



Title:	ASTON -- RD4-6000 Retimer		
Document Number:	B0704-RD4-6000	Revision: 03a (B1)	Bill of Materials

#	QTY	Fitted	Reference	Part Number	Value	Description	Manufacturer	PCB Footprint
1	1		CN1	PJ-036AH-SMT-TR		CONN PWR JACK 2X5.5MM SOLDER	CUI inc	CUI_PJ-036AH
2	3		CN2, CN4, CN5	12401610E4#2A		CONN RCPT USB3.1 TYPEC SMD R/A	Amphenol	USB3-C_12401598E4-2A
3	1	DNP	CN3	68001-202HLF	0.1in 1x2 Header	BERGSTIK II 0.1inch SR AU STRAIGHT	Amphenol	HDR1X2
4	1		CN6	47272-0001		CONN RCPTDISPLAY PORT 20POS SMD	Molex	MOLEX_SD-47272-001
5	1	DNP	CN7	68000-104HLF	0.1in 1x4 Header	CONN HEADER 4POS .100 STR 30AU	Amphenol	HDR1X4
6	1		CN9	68000-103HLF	0.1in 1x3 Header	BERGSTIK II .1inch SR STRAIGHT	Amphenol	HDR1X3
7	2	DNP	CN13, CN17	860-10-003-10-001101	1mm TH 1x3 Header	CONN HDR 3POS 1MM T/H	Preci-Dip	hdr1x3_1mm
8	1		CN14	FTSH-110-01-L-DV-007-K		19/20 pin loaded, 0.05inch pitch	Samtec	FTSH-110-01-L-DV-007
9	1		CN15	68000-106HLF	0.1in 1x6 Header	BERGSTIK II .1inch SR STRAIGHT	Amphenol	CON_FL-06_REV
10	1		CN16	2040002-1	USB μB	CONN PCB MICRO USB SPOS	TE	usb-micro-b
11	33		C1, C12, C15, C26, C27, C34, C36, C40, C42, C50, C51, C53, C54, C57, C58, C79, C81, C84, C89, C93, C94, C95, C96, C98, C99, C100, C101, C102, C103, C104, C106, C107, C111	GRM033R61C104KE84D	0.1μF	CAP CER 0.1μF 16V X5R 0201	Murata	SM_0201
12	10		C3, C10, C85, C109, C110, C112, C113, C114, C115, C116	CL21A106KAYNNNE	10μF	CAP CER 10μF 25V X5R 0805	Samsung	SM_0805
13	4		C5, C8, C16, C17	CC0201KRX7R8BB221	220pF	CAP CER 220pF 25V X7R 0201	Yageo	SM_0201
14	2		C21, C22	GRM0335C1H100GA01	10pF	CAP CER 10pF 50V C0G/NPO 0201	Murata	SM_0201
15	10		C23, C25, C32, C38, C44, C49, C52, C56, C75, C76	CL03B103KP3NNNC	0.01μF	CAP CER 0.01μF 10V 10% X7R 0201	Samsung	SM_0201
16	2		C24, C55	GRM033C81A105ME05D	1μF	CAP CER 1μF 10V X6S 0201	Murata	SM_0201
17	14		C28, C29, C30, C31, C33, C35, C37, C39, C41, C43, C45, C46, C47, C48	CO603X5R0J334M030BC	0.33μF		TDK	SM_0201
18	2		C77, C78	GRM0335C1H6R0BA01D	6pF	CAP CER 6pF 50V C0G/NPO 0201	Murata	SM_0201
19	1		C80	CL05A225KP5NSNC	2.2μF	CAP CER 2.2μF 10V X5R 0402	Samsung	SM_0402
20	2		C82, C83	GRM0335C1H4R0BA01D	4pF	CAP CER 4pF 50V C0G/NPO 0201	Murata	SM_0201
21	1		C86	6TPB330MAL	330μF	CAP TANT POLY 330μF 6.3V 2917	Panasonic	cap_tant_D3L
22	3		C88, C90, C91	GRM033R71E331KA01D	330pF	CAP CER 330pF 25V X7R 0201	Murata	SM_0201
23	2		C92, C108	16TQC33MYFB	33μF	CAP TANT POLY 33μF 16V 1411	Panasonic	cap_tant_b2
24	1	DNP	C105	16TQC33MYFB	33μF	CAP TANT POLY 33μF 16V 1411	Panasonic	cap_tant_b2
25	1		D1	SML-E12U8WT86	RED	LED RED DIFFUSED 0603 SMD	Rohm	SML-E12U8W
26	1		D5	SMLE13EC8TT86	GREEN	LED BLUE-GREEN CLEAR 1608 SMD	Rohm	SML-E13EC8T
27	20		D15, D16, D17, D18, D19, D20, D21, D22, D23, D24, D25, D26, D27, D28, D29, D30, D31, D32, D33, D34	ESD8111PFCT5G		TVS DIODE 8VC 7.1A IPP 2WLCSF	ON Semi	smt_0201
28	7		D35, D36, D37, D38, D39, D41, D42	ESD11N5.0ST5G		TVS DIODE 5V 12V 2DSN	ON Semi	smt_0201
29	1		D40	PDZVTR6.2B	1W 6.2V-7.0V	ZENER DIODE 1000mW, ZV 6.2V to 7.0V	Rohm	sod-128
30	1		FB2	BLM18PG121SN1D	120Ω @ 100MHz, 2A	FERRITE CHIP 120Ω @ 100MHz, 2A	Murata	
31	3		FB4, FB5, FB6	BLM18PG121SN1D	120Ω @ 100MHz 2A	FERRITE CHIP 120Ω @ 100MHz, 2A	Murata	
32	1	DNP	JP18	67997-206HLF	0.1in Header 6	CONN HEADER 6POS .100 STR 15AU	Amphenol	hdr2x3
33	2	DNP	J1, J2	U.FL-R-SMT-1(01)		CONN U.FL RCPT STR 50Q SMD	Hirose Electric	

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34	3		LED1, LED2, LED3	APTF1616LSEEZGKBK		LED RGB 621NM 525NM 465NM 0606	Kingbright	SMD_APTF1616
35	3		L1, L6, L7	DFE201210S-1R0M=P2	1µH	FIXED IND 1µH 2.3A 70mΩ SMD	Murata	SM_805
36	4		L2, L3, L4, L5	TCM0605S-120-2P-T201		CMC 100mA 2LN 12Ω SMD	TDK	tcm0605x
37	4	DNP	MH1, MH2, MH3, MH4			Mounting Hole	N_A	MTG2_3mm
38	2		Q1, Q2	2N7002LT1G	60V 0.115A	MOSFET N-CH 60V 0.115A SOT-23	On Semi	SOT23
39	1		R3	RC0603F203CS	20kΩ	RES SMD 20kΩ ±1% 1/20W 0201	Samsung	SM_0201
40	27		R6, R11, R19, R36, R37, R89, R93, R96, R100, R103, R127, R128, R129, R130, R132, R133, R137, R139, R145, R159, R163, R164, R178, R189, R191, R192, R194	ERJ-1GEF5101C	5.1kΩ	RES SMD 5.1kΩ ±1% 1/20W 0201	Panasonic	SM_0201
41	1		R14	ERJ-1GEF6800C	680Ω	RES SMD 680Ω ±1% 1/20W 0201	Panasonic	SM_0201
42	16		R15, R16, R17, R18, R20, R21, R22, R23, R25, R26, R28, R41, R138, R169, R170, R176	RC0201FR-070RL	0Ω/0.5A	RES SMD 0Ω JUMPER 1/20W 0201 0.5A	Yageo	SM_0201
43	14		R24, R48, R50, R52, R53, R56, R57, R58, R60, R147, R173, R179, R180, R188	ERJ-1GNF1002C	10K	RES SMD 10kΩ 1% 1/20W 0201	Panasonic	SM_0201
44	8	DNP	R30, R68, R136, R167, R168, R177, R186, R187	RC0201FR-070RL	0/0.5A	RES SMD 0Ω JUMPER 1/20W 0201 0.5A	Yageo	SM_0201
45	1		R34	ERJ-1GEF1001C	1kΩ	RES 1kΩ 1/20W ±1% 0201 SMD	Panasonic	SM_0201
46	13		R42, R44, R45, R46, R59, R61, R65, R144, R158, R161, R162, R165, R166	ERJ1GNF1003C	100kΩ	RES SMD 100KΩ ±1% 1/20W 0201	Panasonic	SM_0201
47	1	DNP	R43	ERJ-1GEF1001C	1kΩ		Panasonic	SM_0201
48	4		R47, R62, R63, R64	ERJ-1GEJ105C	1MΩ	RES SMD 1MΩ ±5% 1/20W 0201	Panasonic	SM_0201
49	2		R66, R67	ERJ-1GEJ205C	2MΩ	RES SMD 2MΩ ±5% 1/20W 0201	Panasonic	SM_0201
50	9	DNP	R88, R92, R97, R98, R102, R131, R135, R140, R146	ERJ-1GEF5101C	5.1kΩ	RES SMD 5.1kΩ ±1% 1/20W 0201	Panasonic	SM_0201
51	6		R141, R143, R149, R150, R155, R156	ERJ-2RKF7500X	750Ω	RES SMD 750Ω ±1% 1/10W 0402	Panasonic	SM_402
52	3		R142, R148, R154	ERJ-2RKF3300X	330Ω	RES SMD 330Ω ±1% 1/10W 0402	Panasonic	SM_403
53	1		R152	ERJ-1GNF3011C	3.01kΩ	RES SMD 3.01kΩ ±1% 1/20W 0201	Panasonic	SM_0201
54	1		R160	ERJ-P6WF1200V	120Ω	RES SMD 120Ω ±1% 1/2W 0805	Panasonic	SM_0805
55	2	DNP	R181, R185	CSNL2010FT1L00	1.0mΩ/1.5W	RES 0.001Ω ±1% 1.5W 2010	Stackpole	SM_2010
56	3		R182, R183, R184	CSNL2010FT1L00	1.0mΩ/1.5W	RES 0.001Ω ±1% 1.5W 2010	Stackpole	SM_2010
57	1		R190	ERJ-1GNF1500C	150Ω	RES SMD 150Ω ±1% 1/20W 0201	Panasonic	SM_0201
58	1		R193	ERJ-1GNF2612C	26.1kΩ	RES SMD 26.1kΩ ±1% 1/20W 0201	Panasonic	SM_0201
59	1		SW1	48ASSP3S1M2QBT		SWITCH SLIDE SPDT 5A 125V	Grayhill Inc.	
60	2		SW3, SW4	EVP-BB2A9B000		SWITCH TACTILE SPST-NO 0.02A 15V	Panasonic	
61	6		TP3, TP5, TP11, TP13, TP15, TP16			TEST POINT		PAD35
62	1		U3	XC9261B12DER-G		IC REG BUCK 1.2V 1.5A SYNC 6-USP	Torex	USP-6C
63	1		U5	MCDP6000		USB DisplayPort Switching Retimer	Kinetic Technologies	VQFN46
64	1		U14	FT234XD-R		IC USB SERIAL BASIC UART 12DFN	FTDI	dfn12_3x3mm
65	1		U15	DMC2990UDJ-7		MOSFET N/P-CH 20V SOT963	Diodes Inc	SOT_963
66	1		U16	AP22814ASN-7		IC LOAD SWITCH U-DFN2020-6	Diodes Inc	DFN2020_6
67	1		U17	LPC1549JBD64QL		IC MCU 32BIT 256KB FLASH 64LQFP	NXP	LQFP64_10X10mm
68	1		U18	MCDP9000		USB PD controller	Kinetic Technologies	QFN44-24
69	1		U19	FSA2257L10X		IC SWITCH DUAL SPDT 10MICROPAK	ON Semi	10_UFQFN
70	1		U22	XC9261B18DER-G		IC REG BUCK 1.8V 1.5A SYNC 6-USP	Torex	USP-6C
71	1		U23	XC9261B33DER-G		IC REG BUCK 3.3V 1.5A SYNC 6-USP	Torex	USP-6C
72	2		U24, U25	NC7SZ66L6X		IC BUS SWITCH SGL SPST 6MICROPAK	ON Semiconductor	
73	1		U26	SN74LVC1G04DRYR		IC INVERTER 1CH 1-INP 6SON	Texas Instruments	uson6
74	1		X1	NX2012SA-32.768K-STD-MUB-1	32.768KHz	CRYSTAL 32.7680KHz 12.5pF SMD	NDK	xtal_nx2012sa
75	1		X2	NX3225SA-12.000MHZ-STD-CSR-1	12MHz	CRYSTAL 12.000MHz 8pF SMD	NDK	xtal_nx3225sa
76	1		Y1	NX2016SA : Spec#: EXS00A-CS11457	25MHz ±30ppm over-all	25MHz <±30ppm CRYSTAL	NDK	XTAL_2016mm