



# Kelly Designs

Explorer Board HAT  
PN: 1277  
Rev A2

As of: 10/31/2017  
Patrick Kelly, Jack Kelly  
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| Item | Qty | Location (bottom)                  | Mfg Part #            | Description                          | Rating | Footprint | Mfg         | Mouser                    | DigiKey              | Notes | \$ each | Total |
|------|-----|------------------------------------|-----------------------|--------------------------------------|--------|-----------|-------------|---------------------------|----------------------|-------|---------|-------|
| 1    | 1   | A1                                 | SR4C033-L             | RF Chip Antenna 791-960 MHz Left     |        | SMD       | Antenova    | 237-SR4C033-L             | 627-1094-1-ND        |       | 1.850   | 1.850 |
| 2    | 2   | C6, C7                             | GRM1555C1H180JA01D    | Cap Cer 18pF 50V COG 5% 0402         | COG    | 0402      | Murata      | 81-GRM1555C1H180JA1D      | 490-5858-1-ND        |       | 0.006   | 0.012 |
| 3    | 8   | C1, C2, C5, C9, C21, C22, C24, C30 | CC0603KRX7R7BB104     | Cap Cer 0.1uF 16V X7R 10% 0603       | X7R    | 0603      | Yageo       | 603-CC603KRX7R7BB104      | 311-1088-1-ND        |       | 0.005   | 0.040 |
| 4    | 7   | C12, C13, C14, C15, C16, C17, C23  | GRM155R71C104KA88J    | Cap Cer 0.1uF 16V X7R 10% 0402       | X7R    | 0402      | Murata      | 81-GRM155R71C104KA8J      | 490-6328-1-ND        |       | 0.006   | 0.042 |
| 5    | 3   | C3, C4, C27                        | CC0603KRX5R7BB475     | Cap Cer 4.7uF 16V X5R 10% 0603       | X5R    | 0603      | Yageo       | 603-CC603KRX5R7BB475      | 311-1785-1-ND        |       | 0.072   | 0.216 |
| 6    | 3   | C8, C28, C29                       | GRT188R61C106KE13D    | Cap Cer 10uF 6.3V X5R 10% 0603       | X5R    | 0603      | Murata      | 81-GRT188R61C106KE3D      | 490-12317-1-ND       |       | 0.154   | 0.462 |
| 7    | 1   | C10                                | CC1206KKX7R6BB225     | Cap Cer 2.2uF 10V X7R 10% 1206       | X7R    | 1206      | Yageo       | 603-CC126KKX7R6BB225      | 311-1953-1-ND        |       | 0.037   | 0.037 |
| 7    | 0   | C10                                | GRM31MR71A225KA01L    | Cap Cer 2.2uF 10V X7R 10% 1206       | X7R    | 1206      | Murata      | 81-GRM426X225K010L        | 490-1803-1-ND        |       | 0.118   | 0.000 |
| 7    | 0   | C10                                | C1206C225K8RACTU      | Cap Cer 2.2uF 10V X7R 10% 1206       | X7R    | 1206      | Kemet       | 80-C1206C225K8R           | 399-8182-1-ND        |       | 0.470   | 0.000 |
| 7    | 0   | C10                                | LMK316B7225KL-T       | Cap Cer 2.2uF 10V X7R 10% 1206       | X7R    | 1206      | Taiyo Yuden | 963-LMK316B7225KL-T       | 587-2232-1-ND        |       | 0.074   | 0.000 |
| 8    | 1   | C11                                | GRM31CR60J107KE39L    | Cap Cer 100uF 6.3V X5R 10% 1206      | X5R    | 1206      | Murata      | 81-GRM31CR60J107KE9L      | 490-13982-1-ND       |       | 0.290   | 0.290 |
| 8    | 0   | C11                                | CL31A107MQHNNNE       | Cap Cer 100uF 6.3V X5R 20% 1206      | X5R    | 1206      | Samsung     | NA                        | 1276-1782-1-ND       |       | 0.261   | 0.000 |
| 8    | 0   | C11                                | JMK316BJ107ML-T       | Cap Cer 100uF 6.3V X5R 20% 1206      | X5R    | 1206      | Taiyo Yuden | 963-JMK316BJ107ML-T       | 587-1963-6-ND        |       | 0.472   | 0.000 |
| 9    | 3   | C18, C25, C26                      | CC0603KRX5R5BB475     | Cap Cer 4.7uF 6.3V X5R 10% 0603      | X5R    | 0603      | Yageo       | 603-CC603KRX5R5BB475      | 311-1521-1-ND        |       | 0.025   | 0.075 |
| 10   | 1   | C19                                | LMK105BJ105KV-F       | Cap Cer 1uF 10V X5R 10% 0402         | X5R    | 0402      | Taiyo Yuden | 963-LMK105BJ105KV-F       | 587-1454-1-ND        |       | 0.023   | 0.023 |
| 11   | 1   | C20                                | GRM1555C1HR50WA01D    | Cap Cer 0.5pF 50V COG +/-0.05pF 0402 | COG    | 0402      | Murata      | 81-GRM1555C1HR50WA1D      | 490-6264-1-ND        |       | 0.019   | 0.019 |
| 12   | 2   | D1, D4                             | LTST-C190KRKT         | LED Red Clear 0603                   |        | 0603      | Lite-On     | 859-LTST-C190KRKT         | 160-1436-1-ND        |       | 0.068   | 0.136 |
| 13   | 1   | D2                                 | LTST-C191KFKT         | LED Orange Clear 0603                |        | 0603      | Lite-On     | 859-LTST-C191KFKT         | 160-1445-1-ND        |       | 0.068   | 0.068 |
| 14   | 1   | D3                                 | LTST-C190KGKT         | LED Green Clear 0603                 |        | 0603      | Lite-On     | 859-LTST-C190KGKT         | 160-1435-1-ND        |       | 0.068   | 0.068 |
| 15   | 1   | F1                                 | OZCK0100FF2E          | Fuse PTC Resttable 1.0A 6V Chip 0805 |        | 0805      | Bel Fuse    | 530-OZCK0100FF2E          | 507-1815-1-ND        |       | 0.185   | 0.185 |
| 16   | 1   | J1                                 | CS25582-40G-M36-0A    | Conn Socket 2x20 0.100 inch SMD      |        | 0.100     | Kaweei Tech | (Buy from Adafruit #2187) | NA                   |       | 1.950   | 1.950 |
| 17   | 1   | J2                                 | 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 |
| 18   | 0   | J3                                 | 20021121-00010C4LF    | Conn Header 10 Pos DL 0.050 in SMD   |        | SMD       | Amphenol    | 649-202112100010C4LF      | 609-3695-1-ND        |       | 0.606   | 0.000 |
| 19   | 0   | J4                                 | 68000-404HLF          | Header 4 Pos 0.100 in Str Tin        |        | 0.100     | Amphenol    | 649-68000-404HLF          | 609-3262-ND          | 6     | 0.155   | 0.000 |
| 20   | 0   | J5                                 | M22-2510246           | Header 2 Pos 2mm                     |        | 2mm       | Harwin      | 855-M22-2510246           | 952-2280-ND          | 5,6   | 0.082   | 0.000 |
| 21   | 0   | J5 Shunt                           | M22-1900005           | Shunt Jumper 2mm                     |        | 2mm       | Harwin      | 855-M22-1900005           | 952-1305-ND          |       | 0.215   | 0.000 |
| 22   | 1   | L1                                 | PA4341.682NLT         | Inductor 6.8uH 4.5A 60 Mohm SMD      |        |           | Pulse       | 673-PA4341.682NLT         | 553-3420-1-ND        |       | 0.702   | 0.702 |
| 22   | 0   | L1                                 | PA4341.682NLT         | Inductor 6.8uH 4.5A 60 Mohm SMD      |        |           | Pulse       | buy from Arrow            |                      |       | 0.663   | 0.000 |
| 23   | 1   | L2                                 | LQG15HN33NH02D        | Inductor 33nH 300mA 670 mOhm 0402    |        | 0402      | Murata      | 81-LQG15HN33NH02D         | 490-15080-1-ND       |       | 0.048   | 0.048 |
| 24   | 1   | L3                                 | LQG15HN33N3C02D       | Inductor 3.3nH 800mA 120Mohm 0402    |        | 0402      | Murata      | 81-LQG15HN33N3C02D        | 490-15083-1-ND       |       | 0.048   | 0.048 |
| 25   | 2   | Q1, Q4                             | FDN340P               | MOSFET P-Chan 20V 2A SSOT-3          |        | SSOT-3    | On Semi     | 512-FDN340P               | FDN340PCT-ND         |       | 0.157   | 0.314 |
| 26   | 1   | Q2                                 | MMUN2133LT1G          | Trans Prebias PNP 246mW SOT23-3      |        | SOT23-3   | On Semi     | 863-MMUN2133LT1G          | MMUN2133LT1GOSCT-ND  |       | 0.039   | 0.039 |
| 27   | 1   | Q3                                 | MMBT2222ALT1G         | Trans NPN 40V 0.6A SOT-23            |        | SOT-23    | On Semi     | 863-MMBT2222ALT1G         | MMBT2222ALT1GOSCT-ND |       | 0.034   | 0.034 |
| 28   | 3   | R14, R15, R17                      | RC0603FR-071KL        | Res 1.0K Ohm 1% Thick Film 0603      | 1%     | 0603      | Yageo       | 603-RC0603FR-071KL        | 311-1.00KRCCT-ND     |       | 0.006   | 0.018 |
| 29   | 1   | R1                                 | RT0805BRD07732KL      | Res 732K Ohm 0.1% Thin Film 0805     | 0.1%   | 0805      | Yageo       | 603-RT0805BRD07732KL      | YAG4938CT-ND         |       | 0.114   | 0.114 |
| 30   | 1   | R22                                | ERA-6AEB6653V         | Res 665K Ohm 0.1% Thin Film 0805     | 0.1%   | 0805      | Panasonic   | 667-ERA-6AEB6653V         | P665KDACT-ND         |       | 0.118   | 0.118 |
| 31   | 1   | R7                                 | RT0603BRD07200KL      | Res 200K Ohm 0.1% Thin Film 0603     | 0.1%   | 0603      | Yageo       | 603-RT0603BRD07200KL      | YAG1578CT-ND         |       | 0.127   | 0.127 |
| 32   | 2   | R3, R21                            | RT0603BRD074K99L      | Res 4.99K Ohm 0.1% Thin Film 0603    | 0.1%   | 0603      | Yageo       | 603-RT0603BRD074K99L      | YAG1678CT-ND         |       | 0.127   | 0.254 |
| 33   | 1   | R2                                 | ERA-3AEB2433V         | Res 243K Ohm 0.1% Thin Film 0603     | 0.1%   | 0603      | Panasonic   | 667-ERA-3AEB2433V         | P243KDBCT-ND         |       | 0.117   | 0.117 |
| 34   | 1   | R23                                | RN73C1J402KBTDF       | Res 402K Ohm 0.1% Thin Film 0603     | 0.1%   | 0603      | TE          | 279-RN73C1J402KBTDF       | A124747CT-ND         |       | 0.437   | 0.437 |
| 35   | 1   | R6                                 | CPF0603B1M0E1         | Res 1M Ohm 0.1% Thin Film 0603       | 0.1%   | 0603      | TE          | 279-CPF0603B1M0E1         | A102234CT-ND         |       | 0.157   | 0.157 |
| 36   | 1   | R33                                | CPF0603B750KE1        | Res 750K Ohm 0.1% Thin Film 0603     | 0.1%   | 0603      | TE          | 279-CPF0603B750KE1        | A102315CT-ND         |       | 0.199   | 0.199 |
| 37   | 1   | R25                                | ERA-3AEB8061V         | Res 8.06K Ohm 0.1% Thin Film 0603    | 0.1%   | 0603      | Panasonic   | 667-ERA-3AEB8061V         | P8.06KDBCT-ND        |       | 0.117   | 0.117 |
| 38   | 1   | R9                                 | RN73C1J340KBTDF       | Res 340K Ohm 0.1% Thin Film          | 0.1%   | 0603      | TE          | 279-RN73C1J340KBTDF       | A124740CT-ND         |       | 0.437   | 0.437 |

