

1

2

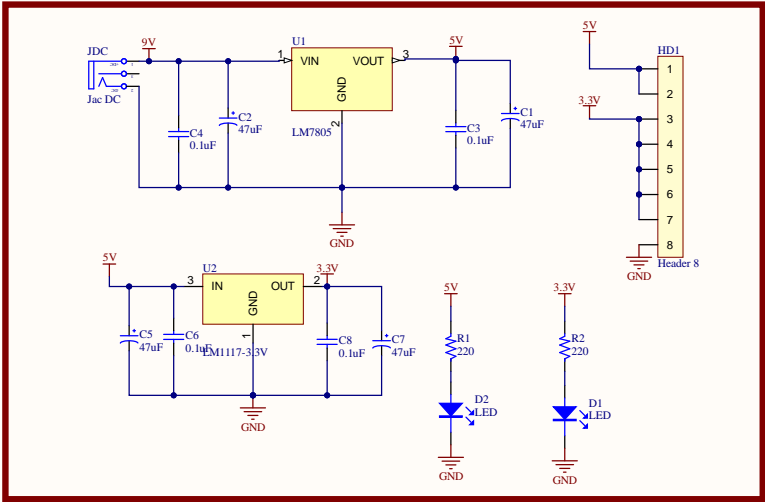
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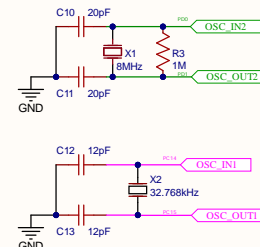
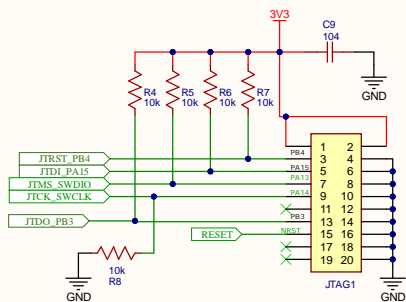
POWER



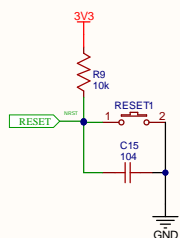
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| APPROVALS | DATE | PROJECT | <div>Altium</div> | | |
| ENG: QUANG THUONG | | | PROJECT REVISION: | DOCUMENT REVISION: | DESIGN ITEM: |
| DSN: HUYNH NHUT HUY | | | Not in version control | | |
| CHK: QUANG THUONG | | | Not in version control | | |
| REFERENCE DOCUMENTS | | | POWER | | |
| BOM: | | | SIZE | CAGE CODE | DWG NO. |
| ASSY DWG: | | | A3 | | |
| FAB DWG: | | | | | |
| PCB DWG: | | | SCALE: | FILE NAME | SHEET 3 OF 6 |
| | | | | POWERSP_SCH.SchDoc | |

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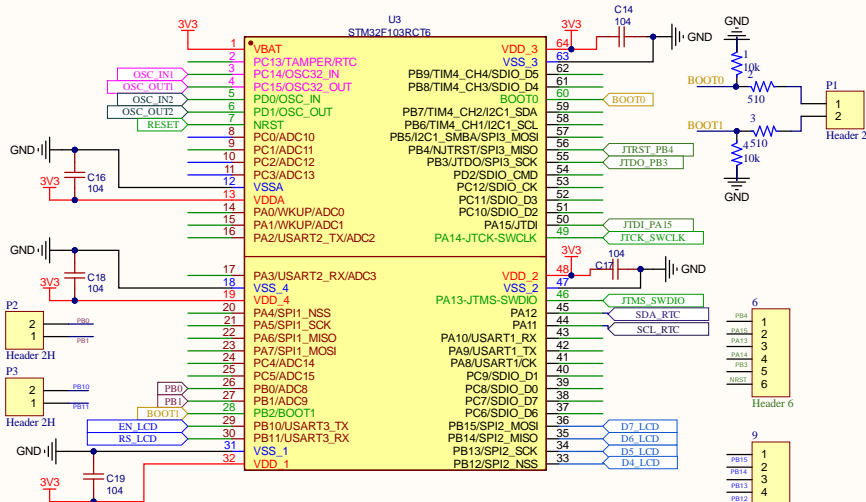
| REVISION | DESCRIPTION | DATE | APPROVED |
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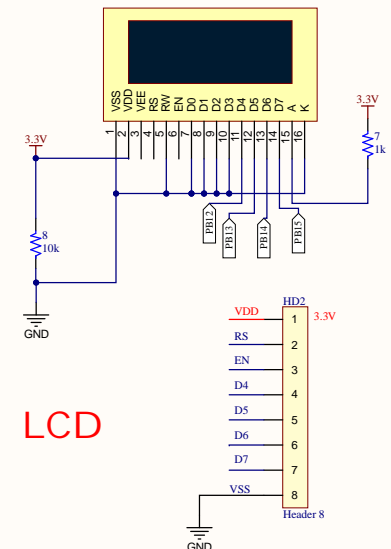
CRISTALS



RESET

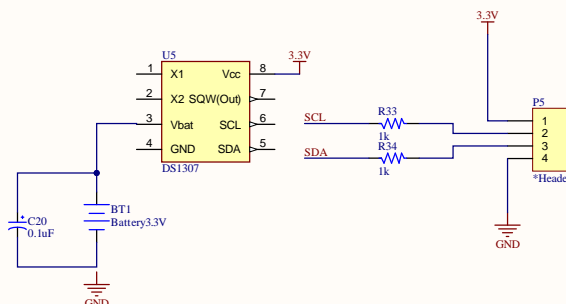
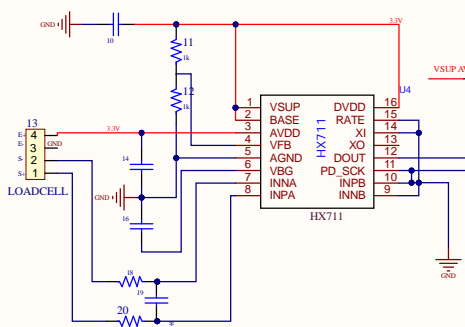


STM32-CPU
STM32F103RCT6 @72MHz



LCD

LOADCELL + HX711

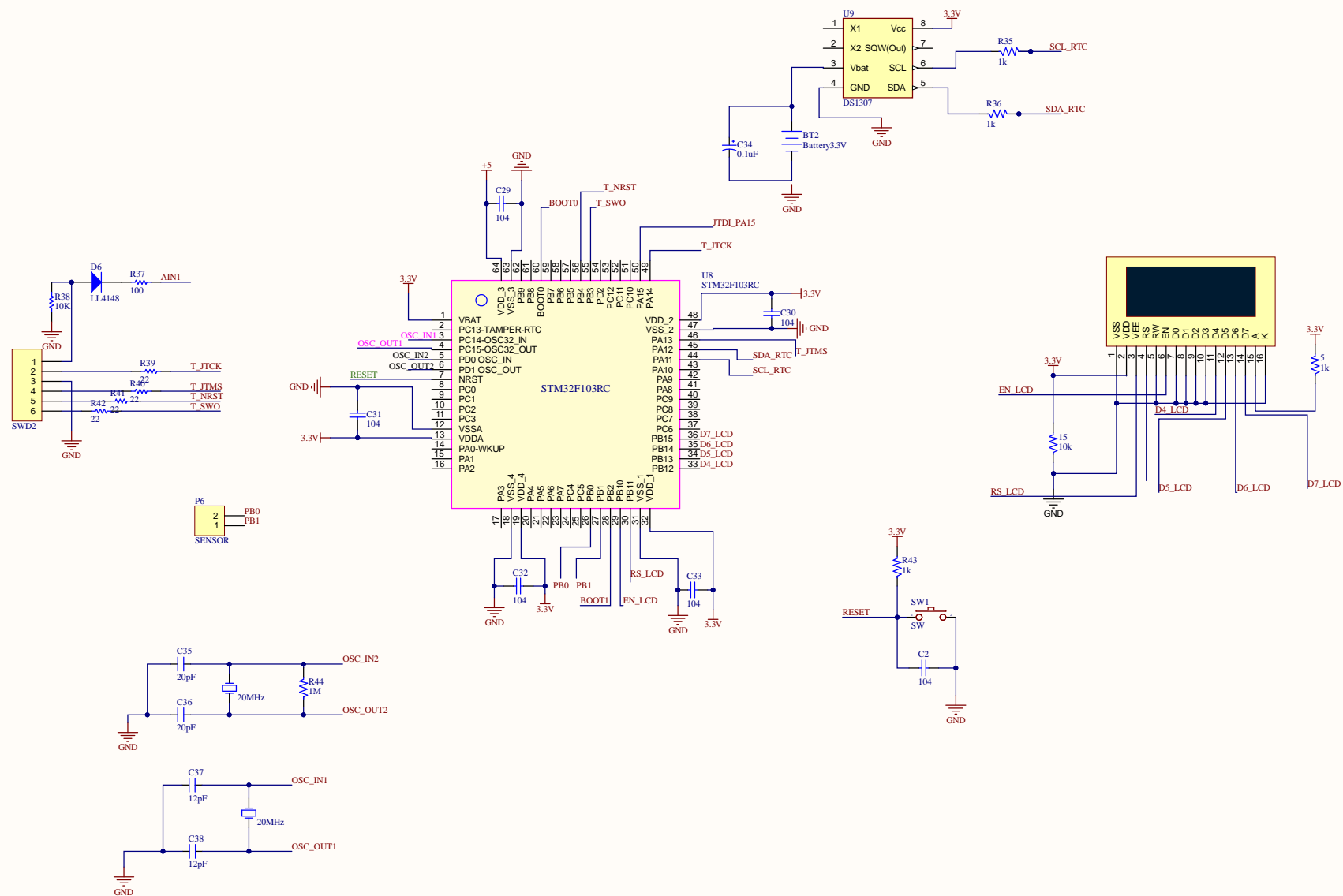


Real-Time Clock

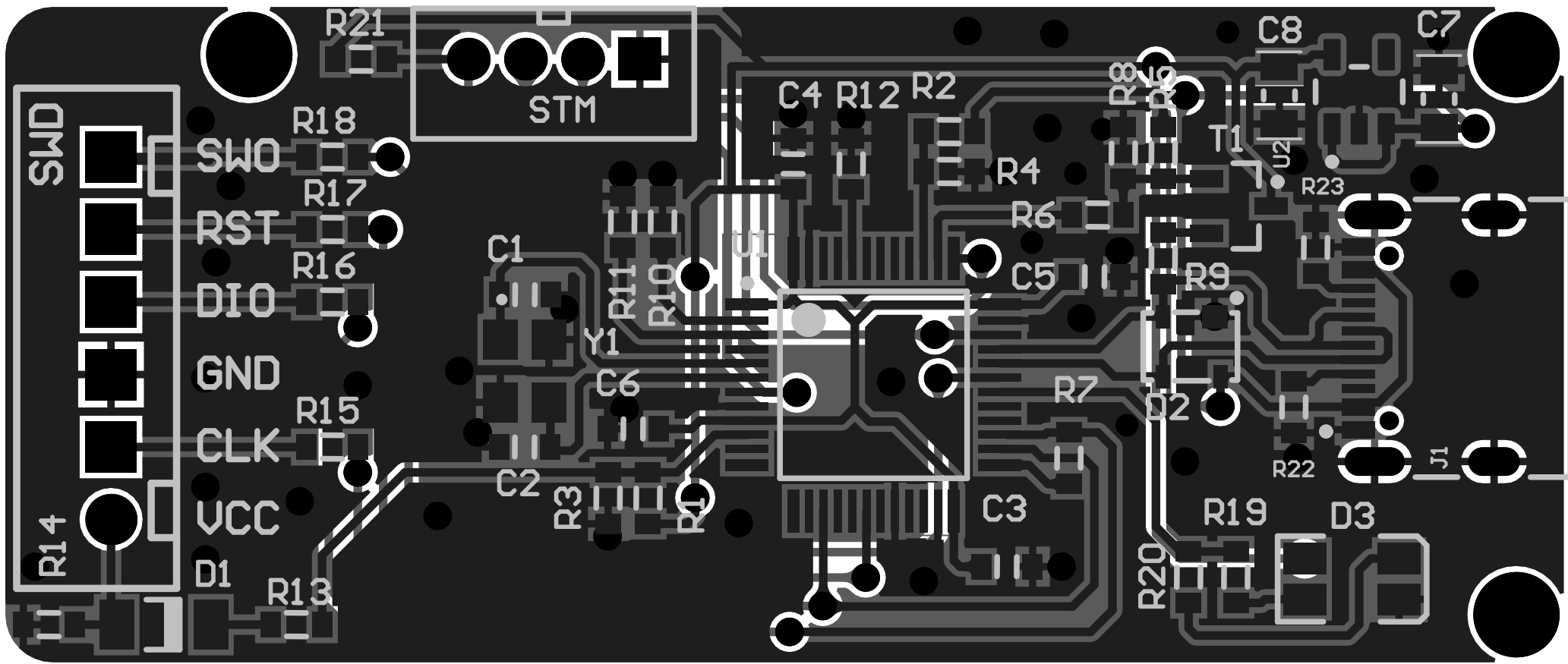
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| APPROVALS | DATE | PROJECT | Altium |
| ENG: QUANG THUONG | | | |
| DSN: HUYNH NHUT HUY | | | |
| CHK: QUANG THUONG | | | |
| REFERENCE DOCUMENTS | | | PROJECT REVISION: Not in version control |
| TITLE | | | DESIGN ITEM: Not in version control |
| BOM: | | | CONNECTER |
| ASSY DWG: | SIZE | CAGE CODE | DWG NO. |
| FAB DWG: | A3 | | |
| PCB DWG: | SCALE: | FILE NAME | CONNECTER.SchDoc |
| | | SHEET | 5 OF 6 |

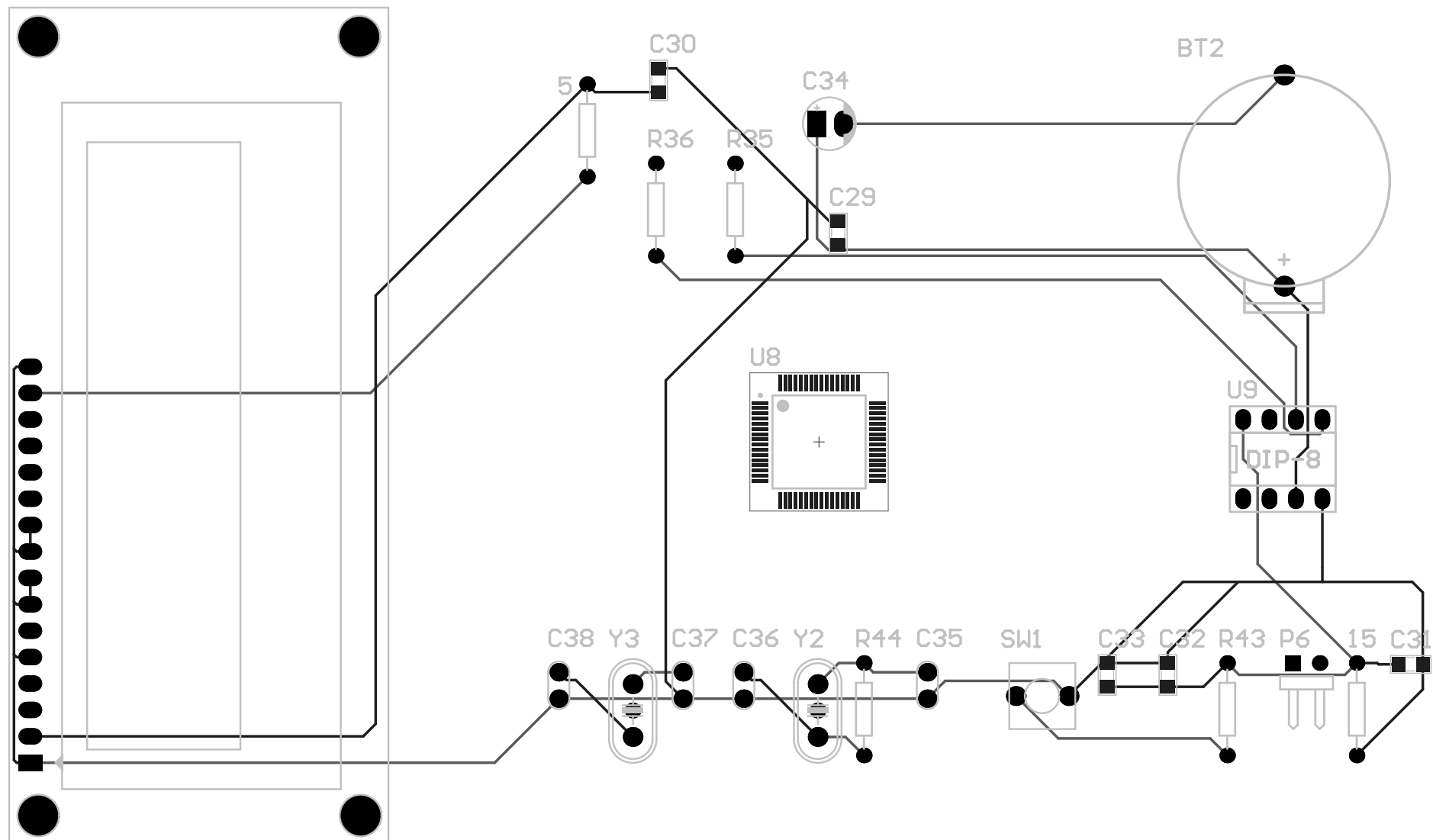
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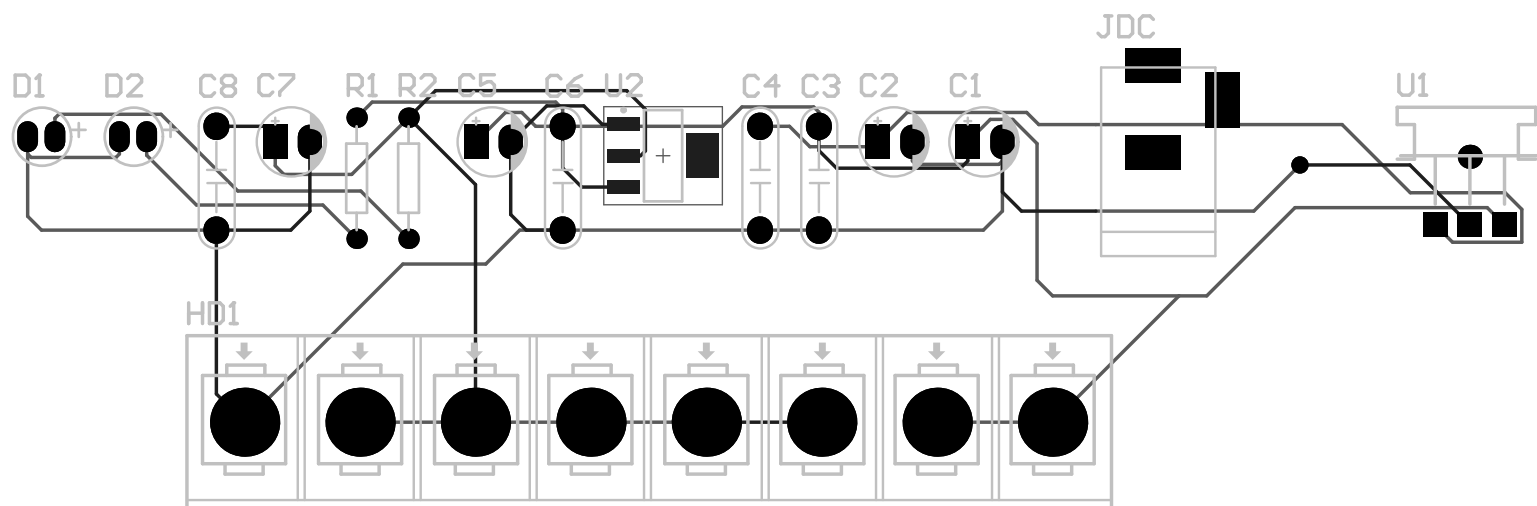
| REVISION | DESCRIPTION | DATE | APPROVED |
|----------|-------------|------|----------|
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|---------------------|--------|---|--------------------|--------------|
| APPROVALS | DATE | PROJECT | Altium | |
| ENG: . | | | | |
| DSN: . | | PROJECT REVISION: | DOCUMENT REVISION: | DESIGN ITEM: |
| CHK: . | | Not in version control Not in version control | | |
| REFERENCE DOCUMENTS | | ★ | | |
| BOM: | | | | |
| ASSY DWG: | SIZE | CAGE CODE | DWG NO. | REV |
| FAB DWG: | A3 | | | |
| PCB DWG: | SCALE: | FILE NAME | DRAW.SchDoc | SHEET 6 OF 6 |







| Comment | Description | Designator | Footprint | LibRef | Quantity |
|----------------|---|---|---|---------------------|----------|
| LCD | | | LCD16X2 | LCD | 2 |
| 10k | Resistor 1/4W | 1, 4, 8, 15 | R16W | Res | 4 |
| 510 | Resistor 1/4W | 2, 3 | R16W | Res | 2 |
| 1k | Resistor 1/4W | 5, 7, 11, 12, R33, R34, R35, R36, R43 | R16W | Res | 9 |
| Header 6 | Header, 6-Pin | 6 | HDR1X6 | Header 6 | 1 |
| *Header | Header, 4-Pin, Right Angle | 9, P5 | HDR1X4 | Header 4 | 2 |
| | Capacitor | 10, 14, 16, 19 | R1206 | CAP | 4 |
| LOADCELL | | 13 | J4 | J4 | 1 |
| 100 | Resistor 1/4W | 18 | R16W | Res | 1 |
| | Resistor 1/4W | 20 | R16W | Res | 1 |
| Battery3.3V | Multicell Battery | BT1, BT2 | CR2032 Holder | Battery3.3V | 2 |
| 47uf | Cap P 0.1uf < 22uf , 16 - 50V | C1, C2, C5, C7 | CP1/2 | CP1 | 4 |
| 104 | Capacitor (Semiconductor SIM Model) | C2 | CAP104 | Cap 104 | 1 |
| 0.1uF | Capacitor (Semiconductor SIM Model) | C3, C4, C6, C8 | CN3 | CAP 102 2KV | 4 |
| 104 | | C9, C14, C15, C16, C17, C18, C19 | C0603 | 104 | 7 |
| 20pf | | C10, C11 | C0603 | 20pf | 2 |
| 12pf | | C12, C13 | C0603 | 12pf | 2 |
| 0.1uF | Cap P 0.1uf < 22uf , 16 - 50V | C20, C34 | CP1/2 | CP1 | 2 |
| 22pf | Capacitor | C21, C22 | C603 | Cap | 2 |
| 10uf | Capacitor | C23, C24 | C805 | Cap | 2 |
| 100nf | Capacitor | C25, C26, C27, C28 | C603 | Cap | 4 |
| 104 | Capacitor (Semiconductor SIM Model) | C29, C30, C31, C32, C33 | 0805 | Cap 104_SMD | 5 |
| 20pf | Cap np 1pf - 472pf | C35, C36 | CN1 | CN1 | 2 |
| 12pf | Cap np 1pf - 472pf | C37, C38 | CN1 | CN1 | 2 |
| LED | | D1, D2 | CAP10UF | LED | 2 |
| LED-RG | | D3 | LED-1210 | LED-RG-4 | 1 |
| PRTR5V0U2X | Ultra low capacitance double rail-to-rail ESD protection diode | D4 | SOT-143B | PRTR5V0U2X | 1 |
| LL4148 | | D5, D6 | SOD-80 | LL4148 | 2 |
| Header 1 | Header, 1-Pin, Right Angle | H1 | HEAD1 | Header 1 | 1 |
| Header 8 | Header 8 VIt Broad | HD1, HD2 | HEDBV | Header 8 | 2 |
| USB4105-GF-A | CONN RCPT USB2.0 TYPEC 5A | J1 | FP-USB4105-GF-A-MFG | CMP-245163-000001-1 | 1 |
| Jac DC | Jac DC input | JDC | DC-IN | DCIN | 1 |
| | | JTAG1 | JTAG | Header 10X2 | 1 |
| Header 2H | Header, 2-Pin, Right Angle | P1, P2, P3, P4 | HDR1X2H | Header 2H | 4 |
| SENSOR | Header, 2-Pin, Right Angle | P6 | HDR1X2H | Header 2H | 1 |
| 220 | Resistor 1/4W | R1, R2 | R16W | Res | 2 |
| 1M | | R3 | R0603 | 1M | 1 |
| 10k | [NoValue], Resistor | R4, R5, R6, R7, R8, R9, R17, R22, R27, R32, R38 | R0603 | 10k, Resistor | 11 |
| 100 | Resistor | R10, R11, R16, R18, R26, R37 | R0603 | Resistor | 6 |
| 4.7K | Resistor | R12, R14, R15, R19, R21 | R0603 | Resistor | 5 |
| 2.7K | Resistor | R13 | R0603 | Resistor | 1 |
| 36K | Resistor | R20 | R0603 | Resistor | 1 |
| 1.5K | Resistor | R23 | R0603 | Resistor | 1 |
| 5K1 | Resistor | R24, R25 | R0603 | Resistor | 2 |
| 22 | Resistor | R28, R29, R30, R31, R39, R40, R41, R42 | R0603 | Resistor | 8 |
| 1M | Resistor 1/4W | R44 | R16W | Res | 1 |
| K2-3.6x6.1_SMD | | RESET1 | KEY-SMD_L6.0-W3.5-LSB.0 | K2-3.6x6.1_SMD | 1 |
| PHDR 4 | PinHeader | STM1 | PH-4 | PHDR 4 | 1 |
| SW | Switch button 2 pin | SW1 | SW2 | SW2 | 1 |
| CONN-6 | | SWD1, SWD2 | XH-6 | CONN-6 | 2 |
| 2n3904 | | T1 | SOT-23-3 | 2n3904 | 1 |
| LM7805 | TO-220 | U1 | TO-220 | LM7805 | 1 |
| LM1117-3.3V | 800mA Low-Dropout Linear Regulator | U2 | SOT223-4N | LM1117 | 1 |
| STM32F103RCT6 | | U3 | STM32F103RCT6 | STM32F103RCT6 | 1 |
| | | U4 | SOP-16_L10.0-W3.9-Pt.27-LS6.0-BL | H0X711 | 1 |
| DS1307 | 64 X 8 Serial Real-Time Clock | U5, U9 | DFP-100/8/W.300/L.4.00 | DS1307 | 2 |
| STM32F103C8T6 | ARM Cortex-M3 32-bit MCU, 64 KB Flash, 20 KB Internal RAM, 37 I/Os, 48-pin LQFP, -40 to 85 degC, Tray | U6 | LOFP-48 | STM32F103C8T6 | 1 |
| TLV74333PDBVR | IC REG LINEAR 3.3V 300MA SOT23-5 | U7 | FP-DBV0005A-MFG | CMP-04917-000051-1 | 1 |
| STM32F103RC | Performance line, ARMv7-based 32-bit MCU with up to 512 KB Flash, USB, CAN, 11 timers, 3 ADCs and 13 communication interfaces | U8 | STM32F103RC_TSOP | STM32F103RC | 1 |
| 8MHz | | X1 | HC-49SMD | 8MHz | 1 |
| 32.768kHz | | X2 | CRYSTAL-TH_BD3.1-L8.0-P2.00-1 | 32.768kHz | 1 |
| X3225MSB4SI | Crystal or Oscillator | Y1 | SMD-3225_4P_12.288MHZ_12PF_10PPM_40--85 | | 1 |
| 20MHz | Crystal Oscillator | Y2, Y3 | X12 | Crystal | 2 |