Parts List for Assembly P/N: 9000-220076

Printed 9/8/2026

9000-220076

PC Assy, Controller
SG9000

Type	PL	Profile	
Revision	A21	Size	
Status	U	Footprint	
Date	2/7/2022	Weight	
By		Stock Bin	

Item	P/N	Rev	Type	Title	Detail	Reference(m)	Qty	Vendor	Vendor P/N
1	1010-003712		PS	MOSFET N-CH 60V 320mA SOT-23	2N7002	Q1, Q2, Q3, Q4, Q5, Q6, Q7, Q8, Q9, Q10, Q11, Q13, Q14, Q15, Q16, Q17, Q18, Q19, Q20, Q24, Q25, Q26, Q27, Q28, Q29, Q30	26	Digikey	2N7002KT1GOSCT-ND
2	1010-005219		PS	Resistor, 10k, 1%, 1/10W, 0603	CRCW060310K0FKEA	R3, R4, R5, R6, R10, R11, R14, R16, R17, R19, R20, R21, R22, R23, R24, R34, R35, R40, R41, R42, R48, R49, R51, R56, R57, R60, R61, R62, R64, R85, R86, R89, R99	33	Digikey	541-10.0KHCT-ND
3	1010-005413		PS	Capacitor, Ceramic, 0.01 uF, 10%, 50V, X7R, SMD 0603	C0603C103K5RACTU	C7, C11, C18, C26, C84, C88, C90, C91, C94, C99, C115, C119, C120, C121, C123, C140, C150, C152, C153, C158, C159, C160, C174	23	Digikey	399-1091-1-ND
4	1010-027824		PS	Capacitor, Ceramic, 100 pF, 5%, 50V, COG, NPO, SMD 0603	C0603C101J5GACTU	C10, C43, C53, C55, C56, C57, C58, C59, C60, C61, C62, C63, C64, C65, C66, C67, C68, C69, C70, C71, C79, C80, C81, C97, C98, C101, C102, C104, C108, C109, C122, C124, C125, C195, C196, C197, C198, C199, C200, C201	40	Digikey	399-1061-1-ND
5	1010-032020		PS	Resistor, 100k, 1%, 1/10W, 0603	CRCW0603100KFKEA	R80, R90, R92	3	Digikey	541-100KHCT-ND
6	1010-069021		PS	LED-RGB SMT	APFA3010LSEEZGKQBKC	DS1, DS2, DS3, DS4, DS5, DS6, DS9, DS10	8	WinSource	APFA3010LSEEZGKQBKC
7	1010-070720		PS	Logic, HCT, Quad 2-Input NAND Gate	74HCT00PW,118	U28, U29	2	Digikey	1727-6616-1-ND
8	1010-071327		PS	Resistor, 243k, 1%, 1/10W, 0603	CRCW0603243KFKEA	R9	1	Digikey	541-243KHCT-ND
9	1010-071629		PS	Diode Schottky 200V 4A Surface Mount SMC	STPS4S200S	D1	1	Digikey	497-16320-1-ND
10	1010-072820		PS	PC Test Point, Compact Phosphor Bronze, Silver Plating SMT	5018	TP4, TP7	2	Digikey	36-5018CT-ND

Item	P/N	Rev	Type	Title	Detail	Reference(m)	Qty	Vendor	Vendor P/N
11	1010-073621		PS	Capacitor, Ceramic, Monolithic, 0.10 uF, 50V, X7R, SMT	C0603C104K5RACTU	C1, C5, C6, C8, C15, C17, C21, C24, C29, C37, C38, C41, C42, C44, C46, C47, C48, C49, C51, C52, C72, C74, C75, C76, C77, C78, C83, C86, C87, C95, C103, C106, C114, C126, C127, C128, C129, C136, C139, C148, C149, C154, C155, C162, C163, C164, C185, C186, C187, C188, C189, C190, C191, C192, C193, C194, C202, C204	58	Digikey	399-5089-1-ND
12	1010-074229		PS	Resistor, 4.7k, 1%, 1/10W, 0603	CRCW06034K70FKEA	R79, R88, R91, R94	4	Digikey	541-4.70KHCT-ND
13	1010-077422		PS	Fuse Brd Mount 1.5A 63VAC/VDC 1206	046801.5NR	F1	1	Digikey	F2569CT-ND
14	1010-081128		PS	Resistor, 0, 1%, 1/10W, 0603	CRCW06030000Z0EA	R47, R59, R66, R67, R82	5	Digikey	541-0.0GCT-ND
15	1010-081527		PS	Resistor, 24.9k, 1%, 1/10W, 0603	CRCW060324K9FKEA	R13, R26, R78	3	Digikey	541-24.9KHCT-ND
16	1010-081624		PS	Resistor, 2.8k, 1%, 1/10W, 0603	CRCW06032K80FKEA	R2, R75, R76, R87, R96	5	Digikey	541-2.80KHCT-ND
17	1010-082124		PS	Resistor, 1M, 1%, 1/10W, 0603	CRCW06031M00JNEA	R1, R74	2	Digikey	541-1.0MGCT-ND
18	1010-082329		PS	Resistor, 4.02k, 1%, 1/10W, 0603	CRCW06034K02FKEA	R53	1	Digikey	541-4.02KHCT-ND
19	1010-082426		PS	IC INVERTER HEX SCHMITT	MC74HCT14ADR2G	U5	1	Digikey	MC74HCT14ADR2GOSCT-ND
20	1010-083724		PS	RES 1K OHM 1% 1/10W	CRCW06031K00FKEA	R7, R8, R29, R33, R44, R45, R46, R52, R58, R65, R68, R69, R97, R98	14	Digikey	541-1.00KHCT-ND
21	1010-084925		PS	TVS DIODE 36VWM 58.1VC	SMBJ36CA-13-F	TVS1	1	Digikey	SMBJ36CA-FDICT-ND
22	1010-085221		PS	MOSFET P-CH 20V 4A	DMP2045U-7	Q12, Q21	2	Digikey	DMP2045U-7DICT-ND
23	1010-086022		PS	Inductor, Power, Shielded 3.82 uH +/-30% 13mOhms	MSS1038-382NL	L6	1	Mouser Electronics	994-MSS1038-382NLC
24	1010-086928		PS	IC GPIO EXPANDER I2C 16CH	SX1509BIULTRT	U11, U13	2	Digikey	SX1509BIULCT-ND
25	1010-090127		PS	CAP CER 18PF 50V NP0 0603	C0603C180J5GACTU	C2, C3, C20, C27, C110, C111, C117, C118	8	Digikey	399-1052-1-ND
26	1010-090321		PS	RES SMD 12K OHM 1% 1/10W	CRCW060312K0FKEA	R93	1	Digikey	541-12.0KHCT-ND
27	1010-090721		PS	SWITCH TACTILE SPST-NO	PTS645SK43SMTR92 LFS	SW1	1	Digikey	CKN9084CT-ND
28	1010-092324		PS	Resistor, 1.33K, 1%, 1/10W, 0603	CRCW06031K33FKEA	R15, R27	2	Digikey	541-1.33KHCT-ND

Item	P/N	Rev	Type	Title	Detail	Reference(m)	Qty	Vendor	Vendor P/N
29	1010-092421		PS	Resistor, 590, 1%, 1/10W, 0603	CRCW0603590RFKEA	R18, R28, R43	3	Digikey	541-590HCT-ND
30	1010-092723		PS	Capacitor, Ceramic, 0.001 uF, 10%, 50V, X7R, SMD 0603	C0603C102K5RACTU	C9, C33, C36, C50, C73, C82, C85, C89, C92, C93, C96, C100, C113, C116, C132, C135, C138, C145, C146, C165, C166, C167, C168, C169, C170, C172, C173, C175, C176, C177, C178, C179, C180, C181, C182, C183, C184	37	Digikey	399-1082-1-ND
31	1010-096222		PS	Resistor, 8.25k, 1%, 1/10W, 0603	CRCW06038K25FKEA	R55	1	Digikey	541-8.25KHCT-ND
32	1010-099531		PS	IC Power Supply Sequencer with Adj Timer	LM3881MME/NOPB	U32	1	Digikey	LM3881MME/NOPBCT-ND
33	1010-105116		PS	Diode, Zener 24V 5W	CZRB5359B-HF	CR3	1	Digikey	641-1811-1-ND
34	1010-109723		PS	IC USB Serial Full UART	FT231XS-R	U4, U8	2	Digikey	768-1129-1-ND
35	1010-117033		PS	RES 274 OHM 1% 1/10W	ERJ-3EKF2740V	R32, R73	2	Digikey	P274HCT-ND
36	1010-117335		PS	Diode, TVS 14VWM 5.0V	SMBJ5.0CA-13-F	TVS3	1	Digikey	SMBJ5.0CA-FDICT-ND
37	1010-118633		PS	Resistor, 3.09k, 1%, 1/10W, 0603	ERJ-3EKF3091V	R37	1	Digikey	P3.09KDBCT-ND
38	1010-121847		PS	Resistor, 150, 1%, 1W, 2512	CRCW2512150RFKEGHP	R84	1	Digikey	541-150RCT-ND
39	1010-121944		PS	CRYSTAL 16.0000MHZ 18PF	ABLS-16.000MHZ-B2-T	XTAL1	1	Digikey	535-9071-1-ND
40	1010-122045		PS	MCU 8BIT 256KB FLASH 100TQFP	ATMEGA2560-16AUR	U1	1	Digikey	ATMEGA2560-16AU-ND
41	1010-122541		PS	FERRITE BEAD 30 OHM	MH2029-300Y	L2, L3	2	Digikey	MH2029-300YCT-ND
42	1010-122843		PS	IND 10UH 25MA 1 OHM	ILSB1206ER100K	L1	1	Digikey	541-2607-1-ND
43	1010-123041		PS	IC GATE OR 1CH 2-INP	74HCT1G32GW,125	U3	1	Digikey	1727-6059-1-ND
44	1010-123149		PS	CONN RCPT USB2.0 TYPEB 4P SMD RA	USB-B-S-S-B-SM	J1, J11	2	Digikey	SAM10375-ND
45	1010-123246		PS	USB 2-Channel Data Protection	TPD2S701QDGSRQ1	U2, U7	2	Digikey	296-51854-1-ND
46	1010-123343		PS	Resistor, 140k, 1%, 1/10W, 0603	CRCW0603140KFKEA	R12, R25	2	Digikey	541-140KHCT-ND
47	1010-124421		PS	Digital Step Atten	DAT-31R5A-PP+	U12, U14, U16, U37	4	Mini-Circuits	DAT-31R5A-PP+
48	1010-124439		PS	50-Ohm Gain Block	LTC6433BIUF-15#TRPBF	U6, U10	2	Digikey	LTC6433BIUF-15#TRPBFCT-ND
49	1010-124587		PS	Inductor, Power, Shielded 470uH +/-20% 2.8Ohms	LPS5030-474MRC	L4, L10	2	Coilcraft	LPS5030-474MRB

Item	P/N	Rev	Type	Title	Detail	Reference(m)	Qty	Vendor	Vendor P/N
50	1010-124595		PS	Capacitor Ceramic 1UF 16V X8R 0805	C2012X8R1C105K125AB	C30, C31, C32, C34, C35, C40, C105, C107, C130, C131, C133, C137, C147, C157, C203	15	Digikey	445-8829-1-ND
51	1010-124625		PS	Connector Power Jack 2X5.5MM RA Thru Hole	PJ-037A	J12	1	Digikey	CP-037A-ND
52	1010-124676		PS	Switch, Push Button, DPDT Alternate (push-push)	F2UEE	SW2, SW3	2	Mouser Electronics	611-F2UEE
53	1010-124722		PS	LED YEL CLEAR T13/4	WP7113SYC	DS8	1	Digikey	754-1280-ND
54	1010-124749		PS	LED, Flashing RED CLEAR T13/4	X001NA1DZ3	DS7	1	Amazon	B077XCM7QZ
55	1010-124854		PS	RF Shield 0.5 X 0.538 SMD	SMS-201F	SHLD1, SHLD2, SHLD3	3	Digikey	1798-1177-1-ND
56	1010-124943		PS	RF Shield 0.728 X 1.156 SMD	SMS-409F	SHLD4, SHLD5, SHLD6, SHLD7, SHLD11	5	Digikey	1798-1221-1-ND
57	1010-124978		PS	IC, Inverter Schmitt 2 CH	74HCT2G14GW,125	U21, U26, U35	3	Digikey	1727-2054-1-ND
58	1010-125001		PS	CMC 370MA 2LN 90 Ohm	744232090	L7, L8	2	Digikey	732-1469-1-ND
59	1010-125010		PS	Capacitor Ceramic 0.47uF 16V X7R 0603	C0603C474J4RACTU	C12	1	Digikey	399-7339-1-ND
60	1010-125036		PS	Ferrite Bead 1806 1LN	2518061517Y0	FB1, FB2, FB3, FB4, FB5, FB6, FB7, FB8, FB10	9	Digikey	1934-1316-1-ND
61	1010-125044		PS	Ferrrite Bead 1812 1LN	2518121217Y6	FB9	1	Digikey	1934-1463-1-ND
62	1010-125109		PS	Resistor, 348, 1%, 1/10W, 0603	CRCW0603348RFKEA	R30, R70	2	Digikey	541-348HCT-ND
63	1010-125176		PS	RF SHIELD 1.07 X 2.206 SMD	SMS-461F	SHLD13	1	Digikey	1798-1235-1-ND
64	1010-125192		PS	Relay RF SPST-NO 500 mA 5V	CGSM-051A-GTR	K1	1	Digikey	1835-1159-1-ND
65	1010-125214		PS	Diode, RF, PIN 50V 3W	SMP1330-085LF	CR5	1	Digikey	863-1402-1-ND
66	1010-125257		PS	Connector, Socket, SMT, 8-Pin, S	PPPC081LFBN-RC / SSQ-108-01-G-S	J3, J5, J6, J10	4	Digikey	S7041-ND
67	1010-125265		PS	Connector, Socket, SMT, 18-Pin, D	PPPC182LFBN-RC / SSQ-118-01-G-D	J9	1	Digikey	S7121-ND
68	1010-125273		PS	Connector, Socket, SMT, 10-Pin, S	PPPC101LFBN-RC / SSQ-110-01-G-S	J4	1	Digikey	S7043-ND
69	1010-125281		PS	RF Switch, SPDT, Absorptive	HSWA2-30DR+	U22, U24, U27	3	Mini-Circuits	HSWA2-30DR+
70	1010-125303		PS	Power Suppy, DC-to-DC, 5W, 24 VDC to 5 VDC	MCWI05-24S05	PS1	1	CDI	MCWI05-2405
71	1010-125320		PS	IC OR Schmitt 1CH	SN74AUP1T32DCKR	U17, U18	2	Digikey	296-27396-1-ND
72	1010-125338		PS	Resistor, Attenuator, 6dB, 50 Ohm, 64 MW,	PAT0816-C-6DB-T5	R71	1	Digikey	408-2186-1-ND

Item	P/N	Rev	Type	Title	Detail	Reference(m)	Qty	Vendor	Vendor P/N
73	1010-125354		PS	Connector, SMA JACK 50 OHM SMD	CONSMA002-SMD-G-T	J14	1	Digikey	343-CONSMA002-SMD-G-TCT-ND
74	1010-125435		PS	Resistor, Attenuator, 3 dB, 50 Ohm, 64 MW,	PAT0816-C-3DB-T5	R50, R54	2	Digikey	408-2209-1-ND
75	1010-125460		PS	CONN BNC JACK R/A HF 50 OHM PCB	413631-1	J13, J16	2	Digikey	A24536-ND
76	1010-125494		PS	IC Buffer Inverter 3-State 3.6V	SN74AUP1G240DBVT	U30, U31, U33, U34	4	Digikey	296-SN74AUP1G240DBVTCT-ND
77	1010-125508		PS	RFI SHIELD FINGER TIN SMD	S1941-46R	GSP1	1	Digikey	952-2635-1-ND
78	1010-125532		PS	Capacitor, Ceramic, 1PF +/- 0.1% 50V NP0 0603	CBR06C109B5GACAUTO	C142	1	Digikey	399-8606-1-ND
79	1010-125567		PS	TVS DIODE 3.3VWM 11VC SOD523	PESD3V3L1UB,115	TVS2	1	Digikey	1727-5418-1-ND
80	1010-125575		PS	100 Ohms ±1% 0.1W, 1/10W Chip Resistor 0603	CRCW0603100RFKEBC	R39, R81	2	Digikey	CRCW0603100RFKEBCCT-ND
81	1010-125770		PS	Resistor, 680, 1%, 1/10W, 0603	RMCF0603FT680R	R38	1	Digikey	RMCF0603FT680RCT-ND
82	1010-126105		PS	Cable, Ribbon, IDC, 4-Pin, M-F	IDMS-04-T-02.00-T	J7	1	Mouser	200-IDMS-04T-02.00T
83	1010-126415		PS	CMC 10.4UH 2.5A 2LN 1.3KOHM SMD	SRF7035A-132Y	L14	1	Digikey	118-SRF7035A-132YCT-ND
84	1010-126423		PS	Cap AL Poly 4.7UF 20% 100V SMD	875105945001	C28, C151	2	Digikey	732-11980-1-ND
85	1010-126512		PS	Diode, Zener, 3.3V 250mW	BZX84-C3V3,235	CR10	1	Digikey	1727-2129-1-ND
86	1010-126644		PS	IC, Charge Pump Switching Regulator IC Negative Adjustable	LTC1550LCMS8#PBF	U20	1	Digikey	LTC1550LCMS8#PBF-ND
87	1010-126679		PS	Resistor, 20k, 1%, 1/10W, 0603	RMCF0603FT20K0	R95	1	Digikey	RMCF0603FT20K0CT-ND
88	1010-126687		PS	IC Config Multi-Func Gate	SN74LVC1G99DCUR	U19, U23, U36	3	Digikey	296-18795-1-ND
89	1010-127195		PS	Capacitor 3pF 50V C0G/NP0 0603	C0603C309C5GACTU	C19, C134, C143	3	Digikey	399-C0603C309C5GACTUCT-ND
90	1010-127241		PS	Capacitor 2 pF 50V C0G/NP0 0603	CBR06C209B5GAC	C45	1	Digikey	399-CBR06C209B5GACCT-ND
91	1010-127357		PS	Plug-of-Nails 6-Pin W/ LEGS 8	PLUG-OF-NAILS 6-PIN W/ LEGS 8	J2	1	Digikey	TC2030-IDC-ND
92	1010-127373		PS	IC Reg Linear 3.3V 250MA SOT23-5	LP5907MFX-3.3/NOPB	U9, U25	2	Digikey	296-38557-1-ND
93	1010-127411		PS	Capacitor 220 uF 20% 16V	EXV227M016A9HAA	C39	1	Digikey	399-EXV227M016A9HAACT-ND
94	1010-127438		PS	Capacitor 100 uF 20% 16V	EXV107M016A9HAA	C54, C112	2	Digikey	399-EXV107M016A9HAACT-ND
95	1010-127446		PS	Inductor 68 uH 1.91A 120 mOHM	744771168	L18	1	Digikey	732-1215-1-ND

Item	P/N	Rev	Type	Title	Detail	Reference(m)	Qty	Vendor	Vendor P/N
96	1010-127489		PS	Diode, 100V 200mA	MMSD4148T1G	CR1, CR2, CR8, CR11	4	Digikey	MMSD4148T1GOSCT-ND
97	1010-127501		PS	Diode, RF, Schottky 70V 200 mA	MMBD770T1G	CR14, CR15	2	Digikey	MMBD770T1GOSCT-ND
98	1010-127527		PS	Capacitor, Tantalum, 10 uF 10%, 16V	293D106X9016A2TE3	C4, C16, C25, C156, C161	5	Digikey	718-1123-1-ND
99	1010-127535		PS	Capacitor, Tantalum, 1 uF 10%, 16V	293D105X9016A2TE3	C13, C14, C22, C23, C144	5	Digikey	718-1113-1-ND
100	1010-127560		PS	Comparator, Latching, Single Push-Pull	TLV9030L1DCKR	U40	1	Digikey	296-TLV9030L1DCKRCT-ND
101	1010-127578		PS	Diode, Schottky 8V 150MW	BAT6804E6327HTSA1	CR4	1	Digikey	BAT6804E6327HTSA1CT-ND
102	1010-127594		PS	Capacitor 6PF +/-0.1pf 50V C0G/NP0	CBR06C609B5GAC	C141	1	Digikey	399-CBR06C609B5GACCT-ND
103	1010-127608		PS	Thermistor, 1k 3% NTC	ERT-J1VT102H	R63	1	Digikey	P124044CT-ND
104	1010-127616		PS	Inductor, 240nH 490mA 180 mOhm	7447610224	L5, L11, L12, L15, L16	5	Digikey	732-7447610224CT-ND
105	1010-127624		PS	Resistor, 150, 1%, 1/10W, 0603	RMCF0603FT150R	R31, R72	2	Digikey	RMCF0603FT150RCT-ND
106	1010-127632		PS	Inductor, 16nH 700mA 170 mOhm	744761116A	L9, L13	2	Digikey	732-744761116ACT-ND
107	1010-127641		PS	Resistor 7.23K Ohm 1% 1/10W 0603	RT0603FRE077K23L	R36	1	Digikey	13-RT0603FRE077K23LCT-ND
0	1010-127829		PS	IC EEPROM 2MBIT I2C 1MHZ 8SOIC	AT24CM02-SSHD-B	U15	1		AT24CM02-SSHD-B-ND
0	1010-127837		PS	IC, AND Gate Single 2 Input	74HCT1G08GW,125	U39, U41, U43	3		1727-6053-1-ND
0	1010-127845		PS	Logic, HCT, Quad 2-Input NAND Gate	SN74LVC00APWR	U28, U29	2		296-1216-1-ND
0	1010-127861		PS	IC, Level Shifter BIDIR SC-70-6	SN74LXC1T45DCKR	U45, U46, U47	3		296-SN74LXC1T45DCKRCT-ND
0	1010-127870		PS	IC, Inverter IC 2 Channel Schmitt Trigger	74HC2G14GW,125	U21, U26, U35	3		1727-6047-1-ND
108	9000-003059		PS	Tag, SN, PCB, 10 mm x 20 mm S/N QR Code	Polyimide		1	Dongguan Gaofei Electronic Technology	10 mm x 20 mm Polyimide SN QR Code
109	9000-220050	A19	PS	PCB, Controller, SG-9000	4-Layer, 1-oz, ENIG		1	JLCPCB	
110	9000-220807		PL	Shield, Clips, AD9910 Pattern	TC-01	CS2	1		
0	9000-220815		PL	Shield, Clips, ATmega2560 Pattern	TC-01	CS1	1		
111	Part Number		PS	Title	Detail	RefDes	0		Digikey