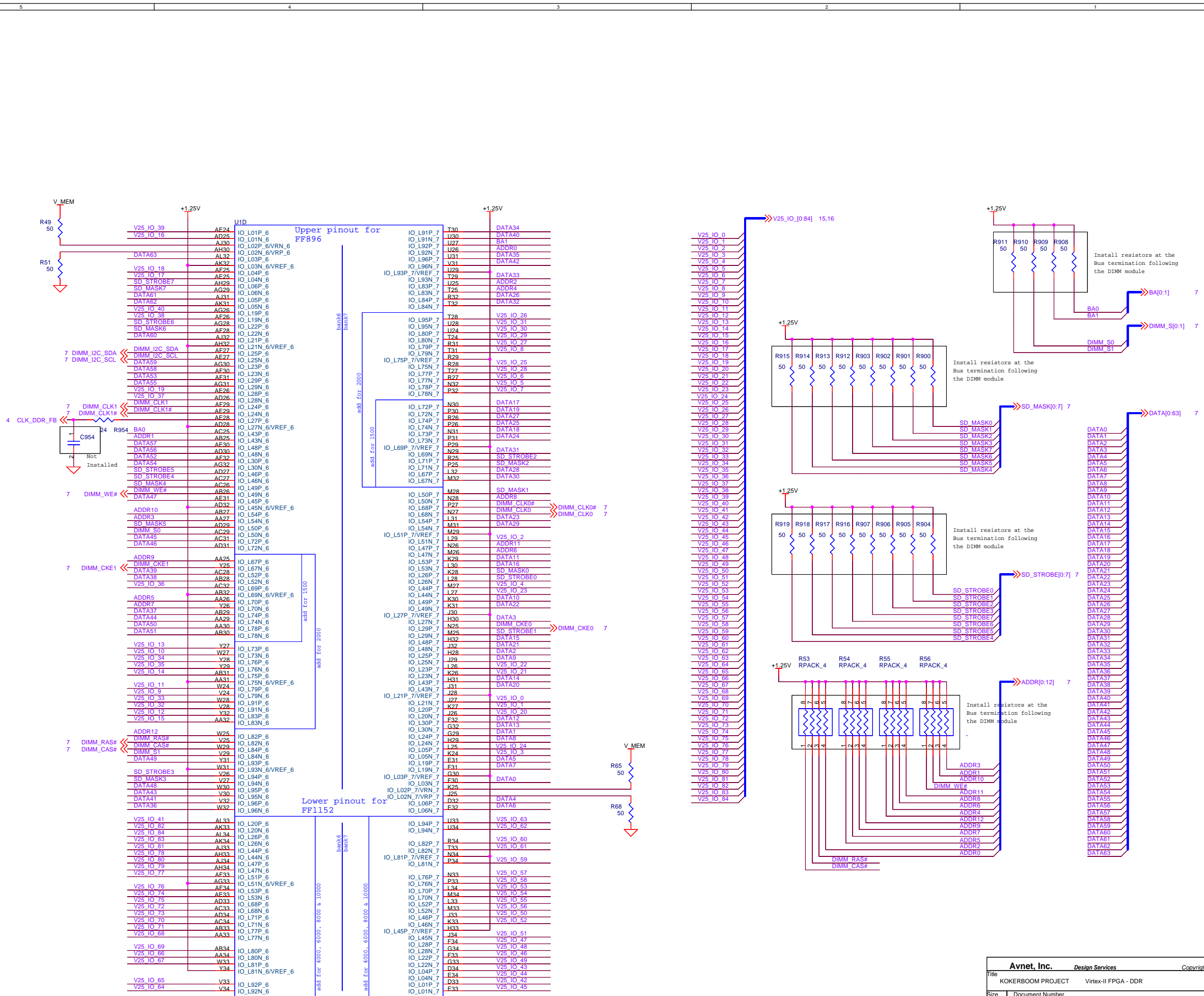
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**REVISION D**

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Title	KOKERBOOM PROJECT Cover Sheet	
Size B	Document Number H294-APPS-KKB-1103	Rev D
Date:	Tuesday, October 22, 2002	Sheet 1 of 17





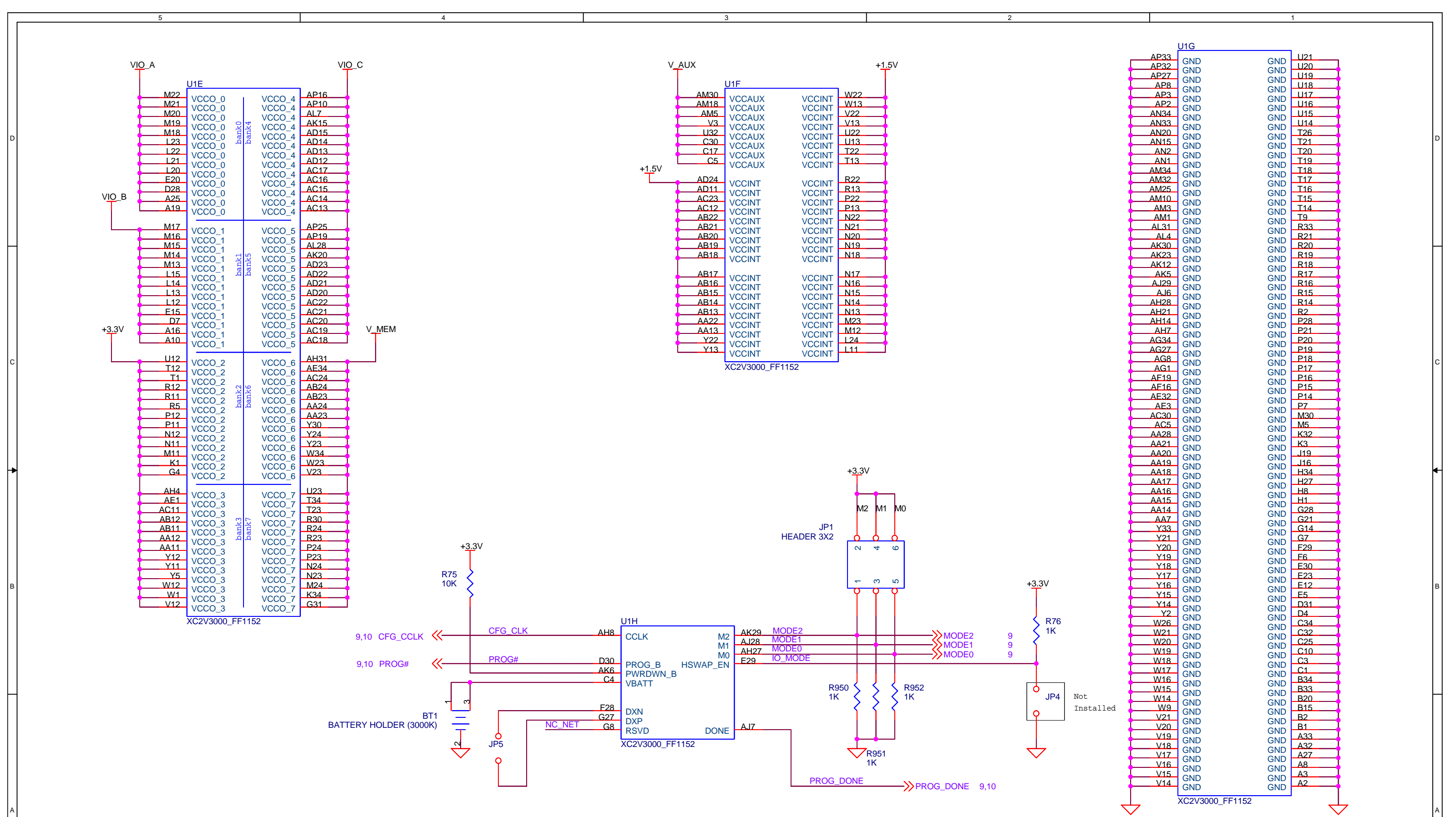


Upper pinout for FF896

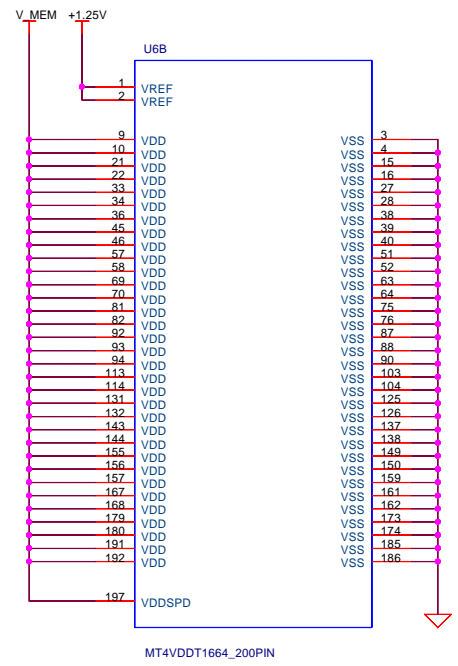
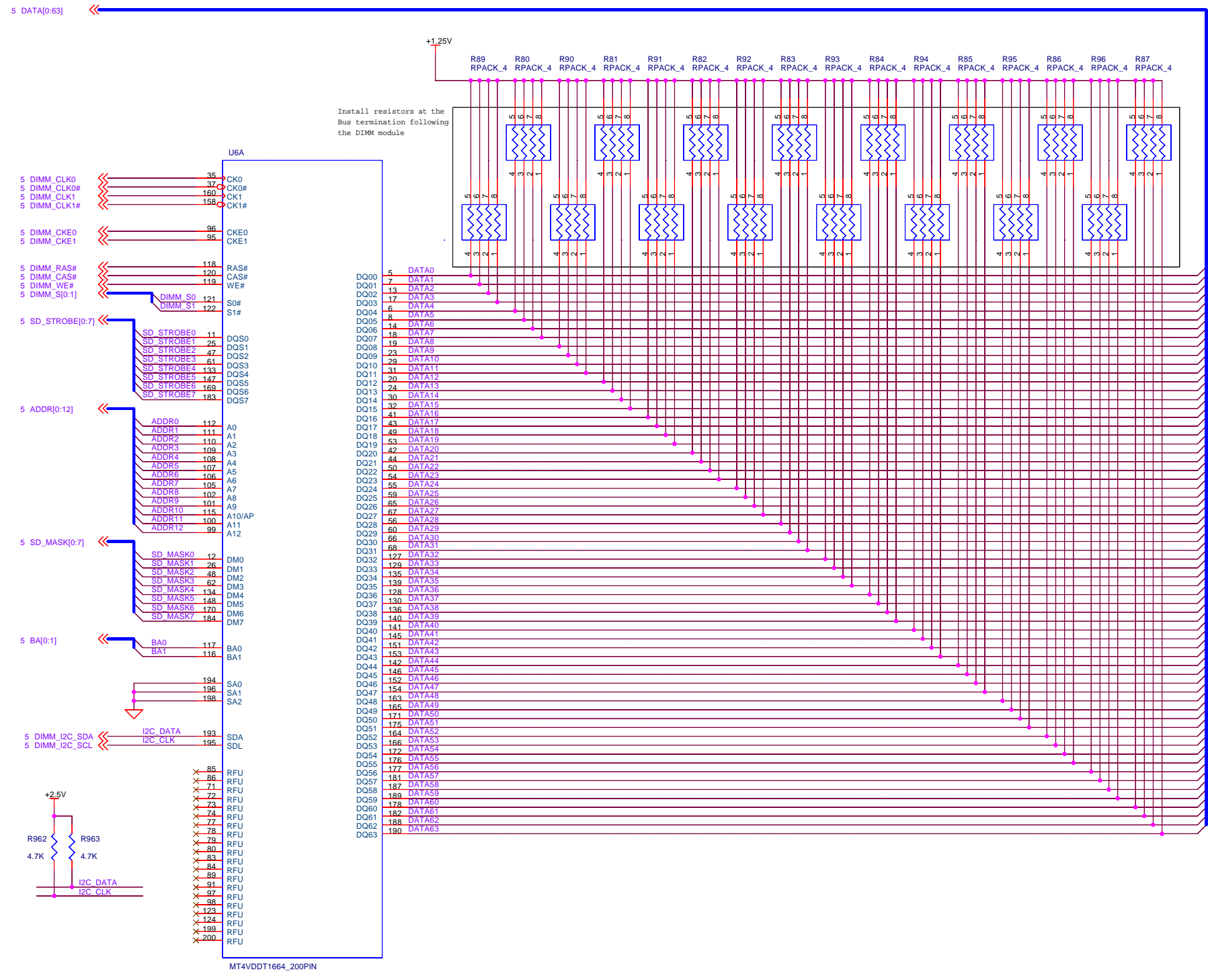
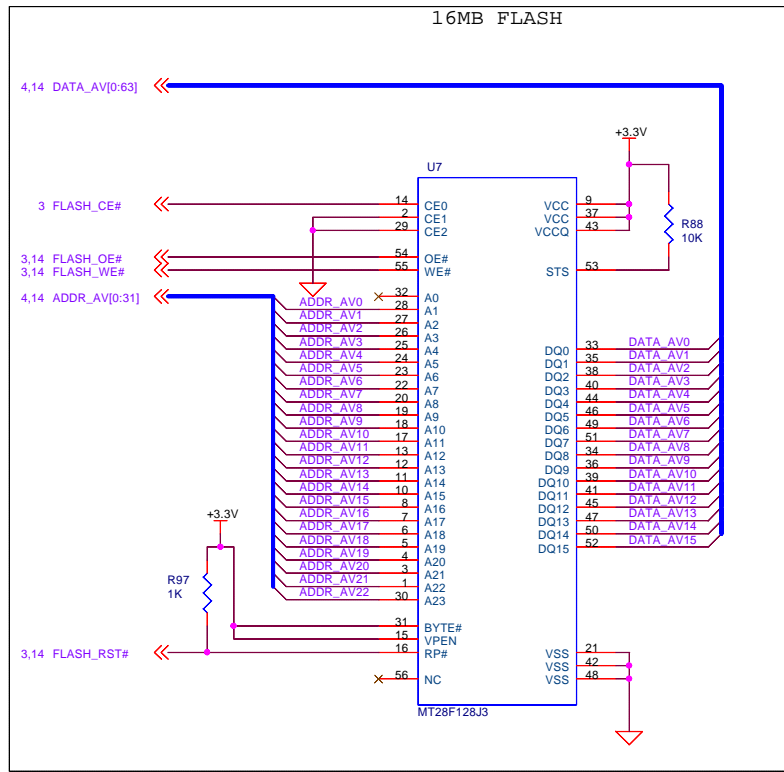
IO L01P_6	AE24	IO L91P_7	T30	DATA34
IO L01N_6	AD25	IO L91N_7	U30	DATA40
AJ30	AH30	IO L92P_7	U27	BA1
IO L02N_6/VRN_6	AH30	IO L92N_7	U26	ADDR0
IO L03P_6	AL32	IO L96P_7	U31	DATA35
IO L03N_6/REF_6	AK32	IO L96N_7	V31	DATA42
IO L04P_6	AE25	IO L93P_7	U29	ADDR2
IO L04N_6	AH29	IO L93N_7	T29	DATA33
IO L06P_6	AG29	IO L04N_6	U25	ADDR2
IO L06N_6	AJ31	IO L83N_7	T25	ADDR4
IO L05P_6	AK31	IO L84P_7	R32	DATA32
IO L05N_6	AG26	IO L84N_7	T32	
IO L18P_6	AF26	IO L95P_7	T28	V25 IO 26
IO L18N_6	AG28	IO L95N_7	U28	V25 IO 31
IO L22N_6	AF28	IO L80P_7	U24	V25 IO 30
IO L22P_6	AJ32	IO L80N_7	T24	V25 IO 29
IO L21P_6	AH32	IO L79P_7	R31	V25 IO 27
IO L21N_6	AE27	IO L79N_7	T31	V25 IO 8
IO L21N_6/REF_6	AE27	IO L75N_7	R29	V25 IO 25
IO L25P_6	AE30	IO L75P_7	R28	V25 IO 28
IO L25N_6	AF30	IO L77P_7	T27	V25 IO 6
IO L23P_6	AF31	IO L77N_7	N32	V25 IO 5
IO L23N_6	AG31	IO L78P_7	P32	V25 IO 7
IO L28N_6	AE26	IO L78N_7		
IO L28P_6	AD26	IO L72P_7	N30	DATA17
IO L28N_6/REF_6	AE29	IO L72N_7	P30	DATA19
IO L24P_6	AE29	IO L74P_7	R26	DATA27
IO L24N_6	AE28	IO L74N_7	P26	DATA25
IO L27P_6	AD28	IO L74N_7/REF_6	P31	DATA18
IO L27N_6/REF_6	AD28	IO L73N_7	P29	DATA24
IO L43P_6	AB25	IO L69N_7	N29	DATA31
IO L43N_6	AE30	IO L71P_7	P25	SD MASK2
IO L48P_6	AD30	IO L71N_7	L32	DATA28
IO L48N_6	AF32	IO L67P_7	M32	DATA30
IO L30P_6	AG32	IO L50P_7	M28	SD MASK1
IO L30N_6	AD27	IO L50N_7	N28	ADDR8
IO L46P_6	AC26	IO L45P_7	P27	DIMM_CLK0#
IO L46N_6	AB26	IO L45N_7/REF_6	N27	DIMM_CLK0
IO L49P_6	AE31	IO L68P_7	L31	V25 IO 42
IO L49N_6	AD32	IO L68N_7	M31	DATA29
IO L45N_6/REF_6	AB27	IO L54P_6	M29	V25 IO 44
IO L54N_6	AD29	IO L54N_6	L29	V25 IO 45
IO L50P_6	AC29	IO L51N_7	N26	ADDR11
IO L50N_6	AD31	IO L47P_7	M26	ADDR6
IO L72P_6	AD31	IO L47N_7	K29	DATA11
IO L72N_6		IO L53P_7	L30	DATA16
IO L67P_6	AA25	IO L53N_7	K28	SD MASK0
IO L67N_6	Y25	IO L52P_6	L28	SD STROBE0
IO L52P_6	AC28	IO L52N_6	AC32	V25 IO 4
IO L52N_6	AB28	IO L69P_6	L27	V25 IO 23
IO L52N_6/REF_6	AC32	IO L69N_6	K30	DATA10
IO L70N_6	AB32	IO L49N_7	K31	DATA22
IO L70P_6	AA26	IO L47N_7/REF_6	L30	DATA3
IO L74N_6	Y26	IO L27N_7	N25	DIMM_CKE0
IO L74P_6	AB29	IO L29P_7	M25	SD STROBE1
IO L74N_6/REF_6	AA29	IO L29N_7	H32	DATA15
IO L78P_6	AA30	IO L29P_7/REF_6	J32	V25 IO 81
IO L78N_6	AB30	IO L48P_7	H28	DATA2
IO L73P_6	Y27	IO L48N_7	J29	DATA9
IO L73N_6	W27	IO L25P_7	L26	V25 IO 22
IO L73N_6/REF_6	Y28	IO L25N_7	K26	DATA14
IO L78P_6	Y29	IO L23P_7	H31	DATA14
IO L78N_6	AB31	IO L23N_7	K26	V25 IO 21
IO L75P_6	AA31	IO L43P_7	J31	DATA20
IO L75N_6/REF_6	W24	IO L43N_7	J28	
IO L79P_6	V24	IO L21N_7	J27	V25 IO 0
IO L79N_6	W28	IO L20P_7	K27	V25 IO 20
IO L91P_6	Y22	IO L20N_7	J26	V25 IO 20
IO L91N_6	Y22	IO L20N_7/REF_6	E32	DATA12
IO L83P_6	AA32	IO L30P_7	G32	DATA13
IO L83N_6	AA32	IO L30N_7	G29	DATA1
IO L82P_6	W25	IO L24P_7	H29	DATA18
IO L82N_6	V25	IO L24N_7	L25	V25 IO 24
IO L84P_6	W29	IO L05P_7	K24	V25 IO 3
IO L84N_6	Y31	IO L05N_7	E31	DATA5
IO L93P_6	Y31	IO L19P_7	E31	DATA7
IO L93N_6/REF_6	Y31	IO L19N_7	E31	
IO L94P_6	Y31	IO L93P_7/REF_6	F30	DATA0
IO L94N_6	W30	IO L94N_7	K25	
IO L95P_6	W30	IO L02P_7/VRN_7	J25	DATA4
IO L95N_6	V30	IO L02N_7/VRP_7	J25	DATA4
IO L96P_6	V32	IO L06P_7	D32	DATA8
IO L96N_6	W32	IO L06N_7	E32	

Lower pinout for FF1152

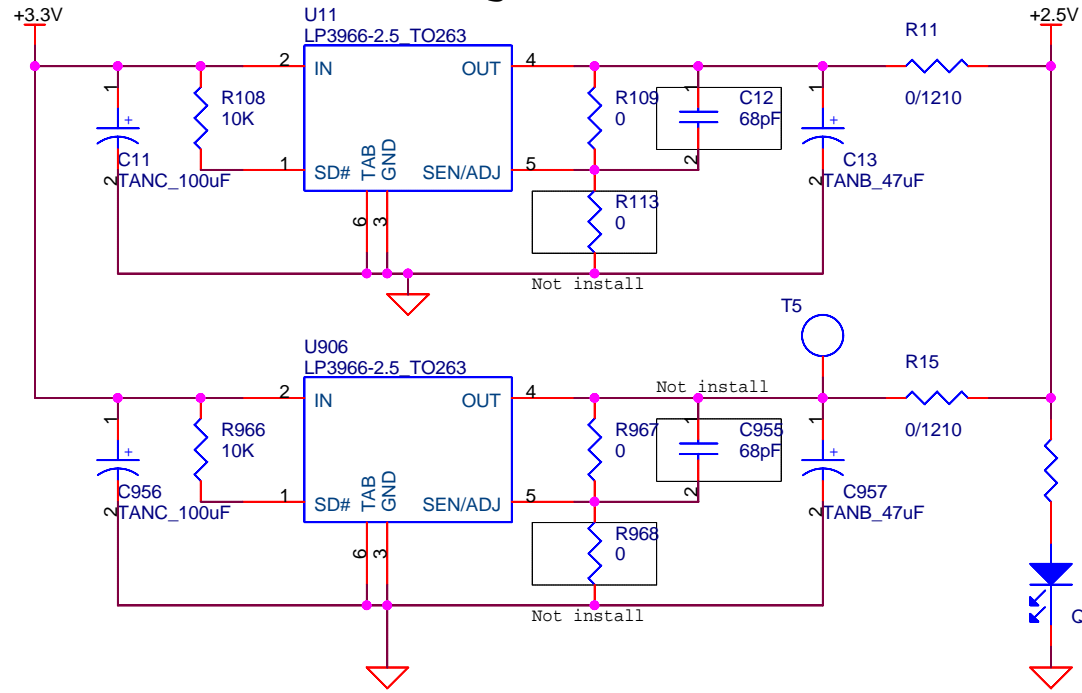
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IO L26P_6	AL34	IO L82P_7	R34	V25 IO 60
IO L26N_6	AK34	IO L82N_7	T33	V25 IO 61
IO L44P_6	AJ33	IO L81P_7/REF_7	N34	
IO L44N_6	AH33	IO L81N_7	P34	V25 IO 59
IO L47P_6	AJ34	IO L78P_7	N33	V25 IO 57
IO L47N_6	AH34	IO L78N_7	P33	V25 IO 58
IO L47N_6/REF_6	AE33	IO L70P_7	L34	V25 IO 53
IO L53P_6	AE34	IO L70N_7	M34	V25 IO 54
IO L53N_6	AD33	IO L52P_7	L33	V25 IO 55
IO L53N_6/REF_6	AD33	IO L52N_7	M33	V25 IO 56
IO L88P_6	AC33	IO L30P_7	J33	V25 IO 50
IO L88N_6	AD34	IO L30N_7	K33	V25 IO 52
IO L71P_6	AC34	IO L46N_7	K33	
IO L71N_6	AB33	IO L45P_7/REF_7	H34	V25 IO 51
IO L77P_6	AB33	IO L45N_7	F34	V25 IO 47
IO L77N_6	AB33	IO L28P_7	G34	V25 IO 48
IO L80P_6	AB34	IO L28N_7	F33	V25 IO 46
IO L80N_6	AA34	IO L22P_7	G33	V25 IO 49
IO L81P_6	W33	IO L22N_7	D34	V25 IO 43
IO L81N_6/REF_6	Y34	IO L04P_7	E34	V25 IO 44
IO L81N_6	W33	IO L04N_7	D33	V25 IO 42
IO L92P_6	V33	IO L01P_7	E33	V25 IO 45
IO L92N_6	V34	IO L01N_7		



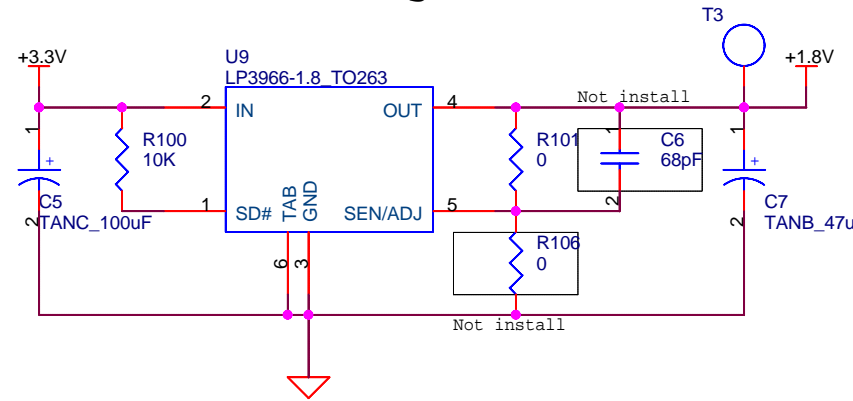
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Title		KOKERBOOM PROJECT	
		Virtex-II FPGA - Power	
Size	Document Number	Rev	
B	H294-APPS-KKB-1103	D	
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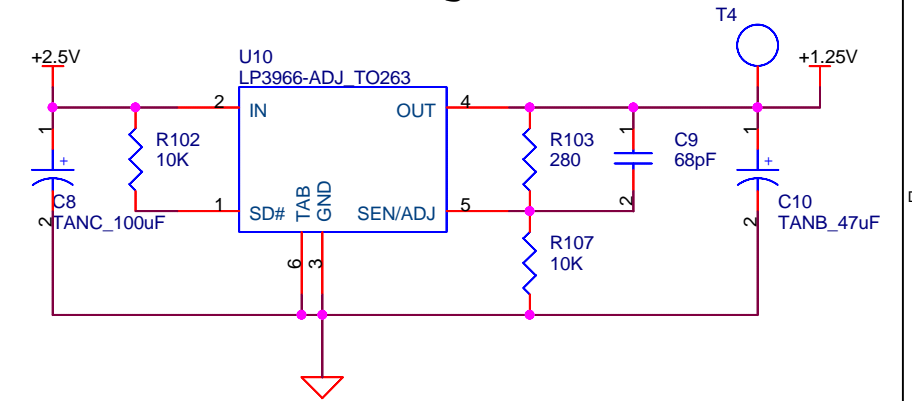
+2.5V Regulated



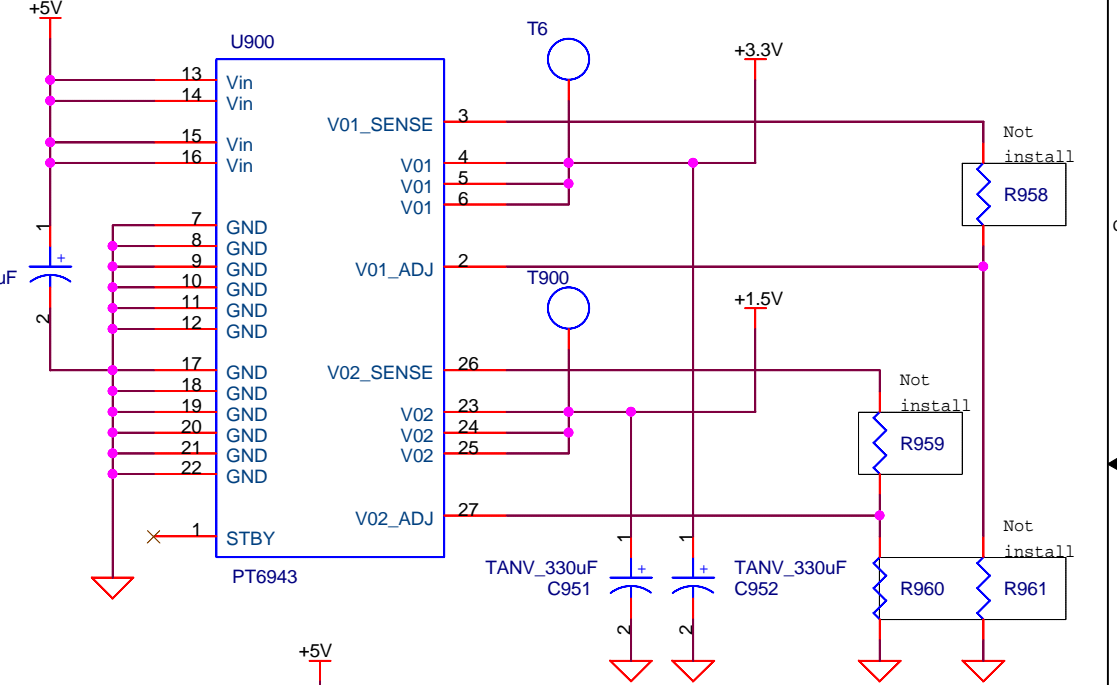
+1.8V Regulated



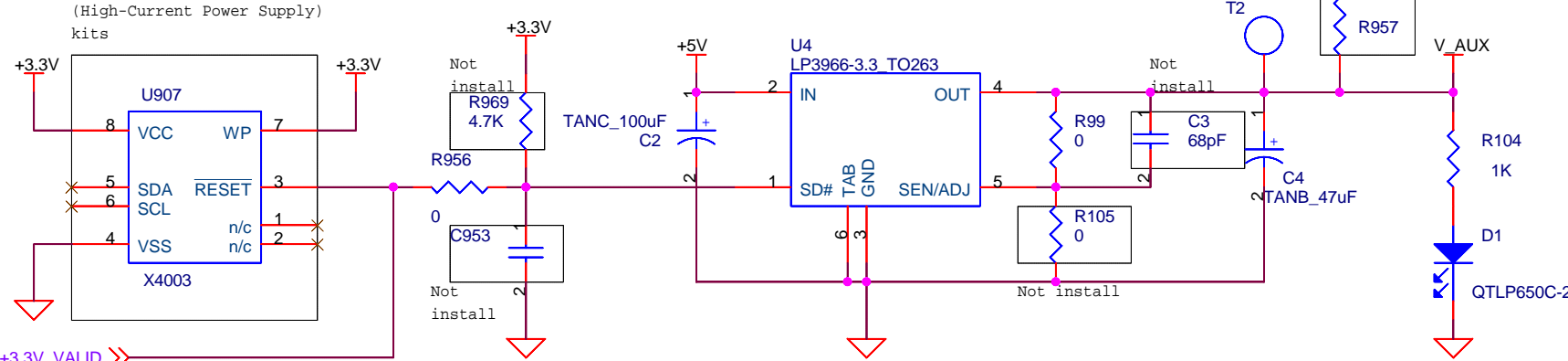
+1.25V Regulated



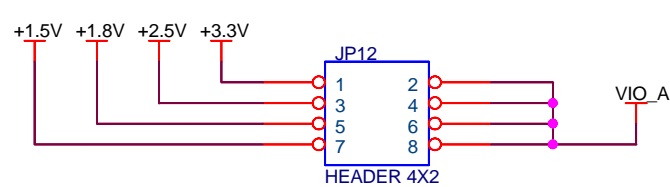
+3.3V / +1.5V Switching Regulated



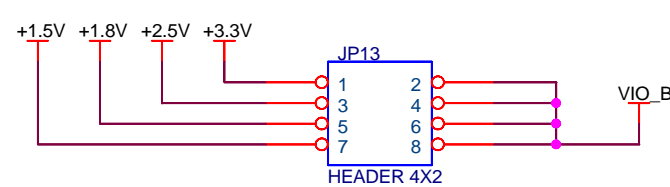
FPGA VAUX (+3.3V) Regulated



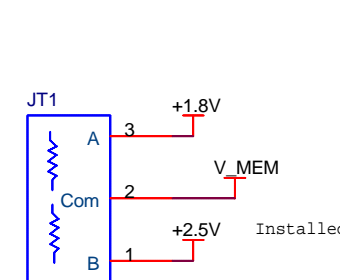
Bank 0 VCCO Voltage



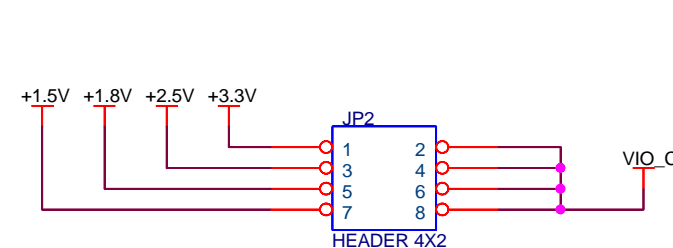
Bank 1 VCCO Voltage



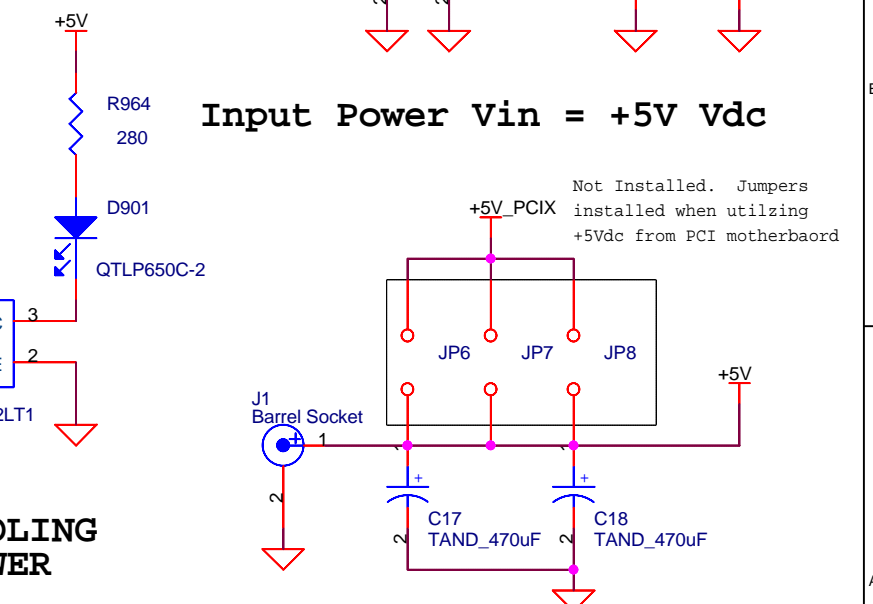
Bank 6 & 7 VCCO Voltage & DIMM VDD



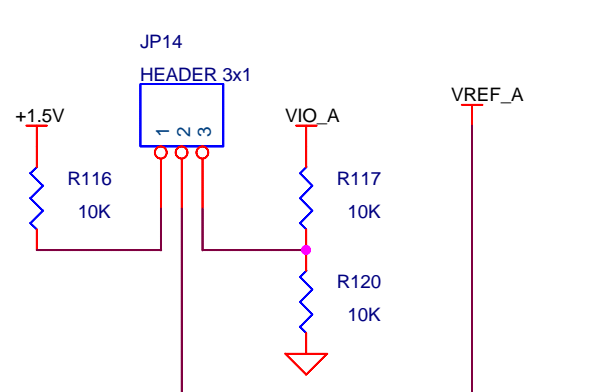
Bank 4 & 5 VCCO Voltage



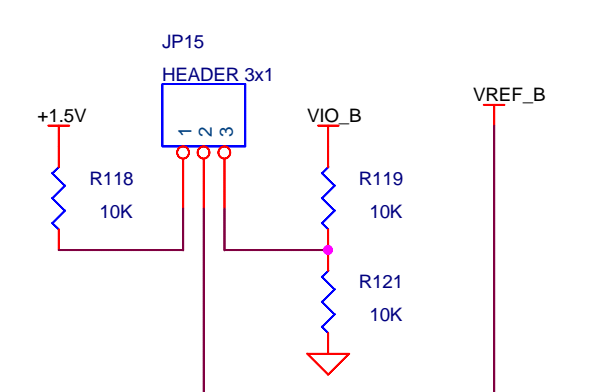
Input Power Vin = +5V Vdc



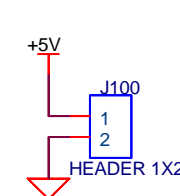
Bank 0 VREF Voltage



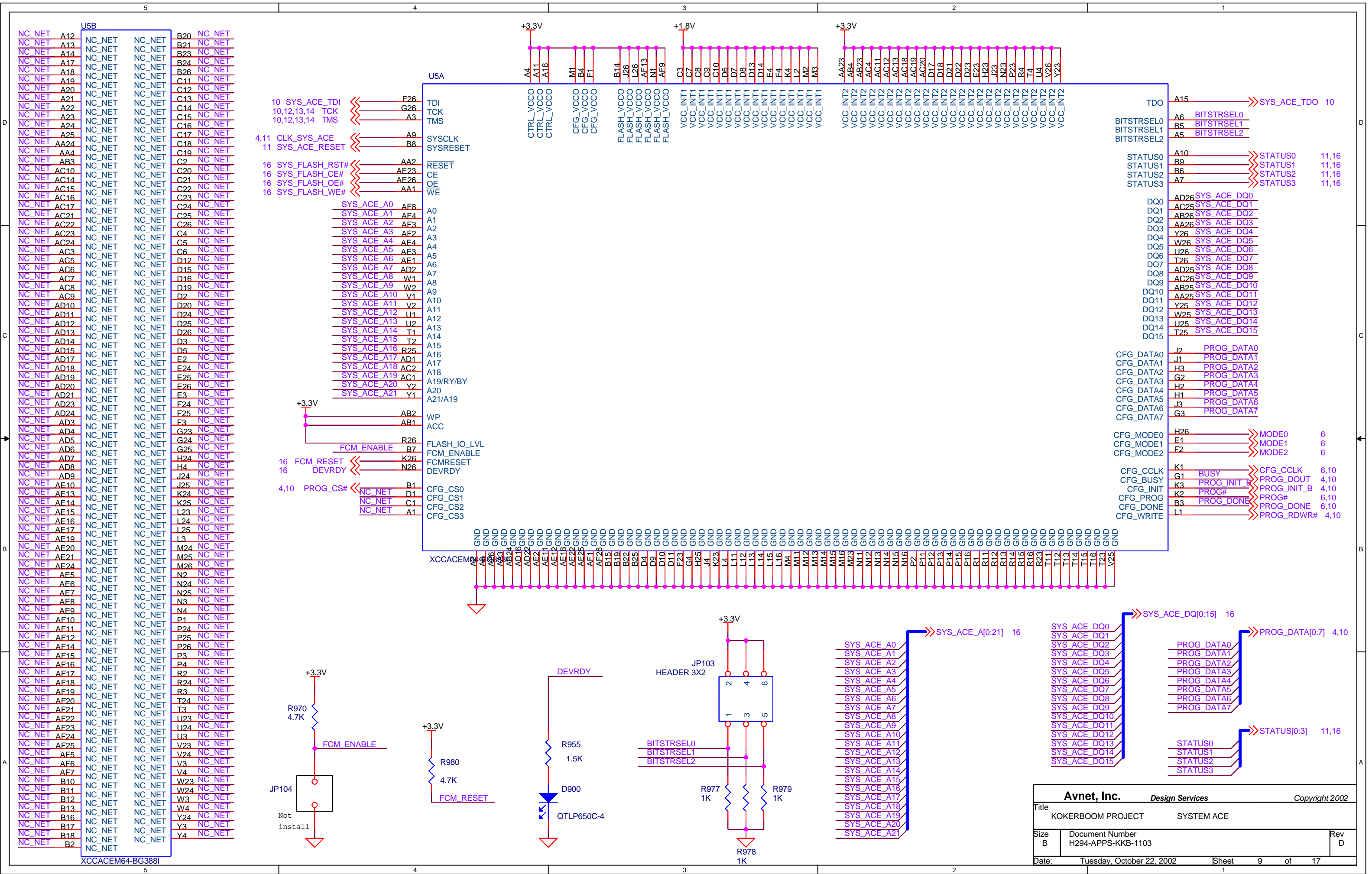
Bank 1 VREF Voltage



+5V COOLING FAN POWER



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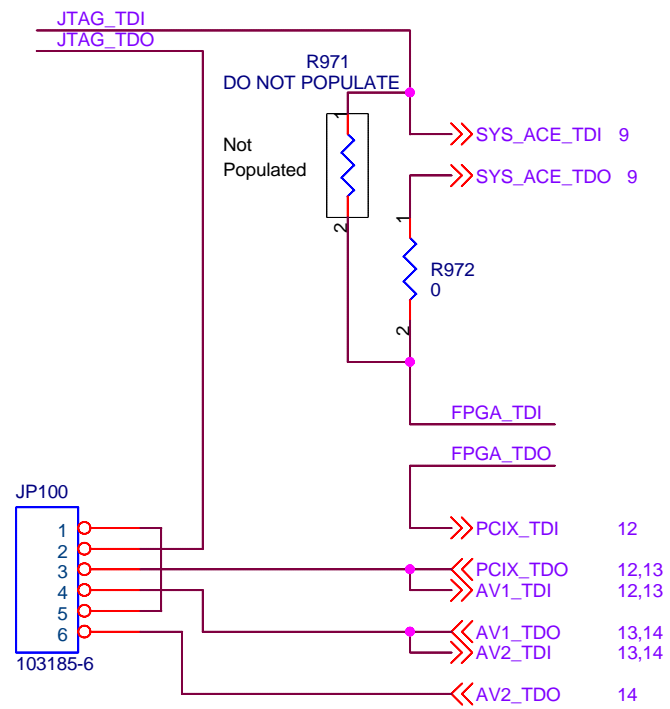
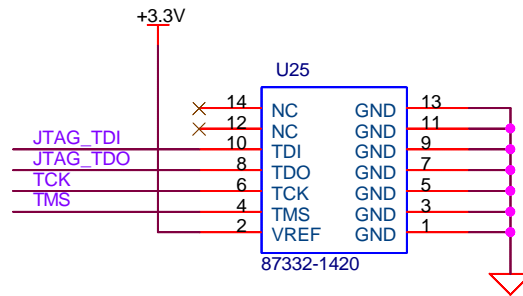


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Title		KOKERBOOM PROJECT SYSTEM ACE	
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FPGA JTAG PORTS

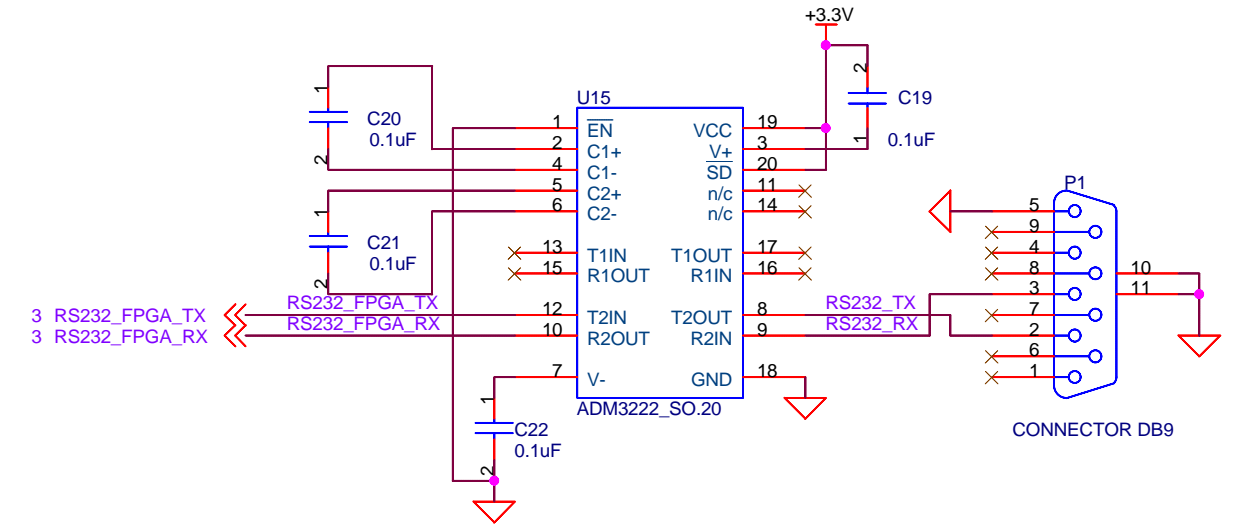


JTAG: PARALLEL CABLE IV CONNECTOR

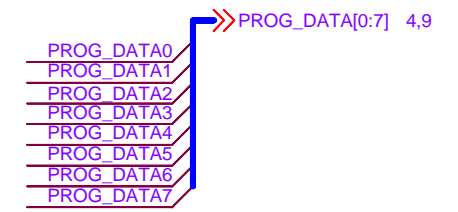
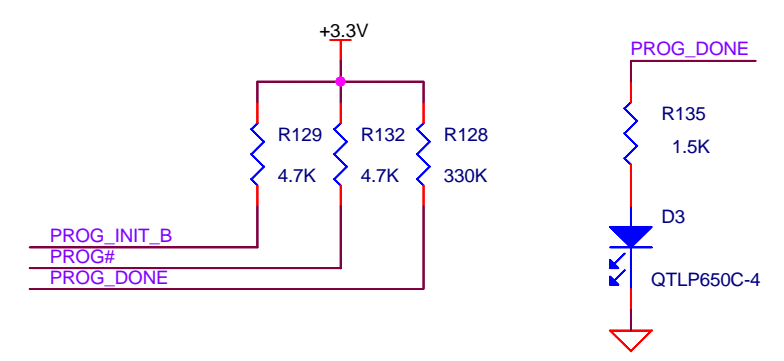
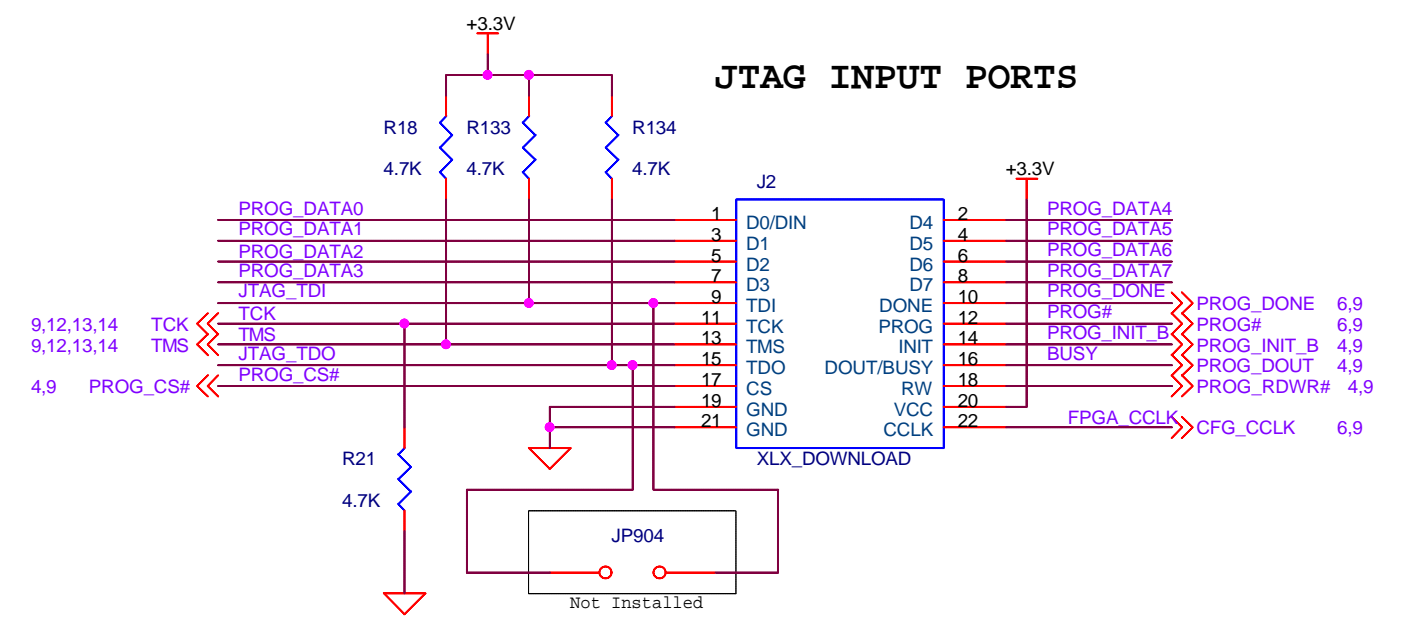


JTAG Chain Selection (Shunts required)	
JP101	Selection
Pins 2-3	SYSTEM ACE, FPGA & PCIX (bypassed - see PCIX sheet) only
Pins 1-2 & 4-5	Add AvBus Connector 1 only
Pins 1-2 & 5-6	Add AvBus Connector 1 & 2
Pins 1-2, 3-4 & 5-6	Add AvBus Connector 2 only

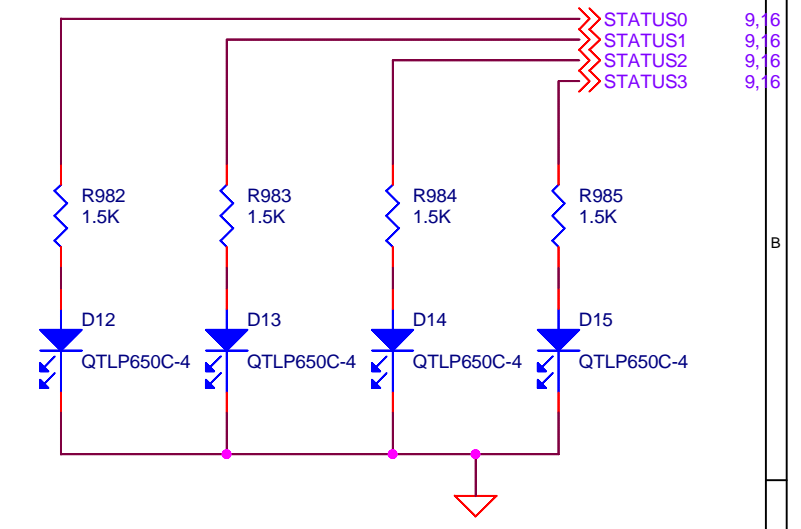
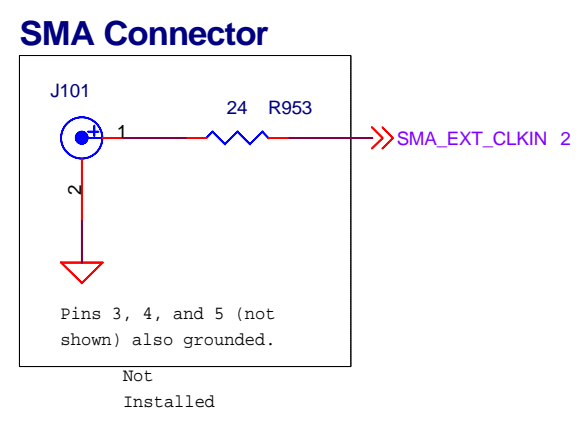
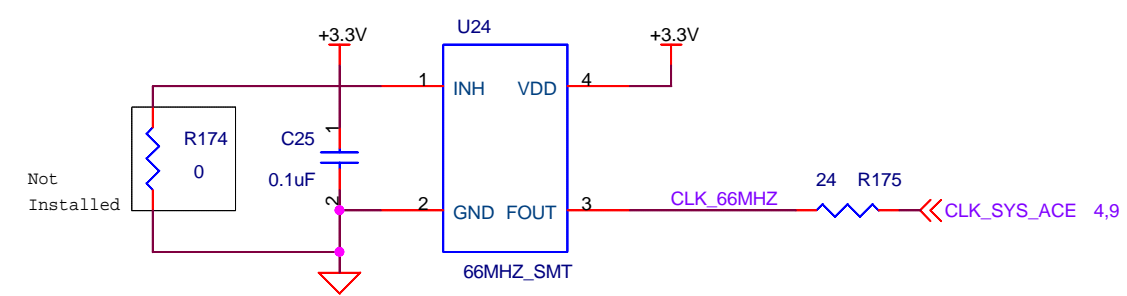
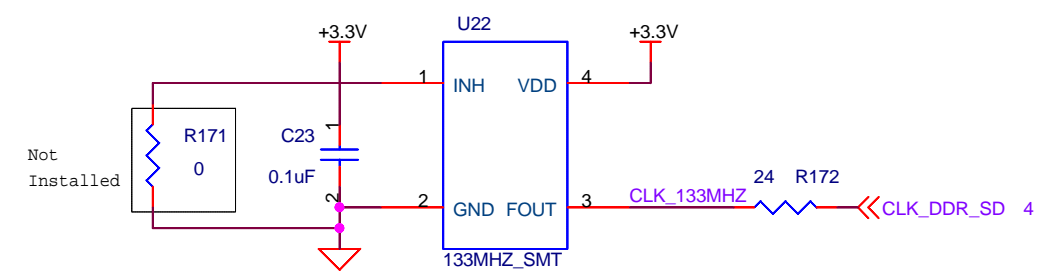
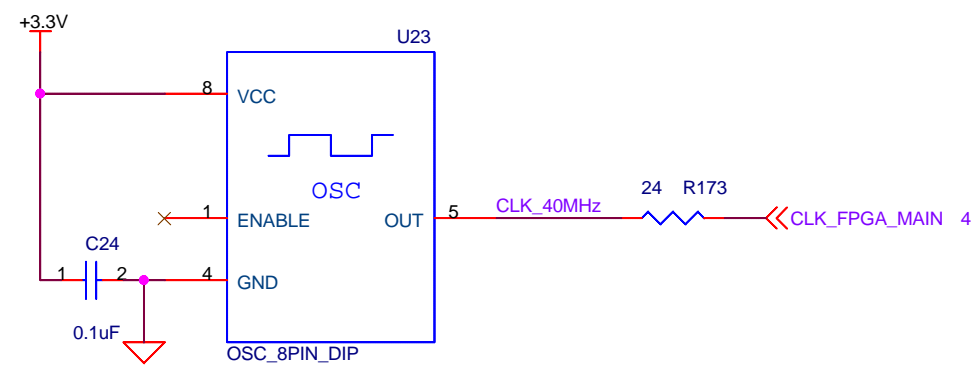
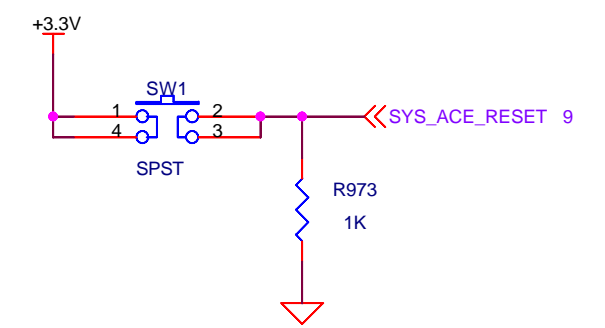
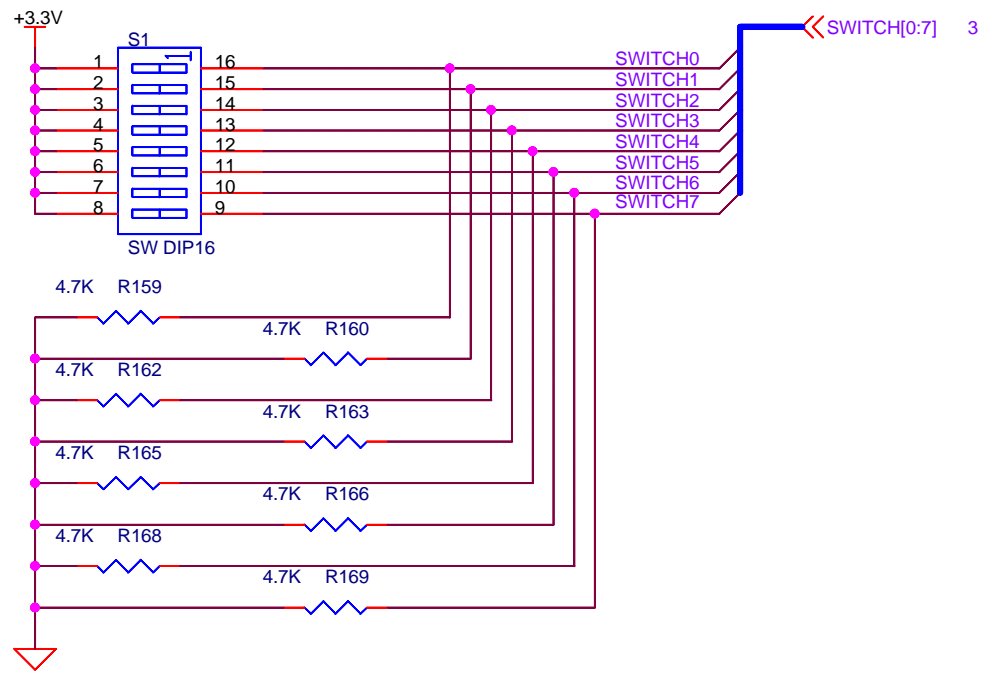
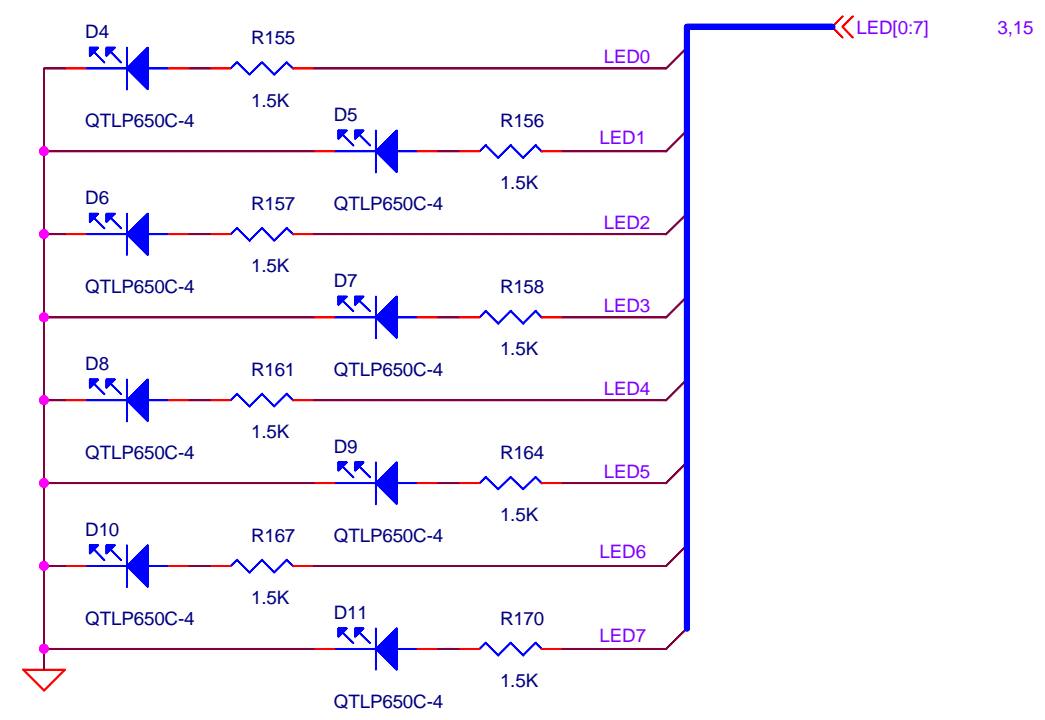
RS232



JTAG INPUT PORTS

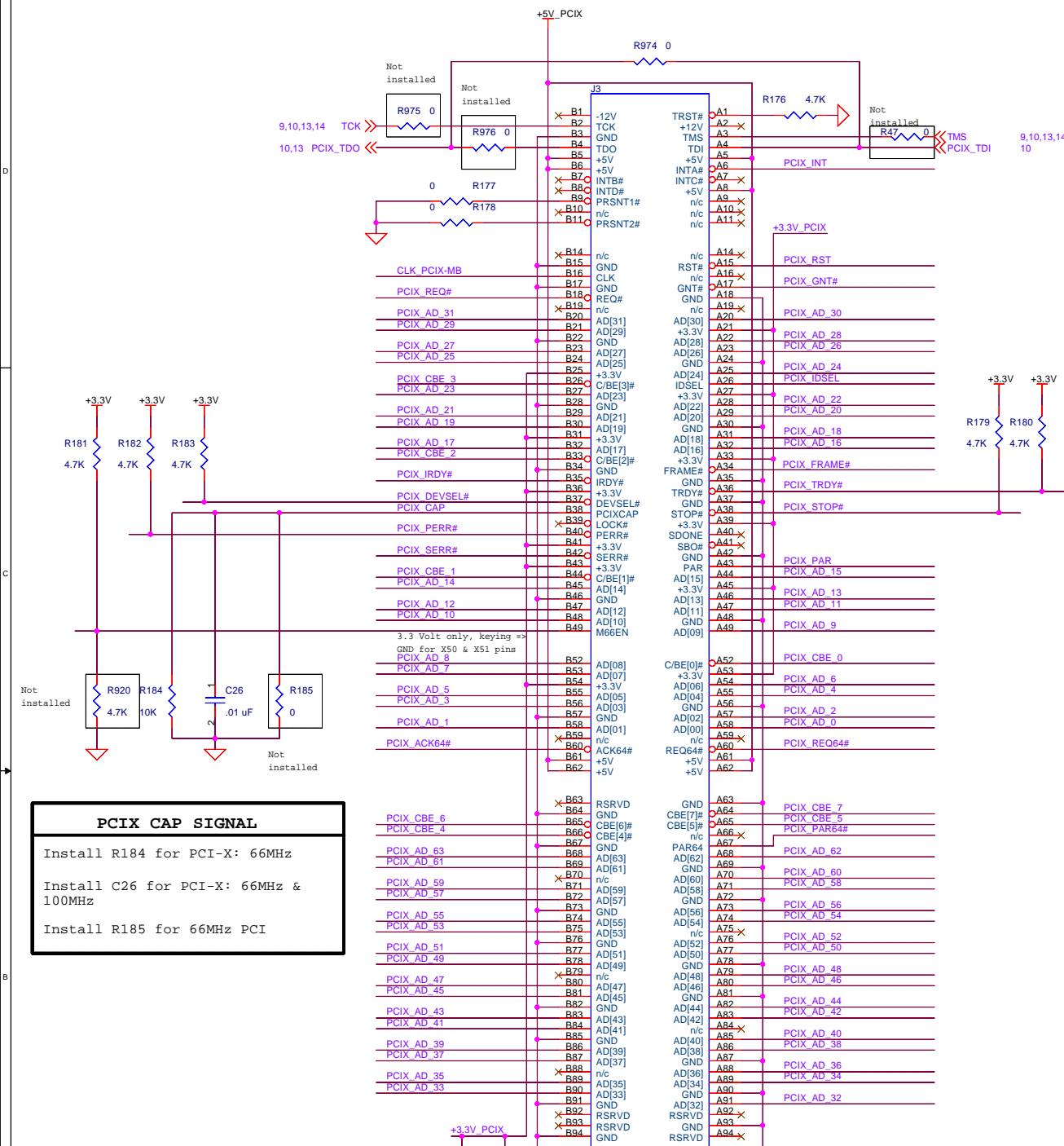


Revision	
Zone	Description
1D	B
ADDED SW1 & C900.	



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Title	KOKERBOOM PROJECT Oscillator / Switch / LEDs	
Size	Document Number	Rev
B	H294-APPS-KKB-1103	D
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Revision	
Zone	Rev.
B5	B
Description ADDED R905.	

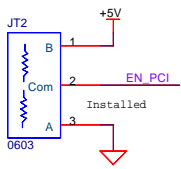
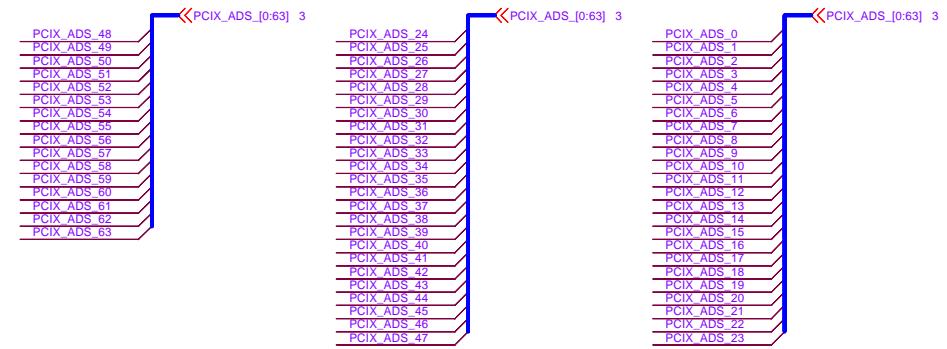
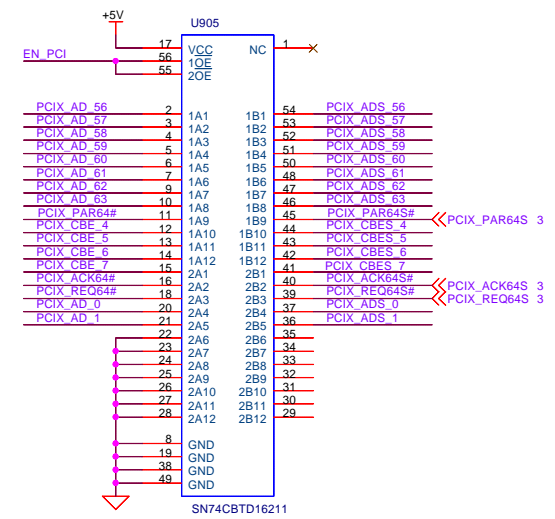
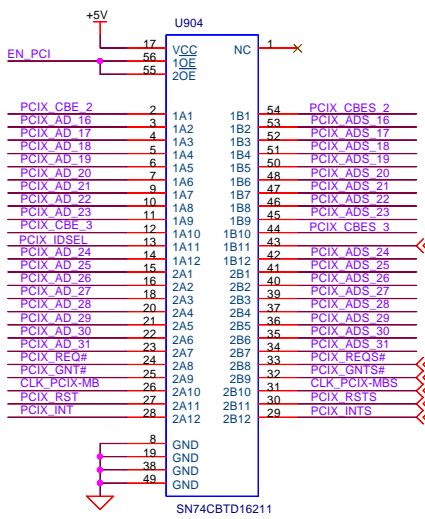
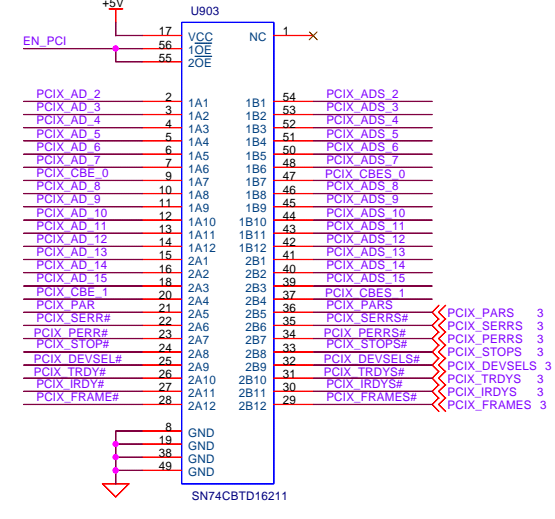
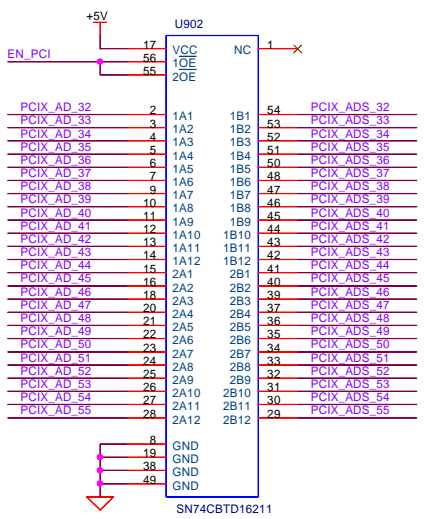


PCIX CAP SIGNAL

Install R184 for PCI-X: 66MHz

Install C26 for PCI-X: 66MHz & 100MHz

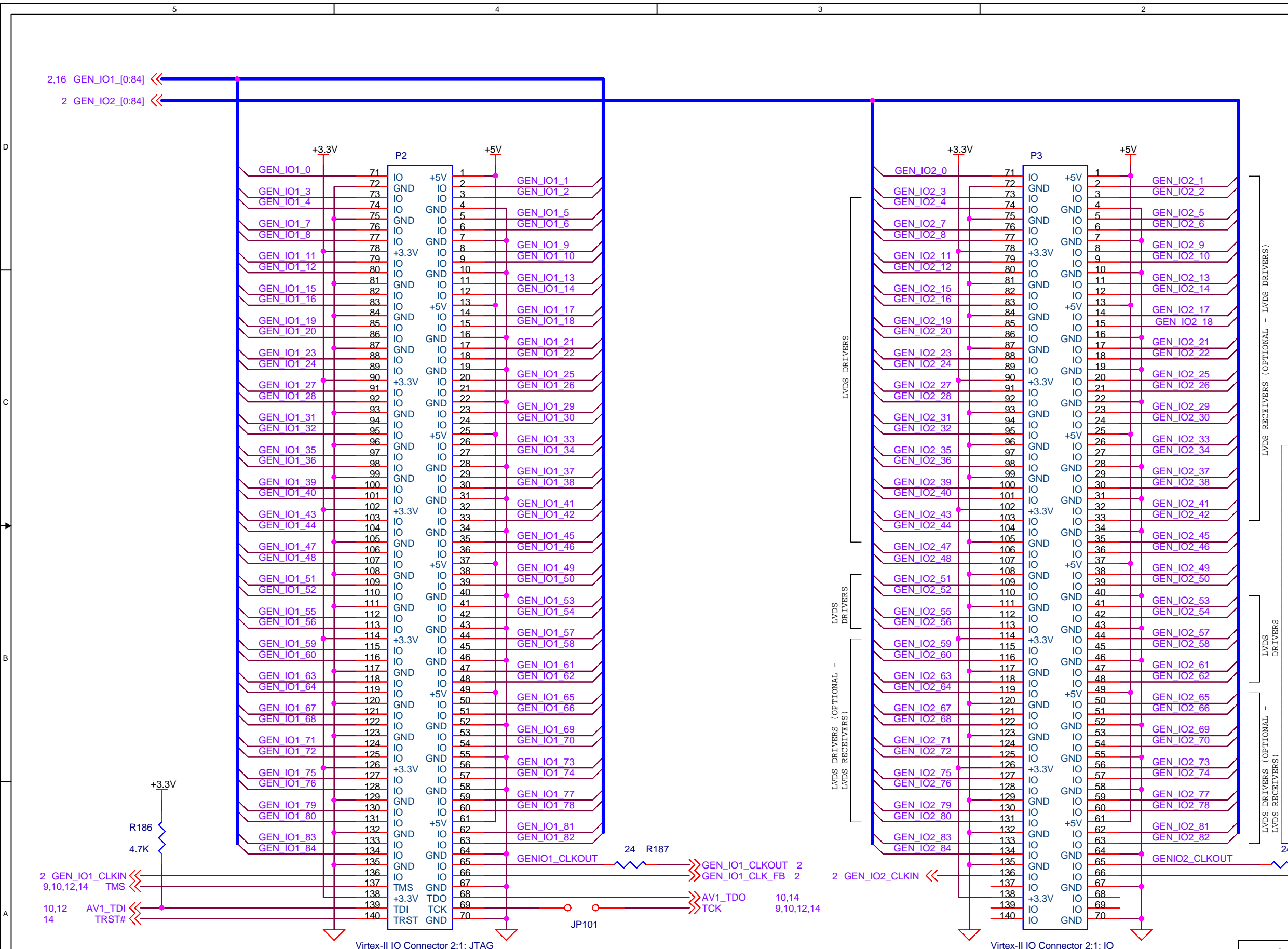
Install R185 for 66MHz PCI



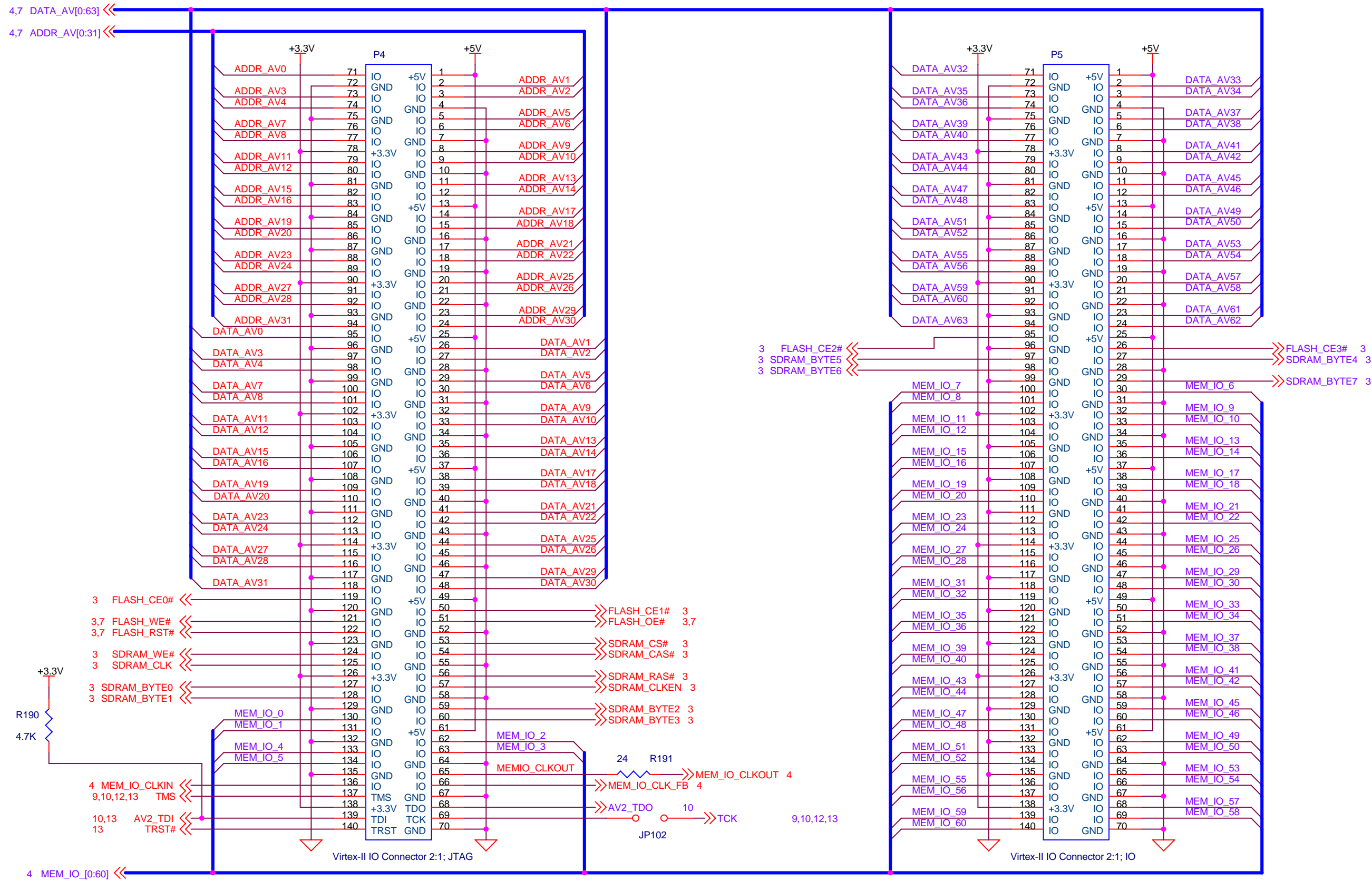
PCI_64_UNIVERSAL
NOTE: Vio's are n/c's

LVDS Pinout Description			
RECEIVER (OPT. DRIVER)		DRIVER	
LVDS Signal	GEN_IO2 Signal	LVDS Signal	GEN_IO2 Signal
LVDS_IN1_N	GEN_IO2_1	LVDS_OUT1_N	GEN_IO2_3
LVDS_IN1_P	GEN_IO2_2	LVDS_OUT1_P	GEN_IO2_4
LVDS_IN2_N	GEN_IO2_5	LVDS_OUT2_N	GEN_IO2_7
LVDS_IN2_P	GEN_IO2_6	LVDS_OUT2_P	GEN_IO2_8
LVDS_IN3_N	GEN_IO2_9	LVDS_OUT3_N	GEN_IO2_11
LVDS_IN3_P	GEN_IO2_10	LVDS_OUT3_P	GEN_IO2_12
LVDS_IN4_N	GEN_IO2_13	LVDS_OUT4_N	GEN_IO2_15
LVDS_IN4_P	GEN_IO2_14	LVDS_OUT4_P	GEN_IO2_16
LVDS_IN5_N	GEN_IO2_17	LVDS_OUT5_N	GEN_IO2_19
LVDS_IN5_P	GEN_IO2_18	LVDS_OUT5_P	GEN_IO2_20
LVDS_IN6_N	GEN_IO2_21	LVDS_OUT6_N	GEN_IO2_23
LVDS_IN6_P	GEN_IO2_22	LVDS_OUT6_P	GEN_IO2_24
LVDS_IN7_N	GEN_IO2_25	LVDS_OUT7_N	GEN_IO2_27
LVDS_IN7_P	GEN_IO2_26	LVDS_OUT7_P	GEN_IO2_28
LVDS_IN8_N	GEN_IO2_29	LVDS_OUT8_N	GEN_IO2_31
LVDS_IN8_P	GEN_IO2_30	LVDS_OUT8_P	GEN_IO2_32
LVDS_IN9_N	GEN_IO2_33	LVDS_OUT9_N	GEN_IO2_35
LVDS_IN9_P	GEN_IO2_34	LVDS_OUT9_P	GEN_IO2_36
LVDS_IN10_N	GEN_IO2_37	LVDS_OUT10_N	GEN_IO2_39
LVDS_IN10_P	GEN_IO2_38	LVDS_OUT10_P	GEN_IO2_40
LVDS_IN11_N	GEN_IO2_41	LVDS_OUT11_N	GEN_IO2_43
LVDS_IN11_P	GEN_IO2_42	LVDS_OUT11_P	GEN_IO2_44

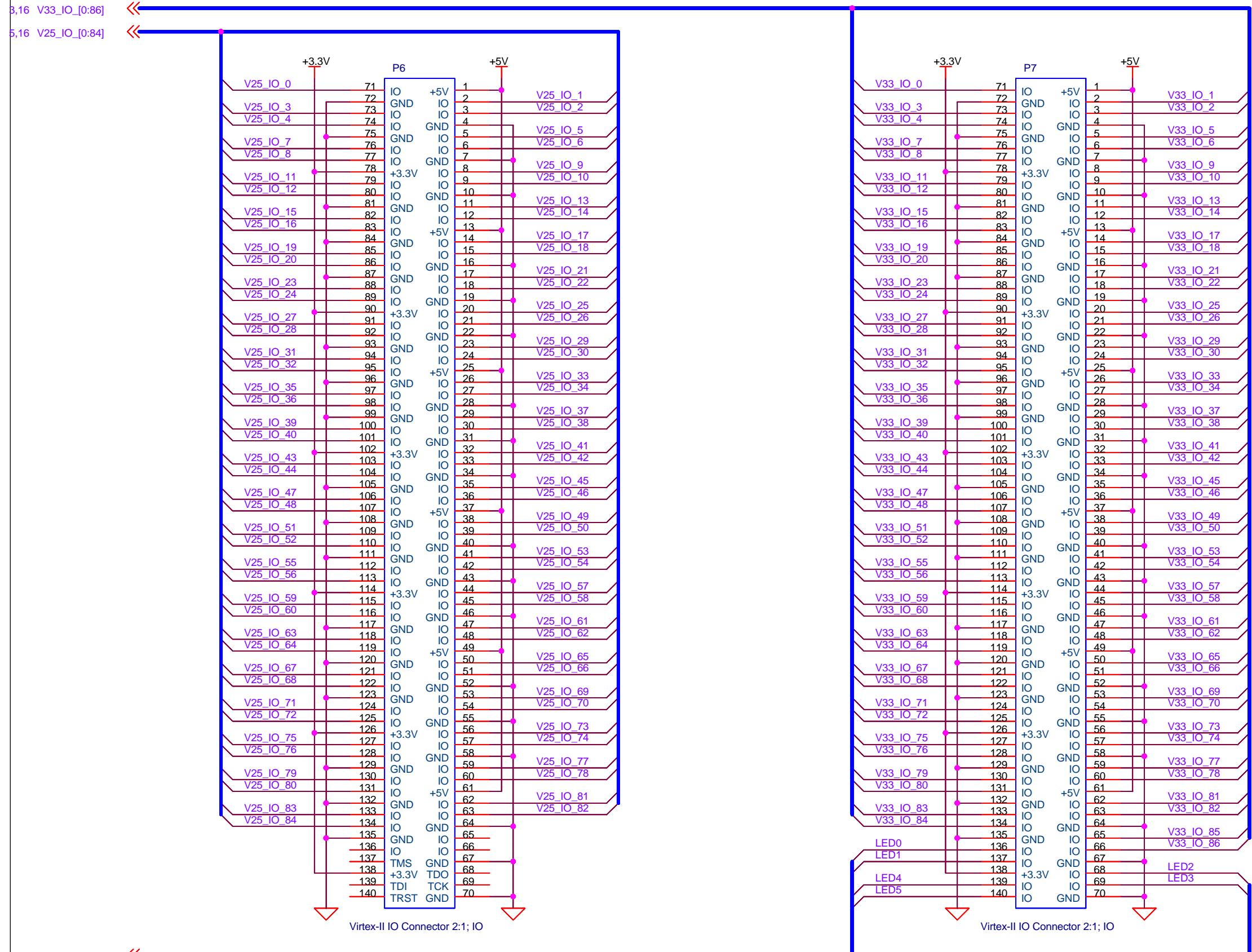
LVDS Pinout Description			
DRIVERS (OPT. RECEIVER)		DRIVERS	
LVDS Signal	GEN_IO2 Signal	LVDS Signal	GEN_IO2 Signal
LVDS_OUT12_N	GEN_IO2_65	LVDS_OUT23_N	GEN_IO2_51
LVDS_OUT12_P	GEN_IO2_66	LVDS_OUT23_P	GEN_IO2_52
LVDS_OUT13_N	GEN_IO2_69	LVDS_OUT24_N	GEN_IO2_55
LVDS_OUT13_P	GEN_IO2_70	LVDS_OUT24_P	GEN_IO2_56
LVDS_OUT14_N	GEN_IO2_73	LVDS_OUT25_N	GEN_IO2_53
LVDS_OUT14_P	GEN_IO2_74	LVDS_OUT25_P	GEN_IO2_54
LVDS_OUT15_N	GEN_IO2_77	LVDS_OUT26_N	GEN_IO2_57
LVDS_OUT15_P	GEN_IO2_78	LVDS_OUT26_P	GEN_IO2_58
LVDS_OUT16_N	GEN_IO2_81	LVDS_OUT27_N	GEN_IO2_61
LVDS_OUT16_P	GEN_IO2_82	LVDS_OUT27_P	GEN_IO2_62
LVDS_OUT17_N	GEN_IO2_59		
LVDS_OUT17_P	GEN_IO2_60		
LVDS_OUT18_N	GEN_IO2_63		
LVDS_OUT18_P	GEN_IO2_64		
LVDS_OUT19_N	GEN_IO2_67		
LVDS_OUT19_P	GEN_IO2_68		
LVDS_OUT20_N	GEN_IO2_71		
LVDS_OUT20_P	GEN_IO2_72		
LVDS_OUT21_N	GEN_IO2_75		
LVDS_OUT21_P	GEN_IO2_76		
LVDS_OUT22_N	GEN_IO2_79		
LVDS_OUT22_P	GEN_IO2_80		



24 R188 Available with larger device

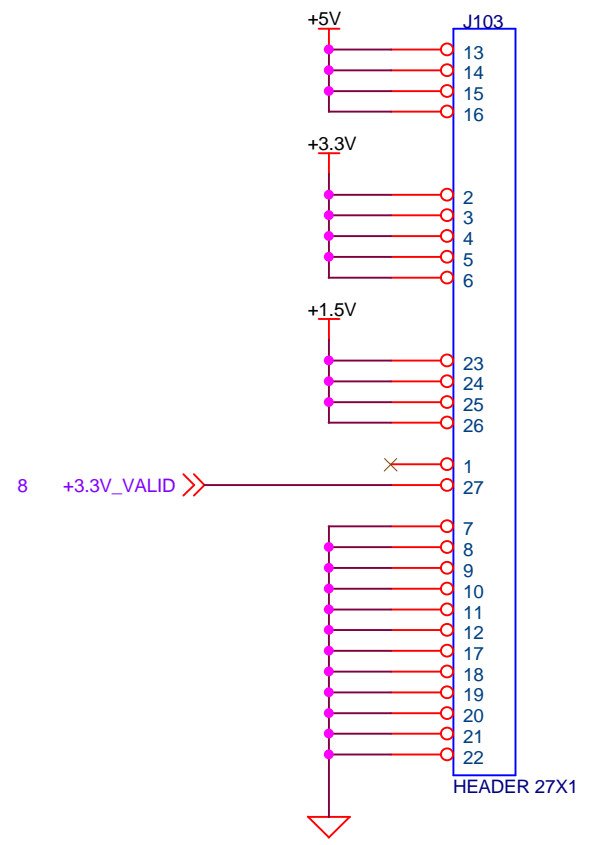
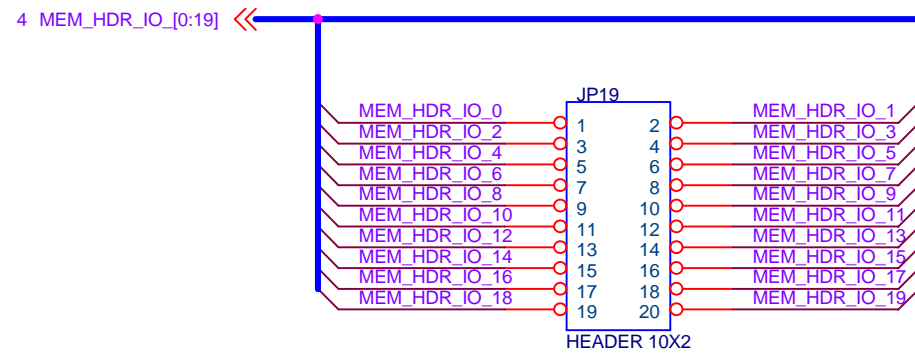
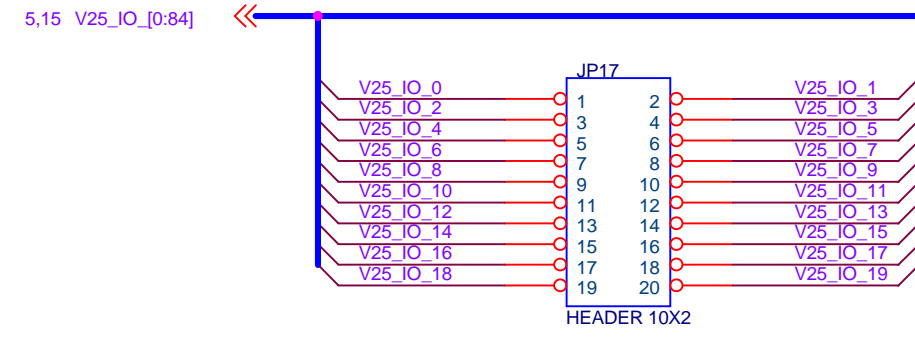
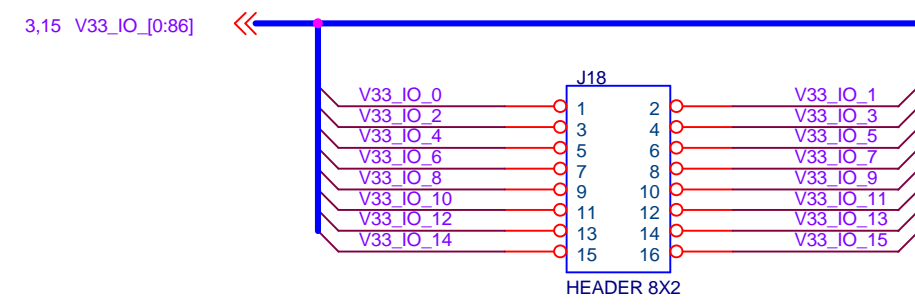
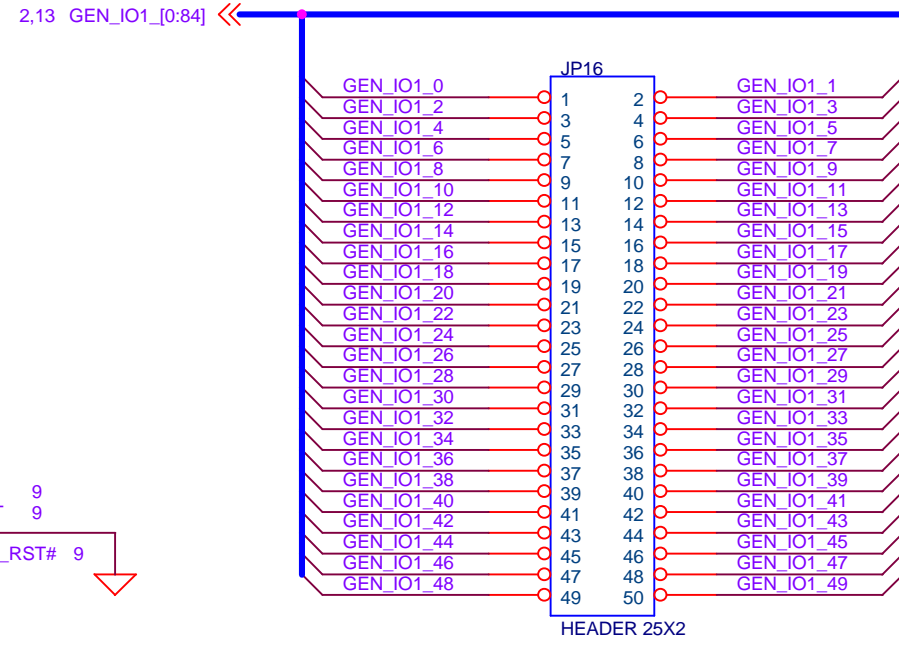
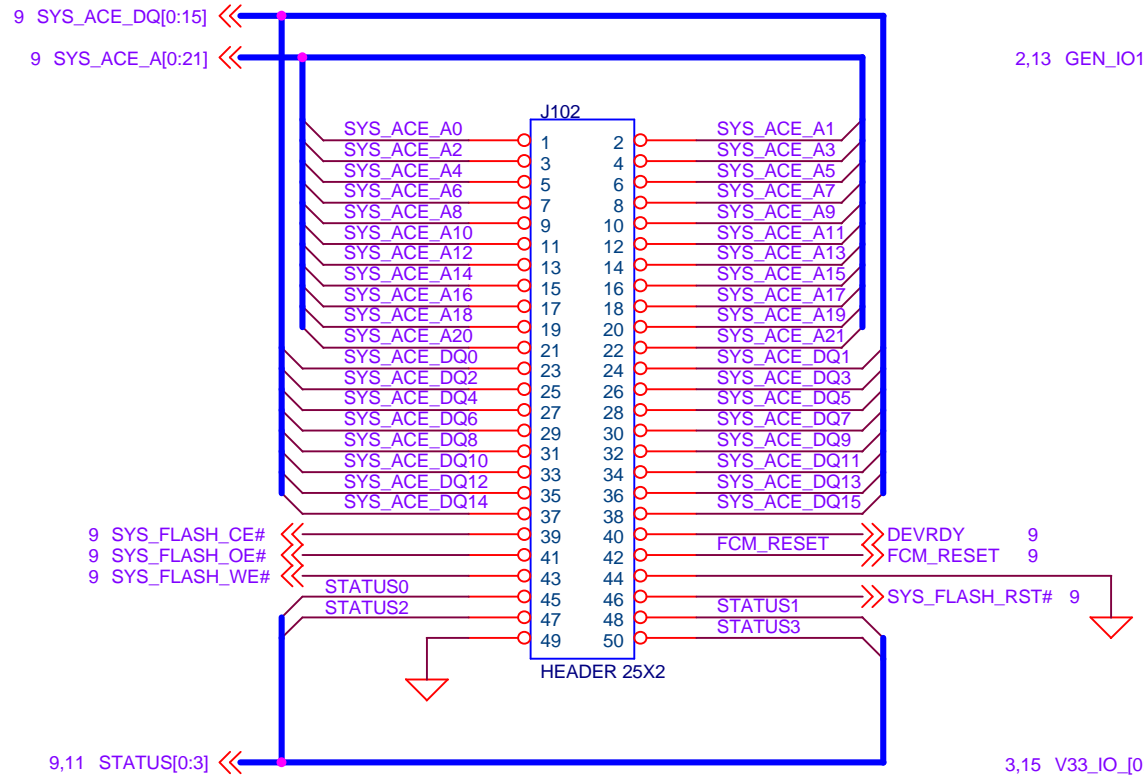


Revision		
Zone	Rev.	Description

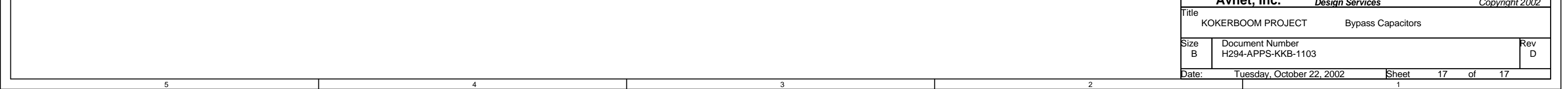
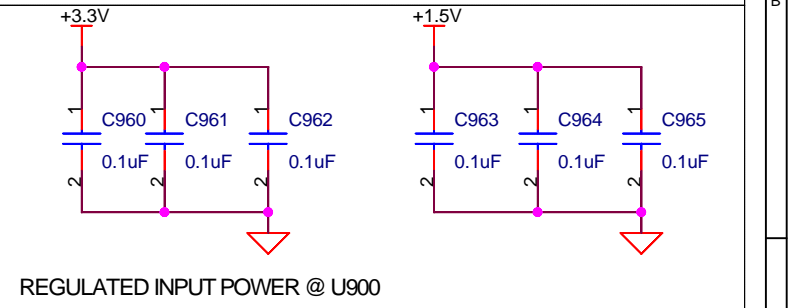
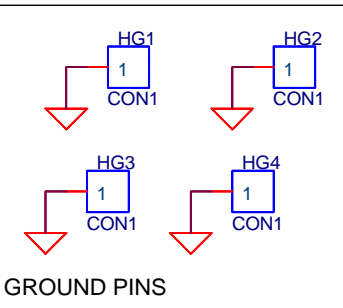
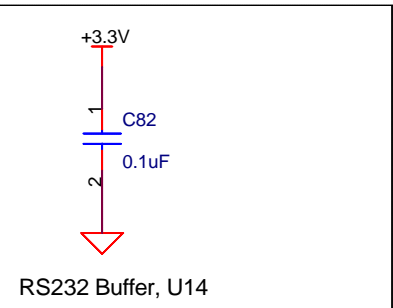
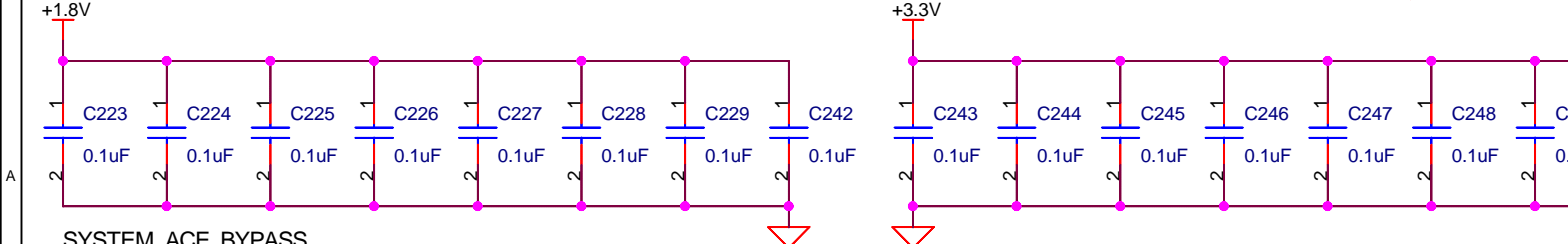
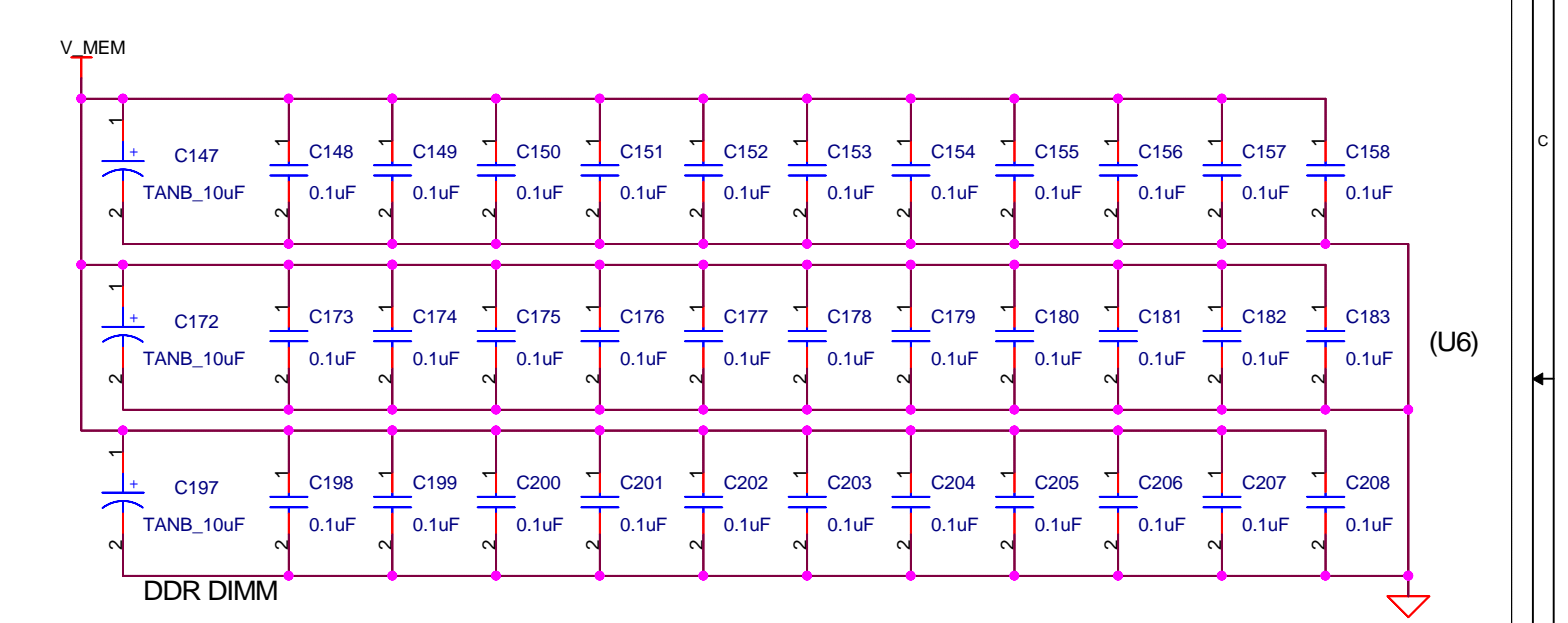
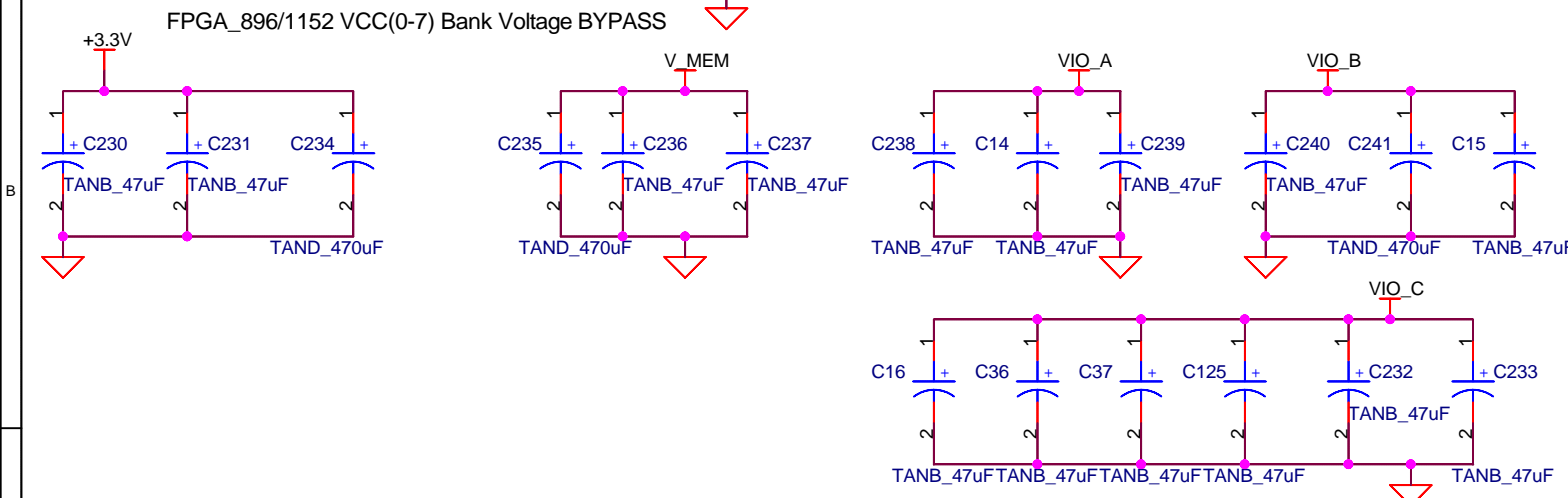
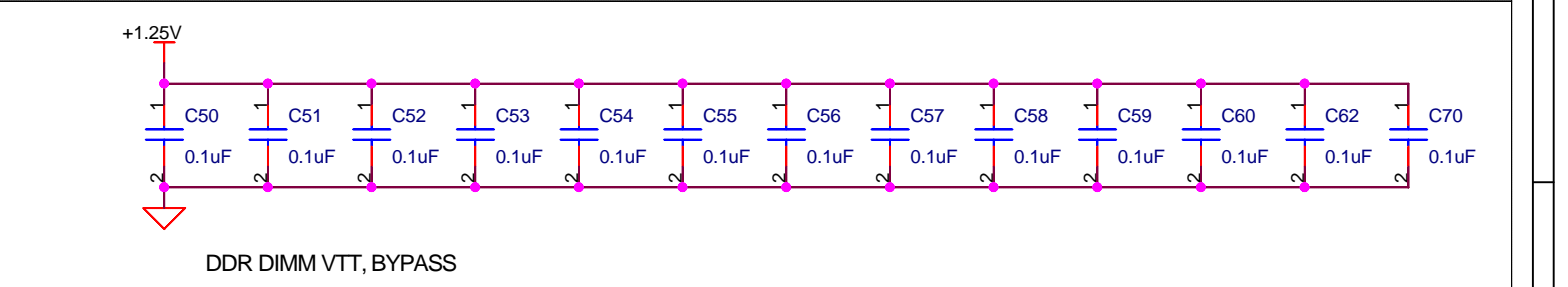
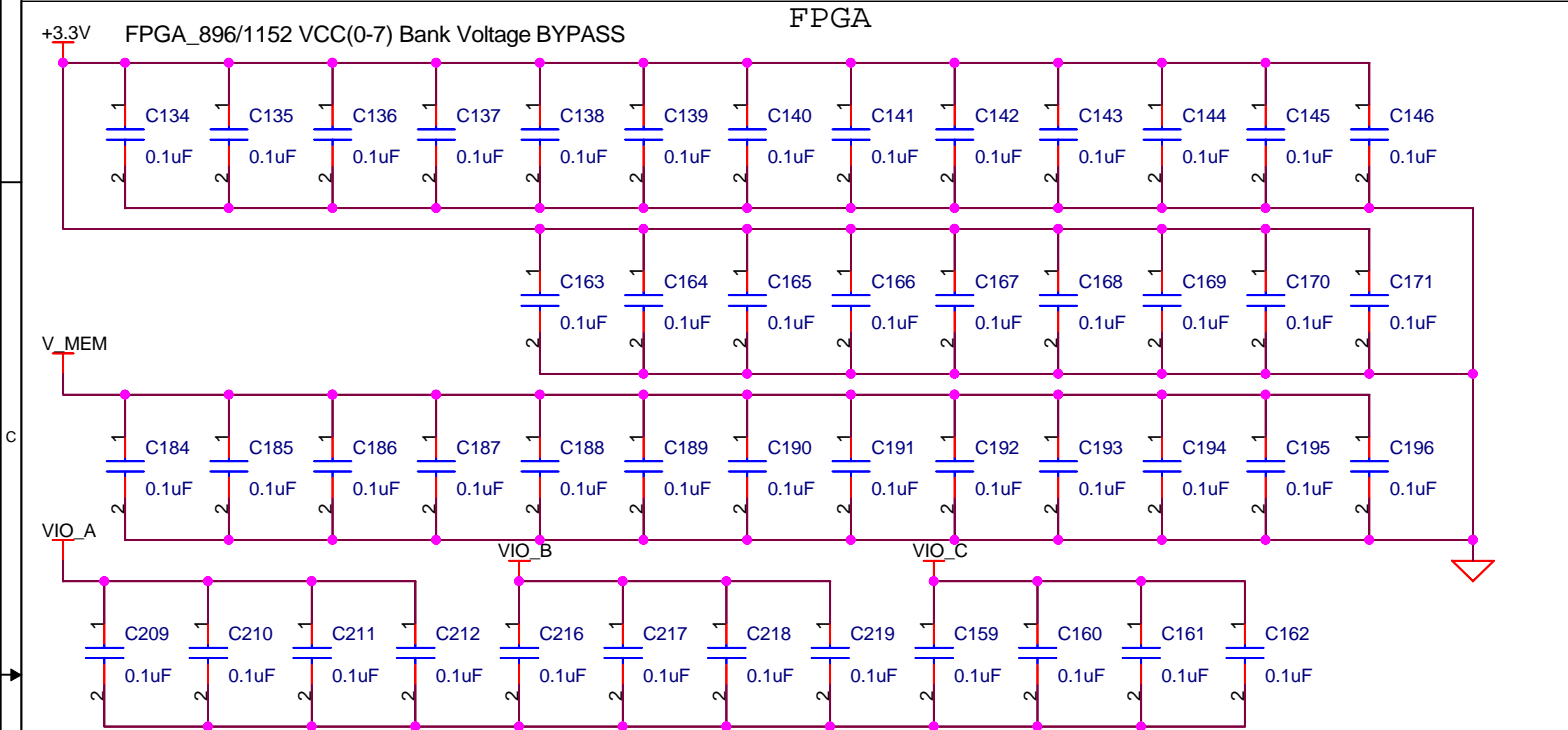
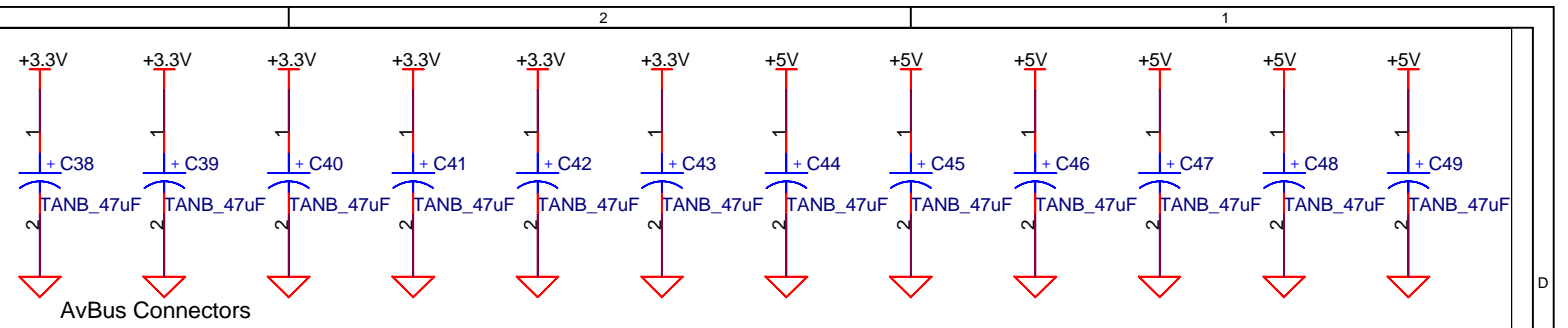
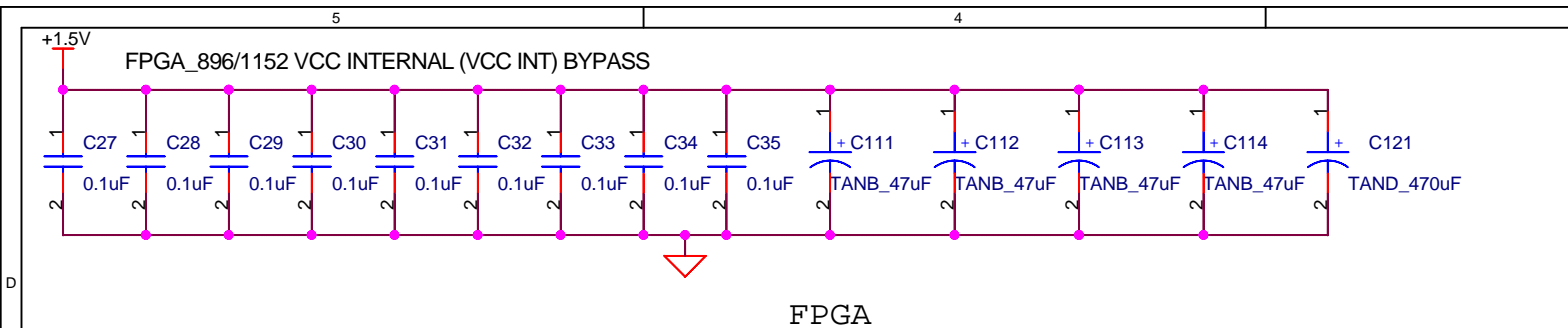


Not installed with XC2V1500. Install only with XC2V4000 or larger device

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