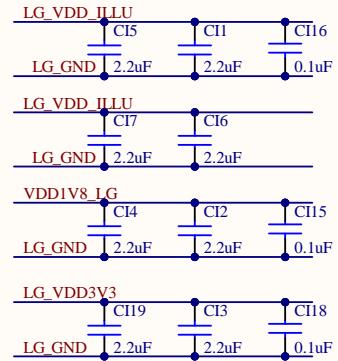
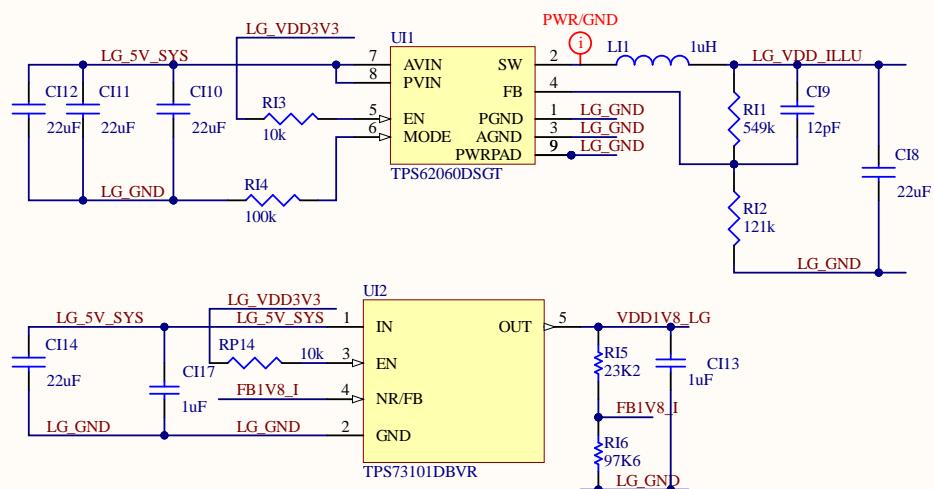
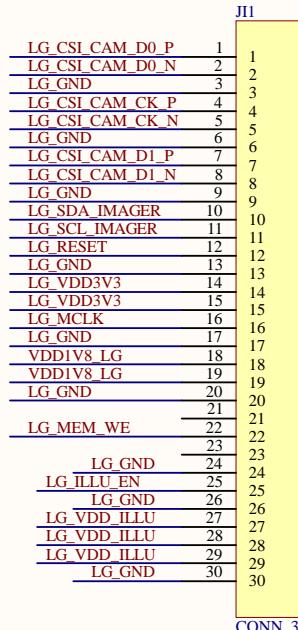
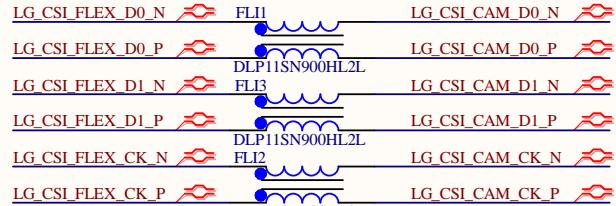
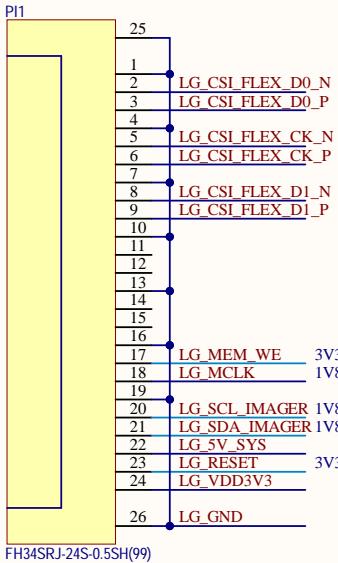


LG DTFA-I006A

A



| Title RDDRONE-MEDIASMM PX4 Robotic Drone Media Board; LG addon board | | |
|---|----------------------|-------------------------|
| Size | Document Number 2 | Revision 1A |
| Date 6/24/2020 | | Sheet 2 of 3 |
| File RDDRONE-MEDIA8MM-LG-1A.SchDoc | | Drawn By Andrew Bushuey |

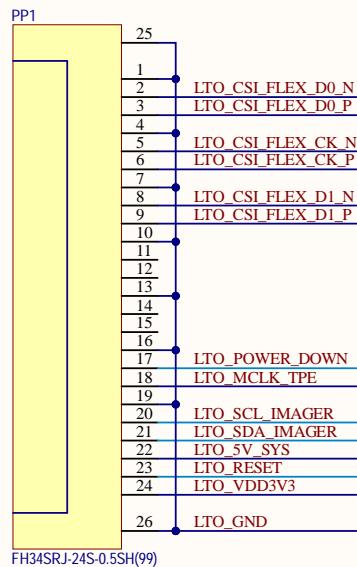
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2

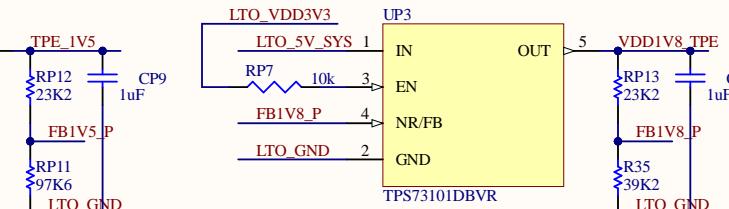
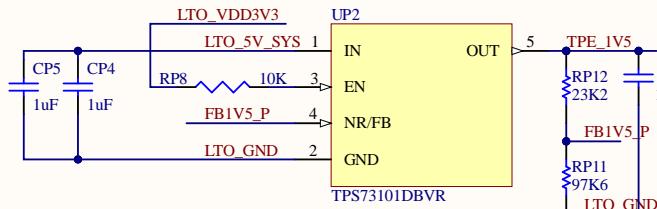
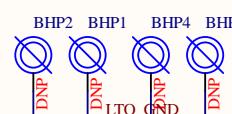
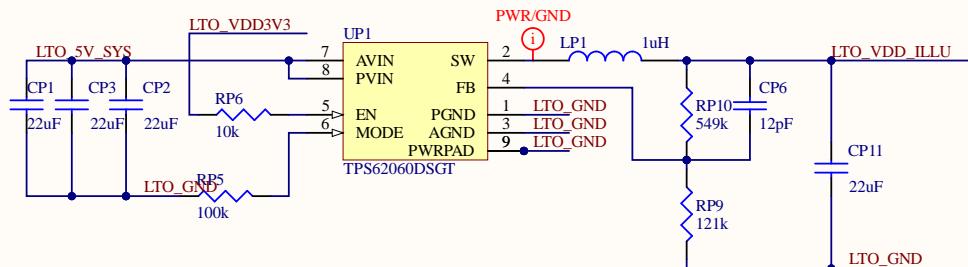
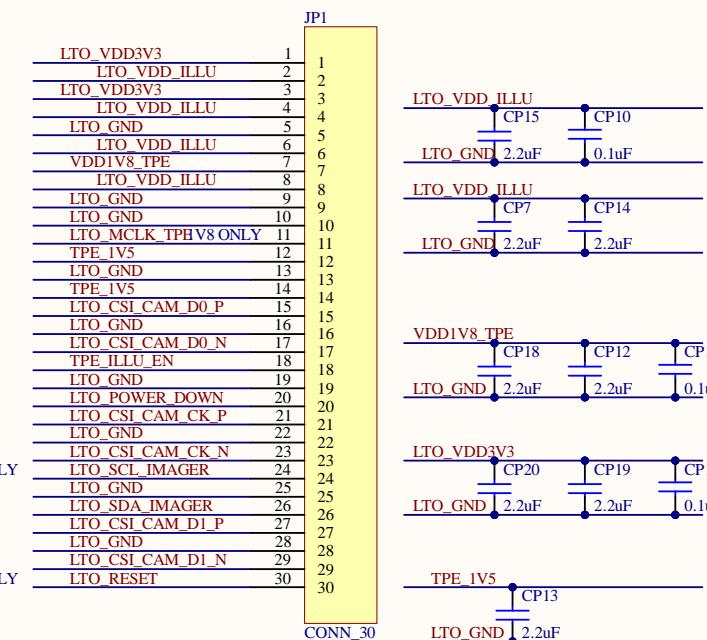
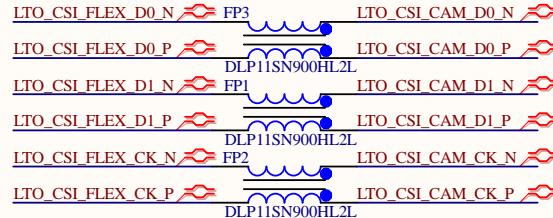
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4

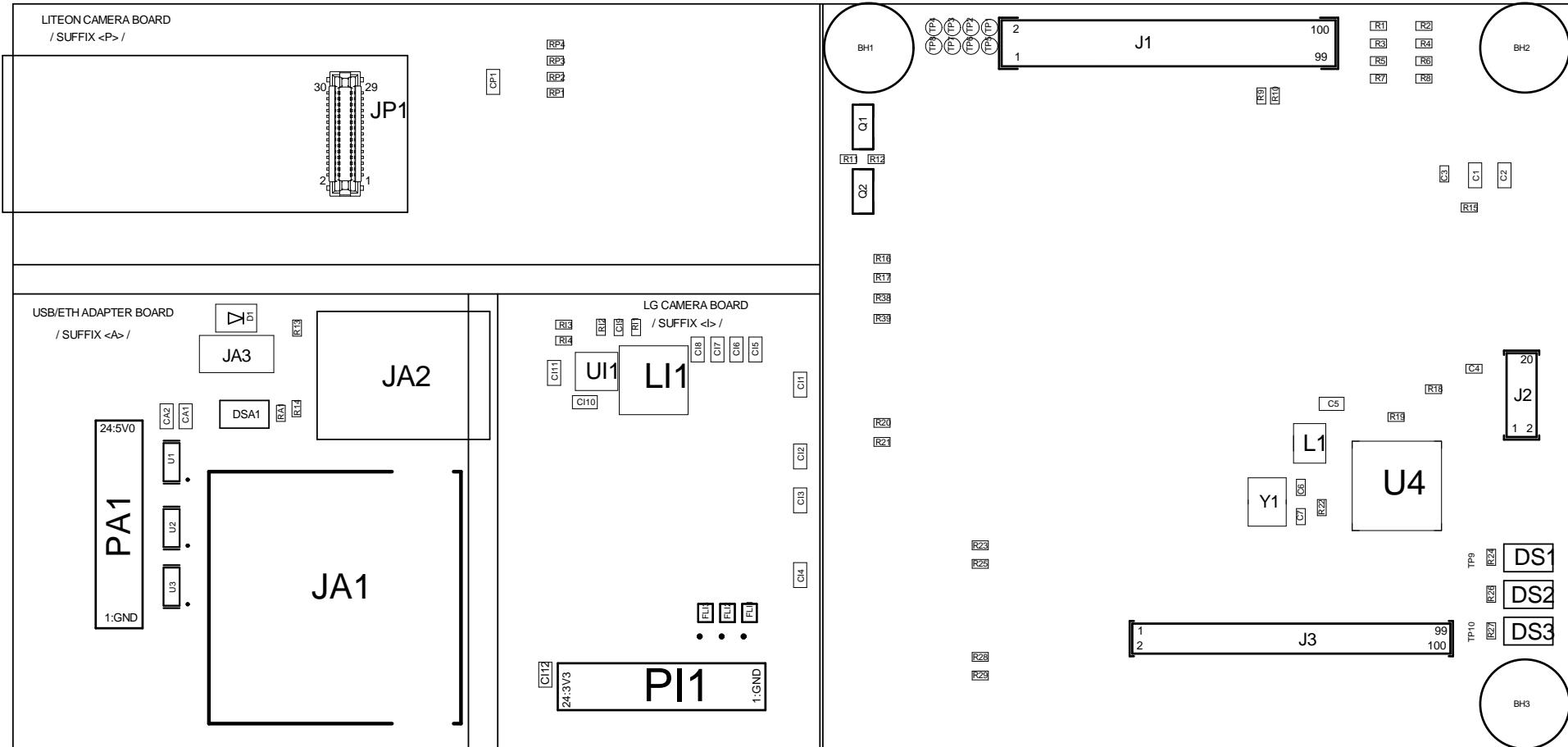
LITEON 6BFX0538



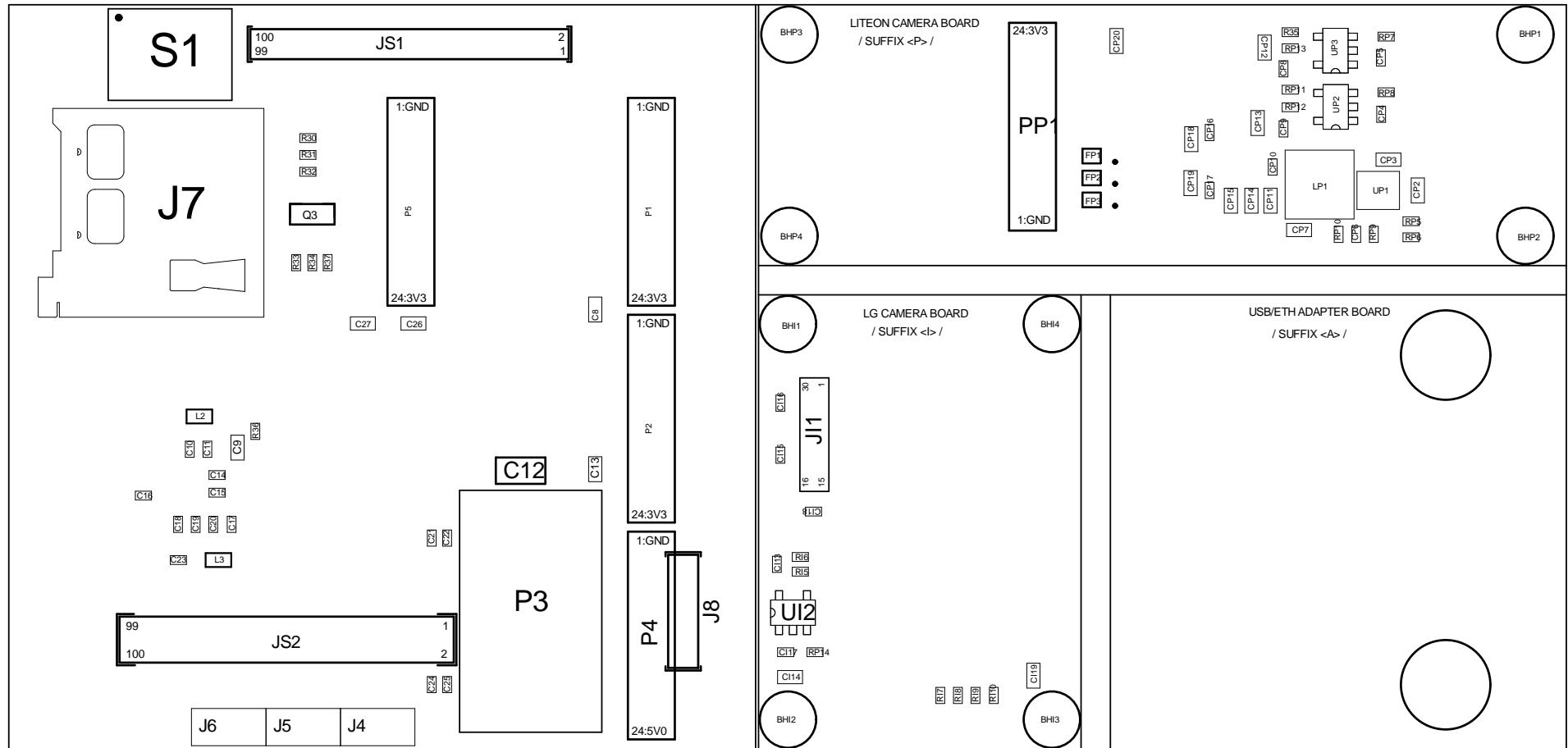
3V3 CAM1_PWDN DO NOT DRIVE PIN HIGH!!! OPEN DRAIN ONLY
1V8
1V8
1V8
3V3 CAM1_RESET#P DO NOT DRIVE PIN HIGH!!! OPEN DRAIN ONLY

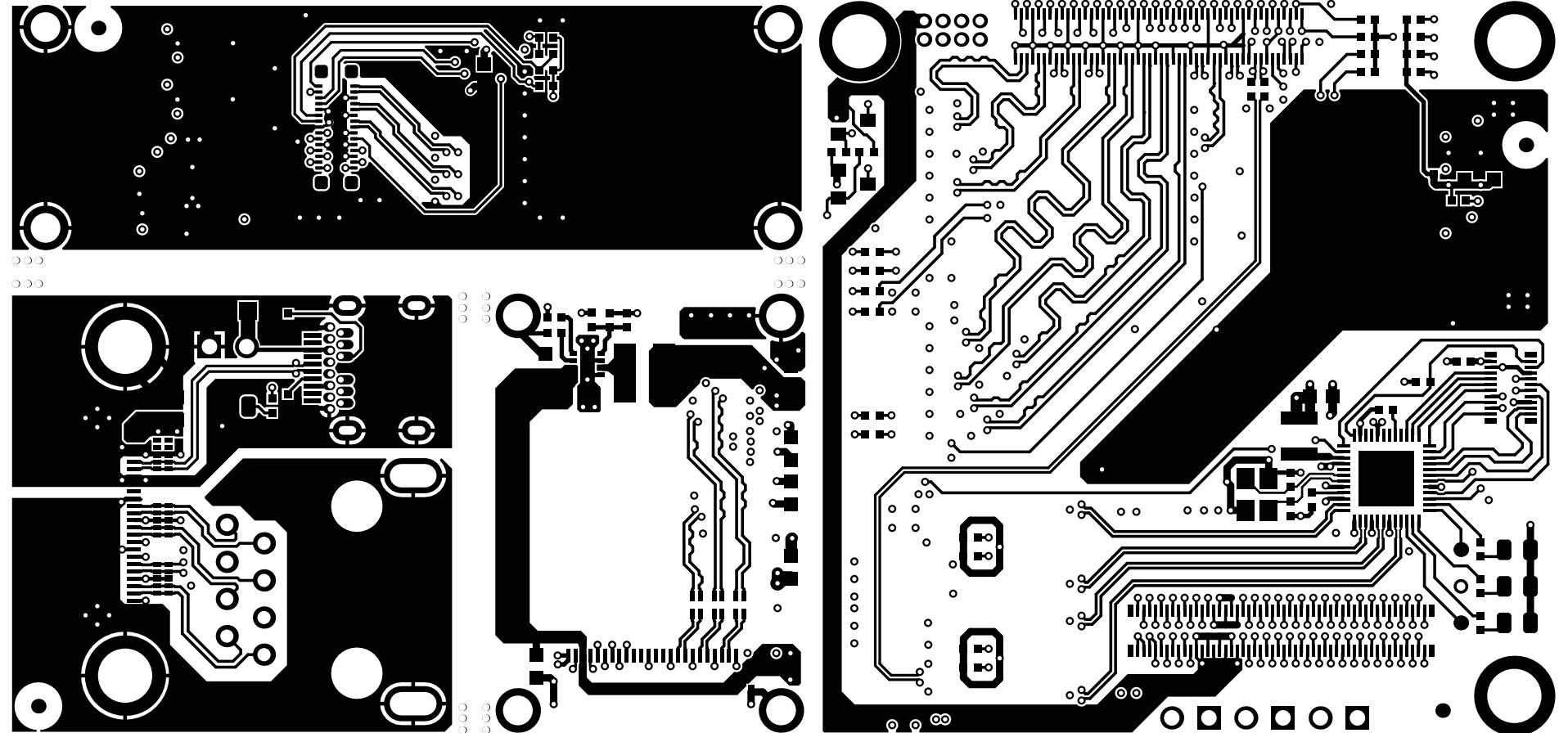


| Title RDDRONE-MEDIA8MM PX4 Robotic Drone Media Board; LiteOn addon board | | |
|---|----------------------|----------------|
| Size | Document Number 3 | Revision 1A |
| Date 6/24/2020 | Sheet 3 | of 3 |
| File RDDRONE-MEDIA8MM-TPF-1A.SchDoc | Drawn By | Andrew Bushuev |

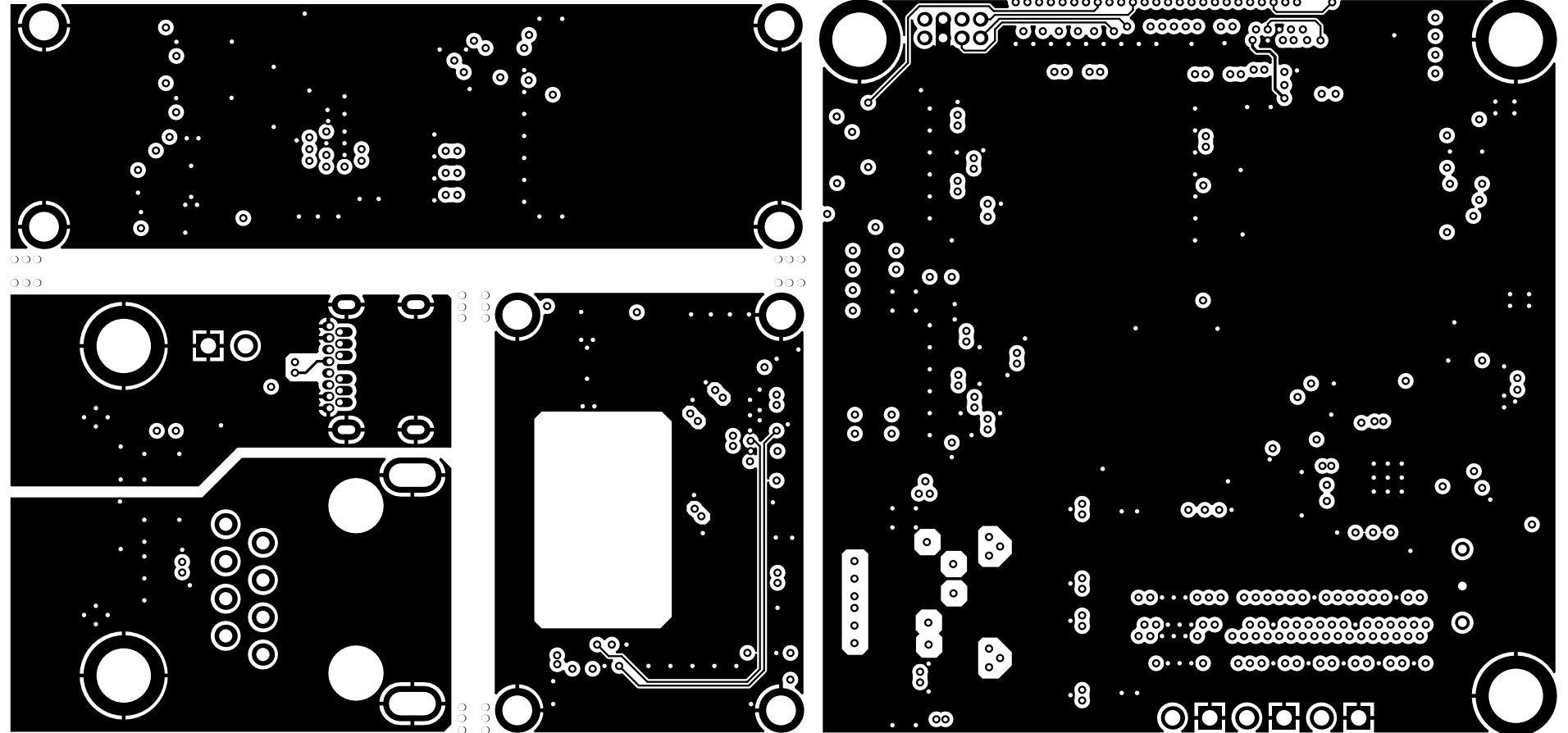


ASSEMBLY TOP

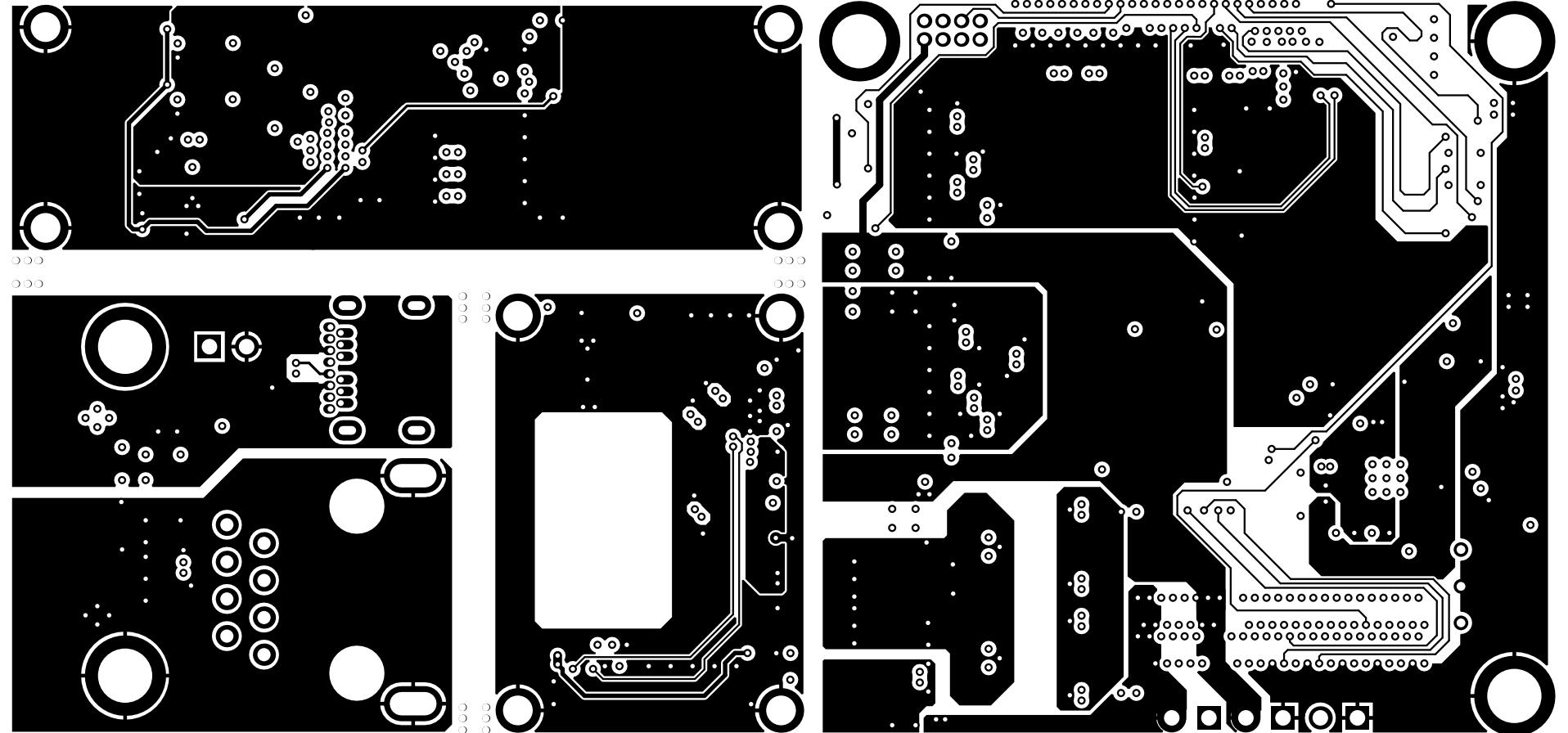




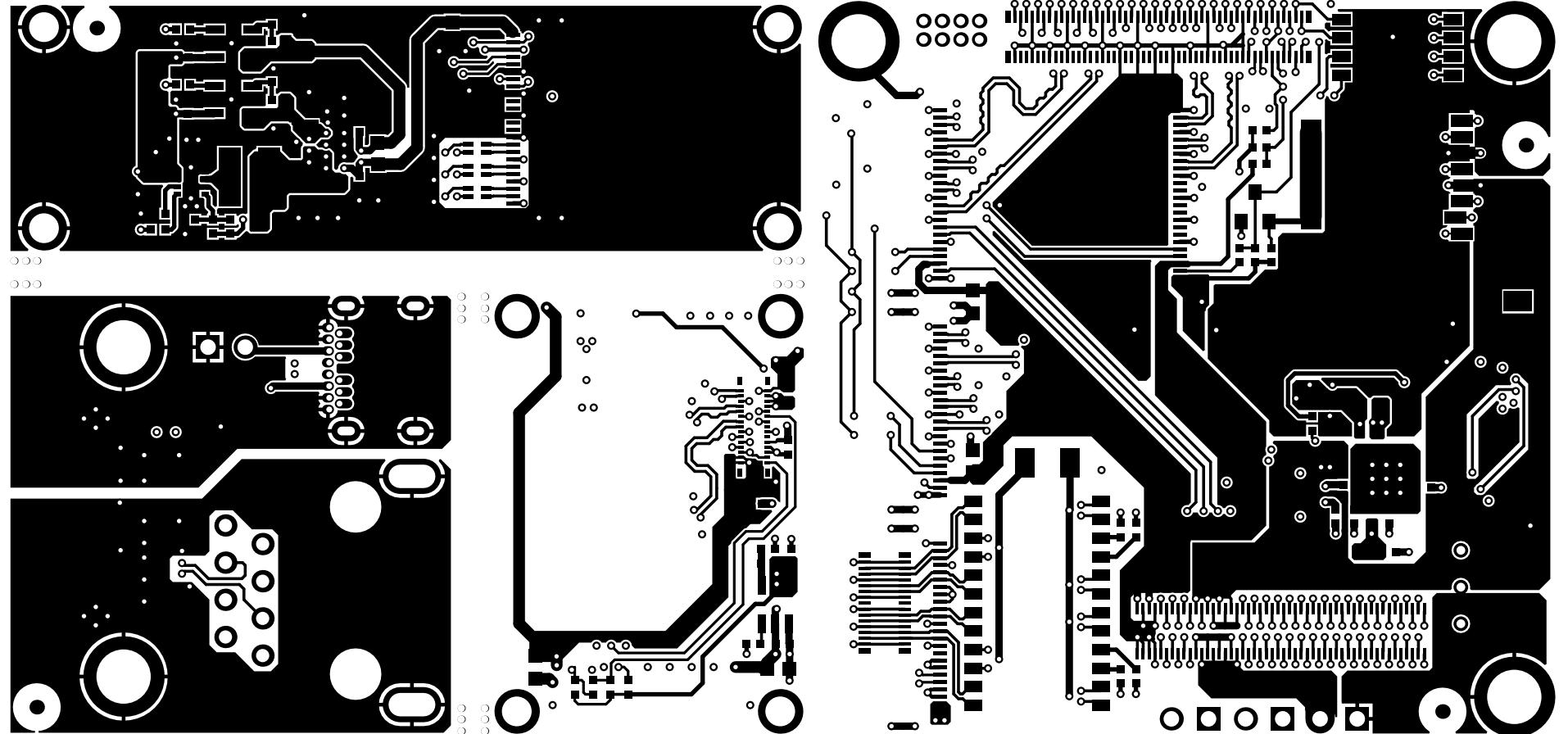
LAYER1 - TOP



LAYER 2 - GROUND PLANE



LAYER 3 - POWER PLANE

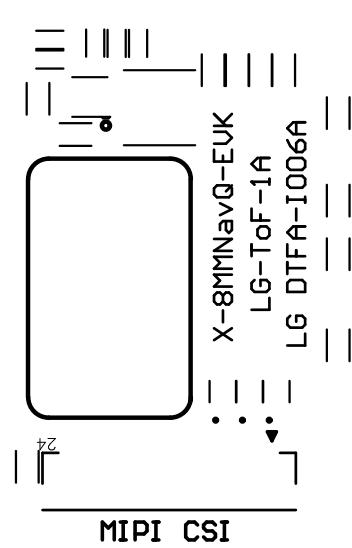
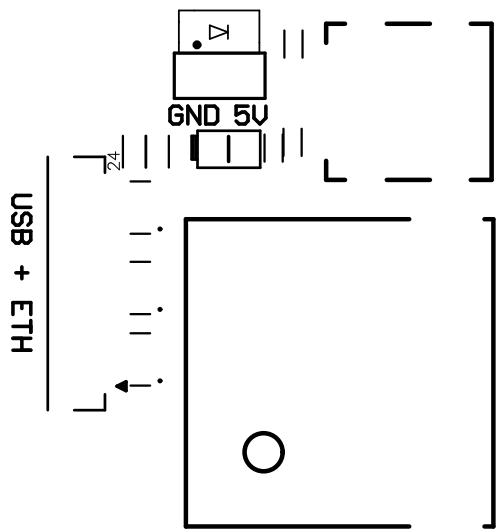
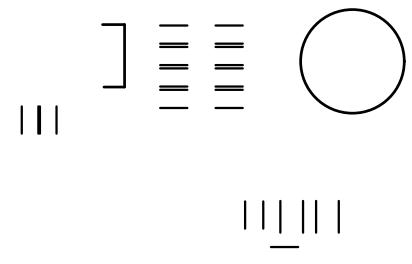
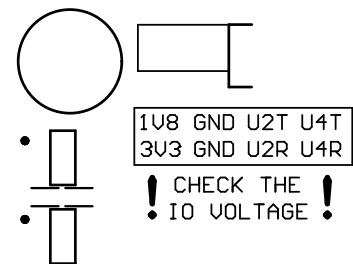


LAYER 4 - BOTTOM LAYER



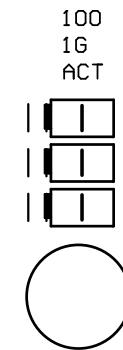
LITEON

X-8MMNavQ-EVK
LiteON-ToF-1A



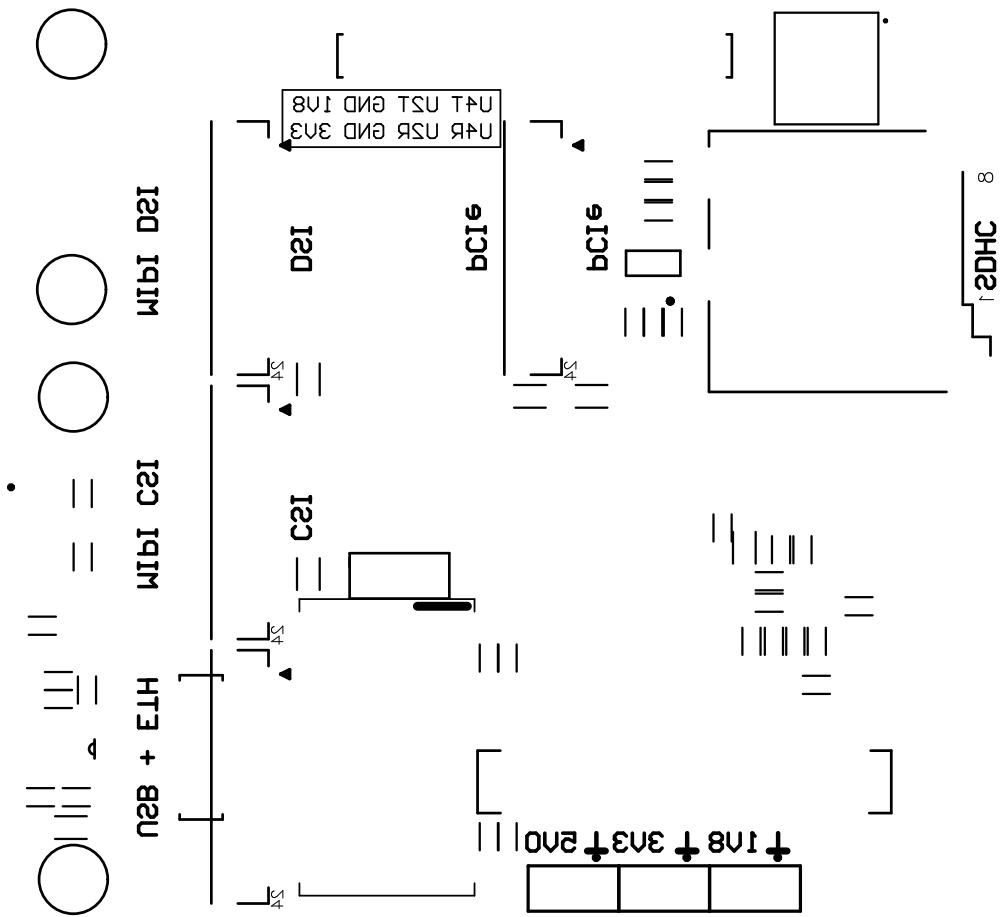
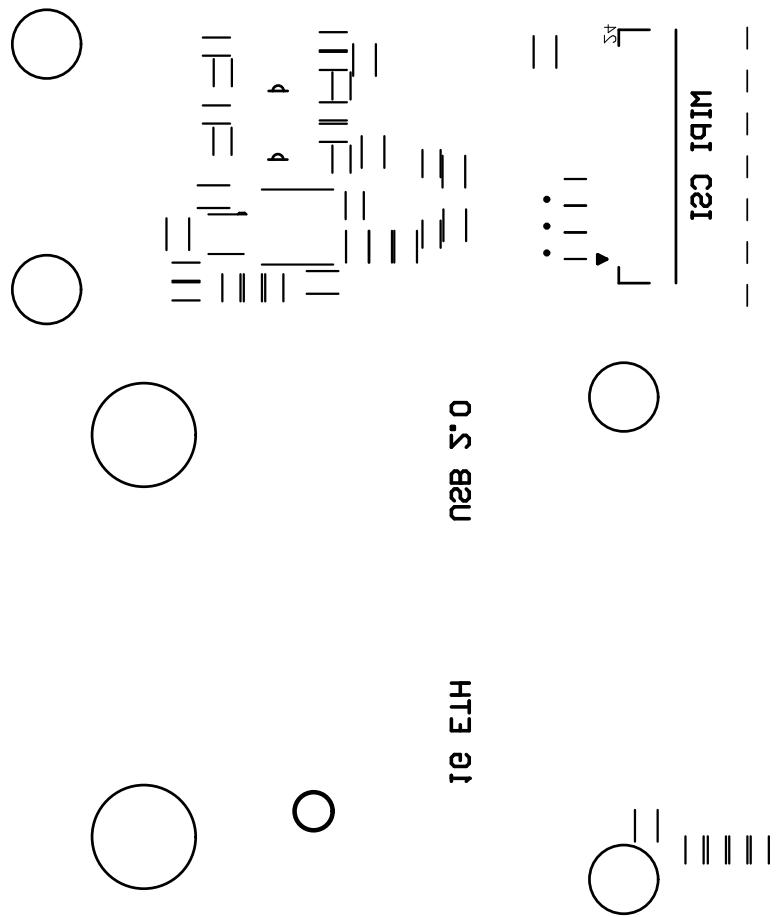
X-8MMNavQ-EVK
MEDIABOARD-1A
WWW.EMCRAFT.COM

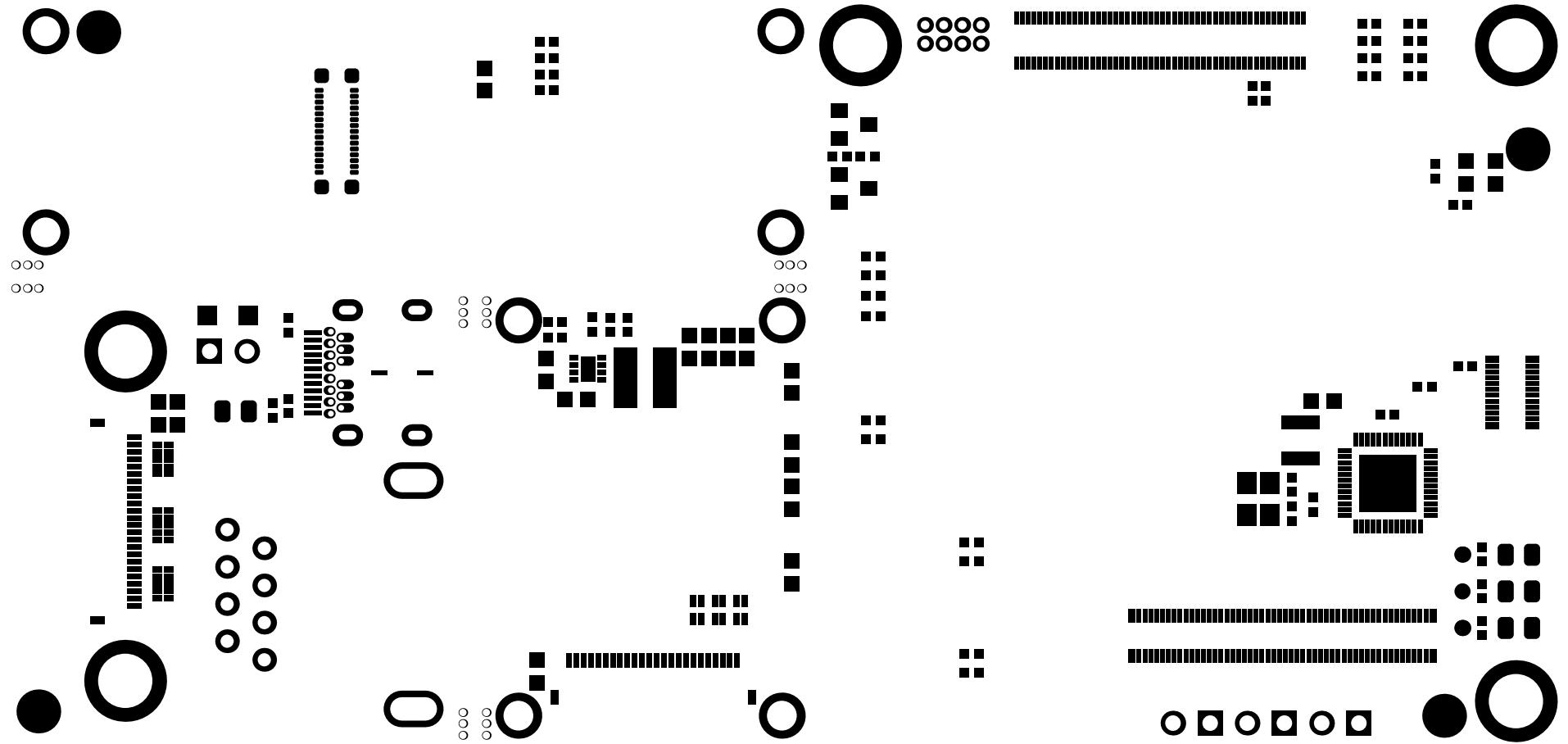
5V0 ± 3V3 ± 1V8 ±



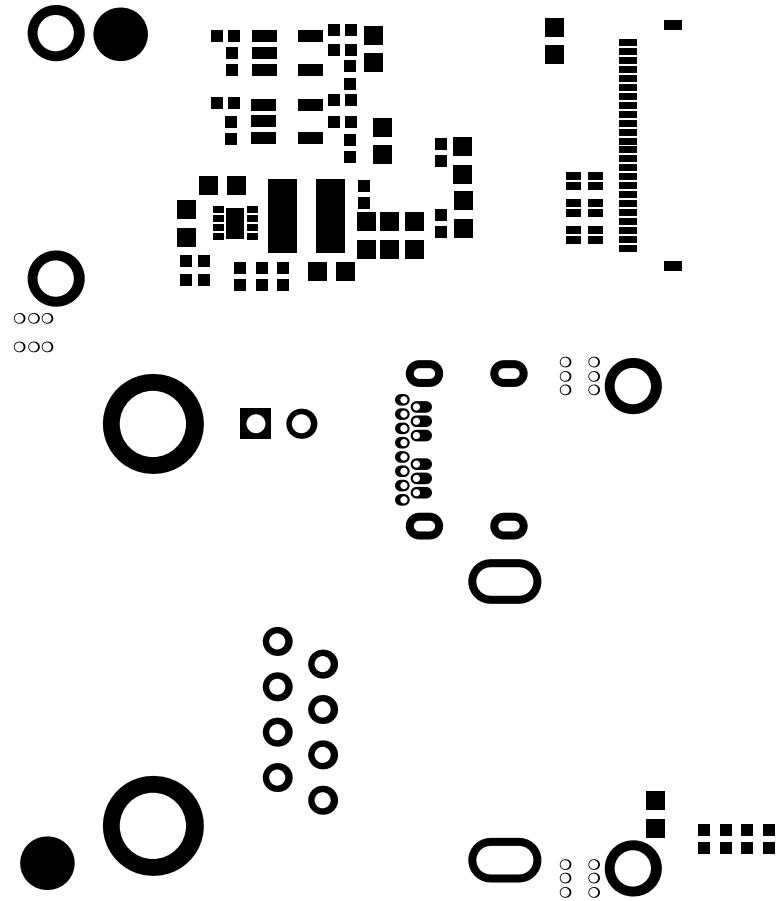
SILKSCREEN TOP

SILKSCREEN BOTTOM

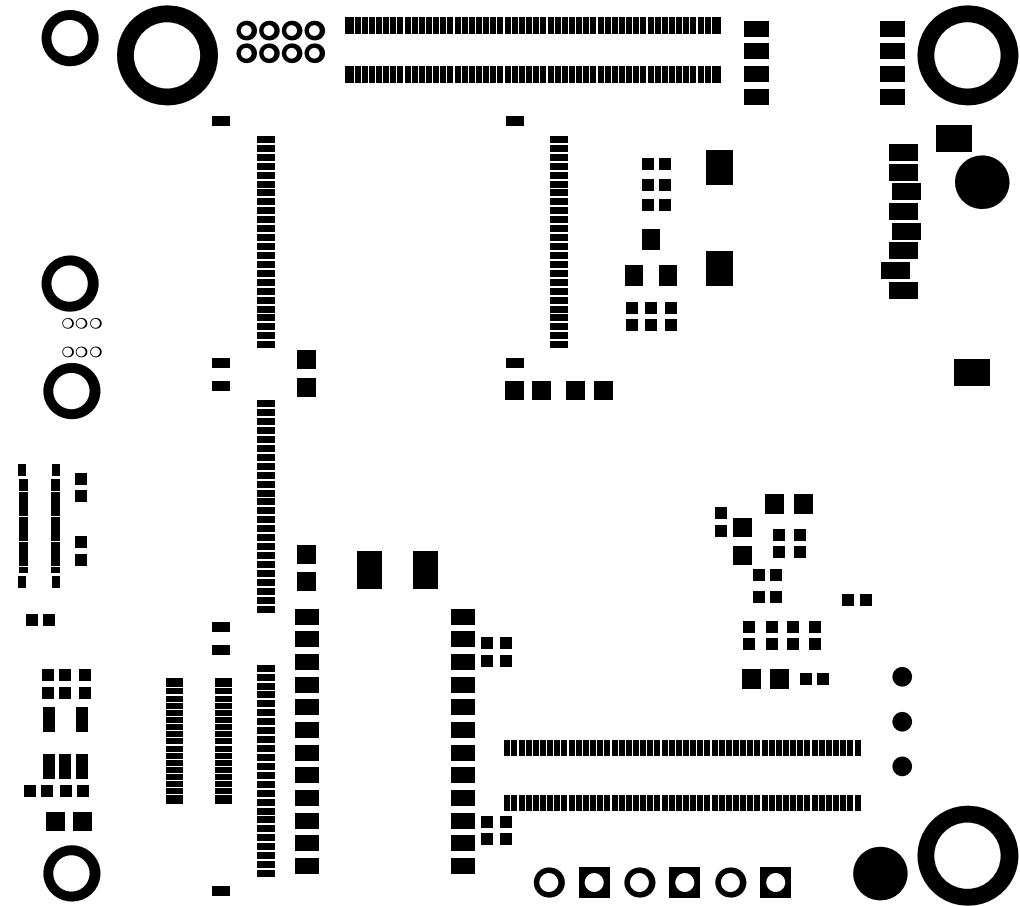




MASK TOP



MASK BOTTOM



| Description | Quantity | ManType | Manufacturer | Designator | Notes |
|---|----------|----------------------------|---------------------------------|--|--------------------------|
| ROUND SPACER STEEL 1.5MM | 3 | 9774015951R | Würth Elektronik | BH1, BH2, BH3 | |
| RND STANDOFF M2.5X0.45 STEEL 3MM | 2 | 9774030151R | Würth Elektronik | BHA1, BHA2 | DNP |
| TH-0.6-3.0-M1.4 / https://www.machjapan.com/products/ 458 | 8 | TH-0.6-3.0-M1.4 | Mac8 | BH1, BH2, BH3, BH4, BHP1, BHP2, BHP3, BHP4 | DNP |
| CAP CER 2.2uF 10V X5R 0402 | 14 | 885012105013 | Würth Elektronik | C1, C2, C8, C13, C26, C27, CP7, CP12, CP13, CP14, CP15, CP18, CP19, CP20 | |
| CAP CER 0.1uF 25V X5R 0402 | 1 | 885012105018 | Würth Elektronik | C3 | Option: C1005X5R0J10K |
| CAP CER 0.22uF 16V X5R 0402 | 8 | 885012105017 | Würth Elektronik | C4, C10, C11, C14, C15, C18, C19, C20 | |
| CAP CER 10uF 6.3V X5R 0603 | 2 | 885012106006 | Würth Elektronik | C5, C9 | |
| CAP CER 22PF 50V % NPO 0402 | 2 | CC0402RNP09BN220 | YAGEO | C6, C7 | |
| 1000pF 1KV 10% X7R | 1 | GRM318R73A102KW01L | Murata Electronics | C12 | |
| CAP CER 1uF 10V X5R 0402 | 9 | 885012105012 | Würth Elektronik | C16, C17, C23, C13, C17, CP4, CP5, CP8, CP9 | |
| CAP CER 0.1uF 25V X5R 0402 | 10 | 885012105018 | Würth Elektronik | C21, C22, C24, C25, C15, C16, C18, CP10, CP16, CP17 | |
| 22uF +-20% 6.3V Ceramic Capacitor X5R 0603 | 2 | CL10A226MQ8NRNC | Samsung | CA1, CA2 | DNP |
| CAP CER 2.2uF 6.3V 10% X5R 0603 | 8 | 885012105013 | Würth Elektronik | C11, C12, C13, C14, C15, C16, C17, C19 | |
| 22uF +-20% 6.3V Ceramic Capacitor X5R 0603 | 9 | CL10A226MQ8NRNC | Samsung | C18, C10, C11, C12, C14, CP1, CP2, CP3, CP11 | |
| CAP CER 12PF 50V % NPO 0402 | 2 | CC0402RNP09BN120 | Yageo | C19, CP6 | |
| TVS DIODE 5V 9.2V CFP3 | 1 | PTVS5V0S1UR,115 | Nexperia USA Inc. | D1 | DNP |
| LED RED CLEAR 0805 SMD | 1 | 150080RS75000 | Würth Elektronik | DS1 | |
| LED BLUE CLEAR 0805 SMD | 1 | 150080BS75000 | Würth Elektronik | DS2 | |
| LED GREEN CLEAR 0805 SMD | 1 | 150080GS75000 | Würth Elektronik | DS3 | |
| LED GREEN CLEAR 0805 SMD | 1 | 150080GS75000 | Würth Elektronik | DSA1 | DNP |
| | 8 | | | FID1, FID2, FID3, FID4, FID5, FID6, FID7, FID8 | DNP |
| MURATA# DLP11SN900HL2L, D LP Series 90 Ohm Impedance 20% 150 mA DCR 1.5 Ohm SMT Common Mode Choke | 6 | DLP11SN900HL2L | Murata | FLU1, FLU2, FLI3, FP1, FP2, FP3 | |
| CONN RCPT 100POS SMD GOLD | 1 | DF40C-100DS-0.4V(51) | Hirose Electric Co Ltd | J1 | |
| CONN PLUG 20POS SMD GOLD | 1 | DF40C-20DP-0.4V(51) | Hirose Electric Co Ltd | J2 | |
| CONN PLUG 100POS SMD GOLD | 2 | DF40C-100DP-0.4V(51) | Hirose Electric Co Ltd | J3, JS1 | |
| CONN HEADER VERT 2PQS 2.54MM | 4 | 61300211121 | Würth Elektronik | J4, J5, J6, JA3 | DNP |
| CONN MICRO SD CARD PUSH-PUSH R/A | 1 | 693071010811 | Würth Elektronik | J7 | |
| CONN PLUG 3PQS SMD GOLD | 1 | DF40C-30DP-0.4V(51) | Hirose Electric Co Ltd | J8 | |
| CONN MOD JACK 8P8C R/A SHIELDED | 1 | 61500814221 | Würth Elektronik | JA1 | DNP |
| CONN RCP USB3.1 TYPEC 24P SMD RA | 1 | 632723300011 | Würth Elektronik | JA2 | DNP |
| CONN SOCKET .4MM 30 POS SMD | 1 | BM23FR0.6-30DS-0.35V(895) | Hirose Electric Co Ltd | J11 | |
| CONN SOCKET .4MM 30 POS SMD | 1 | AXE530127 | Panasonic Electric Works | JP1 | |
| CONN RCPT 100POS SMD GOLD | 1 | DF40HC(3.0)-100DS-0.4V(58) | Hirose Electric Co Ltd | JS2 | |
| 4.7uH Shielded Multilayer Inductor 1.1A 110mOhm 1008 | 1 | CIG22L4R7MNE | SAMSUNG | L1 | |
| FERRITE BEAD 120 OHM 0603 1LN | 2 | 742792625 | Würth Elektronik | L2, L3 | |
| FIXED IND 1UH 2A 25 MOHM SMD | 2 | TYS40181R0N-10 | Laird-Signal Integrity Products | LI1, LP1 | |
| CONN FPC/FFC 24POS .5MM | 5 | FH345RJ-24S-0.5SH(99) | Hirose Electric Co Ltd | P1, P2, P5, PI1, PP1 | |
| WE-LAN 10/100/1000 BASE-T SMT TR | 1 | 1749020111A | Würth Elektronik | P3 | |
| CONN FPC/FFC 24POS .5MM | 2 | FH345RJ-24S-0.5SH(99) | Hirose Electric Co Ltd | P4, PA1 | DNP |
| MOSFET-N CH 60V 360mA TO-236AB | 3 | BSS138P_215 | Nexperia USA Inc. | Q1, Q2, Q3 | |
| RES 100K, 1% 1/10W 0402 | 4 | ERJ-2RKF1003X | Panasonic Electronic Components | R1, R3, R5, R7 | DNP |
| RES 10K OHM 1/16W 5% 0402 | 6 | RMCF0402JT10K0 | Stackpole Electronics Inc | R2, R4, R6, R8, R32, R37 | DNP |
| RES 0.0 OHM 1/16W JUMP 0402 | 2 | RMCF0402ZT0R00 | STACKPOLE | R9, R10 | DNP |
| RES 4.7K 5%, 1/10W 0402 | 2 | ERJ-2GEJ472X | Panasonic | R11, R12 | |
| RES 5.1K OHM 1% 1/16W 0402 | 2 | RMCF0402FT5K10 | Stackpole Electronics Inc | R13, R14 | DNP |
| RES 10K OHM 1/16W 5% 0402 | 15 | RMCF0402JT10K0 | Stackpole Electronics Inc | R15, R33, R34, R36, R13, R17, R18, R10, RP1, RP2, RP4, RP6, RP7, RP8, RP14 | |
| RES 0.0 OHM 1/16W JUMP 0402 | 6 | RMCF0402ZT0R00 | STACKPOLE | R16, R17, R20, R21, R38, R39 | |
| RES SMD 1.62K OHM 1% 1/16W 0402 | 1 | RC0402F-R-071K62L | Yageo | R18 | |
| Res. 2.37K ohm, 1%, 0402 | 2 | ERJ-2RKF2371X | Panasonic | R19, R22 | |
| RES 75 OHM 5% 1/16W 0402 | 4 | RMCF0402JT75R0 | Stackpole Electronics Inc | R23, R25, R28, R29 | |
| RES 4.7K OHM 1/16W 5% 0402 | 3 | RMCF0402JT4K70 | Stackpole Electronics Inc | R24, R26, R27 | |
| RES SMD 19.6K OHM 1% 1/16W 0402 | 2 | RC0402F-R-071K6L | Yageo | R30, R31 | DNP |
| RES SMD 39.2K OHM 1% 1/16W 0402 | 1 | RMCF0402FT39K2 | STACKPOLE | R35 | |
| RES 4.7K OHM 1/16W 5% 0402 | 1 | RMCF0402JT4K70 | Stackpole Electronics Inc | RA1 | DNP |
| RES 549K OHM 1/16W 1% 0402 | 2 | RC1005F5493CS | Samsung | R11, RP10 | |
| RES 121K OHM 1/16W 1% 0402 | 2 | RC1005F1213CS | Samsung | R12, RP9 | |
| RES SMD 100K OHM 5% 1/16W 0402 | 2 | RMCF0402JT100K | Vishay Dale | R14, RP5 | |
| RES SMD 23.2K OHM 1% 1/16W 0402 | 3 | RC0402F-R-0723K2L | YAGEO | R15, RP12, RP13 | |
| RES SMD 97.6K OHM 1% 1/16W 0402 | 2 | RMCF0402FT97K6 | STACKPOLE | R16, RP11 | |
| RES 33 OHM 1/16W 5% 0402 | 2 | RMCF0402JT33R0 | Stackpole Electronics Inc | R19, RP3 | |
| SWITCH SLIDE DIP SPST 25MA 24V | 1 | 416131160804 | Wurth Electronics | S1 | DNP |
| Round Test Point Imm. | 10 | | | TP1, TP2, TP3, TP4, TP5, TP6, TP7, TP8, TP9, TP10 | DNP |
| TVS DIODE 3.3V 5V DFN2510A-10 | 3 | PUSB3AB4Z | Nexperia USA Inc. | U1, U2, U3 | DNP |
| IC TRANSCEIVER ETHERNET 48-BFN | 1 | AR8031-AL1A | Qualcomm | U4 | |
| IC REG BUCK ADJ 1.6A 8VSON | 2 | TP562060DSG | Texas Instruments | U11, UP1 | |
| IC REG LIN POS ADJ 150mA SOT23-5 | 3 | TP573101DBVR | Texas Instruments | U12, UP2, UP3 | |
| CRYSTAL 25.0000MHz 18PF SMD | 1 | 403C35D25M00000 | CTS | Y1 | |