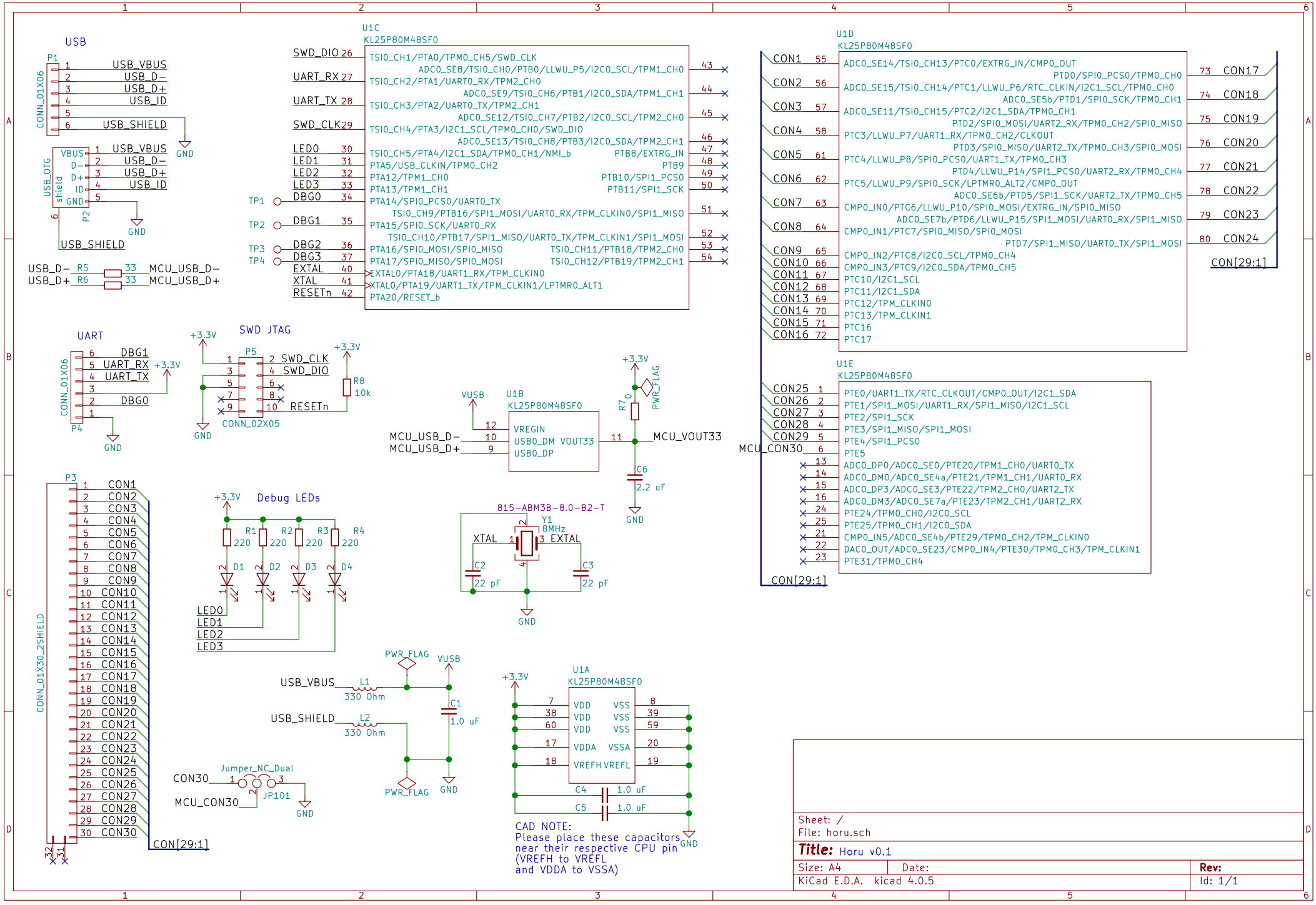
USB
P1
CONN_01X06
USB_VBUS
USB_D−
USB_D+
USB_ID
USB_SHIELD
GND
USB_OTG
VBUS
D−
D+
ID
GND
shield
P2
USB_SHIELD
USB_D− R5 33 MCU_USB_D−
USB_D+ R6 33 MCU_USB_D+
U1C
KL25P80M48SF0
SWD_DIO 26
TSI0_CH1/PTA0/TPM0_CH5/SWD_CLK
ADC0_SE8/TSI0_CH0/PTB0/LLWU_P5/I2C0_SCL/TPM1_CH0
UART_RX 27
TSI0_CH2/PTA1/UART0_RX/TPM2_CH0
ADC0_SE9/TSI0_CH6/PTB1/I2C0_SDA/TPM1_CH1
UART_TX 28
TSI0_CH3/PTA2/UART0_TX/TPM2_CH1
ADC0_SE12/TSI0_CH7/PTB2/I2C0_SCL/TPM2_CH0
SWD_CLK 29
TSI0_CH4/PTA3/I2C1_SCL/TPM0_CH0/SWD_DIO
ADC0_SE13/TSI0_CH8/PTB3/I2C0_SDA/TPM2_CH1
LED0 30
TSI0_CH5/PTA4/I2C1_SDA/TPM0_CH1/NMI_b
PTB8/EXTRG_IN
LED1 31
PTA5/USB_CLKIN/TPM0_CH2
PTB9
LED2 32
PTA12/TPM1_CH0
PTB10/SPI1_PCS0
LED3 33
PTA13/TPM1_CH1
PTB11/SPI1_SCK
TP1 DBG0 34
PTA14/SPI0_PCS0/UART0_TX
TSI0_CH9/PTB16/SPI1_MOSI/UART0_RX/TPM_CLKIN0/SPI1_MISO
TP2 DBG1 35
PTA15/SPI0_SCK/UART0_RX
TSI0_CH10/PTB17/SPI1_MISO/UART0_TX/TPM_CLKIN1/SPI1_MOSI
TP3 DBG2 36
PTA16/SPI0_MOSI/SPI0_MISO
TSI0_CH11/PTB18/TPM2_CH0
TP4 DBG3 37
PTA17/SPI0_MISO/SPI0_MOSI
TSI0_CH12/PTB19/TPM2_CH1
EXTAL 40
EXTAL0/PTA18/UART1_RX/TPM_CLKIN0
XTAL 41
XTAL0/PTA19/UART1_TX/TPM_CLKIN1/LPTMR0_ALT1
RESETn 42
PTA20/RESET_b
43 44 45 46 47 48 49 50 51 52 53 54
U1D
KL25P80M48SF0
CON1 55
ADC0_SE14/TSI0_CH13/PTC0/EXTRG_IN/CMP0_OUT
PTD0/SPI0_PCS0/TPM0_CH0
CON2 56
ADC0_SE15/TSI0_CH14/PTC1/LLWU_P6/RTC_CLKIN/I2C1_SCL/TPM0_CH0
ADC0_SE5b/PTD1/SPI0_SCK/TPM0_CH1
CON3 57
ADC0_SE11/TSI0_CH15/PTC2/I2C1_SDA/TPM0_CH1
PTD2/SPI0_MOSI/UART2_RX/TPM0_CH2/SPI0_MISO
CON4 58
PTC3/LLWU_P7/UART1_RX/TPM0_CH2/CLKOUT
PTD3/SPI0_MISO/UART2_TX/TPM0_CH3/SPI0_MOSI
CON5 61
PTC4/LLWU_P8/SPI0_PCS0/UART1_TX/TPM0_CH3
PTD4/LLWU_P14/SPI1_PCS0/UART2_RX/TPM0_CH4
CON6 62
PTC5/LLWU_P9/SPI0_SCK/LPTMR0_ALT2/CMP0_OUT
ADC0_SE6b/PTD5/SPI1_SCK/UART2_TX/TPM0_CH5
CON7 63
CMP0_IN0/PTC6/LLWU_P10/SPI0_MOSI/EXTRG_IN/SPI0_MISO
ADC0_SE7b/PTD6/LLWU_P15/SPI1_MOSI/UART0_RX/SPI1_MISO
CON8 64
CMP0_IN1/PTC7/SPI0_MISO/SPI0_MOSI
PTD7/SPI1_MISO/UART0_TX/SPI1_MOSI
CON9 65
CMP0_IN2/PTC8/I2C0_SCL/TPM0_CH4
CON10 66
CMP0_IN3/PTC9/I2C0_SDA/TPM0_CH5
CON11 67
PTC10/I2C1_SCL
CON12 68
PTC11/I2C1_SDA
CON13 69
PTC12/TPM_CLKIN0
CON14 70
PTC13/TPM_CLKIN1
CON15 71
PTC16
CON16 72
PTC17
73 CON17
74 CON18
75 CON19
76 CON20
77 CON21
78 CON22
79 CON23
80 CON24
CON[29:1]
U1E
KL25P80M48SF0
CON25 1
PTE0/UART1_TX/RTC_CLKOUT/CMP0_OUT/I2C1_SDA
CON26 2
PTE1/SPI1_MOSI/UART1_RX/SPI1_MISO/I2C1_SCL
CON27 3
PTE2/SPI1_SCK
CON28 4
PTE3/SPI1_MISO/SPI1_MOSI
CON29 5
PTE4/SPI1_PCS0
MCU_CON30 6
PTE5
13 ADC0_DP0/ADC0_SE0/PTE20/TPM1_CH0/UART0_TX
14 ADC0_DM0/ADC0_SE4a/PTE21/TPM1_CH1/UART0_RX
15 ADC0_DP3/ADC0_SE3/PTE22/TPM2_CH0/UART2_TX
16 ADC0_DM3/ADC0_SE7a/PTE23/TPM2_CH1/UART2_RX
24 PTE24/TPM0_CH0/I2C0_SCL
25 PTE25/TPM0_CH1/I2C0_SDA
21 CMP0_IN5/ADC0_SE4b/PTE29/TPM0_CH2/TPM_CLKIN0
22 DAC0_OUT/ADC0_SE23/CMP0_IN4/PTE30/TPM0_CH3/TPM_CLKIN1
23 PTE31/TPM0_CH4
CON[29:1]
UART
P4
CONN_01X06
6 DBG1
5 UART_RX
4 UART_TX
3
2 DBG0
1
+3.3V
GND
SWD JTAG
+3.3V
P5
1 2 SWD_CLK
3 4 SWD_DIO
5 6
7 8
9 10 RESETn
CONN_02X05
R8 10k
GND
VUSB
U1B
KL25P80M48SF0
12 VREGIN
MCU_USB_D− 10 USB0_DM VOUT33 11 MCU_VOUT33
MCU_USB_D+ 9 USB0_DP
+3.3V
PWR_FLAG
R7 0
C6 2.2 uF
GND
P3
CONN_01X30_2SHIELD
CON1 CON2 CON3 CON4 CON5 CON6 CON7 CON8 CON9 CON10 CON11 CON12 CON13 CON14 CON15 CON16 CON17 CON18 CON19 CON20 CON21 CON22 CON23 CON24 CON25 CON26 CON27 CON28 CON29 CON30
32 31
CON[29:1]
+3.3V
Debug LEDs
R1 220
R2 220
R3 220
R4 220
D1 D2 D3 D4
LED0
LED1
LED2
LED3
815-ABM3B-8.0-B2-T
Y1
8MHz
XTAL 1
3 EXTAL
4
C2 22 pF
C3 22 pF
GND
PWR_FLAG
VUSB
USB_VBUS L1 330 Ohm
C1 1.0 uF
USB_SHIELD L2 330 Ohm
PWR_FLAG
GND
CON30
Jumper_NC_Dual
1 2 3
JP101
MCU_CON30
GND
+3.3V
U1A
KL25P80M48SF0
7 VDD
38 VDD
60 VDD
17 VDDA
18 VREFH
8 VSS
39 VSS
59 VSS
20 VSSA
19 VREFL
C4 1.0 uF
C5 1.0 uF
GND
CAD NOTE:
Please place these capacitors
near their respective CPU pin
(VREFH to VREFL
and VDDA to VSSA)
Sheet: /
File: horu.sch
Title: Horu v0.1
Size: A4
Date:
Rev:
KiCad E.D.A. kicad 4.0.5
Id: 1/1