Kelly Designs

Explorer Board HAT
Test Fixture
PN: 1290
Rev P1

As of: 1/2/2019
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Item	Qty	Location (*bottom*)	Mfg Part #	Description	Rating	Footprint	Mfg	Mouser	DigiKey	Notes	$ each	Total
1	7	C2, C3, C5, C8, *C9*, C12, *C13*	CC0805KRX7R8BB104	Cap Cer 0.1uF 25V X7R 0805 10%	X7R	0805	Yageo	603-CC805KRX7R8BB104	311-1141-1-ND		0.028	0.196
1	0	C2, C3, C5, C8, *C9*, C12, *C13*	08055C104KAT2A	Cap Cer 0.1uF 25V X7R 0805 10%	X7R	0805	AVX	581-08055C104K	478-1395-1-ND		0.059	0.000
2	7	C1, C4, C6, C7, *C10*, C11, *C14*	C2012X7R1A106K125AC	Cap Cer 10uF 10V X7R 0805 10%	X7R	0805	TDK	810-C2012X7R1A106K	445-6857-1-ND		0.215	1.505
2	0	C1, C4, C6, C7, *C10*, C11, *C14*	CL21B106KOQNNNE	Cap Cer 10uF 10V X7R 0805 10%	X7R	0805	Samsung	NA	1276-2872-1-ND		0.131	0.000
3	1	*D1*	LTST-C190KGKT	LED Green Clear 0603		0603	Lite-On	859-LTST-C190KGKT	160-1435-1-ND		0.068	0.068
4	2	D2, D3	MBRA340T3G	Diode Schottky 40V 3A Low Forward Drop		SMA	On Semi	863-MBRA340T3G	MBRA340T3GOSCT-ND		0.299	0.598
5	1	*J1*	CS25582-40G-M36-0A	Conn Socket 2x20 0.100 inch SMD		0.100	Kaweei Tech	(Buy from Adafruit #2187)	NA	6	1.950	1.950
6	2	J2	450-10-224-00-001000	Conn Header 24 Pos 0.100 inch .018 Dia		0.100	Mill-Max	575-4501022400001000	450-10-224-00-001000-ND	6	16.430	32.860
7	3	J3, J5, J6	0022122024	Conn Header 2 Pos 0.100 RA		0.100	Molex	538-22-12-2024	WM2711-ND	6	0.473	1.419
8	1	J4	S2B-PH-SM4-TB(LF)(SN)	Conn Header PH Side 2 Pos 2mm SMD		SMD	JST	NA	455-1749-1-ND		0.419	0.419
9	6	R1, R2, *R4*, R5, R7, *R11*	RC0805FR-07330RL	Res 330 Ohm 1% Thick Film 0805	1%	0805	Yageo	603-RC0805FR-07330RL	311-330CRCT-ND		0.016	0.096
10	6	*R3*, *R14*, *R15*, *R16*, R18, *R19*	RC0805FR-0710KL	Res 10K Ohm 1% Thick Film 0805	1%	0805	Yageo	603-RC0805FR-0710KL	311-10.0KCRCT-ND		0.016	0.096
11	1	R6	RC0805FR-07270RL	Res 270 Ohm 1% Thick Film 0805	1%	0805	Yageo	603-RC0805FR-07270RL	311-270CRCT-ND		0.016	0.016
12	1	*R8*	RC0805FR-0759KL	Res 59K Ohm 1% Thick Film 0805	1%	0805	Yageo	603-RC0805FR-0759KL	311-59.0KCRCT-ND		0.016	0.016
13	1	*R9*	RC0805FR-0728K7L	Res 28.7K Ohm 1% Thick Film 0805	1%	0805	Yageo	603-RC0805FR-0728K7L	311-28.7KCRCT-ND		0.016	0.016
14	1	*R10*	RC1206FR-07348RL	Res 348 Ohm 1% Thick Film 1206	1%	1206	Yageo	603-RC1206FR-07348RL	311-348FRCT-ND		0.030	0.030
15	1	*R12*	RC0805FR-0749K9L	Res 49.9K Ohm 1% Thick Film 0805	1%	0805	Yageo	603-RC0805FR-0749K9L	311-49.9KCRCT-ND		0.016	0.016
16	1	*R13*	RC0805FR-0730K1L	Res 30.1K Ohm 1% Thick Film 0805	1%	0805	Yageo	603-RC0805FR-0730K1L	311-30.1KCRCT-ND		0.016	0.016
17	1	*R17*	RC1206FR-07316RL	Res 316 Ohm 1% Thick Film 1206	1%	1206	Yageo	603-RC1206FR-07316RL	311-316FRCT-ND		0.030	0.030
18	6	*TP1-TP6*	5019	PC Test point mini SMD		SMD	Keystone	534-5019	36-5019CT-ND		0.218	1.308
19	1	*Q1*	BSS138-7-F	MOSFET N-Chan 50V 200mA SOT23-3		SOT23-3	Diodes Inc	621-BSS138-7-F	BSS138-FDICT-ND		0.207	0.207
20	6	U1, U2, *U4*, *U5*, U6, *U7*	LCB710S	Relay OptoMOS 1A SPST-NC 60V			IXYS	849-LCB710S	CLA369-ND		3.895	23.370
21	1	U3	LCA715S	Relay SSR SPST-NO 2.2A 0-60V			IXYS	849-LCA715STR	CLA309CT-ND		4.532	4.532
21	2	*U6*, *U8*	TPS73701DC	IC Reg Linear Pos Adj 1A SOT223-6		SOT223-6	TI	595-TPS73701DCQR	296-27066-1-ND		1.118	2.236
22	4	U9, *U11*, *U12*, *U13*	SN74LVC1G06DBVR	IC Buffer Invert 5.5V SOT23-5		SOT23-5	TI	595-SN74LVC1G06DBVR	296-8483-1-ND		0.199	0.796
23	1	U10	SN74LVC1G07DBVR	IC Buffer Non-invert 5.5V SOT23-5		SOT23-5	TI	595-SN74LVC1G07DBVR	296-8485-1-ND		0.199	0.199
23	1	*EZ Hook*	XMBLK	Hook Micro Test Conn Blk			E-Z Hook	NA	461-1004-ND		2.010	2.010
24	1			PCB Bare								0.000
								Sub total:	**$74.01**			
				Assemble								
1	1	Pi Zero W	3400	Raspberry Pi Zero W				Buy from Adafruit	NA		10.000	10.000
2	1	PI Zero Micro SD Card	SDSQUNC-016G-GN6MA	Micro SD Card 16GB Class 10			SanDisk	Buy from Amazon	NA		9.950	9.950
3	1	PI Zero GPIO Conn	2822	Header male 2x20 0.100 inch		0.100		Buy from Adafruit	NA	6	0.950	0.950
4	4	M1, M2, M3,M4	970090151	Hex Spacer M2.5 threaded Al 9mm			Wurth	NA	732-10537-ND		0.422	1.688
4	0	M1, M2, M3,M4	M1256-2545-SS	Hex Spacer M2.5 threaded SS 9mm	ALT		RAF Electronic	761-M1256-2545-SS	1772-1450-ND		0.918	0.000
4	0	M1, M2, M3,M4	M1256-2545-AL	Hex Spacer M2.5 threaded Al 9mm	ALT		RAF Electronic	761-M1256-2545-AL	1772-1890-ND		0.400	0.000
4	0	M1, M2, M3,M4	FM1256-2545-SS	Hex Spacer M2.5 threaded SS 9mm	ALT		Fascomp	728-FM1256-2545-SS	NA		0.616	0.000

5	6	M1, M2, M3,M4	29300	Screw Machine Pan M2.5 x 4mm			Keystone	534-29300	36-29300-ND		0.237	1.422
6	2	M1, M2	29306	Screw Machine Pan M2.5 x 16mm			Keystone		36-29306-ND		0.278	0.556
7	4	Bottom Feet	971070151	Hex Standoff M2.5 Steel 7mm M/F			Wurth	NA	732-10386-ND		0.363	1.452
8	4	Top Support	M1255-2545-N	Hex Standoff M2.5 Nylon 8mm			RAF Electronic	761-M1255-2545-N	1772-2022-ND		1.189	4.756
9	1	USB Power Supply	GEO15UB-6025	Switching AC/DC Power Adaptor			I.T.E. Power	Buy from Adafruit #1995			7.500	7.500
						Sub total:			$30.77			

Notes:

1	These components should be stocked due to concerns over lead time and/or limited substitutions available.
2	Cut pins flush to this board (0.030 inch or less)
3	Do not wash
4	
5	Leave holes open (do not fill with solder)
6	Thru-hole component
7	