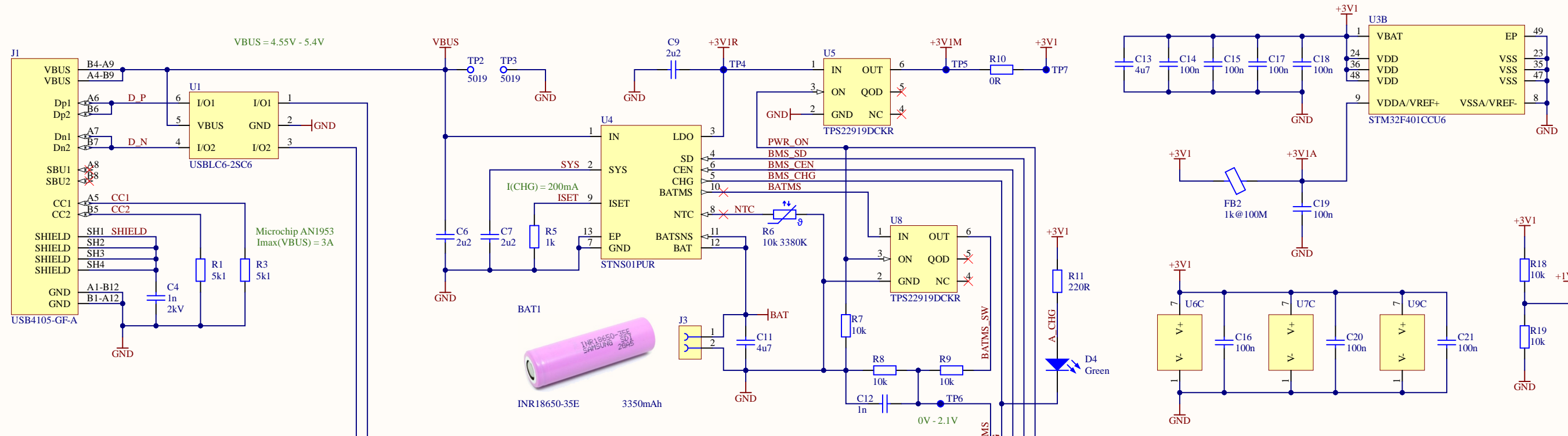
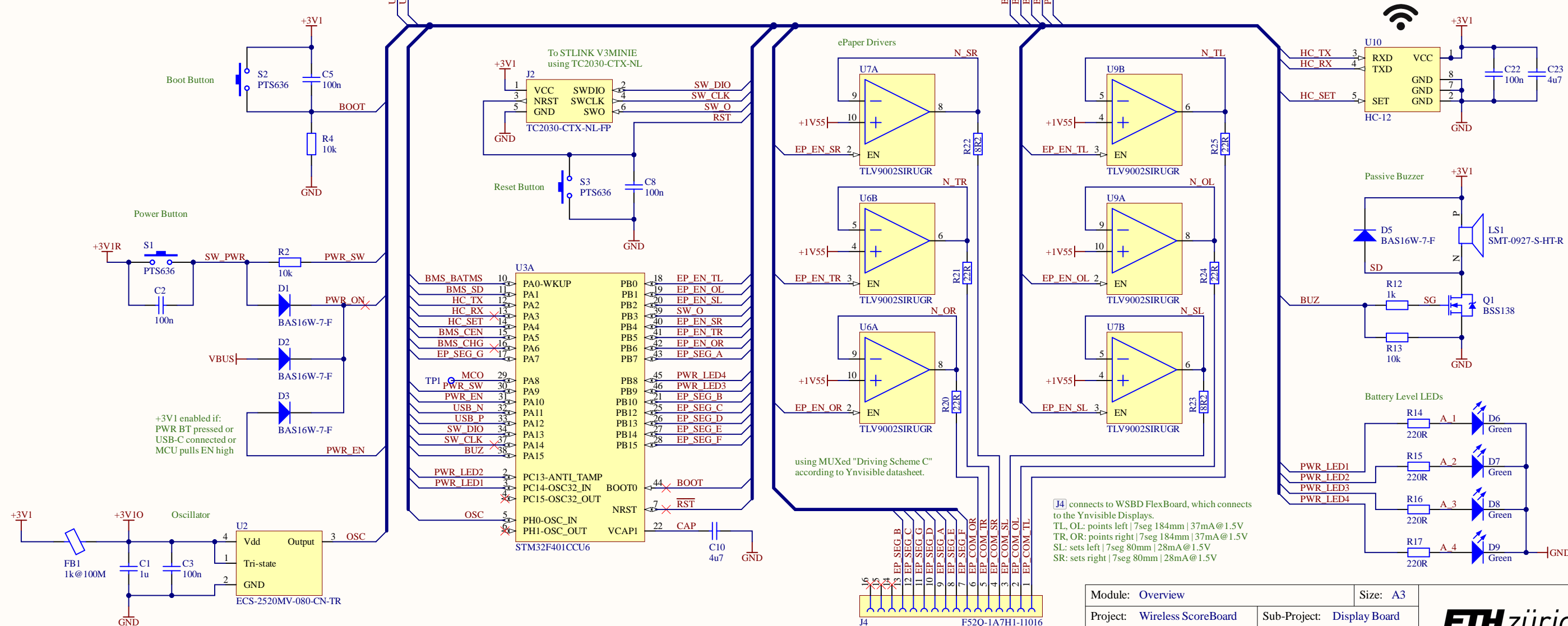


## POWER



## MCU



|                                     |                                   |                 |
|-------------------------------------|-----------------------------------|-----------------|
| Module: <b>Overview</b>             |                                   | Size: <b>A3</b> |
| Project: <b>Wireless ScoreBoard</b> | Sub-Project: <b>Display Board</b> |                 |
| Sheet: <b>1 / 1</b>                 | Author: <b>Joel Schaller</b>      |                 |
| Revision: <b>1.0</b>                | Date: <b>20.03.2024</b>           |                 |
| File: <b>Overview.SchDoc</b>        |                                   |                 |

**ETH** zürich

| Fitted | Designator  | Comment              | Value     | Description   | Manufacturer         | Manufacturer Part Number | Supplier   | Supplier Part Number      | Quantity |
|--------|---|----------------------|-----------|---|----------------------|--------------------------|------------|---------------------------|----------|
| Fitted | BAT1  | INR18650-35E         | 3350mAh   | EMECH SINGLE BATTERY LIPO                               | Samsung              | INR18650-35E             | Conrad     | 1499572 - 62              | 1        |
| Fitted | C1  | C0805                | 1u        | CERCAP 1u 25V 10% X7R 0805                              | YAGEO                | CC0805KKX7R8BB105        | Digi-Key   | 311-1456-1-ND             | 1        |
| Fitted | C2, C3, C5, C8, C14, C15, C16, C17, C18, C19, C20, C21, C22 | C0402                | 100n      | CERCAP 100n 50V 10% X7R 0402                            | YAGEO                | CC0402KRX7R9BB104        | Digi-Key   | 311-3566-1-ND             | 13       |
| Fitted | C4  | C1206                | 1n        | CERCAP 1n 2kV 10% X7R 1206                              | Würth Elektronik     | 885342208024             | Digi-Key   | 732-885342208024CT-ND     | 1        |
| Fitted | C6, C7, C9  | C0805                | 2u2       | CERCAP 2u2 25V 10% X7R 0805                             | YAGEO                | CC0805KKX7R8BB225        | Digi-Key   | 311-1884-1-ND             | 3        |
| Fitted | C10, C11, C13, C23  | C0805                | 4u7       | CERCAP 4u7 25V 10% X7R 0805                             | YAGEO                | CC0805KKX7R8BB475        | Digi-Key   | 311-1885-1-ND             | 4        |
| Fitted | C12   | C0402                | 1n        | CERCAP 1n 50V 10% X7R 0402                              | YAGEO                | CC0402KRX7R9BB102        | Digi-Key   | 311-1036-1-ND             | 1        |
| Fitted | D1, D2, D3, D5  | BAS16W-7-F           |           | DIODE 200mW 75V 300mA SOT-323                           | Diodes Incorporated  | BAS16W-7-F               | Digi-Key   | BAS16W-FDICT-ND           | 4        |
| Fitted | D4, D6, D7, D8, D9  | APHHS1005LZGCK-V     | Green     | LED GREEN 2mA 2.65V 0402                                | Kingbright           | APHHS1005LZGCK-V         | DigiKey    | 754-2126-1-ND             | 5        |
| Fitted | FB1, FB2  | BLM15BD102SN1D       | 1k@100M   | FERRITE 200mA-1k 0402                                   | Murata Electronics   | BLM15BD102SN1D           | Digi-Key   | 490-1010-1-ND             | 2        |
| Fitted | J1  | USB4105-GF-A         |           | CONN Female USB-C 16x Horizontal SMD                    | GCT                  | USB4105-GF-A             | Digi-Key   | 2073-USB4105-GF-ACT-ND    | 1        |
| Fitted | J4  | F52Q-1A7H1-11016     |           | CONN FPC TOP 16POS 1mm                                  | Amphenol ICC (FCI)   | F52Q-1A7H1-11016         | Digi-Key   | 609-F52Q-1A7H1-11016CT-ND | 1        |
| Fitted | LS1   | SMT-0927-S-HT-R      |           | PASSIVE PIEZO_BUZZER 8.5x8.5x4.3mm                      | PUI Audio, Inc.      | SMT-0927-S-HT-R          | Digi-Key   | 668-SMT-0927-S-HT-RCT-ND  | 1        |
| Fitted | O1  | BSS138               |           | MOSFET N 0.2A 50V SOT323                                | Diodes Incorporated  | BSS138W-7-F              | Digi-Key   | BSS138W-FDICT-ND          | 1        |
| Fitted | R1, R3  | R0402                | 5k1       | RES 5k1 62.5mW 1% 0402                                  | YAGEO                | RC0402FR-075K1L          | Digi-Key   | 311-5.10KLRCT-ND          | 2        |
| Fitted | R2, R4, R7, R8, R9, R13, R18, R19                           | R0402                | 10k       | RES 10k 62.5mW 1% 0402                                  | YAGEO                | RC0402FR-0710KL          | Digi-Key   | 311-10.0KLRCT-ND          | 8        |
| Fitted | R5, R12   | R0402                | 1k        | RES 1k 62.5mW 1% 0402                                   | YAGEO                | RC0402FR-071KL           | Digi-Key   | 311-1.00KLRCT-ND          | 2        |
| Fitted | R6  | NCU15XH103F6SRC      | 10k 3380K | RES NTC 10k 3380K                                       | Murata Electronics   | NCU15XH103F6SRC          | Digi-Key   | 490-NCU15XH103F6SRCCT-ND  | 1        |
| Fitted | R10   | R0402                | 0R        | RES 0R 0402   | YAGEO                | RC0402FR-070RL           | Digi-Key   | 311-0.0LRCT-ND            | 1        |
| Fitted | R11, R14, R15, R16, R17                                     | R0402                | 220R      | RES 220R 62.5mW 1% 0402                                 | YAGEO                | RC0402FR-07220RL         | Digi-Key   | 311-220LRCT-ND            | 5        |
| Fitted | R20, R21, R24, R25  | R0402                | 22R       | RES 22R 62.5mW 1% 0402                                  | YAGEO                | RC0402FR-0722RL          | Digi-Key   | 311-22.0LRCT-ND           | 4        |
| Fitted | R22, R23  | R0402                | 8R2       | RES 8R2 62.5mW 1% 0402                                  | YAGEO                | RC0402FR-078R2L          | Digi-Key   | 13-RC0402FR-078R2LCT-ND   | 2        |
| Fitted | S1, S2, S3  | PTS636               |           | BUTTON SPST 12V 50mA 6x3.5x4.3mm                        | C&K                  | PTS636 SK43 SMTR LFS     | Digi-Key   | CKN12311-1-ND             | 3        |
| Fitted | TP2, TP3  | 5019                 |           | TP SMD 3.81x 2.03mm                                     | Keystone Electronics | 5019                     | Digi-Key   | 36-5019CT-ND              | 2        |
| Fitted | U1  | USBLC6-2SC6          |           | IC Dual ESD Protection SOT23-6                          | STMicroelectronics   | USBLC6-2SC6              | Digi-Key   | 497-5235-1-ND             | 1        |
| Fitted | U2  | ECS-2520MV-080-CN-TR |           | OSC 8MHz Enable/Disable 1.6V-3.6V 4-SMD 2.5x2mm         | ECS Inc.             | ECS-2520MV-080-CN-TR     | Digi-Key   | XC3029CT-ND               | 1        |
| Fitted | U3  | STM32F401CCU6        |           | MCU ARM-Cortex-M4 256kB_FLASH 64kB_RAM 1.7-3.6V UQFPN48 | STMicroelectronics   | STM32F401CCU6            | Digi-Key   | 497-17426-ND              | 1        |
| Fitted | U4  | STNS01PUR            |           | Charger Single Lilon 5.4V 12-DFN                        | STMicroelectronics   | STNS01PUR                | Digi-Key   | 497-13880-1-ND            | 1        |
| Fitted | U5, U8  | TPS22919DCKR         |           | POWER-DISTRIBUTION Single Switch 5.5V SOT363            | Texas Instruments    | TPS22919DCKR             | Digi-Key   | 296-TPS22919DCKRCT-ND     | 2        |
| Fitted | U6, U7, U9  | TLV9002SIRUGR        |           | OPAMP DUAL 1MHz 1.8-5.5V X2OFN                          | Texas Instruments    | TLV9002SIRUGR            | Digi-Key   | 296-TLV9002SIRUGRCT-ND    | 3        |
| Fitted | U10   | HC-12                |           | RF Module UART  | HC Tech              | HC-12                    | AliExpress | HC-12                     | 1        |