

| Item | Quantity | Reference   | Part                  | Footprint                | Part Description   | Power | Tolerance | Voltage  | Manufacturer                      |
|------|----------|---|-----------------------|--------------------------|--|-------|-----------|----------|-----------------------------------|
| 1    | 11       | C1,C3,C4,C6,C7,C8,C19,C44,C45,C46,C47   | 0.1uF                 | SMD0603-A-1              | CAP, SMD, Ceramic, 0603                                    |       |           | 10% 50V  |                                   |
| 2    | 1        | C2  | 10uF TANT.            | SM/CT_3528_12            |  |       |           | 50V      | Any                               |
| 3    | 2        | C5,C9   | 33U-7343              | SMD07343                 | C/C/ SMD, Tan, 7343  |       |           | 10% 25V  |                                   |
| 4    | 2        | C11,C15   | 33pF                  | SMD0805-A-1              | CAP, SMD, Ceramic, 0805                                    |       |           | 10% 50V  |                                   |
| 5    | 1        | C16   | 33uF                  | SMD3528-B-1              |  |       |           |          |                                   |
| 6    | 1        | C17   | 68uF                  | SMD3528-B-1              |  |       |           |          |                                   |
| 7    | 1        | C18   | 10u                   | SMD07343                 |  |       |           |          |                                   |
| 9    | 3        | C21,C22,C23   | 2.2uF                 | SMD1812-A-1              | CAP, SMD, Ceramic, 1812, X7R                               |       |           | 10% 100V | TDK/C4532X7R2A225                 |
| 10   | 1        | C24   | 390uF                 | WA series, Size Code G80 | Capacitor electrolytic                                     |       |           |          | Panasonic/EEF-WA0J391P            |
| 11   | 1        | C25   | 10u, 6.3V             | SMD1206-A-1              | CAP, SMD, Ceramic, 1206, X7R                               |       |           | 10% 6.3V | TDK/C3216X5R0J106K                |
| 12   | 3        | C26,C27,C28   | 10u, 6.3V             | SMD1206-A-1              | CAP, SMD, Ceramic, 1206, X7R                               |       |           | 10% 6.3V | TDK/C3216X5R0J106K                |
| 13   | 1        | C29   | 0.1uF                 | SMD805-A-1               | CAP, SMD, Ceramic, 805, X7R                                |       |           | 10%      | Vitramon/VJ0805                   |
| 14   | 1        | C30   | 0.1uF 100V            | SMD805-A-1               | CAP, SMD, Ceramic, 805, X7R                                |       |           | 10% 100V | Vitramon/VJ0805                   |
| 15   | 2        | C34,C31   | 1uF                   | SMD805-A-1               | CAP, SMD, Ceramic, 805, X7R                                |       |           | 10%      | TDK/C2012X5R1A105K                |
| 16   | 2        | C32,C36   | 1nF                   | SMD805-A-1               | CAP, SMD, Ceramic, 805, X7R                                |       |           | 10%      | Vitramon/VJ0805                   |
| 17   | 1        | C33   | 4.7nF                 | SMD805-A-1               | CAP, SMD, Ceramic, 805, X7R                                |       |           | 10%      | Vitramon/VJ0805                   |
| 18   | 1        | C35   | 47nF                  | SMD805-A-1               | CAP, SMD, Ceramic, 805, X7R                                |       |           | 10%      | Vitramon/VJ0805                   |
| 19   | 1        | C37   | 27nF                  | SMD805-A-1               | CAP, SMD, Ceramic, 805, X7R                                |       |           | 10%      | Vitramon/VJ0805                   |
| 20   | 1        | C38   | 1nF                   | SMD1808-A-1              | CAP, SMD, Ceramic, 1808, X7R                               |       |           | 10% 250V | Syfer/1808JA250102KXBSY2          |
| 21   | 1        | C48   | 1500pF                | SMD1808-A-1              | CAP, SMD, Ceramic, 1808, X7R                               |       |           | 10% 2KV  |                                   |
| 22   | 1        | C49   | 0.22uF                | SMD805-A-1               | CAP, SMD, Ceramic, 805, X7R                                |       |           | 10%      | Vitramon/VJ0805                   |
| 23   | 4        | C50,C51,C53,C54   | 1nF 250V              | SMD1808-A-1              | CAP, SMD, Ceramic, 1808, X7R                               |       |           | 10% 250V | Syfer/1808JA250102KXBSY2          |
| 24   | 1        | C55   | Open                  | SMD805-A-1               | CAP, SMD, Ceramic, 805, X7R                                |       |           | 10%      | TDK/C2012X5R1A105K                |
| 25   | 1        | DZ1   | SMAJ90A               | SMA                      | Transient suppressor diode                                 |       |           |          | Diodes/SMAJ90A                    |
| 26   | 1        | DZ2   | SMAJ60A               | SMA                      | Transient suppressor diode                                 |       |           |          | Diodes/SMAJ60A                    |
| 27   | 1        | D1  | LED_ACT/COL           | LED-DUAL-SMT             | LTST-C195GYKT  |       |           |          |                                   |
| 28   | 1        | D2  | LED_SPEED             | LED-DUAL-SMT             | LTST-C195GYKT  |       |           |          |                                   |
| 29   | 1        | D3  | LED_LINK              | LED-DUAL-SMT             | LTST-C195GYKT  |       |           |          |                                   |
| 30   | 1        | D4  | 12CWQ03               | D-Pak (TO-252AA)         | Schottky Rectifier   |       |           |          | International Rectifier/12CWQ03FN |
| 31   | 1        | D5  | MMSD4148              | SOD-123                  | Small signal diode   |       |           |          | ON Semiconductor                  |
| 32   | 1        | D6  | MMSD4148              | SOD-123                  | Small signal diode   |       |           |          |                                   |
| 33   | 2        | D7,D8   | LTM673                | OSRAM LTM673             | Hyper-Bright LED   |       |           |          | OSRAM/LTM673-R1S2-35              |
| 34   | 2        | D10,D9  | HD01                  | MiniDIP                  | Surface Mount Bridge Rectifier                             |       |           |          | Diodes/HD01                       |
| 35   | 1        | J1  | HDR-2X20              | CN-MII-40P-RA-M          |  |       |           |          |                                   |
| 36   | 8        | J3,J4,J5,J16,J17,J24,J25,J57  | HDR_1X3               | CN-HDR1X3                |  |       |           |          |                                   |
| 37   | 2        | J56,J58   | HDR-1X2               | CN-HDR1X2                |  |       |           |          |                                   |
| 38   | 1        | J9  | HDR2X3                | CN-HDR2X3                |  |       |           |          |                                   |
| 39   | 1        | J13   | CON-MII-MALE          | CN-MII-40P-RA-M          |  |       |           |          |                                   |
| 40   | 1        | J15   | CON2x5_TH             | cn-hdr2x5                |  |       |           |          |                                   |
| 41   | 5        | J18,J19,J20,J21,J22   | HDR-1X1               | CN-HDR1X1                |  |       |           |          |                                   |
| 42   | 3        | J30,J31,J32   | HDR-1X3               | CN-HDR1X3                |  |       |           |          |                                   |
| 43   | 1        | J50   | CON-RJ45              | CN-PHONE8P8C-RA-SHLD     | RJ-45 Connector  |       |           |          |                                   |
| 44   | 1        | J55   | 2 pos. Terminal Block | Phoenix Contact Fig. 7   | 5mm PCB Connector Terminal Block, Contact Type MKDSN 1.5/2 |       |           |          | Phoenix Contact/1729018           |
| 45   | 1        | L1  | 0.2uH                 | P2004                    | Bead Inductor  |       |           |          | Pulse/P2004                       |
| 46   | 1        | R121  |                       | 0 SMD1206-A-1            | RES, SMD, 1206   |       |           |          |                                   |
| 47   | 1        | L3  | PE-53913              | Pulse PE-53913           | SMT Common Mode Inductor                                   |       |           |          | Pulse/PE-5913                     |
| 49   | 2        | M1,M2   | NTMS10P02R2           | SO-8                     | PMOS, low Vt   |       |           |          | ON Semi/NTMS10P02R2               |
| 50   | 1        | M3  | NTA4001N              | SC-75                    | NMOS, low Vt   |       |           |          | ON Semiconductor/NTA4001N         |
| 51   | 1        | Q1  | IRF7451               | SO-8                     | N-channel power MOSFET                                     |       |           |          | International Rectifier/IRF7451   |
| 52   | 1        | REF1  | LMV431                | SOT23-5                  |  |       |           |          |                                   |
| 53   | 25       | R1,R2,R3,R5,R6,R7,R28,R29,R30,R31,R33,R34,R37,R38,R39,R46,R47,R48,R55,R56,R57,R107,R111,R119,R120 | 2.2K                  | SMD0603-A-1              | RES, SMD, 0603   | 1/16W |           | 5%       |                                   |
| 54   | 1        | R8  | 1.5K                  | SMD805-A-1               | RES, SMD, 0805   | 1/10W |           | 1%       |                                   |
| 55   | 1        | R11   | 4.87K                 | SMD0603-A-1              | RES, SMD, 0603   | 1/16W |           | 1%       |                                   |
| 56   | 1        | R12   | 0.0-0805              | SMD0805-A-1              | RES, SMD, 0805   | 1/10W |           | 1%       |                                   |

|    |    |   |                       |                   |  |       |    |   |
|----|----|---|-----------------------|-------------------|--|-------|----|---|
| 57 | 15 | R13,R14,R15,R16,R17,R18,<br>R19,R20,R21,R22,R23,R24,<br>R25,R26,R27 | 33                    | SMD0603-A-1       | RES, SMD, 0603                               | 1/16W | 5% |   |
| 58 | 3  | R49,R50,R51   | 110                   | SMD0603-A-1       | RES, SMD, 0603                               | 1/16W | 1% |   |
| 59 | 5  | R52,R53,R54,R71,R72   | 165                   | SMD0603-A-1       | RES, SMD, 0603                               | 1/16W | 1% |   |
| 60 | 2  | R58,R63   | 0                     | SMD0603-A-1       | RES, SMD, 0603                               | 1/16W | 5% |   |
| 61 | 1  | R60   | Open                  | SMD0603-A-1       | RES, SMD, 0603                               | 1/16W | 5% |   |
| 63 | 1  | R68   | 20                    | SMD0805-A-1       | RES, SMD, 805, 1% Thick Film                 | 1/16W | 1% | DALE CRCW0805   |
| 64 | 1  | R69   | 50K                   | SMD0603-A-1       | RES, SMD, 0603                               | 1/16W | 1% |   |
| 65 | 1  | R70   | 10                    | SMD0805-A-1       | RES, SMD, 805, 1% Thick Film                 | 1/16W | 1% | DALE CRCW0805   |
| 66 | 1  | R73   | 33.2K                 | SMD0805-A-1       | RES, SMD, 805, 1% Thick Film                 |       | 1% | DALE CRCW0805   |
| 67 | 1  | R74   | 24.9K                 | SMD0805-A-1       | RES, SMD, 805, 1% Thick Film                 |       | 1% | DALE CRCW0805   |
| 68 | 1  | R75   | 590                   | SMD0805-A-1       | RES, SMD, 805, 1% Thick Film                 |       | 1% | DALE CRCW0805   |
| 69 | 1  | R76   | 24.3K                 | SMD0805-A-1       | RES, SMD, 805, 1% Thick Film                 |       | 1% | DALE CRCW0805   |
| 70 | 1  | R77   | 10.0K                 | SMD0805-A-1       | RES, SMD, 805, 1% Thick Film                 |       | 1% | DALE CRCW0805   |
| 71 | 1  | R78   | 590K                  | SMD0805-A-1       | RES, SMD, 805, 1% Thick Film                 | 1/16W | 1% | DALE CRCW0805   |
| 72 | 1  | R79   | 1.00K                 | SMD0805-A-1       | RES, SMD, 805, 1% Thick Film                 |       | 1% | DALE CRCW0805   |
| 73 | 1  | R81   | 100                   | SMD0805-A-1       | RES, SMD, 805, 1% Thick Film                 | 1/16W | 1% | DALE CRCW0805   |
| 74 | 1  | R82   | OPEN                  | SMD0805-A-1       | RES, SMD, 805, 1% Thick Film                 | 1/16W | 1% | DALE CRCW0805   |
| 75 | 1  | R83   | 107K                  | SMD0805-A-1       | RES, SMD, 805, 1% Thick Film                 | 1/16W | 1% | DALE CRCW0805   |
| 76 | 1  | R84   | 12.1K                 | SMD0805-A-1       | RES, SMD, 805, 1% Thick Film                 |       | 1% | DALE CRCW0805   |
| 77 | 1  | R85   | 14.7K                 | SMD0805-A-1       | RES, SMD, 805, 1% Thick Film                 |       | 1% | DALE CRCW0805   |
| 78 | 1  | R86   | 0.33                  | SMD2010-A-1       | RES, SMD, 2010, 1% Thick Film                |       | 1% | DALE CRCW2010   |
| 79 | 4  | R91,R92,R93,R94   | Open                  | SMD1206-A-1       | RES, SMD, 1206                               | 1/4W  | 5% |   |
| 80 | 4  | R97,R98,R99,R100  | 49.9                  | SMD0603-A-1       | RES, SMD, 0603                               | 1/16W | 1% |   |
| 81 | 4  | R101,R102,R103,R104   | 75                    | SMD0603-A-1       | RES, SMD, 0603                               | 1/16W | 1% |   |
| 82 | 1  | R105  | 10K                   | SMD0603-A-1       |  |       |    |   |
| 83 | 3  | R108,R109,R118  | Open                  | SMD0805-A-1       | RES, SMD, 805, 1% Thick Film                 |       | 1% | DALE CRCW0805   |
| 84 | 1  | R110  | 0                     | SMD0805-A-1       | RES, SMD, 0805                               | 1/16W | 5% |   |
| 85 | 1  | R112  | 0                     | SMD0805-A-1       | RES, SMD, 805, 1% Thick Film                 |       | 1% | DALE CRCW0805   |
| 86 | 2  | R113,R116   | 0                     | SMD0603-A-1       | RES, SMD, 0603                               | 1/16W | 1% |   |
| 87 | 1  | R117  | 1.0K                  | SMD0805-A-1       | RES, SMD, 805, 1% Thick Film                 | 1/16W | 1% | DALE CRCW0805   |
| 88 | 1  | T1  | PA1269                | Pulse EP13        | POE Power Transformer                        |       |    | Pulse/PA1269  |
| 89 | 1  | T2  | H2019 (POE)           | Pulse H1102/H2019 | Magnetic                                     |       |    | Pulse/H2019   |
| 90 | 1  | U1  | DP83848               | VBH48A (Rev A)    | Single 10/100 Ethernet Transceiver           |       |    |   |
| 91 | 1  | U4  | LP3964 - 3.3V - 800mA | SOT223-5          | Voltage Regulator 5V-3.3V                    |       |    | NSC/LP3964EMP-3.3   |
| 92 | 1  | U5  | PS2501-1-H            | PS2501-1          | Thru hole mount opto-coupler                 |       |    | NEC/PS2501-1-H  |
| 93 | 1  | U6  | LM5070                | MTC16             | Integrated POE PD Interface & PWM Controller |       |    | NSC/LM5070  |
| 95 | 1  | Y1  | XTAL - 25M            | HC49-US           | Crystal, 25.000M                             |       |    | Preferred Xtal manufacturer(s)/Part number/Specifications<br>(Fox/Raltron/Calber/Abracon composite specifications):<br>Fundamental mode frequency = 25MHz<br>RS = Series Resistance = 40 Ohms Max<br>CO = Shunt Capacitance =7pF Max<br>CL = Load capacitance = 20pF<br>DL = Recommended drive Level = 100uW<br>GL = Max Drive Level = 500uW<br>FS = Frequency Stability = +/- 50 ppm at DL |

Do Not Populate These Items:

| Item | Quantity | Reference      | Part       | Footprint         | Part Description                 | Power | Tolerance | Voltage | Manufacturer    |
|------|----------|----------------|------------|-------------------|----------------------------------|-------|-----------|---------|-----------------|
| 37a  | 2        | J6, J59        | HDR-1X2    | CN-HDR1X2         |                                  |       |           |         |                 |
| 48   | 3        | MTG1,MTG4,MTG8 | MTG250R125 | MTG250R125        | Mounting Guide Hole              |       |           |         |                 |
| 59a  | 1        | R59            | 0          | SMD0603-A-1       | RES, SMD, 0603                   | 1/16W | 5%        |         |                 |
| 88a  | 1        | T2             | H1102      | Pulse H1102/H2019 | Magnetic                         |       |           |         | Pulse/H1102     |
| 94   | 1        | X1             | OSC-25 MHz | OSC14-4P          | 25 MHz Oscillator (50 ppm), 3.3V |       |           |         |                 |
| 8    | 1        | C20            | 470pF      | SMD805-A-1        | CAP, SMD, Ceramic, 805, X7R      |       |           | 10%     | Vitramon/VJ0805 |
| 62   | 1        | R67            | 10, 1/4W   | SMD2010-A-1       | RES, SMD,2010, 1% Thick Film     |       |           | 1%      | DALE CRCW2010   |