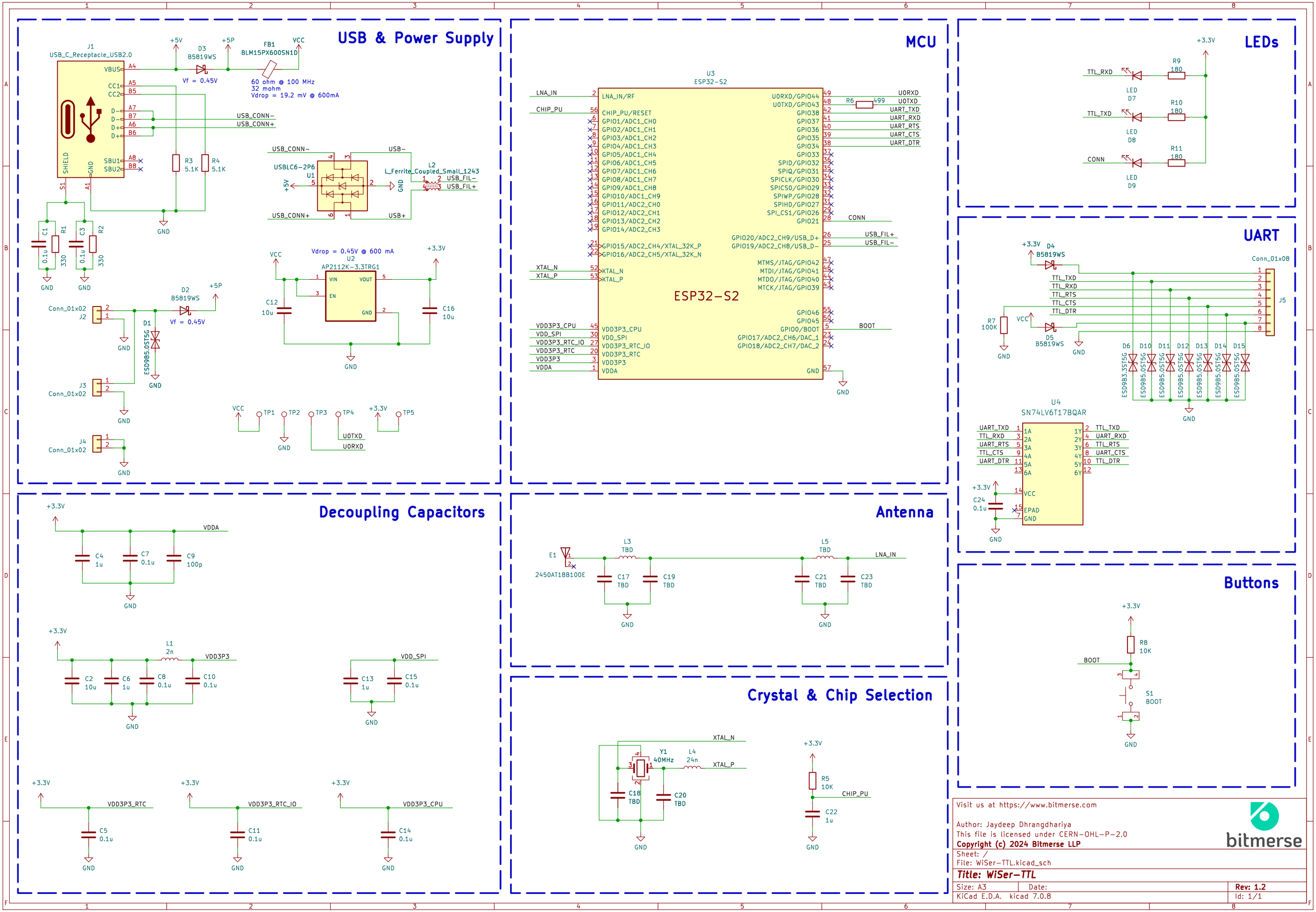
USB & Power Supply
J1
USB_C_Receptacle_USB2.0
VBUS
CC1
CC2
D-
D-
D+
D+
SHIELD
GND
SBU1
SBU2
+5V
D3
B5819WS
+5P
FB1
BLM15PX600SN1D
VCC
Vf = 0.45V
60 ohm @ 100 MHz
32 mohm
Vdrop = 19.2 mV @ 600mA
USB_CONN-
USB_CONN+
R3
5.1K
R4
5.1K
C1
0.1u
R1
330
C3
0.1u
R2
330
USB_CONN-
USB-
USBLC6-2P6
U1
+5V
GND
L2
L_Ferrite_Coupled_Small_1243
USB_FIL-
USB_FIL+
USB_CONN+
USB+
Conn_01x02
J2
D2
B5819WS
+5P
Vf = 0.45V
D1
ESD9B5.0ST5G
J3
Conn_01x02
J4
Conn_01x02
VCC
Vdrop = 0.45V @ 600 mA
U2
AP2112K-3.3TRG1
VIN
VOUT
EN
GND
+3.3V
C12
10u
C16
10u
VCC
TP1
TP2
TP3
TP4
+3.3V
TP5
U0TXD
U0RXD
MCU
U3
ESP32-S2
LNA_IN
CHIP_PU
XTAL_N
XTAL_P
VDD3P3_CPU
VDD_SPI
VDD3P3_RTC_IO
VDD3P3_RTC
VDD3P3
VDDA
LNA_IN/RF
CHIP_PU/RESET
GPIO1/ADC1_CH0
GPIO2/ADC1_CH1
GPIO3/ADC1_CH2
GPIO4/ADC1_CH3
GPIO5/ADC1_CH4
GPIO6/ADC1_CH5
GPIO7/ADC1_CH6
GPIO8/ADC1_CH7
GPIO9/ADC1_CH8
GPIO10/ADC1_CH9
GPIO11/ADC2_CH0
GPIO12/ADC2_CH1
GPIO13/ADC2_CH2
GPIO14/ADC2_CH3
GPIO15/ADC2_CH4/XTAL_32K_P
GPIO16/ADC2_CH5/XTAL_32K_N
VDD3P3_CPU
VDD_SPI
VDD3P3_RTC_IO
VDD3P3_RTC
VDD3P3
VDDA
U0RXD/GPIO44
U0TXD/GPIO43
GPIO38
GPIO37
GPIO36
GPIO35
GPIO34
GPIO33
SPID/GPIO32
SPIQ/GPIO31
SPICLK/GPIO30
SPICS0/GPIO29
SPIWP/GPIO28
SPIHD/GPIO27
SPI_CS1/GPIO26
GPIO21
GPIO20/ADC2_CH9/USB_D+
GPIO19/ADC2_CH8/USB_D-
MTMS/JTAG/GPIO42
MTDI/JTAG/GPIO41
MTDO/JTAG/GPIO40
MTCK/JTAG/GPIO39
GPIO46
GPIO45
GPIO0/BOOT
GPIO17/ADC2_CH6/DAC_1
GPIO18/ADC2_CH7/DAC_2
GND
R6
499
U0RXD
U0TXD
UART_TXD
UART_RXD
UART_RTS
UART_CTS
UART_DTR
CONN
USB_FIL+
USB_FIL-
BOOT
GND
LEDs
+3.3V
TTL_RXD
R9
180
LED
D7
TTL_TXD
R10
180
LED
D8
CONN
R11
180
LED
D9
UART
+3.3V
D4
B5819WS
Conn_01x08
J5
TTL_TXD
TTL_RXD
TTL_RTS
TTL_CTS
TTL_DTR
R7
100K
VCC
D5
B5819WS
D6
D10
D11
D12
D13
D14
D15
ESD9B3.3ST5G
ESD9B5.0ST5G
U4
SN74LV6T17BQAR
UART_TXD
TTL_RXD
UART_RTS
TTL_CTS
UART_DTR
1A
2A
3A
4A
5A
6A
1Y
2Y
3Y
4Y
5Y
6Y
TTL_TXD
UART_RXD
TTL_RTS
UART_CTS
TTL_DTR
VCC
EPAD
GND
C24
0.1u
Decoupling Capacitors
+3.3V
VDDA
C4
1u
C7
0.1u
C9
100p
L1
2n
VDD3P3
C2
10u
C6
1u
C8
0.1u
C10
0.1u
VDD_SPI
C13
1u
C15
0.1u
VDD3P3_RTC
C5
0.1u
VDD3P3_RTC_IO
C11
0.1u
VDD3P3_CPU
C14
0.1u
Antenna
E1
2450AT18B100E
L3
TBD
C17
TBD
C19
TBD
L5
TBD
LNA_IN
C21
TBD
C23
TBD
Crystal & Chip Selection
XTAL_N
Y1
40MHz
L4
24n
XTAL_P
C18
TBD
C20
TBD
R5
10K
CHIP_PU
C22
1u
Buttons
R8
10K
BOOT
S1
BOOT
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