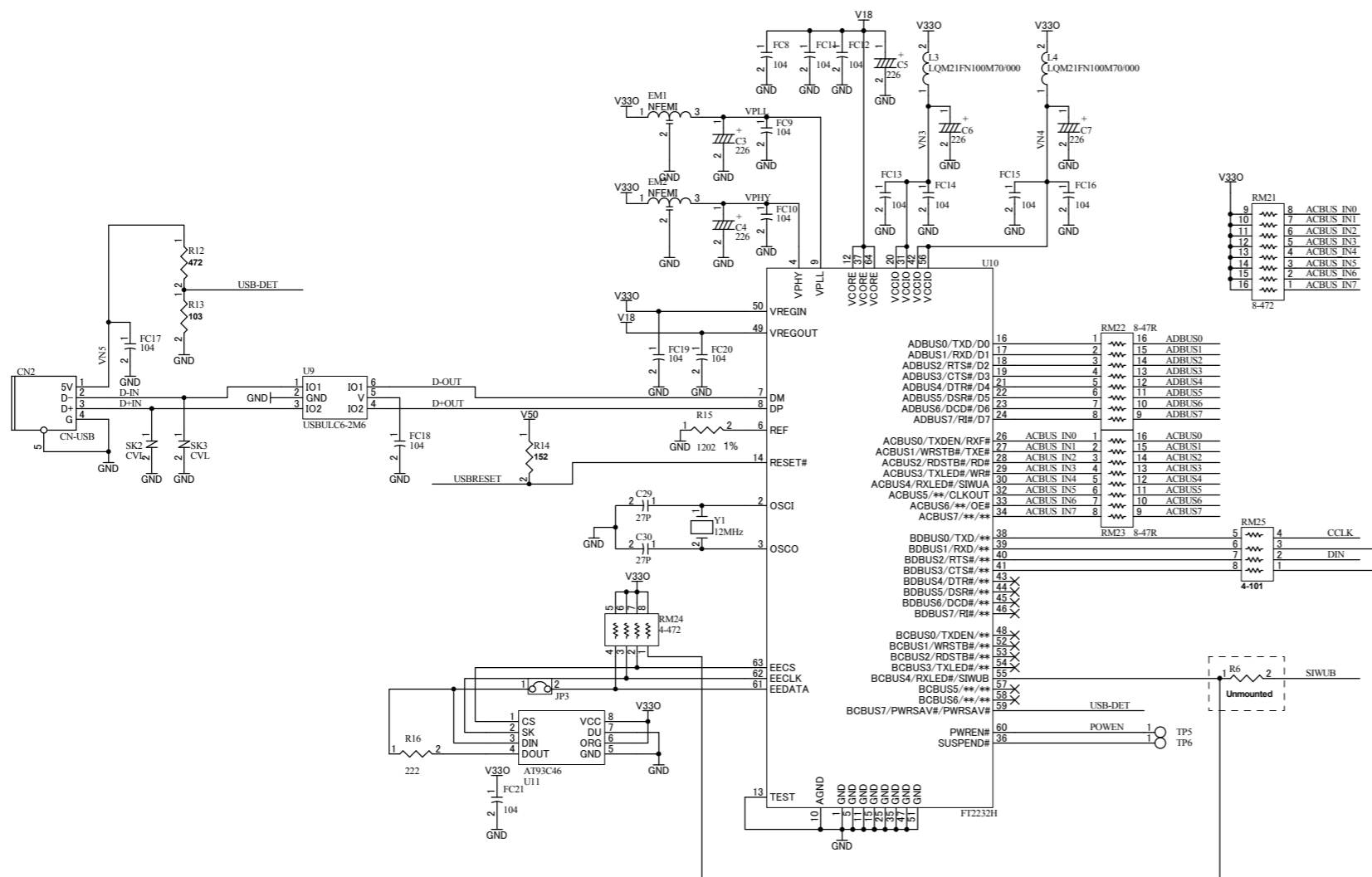


		<b>HuMANDATA LTD.</b> OSAKA JAPAN <a href="http://www.hdl.co.jp/en/(Global)">www.hdl.co.jp/en/(Global)</a> <a href="http://www.hdl.co.jp/(Japan)">www.hdl.co.jp/(Japan)</a>	
<b>Virtex-5 FFG676 USB-FPGA Board</b>		DOC. No.	<b>EDX-006</b>
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V18 V18  
 V10 V10  
 V25 V25  
 V330 V330  
 GND GND



NET LABEL	FPGA Pin	Operation Mode						
		RS232	245 FIFO Sync	245 FIFO	ASync Bit-bang	Sync Bit-bang	MPSSE	CPU Style FIFO
ADBUS0	B14	TDX	D0	D0	D0	D0	TCK/SK	D0
ADBUS1	A14	RXD	D1	D1	D1	D1	TDI/DO	D1
ADBUS2	B15	RTS#	D2	D2	D2	D2	TDO/CI	D2
ADBUS3	A15	CTS#	D3	D3	D3	D3	TMS/CS	D3
ADBUS4	C16	DTR#	D4	D4	D4	D4	GPIOL0	D4
ADBUS5	B17	DSR#	D5	D5	D5	D5	GPIOL1	D5
ADBUS6	A17	DCD#	D6	D6	D6	D6	GPIOL2	D6
ADBUS7	A18	R#	D7	D7	D7	D7	GPIOL3	D7
ACBUS0	A8	TXDEN	RXF#	RXF#	-	-	GPIOH0	CS#
ACBUS1	B9	-	TXE#	TXE#	WRSTB#	WRSTB#	GPIOH1	A0
ACBUS2	A9	-	RD#	RD#	RDSTB#	RDSTB#	GPIOH2	RD#
ACBUS3	B10	RXLED#	WR#	WR#	-	-	GPIOH3	WR#
ACBUS4	A10	TXLED#	SIWUA	SIWUA	SIWUA	SIWUA	GPIOH4	SIWUA
ACBUS5	F9	-	CLKOUT	-	-	-	GPIOH5	-
ACBUS6	B12	-	OE#	-	-	-	GPIOH6	-
ACBUS7	A12	-	-	-	-	-	GPIOH7	-
USB-DET	A19	-	-	-	-	-	-	-
XUSBRESET	G14	-	-	-	-	-	-	-

ADBUS0..71	ADBUS0..71
ACBUS0..71	ACBUS0..71
CCLK	CCLK
PROG	PROG
DIN	DIN
DONE	DONE
USBRESET	USBRESET
USB-DET	USB-DET
SIWUB	SIWUB

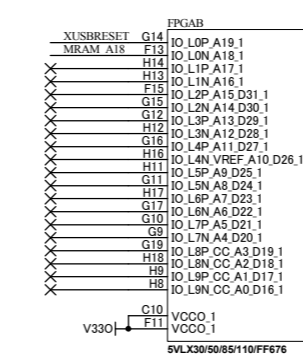
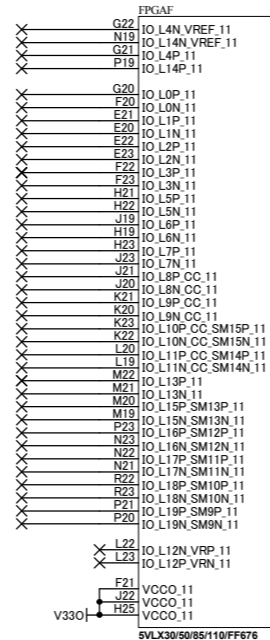
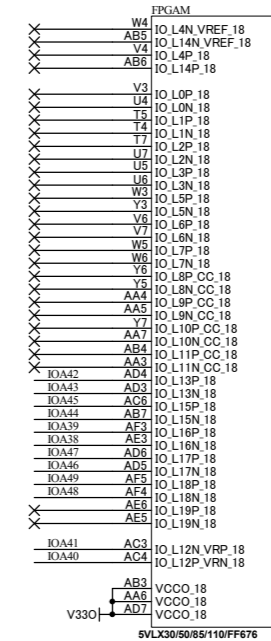
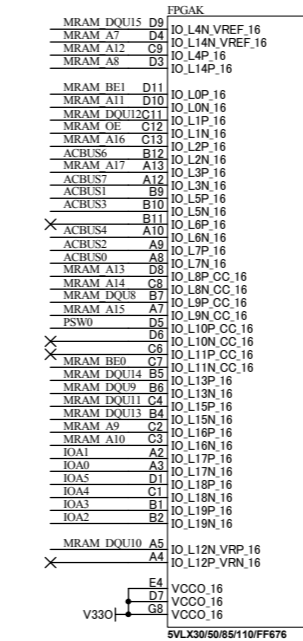
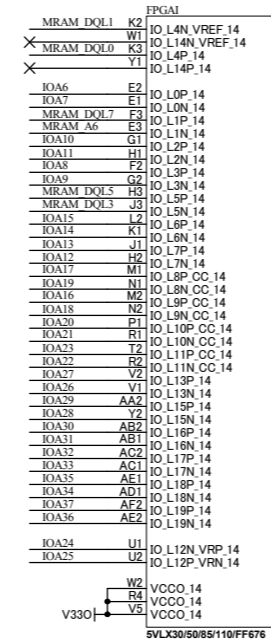
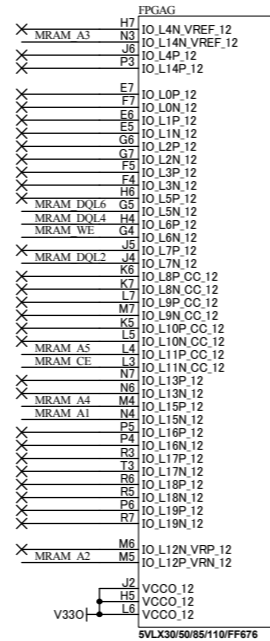
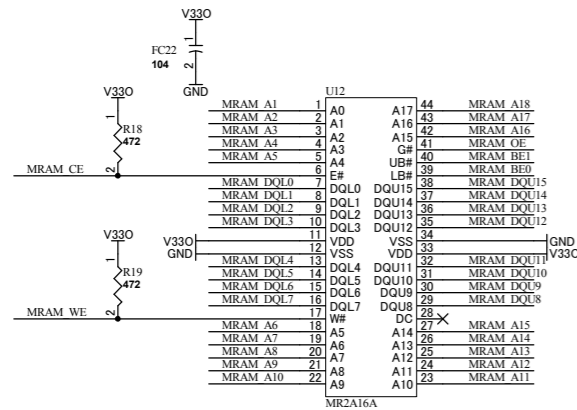
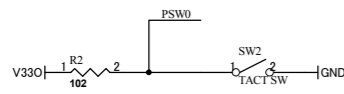
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<b>HUMAN DATA</b>		Virtex-5 FFG676 USB-FPGA Board	
HuMANDATA LTD. OSAKA JAPAN www.hdl.co.jp/en/(Global) www.hdl.co.jp/(Japan)		DOC. No.	EDX-006
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V18 V18  
 V10 V10  
 V25 V25  
 V330 V330  
 GND GND

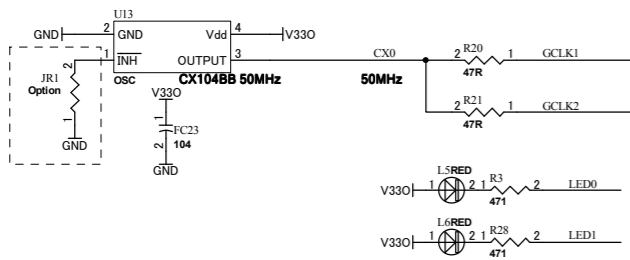
IOA[0..49] IOA[0..49]

ADBUS[0..7] ADBUS[0..7]  
 ACBUS[0..7] ACBUS[0..7]  
 USBRESET USBRESET  
 XUSBRESET XUSBRESET



		Virtex-5 FFG676 USB-FPGA Board	
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		DOC. No.	EDX-006
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V18 V18  
V10 V10  
V25 V25  
V330 V330  
GND GND

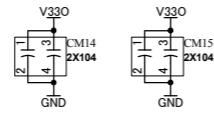


IOB[0..49]	IOB[0..49]
ADBUS[0..7]	ADBUS[0..7]
ACBUS5	ACBUS5
SIWUB	SIWUB
CLK_EX1	CLK_EX1
CLK_EX2	CLK_EX2
CLK_EX3	CLK_EX3
CLK_EX4	CLK_EX4
USB_DET	USB_DET

FPGA

X E11	IO L4N_GC_VREF_3
X U26	IO L14N_VREF_13
X E10	IO L4P_GC_3
X V26	IO L14P_13
CLK_EX1	F14 IO L0P_CC_GC_3
CLK_EX2	E13 IO L0N_CC_GC_3
CLK_EX3	D13 IO L1P_CC_GC_3
CLK_EX4	O14 IO L1N_CC_GC_3
GCLK1	D15 IO L3P_GC_3
GCLK2	E15 IO L3N_GC_3
F19	IO L5P_GC_3
F18	IO L5N_GC_3
F19	IO L6P_GC_3
F18	IO L6N_GC_3
F19	IO L7P_GC_3
F18	IO L7N_GC_3
F19	IO L8P_GC_3
F18	IO L8N_GC_3
F19	IO L9P_GC_3
F18	IO L9N_GC_3
IOB30	F17 IO L13P_13
IOB31	F24 IO L13N_13
IOB32	U24 IO L15P_13
IOB33	U25 IO L15N_13
IOB31	W25 IO L16P_13
IOB20	W26 IO L16N_13
IOB23	Y25 IO L17P_13
IOB22	Y26 IO L17N_13
IOB40	AB25 IO L18P_13
IOB41	AA25 IO L18N_13
IOB25	AC26 IO L19P_13
IOB24	AB26 IO L19N_13
F12	IO L2N_GC_VRP_3
E12	IO L2P_GC_VRN_3
IOB18	R26 IO L12N_VRP_13
IOB19	R25 IO L12P_VRN_13
E14	V330 VCCO_3
D17	V330 VCCO_3

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FPGA

X IOB36	W23 IO L4N_VREF_17
X IOB37	W24 IO L14N_VREF_17
X U19	IO L4P_17
X U19	IO L14P_17
T23	IO L0P_17
T22	IO L0N_17
R21	IO L1P_17
R20	IO L1N_17
T20	IO L2P_17
T19	IO L2N_17
U22	IO L5P_17
U21	IO L5N_17
IOB35	V24 IO L3N_17
IOB34	V23 IO L3P_17
LED0	AA23 IO L6P_17
IOB39	Y23 IO L6N_17
IOB38	Y22 IO L7P_17
IOB45	AC23 IO L7N_17
IOB44	AC22 IO L8P_CC_17
IOB45	AC22 IO L8N_CC_17
IOB42	AB24 IO L9P_CC_17
IOB43	AC24 IO L9N_CC_17
LED1	AB22 IO L10P_CC_17
IOB46	AC23 IO L10N_CC_17
IOB47	AB21 IO L11P_CC_17
W21	IO L11N_CC_17
W20	IO L13P_17
W19	IO L13N_17
W18	IO L15P_17
Y17	IO L15N_17
Y16	IO L16P_17
Y15	IO L16N_17
AC18	IO L17P_17
AC17	IO L17N_17
IOB49	AB20 IO L18P_17
IOB48	AB19 IO L18N_17
AA20	IO L19P_17
AA19	IO L19N_17
V22	IO L12N_VRP_17
V21	IO L12P_VRN_17
T21	V330 VCCO_17
W22	V330 VCCO_17
W25	V330 VCCO_17

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FPGA

X AD14	IO L4N_GC_VREF_4
X AD15	IO L4P_GC_4
X AD18	IO L0P_GC_D15_4
X AC18	IO L0N_GC_D14_4
X AB10	IO L1P_GC_D13_4
X AB9	IO L1N_GC_D12_4
X AC17	IO L2P_GC_D11_4
X AC16	IO L2N_GC_D10_4
X AC8	IO L3P_GC_D8_4
X AC9	IO L3N_GC_D8_4
X AD9	IO L5P_GC_4
X AC9	IO L5N_GC_4
X AD13	IO L6P_GC_4
X AC14	IO L6N_GC_4
X AC13	IO L8P_CC_GC_4
X AC12	IO L8N_CC_GC_4
X AD11	IO L9P_CC_GC_4
X AD10	IO L9N_CC_GC_4
X AC11	IO L7N_GC_VRP_4
X AB12	IO L7P_GC_VRN_4
X AC19	V330 VCCO_4
X AB13	V330 VCCO_4

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FPGA

X IOB11	J26 IO L4N_VREF_13
X IOB10	J25 IO L14N_VREF_13
X U19	IO L4P_13
X U19	IO L14P_13
F24	IO L0P_SM8P_13
F25	IO L0N_SM8N_13
E26	IO L1P_SM7P_13
E25	IO L1N_SM7N_13
G26	IO L2P_SM6P_13
H26	IO L2N_SM6N_13
G24	IO L3P_SM5P_13
H24	IO L3N_SM5N_13
J24	IO L5P_SM4P_13
J24	IO L5N_SM4N_13
L24	IO L6P_SM3P_13
L25	IO L6N_SM3N_13
K25	IO L7P_SM2P_13
K26	IO L7N_SM2N_13
M26	IO L8P_CC_SM1P_13
M27	IO L8N_CC_SM1N_13
N24	IO L9P_CC_SM0P_13
N24	IO L9N_CC_SM0N_13
P26	IO L10P_CC_13
P26	IO L10N_CC_13
P25	IO L11P_CC_13
P24	IO L11N_CC_13
N20	V330 VCCO_13
M23	V330 VCCO_13
R24	V330 VCCO_13

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FPGA

X C17	IO L4N_VREF_15
X A24	IO L14N_VREF_15
D18	IO L4P_15
A23	IO L14P_15
C14	IO L0P_15
B14	IO L0N_15
A14	IO L1P_15
A15	IO L1N_15
B15	IO L2P_15
B16	IO L2N_15
D16	IO L3P_15
C16	IO L3N_15
B17	IO L5P_15
C18	IO L5N_15
A17	IO L6P_15
A18	IO L6N_15
A19	IO L7P_15
B19	IO L7N_15
A20	IO L8P_CC_15
B20	IO L8N_CC_15
C19	IO L9P_CC_15
C19	IO L9N_CC_15
D20	IO L10P_CC_15
D19	IO L10N_CC_15
E20	IO L11P_CC_15
E19	IO L11N_CC_15
F20	IO L13P_15
F19	IO L13N_15
G20	IO L15P_15
G19	IO L15N_15
H20	IO L16P_15
H19	IO L16N_15
I20	IO L17P_15
I19	IO L17N_15
J20	IO L18P_15
J19	IO L18N_15
K20	IO L19P_15
K19	IO L19N_15
L20	IO L12N_VRP_15
L21	IO L12P_VRN_15
C20	V330 VCCO_15
B23	V330 VCCO_15
E24	V330 VCCO_15

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FPGA

X AE23	IO L4N_VREF_21
X AE13	IO L14N_VREF_21
X AF23	IO L4P_21
X AF12	IO L14P_21
AD24	IO L0P_21
AD23	IO L0N_21
AE26	IO L1P_21
AD26	IO L1N_21
AF24	IO L2P_21
AF25	IO L2N_21
AE25	IO L3P_21
AD25	IO L3N_21
AD20	IO L5P_21
AD20	IO L5N_21
AE20	IO L6P_21
AE21	IO L6N_21
AF22	IO L7P_21
AE22	IO L7N_21
AF18	IO L8P_CC_21
AE18	IO L8N_CC_21
AF19	IO L9P_CC_21
AF20	IO L9N_CC_21
AF17	IO L10P_CC_21
AE17	IO L10N_CC_21
AF18	IO L11P_CC_21
AE18	IO L11N_CC_21
AF14	IO L13P_21
AF15	IO L13N_21
AE12	IO L15P_21
AE11	IO L15N_21
AF10	IO L16P_21
AE10	IO L16N_21
AF9	IO L17P_21
AF9	IO L17N_21
AE7	IO L18P_21
AE7	IO L18N_21
AE8	IO L19P_21
AD9	IO L19N_21
AE15	IO L12N_VRP_21
AF15	IO L12P_VRN_21
AC20	V330 VCCO_21
AB23	V330 VCCO_21
AE24	V330 VCCO_21

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