

Bill of Materials for SUNIX-S Series I (R1.2)

This list is only valid for the specified revision of the board
 This list includes the parts for a "tube board", the parts marked in **bold blue** may be different in your project
 Parts mared in **red** are design-critical. Most others can be replaced with any type!

Part	Value	Package	Description	MPN	DIGIKEY	FARNELL	MOUSER	NEWARK	Manufact.
BAT	CR1220	CR1220-SMD	Battery Holder	3080	6-3080-ND	1887942	534-3080	25T0433	KEYSTONE
C1	150u 35V	PANA_D	Capacitor Polarized	EEF5TV151XAP	PCE5017CT-ND	1868418	667-EEE-FTV151XAP	31T8173	Panasonic
C10	100n	C1206	Capacitor	C1206C104K5RACAU0	399-7009-1-ND	2070499	80-C1206C104K5RAUTO	86T2669	KEMET
C11	100n	C1206	Capacitor	C1206C104K5RACAU0	399-7009-1-ND	2070499	80-C1206C104K5RAUTO	86T2669	KEMET
C12	4.7u/400V	PANA_G	Capacitor Polarized	EEVEB2G3R3Q	PCE3441CT-ND	2326349	667-EEV-EB2G3R3Q	53W3888	Panasonic
C13	100p	C0805K	Capacitor	CC0805JRNPOBBN101	CC0805JRNPOBBN101	1284124	603-CC0805JRNPOBBN101	26M6695	YAEGO
C14	100n	C1206	Capacitor	C1206C104K5RACAU0	399-7009-1-ND	2070499	80-C1206C104K5RAUTO	86T2669	KEMET
C15	100n	C1206	Capacitor	C1206C104K5RACAU0	399-7009-1-ND	2070499	80-C1206C104K5RAUTO	86T2669	KEMET
C16	100n	C1206	Capacitor	C1206C104K5RACAU0	399-7009-1-ND	2070499	80-C1206C104K5RAUTO	86T2669	KEMET
C17	100n	C1206	Capacitor	C1206C104K5RACAU0	399-7009-1-ND	2070499	80-C1206C104K5RAUTO	86T2669	KEMET
C18	22p	C1206	Capacitor	C1206C220J5GACTU	399-1197-1-ND	1414717	80-C1206C220J5G	70K9304	KEMET
C19	22p	C1206	Capacitor	C1206C220J5GACTU	399-1197-1-ND	141717	80-C1206C220J5G	70K9304	KEMET
C2	22u, 35V, tantal.	SMC_D	Capacitor Polarized	TR3D226K035C0300	718-1346-1-ND	1754131	74-TR3D226K035C0300	46R1170	Vishay
C20	100n	C1206	Capacitor	C1206C104K5RACAU0	399-7009-1-ND	2070499	80-C1206C104K5RAUTO	86T2669	KEMET
C21	100n	C1206	Capacitor	C1206C104K5RACAU0	399-7009-1-ND	2070499	80-C1206C104K5RAUTO	86T2669	KEMET
C22	100n	C1206	Capacitor	C1206C104K5RACAU0	399-7009-1-ND	2070499	80-C1206C104K5RAUTO	86T2669	KEMET
C23	100n	C1206	Capacitor	C1206C104K5RACAU0	399-7009-1-ND	2070499	80-C1206C104K5RAUTO	86T2669	KEMET
C24	100n	C1206	Capacitor	C1206C104K5RACAU0	399-7009-1-ND	2070499	80-C1206C104K5RAUTO	86T2669	KEMET
C25	100n	C1206	Capacitor	C1206C104K5RACAU0	399-7009-1-ND	2070499	80-C1206C104K5RAUTO	86T2669	KEMET
C26	100n	C1206	Capacitor	C1206C104K5RACAU0	399-7009-1-ND	2070499	80-C1206C104K5RAUTO	86T2669	KEMET
C27	100n	C1206	Capacitor	C1206C104K5RACAU0	399-7009-1-ND	2070499	80-C1206C104K5RAUTO	86T2669	KEMET
C28	100n	C1206	Capacitor	C1206C104K5RACAU0	399-7009-1-ND	2070499	80-C1206C104K5RAUTO	86T2669	KEMET
C29	100n	C1206	Capacitor	C1206C104K5RACAU0	399-7009-1-ND	2070499	80-C1206C104K5RAUTO	86T2669	KEMET
C3	220u, 6.3V, tantal.	SMC_D	Capacitor Polarized	293D227X96R3D2TE3	718-1073-1-ND	1754157	74-293D227X96R3D2TE3	09K6287	Vishay
C30	100n	C1206	Capacitor	C1206C104K5RACAU0	399-7009-1-ND	2070499	80-C1206C104K5RAUTO	86T2669	KEMET
C31	100n	C1206	Capacitor	C1206C104K5RACAU0	399-7009-1-ND	2070499	80-C1206C104K5RAUTO	86T2669	KEMET

C32	100n	C1206	Capacitor	C1206C104K5RACAUTO	399-7009-1-ND	2070499	80-C1206C104K5RAUTO	86T2669	KEMET
C33	100n	C1206	Capacitor	C1206C104K5RACAUTO	399-7009-1-ND	2070499	80-C1206C104K5RAUTO	86T2669	KEMET
C4	1500u 6.3v	PANA_F	Capacitor Polarized	EEFT0J152AP	P15077CT-ND	2065957	667-EEE-FT0J152AP	73T9147	Panasonic
C5	220n	C1206	Capacitor	C1206C224K5RACAUTO	399-7018-1-ND	2070511	80-C1206C224K5RAUTO	86T2679	KEMET
C6	220n	C1206	Capacitor	C1206C224K5RACAUTO	399-7018-1-ND	2070511	80-C1206C224K5RAUTO	86T2679	KEMET
C7	100n	C1206	Capacitor	C1206C104K5RACAUTO	399-7009-1-ND	2070499	80-C1206C104K5RAUTO	86T2669	KEMET
C8	15u, 16V,tantal.	SMC_B	Capacitor Polarized	T491B156K016AT	399-9723-1-ND	1457440			KEMET
C9	100u/35V	SMC_D	Capacitor Polarized	TPSD107K020R0150	478-9143-1-ND	1658603	581-TPSD107K020R0150	15P3629	AVX
D1	S320	DO214AA	DIODE	S320	S320FSCT-ND	2322482	512-S320	84W8974	Fairchild
D2	SS24	DO214AA	DIODE	SS24-E3/52T	SS24-E3/52TGICT-ND	2335167	625-SS24-E3	97W2923	Vishay
D3	STTH3R	DO214AA	DIODE	STTH3R06U	497-15329-1-ND	2341605	511-STTH3R06U	31Y4748	ST
F1	1.1A T	SMD2920	PTC fuses	2920L100PR	F2868CT-ND	1822225	576-2920L10	18M4792	LITTLEFUSE
IC1	TPS2400	SOT23-5L	Voltage Protec.	TPS2400DBVT	296-17226-1-ND	2323673	595-TPS2400DBVT	96W3417	Texas
IC10	HV5122PLCC	PLCC44	HV-Driver	HV5122PJ-G	HV5122PJ-G-ND		689-HV5122PJ-G		MICROCHIP
IC11	HV5122PLCC	PLCC44	HV-Driver	HV5122PJ-G	HV5122PJ-G-ND		689-HV5122PJ-G		MICROCHIP
IC2	MIC4960	SOIC8	DC-DC Converter	MIC4690YM	576-1225-ND	2510178	998-MIC4690YM	27K8368	Micrel
IC3	ST662ABD-TR	SOIC9	DC-DC Converter	ST662ABD-TR	497-6541-1-ND	2463958	511-ST662ABD-TR	94W9603	ST
IC4	MAX1771	SOIC10	DC-DC Converter	MAX1771CSA+T	MAX1771CSA+CT-ND	2514155	700-MAX1771CSAT	73Y2674	MAXIM
IC5	FT232RL	SSOP28	USB to Uart	FT232RL	768-1007-1-ND	1146032	895-FT232RL	91K9918	FDTI
IC6	ATMEGA328P	QFP-32	8bit Microcontroller	ATMEGA328P-AU	ATMEGA328P-AURCT	1715486	556-ATMEGA328P-PU	14R4631	Atmel
IC7	DS3231/SO	SO16W	RTC	DS3231S#	DS3231S#-ND	2519295	700-DS3231S#	78Y4800	MAXIM
IC8	4504D	SO16	Level Shifter	MC14504BDG	MC14504BDGOS-ND	9665218	863-MC14504BDG	71J5489	ON SEMI
IC9	24AA02SN	SO-08	Serial EEPROM	24AA02/SN	24AA02/SN-ND	1331272		89C9793	MICROCHIP
J1		USB-MINIB	Mini-USB B" con.	MUSB-05-S-B-SM-A	SAM8841-ND	1753806	649-10033526-N3212LF	33R0875	SAMTEC
L1	22uH	7050	SMD Power Inductor	74437346022	732-3372-1-ND	2077787	710-74437346022	82T3251	Wuerth
L2	100uH		POWER INDUCTOR	DR127-101-R	513-1038-1-ND	1463472	704-DR127-101-R	52K7528	COILTRONICS
LED1	WS2812B	WS2812B	Adafruit Neopixel		1528-1104-ND				
LED2	WS2812B	WS2812B	Adafruit Neopixel		1528-1104-ND				
LED3	WS2812B	WS2812B	Adafruit Neopixel		1528-1104-ND				
LED4	WS2812B	WS2812B	Adafruit Neopixel		1528-1104-ND				
LED5	WS2812B	WS2812B	Adafruit Neopixel		1528-1104-ND				
LED6	WS2812B	WS2812B	Adafruit Neopixel		1528-1104-ND				
Q1	IRLML0060	SOT23	Mosfetk	IRLML0060TRPBF	IRLML0060TRPBFCT-ND	1783927	942-IRLML0060TRPBF	60R6446	Int. Rectif.

Q2	IPD600N25N3	TO252	SIPMOS Transistor	IPD600N25N3 G	IPD600N25N3	2212828	726-IPD600N25N3G	47W3474	Infineon
Q3		HC49/S	CRYSTAL	AS-16.000-18		1611761	-	96F2831	RALTRON
R1	10k	R1206	Resistor	CRCW120610K0FKTA	CRCW120610K0FKTA-ND	1653050RL	71-CRCW1206-10K	53K1907	Vishay
R10	4.7k	R1206	Resistor	CRCW12064K70FKEA	541-4.70KFCT-ND	1470013	71-CRCW1206-4.7K-E3	53K2354	VISHAY
R11	10k	R1206	Resistor	CRCW120610K0FKTA	CRCW120610K0FKTA-ND	1653050RL	71-CRCW1206-10K	53K1907	Vishay
R12	4.7k	R1206	Resistor	CRCW12064K70FKEA	541-4.70KFCT-ND	1470013	71-CRCW1206-4.7K-E3	53K2354	VISHAY
R13	4.7k	R1206	Resistor	CRCW12064K70FKEA	541-4.70KFCT-ND	1470013	71-CRCW1206-4.7K-E3	53K2354	VISHAY
R14	10k	R1206	Resistor	CRCW120610K0FKTA	CRCW120610K0FKTA-ND	1653050RL	71-CRCW1206-10K	53K1907	Vishay
R15	10k	R1206	Resistor	CRCW120610K0FKTA	CRCW120610K0FKTA-ND	1653050RL	71-CRCW1206-10K	53K1907	Vishay
R16	10k	R1206	Resistor	CRCW120610K0FKTA	CRCW120610K0FKTA-ND	1653050RL	71-CRCW1206-10K	53K1907	Vishay
R17	10k	R1206	Resistor	CRCW120610K0FKTA	CRCW120610K0FKTA-ND	1653050RL	71-CRCW1206-10K	53K1907	Vishay
R18	10k	R1206	Resistor	CRCW120610K0FKTA	CRCW120610K0FKTA-ND	1653050RL	71-CRCW1206-10K	53K1907	Vishay
R19	10k	R1206	Resistor	CRCW120610K0FKTA	CRCW120610K0FKTA-ND	1653050RL	71-CRCW1206-10K	53K1907	Vishay
R2	6.8k	R1206	Resistor	CRCW12066K80FKEA	541-6.80KFCT-ND	1653163	71-CRCW1206-6.8K-E3	53K2520	Vishay
R20	10k	R1206	Resistor	CRCW120610K0FKTA	CRCW120610K0FKTA-ND	1653050RL	71-CRCW1206-10K	53K1907	Vishay
R21	330	R1206	Resistor	CRCW1206330RFKEA	541-330UCT-ND	1470008	71-CRCW1206-330-E3	41R4885	VISHAY
R22	27k	R1206	Anode Resistor	ERJ8ENF2702V	P27.0KFCT-ND	2307578	667-ERJ-8ENF2702V	53W8375	PANASONIC
R23	27k	R1206	Anode Resistor	ERJ8ENF2702V	P27.0KFCT-ND	2307578	667-ERJ-8ENF2702V	53W8375	PANASONIC
R24	27k	R1206	Anode Resistor	ERJ8ENF2702V	P27.0KFCT-ND	2307578	667-ERJ-8ENF2702V	53W8375	PANASONIC
R25	27k	R1206	Anode Resistor	ERJ8ENF2702V	P27.0KFCT-ND	2307578	667-ERJ-8ENF2702V	53W8375	PANASONIC
R26	27k	R1206	Anode Resistor	ERJ8ENF2702V	P27.0KFCT-ND	2307578	667-ERJ-8ENF2702V	53W8375	PANASONIC
R27	27k	R1206	Anode Resistor	ERJ8ENF2702V	P27.0KFCT-ND	2307578	667-ERJ-8ENF2702V	53W8375	PANASONIC
R28	270k	R1206	Anode Resistor	ERJ8ENF2703V	P270KFCT-ND	2307579	667-ERJ-8ENF2703V	64R5458	PANASONIC
R29	270k	R1206	Anode Resistor	ERJ-8ENF2703V	P270KFCT-ND	2307579	667-ERJ-8ENF2703V	64R5458	PANASONIC
R3	3.01k	R1206	Resistor	CRCW12063K01FKEA	541-3.01KFCT-ND	1470004	71-CRCW1206-3.01K-E3	53K220	Vishay
R4	976	R1206	Resistor	CRCW1206976RFKEA	541-976FCT-ND	2139437	71-CRCW1206-976-E3	53K2720	Vishay
R5	10k	R1206	Resistor	CRCW120610K0FKTA	CRCW120610K0FKTA-ND	1653050RL	71-CRCW1206-10K	53K1907	Vishay
R6	50m/2W	R2512	Resistor	LR2512-R05FW	985-1217-1-ND	1100065	756-LR2512-R05FW	97K3880	WELWYN
R7	1.5M 500V	R1206	Resistor	RCV12061M50FKEA		2352641	-	06X6868	Vishay
R8	5K, 12T	RTRIM3224X	Trimm resistor	3224X-1-502E	3224X-1-502ECT-ND	2329355	652-3224X-1-502E	04B2506	BOURNS
R9	10k	R1206	Resistor	CRCW120610K0FKTA	CRCW120610K0FKTA-ND	1653050RL	71-CRCW1206-10K	53K1907	Vishay
SP1	BUZZER	AL60P	Buzzer	ABT-414-RC		2098836	-	93T7245	PRO SIGNAL
SW1	EC11B_ALPS	EC11B_1	Rotary encoder	EC11B15242AE		2064978	688-EC11B15242AE	75T6666	ALPS

SW2		B3F-31XX	OMRON SWITCH	B3F-3100	SW1049-ND	959704	653-B3F-3100	36M3582	OMRON
T1	MMBT5551	SOT23	NPN TRANSISTOR	MMBT5551	MMBT5551LT1GOSCT-ND	1471023	512-MMBT5551	18C7423	Fairchild
V1			Nixie Tube						
V2			Nixie Tube						
V3			Nixie Tube						
V4			Nixie Tube						
V5			Nixie Tube						
V6			Nixie Tube						
V7			Neon Bulb						
V9			Neon Bulb						
X1	NEB21R	NEB21R	Power Connector	NEB 21 R		1217037		97K6458	LUMBERG
X2	S5B-ZR	S5B-ZR		S5B-ZR	455-1672-ND	1830907	-	90R9347	JST
XCN		MA05-1	PIN HEADER	2212S-05SG-85	S6103-ND	1593461		unknown	MULTICOMP
XCN.		MA05-1	PIN HEADER	22-28-4050	WM50014-05-ND	2381173			MOLEX
XH1		1X10	PIN HEADER	2212S-10SG-85	732-2859-ND	1593464			MULTICOMP
XH1.		1X10	PIN HEADER	90120-0130	WM8080-ND	1393053			MOLEX
XH2.		1X10	PIN HEADER	90120-0130	WM8080-ND	1393053			MOLEX
XH3		1X10	PIN HEADER	2212S-10SG-85	732-2859-ND	1593464			
XHV		MA05-1	PIN HEADER	2212S-05SG-85	S6103-ND	1593461		unknown	MULTICOMP
XHV.		MA05-1	PIN HEADER	22-28-4050	WM50014-05-ND	2381173			MOLEX
XM1		1X10	PIN HEADER	2212S-10SG-85	732-2859-ND	1593464			MULTICOMP
XM1.		1X10	PIN HEADER	90120-0130	WM8080-ND	1393053			MOLEX
XM2		1X10	PIN HEADER	2212S-10SG-85	732-2859-ND	1593464			MULTICOMP
XM2.		1X10	PIN HEADER	90120-0130	WM8080-ND	1393053			MOLEX
XS1		1X10	PIN HEADER	2212S-10SG-85	732-2859-ND	1593464			MULTICOMP
XS1.		1X10	PIN HEADER	90120-0130	WM8080-ND	1393053			MOLEX
XS2		1X10	PIN HEADER	2212S-10SG-85	732-2859-ND	1593464			MULTICOMP
XS2.		1X10	PIN HEADER	90120-0130	WM8080-ND	1393053			MOLEX

