

Control Board

| Designator | Quantity | Description | Manufacturer | PartNumber | Alternate Manufacturer | Alternate PartNumber |
|--|----------|--|-----------------------------|------------------------|------------------------|----------------------|
| C1_c, C2_c, C3_c, C4_c, C5_c, C6_c, C7_c, C8_c, C9_c, C10_c, C19_c, C20_c, C21_c, C22_c, C23_c, C24_c, C34_c, C35_c, C36_c, C37_c, C40_c, C11_c, C13_c, C15_c, C18_c, C25_c, C26_c, C28_c, C30_c, C31_c, C38_c, C39_c, C41_c | 21 | CAP, CERM, 100 pF, 25 V, +/- 10%, X7R,0402 | | | | |
| C12_c, C14_c, C27_c, C29_c | 4 | CAP, CERM, 0.33 uF, 50 V, +/- 10%, X7R, 0603 | TDK | C1608X7R1H334K080AC | | |
| C16_c, C17_c, C32_c, C33_c | 4 | CAP, CERM, 1 uF, 10 V, +/- 10%, X5R, 0402 | MuRata | GRM155R61A105KE15D | | |
| C42_c | 1 | CAP, CERM, 0.1 uF, 25 V, +/- 10%, X7R, 0402 | MuRata | GRM155R71E104KE14D | | |
| C43_c, C44_c, C45_c | 3 | CAP, CERM, 22 uF, 25 V, +/- 20%, X5R, 0805 | MuRata | GRM21BR61E226ME44L | | |
| D1_c, D2_c | 2 | Diode, Schottky, 40 V, 0.03 A, SOD-523 | Diodes Inc. | SDM03U40-7 | | |
| FID1_c, FID2_c, FID3_c | 3 | Fiducial mark. There is nothing to buy or mount. | N/A | N/A | | |
| J1_c | 1 | Receptacle, 1.27mm, 40x2, Gold, TH | Amphenol FCI | 20021311-00080T4LF | | |
| J2_c | 1 | Receptacle, 50x1, 1.27mm, TH R/A | Preci-dip | 851-PP-NNN-20-001101 | | |
| J3_c, J4_c | 2 | Header, 1.27mm, 5x2, Gold, SMT | FCI | 20021121-00010C4LF | | |
| J5_c | 1 | Header, 1.27mm, 4x1, Gold, TH | Sullins Connector Solutions | LPPB041NFFN-RC | | |
| J6_c | 1 | C2000 controlCARD-120HSEC connector, SMT | Samtec | HSEC8-160-01-L-DV-A-BL | | |
| J7_c | 1 | Header(shrouded), 1.27mm, 40x2, Gold with Tin tail, R/A, TH | Samtec | TFM-140-01-L-D-RA | | |
| J8_c | 1 | Header, 100mil, 4x1, Tin, TH | TE Connectivity | 5-146278-4 | | |
| J9_c, J10_c, J11_c, J12_c, J13_c, J14_c | 6 | Jumper, SMT | Any | JMP-36-30X40SMT | | |
| L1_c | 1 | Inductor, Wirewound, Ferrite, 10 uH, 0.68 A, 0.46 ohm, SMD | Würth Elektronik | 74438323100 | | |
| LBL1_c | 1 | Thermal Transfer Printable Labels, 0.650" W x 0.200" H - 10,000 per roll | Brady | THT-14-423-10 | | |
| R1_c, R2_c, R3_c, R5_c, R8_c, R10_c, R12_c, R13_c, R14_c, R15_c, R16_c, R17_c, R18_c, R19_c, R20_c, R21_c, R22_c, R23_c, R24_c, R25_c, R26_c, R27_c, R28_c, R32_c | 24 | RES, 0, 5%, 0.063 W, AEC-Q200 Grade 0, 0402 | Vishay-Dale | CRCW04020000Z0ED | | |
| R4_c, R6_c, R7_c, R9_c, R11_c, R31_c, R33_c, R46_c | 8 | RES, 51, 5%, 0.0625 W, 0402 | Yageo America | RC0402JR-0751RL | | |
| R29_c | 1 | RES, 10.0 k, 1%, 0.1 W, 0402 | | | | |
| R30_c | 1 | RES, 45.3 k, 1%, 0.063 W, 0402 | Yageo America | RC0402FR-0745K3L | | |
| R34_c, R35_c, R36_c, R37_c, R38_c, R39_c, R40_c, R41_c | 8 | RES, 49.9, 1%, 0.063 W, 0402 | Yageo America | RC0402FR-0749R9L | | |
| R42_c, R43_c, R44_c | 3 | RES, 10.0 k, 1%, 0.1 W, 0402 | | | | |
| U1_c, U4_c, U5_c, U9_c | 4 | High Speed, Robust EMC Reinforced Dual-Channel Digital Isolator, DWV0008A (SOIC-8) | Texas Instruments | ISO7721FDWVR | Texas Instruments | ISO7721FDWV |
| U2_c, U3_c, U7_c, U8_c | 4 | 3 Pin 100mA Fixed 5V Positive Voltage Regulator, PK0003A (SOT-3) | Texas Instruments | UA78L05CPK | Texas Instruments | |
| U6_c | 1 | Dual 4-Input Positive-AND Gate, DGV0014A (TVSOP-14) | Texas Instruments | SN74LV21ADGVR | Texas Instruments | |
| U10_c, U12_c | 2 | Dual Schmitt-Trigger Inverter, DBV0006A, LARGE T&R | Texas Instruments | SN74LVC2G14DBVR | Texas Instruments | |
| U11_c | 1 | 4.2-V to 17-V Input, 2-A Synchronous Buck Converter, DRL0008A (SOT-5X3-8) | Texas Instruments | TPS562211DRLR | Texas Instruments | |

Notes:
Substitutions made according to Alternate PartNumber must meet datasheet parameters, not just the Description specified.