

FD-Series BOM (FD-2000 / FD-4000)

PCB Part ID	Value	Notes 1	Notes 2	Needed PER BUILT	Cost/each	Link
U1 - 2MHz	G65C02P-2	2MHz CMOS 6502 CPU		1		TBD eBay (do a search, you'll find something)
U1 - 4MHz	R65C02P4	4MHz CMOS 6502CPU		1		TBD eBay (do a search, you'll find something)
U2	27C512	EPROM		1		TBD eBay (do a search, you'll find something)
U3	AS6C62256-55PCN	Alliance Memory Inc.		1	\$7.95	<a href="https://www.digikey.ca/en/products/detail/alliance-memory-inc/AS6C62256-55PCN/4234592">https://www.digikey.ca/en/products/detail/alliance-memory-inc/AS6C62256-55PCN/4234592</a>
U5	W65C22N6TPG-14	CMOS 6522		1	\$14.39	<a href="https://www.mouser.ca/ProductDetail/955-W65C22N6TPG-14">https://www.mouser.ca/ProductDetail/955-W65C22N6TPG-14</a>
U6	SN74F163AN			1	\$0.17	<a href="https://www.jameco.com/z/74F163AN-Major-Brands-Counter-IC-Binary-Counter-1-Element-4-Bit-Positive-Edge-DIP-16-Synchronous-Clear_245198.html">https://www.jameco.com/z/74F163AN-Major-Brands-Counter-IC-Binary-Counter-1-Element-4-Bit-Positive-Edge-DIP-16-Synchronous-Clear_245198.html</a>
U7	SN74LS74AN			1	\$0.71	<a href="https://www.mouser.ca/ProductDetail/Texas-Instruments/SN74LS74AN?qs=b0glXGU74fP41yYZQO4%252BKQ%3D%3D">https://www.mouser.ca/ProductDetail/Texas-Instruments/SN74LS74AN?qs=b0glXGU74fP41yYZQO4%252BKQ%3D%3D</a>
U8, U13	SN74LS14N			2	\$1.00	<a href="https://www.mouser.ca/ProductDetail/Texas-Instruments/SN74LS14N?qs=sGAEpiMZZMutXGii8Ay4kBELeCaPbA6Baz7mo8DTZQo%3D">https://www.mouser.ca/ProductDetail/Texas-Instruments/SN74LS14N?qs=sGAEpiMZZMutXGii8Ay4kBELeCaPbA6Baz7mo8DTZQo%3D</a>
U9	7406			1	\$1.04	<a href="https://www.jameco.com/z/7406-Major-Brands-IC-7406-HEX-INVERTER-BUFFER-DRIVER_49091.html">https://www.jameco.com/z/7406-Major-Brands-IC-7406-HEX-INVERTER-BUFFER-DRIVER_49091.html</a>
U10	74LS38N			1	\$1.28	<a href="https://www.mouser.ca/ProductDetail/Texas-Instruments/SN74LS38N?qs=q2XTDbzbm6CPeB2W6c2ilq%3D%3D">https://www.mouser.ca/ProductDetail/Texas-Instruments/SN74LS38N?qs=q2XTDbzbm6CPeB2W6c2ilq%3D%3D</a>
U12	SN74HC14N			1	\$0.85	<a href="https://www.jameco.com/z/SN74HC14N-TI-IC-74HC14-Hex-Inverting-Schmitt-Trigger_45364.html">https://www.jameco.com/z/SN74HC14N-TI-IC-74HC14-Hex-Inverting-Schmitt-Trigger_45364.html</a>
U15	DM7438N			1	\$1.23	<a href="https://www.jameco.com/z/7438-Major-Brands-IC-7438-QUAD-2-INPUT-NAND-BUFFER_50315.html">https://www.jameco.com/z/7438-Major-Brands-IC-7438-QUAD-2-INPUT-NAND-BUFFER_50315.html</a>
U16	DM74LS20N			1	\$1.86	<a href="https://www.mouser.ca/ProductDetail/Texas-Instruments/SN74LS20N?qs=EiJG%252BN7kn%252BksyasuSGdb8A%3D%3D">https://www.mouser.ca/ProductDetail/Texas-Instruments/SN74LS20N?qs=EiJG%252BN7kn%252BksyasuSGdb8A%3D%3D</a>
U17	GD74LS00			1	\$0.83	<a href="https://www.mouser.ca/ProductDetail/Texas-Instruments/SN74LS00N?qs=sGAEpiMZZMutXGii8Ay4kFSXmDbOg0RMt%252BjPcJdnFE4%3D">https://www.mouser.ca/ProductDetail/Texas-Instruments/SN74LS00N?qs=sGAEpiMZZMutXGii8Ay4kFSXmDbOg0RMt%252BjPcJdnFE4%3D</a>
U18	7805CP	8421	Linear Voltage Regulator	1	\$1.77	<a href="https://www.mouser.ca/ProductDetail/STMicroelectronics/L7805CP?qs=DUdHuK3gDFR9VUkjoO8Odg%3D%3D">https://www.mouser.ca/ProductDetail/STMicroelectronics/L7805CP?qs=DUdHuK3gDFR9VUkjoO8Odg%3D%3D</a>
U19	X129-ND	ECS-100A-240	XTAL OSC XO 24.0000MHz		\$4.81	<a href="https://www.digikey.ca/en/products/detail/ecs-inc/ECS-100A-240/79226">https://www.digikey.ca/en/products/detail/ecs-inc/ECS-100A-240/79226</a>
PLCC-68 Socket	PLCC-68-AT	2057-PLCC-68-AT-ND		1	\$3.25	<a href="https://www.digikey.ca/en/products/detail/adam-tech/PLCC-68-AT/9833042">https://www.digikey.ca/en/products/detail/adam-tech/PLCC-68-AT/9833042</a>
PLCC-52 Socket	PLCC-52-AT	2057-PLCC-52-AT-ND		1	\$3.05	<a href="https://www.digikey.ca/en/products/detail/adam-tech/PLCC-52-AT/9833068">https://www.digikey.ca/en/products/detail/adam-tech/PLCC-52-AT/9833068</a>
Floppy Controller	DP8473AV	S9236AV / 1987	FD-2K Controller	1	Varies	<a href="https://www.ebay.ca/itm/114253744579">https://www.ebay.ca/itm/114253744579</a>
Floppy Controller	PC8477BV-1	NS024AD / ©/M 1991 A	FD-4K Controller	1	Varies	<a href="https://www.ebay.ca/itm/193838066095">https://www.ebay.ca/itm/193838066095</a>
LED1, 2, 3	5MM LED	2 - Red, 1 - Green				<a href="https://www.ebay.ca/itm/386332862768">https://www.ebay.ca/itm/386332862768</a>

R1, R7, R11, R3, R26, R28, R4, R23, R20, R21, R22, R29	10K / 5%	Brn / Blk / Org / Gold		12	\$0.15	<a href="https://www.mouser.ca/ProductDetail/KOA-Speer/MF1-4LCT52R103J?qs=DG1n8gfZNTsQyNkYIaO24A%3D%3D">https://www.mouser.ca/ProductDetail/KOA-Speer/MF1-4LCT52R103J?qs=DG1n8gfZNTsQyNkYIaO24A%3D%3D</a>
R5, R9, R10, R14, R18	470R / 5%	Yel / Pur / Brn / Gold		5	\$0.15	<a href="https://www.mouser.ca/ProductDetail/KOA-Speer/MF1-4LCT52R471J?qs=91WPSliQh9IAnV11G8%2Fw0Q%3D%3D">https://www.mouser.ca/ProductDetail/KOA-Speer/MF1-4LCT52R471J?qs=91WPSliQh9IAnV11G8%2Fw0Q%3D%3D</a>
R2, R25, R8	220R / 5%	Red / Red / Brn / Gold		3	\$0.15	<a href="https://www.mouser.ca/ProductDetail/KOA-Speer/MF1-4LCT52R221J?qs=91WPSliQh9JlJB%2FAtwkZiw%3D%3D">https://www.mouser.ca/ProductDetail/KOA-Speer/MF1-4LCT52R221J?qs=91WPSliQh9JlJB%2FAtwkZiw%3D%3D</a>
R27, R30,R19, R24	1K / 5%	Brn / Blk / Red / Gold	If modifying an HD drive, you'll need 1 for that.	4	\$0.15	<a href="https://www.mouser.ca/ProductDetail/KOA-Speer/MF1-4LCT52R102J?qs=DG1n8gfZNTuu%252B1dyzP%252BubA%3D%3D">https://www.mouser.ca/ProductDetail/KOA-Speer/MF1-4LCT52R102J?qs=DG1n8gfZNTuu%252B1dyzP%252BubA%3D%3D</a>
R12	560R / 5%	Grn / Blu / Brn / Gold		1	\$0.15	<a href="https://www.mouser.ca/ProductDetail/KOA-Speer/MF1-4LCT52R561J?qs=91WPSliQh9J8mZ0hXvr%2FfQ%3D%3D">https://www.mouser.ca/ProductDetail/KOA-Speer/MF1-4LCT52R561J?qs=91WPSliQh9J8mZ0hXvr%2FfQ%3D%3D</a>
R13	5.62K / 1%	Grn / Blu / Red / Brn / Brn		1	\$0.28	<a href="https://www.mouser.ca/ProductDetail/KOA-Speer/MF1-4DCT52R5R62F?qs=IzQMruFkPG1G6PisiE0GAA%3D%3D">https://www.mouser.ca/ProductDetail/KOA-Speer/MF1-4DCT52R5R62F?qs=IzQMruFkPG1G6PisiE0GAA%3D%3D</a>
IEC1, 2		IEC connectors		2		<a href="https://www.ebay.ca/itm/114190129239">https://www.ebay.ca/itm/114190129239</a>
4 Position DIP SW		AMP 9227 / 435802-3 / * OFF		1	\$1.14	<a href="https://www.digikey.ca/en/products/detail/cts-electrocomponents/195-4MST/61478">https://www.digikey.ca/en/products/detail/cts-electrocomponents/195-4MST/61478</a>
Push Button	6x6x10mm	Momentary Right Angle	Tactile 2 pin	1	\$3.99/50pcs	<a href="https://www.ebay.ca/itm/182363335361">https://www.ebay.ca/itm/182363335361</a>
P3		Barrel Connector		1	\$1.81	<a href="https://www.mouser.ca/ProductDetail/SparkFun/PRT-00119?qs=WyAARYrbSnbnQpS9xf%252Bx5A%3D%3D">https://www.mouser.ca/ProductDetail/SparkFun/PRT-00119?qs=WyAARYrbSnbnQpS9xf%252Bx5A%3D%3D</a>
4P Floppy pwr	Power Connector			2		<a href="https://www.ebay.ca/itm/155133425203">https://www.ebay.ca/itm/155133425203</a>
RP1, RP2	1K, bussed	RKL6S102 GW	6p resistor array	2	\$0.99	<a href="https://www.mouser.ca/ProductDetail/Bourns/4606M-101-102LF?qs=5DXzRwmrLHFQqRAYa1Gagb%3D%3D">https://www.mouser.ca/ProductDetail/Bourns/4606M-101-102LF?qs=5DXzRwmrLHFQqRAYa1Gagb%3D%3D</a>
RP3	10K, bussed	A103GA / 120	6p resistor array	1	\$0.97	<a href="https://www.mouser.ca/ProductDetail/Bourns/4606M-101-103LF?qs=2bTlwLLrckQK2YyGqLkJ2w%3D%3D">https://www.mouser.ca/ProductDetail/Bourns/4606M-101-103LF?qs=2bTlwLLrckQK2YyGqLkJ2w%3D%3D</a>
CR1, CR2	TFK / 1N4148	Diode		2	\$0.15	<a href="https://www.mouser.ca/ProductDetail/onsemi-Fairchild/1N4148?qs=i4Fj9T%2FoRm8RMUhj5DeFQg%3D%3D">https://www.mouser.ca/ProductDetail/onsemi-Fairchild/1N4148?qs=i4Fj9T%2FoRm8RMUhj5DeFQg%3D%3D</a>
C1	47uf / 16V	5mm Dia, 11mm tall, 2mm LS		1	\$0.29	<a href="https://www.mouser.ca/ProductDetail/KEMET/ESK476M016AC3KA?qs=gt1LBUVyoHkCduGTGGubTA%3D%3D">https://www.mouser.ca/ProductDetail/KEMET/ESK476M016AC3KA?qs=gt1LBUVyoHkCduGTGGubTA%3D%3D</a>
C2	561pf			1		<a href="https://www.digikey.ca/en/products/detail/vishay-beyschlag-draloric-bc-components/D561K20Y5PH63J5R/2830797">https://www.digikey.ca/en/products/detail/vishay-beyschlag-draloric-bc-components/D561K20Y5PH63J5R/2830797</a>
C3	.T:153	Ceramic capacitor	15nf	1	\$0.35	<a href="https://www.mouser.ca/ProductDetail/TDK/FG28X7R1H153KNT00?qs=vNwBHymccZ9igNVyJ6Z9FA%3D%3D">https://www.mouser.ca/ProductDetail/TDK/FG28X7R1H153KNT00?qs=vNwBHymccZ9igNVyJ6Z9FA%3D%3D</a>
C4	.T:123	Ceramic capacitor	12 nf	1	\$0.87	<a href="https://www.mouser.ca/ProductDetail/Murata-Electronics/RDE5C1H123J1K1H03B?qs=IAJliSVA5G9QwsjSX2R4QQ%3D%3D">https://www.mouser.ca/ProductDetail/Murata-Electronics/RDE5C1H123J1K1H03B?qs=IAJliSVA5G9QwsjSX2R4QQ%3D%3D</a>
C5	.U:333	Ceramic capacitor	33 nf	1	\$0.35	<a href="https://www.mouser.ca/ProductDetail/TDK/FG28X7R1H333KNT06?qs=qf2ddTMq67WY1FOf%2Fv0ktQ%3D%3D">https://www.mouser.ca/ProductDetail/TDK/FG28X7R1H333KNT06?qs=qf2ddTMq67WY1FOf%2Fv0ktQ%3D%3D</a>
C6	100uf / 16v	6.5mm Dia, 11mm Tall, 2mm LS		1	\$0.16	<a href="https://www.mouser.ca/ProductDetail/Wurth-Elektronik/860010372006?qs=0KOYDY2FL29Gqp2VaG847w%3D%3D">https://www.mouser.ca/ProductDetail/Wurth-Elektronik/860010372006?qs=0KOYDY2FL29Gqp2VaG847w%3D%3D</a>
C10	102K			1	\$0.55	<a href="https://www.mouser.ca/ProductDetail/Vishay-BC-Components/F102K39Y5RN6TK5R?qs=Zix4r1UhwbXZRdVpZ5cHNw%3D%3D">https://www.mouser.ca/ProductDetail/Vishay-BC-Components/F102K39Y5RN6TK5R?qs=Zix4r1UhwbXZRdVpZ5cHNw%3D%3D</a>
DC17	10 / 16V	Ceramic Polarized Capacitor		1	\$0.96	<a href="https://www.mouser.ca/ProductDetail/KYOCERA-AVX/TAP106K016SRW?qs=OZVHsXXMeBUUOjw%2FJNjMjTw%3D%3D">https://www.mouser.ca/ProductDetail/KYOCERA-AVX/TAP106K016SRW?qs=OZVHsXXMeBUUOjw%2FJNjMjTw%3D%3D</a>
DC11,12,6,1,7,C9 14,10,3,15,4,2,8 13,5,13A	104	Ceramic Capacitors		16	\$0.29	<a href="https://www.mouser.ca/ProductDetail/Vishay-BC-Components/K104K15X7RF5TH5?qs=CuWZN%2F5Vbiofhf%252BuZNGw%2Fg%3D%3D">https://www.mouser.ca/ProductDetail/Vishay-BC-Components/K104K15X7RF5TH5?qs=CuWZN%2F5Vbiofhf%252BuZNGw%2Fg%3D%3D</a>
FB14, 4, 5, 6, 1, 2,3, 1Ferrite Beads			3.5mm x 6.7mm	13	\$0.29	<a href="https://www.digikey.ca/en/products/detail/fair-rite-products-corp/2743003112/8594219">https://www.digikey.ca/en/products/detail/fair-rite-products-corp/2743003112/8594219</a>
FD-2000 Drive Mech						<b>Compatible Drives:</b> (search anywhere convenient to you) Newtronics D359T5 Sony MPF520-1 Samsung 321B TEAC FD-235F-6240 TEAC FD-235F-7291 TEAC FD-235F-A291 TEAC FD-235F-C891 TEAC FD-235F-C429
FD-4000 Drive Mech				1		<b>Compatible Drive:</b> (search anywhere convenient to you) TEAC FD-235J-5670-U

Power Supply

9V / 1A	Center Positive	Product ID: 63	5.5mm/2.1mm barrel jack	1	\$8.95	<a href="https://www.adafruit.com/product/63">https://www.adafruit.com/product/63</a>
Barrel Connector			5.5mm/2.1mm barrel jack	1	\$1.08	<a href="https://www.digikey.ca/en/products/detail/tensility-international-corp/54-00166/10459294">https://www.digikey.ca/en/products/detail/tensility-international-corp/54-00166/10459294</a>
Power Switch	DPST /on-off			1	\$2.17	<a href="https://www.digikey.ca/en/products/detail/cw-industries/GRS-4021-0002/3190608">https://www.digikey.ca/en/products/detail/cw-industries/GRS-4021-0002/3190608</a>

OPTIONAL - RTC Circuit

RTC	DS1315S336	Maxim / 16-SOIC	Phantom Time Chip 3,3v	1	35.45	<a href="https://www.digikey.ca/en/products/detail/analog-devices-inc-maxim-integrated/DS1315S-33/1196899">https://www.digikey.ca/en/products/detail/analog-devices-inc-maxim-integrated/DS1315S-33/1196899</a>
CT1, CT2	10uf / 0805	C0805C106K8PAC7800		2	0.2	<a href="https://www.digikey.ca/en/products/detail/kemet/C0805C106K8PAC7800/1090830">https://www.digikey.ca/en/products/detail/kemet/C0805C106K8PAC7800/1090830</a>
32.768KHz	370-1057-2-ND	CPFBZ-A2C4-32.768KD6	4-SOJ, 5.50mm pitch	1	0.93	<a href="https://www.digikey.ca/en/products/detail/cardinal-components-inc/CPFBZ-A2C4-32-768KD6/3748490">https://www.digikey.ca/en/products/detail/cardinal-components-inc/CPFBZ-A2C4-32-768KD6/3748490</a>
VRT	AMS1117	SOT-223-3L \ AMS1117-3.3	3.3v Voltage Regulator	1	0.73	<a href="https://www.digikey.ca/en/products/detail/umw/AMS1117-3-3/17635254">https://www.digikey.ca/en/products/detail/umw/AMS1117-3-3/17635254</a>
CR2032	Coin Cell Holder	20mm Lead Spacing		1	TBD	<a href="https://www.ebay.ca/itm/166196377549">https://www.ebay.ca/itm/166196377549</a>

OPTIONAL - Onboard Power LED

R31	1K / 0805	RMCF0805FT1K00TR-ND		1	0.15	<a href="https://www.digikey.ca/en/products/detail/stackpole-electronics-inc/RMCF0805FT1K00/1760090">https://www.digikey.ca/en/products/detail/stackpole-electronics-inc/RMCF0805FT1K00/1760090</a>
LD1	3147-B1701URO-20D000114U1930TR-ND			1	0.15	<a href="https://www.digikey.ca/en/products/detail/harvatek-corporation/B1701URO-20D000114U1930/16671739">https://www.digikey.ca/en/products/detail/harvatek-corporation/B1701URO-20D000114U1930/16671739</a>

HD (FD-2000) Floppy Drive Modification Notes

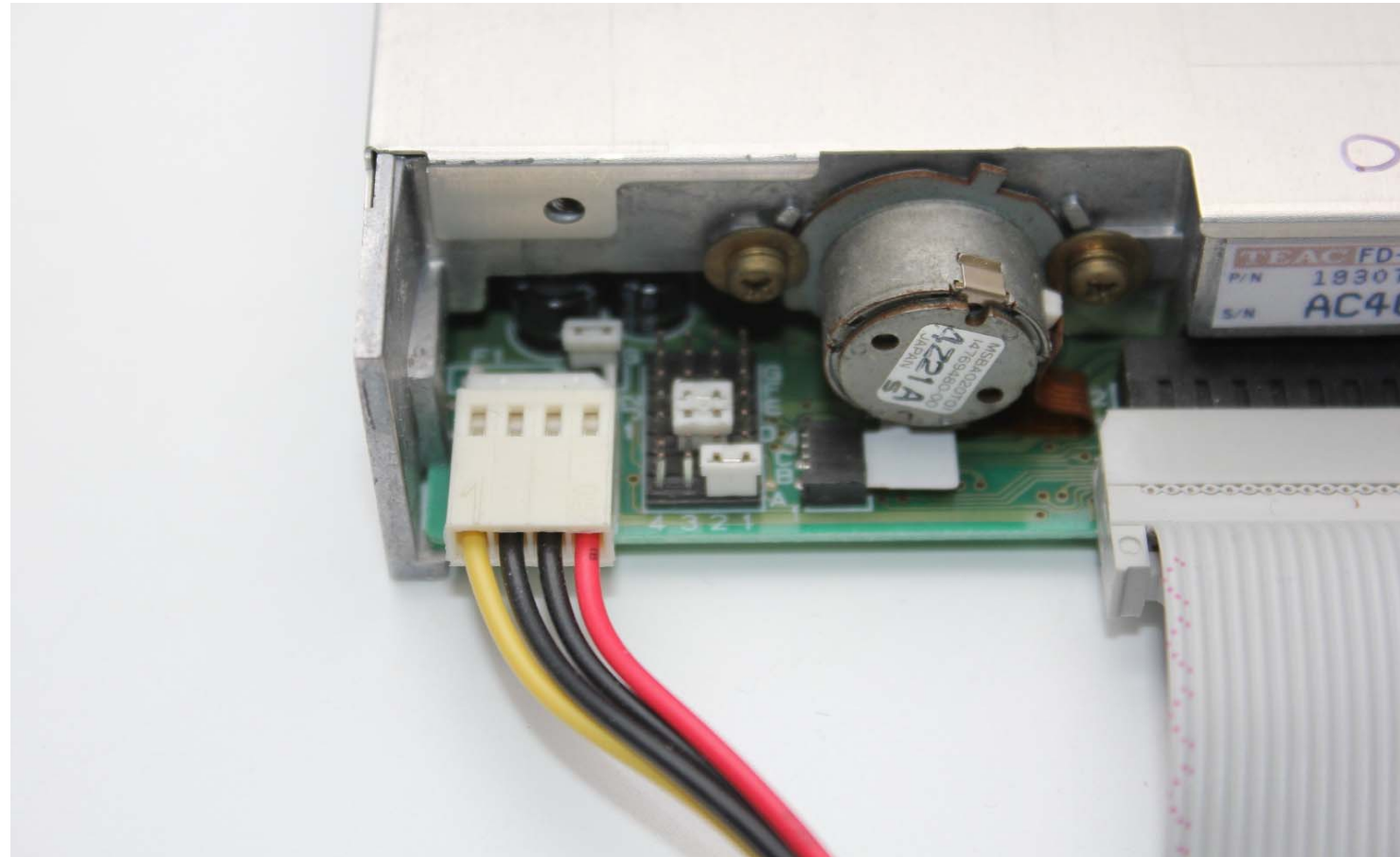
Every HD floppy drive noted above will require two modifications to function in an FD-2000 reproduction. If you have another make/model of HD floppy drive, feel free to try the modification, you may find it will work!

1. Remove the DS1 jumper
2. Jumper DS0
3. Connect a 1k resistor between pin 2 of the floppy drive connector (on the floppy drive itself) to +5V on the floppy drive. You will need a meter to definitively determine these locations.

ED (FD-4000) Floppy Drive Modification Notes

There are no hardware modifications required for the TEAC ED drive.

Based on a functioning preconfigured original TEAC ED drive, these are the jumper settings for that drive to function in an FD-4000 reproduction drive.



FD-Series (FD-2000 / FD-4000 Metal and 3D Printed FDM/SLA) Cases

<b>PCBWay Shared Projects</b>	<a href="https://www.pcbway.com/project/shareproject/Creative_Micro_Designs_Inc_CMD_FD_2000_FD_4000_Case_25d8f96a.html">https://www.pcbway.com/project/shareproject/Creative_Micro_Designs_Inc_CMD_FD_2000_FD_4000_Case_25d8f96a.html</a>
	<a href="https://www.pcbway.com/project/shareproject/Creative_Micro_Designs_Inc_CMD_FD_2000_FD_4000_3D_Printable_Case_65080768.html">https://www.pcbway.com/project/shareproject/Creative_Micro_Designs_Inc_CMD_FD_2000_FD_4000_3D_Printable_Case_65080768.html</a>
<b>COREi64.com</b>	<a href="https://corei64.com/shop/index.php?route=product/product&amp;product_id=454">https://corei64.com/shop/index.php?route=product/product&amp;product_id=454</a>

OPTIONAL - Heatsink for Linear Regulator when using plastic case

Heatsink	274-3AB	567-274-3AB		1	0		0.41
----------	---------	-------------	--	---	---	--	------

[illegible]

[illegible]