

| REVISION | DESCRIPTION | DATE | APPROVED |
|----------|-------------|------|----------|
| | | | |

Bill Of Materials

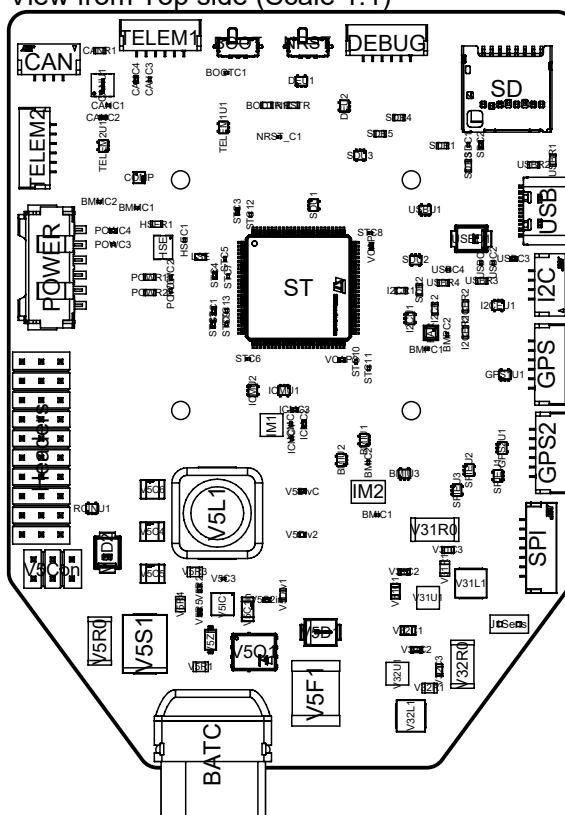
| Line # | Designator | Comment | Quantity |
|--------|--|-----------------------------|----------|
| 1 | BAR | BMP388 | 1 |
| 2 | BATC | XT60PW-F | 1 |
| 3 | BMIC1, BMIC2, BMMC1, BMMC2, BMPC1, BMPC2, BOOTC1, CANC1, CANC3, HSEC1, ICMC1, ICMC4, NRST_C1, POWC1, POWC2, POWC3, SDC1, STC5, STC6, STC7, STC8, STC9, STC10, STC11, STC12, STC13, USBC1, USBC2, USBC4, V5C3 | 100nF 1mOhm | 30 |
| 4 | BMIU1, BMIU2, BMIU3, DEU1, DEU2, GPS1U1, GPS2U1, I2CEU1, I2CU1, ICMU1, ICMU2, RCINU1, SDU1, SDU2, SDU3, SPIEU1, SPIEU2, SPIEU3, TELEM1U1, TELEM2U1, USBU1 | TPD2E2U06DRLR | 21 |
| 5 | BOOT_SW, NRST_SW | SSAJ120100 | 2 |
| 6 | BOOTR1, NRSTR, SDR1, SDR2, SDR3, SDR4, SDR5, USBR4 | 10kOhm | 8 |
| 7 | CAN, I2C_EXT | SM04B-GHS-TB(LF)(SN) | 2 |
| 8 | CANC2, CANC4, ICMC2, USBC3, VCAP1, VCAP2 | 2.2uF | 6 |
| 9 | CANR1 | 120Ohm | 1 |
| 10 | CANU1 | TJA1051TK3/1J | 1 |
| 11 | COMP | BMM150 | 1 |
| 12 | DEBUG, GPS, GPS2, TELEM1, TELEM2 | SM06B-GHS-TB(LF)(SN) | 5 |
| 13 | Headers | HTSW-110-07-L-T | 1 |
| 14 | HSE | SIT1602AI-22-33E-26.000000D | 1 |
| 15 | HSER1, I2CER1, I2CER2, I2CR1, I2CR2, POWR1, POWR2 | 2.2kOhm | 7 |
| 16 | ICMC3 | 10nF | 1 |
| 17 | IM1 | ICM-20602 | 1 |
| 18 | IM2 | BMO88 | 1 |
| 19 | J1Sens | 68000-102HLF | 1 |
| 20 | LSE | SIT1552AI-JE-DCC-32.768D | 1 |
| 21 | POWC4, SDC2, STC1, STC2 | 1uF | 4 |
| 22 | POWER | 502494-0670 | 1 |
| 23 | SD | 104031-0811 | 1 |
| 24 | SPI_EXT | SM07B-GHS-TB(LF)(SN) | 1 |
| 25 | ST | STM32H743VIT6 | 1 |
| 26 | STC3, STC4 | 4.7uF | 2 |
| 27 | USB | TYPE-C-31-M-12 | 1 |
| 28 | USBD1, V5D2 | SMBJ5.0A | 2 |
| 29 | USBR1, USBR2, USBR3 | 5.1kOhm | 3 |
| 30 | V5C1in | 4.7uF 3mOhm | 1 |
| 31 | V5C2in, V5DivC | 100nF 39mOhm?? | 2 |
| 32 | V5C4, V5C5, V5C6 | 47uF 3mOhm | 3 |
| 33 | V5Con | HTSW-103-08-L-D | 1 |
| 34 | V5D1 | SMBJ36A | 1 |
| 35 | V5Div1 | 360kOhm 100mW | 1 |
| 36 | V5Div2, V5R2 | 30.9kOhm 63mW, 30.9kOhm | 2 |
| 37 | V5F1 | 3425L300_36MR | 1 |
| 38 | V5I1 | LMR51450FNDRRR | 1 |
| 39 | V5L1 | 10uH 16mOhm | 1 |
| 40 | V5Q1 | SI7489DP-T1-E3 | 1 |
| 41 | V5R0, V31R0, V32R0 | AC2512JK-070RL | 3 |
| 42 | V5R1, V5R3, V5R4, V31R1, V32R1 | 100kOhm | 5 |
| 43 | V5R5 | 16.9kOhm | 1 |
| 44 | V5S1 | SS34C | 1 |
| 45 | V5Z1 | BZT52C15-E3-08 | 1 |
| 46 | V31C1, V32C1 | 10uF 3mOhm | 2 |
| 47 | V31C2, V32C2 | 390pF 1mOhm | 2 |
| 48 | V31C3, V32C3 | 22uF 1mOhm | 2 |
| 49 | V31L1, V32L1 | 2.2uH | 2 |
| 50 | V31U1, V32U1 | TPS62142RGTT | 2 |

Layer Stack Legend

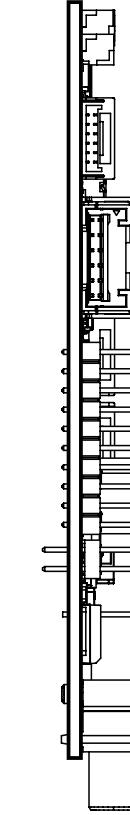
| Material | Layer | Thickness | Dielectric Material | Type | Gerber |
|------------------|-----------------------|---------------|---------------------|----------------|------------|
| | Top Overlay | | | Legend | GTO |
| Surface Material | Top Solder | 0.03mm | SM-001 | Solder Mask | GTS |
| PbSn | Top Surface Finish | 0.02mm | | Surface Finish | |
| CF-004 | Top Layer | 0.04mm | | Signal | GTL |
| | Prepreg | 0.21mm | 7628 | Dielectric | |
| CF-003 | Int1 (GND) | 0.02mm | | Signal | G1 |
| | Core | 1.06mm | FR4 | Dielectric | |
| CF-003 | Int2 (PWR) | 0.02mm | | Signal | G2 |
| | Prepreg | 0.21mm | 7628 | Dielectric | |
| CF-004 | Bottom Layer | 0.04mm | | Signal | GBL |
| PbSn | Bottom Surface Finish | 0.02mm | | Surface Finish | |
| Surface Material | Bottom Solder | 0.03mm | SM-001 | Solder Mask | GBS |
| | Bottom Overlay | | | Legend | GBO |

Total thickness: 1.68mm

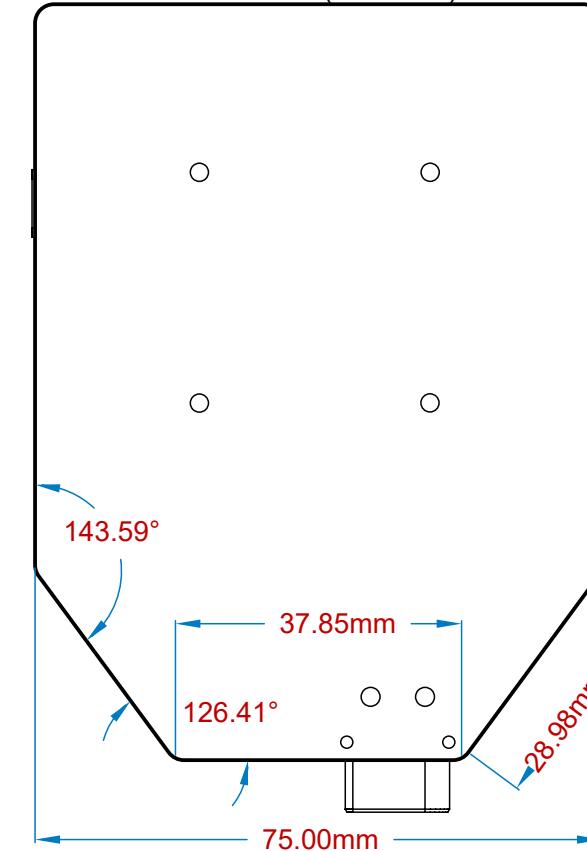
View from Top side (Scale 1:1)



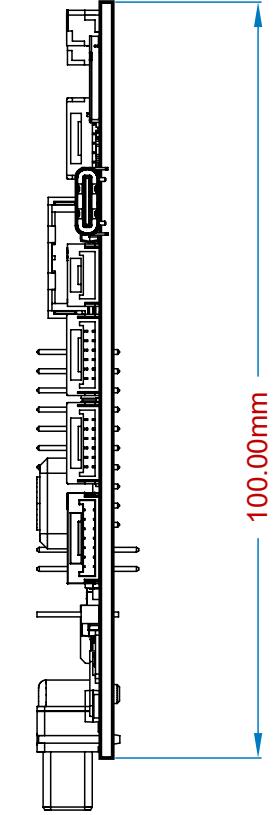
View from Left side (Scale 1:1)



View from Bottom side (Scale 1:1)



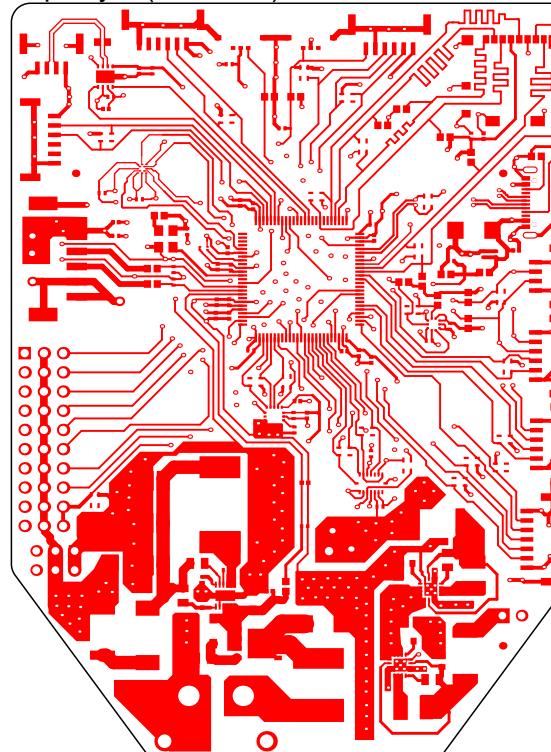
View from Right side (Scale 1:1)



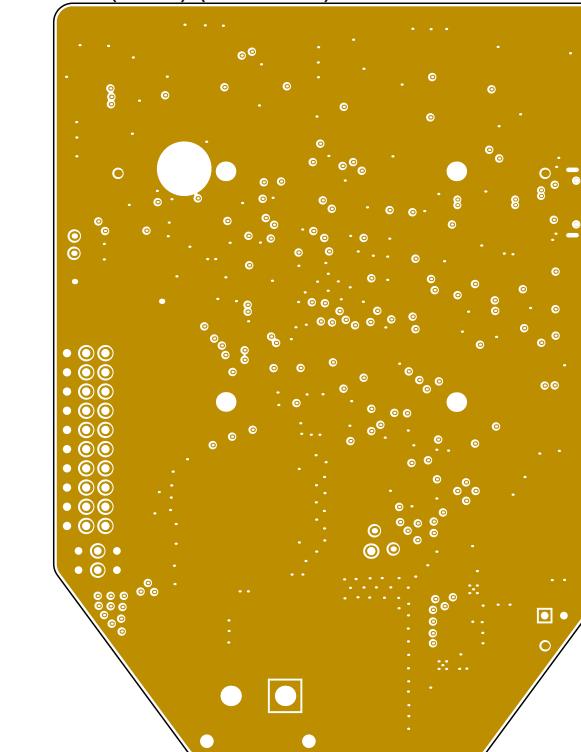
Transmission Line Structure Tab

| Impedance Id | Transmission Line | Target Impedance | Calculated Impedance | Trace layer | Wide Trace Width | Narrow Trace Width | Gap | Reference layers | Substack | Clearance | Target Tolerance |
|--------------|--------------------------------|------------------|----------------------|--------------|------------------|--------------------|--------|------------------|-------------------|-----------|------------------|
| 1 | Edge-Coupled Coated Microstrip | 90 | 89.32 | Top Layer | 0.29mm | 0.29mm | 0.20mm | Int1 (GND) | Board Layer Stack | 0.13mm | 10% |
| 2 | Edge-Coupled Coated Microstrip | 120 | 119.12 | Top Layer | 0.18mm | 0.18mm | 0.36mm | Int1 (GND) | Board Layer Stack | 0.13mm | 10% |
| 3 | Coated Microstrip | 50 | 49.93 | Top Layer | 0.35mm | 0.35mm | | Int1 (GND) | Board Layer Stack | 0.13mm | 10% |
| 4 | Edge-Coupled Coated Microstrip | 90 | 89.32 | Bottom Layer | 0.29mm | 0.29mm | 0.20mm | Int2 (PWR) | Board Layer Stack | 0.13mm | 10% |
| 5 | Edge-Coupled Coated Microstrip | 120 | 119.12 | Bottom Layer | 0.18mm | 0.18mm | 0.36mm | Int2 (PWR) | Board Layer Stack | 0.13mm | 10% |
| 6 | Coated Microstrip | 50 | 49.93 | Bottom Layer | 0.35mm | 0.35mm | | Int2 (PWR) | Board Layer Stack | 0.13mm | 10% |

Top Layer (Scale 1:1)

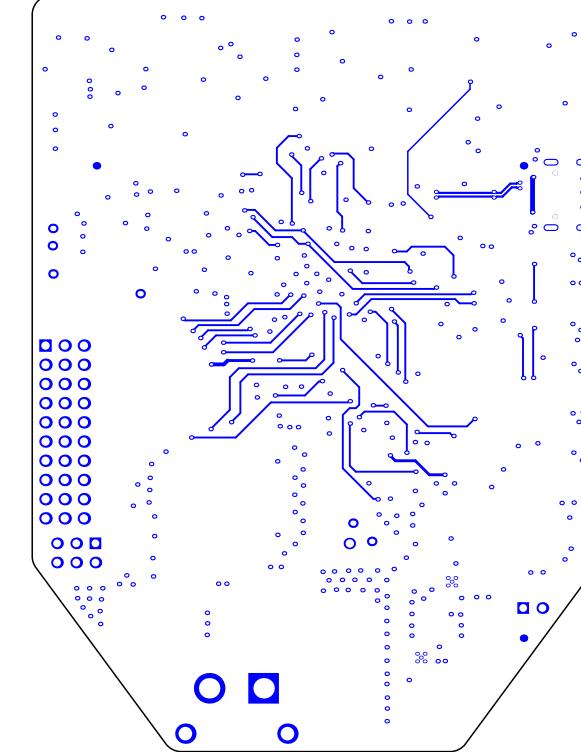


Int1 (GND) (Scale 1:1)

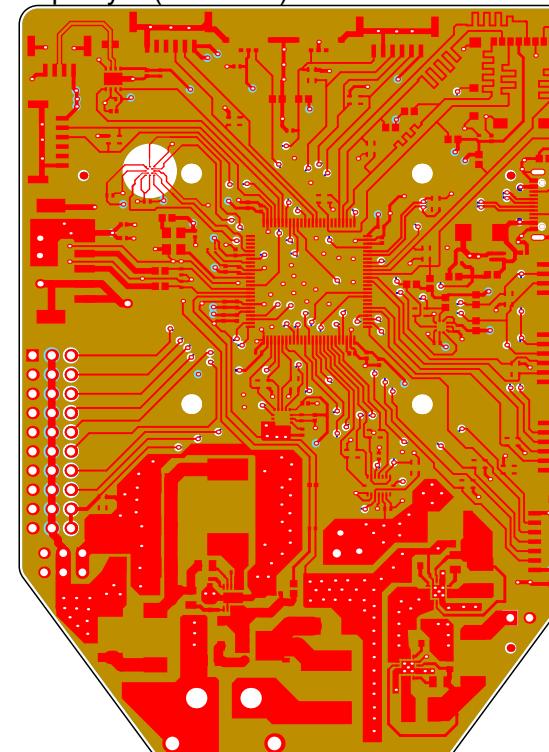


Int2 (PWR) (Scale 1:1)

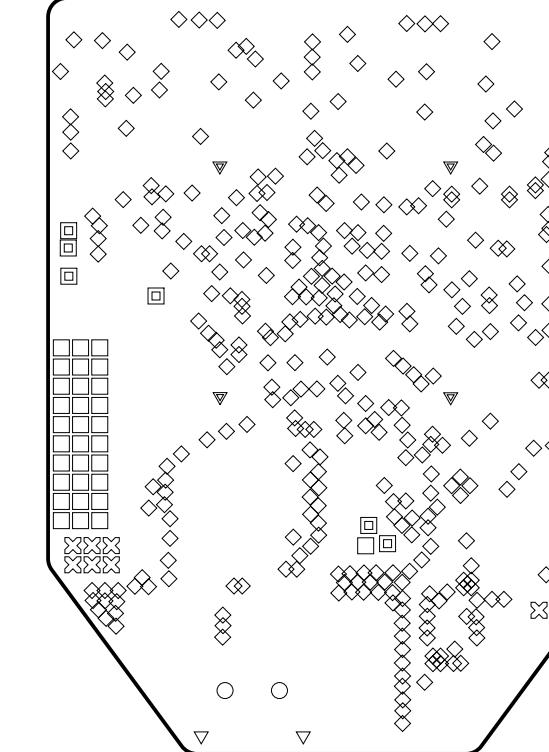
Bottom Layer (Scale 1:1)



Top Layer (Scale 1:



Drill Drawing View (Scale 1:



Drill Tab

| Symbol | Count | Hole Size | Plated | Hole Tolerance |
|-----------|-------|-----------|------------|----------------|
| ◇ | 374 | 0.30mm | Plated | |
| ⊗ | 2 | 0.60mm | Non-Plated | |
| + | 4 | 0.60mm | Plated | |
| □ | 6 | 0.71mm | Plated | |
| ✗ | 8 | 1.02mm | Plated | |
| □ | 31 | 1.10mm | Plated | |
| ▽ | 2 | 1.80mm | Plated | |
| ▼ | 4 | 2.60mm | Plated | |
| ○ | 2 | 2.70mm | Plated | |
| 433 Total | | | | |