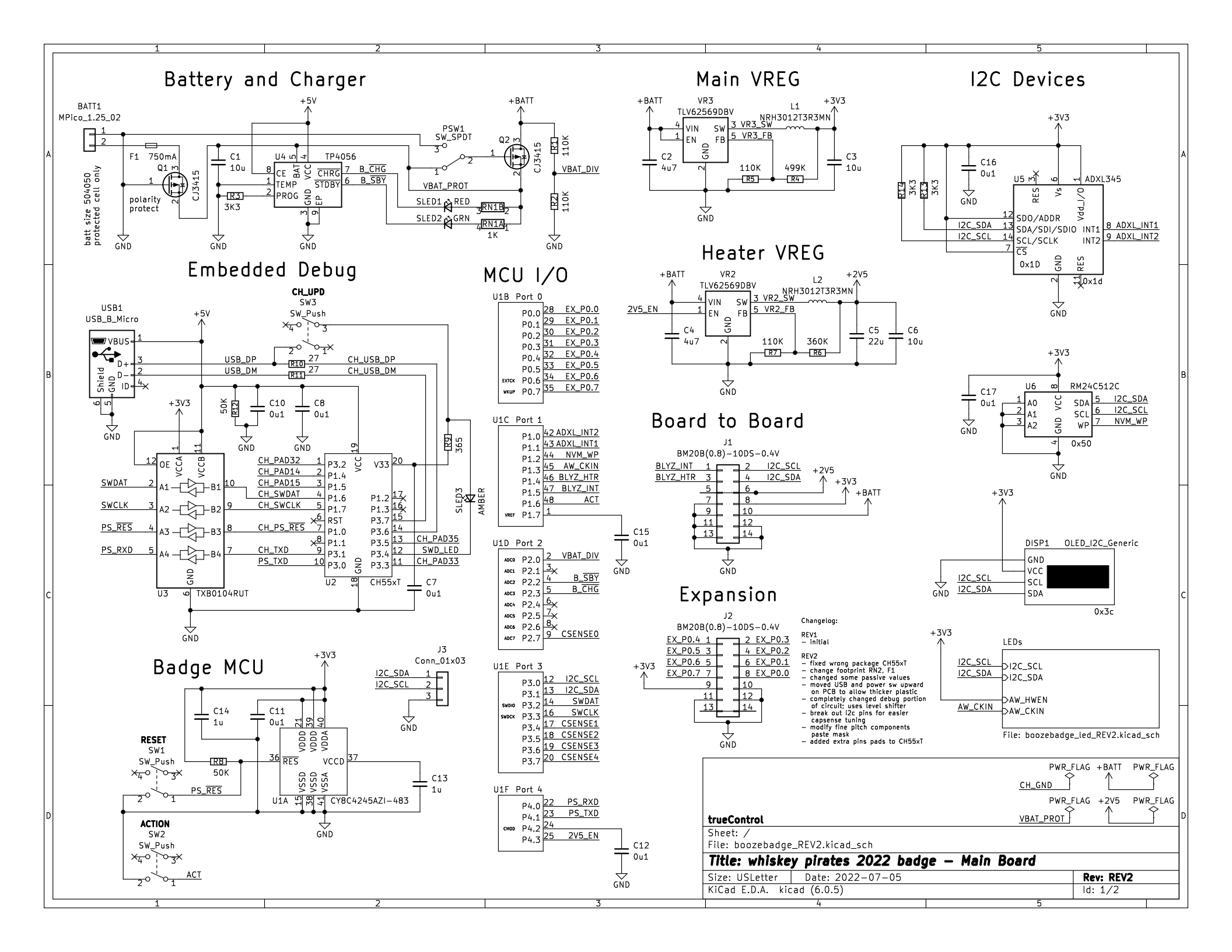
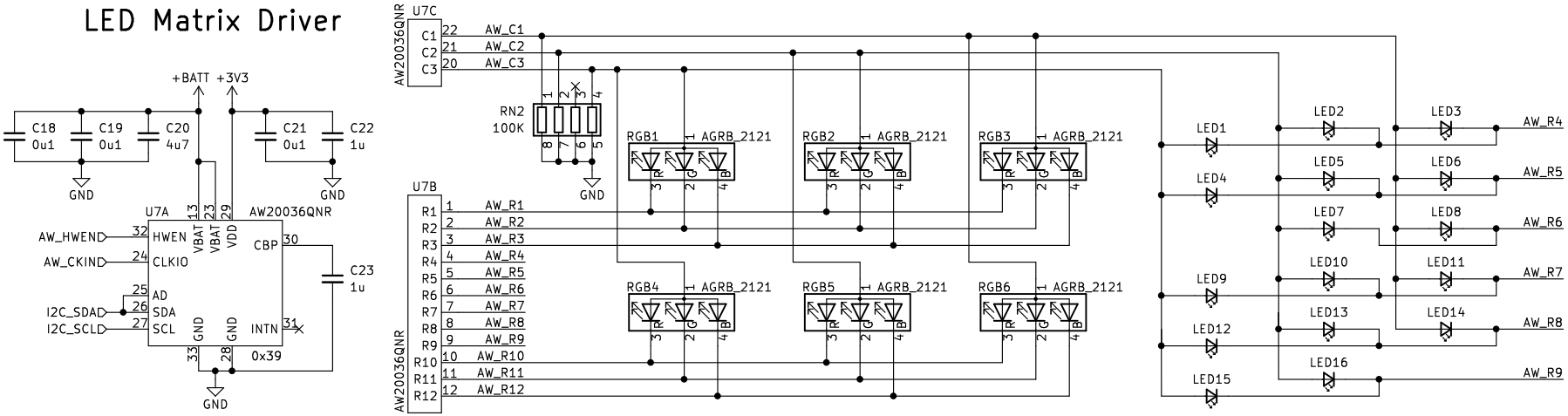

Battery and Charger
Main VREG
I2C Devices
Embedded Debug
MCU I/O
Heater VREG
Board to Board
Expansion
Badge MCU
BATT1
MPico_1.25_02
batt size 504050
protected cell only
F1 750mA
polarity protect
Q1 CJ3415
C1 10u
U4 TP4056
CE
TEMP
PROG
BAT
VCC
CHRG
STDBY
GND
EP
B_CHG
B_SBY
R3 3K3
PSW1 SW_SPDT
Q2 CJ3415
R1 110K
R2 110K
VBAT_DIV
VBAT_PROT
SLED1 RED
SLED2 GRN
RN1B
RN1A 1K
+5V
+BATT
GND
VR3 TLV62569DBV
L1 NRH3012T3R3MN
+3V3
C2 4u7
C3 10u
VIN
EN
SW
FB
VR3_SW
VR3_FB
R5 110K
R4 499K
U5 ADXL345
RES
Vs
Vdd_I/O
SDO/ADDR
SDA/SDI/SDIO
SCL/SCLK
CS
INT1
INT2
I2C_SDA
I2C_SCL
ADXL_INT1
ADXL_INT2
0x1D
0x1d
C16 0u1
R14 3K3
R13 3K3
USB1
USB_B_Micro
VBUS
D+
D-
ID
Shield
USB_DP
USB_DM
CH_USB_DP
CH_USB_DM
R10 27
R11 27
SW3 SW_Push
CH_UPD
R12 50K
C10 0u1
C8 0u1
U3 TXB0104RUT
OE
VCCA
VCCB
A1
A2
A3
A4
B1
B2
B3
B4
SWDAT
SWCLK
PS_RES
PS_RXD
U2 CH55xT
VCC
V33
P3.2
P1.4
P1.5
P1.6
P1.7
RST
P1.0
P1.1
P3.1
P3.0
P1.2
P1.3
P3.7
P3.6
P3.5
P3.4
P3.3
CH_PAD32
CH_PAD14
CH_PAD15
CH_SWDAT
CH_SWCLK
CH_PS_RES
CH_TXD
PS_TXD
CH_PAD35
SWD_LED
CH_PAD33
R9 365
SLED3 AMBER
C7 0u1
U1B Port 0
U1C Port 1
U1D Port 2
U1E Port 3
U1F Port 4
P0.0
P0.1
P0.2
P0.3
P0.4
P0.5
P0.6
P0.7
EXTCK
WKUP
EX_P0.0
EX_P0.1
EX_P0.2
EX_P0.3
EX_P0.4
EX_P0.5
EX_P0.6
EX_P0.7
P1.0
P1.1
P1.2
P1.3
P1.4
P1.5
P1.6
P1.7
VREF
ADXL_INT2
ADXL_INT1
NVM_WP
AW_CKIN
BLYZ_HTR
BLYZ_INT
ACT
C15 0u1
P2.0
P2.1
P2.2
P2.3
P2.4
P2.5
P2.6
P2.7
ADC0
ADC1
ADC2
ADC3
ADC4
ADC5
ADC6
ADC7
VBAT_DIV
B_SBY
B_CHG
CSENSE0
P3.0
P3.1
P3.2
P3.3
P3.4
P3.5
P3.6
P3.7
SWDIO
SWDCK
I2C_SCL
I2C_SDA
SWDAT
SWCLK
CSENSE1
CSENSE2
CSENSE3
CSENSE4
P4.0
P4.1
P4.2
P4.3
CMOD
PS_RXD
PS_TXD
2V5_EN
C12 0u1
VR2 TLV62569DBV
L2 NRH3012T3R3MN
+2V5
C4 4u7
C5 22u
C6 10u
R7 110K
R6 360K
VR2_SW
VR2_FB
J1 BM20B(0.8)-10DS-0.4V
+2V5
C17 0u1
U6 RM24C512C
A0
A1
A2
WP
NVM_WP
0x50
DISP1 OLED_I2C_Generic
0x3c
J2 BM20B(0.8)-10DS-0.4V
EX_P0.4
EX_P0.5
EX_P0.6
EX_P0.7
EX_P0.3
EX_P0.2
EX_P0.1
EX_P0.0
Changelog:
REV1
- initial
REV2
- fixed wrong package CH55xT
- change footprint RN2, F1
- changed some passive values
- moved USB and power sw upward on PCB to allow thicker plastic
- completely changed debug portion of circuit: uses level shifter
- break out I2c pins for easier capsense tuning
- modify fine pitch components paste mask
- added extra pins pads to CH55xT
LEDs
AW_HWEN
AW_CKIN
File: boozebadge_led_REV2.kicad_sch
RESET
SW1
SW_Push
R8 50K
ACTION
SW2
ACT
C14 1u
C11 0u1
C13 1u
U1A CY8C4245AZI-483
VDDD
VDDA
VSSD
VSSA
VCCD
J3 Conn_01x03
PWR_FLAG
CH_GND
VBAT_PROT
trueControl
Sheet: /
File: boozebadge_REV2.kicad_sch
Title: whiskey pirates 2022 badge – Main Board
Size: USLetter
Date: 2022-07-05
Rev: REV2
KiCad E.D.A. kicad (6.0.5)
Id: 1/2



trueControl

Sheet: /LEDs/

File: boozebadge_led_REV2.kicad_sch

Title: whiskey pirates 2022 badge – LED section

Size: USLetter	Date: 2022-07-05	**Rev: REV2**
KiCad E.D.A. kicad (6.0.5)		Id: 2/2