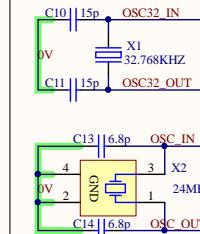
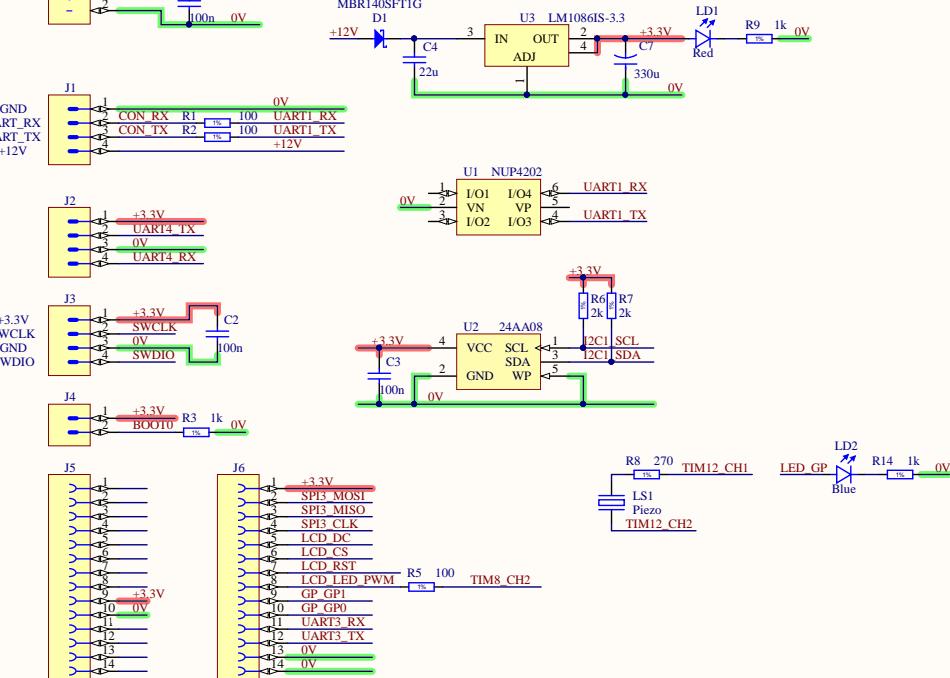
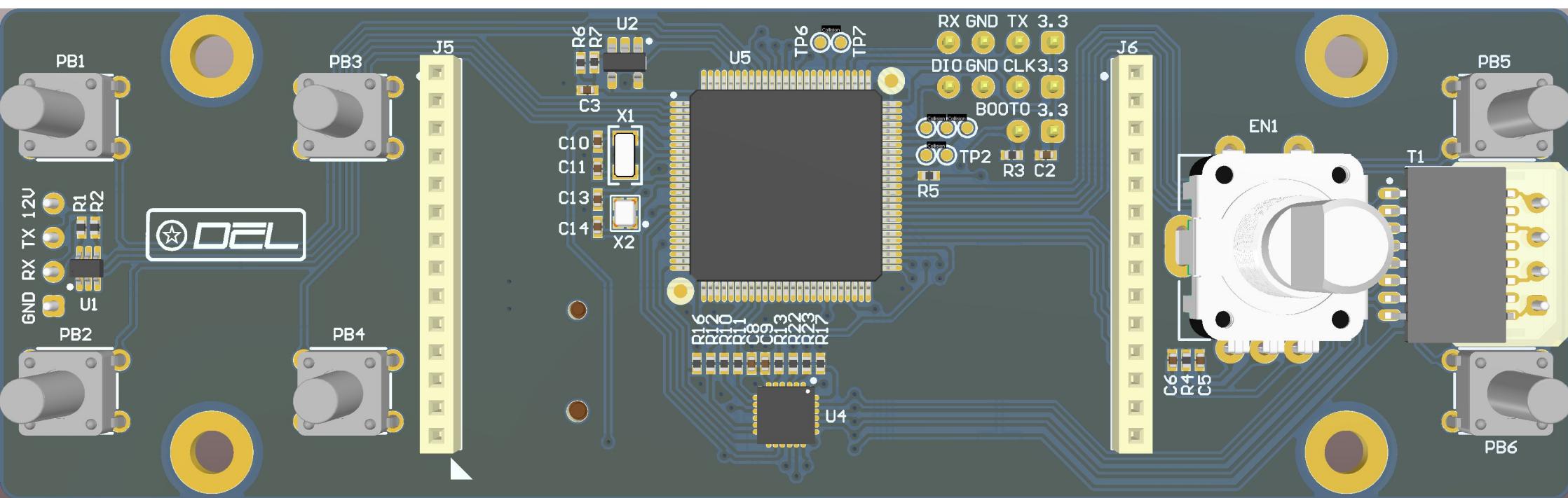
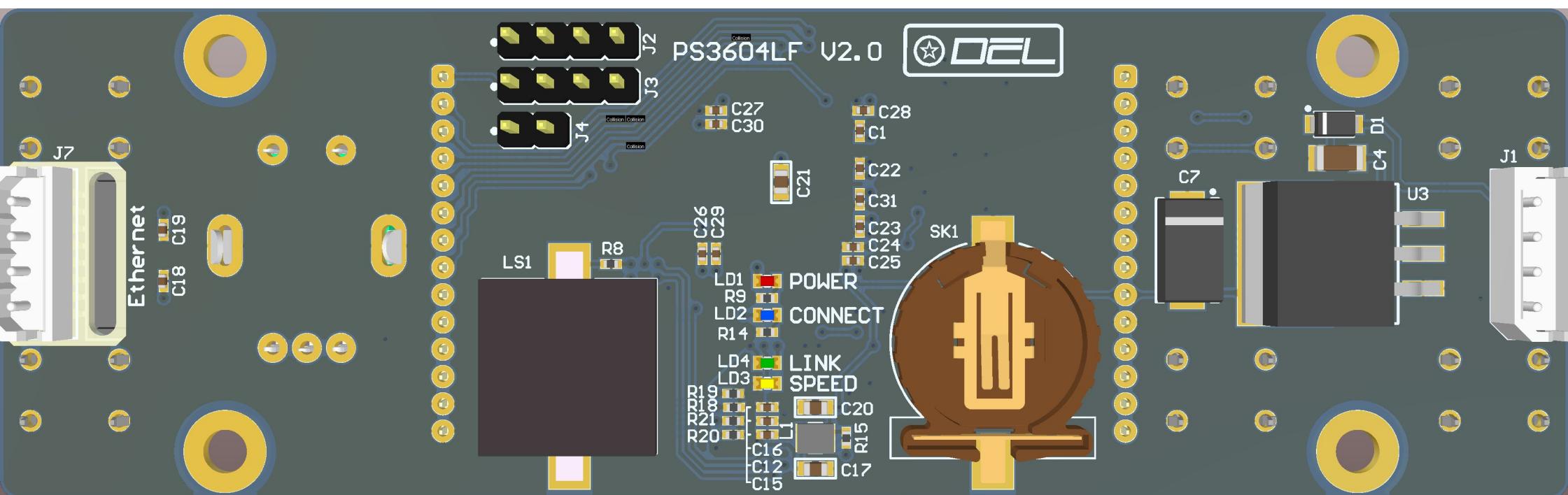
**MCU Signals**

| U5 STM32F407VET6 |                        |
|------------------|------------------------|
| B_ONOFF          | PE2 100 +3.3V          |
| B_NEXT           | PE3 99 0V              |
| B_VIEW           | PE4 98                 |
| B_MODE           | PE4 97                 |
| VBAT             | PE5 96 12C1 SDA        |
| VBAT             | PE6 95 12C1 SCL        |
| OSC32_IN         | PE7 94 BOOT0           |
| OSC32_OUT        | PE8 93 UART1_RX        |
| OSC32_OUT        | PE8 92 UART1_TX        |
| OSC32_OUT        | PE9 91 SPI3 MOSI       |
| OSC32_OUT        | PE10 90 SPI3 CLK       |
| VDD              | PE11 89 VREF+          |
| PH0_OSC_IN       | PE12 88 CAN1 TX        |
| PH1_OSC_OUT      | PE13 87 CAN1 RX        |
| NRST             | PE14 86 LCD CS         |
| PC0              | PE15 85 LCD_RST        |
| ETH_MDC          | PE16 84 PWDN           |
| GP_ETH_NRST      | PE17 83 PC1            |
| GP_ETH_NINT      | PE18 82 PC2            |
| +3.3V            | PE19 81 PC3            |
| 0V               | PE20 80 VSSA           |
| +3.3V            | PE21 79 VREF+          |
| +3.3V            | PE22 78 VDDA           |
| RCC_MCO2         | PA0/WKUP 77 PA1        |
| ETH_REF_CLK      | PA1 76 PA2             |
| ETH_MDIO         | PA15 75 PA3            |
| PA2              | PA14 74 +3.3V          |
| PA3              | PA13 73 VSS            |
| PA4              | PA12 72 SWDIO          |
| PA5              | PA11 71 USB_OTG_FS_DP  |
| PA6              | PA10 70 USB_OTG_FS_DM  |
| PA7              | PA9 69 USB_OTG_FS_ID   |
| PA8              | PA8 68 USB_OTG_FS_VBUS |
| PA9              | PA7 67 RCC_MCO1        |
| PA10             | PA6 66 RCC_MCO2        |
| PA11             | PA5 65 PC9             |
| PA12             | PA4 64 PC8             |
| PA13             | PA3 63 PC7             |
| PA14             | PA2 62 PC6             |
| PA15             | PA1 61 PC5             |
| PA16             | PA0 60 PC4             |
| PA17             | PA1 59 PC3             |
| PA18             | PA0 58 PC2             |
| PA19             | PA1 57 PC1             |
| PA20             | PA0 56 PC0             |
| PA21             | PA1 55 PB1/BOOT1       |
| PA22             | PA0 54 PC7             |
| PA23             | PA1 53 PC6             |
| PA24             | PA0 52 PC5             |
| PA25             | PA1 51 PC4             |
| PA26             | PA0 50 PC3             |
| PA27             | PA1 49 PC2             |
| PA28             | PA0 48 PC1             |
| PA29             | PA1 47 PC0             |
| PA30             | PA0 46 PC7             |
| PA31             | PA1 45 PC6             |
| PA32             | PA0 44 PC5             |
| PA33             | PA1 43 PC4             |
| PA34             | PA0 42 PC3             |
| PA35             | PA1 41 PC2             |
| PA36             | PA0 40 PC1             |
| PA37             | PA1 39 PC0             |
| PA38             | PA0 38 PC7             |
| PA39             | PA1 37 PC6             |
| PA40             | PA0 36 PC5             |
| PA41             | PA1 35 PC4             |
| PA42             | PA0 34 PC3             |
| PA43             | PA1 33 PC2             |
| PA44             | PA0 32 PC1             |
| PA45             | PA1 31 PC0             |
| PA46             | PA0 30 PC7             |
| PA47             | PA1 29 PC6             |
| PA48             | PA0 28 PC5             |
| PA49             | PA1 27 PC4             |
| PA50             | PA0 26 PC3             |
| PA51             | PA1 25 PC2             |
| PA52             | PA0 24 PC1             |
| PA53             | PA1 23 PC0             |
| PA54             | PA0 22 PC7             |
| PA55             | PA1 21 PC6             |
| PA56             | PA0 20 PC5             |
| PA57             | PA1 19 PC4             |
| PA58             | PA0 18 PC3             |
| PA59             | PA1 17 PC2             |
| PA60             | PA0 16 PC1             |
| PA61             | PA1 15 PC0             |
| PA62             | PA0 14 PC7             |
| PA63             | PA1 13 PC6             |
| PA64             | PA0 12 PC5             |
| PA65             | PA1 11 PC4             |
| PA66             | PA0 10 PC3             |
| PA67             | PA1 9 PC2              |
| PA68             | PA0 8 PC1              |
| PA69             | PA1 7 PC0              |
| PA70             | PA0 6 PC7              |
| PA71             | PA1 5 PC6              |
| PA72             | PA0 4 PC5              |
| PA73             | PA1 3 PC4              |
| PA74             | PA0 2 PC3              |
| PA75             | PA1 1 PC2              |
| PA76             | PA0 0 PC1              |
| PA77             | PA1 -1 PC0             |

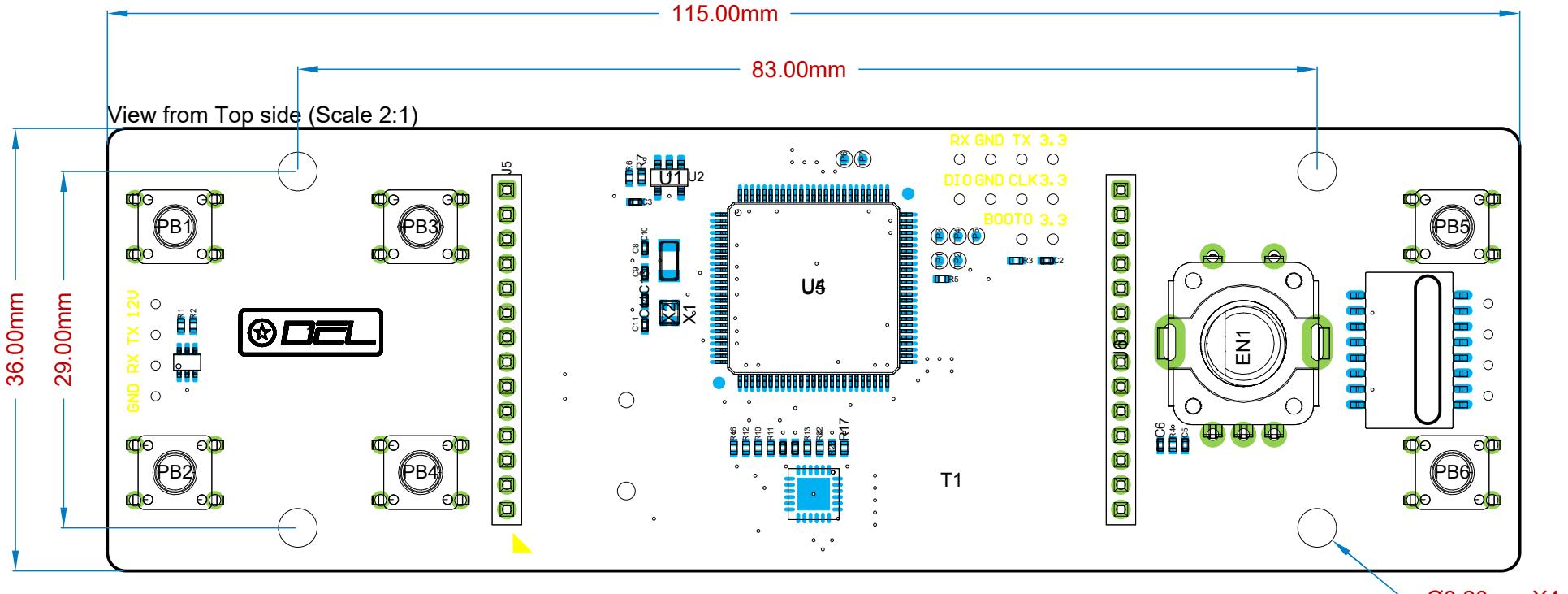


| Designator              | Part Description   | Footprint                    | Part Number         | Quantity |
|-------------------------|--|------------------------------|---------------------|----------|
| U4                      | Small Footprint RMII 10/100 Ethernet Transceiver with HP     | QFN50P400X400X100-25N-S265   | LAN8720A-CP-TR      | 1        |
| U3                      | 3.3V 1.5A Low Dropout Positive Regulators                    | TO254P1435X464-4N-R1041X635  | LM1086IS-3.3        | 1        |
| U5                      | ARM Cortex-M4 32b MCU+FPU, 210DMIPS, up to 1MB Flas          | QFP50P1600X1600X160-100N     | STM32F407VET6       | 1        |
| SK1                     | Battery holder for CR and LIR series1216 to 1220,1225        | EEMB_BH500                   | EEMB_BH500          | 1        |
| J4                      | 2 Contacts - Horizontal Contacts Straight Strip Header Pitch | 3M_2302-6111-TG              | 3M_2302-6111-TG     | 1        |
| J1, J7                  | 2.50mm Pitch SPOX Wire-to-Board Header, Vertical, Shroud     | MOLEX_22-03-5045             | MOLEX_22-03-5045    | 2        |
| J2, J3                  | 4 Contacts - Vrtical Contacts Straight Strip Header Pitch 2. | 3M_2304-6111-TG              | 3M_2304-6111-TG     | 2        |
| J5, J6                  | 14 Contacts - 2mm x 2 mm Straight, Boardmount Socket, 90°    | 3M_955114-6102-AR            | 3M_955114-6102-AR   | 2        |
| X2                      | ± 30ppm at (25±3°C), -30°C to +85°C, 6pF, Ceramic SMD Cr     | OSCCC160X200X65-4N           | 24MHZ_XRCGB24M00    | 1        |
| EN1                     | 12 mm Incremental Encoder, 24 pulses, Push Momentary S       | EN_BOURNS_PEC11R-4x20F-Sxxxx | EN_BOUNCE_PEC11R-   | 1        |
| U1                      | ESD Protection Diode, Low Clamping Voltage                   | SOT65P220X110-6N             | NUP4202W1           | 1        |
| U2                      | 8K Serial EEPROM   | SOT95P280X145-5N             | 24AA08T-I/OT        | 1        |
| L1                      | SMT Inductors  | INDC2520X100N                | IND1008_2.2UH_20%   | 1        |
| LD1                     | Surface Mount Red LED (0603 Case)                            | LEDC1608X80N_RED             | LED_OF-SMD1608R     | 1        |
| LD2                     | Surface Mount Red LED (0603 Case)                            | LEDC1608X80N_BLUE            | LED_OF-SMD1608B     | 1        |
| LD3                     | Surface Mount Red LED (0603 Case)                            | LEDC1608X80N_YELLOW          | LED_OF-SMD1608Y     | 1        |
| LD4                     | Surface Mount Green LED (0603 Case)                          | LEDC1608X80N_GREEN           | LED_OF-SMD1608G     | 1        |
| C1, C2, C3, C15, C16, C | SMD Multilayer Chip Ceramic Capacitor                        | CAPC1005X55N                 | CC0402_100NF_50V_   | 13       |
| C4                      | SMD Multilayer Chip Ceramic Capacitor                        | CAPC3216X100N                | CC1206_22UF_16V_2   | 1        |
| C5, C6                  | SMD Multilayer Chip Ceramic Capacitor                        | CAPC1005X55N                 | CC0402_10NF_50V_1   | 2        |
| C8                      | SMD Multilayer Chip Ceramic Capacitor                        | CAPC1005X55N                 | CC0402_470PF_50V_1  | 1        |
| C9, C29, C30            | SMD Multilayer Chip Ceramic Capacitor                        | CAPC1005X55N                 | CC0402_2.2UF_6.3V_1 | 3        |
| C10, C11                | SMD Multilayer Chip Ceramic Capacitor                        | CAPC1005X55N                 | CC0402_15PF_50V_5   | 2        |
| C12, C18, C19           | SMD Multilayer Chip Ceramic Capacitor                        | CAPC1005X55N                 | CC0402_22NF_16V_1   | 3        |
| C13, C14                | SMD Multilayer Chip Ceramic Capacitor                        | CAPC1005X55N                 | CC0402_6.8PF_50V_0  | 2        |
| C17, C20, C21           | SMD Multilayer Chip Ceramic Capacitor                        | CAPC1608X87N                 | CC0603_4.7UF_10V_1  | 3        |
| LS1                     | Piezo sound generator  | HPS13C                       | HPS13C              | 1        |
| C7                      | Low ESR OR025 Tantalum Chip Capacitor                        | CAPMP7343X310N               | CTE7343-31_330UF_6  | 1        |
| PB1, PB2, PB3, PB4, PE  | 12VDC 50mA SPST Tactile Push-Button Switch                   | PB_E-SWITCH_TL1105HF100Q     | PB_E-SWITCH_TL1105  | 6        |
| X1                      | Quartz Crystal ±20ppm  | OSCCC150X320X80-2N           | 32.768KHz_KX-327NH  | 1        |
| R1, R2, R4, R5, R13     | General Purpose Thick Film Chip Resistor                     | RESC1005X40N                 | R0402_100R_1%_0.06  | 5        |
| R3, R9, R14             | General Purpose Thick Film Chip Resistor                     | RESC1005X40N                 | R0402_1K_1%_0.0625  | 3        |
| R6, R7, R16             | General Purpose Thick Film Chip Resistor                     | RESC1005X40N                 | R0402_2K_1%_0.0625  | 3        |
| R8, R23                 | General Purpose Thick Film Chip Resistor                     | RESC1005X40N                 | R0402_270R_1%_0.06  | 2        |
| R10, R11, R12           | General Purpose Thick Film Chip Resistor                     | RESC1005X40N                 | R0402_10R_1%_0.062  | 3        |
| R15                     | General Purpose Thick Film Chip Resistor                     | RESC1005X40N                 | R0402_1K5_1%_0.062  | 1        |
| R17                     | General Purpose Thick Film Chip Resistor                     | RESC1005X40N                 | R0402_12K_1%_0.062  | 1        |
| R18, R19, R20, R21      | General Purpose Thick Film Chip Resistor                     | RESC1005X40N                 | R0402_49R9_1%_0.06  | 4        |
| R22                     | General Purpose Thick Film Chip Resistor                     | RESC1005X40N                 | R0402_4K7_1%_0.062  | 1        |
| D1                      | Schottky Power Rectifier                                     | SOD-123FL                    | MBR140SFT1G         | 1        |
| T1                      | 10/100BASE-Tx PC Card LAN Magnetics Module                   | XFMR_LF-H84P                 | XFMR_LF-H84P-1      | 1        |
| TP1, TP2, TP3, TP4, TP  | 0.8mm round SMD Pad  | TP_SMD_800                   | TP_SMD_0.8MM        | 7        |

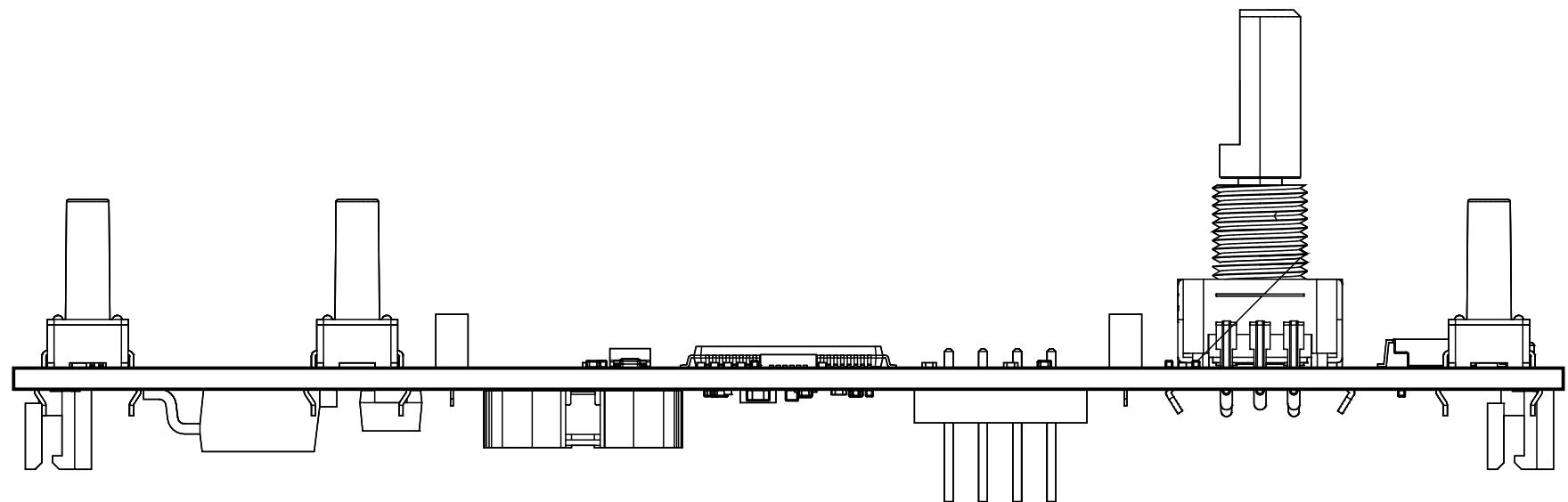








View from Front side (Scale 2:1)



A

View from Bottom side (Scale 2:1)

