

# Pin List: SYZYG-BRAIN-1

2020-09-29

Connector	Pin	FPGA Pin	Description	PCB Length (mm)	Package Length - 7012S (mm)	I/O Bank
PORTA	1		SCL			
PORTA	2		+5V			
PORTA	3		SDA			
PORTA	4		R_GA			
PORTA	5	AB13	S0_D0P	44.338	22.067	13
PORTA	6	AA14	S1_D1P	38.796	18.833	13
PORTA	7	AB14	S2_D0N	45.744	20.426	13
PORTA	8	AA15	S3_D1N	39.511	18.118	13
PORTA	9	AB16	S4_D2P	50.076	13	13
PORTA	10	AB18	S5_D3P	41.503	12.62	13
PORTA	11	AB17	S6_D2N	50.869	12.207	13
PORTA	12	AB19	S7_D3N	41.626	12.497	13
PORTA	13	Y14	S8_D4P	45.489	19.729	13
PORTA	14	AA16	S9_D5P	41.449	15.916	13
PORTA	15	Y15	S10_D4N	46.132	19.086	13
PORTA	16	AA17	S11_D5N	42.352	14.978	13
PORTA	17	AA19	S12_D6P	46.583	9.868	13
PORTA	18	AB21	S13_D7P	41.012	15.899	13
PORTA	19	AA20	S14_D6N	46.696	9.593	13
PORTA	20	AB22	S15_D7N	41.172	15.739	13
PORTA	21	W17	S16	52.332	6.777	13
PORTA	22	U13	S17	44.698	25.154	13
PORTA	23	V18	S18	48.19	6.263	13
PORTA	24	Y17	S19	47.02	7.002	13
PORTA	25	V13	S20	51.455	27.19	13
PORTA	26	W18	S21	52.001	6.579	13
PORTA	27	W15	S22	48.463	27.655	13
PORTA	28	V15	S23	40.765	29.031	13
PORTA	29	V14	S24	51.035	24.79	13
PORTA	30	U14	S25	43.508	25.438	13
PORTA	31	V19	S26	50.62	5.798	13

Connector	Pin	FPGA Pin	Description	PCB Length (mm)	Package Length - 7012S (mm)	I/O Bank
PORTA	32	U19	S27	48.637	7.323	13
PORTA	33	Y18	P2C_CLKp	49.931	8.794	13
PORTA	34	V16	C2P_CLKp	49.301	5.957	13
PORTA	35	Y19	P2C_CLKn	48.762	9.79	13
PORTA	36	W16	C2P_CLKn	49.119	5.931	13
PORTA	37		RSVD			
PORTA	38		RSVD			
PORTA	39		VIO			
PORTA	40		+3.3V			
PORTB	1		SCL			
PORTB	2		+5V			
PORTB	3		SDA			
PORTB	4		R_GA			
PORTB	5	AA7	RX0p	28.412	10.291	112
PORTB	6	AA3	TX0p	28.466	10.231	112
PORTB	7	AB7	RX0n	28.655	10.048	112
PORTB	8	AB3	TX0n	28.606	10.065	112
PORTB	9	W8	RX1p	28.617	10.121	112
PORTB	10	W4	TX1p	29.674	8.972	112
PORTB	11	Y8	RX1n	28.782	9.956	112
PORTB	12	Y4	TX1n	29.775	8.757	112
PORTB	13	U9	REFCLKp	31.437	7.252	112
PORTB	14	P1	S0	34.79	11.814	34
PORTB	15	V9	REFCLKn	31.198	7.491	112
PORTB	16	M3	S1	37.571	8.493	34
PORTB	17	N1	S2	39.409	10.684	34
PORTB	18	N3	S3	37.366	8.667	34
PORTB	19	P2	S4	37.054	9.604	34
PORTB	20	R4	S5	37.003	9.601	34
PORTB	21	P3	S6	37.123	12.198	34
PORTB	22	N5	S7	35.354	10.984	34
PORTB	23	N4	S8	37.812	8.979	34
PORTB	24	N6	S9	31.985	14.412	34
PORTB	25	R5	S10	37.982	8.486	34

Connector	Pin	FPGA Pin	Description	PCB Length (mm)	Package Length - 7012S (mm)	I/O Bank
PORTB	26	L4	S11	38.679	8.755	34
PORTB	27	M4	S12	40.482	8.773	34
PORTB	28	L5	S13	39.983	7.159	34
PORTB	29	P5	S14	38.189	9.691	34
PORTB	30	R7	S15	33.854	12.335	34
PORTB	31	P6	S16	37.54	12.938	34
PORTB	32	P7	S17	38.993	8.396	34
PORTB	33	U2	P2C_CLKp	42.707	17.316	34
PORTB	34	M2	C2P_CLKp	43.523	9.443	34
PORTB	35	U1	P2C_CLKn	46.423	13.6	34
PORTB	36	M1	C2P_CLKn	43.567	9.238	34
PORTB	37		RSVD			
PORTB	38		RSVD			
PORTB	39		VIO			
PORTB	40		+3.3V			
PORTC	1		SCL			
PORTC	2		+5V			
PORTC	3		SDA			
PORTC	4		R_GA			
PORTC	5	G4	S0_D0P	35.513	8.606	35
PORTC	6	H1	S1_D1P	34.676	8.279	35
PORTC	7	F4	S2_D0N	35.527	8.592	35
PORTC	8	G1	S3_D1N	32.797	10.064	35
PORTC	9	G3	S4_D2P	35.282	9.057	35
PORTC	10	J2	S5_D3P	35.397	8.547	34
PORTC	11	G2	S6_D2N	35.544	8.816	35
PORTC	12	J1	S7_D3N	33.811	9.931	34
PORTC	13	H4	S8_D4P	34.42	9.03	35
PORTC	14	J3	S9_D5P	35.425	7.824	34
PORTC	15	H3	S10_D4N	35.071	8.229	35
PORTC	16	K2	S11_D5N	35.43	7.827	34
PORTC	17	L2	S12_D6P	36.122	7.008	34
PORTC	18	K4	S13_D7P	37.12	6.479	34
PORTC	19	L1	S14_D6N	34.274	8.856	34

Connector	Pin	FPGA Pin	Description	PCB Length (mm)	Package Length - 7012S (mm)	I/O Bank
PORTC	20	K3	S15_D7N	35.565	8.091	34
PORTC	21	G6	S16	35.969	7.495	35
PORTC	22	J7	S17	29.743	14.086	34
PORTC	23	H5	S18	36.639	7.415	35
PORTC	24	J8	S19	32.204	10.967	34
PORTC	25	F6	S20	38.491	5.368	35
PORTC	26	K8	S21	32.509	10.641	34
PORTC	27	H6	S22	37.563	5.721	35
PORTC	28	K7	S23	31.853	12.095	34
PORTC	29	J6	S24	34.294	10.371	34
PORTC	30	M6	S25	30.775	13.269	34
PORTC	31	L7	S26	33.839	9.628	34
PORTC	32	L6	S27	28.924	16.446	34
PORTC	33	T2	P2C_CLKp	33.219	11.424	34
PORTC	34	J5	C2P_CLKp	34.722	8.802	34
PORTC	35	T1	P2C_CLKn	31.181	13.462	34
PORTC	36	K5	C2P_CLKn	34.717	8.635	34
PORTC	37		RSVD			
PORTC	38		RSVD			
PORTC	39		VIO			
PORTC	40		+3.3V			
PORTD	1		SCL			
PORTD	2		+5V			
PORTD	3		SDA			
PORTD	4		R_GA			
PORTD	5	B7	S0_D0P	64.822	11.944	35
PORTD	6	C6	S1_D1P	65.475	12.355	35
PORTD	7	B6	S2_D0N	64.617	12.149	35
PORTD	8	C5	S3_D1N	66.972	10.702	35
PORTD	9	A5	S4_D2P	63.83	13.932	35
PORTD	10	A7	S5_D3P	62.63	14.746	35
PORTD	11	A4	S6_D2N	63.993	13.769	35
PORTD	12	A6	S7_D3N	63.519	13.857	35
PORTD	13	D5	S8_D4P	61.834	16.652	35

Connector	Pin	FPGA Pin	Description	PCB Length (mm)	Package Length - 7012S (mm)	I/O Bank
PORTD	14	C8	S9_D5P	63.343	13.607	35
PORTD	15	C4	S10_D4N	63.062	15.424	35
PORTD	16	B8	S11_D5N	63.797	13.153	35
PORTD	17	E4	S12_D6P	62.045	16.461	35
PORTD	18	D7	S13_D7P	69.852	7.796	35
PORTD	19	E3	S14_D6N	63.369	14.955	35
PORTD	20	D6	S15_D7N	70.964	6.684	35
PORTD	21	A1	S16	61.952	14.557	35
PORTD	22	C3	S17	65.162	11.811	35
PORTD	23	A2	S18	61.524	14.684	35
PORTD	24	E5	S19	70.391	6.07	35
PORTD	25	F1	S20	65.183	12.853	35
PORTD	26	D3	S21	64.148	12.342	35
PORTD	27	F2	S22	62.934	14.32	35
PORTD	28	D1	S23	64.672	12.662	35
PORTD	29	F5	S24	71.917	4.97	35
PORTD	30	D2	S25	64.763	11.964	35
PORTD	31	C1	S26	65.458	12.587	35
PORTD	32	E2	S27	65.095	11.863	35
PORTD	33	B4	P2C_CLKp	65.139	11.782	35
PORTD	34	B2	C2P_CLKp	60.751	16.567	35
PORTD	35	B3	P2C_CLKn	64.018	12.903	35
PORTD	36	B1	C2P_CLKn	62.011	15.307	35
PORTD	37		RSVD			
PORTD	38		RSVD			
PORTD	39		VIO			
PORTD	40		+3.3V			
J6	1	L12	XADC_VP_0			0
J6	2		SYS_SUPPLY_SCL			
J6	3	M11	XADC_VN_0			0
J6	4		SYS_SUPPLY_SDA			
J6	5		SYS_SUPPLY_ENSEQ			
J6	6		SYS_SUPPLY_CE			
J6	7	U12	TEST_MODE_0			13

Connector	Pin	FPGA Pin	Description	PCB Length (mm)	Package Length - 7012S (mm)	I/O Bank
J6	8		SYS_SUPPLY_RST_B			
J6	9	U11	TEST_MODE_1			13
J6	10	A22	PS_MIO1_500			500
J6	11	W11	TEST_MODE_2			13
J6	12	A19	BOOT_MODE_4			500
J6	13	V11	TEST_MODE_3			13
J6	14	A21	BOOT_MODE_3			500
J6	15		DGND			
J6	16	A20	BOOT_MODE_0			500
J6	17		+3.3V			
J6	18	F17	BOOT_MODE_1			500
J6	19		DGND			
J6	20	E19	BOOT_MODE_2			500