

# S3E 1600

## 210-108

PCA  
Spartan 3E Starter, 1600 Gate

IC14 IS NO LOAD  
R33, R42-44, R86, R99, R100, R117-119, R133-134,  
R137-138, R181, R202-210 ARE NO LOAD  
C79, C89 ARE NO LOAD  
JP4, JP5, J6, J8 J21-27, J29 ARE NO LOAD

|          |           |                |
|----------|-----------|----------------|
| Type     | PL        | Tesse          |
| Revision | A         | Mike           |
| Status   | U         | Doc Location   |
| Date     | 3/15/2006 | Digilent Stock |
| By       | MPH       | Cantron Stock  |

| Item | Qty Unit | Part Number | Type Rev   | Title Detail  | Reference |         |
|------|----------|-------------|------------|---|-----------|---------|
|      |          | Vendor      | Vendor P/N |   | Mfr Name  | Mfr P/N |
| 1    | 1 each   | 200-087     | DWG D      | PCB Spartan 3E  |           |         |
| 3    | 1 each   | 126-031     | PS         | IC MC74VHC1G125DFT2, Single Tri-State Buffer, SOT353-5<br>On Semiconductor MC74VHC1G125DFT2 On Semiconductor MC74VHC1G125DFT2 | IC1       |         |
| 4    | 1 each   | 126-061     | PS         | IC ICL3232CBN, 3.3V RS232 Level shifter, SOIC16 ST3232D<br>Avnet ICL3232CBN Intersil ICL3232CBN                               | IC2       |         |
| 5    | 1 each   | 126-164     | PS         | IC XC2C256-6VQG100C Lead free ROHS<br>Xilinx  | IC3       |         |
| 6    | 1 each   | 126-178     | PS         | IC CY7C68013A-100AXC, 100TQFP<br>Arrow Electronics, Inc. CY7C68013A-100AXC  | IC4       |         |
| 7    | 1 each   | 126-191     | PS         | IC 24LC00-I/ST, Serial EEPROM, 128Bit, 2.5V-5V, 8-TSSOP<br>Digi-Key Corp. 24LC00-I/ST-ND                                      | IC5       |         |
| 8    | 1 each   | 126-167     | PS         | IC LAN83C185, Ethernet Transceiver 10/100Mbps, TQFP-48<br>SMSC  | IC6       |         |
| 9    | 1 each   | 126-122     | PS         | IC TPS75003RHRLR, Triple Output Regulator, 1.2V 2.5V 3.3V, QFN-20<br>Digi-Key Corp. 296-17835-1-ND                            | IC7       |         |
| 10   | 1 each   | 126-169     | PS         | IC LTC3412EFE 2.5A, 4MHz, Monolithic Synch Step Down Regulator, TSSOP16<br>Linear Technology LTC3412EFE                       | IC8       |         |
| 11   | 1 each   | 126-181     | PS         | IC LTC1844ES5-SD, 250mA Adj Ultra LDO Regulator, SOT23-5<br>Linear Technology LTC1844ES5                                      | IC9       |         |

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|      |             | Vendor      | Vendor P/N  |  | Mfr Name  | Mfr P/N |
| 12   | 1<br>each   | 126-185     | PS          | <b>IC</b><br>XC3S1600E-4FGG320C Lead free<br>ROHS  | IC10  |         |
| 13   | 2<br>each   | 126-115     | PS          | <b>IC</b><br>XCF04S-VO20C<br>ROHS = 2072   | IC11, IC13  |         |
| 14   | 1<br>each   | 126-130     | PS          | <b>IC</b><br>DS2432P, 1kb Protected 1-Wire EEPROM with<br>SHA-1 Engine, 6TSOC<br><br>Avnet   | IC12  |         |
| 16   | 1<br>each   | 126-184     | PS          | <b>IC</b><br>M25P16-VME6G, 16Mbit Serial Flash Rom MLP8<br><br>Nu Horizons Electronics Corp.   | IC15<br><br>M25P16-VME6G  |         |
| 17   | 1<br>each   | 163-010     | PS          | <b>Socket</b><br>8 pin DIP<br><br>E-Call Enterprise Co, Ltd.   | IC16<br><br>100-103-080   |         |
| 18   | 1<br>each   | 126-032     | PS          | <b>IC</b><br>SG-8002JF-MPT, Programmable Oscillator, 50Mhz,<br>JF<br><br>Digi-Key Corp.  | IC17<br><br>SG-8002JF-PCC-ND<br>Epson Electronics<br>America, Inc.<br>SG-8002JF-PWT |         |
| 19   | 1<br>each   | 126-029     | PS          | <b>IC</b><br>XC2C64-7VQG44C, Lead Free II CPLD, VQ44<br>ROHS   | IC18  |         |
| 20   | 1<br>each   | 126-192     | PS          | <b>IC</b><br>LTC1407CMSE-1, Serial 12/14 Bit, 3Msps<br>Simultaneous Sampling ADCs with Shutdown,<br>MSOP-10 PWP<br><br>Linear Technology | IC19<br><br>LTC1407ACMSE  |         |
| 21   | 1<br>each   | 126-172     | PS          | <b>IC</b><br>LTC6912CGN-1, Dual Prog Gain Amps w/ Serial<br>Digital Interface, SSOP-16<br><br>Linear Technology                          | IC20<br><br>LTC6912CGN-1  |         |
| 22   | 1<br>each   | 126-173     | PS          | <b>IC</b><br>LTC2624CGN, Quad Rail to Rail DAC, SSOP-16  | IC21  |         |
| 23   | 1<br>each   | 126-219     | PS          | <b>IC</b><br>JS28F128J3D75 Intel Strata Flash<br><br>Intel   | IC22  |         |
| 24   | 1<br>each   | 126-175     | PS          | <b>IC</b><br>MT46V32M16TG-6T TSOPII-66   | IC23  |         |
| 25   | 1<br>each   | 121-005     | PS          | <b>Diode</b><br>MBR0520, 500Ma Shotkey power rectifier, SOD-123<br><br>Digi-Key Corp.  | D1<br><br>MBR0520LCT-ND<br>FAIRCHILD<br>SEMICONDUCTOR<br>MBR0520L                   |         |

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|------|-------------|-----------------------|--|--|---|---------|
|      |             | Vendor                | Vendor P/N                                     |  | Mfr Name  | Mfr P/N |
| 26   | 1<br>each   | 121-025               | PS   | <b>Diode</b><br>Schottky Diode, 20V, 1A Powermite                      | D2  |         |
|      |             | Digi-Key Corp.        | MBRM120ET3OSCT-ND ON Semiconductor             |  | MBRM120ET3  |         |
| 27   | 1<br>each   | 121-026               | PS   | <b>Diode</b><br>Surface Mount Schottky Barrier Rectifier DO-214AB      | D3  |         |
|      |             | General Semiconductor | SS32   |  |   |         |
| 28   | 1<br>each   | 131-019               | PS   | <b>Inductor</b><br>CDRH6D38-5R0NC, 5.0uH                               | L1  |         |
|      |             | Harvey King Inc       | CDRH6D38-5R0NC Sumida                          |  | CDRH6D38-5R0NC  |         |
| 29   | 1<br>each   | 131-020               | PS   | <b>Inductor</b><br>CDRH8D43-150NC, 15uH                                | L2  |         |
|      |             | Harvey King Inc       | CDRH8D43-150NC Sumida                          |  | CDRH8D43-150NC  |         |
| 30   | 1<br>each   | 131-029               | PS   | <b>Inductor</b><br>6.8uH, 20% Vishay 2525                              | L3  |         |
|      |             | Mouser Electronics    | 70-IHLP2525CZER6R8M Vishay/Dale                |  | IHLP2525CZER6R8M01  |         |
| 31   | 55<br>each  | 111-017               | PS   | <b>Capacitor</b><br>0.047uF, ceramic, 10%, 16V, X5R, 0402<br>Lead Free | C1-2, C19, C86, C92-96,<br>C104-108, C116-120,<br>C128-132, C140-147,<br>C158-165, C177, C179,<br>C181, C183, C195-203,<br>C205, C207 |         |
|      |             | Digi-Key Corp.        | 478-1125-1-ND AVX Corporation                  |  | 0402YD473KAT2A  |         |
| 32   | 38<br>each  | 111-010               | PS   | <b>Capacitor</b><br>0.001uf, ceramic, 10%, 50V, X7R, 0402              | C3, C74, C97-101,<br>C109-113, C121-125,<br>C133-137, C148-155,<br>C166-173   |         |
|      |             | Digi-Key Corp.        | 311-1036-1-ND Yageo America                    |  | CC0402KRX7R9BB102   |         |
| 33   | 39<br>each  | 111-009               | PS   | <b>Capacitor</b><br>0.1uf, ceramic, 10%, 6.3V, X5R, 0402               | C4-7, C10-18, C20-28,<br>C31, C52, C54, C62,<br>C76-78, C83-85, C90-91,<br>C184, C186, C190,<br>C192-193                              |         |
|      |             | Digi-Key Corp.        | 445-1266-1-ND TDK Corporation                  |  | C1005X5R0J104K  |         |
| 34   | 2<br>each   | 111-072               | PS   | <b>Capacitor</b><br>12pF, ceramic, 5%, 50V, NP0, 0402                  | C8-9  |         |
|      |             | Digi-Key Corp.        | PCC120CQCT-ND Panasonic - ECG                  |  | ECJ-0EC1H120J   |         |
| 35   | 2<br>each   | 111-028               | PS   | <b>Capacitor</b><br>1uF, ceramic, 10%, 6.3V, X5R, 0402                 | C29, C58  |         |
|      |             | Digi-Key Corp.        | PCC2393CT-ND Panasonic - ECG                   |  | ECJ-0EB0J105K   |         |
| 36   | 1<br>each   | 111-014               | PS   | <b>Capacitor</b><br>1uF, ceramic, 10%, 16V, X5R, 0603                  | C30   |         |
|      |             | Digi-Key Corp.        | 490-1536-1-ND Murata Electronics North America |  | GRM188R61C105KA93D  |         |

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|------|-------------|----------------|---|---|--|---------|
|      |             | Vendor         | Vendor P/N  |   | Mfr Name   | Mfr P/N |
| 37   | 2<br>each   | 111-061        | PS  | <b>Capacitor</b><br>6800pF, ceramic, 10%, 25V, X7R, 0402                            | C32-33   |         |
|      |             | Digi-Key Corp. | PCC1708CT-ND Panasonic-ECG                        |   | ECJ-0EB1E682K  |         |
| 38   | 1<br>each   | 111-064        | PS  | <b>Capacitor</b><br>0.022uF, ceramic, 10%, 16V, X7R, 0402                           | C34  |         |
|      |             | Digi-Key Corp. | 478-1118-1-ND AVX Corporation                     |   | 0402YC223KAT2A   |         |
| 39   | 20<br>each  | 111-011        | PS  | <b>Capacitor</b><br>0.01uf, ceramic, 10%, 16V, X7R, 0402                            | C35-38, C43, C45-48,<br>C66, C71, C87, C176,<br>C178, C180, C182, 204,<br>C206, C208, C216 |         |
|      |             | Digi-Key Corp. | 399-1038-1-ND Kemet                               |   | C0402C103K4RACTU   |         |
| 40   | 8<br>each   | 111-060        | PS  | <b>Capacitor</b><br>0.47uF, ceramic, 10%, 10V, X5R 0402                             | C39, C49, C102, C114,<br>C126, C138, C156, C174  |         |
|      |             | Digi-Key Corp. | 490-3264-1-ND Murata Electronics North<br>America |   | GRM155R61A474KE15D   |         |
| 41   | 5<br>each   | 111-046        | PS  | <b>Capacitor</b><br>4.7uF, ceramic, 10%, 6.3V, X5R, 0603<br>Lead Free               | C40, C44, C50, C70,<br>C72   |         |
|      |             | Digi-Key Corp. | PCC2396CT-ND Panasonic - ECG                      |   | ECJ-1VB0J475K  |         |
| 42   | 2<br>each   | 111-062        | PS  | <b>Capacitor</b><br>27pF, ceramic, 5%, 50V, NP0, 0402                               | C41-42   |         |
|      |             | Digi-Key Corp. | PCC270CQCT-ND Panasonic - ECG                     |   | ECJ-0EC1H270J  |         |
| 43   | 1<br>each   | 111-000        | PS  | <b>Capacitor</b><br>10uF, tantalum, 10%, 16V, B size                                | C59  |         |
|      |             | Digi-Key Corp. | 495-2238-1-ND EPCOS Inc.                          |   | B45190E3106K209  |         |
| 44   | 2<br>each   | 111-068        | PS  | <b>Capacitor</b><br>100uF, tantalum, 20% 6.3V, 6032-28 C size, 100<br>milliohms ESR | C53, C61   |         |
|      |             | TTI            | TPSC107K006R0075                                  |   |  |         |
| 45   | 3<br>each   | 111-054        | PS  | <b>Capacitor</b><br>1.5nF, ceramic, 10%, 50V, X7R, 0402                             | C55, C60, C63  |         |
|      |             | Digi-Key Corp. | PCC1723CT-ND Panasonic - ECG                      |   | ECJ-0EB1H152K  |         |
| 46   | 2<br>each   | 111-051        | PS  | <b>Capacitor</b><br>10pF, ceramic, 5%, 50V, NP0, 0402                               | C56, C81   |         |
|      |             | Digi-Key Corp. | BC1195CT-ND BC COMPONENTS                         |   | VJ0402A100JXACW1BC   |         |
| 47   | 3<br>each   | 111-090        | PS  | <b>Capacitor</b><br>100uF, ceramic, 20% 6.3V X5R, 1210                              | C57, C64, C69  |         |
|      |             | Digi-Key Corp. | 587-1388-2-ND Taiyo Yuden                         |   | JMK325BJ107MY-T  |         |
| 48   | 1<br>each   | 111-027        | PS  | <b>Capacitor</b><br>22pF, ceramic, 5%, 50V, NP0, 0402                               | C68  |         |
|      |             | Digi-Key Corp. | 311-1018-1-ND Yageo America                       |   | 0402CG220J9B200  |         |

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|------|-------------|--------------------|-----------------------------------|--|---|---------|
|      |             | Vendor             | Vendor P/N                        |  | Mfr Name  | Mfr P/N |
| 49   | 1<br>each   | 111-037            | PS                                | <b>Capacitor</b><br>470pF, ceramic, 10%, X7R, 0402                         | C73   |         |
|      |             | Digi-Key Corp.     | PCC1717CT-ND Panasonic-ECG        |  | ECJ-0EB1H471K   |         |
| 50   | 1<br>each   | 111-066            | PS                                | <b>Capacitor</b><br>56pF, ceramic, 5%, 50V, NP0, 0402                      | C75   |         |
|      |             | Digi-Key Corp.     | PCC560CQCT-ND Panasonic - ECG     |  | ECJ-0EC1H560J   |         |
| 51   | 7<br>each   | 111-067            | PS                                | <b>Capacitor</b><br>39pF, ceramic, 5%, 50V, NP0, 0402                      | C80, C88, C209,<br>C211-214   |         |
|      |             | Digi-Key Corp.     | PCC390CQCT-ND Panasonic - ECG     |  | ECJ-0EC1H390J   |         |
| 52   | 1<br>each   | 111-052            | PS                                | <b>Capacitor</b><br>15pF, ceramic, 5%, 50V, NP0, 0402                      | C82   |         |
|      |             | Digi-Key Corp.     | 511-1036-1-ND ROHM                |  | MCH155A150JK  |         |
| 53   | 2<br>each   | 111-056            | PS                                | <b>Capacitor</b><br>220pF, ceramic, 10%, 25V, X7R, 0402                    | C187-188  |         |
|      |             | Digi-Key Corp.     | PCC1706CT-ND Panasonic - ECG      |  | ECJ-0EB1E221K   |         |
| 55   | 3<br>each   | 131-002            | PS                                | <b>Ferrite Bead</b><br>Wound Bead, 600 ohm, SMD, 0603 MPN=<br>2944666671   | FB1-3   |         |
|      |             | Allied Electronics | 589-0556 Fair-Rite Products Corp. |  | 2944666671  |         |
| 56   | 2<br>each   | 121-022            | PS                                | <b>Transistor</b><br>SI2323DS, P-Channel 20V Mosfet, SOT-23                | Q1-2  |         |
|      |             | Newark in One      | 21H8026 VISHAY SILICONIX          |  | SI2323DS-T1   |         |
| 57   | 1<br>each   | 131-025            | PS                                | <b>Crystal</b><br>D12AA1 24.000MHz 12 pF, 0.1 milli watt, crystal<br>CSM-7 | X1  |         |
|      |             | Digi-Key Corp.     | XC1001CT-ND                       |  |   |         |
| 58   | 1<br>each   | 131-014            | PS                                | <b>Crystal</b><br>25MHz, 18pF, CSM-7                                       | X2  |         |
|      |             | Digi-Key Corp.     | XC745CT-ND                        |  |   |         |
| 60   | 23<br>each  | 101-034            | PS                                | <b>Resistor</b><br>4.7K ohm, 5%, 1/16W, 0402                               | R2, R52, R54, R72,<br>R80-82, R94-95, R97-98,<br>R109-111, R120-122,<br>R124-125, R131, R135,<br>R144, R211 |         |
|      |             | Digi-Key Corp.     | 311-4.7KJCT-ND Yageo America      |  | 9C04021A4701JLHF3   |         |
| 61   | 5<br>each   | 101-037            | PS                                | <b>Resistor</b><br>270 ohm, 5%, 1/16W, 0402                                | R3-7  |         |
|      |             | Digi-Key Corp.     | 311-270JCT-ND Yageo America       |  | 9C04021A2700JLHF3   |         |
| 62   | 2<br>each   | 101-100            | PS                                | <b>Resistor</b><br>82.5 ohm, 1%, 1/16W, 0402                               | R8-9  |         |
|      |             | Digi-Key Corp.     | P82.5LCT-ND Panasonic - ECG       |  | ERJ-2RKF82R5X   |         |

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|      |             | Vendor         | Vendor P/N     |  | Mfr Name   | Mfr P/N           |
| 63   | 28<br>each  | 101-047        | PS             | <b>Resistor</b><br>10K ohm, 5%, 1/16W, 0402<br>Lead Free | R10-21, R23-28, R31,<br>R41, R87, R90,<br>R102-104, R114-116 |                   |
|      |             | Digi-Key Corp. | 311-10KJRCT-ND |  | Yageo America  | RC0402JR-0710KL   |
| 64   | 1<br>each   | 101-101        | PS             | <b>Resistor</b><br>49.9K, 1%, 1/16W, 0402                | R22  |                   |
|      |             | Digi-Key Corp. | RHM49.9KLCT-ND |  | ROHM   | MCR01MZPF4992     |
| 65   | 2<br>each   | 101-128        | PS             | <b>Resistor</b><br>15 ohm, 5%, 1/16, 0402                | R29-30   |                   |
|      |             | Digi-Key Corp. | RHM15JCT-ND    |  | ROHM   | MCR01MZPJ150      |
| 66   | 3<br>each   | 101-038        | PS             | <b>Resistor</b><br>2.2K ohm, 5%, 1/16W, 0402             | R32, R34, R62  |                   |
|      |             | Digi-Key Corp. | 311-2.2KJCT-ND |  | Yageo America  | 9C04021A2201JLHF3 |
| 68   | 8<br>each   | 101-036        | PS             | <b>Resistor</b><br>0.0 ohm shunt, 5%, 1/16W, 0402        | R35, R51, R53, R83,<br>R85, R88, R92, R141                   |                   |
|      |             | Digi-Key Corp. | 311-0.0JCT-ND  |  | Yageo America  | 9C04021A0R00JLHF3 |
| 69   | 11<br>each  | 101-033        | PS             | <b>Resistor</b><br>390 ohm, 5%, 1/16W, 0402              | R36-37, R60, R145-152  |                   |
|      |             | Digi-Key Corp. | 311-390JCT-ND  |  | Yageo America  | 9C04021A3900JLHF3 |
| 70   | 4<br>each   | 101-081        | PS             | <b>Resistor</b><br>49.9 ohm, 1%, 1/16W, 0402             | R38-39, R45, R47   |                   |
|      |             | Digi-Key Corp. | RHM49.9LCT-ND  |  | ROHM   | MCR01MZPF49R9     |
| 71   | 7<br>each   | 101-102        | PS             | <b>Resistor</b><br>10 ohm, 5%, 1/16W, 0402               | R40, R84, R89, R91,<br>R105, R112, R127                      |                   |
|      |             | Digi-Key Corp. | RHM10JCT-ND    |  | ROHM   | MCR01MZPJ100      |
| 72   | 5<br>each   | 101-103        | PS             | <b>Resistor</b><br>56.2 ohm, 1%, 1/16W, 0402             | R46, R48, R50, R55,<br>R96                                   |                   |
|      |             | Digi-Key Corp. | P56.2LCT-ND    |  | Panasonic - ECG  | ERJ-2RKF56R2X     |
| 73   | 1<br>each   | 101-104        | PS             | <b>Resistor</b><br>12.4K ohm, 1%, 1/16W, 0402            | R56  |                   |
|      |             | Digi-Key Corp. | P12.4KLCT-ND   |  | Panasonic - ECG  | ERJ-2RKF1242X     |
| 74   | 2<br>each   | 101-094        | PS             | <b>Resistor</b><br>0.047 ohm, 5%, 1/10W, 0603            | R57, R64   |                   |
|      |             | Digi-Key Corp. | P47NJCT-ND     |  | Panasonic - ECG  | ERJ-L03KJ47MV     |
| 75   | 2<br>each   | 101-078        | PS             | <b>Resistor</b><br>619K ohm, 1%, 1/16W, 0402             | R58, R61   |                   |
|      |             | Digi-Key Corp. | P619KLCT-ND    |  | Panasonic - ECG  | ERJ-2RKF6193X     |
| 76   | 1<br>each   | 101-079        | PS             | <b>Resistor</b><br>365K ohm, 1%, 1/16W, 0402             | R59  |                   |
|      |             | Digi-Key Corp. | P365KLCT-ND    |  | Panasonic - ECG  | ERJ-2RKF3653X     |

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|      |             | Vendor         | Vendor P/N                   |  | Mfr Name                            | Mfr P/N |
| 77   | 1<br>each   | 101-080        | PS                           | <b>Resistor</b><br>154K ohm, 1%, 1/16W, 0402             | R63                                 |         |
|      |             | Digi-Key Corp. | P154KLCT-ND Panasonic - ECG  |  | ERJ-2RKF1543X                       |         |
| 78   | 15<br>each  | 101-035        | PS                           | <b>Resistor</b><br>100 ohm, 5%, 1/16W, 0402<br>Lead Free | R65, R67, R76-78, R126,<br>R212-220 |         |
|      |             | Digi-Key Corp. | 311-100JRCT-ND Yageo America |  | RC0402JR-07100RL                    |         |
| 79   | 1<br>each   | 101-105        | PS                           | <b>Resistor</b><br>5.1 ohm, 5%, 1/16W, 0402              | R66                                 |         |
|      |             | Digi-Key Corp. | RHM5.1JCT-ND ROHM            |  | MCR01MZPJ5R1                        |         |
| 80   | 1<br>each   | 101-046        | PS                           | <b>Resistor</b><br>100K ohm, 5%, , 1/16W, 0402           | R68                                 |         |
|      |             | Digi-Key Corp. | 311-100KJCT-ND Yageo America |  | 9C04021A1003JLHF3                   |         |
| 81   | 1<br>each   | 101-106        | PS                           | <b>Resistor</b><br>4.7M ohm, 5%, 1/8W, 0805              | R69                                 |         |
|      |             | Digi-Key Corp. | RHM4.7MACT-ND ROHM           |  | MCR10EZJH475                        |         |
| 82   | 1<br>each   | 101-123        | PS                           | <b>Resistor</b><br>300 ohm, 5%, 1/16W, 0402              | R70                                 |         |
|      |             | Digi-Key Corp. | RHM300JCT-ND ROHM            |  | MCR01MZPJ301                        |         |
| 83   | 1<br>each   | 101-107        | PS                           | <b>Resistor</b><br>392K ohm, 1%, 1/16W, 0402             | R71                                 |         |
|      |             | Digi-Key Corp. | P392KLCT-ND Panasonic - ECG  |  | ERJ-2RKF3923X                       |         |
| 85   | 2<br>each   | 101-051        | PS                           | <b>Resistor</b><br>680 ohm, 5%, 1/16W, 0402              | R73, R101                           |         |
|      |             | Digi-Key Corp. | RHM680JCT-ND ROHM            |  | MCR01MZPJ681                        |         |
| 86   | 1<br>each   | 101-109        | PS                           | <b>Resistor</b><br>309K ohm, 1%, 1/16, 0402              | R74                                 |         |
|      |             | Digi-Key Corp. | P309KLCT-ND Panasonic - ECG  |  | ERJ-2RKF3093X                       |         |
| 87   | 1<br>each   | 101-111        | PS                           | <b>Resistor</b><br>182K ohm, 1%, 1/16W, 0402             | R75                                 |         |
|      |             | Digi-Key Corp. | P182KLCT-ND Panasonic - ECG  |  | ERJ-2RKF1823X                       |         |
| 88   | 1<br>each   | 101-112        | PS                           | <b>Resistor</b><br>330 ohm, 5%, 1/16, 0402               | R79                                 |         |
|      |             | Digi-Key Corp. | RHM330JCT-ND ROHM            |  | MCR01MZPJ331                        |         |
| 89   | 1<br>each   | 101-114        | PS                           | <b>Resistor</b><br>150 ohm, 1%, 1/16W, 0402              | R93                                 |         |
|      |             | Digi-Key Corp. | RHM150LCT-ND ROHM            |  | MCR01MZPF1500                       |         |
| 90   | 3<br>each   | 101-045        | PS                           | <b>Resistor</b><br>200 ohm, 5%, 1/16W, 0402              | R106-108                            |         |
|      |             | Digi-Key Corp. | 311-200JCT-ND Yageo America  |  | 9C04021A2000JLHF3                   |         |

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|------|-------------|----------------------------|-------------|--|---|-------------------|
|      |             | Vendor                     |             | Vendor P/N   | Mfr Name                                | Mfr P/N           |
| 92   | 14<br>each  | 101-116                    | PS          | <b>Resistor</b><br>45.3 ohm, 1%, 1/16W, 0402                                   | R113, R175-178, R180,<br>R182, R195-201 |                   |
|      |             | Digi-Key Corp.             |             | P45.3LCT-ND  | Panasonic - ECG                         | ERJ-2RKF45R3X     |
| 93   | 2<br>each   | 101-052                    | PS          | <b>Resistor</b><br>470 ohm, 5%, 1/16W, 0402                                    | R123, R128                              |                   |
|      |             | Digi-Key Corp.             |             | RHM470JCT-ND   | ROHM                                    | MCR01MZPJ471      |
| 94   | 3<br>each   | 101-054                    | PS          | <b>Resistor</b><br>1.0K ohm, 1%, 1/16W, 0402                                   | R129, R132, 143                         |                   |
|      |             | Digi-Key Corp.             |             | RHM1.00KLCT-ND   | ROHM                                    | MCR01MZPF1001     |
| 95   | 6<br>each   | 101-071                    | PS          | <b>Resistor</b><br>100 ohm, 1%, 1/16W, 0402                                    | R130, R154-158                          |                   |
|      |             | Digi-Key Corp.             |             | RHM100LCT-ND   | ROHM                                    | MCR01MZPF1000     |
| 96   | 1<br>each   | 101-130                    | PS          | <b>Resistor</b><br>10 ohm, 1%, 1/16W, 0402                                     | R136                                    |                   |
|      |             | Digi-Key Corp.             |             | RHM10.0LCT-ND  | ROHM                                    | MCR01MZPF10R0     |
| 97   | 4<br>each   | 101-025                    | PS          | <b>Resistor</b><br>0 ohm shunt, 5%, 1/16W, 0603                                | R1, R49, R139-140                       |                   |
|      |             | Digi-Key Corp.             |             | 311-0.0GCT-ND  | Yageo America                           | 9C06031A0R00JLHFT |
| 98   | 1<br>each   | 101-059                    | PS          | <b>Resistor</b><br>10K ohm, 1%, 1/16W, 0402                                    | R142                                    |                   |
|      |             | Digi-Key Corp.             |             | 311-10.0KLCT-ND  | Yageo America                           | 9C04021A1002FLHF3 |
| 100  | 1<br>each   | 101-057                    | PS          | <b>Resistor</b><br>20K ohm, 1%, 1/16W, 0402                                    | R153                                    |                   |
|      |             | Digi-Key Corp.             |             | 311-20.0KLCT-ND  | Yageo America                           | 9C04021A2002FLHF3 |
| 101  | 29<br>each  | 101-115                    | PS          | <b>Resistor</b><br>75 ohm, 1%, 1/16W, 0402                                     | R159-174, R179,<br>R183-194             |                   |
|      |             | Digi-Key Corp.             |             | 311-75.0LCT-ND   | Yageo America                           | 9C04021A75R0FLHF3 |
| 102  | 3<br>each   | 163-044                    | PS          | <b>Connector</b><br>Header, 1x6, female, RA                                    | J1-2, J4                                |                   |
|      |             | E-Call Enterprise Co, Ltd. |             | 161-220-060  |   |                   |
| 103  | 1<br>each   | 163-076                    | PS          | <b>Connector</b><br>FX2-100P-1.27DS Hirose FX connector, header<br>Right Angle | J3                                      |                   |
|      |             | Digi-Key Corp.             |             | H4311-ND   | Hirose Electronics                      | FX2-100P-1.27DS   |
| 104  | 4<br>each   | 163-017                    | PS          | <b>Connector</b><br>Header, 1x6, male, straight                                | J5, J7, J12, J28                        |                   |
|      |             | E-Call Enterprise Co, Ltd. |             | 125-203-060  |   |                   |



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|      |             | Vendor                           | Vendor P/N      |  | Mfr Name                | Mfr P/N |
| 105  | 1<br>each   | 163-005                          | PS              | <b>Connector</b><br>DB-9, female, PC mount, RA               | J9                      |         |
|      |             | E-Call Enterprise Co, Ltd.       | 103-312-092     |  |                         |         |
| 106  | 1<br>each   | 163-029                          | PS              | <b>Connector</b><br>DB-9, Male, PC mount, RA                 | J10                     |         |
|      |             | E-Call Enterprise Co, Ltd.       | 103-312-092     |  |                         |         |
| 107  | 1<br>each   | 163-041                          | PS              | <b>Connector</b><br>Header, 1x4, male, straight              | J11                     |         |
| 108  | 1<br>each   | 163-006                          | PS              | <b>Connector</b><br>Mini-Din, 6 pin, PC mount, PS/2 keyboard | J14                     |         |
|      |             | E-Call Enterprise Co, Ltd.       | 158-130-062     |  |                         |         |
| 109  | 1<br>each   | 163-007                          | PS              | <b>Connector</b><br>DB15HD, female, PC mount, RA, VGA        | J15                     |         |
|      |             | E-Call Enterprise Co, Ltd.       | 167-303-152     |  |                         |         |
| 110  | 1<br>each   | 163-094                          | PS              | <b>Connector</b><br>Header, 2x8, male, straight              | J16                     |         |
| 111  | 1<br>each   | 163-095                          | PS              | <b>Connector</b><br>Vertical Jack PCB mount SMA 50 ohms      | J17                     |         |
|      |             | Mouser Electronics               | 538-73391-0060  | Molex  | 73391-0060              |         |
| 112  | 1<br>each   | 163-058                          | PS              | <b>Connector</b><br>AMP 787780 USB B-style Connector         | J18                     |         |
|      |             | Digi-Key Corp.                   | 787780-1-ND     | AMP/Tyco Electronics   | 787780-1                |         |
| 113  | 1<br>each   | 163-088                          | PS              | <b>Connector</b><br>HFJ11-2450E-L11, Ethernet RJ45 Jack      | J19                     |         |
|      |             | Kensington                       | HFJ11-2450E-L11 |  |                         |         |
| 114  | 1<br>each   | 163-009                          | PS              | <b>Connector</b><br>Coax Power, 5.5mm x 2.1mm, PC mount, RA  | J20                     |         |
|      |             | E-Call Enterprise Co, Ltd.       | 501-500-012     |  |                         |         |
| 116  | 8<br>each   | 163-028                          | PS              | <b>Connector</b><br>Header, 1x2 male, straight               | J31, JP1-3, JP6-8, JP10 |         |
|      |             | E-Call Enterprise Co, Ltd.       | 125-203-020     |  |                         |         |
| 117  | 1<br>each   | 163-035                          | PS              | <b>Connector</b><br>Header, 1x3, male, straight              | JP9                     |         |
|      |             | E-Call Enterprise Co, Ltd.       | 125-203-030     |  |                         |         |
| 118  | 1<br>each   | 163-018                          | PS              | <b>Connector</b><br>Header, 2x3, male, straight              | J30                     |         |
|      |             | E-Call Enterprise Co, Ltd.       | 126-103-060     |  |                         |         |
| 119  | 1<br>each   | 121-007                          | PS              | <b>LED</b><br>Yellow, SMD, 0603 Hi Brite                     | LD-D                    |         |
|      |             | Wei Dien Int'l Trading Co., Ltd. | WDM-1608YW-02   |  |                         |         |

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|------|-------------|----------------------------------|---------------------|--|--|---------|
|      |             | Vendor                           | Vendor P/N          |  | Mfr Name   | Mfr P/N |
| 120  | 1<br>each   | 121-028                          | PS                  | <b>LED</b><br>Green, SMD, 0402, Hi Brite                         | LD-G   |         |
| 121  | 1<br>each   | 121-001                          | PS                  | <b>LED</b><br>Red, SMD, 0603 Hi Brite                            | LD-P   |         |
|      |             | Wei Dien Int'l Trading Co., Ltd. | WDM-1608URW-02      |  |  |         |
| 122  | 1<br>each   | 121-034                          | PS                  | <b>LED</b><br>Red, SMD, 0402, Hi Brite                           | LD-R   |         |
| 123  | 8<br>each   | 121-006                          | PS                  | <b>LED</b><br>Green, SMD, 0603 Hi Brite                          | LD0-7  |         |
|      |             | Wei Dien Int'l Trading Co., Ltd. | WDM-1608GW-02       |  |  |         |
| 124  | 1<br>each   | 153-004                          | PS                  | <b>Encoder</b><br>Mechanical rotary encoder w/push button        | ROT1   |         |
|      |             | CUI                              | AEC11BR1E-15FD1-20C |  |  |         |
| 125  | 5<br>each   | 153-000                          | PS                  | <b>Switch</b><br>SPST, momentary push button, PC mount           | BTN1, N, S, E, W   |         |
|      |             | E-Call Enterprise Co, Ltd.       | 203-125-042         |  |  |         |
| 126  | 5<br>each   | 153-001                          | PS                  | <b>Switch</b><br>SPDT, slide, PC mount                           | SW0-3, SWP   |         |
|      |             | E-Call Enterprise Co, Ltd.       | 203-419-030         |  |  |         |
| 127  | 6<br>each   | 170-003                          | PS                  | <b>Mounting</b><br>Rubber feet, SJ-5303                          | F1-6   |         |
|      |             | Digi-Key Corp.                   | SJ5303-7-ND         |  |  |         |
| 128  | 8<br>each   | 163-042                          | PS                  | <b>Jumper</b><br>Shorting Block, 100mil spacing                  |  |         |
|      |             | E-Call Enterprise Co, Ltd.       | 146-210-020         |  |  |         |
| 129  | 1<br>each   | 710-000                          | PS                  | <b>Packaging</b><br>Bag, anti-static, 8"x10"                     |  |         |
|      |             | ULINE                            | S-1315              | ULINE  | S-1315   |         |
| 130  | 1<br>each   | 153-009                          | PS                  | <b>Switch</b><br>Knob, White Line K650DRNP12000-03               | ROT1   |         |
|      |             | Elma ELelectronics               | K650DRNP12000-03    |  |  |         |
| 132  | 11<br>each  | 111-059                          | PS                  | <b>Capacitor</b><br>10uF, ceramic, 20%, 6.3V, X5R 0805           | C51, C65, C103, C115,<br>C127, C139, C157,<br>C175, C185, C189, C215 |         |
|      |             | Digi-Key Corp.                   | 587-1304-2-ND       | Panasonic - ECG  | ECJ-2FB0J106M  |         |
| 133  | 1<br>each   | 111-093                          | PS                  | <b>Capacitor</b><br>22uF, ceramic, 20%, 6.3V, X5R, 0805          | C67  |         |
|      |             | Digi-Key Corp.                   | 587-1305-1-ND       | Taiyo Yuden  | JMK212BJ226MG-T  |         |
| 134  | 1<br>each   | 163-105                          | PS                  | <b>Connector</b><br>Header, 1x16 100mil spacing, female straight | J13  |         |
|      |             | Digi-Key Corp.                   | S7049-ND            | Sullins Electronics Group  | PPPC161LFBN  |         |

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|      |             | Vendor                    |             | Vendor P/N   | Mfr Name                  | Mfr P/N |
| 135  | 1<br>each   | 125-055<br>Digi-Key Corp. | PS          | IC<br>CMOS oscillator, 66.67Mhz, DIP8<br>SGR-8002DC-PCC-ND<br>Epson Electronics<br>America Inc | IC16<br>SG-8002DC-MPTROHS |         |