Balloon 3 FPGA pinning

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Connections to PXA270

GPIO	Address	VCC	FPGA	MEM	pin	CPLD	MEM	pin	Data	VCC	FPGA	MEM	pin	CPLD		pin
	SA_A25	MEM	1	1	M1				SA_D31	MEM	1	1	C2			
	SA_A24	MEM	1	1	M2				SA_D30	MEM	1	1	C3			
	SA_A23	MEM	1	1	M3	1	1	36	SA_D29	MEM	1	1	C4			
	SA_A22	MEM	1	1	M4	1	1	35	SA_D28	MEM	1	1	D1			
	SA_A21	MEM	1	1	M5	1	1	34	SA_D27	MEM	1	1	C1			
	SA_A20	MEM	1	1	M6				SA_D26	MEM	1	1	E4			
	SA_A19	MEM	1	1	N1				SA_D25	MEM	1	1	D4			
	SA_A18	MEM	1	1	N2				SA_D24	MEM	1	1	D2			
	SA_A17	MEM	1	1	N3				SA_D23	MEM	1	1	D3			
	SA_A16	MEM	1	1	N4				SA_D22	MEM	1	1	E3			
	SA_A15	MEM	1	1	T1				SA_D21	MEM	1	1	F4			
	SA_A14	MEM	1	1	T2				SA_D20	MEM	1	1	E1			
	SA_A13	MEM	1	1	U2				SA_D19	MEM	1	1	E2			
	SA_A12	MEM	1	1	U3	1	1	33	SA_D18	MEM	1	1	G6			
	SA_A11	MEM	1	1	U4				SA_D17	MEM	1	1	F5			
	SA_A10	MEM	1	1	T4	1	1	31	SA_D16	MEM	1	1	F2			
	SA_A9	MEM	1	1	T5	1	1	29	SA_D15	MEM	1	1	F3	1	1	8
	SA_A8	MEM	1	1	T6	1	1	28	SA_D14	MEM	1	1	H5	1	1	7
	SA_A7	MEM	1	1	V1	1	1	25	SA_D13	MEM	1	1	G5	1	1	10
	SA_A6	MEM	1	1	V2	1	1	26	SA_D12	MEM	1	1	G1	1	1	9
	SA_A5	MEM	1	1	V3	1	1	27	SA_D11	MEM	1	1	G2	1	1	11
	SA_A4	MEM	1	1	V4	1	1	44	SA_D10	MEM	1	1	K3	1	1	12
	SA_A3	MEM	1	1	V5	1	1	43	SA_D9	MEM	1	1	K4	1	1	13
	SA_A2	MEM	1	1	U5	1	1	42	SA_D8	MEM	1	1	K1	1	1	15
	SA_A1	MEM	1	1	W1	1	1	40	SA_D7	MEM	1	1	AA14	1	1	24
	SA_A0	MEM	1	1	W2	1	1	39	SA_D6	MEM	1	1	AB14	1	1	16
									SA_D5	MEM	1	1	U12	1	1	22
	Control								SA_D4	MEM	1	1	V12	1	1	17
	SA_DQM3	MEM	1	1	L3				SA_D3	MEM	1	1	W11	1	1	21
	SA_DQM2	MEM	1	1	L6				SA_D2	MEM	1	1	V11	1	1	19
	SA_DQM1	MEM	1	1	L5	1	1	37	SA_D1	MEM	1	1	AB9	1	1	20
	SA_DQM0	MEM	1	1	K2	1	1	38	SA_D0	MEM	1	1	AA9	1	1	18
	SA_SDCLK0	MEM	1	1	Y11	1	1	182								
	SA_NCS0	MEM	1	1	F12	1	1	4								
	SA_NCS5..1		gpio													
	SA_NOE	MEM	1	1	W4	1	1	56								
	SA_NWE	MEM	1	1	AA4	1	1	57								
	SA_RDNWR	MEM	1	1	W3	1	1	55								
18	SA_RDY	MEM	gpio													
	VCC_IO															
	NRESET_OUT	REG	1		D14	1		190								
0	AUX_UNSUSPEND	REG	1		D13	1		177								
94	AUX_NIRQ	IO	1		Y20	1		59								
11	CLK_48M	IO	gpio													
2	SYS_EN	REG	gpio													
	Configuration (dedicated)															
	HSWAP_EN		GND													
	M0		GND													
	M1		VDD_SPARTAN_AUX													
	M2		VDD_SPARTAN_AUX													
103	PROG_B	IO	XIL_PROG													
	CCLK		SA_NWE													
110	DONE	IO	MMDAT3													
	Configuration (dual purpose)															
83	INIT_B	BB	BB_IB_CLK													
84	BUSY	BB	BB_IB_STB													
104	RDWR_B	IO	CF_NPSKTSEL													
78	CS_B	MEM	SA_NCS4													
	Subtotal FPGA		38								32					
	of which VCC_MEM			35								32				
	Subtotal CPLD					25								16		
	of which VCC_MEM						22								16	
	Total pins FPGA															
	of which VCC_MEM															
	Total pins CPLD															
	of which VCC_MEM															
	Pins on XC3S400-FG456		(31 or 35 per bank)													
	Pins on XCR3256XL-PQ208															

GPIO

GPIO	Memory	VCC	FPGA	MEM	pin	CPLD	MEM	pin
33	SA_NCS5	MEM	1	1	Y1	1	1	178
80	SA_NCS4	MEM	1	1	Y2	1	1	197
79	SA_NCS3	MEM	1	1	Y3	1	1	205
78	SA_NCS2	MEM	1	1	AA3	1	1	6
15	SA_NCS1	MEM	1	1	AB4	1	1	3
18	SA_RDY	MEM	1	1	B6	1	1	206
20	SA_NSDCS2 (MBREQ)	MEM	1	1	B12			
21	SA_NSDCS3 (MBGNT)	MEM	1	1	A12			
	PCMCIA/MSL							
48	CF_NPOE	BB	1		W21	1		77
49	CF_NPWE	MEM	1	1	W19	1	1	80
51	CF_NPIOW	BB	1		L26	1		79
50	CF_NPIOR	BB	1		AB20	1		78
54	CF_NPCE2	BB	1		Y22	1		76
85	CF_NPCE1	BB	1		V19	1		73
57	CF_NIOIS16	BB	1		W22	1		129
56	CF_NPWAIT	BB	1		Y19	1		84
104	CF_NPSKTSEL	IO	1		Y4	1		58
55	CF_NPREG	BB	1		Y21	1		118
	LCD							
87	LDD17	LCD						27
86	LDD16	LCD						23
73	LDD15	LCD						26
72	LDD14	LCD						24
71	LDD13	LCD						25
70	LDD12	LCD						
69	LDD11	LCD						95
68	LDD10	LCD						94
67	LDD9	LCD						93
66	LDD8	LCD						
65	LDD7	LCD						99
64	LDD6	LCD						98
63	LDD5	LCD						97
62	LDD4	LCD						102
61	LDD3	LCD						101
60	LDD2	LCD						100
59	LDD1	LCD						108
58	LDD0	LCD						107
19	LCD_CS	LCD						106
74	LCD_FCLK	LCD						105
75	LCD_LCLK	LCD						
76	LCD_PCLK	LCD	1		AA11	1		181
14	LCD_VSYNC	LCD						52
77	LCD_BIAS	LCD						53
	LPCLK_OUT		1		W9	1		184
	Serial							
96	COM2_FFRXD	IO						
16	COM2_FFTXD	IO						
42	COM1_BTRXD	IO	1		E13	1		194
43	COM1_BTTXD	IO	1		B20	1		193
44	COM1_BTCTS	IO						
45	COM1_BTRTS	IO						
46	COM3_STD_RXD	IO						
47	COM3_STD_TXD	IO						
	MMC							
32	MMCLK	IO						
112	MMCMD	IO						
92	MMDAT0	IO						
109	MMDAT1	IO						
110	MMDAT2	IO						
111	MMDAT3	IO						

GPIO	USBPHY/FFUART	VCC	FPGA	pin	CPLD	pin
40	USBP2_5	IO				
38	USBP2_3	IO				
39	USBP2_6	IO				
36	USBP2_4	IO				
35	USBP2_1	IO				
34	USBP2_2	IO				
41	USBP2_7	IO				
37	USBP2_8	IO				
89	USBHPEN	IO				
88	USBHPWR	IO				
	Camera/Sync serial					
106	CIF_DD9	IO	1	F11		
107	CIF_DD8	IO	1	D10		
17	CIF_DD6	IO	1	B10		
90	CIF_DD4	USIM	1	E10		
116	CIF_DD2	IO	1	D9		
114	CIF_DD1	IO	1	B9		
27	CIF_DD0 (SSPEXTCLK)	IO	1	A9		
23	CIF_MCLK (SSPSCLK)	IO	1	U26		
26	CIF_PCLK (SSPRXD)	IO	1	E11		
24	CIF_FV (SSPSFRM)	IO	1	D11		
25	CIF_LV (SSPTXD)	IO	1	C11		
	Keypad direct/rotary encoder					
95	CODEC_IRQ	IO				
	Keypad matrix					
99	RUN_BACKLIGHT	IO				
98	RUN_SPARTAN	IO				
97	RUN_CF	IO				
102	RUN_NAND	IO				
101	RUN_SAMOSA	IO				
100	USB_HPEN2	IO				
108	USB_HPWR2	IO				
107	CIF_DD8	IO				
106	CIF_DD9	IO				
105	CF_ABSENT	IO				
	MSL (rest of MSL lines are shared with PCMCIA)					
81	BB_OB_DAT0	BB	1	U13		
52	BB_OB_CLK	BB	1	Y13		
53	BB_OB_STB	BB	1	AB13		
82	BB_IB_DAT0	BB	1	AA13		
83	BB_IB_CLK	BB	1	W12		
84	BB_IB_STB	BB	1	Y12		
13	MSL_CLK_EXT	IO	1	V13		
	AC97					
113	AC97_NRESET	IO				
28	AC97_BITCLK	IO				
31	AC97_SYNC	IO				
30	AC97_SDATA_OUT	IO				
29	AC97_SDATA_IN0	IO				
95	CODEC_IRQ	IO				
	I2C					
117	PXA_SCL	IO	1	A14	1	204
118	PXA_SDA	IO	1	B14	1	203
	48Mhz clock					
11	CLK_48M	REG	1	C12	1	183
	Power					
2	SYS_EN	REG				

Backplane

Address	FGPA	pin	CPLD	pin
BP_A25	1	V21		
BP_A24	1	U18		
BP_A23	1	T17		
BP_A22	1	U21		
BP_A21	1	U20		
BP_A20	1	R18		
BP_A19	1	T18		
BP_A18	1	T22		
BP_A17	1	T21		
BP_A16	1	N19		
BP_A15	1	N20		
BP_A14	1	N21		
BP_A13	1	N22		
BP_A12	1	M17		
BP_A11	1	M18		
BP_A10	1	M19	1	108
BP_A9	1	M20	1	109
BP_A8	1	M21	1	110
BP_A7	1	M22	1	111
BP_A6	1	L22	1	112
BP_A5	1	L21	1	113
BP_A4	1	L20	1	114
BP_A3	1	L19	1	115
BP_A2	1	L18	1	117
BP_A1	1	L17	1	119
BP_A0	1	K22	1	120
Data				
BP_D31	1	AB12		
BP_D30	1	V18		
BP_D29	1	W18		
BP_D28	1	Y18		
BP_D27	1	F9		
BP_D26	1	E9		
BP_D25	1	B8		
BP_D24	1	A8		
BP_D23	1	F7		
BP_D22	1	C7		
BP_D21	1	E6		
BP_D20	1	D6		
BP_D19	1	E7		
BP_D18	1	D7		
BP_D17	1	F6		
BP_D16	1	B5		
BP_D15	1	V9	1	71
BP_D14	1	AB8	1	69
BP_D13	1	AA8	1	67
BP_D12	1	W8	1	65
BP_D11	1	V8	1	62
BP_D10	1	V7	1	121
BP_D9	1	U7	1	122
BP_D8	1	U6	1	123
BP_D7	1	Y6	1	70
BP_D6	1	AA6	1	68
BP_D5	1	W6	1	66
BP_D4	1	V6	1	64
BP_D3	1	AB5	1	61
BP_D2	1	AA5	1	124
BP_D1	1	Y5	1	126
BP_D0	1	W5	1	127

Control	FGPA	pin	CPLD	pin
BP_DQM3	1	W20		
BP_DQM2	1	U19		
BP_DQM1	1	V20		
BP_DQM0	1	V22		
BP_SDCLK1	1	G21		
BP_SDCLK0	1	G22		
BP_NCS5	1	G19		
BP_NCS4	1	G18		
BP_NCS3	1	G17		
BP_NCS2	1	E22		
BP_NOE	1	F20		
BP_NWE	1	F21		
BP_RD_NWR	1	F19		
BP_EXT_RDY	1	C6		
VCC_IO				
BP_NRESET	1	K21		
BP_DREQ0	1	K19		
BP_DVAL0	1	K20		
BP_IRQ	1	F13		
CF				
Address				
BP_A10-BP_A0	backplane		backplane	
Data				
BP_D15-BP_D0	backplane		backplane	
Control				
BP_NPREG	1	C13	1	60
BP_NSKTSEL	1	W10	1	130
BP_NPCE1	1	AA10	1	49
BP_NPCE2	1	AB10	1	188
BP_NPIOW	1	U11	1	46
BP_NPIOR	1	AB11	1	45
BP_NPWE	1	V10	1	47
BP_NPOE	1	U10	1	48
BP_NPWAIT	1	A13	1	30
BP_NIOIS16	1	B13	1	189
BP_CF_NRDY	1	Y10	1	187
BP_CF_NRESET	1	E12	1	173
BP_NSTSCHG	1	D12	1	128

NAND/Samosa

	FPGA	pin	CPLD	pin
NAND_NWE	1	Y16	1	135
NAND_NRE	1	Y17	1	168
NAND_NWP	1	AA17	1	136
NAND_CLE	1	U17	1	132
NAND_ALE	1	V17	1	133
NAND_NCE5	1	L1	1	196
NAND_NCE4	1	E16	1	192
NAND_NCE3	1	E14	1	81
NAND_NCE2	1	AB18	1	169
NAND_NCE1	1	AA18	1	170
NAND_NCE0	1	W17	1	171
NAND_D15	1	V16	1	95
NAND_D14	1	U16	1	97
NAND_D13	1	AB15	1	99
NAND_D12	1	AA15	1	101
NAND_D11	1	W14	1	86
NAND_D10	1	V14	1	88
NAND_D9	1	U14	1	90
NAND_D8	1	W13	1	92
NAND_D7	1	AA20	1	96
NAND_D6	1	B11	1	98
NAND_D5	1	A5	1	100
NAND_D4	1	D5	1	102
NAND_D3	1	C5	1	87
NAND_D2	1	B4	1	89
NAND_D1	1	A4	1	91
NAND_D0	1	A3	1	93
NAND_RNB	1	W16	1	175
SAMOSA_NWE	1	B18	1	164
SAMOSA_NRE	1	C18	1	163
SAMOSA_NWP	1	D18	1	162
SAMOSA_CLE	1	A19	1	161
SAMOSA_ALE	1	B19	1	160
SAMOSA_NCE	1	C19	1	167
SAMOSA_D15	1	E21	1	154
SAMOSA_D14	1	E20	1	153
SAMOSA_D13	1	E19	1	151
SAMOSA_D12	1	E18	1	150
SAMOSA_D11	1	F18	1	149
SAMOSA_D10	1	D22	1	148
SAMOSA_D9	1	D21	1	147
SAMOSA_D8	1	D20	1	146
SAMOSA_D7	1	D19	1	145
SAMOSA_D6	1	C22	1	144
SAMOSA_D5	1	C21	1	142
SAMOSA_D4	1	C20	1	141
SAMOSA_D3	1	D17	1	140
SAMOSA_D2	1	C17	1	139
SAMOSA_D1	1	B17	1	138
SAMOSA_D0	1	F16	1	137
SAMOSA_RNB	1	E17	1	159
SAMOSA_WP	1	AA12	1	176
SAMOSA_ABSENT	1	F17	1	166
SAMOSA_IRQ	1	A18	1	172
SAMOSA_RESET	1	A15	1	198
Pinko				
PINKO_CTS	1	E15	1	199
PINKO_RXD	1	D15	1	201
PINKO_TXD	1	B15	1	202
PINKO_RESET	same as NRES_BUTTON			
PINKO_UNSUSPEND	GPIO1			
Other				
NOR_NCE	hard-wired			
GREEN_LED	1	L2	1	195
	59			
			59	