

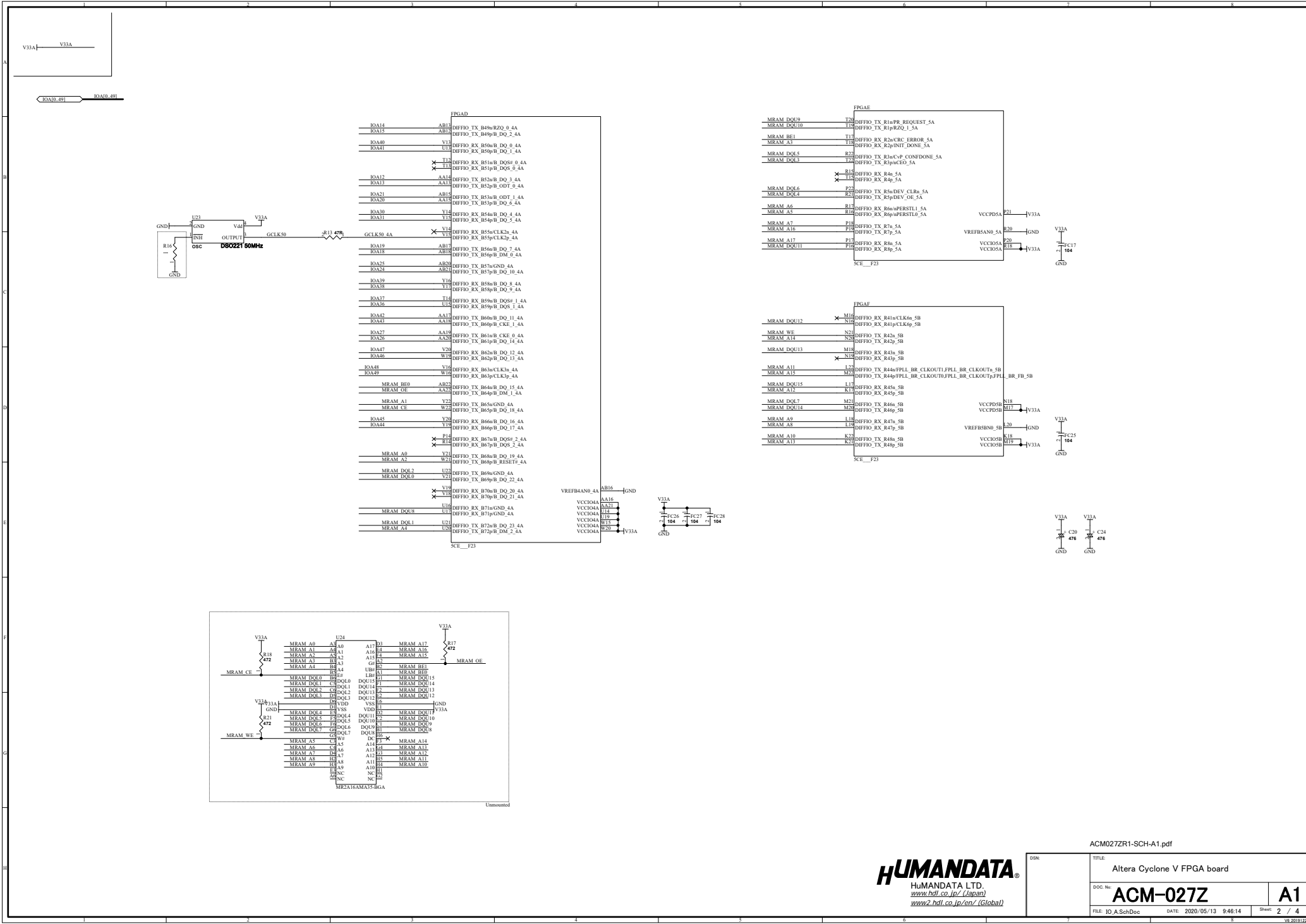
DSN TITLE  
ACM027Z1-SCH-A1.pdf

Altera CycloneV FPGA board

DOC. No. **ACM-027Z**

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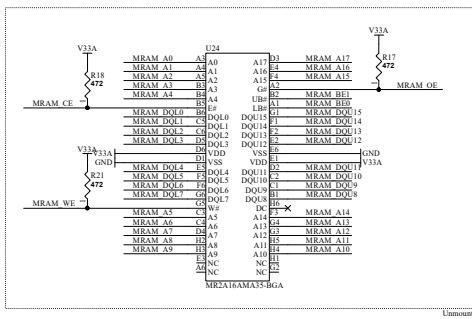
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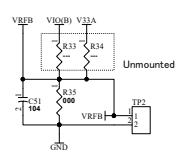
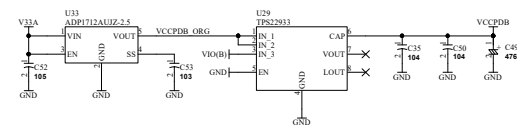
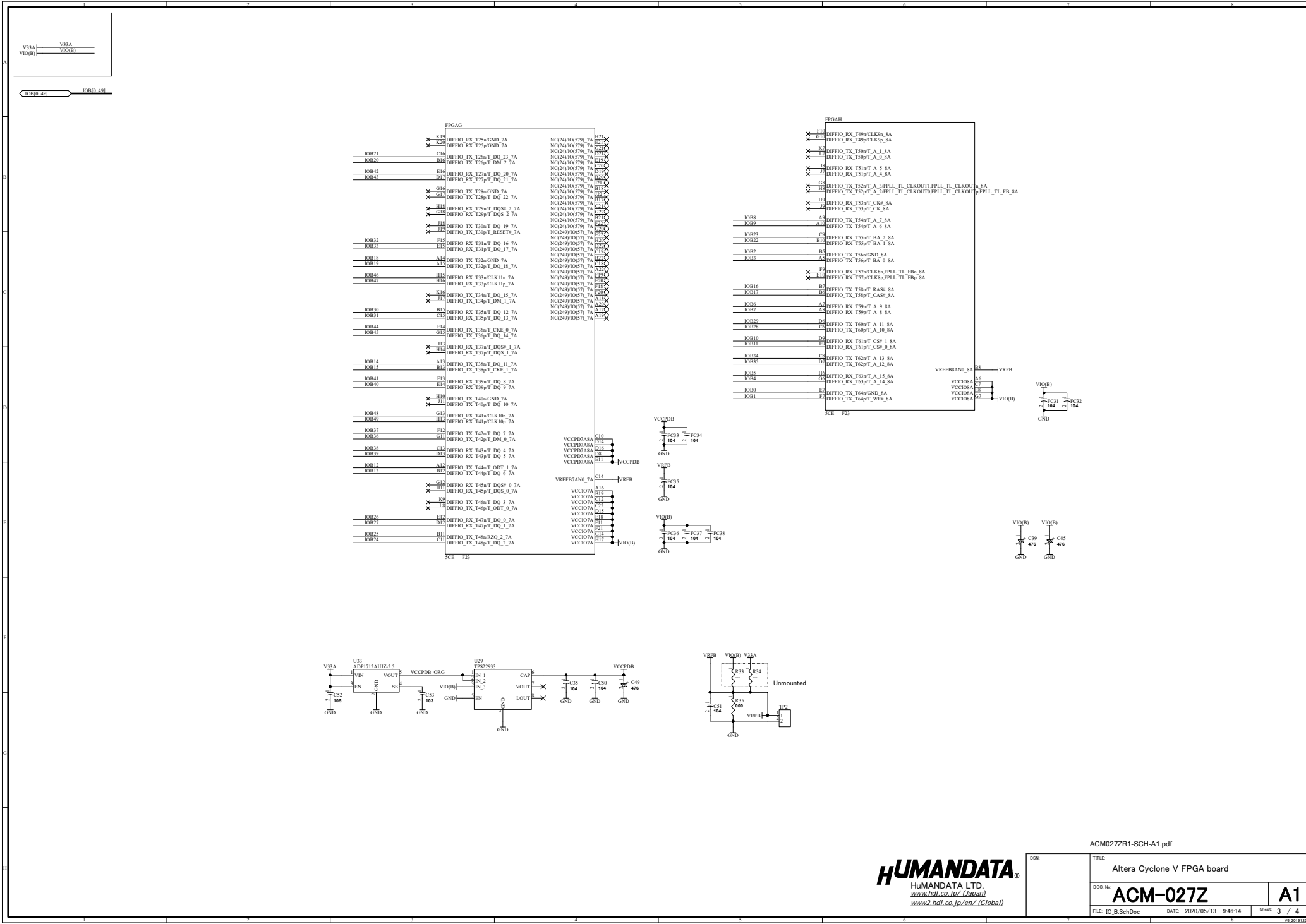
IOA10_49		IOA10_49		IOA10_49	
IOA14	AB13	DIFFIO_TX_B49wRZQ_0_4A			
IOA15	AB15	DIFFIO_TX_B49wB_DQ_2_4A			
IOA40	V13	DIFFIO_RX_B50wB_DQ_0_4A			
IOA21	U13	DIFFIO_RX_B50wB_DQ_1_4A			
	X112	DIFFIO_RX_B51wB_DQ5_0_4A			
	X113	DIFFIO_RX_B51wB_DQ5_0_4A			
IOA12	AA14	DIFFIO_TX_B52wB_DQ_3_4A			
IOA13	AA13	DIFFIO_TX_B52wB_ODT_0_4A			
IOA21	AB15	DIFFIO_TX_B53wB_ODT_1_4A			
IOA20	AA15	DIFFIO_TX_B53wB_DQ_6_4A			
IOA30	V14	DIFFIO_RX_B54wB_DQ_4_4A			
IOA31	V15	DIFFIO_RX_B54wB_DQ_5_4A			
	X114	DIFFIO_RX_B55wCLK2_4A			
	X115	DIFFIO_RX_B55wCLK2_4A			
IOA19	AB17	DIFFIO_TX_B56wB_DQ_7_4A			
IOA18	AB18	DIFFIO_TX_B56wB_DM_0_4A			
IOA25	AB20	DIFFIO_TX_B57wGND_4A			
IOA24	AA24	DIFFIO_TX_B57wB_DQ_10_4A			
IOA39	V16	DIFFIO_RX_B58wB_DQ_8_4A			
IOA18	V17	DIFFIO_RX_B58wB_DQ_9_4A			
IOA17	T14	DIFFIO_RX_B59wB_DQ5_1_4A			
IOA16	U15	DIFFIO_RX_B59wB_DQ5_1_4A			
IOA42	AA17	DIFFIO_TX_B60wB_DQ_11_4A			
IOA43	AA18	DIFFIO_TX_B60wB_CKE_1_4A			
IOA27	AA19	DIFFIO_TX_B61wB_CKE_0_4A			
IOA26	AA20	DIFFIO_RX_B61wB_DQ_14_4A			
IOA47	V20	DIFFIO_RX_B62wB_DQ_12_4A			
IOA46	W19	DIFFIO_RX_B62wB_DQ_13_4A			
IOA48	V18	DIFFIO_RX_B63wCLK3_4A			
IOA49	W18	DIFFIO_RX_B63wCLK3_4A			
MRAM_BE0	AB22	DIFFIO_TX_B64wB_DM_15_4A			
MRAM_OE	AA22	DIFFIO_TX_B64wB_DM_1_4A			
MRAM_A1	V22	DIFFIO_TX_B65wGND_4A			
MRAM_CE	W22	DIFFIO_TX_B65wB_DQ_1_4A			
IOA45	V20	DIFFIO_RX_B66wB_DQ_16_4A			
IOA44	V19	DIFFIO_RX_B66wB_DQ_17_4A			
	X114	DIFFIO_RX_B67wB_DQ5_2_4A			
	X115	DIFFIO_RX_B67wB_DQ5_2_4A			
MRAM_A0	V21	DIFFIO_TX_B68wB_DQ_19_4A			
MRAM_A1	W21	DIFFIO_TX_B68wB_DQ5_15_4A			
MRAM_DQ1_2	U22	DIFFIO_TX_B69wB_DQ_4A			
MRAM_DQ1_0	V21	DIFFIO_TX_B69wB_DQ_22_4A			
	X116	DIFFIO_RX_B70wB_DQ_20_4A			
	X117	DIFFIO_RX_B70wB_DQ_21_4A			
MRAM_DQ18	U16	DIFFIO_RX_B71wGND_4A			
MRAM_DQ18	U17	DIFFIO_RX_B71wGND_4A			
MRAM_DQ1_1	U21	DIFFIO_TX_B72wB_DQ_23_4A			
MRAM_A4	U20	DIFFIO_TX_B72wB_DM_2_4A			

FPGA		FPGA	
MRAM_DQ19	T20	DIFFIO_TX_R10wPR_REQUEST_5A	
MRAM_DQ10	U19	DIFFIO_TX_R10wRZQ_1_5A	
MRAM_BE1	T17	DIFFIO_RX_R2wCRC_ERROR_5A	
MRAM_A3	U15	DIFFIO_RX_R2wINIT_DONE_5A	
MRAM_DQ1_5	R21	DIFFIO_TX_R3wCvP_CONF_DONE_5A	
MRAM_DQ1_1	U22	DIFFIO_TX_R3wCvP_CONF_DONE_5A	
	X118	DIFFIO_RX_R4w_5A	
	X119	DIFFIO_RX_R4w_5A	
MRAM_DQ1_6	P22	DIFFIO_TX_R5wDEV_CLK_5A	
MRAM_DQ1_4	R21	DIFFIO_TX_R5wDEV_OE_5A	
MRAM_A6	R17	DIFFIO_RX_R6wPERSTL1_5A	
MRAM_A5	R16	DIFFIO_RX_R6wPERSTL0_5A	
MRAM_A7	P18	DIFFIO_TX_R7w_5A	
MRAM_A16	P19	DIFFIO_TX_R7w_5A	
MRAM_A17	P17	DIFFIO_RX_R8w_5A	
MRAM_DQ11	P16	DIFFIO_RX_R8w_5A	

FPGA		FPGA	
MRAM_DQ112	X119	DIFFIO_RX_R41wCLK6_5B	
	X120	DIFFIO_RX_R41wCLK6_5B	
MRAM_WE	N21	DIFFIO_TX_R42w_5B	
MRAM_A14	N20	DIFFIO_TX_R42w_5B	
MRAM_DQ13	M18	DIFFIO_RX_R43w_5B	
	X121	DIFFIO_RX_R43w_5B	
MRAM_A11	L20	DIFFIO_TX_R44wFPLL_BR_CLKOUT1_FPLL_BR_CLKOUT_5B	
MRAM_A15	M20	DIFFIO_TX_R44wFPLL_BR_CLKOUT1_FPLL_BR_CLKOUT_5B	
MRAM_DQ15	L17	DIFFIO_RX_R45w_5B	
MRAM_A15	K21	DIFFIO_RX_R45w_5B	
MRAM_DQ1_7	M21	DIFFIO_TX_R46w_5B	
MRAM_DQ14	M20	DIFFIO_TX_R46w_5B	
MRAM_A9	L18	DIFFIO_RX_R47w_5B	
MRAM_A8	L19	DIFFIO_RX_R47w_5B	
MRAM_A10	K22	DIFFIO_TX_R48w_5B	
MRAM_A13	K21	DIFFIO_TX_R48w_5B	



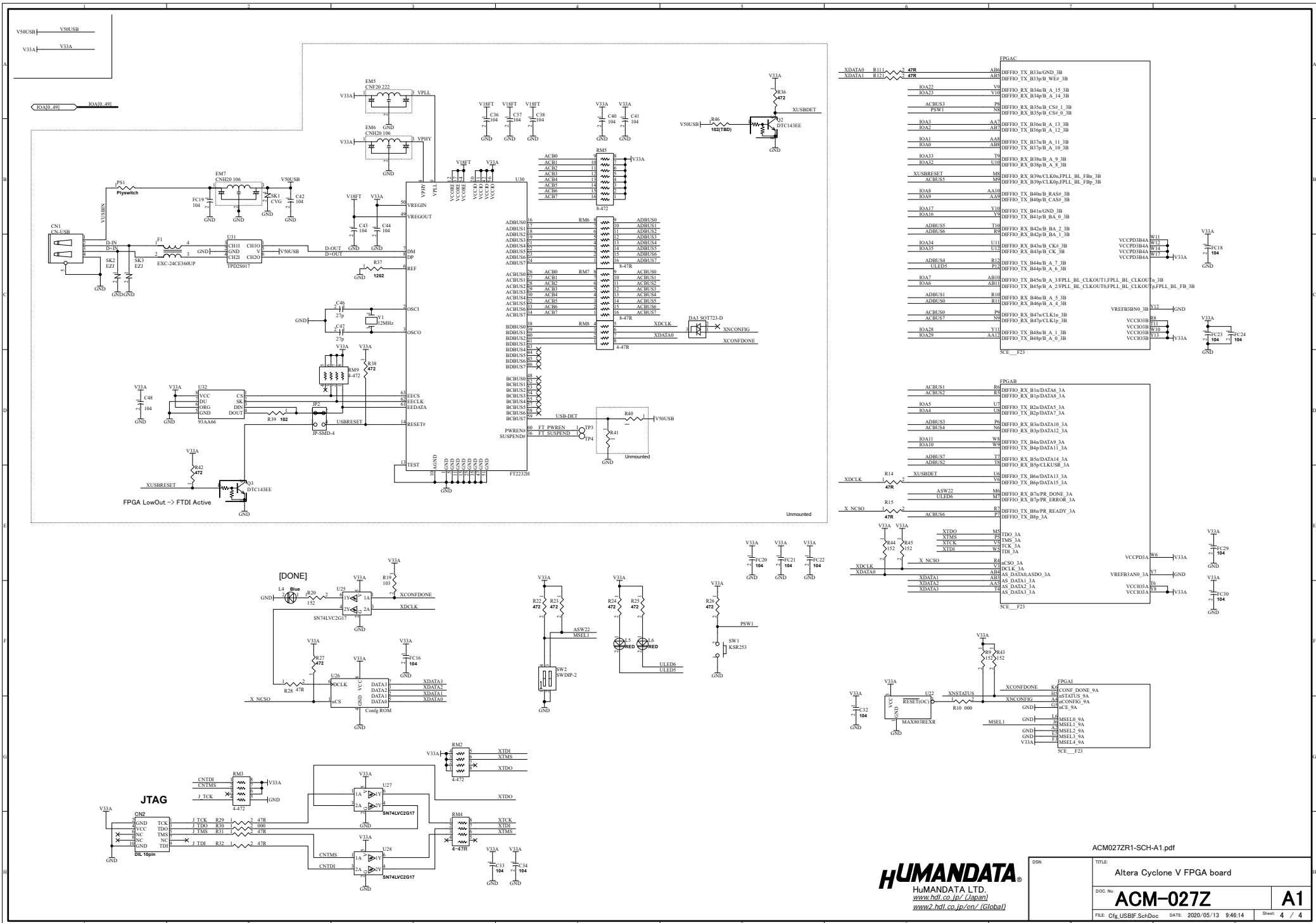
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**HUMAN DATA**  
 HUMAN DATA LTD.  
[www.hdl.co.jp/](http://www.hdl.co.jp/) (*Japan*)  
[www2.hdl.co.jp/en/](http://www2.hdl.co.jp/en/) (*Global*)

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**FGAC**

XDATA0	R11	2	47R	AB8	DIFFIO_TX_B3toGND_3B
XDATA1	R12	2	47R	AB9	DIFFIO_TX_B3toB_WE6_3B
IOA27	VM			VM	DIFFIO_RX_B34toA_15_3B
IOA33	VM			VM	DIFFIO_RX_B34toA_14_3B
ACBUS3	PSW1	PS		PS	DIFFIO_RX_B35toCsr_1_3B
ACBUS3	PSW1	PS		PS	DIFFIO_RX_B35toCsr_2_3B
IOA3	AA7	AA		AA7	DIFFIO_TX_B36toA_13_3B
IOA2	AA8	AA		AA8	DIFFIO_TX_B36toA_12_3B
IOA1	AA9	AA		AA9	DIFFIO_TX_B37toA_11_3B
IOA0	AA0	AA		AA0	DIFFIO_TX_B37toA_10_3B
IOA33	TA	TA		TA	DIFFIO_RX_B38toA_9_3B
IOA32	TA	TA		TA	DIFFIO_RX_B38toA_8_3B
XUSBRESET	MA9	MA		MA9	DIFFIO_RX_B39toCLKtoFPLL_BL_FB_3B
ACBUS5	MA9	MA		MA9	DIFFIO_RX_B39toCLKtoFPLL_BL_FB_2_3B
IOA5	AA10	AA		AA10	DIFFIO_TX_B40toB_RA5_3B
IOA9	AA9	AA		AA9	DIFFIO_TX_B40toB_RA5_3B
IOA17	VI0	VI		VI0	DIFFIO_TX_B41toGND_3B
IOA16	VI1	VI		VI1	DIFFIO_TX_B41toB_BA_0_3B
ACBUS5	UI0	UI		UI0	DIFFIO_RX_B42toB_BA_2_3B
ACBUS5	UI0	UI		UI0	DIFFIO_RX_B42toB_BA_1_3B
IOA34	UI1	UI		UI1	DIFFIO_RX_B44toB_CK_3B
IOA15	UI2	UI		UI2	DIFFIO_RX_B44toB_CK_3B
ACBUS4	R12	R1		R12	DIFFIO_TX_B44toA_7_3B
ULED5	PI0	PI		PI0	DIFFIO_TX_B44toA_6_3B
IOA7	PI1	PI		PI1	DIFFIO_TX_B45toA_3FPLL_BL_CLKOUTtoFPLL_BL_CLKOUT_3B
IOA6	PI0	PI		PI0	DIFFIO_TX_B45toA_2FPLL_BL_CLKOUTtoFPLL_BL_CLKOUT_3B
ACBUS1	R10	R1		R10	DIFFIO_RX_B46toA_5_3B
ACBUS0	R11	R1		R11	DIFFIO_RX_B46toA_4_3B
ACBUS7	P9	PI		P9	DIFFIO_RX_B47toCLKto_3B
ACBUS7	N9	NI		N9	DIFFIO_RX_B47toCLKto_3B
IOA28	VI1	VI		VI1	DIFFIO_TX_B48toB_1_3B
IOA29	AA12	AA		AA12	DIFFIO_TX_B48toB_0_3B

**FGAB**

ACBUS1	R6	R1		R6	DIFFIO_RX_B16toDATA6_3A
ACBUS2	U7	UI		U7	DIFFIO_RX_B16toDATA3_3A
IOA5	U8	UI		U8	DIFFIO_TX_B26toDATA5_3A
IOA4	U9	UI		U9	DIFFIO_TX_B26toDATA7_3A
ACBUS3	PS	PS		PS	DIFFIO_RX_B30toDATA10_3A
ACBUS4	NS	NI		NS	DIFFIO_RX_B30toDATA12_3A
IOA11	WS	WI		WS	DIFFIO_TX_B46toDATA9_3A
IOA10	WS	WI		WS	DIFFIO_TX_B46toDATA11_3A
ACBUS7	TI	TI		TI	DIFFIO_RX_B56toDATA14_3A
ACBUS2	TA	TA		TA	DIFFIO_RX_B56toCLKtoSR_3A
XUSBDDET	UI6	UI		UI6	DIFFIO_TX_B66toDATA13_3A
ASW22	UE6	UE		UE6	DIFFIO_TX_B66toDATA15_3A
ULED6	M6	MI		M6	DIFFIO_RX_B76toPR_DONE_3A
ULED6	M6	MI		M6	DIFFIO_RX_B76toPR_ERROR_3A
X_NCSO	R7	R1		R7	DIFFIO_TX_B86toPR_READY_3A
X_NCSO	R7	R1		R7	DIFFIO_TX_B86toPR_READY_3A

**FGAI**

XTDO	M5	MI		M5	CONF_DONE_9A
XIMS	PI	PI		PI	XNSTATUS_9A
XTK	TMS_3A	TM		TMS_3A	XNCONFIG_9A
XTK	TK_3A	TK		TK_3A	ACE_9A
XTDI	WS	WI		WS	ACE_9A
X_NCSO	B4	BI		B4	MSEL0_9A
X_NCSO	B4	BI		B4	MSEL1_9A
XDATA0	AB8	AB		AB8	MSEL2_9A
XDATA1	AB9	AB		AB9	MSEL3_9A
XDATA2	AB0	AB		AB0	MSEL4_9A
XDATA3	TA	TA		TA	MSEL4_9A



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