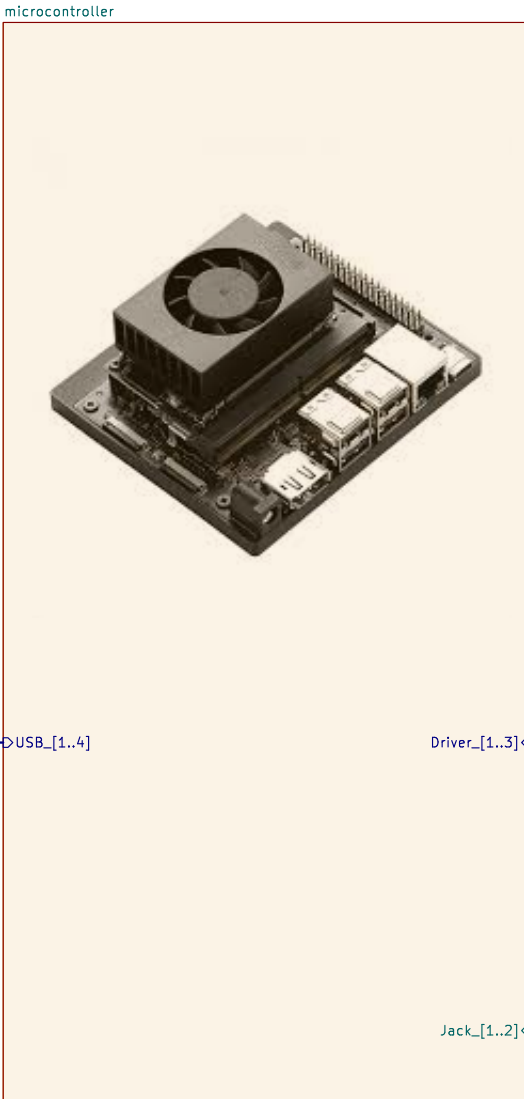
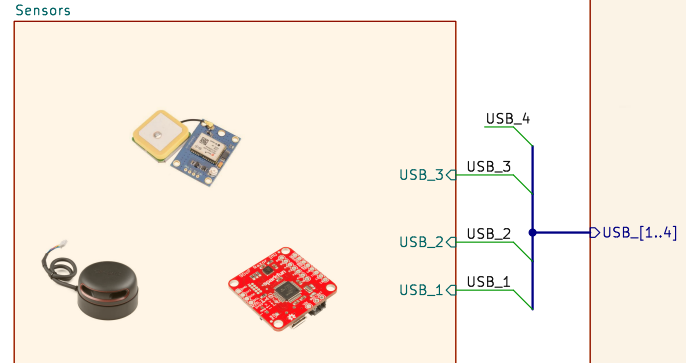


Sensors

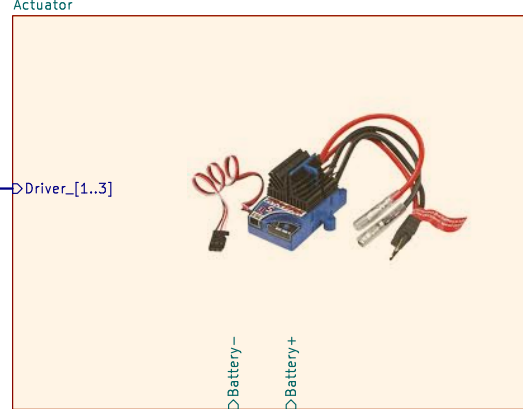


LoRa



(Antenna Gain + Power)

MotorDriver



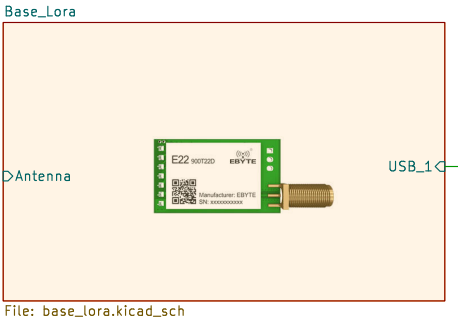
Environment

FreeSpace Path Loss (distance)

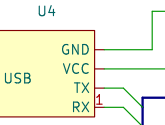
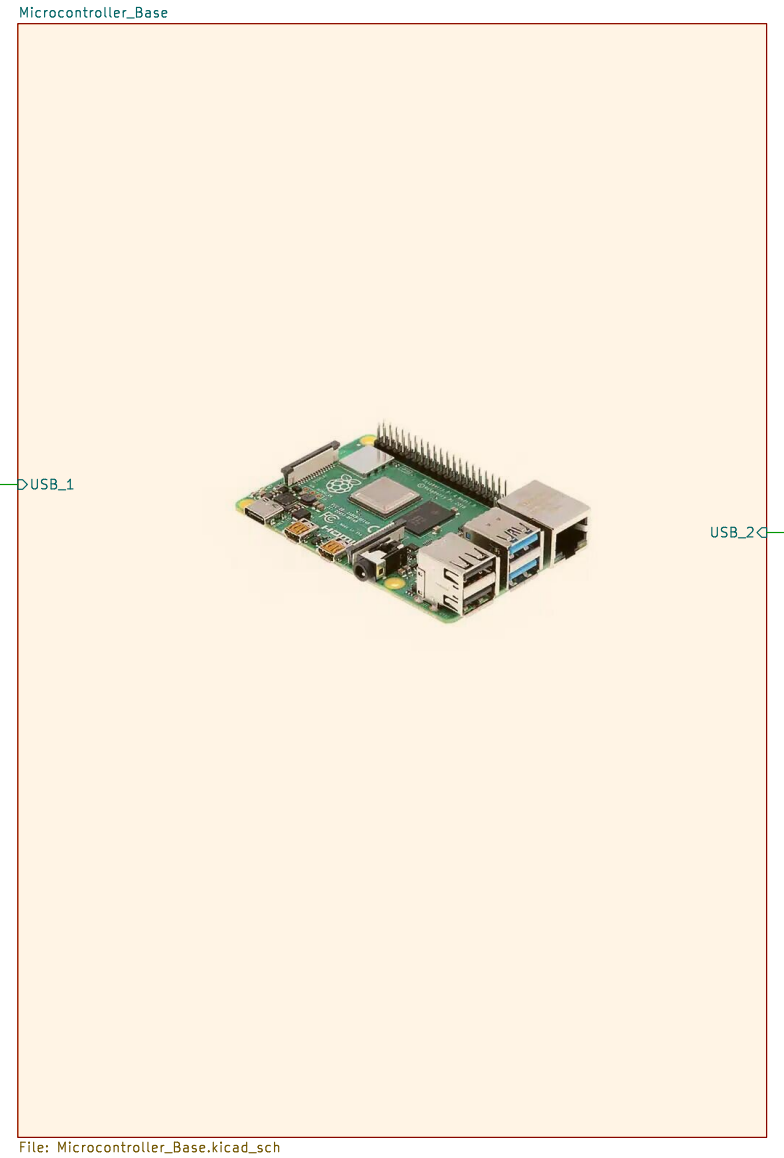
$$RSSI = P_r = P_t + G_T + G_R - (20 \cdot \log_{10}(d \cdot f) - 147.55 - Loss_{noises})$$

- P_r, P_t : Power of transmit and receive signal
- G_t, G_r : Antenna Gain of Transmitter and Receiver
- d : Distance between receiver and transmitter
- f : Communication Frequency
- -147.55 : Reference value of free distance path loss at 1 MHz and 1 meter
- $Loss_{noises}$: Path losses from noise and obstacles

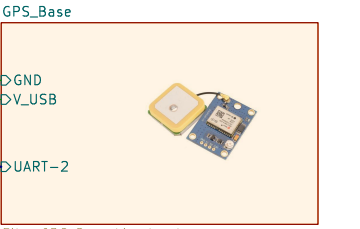
LoRa

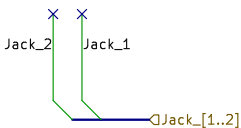
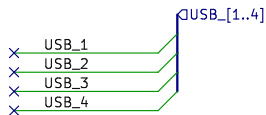
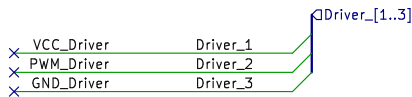


(Antenna Gain + Power)



GPS

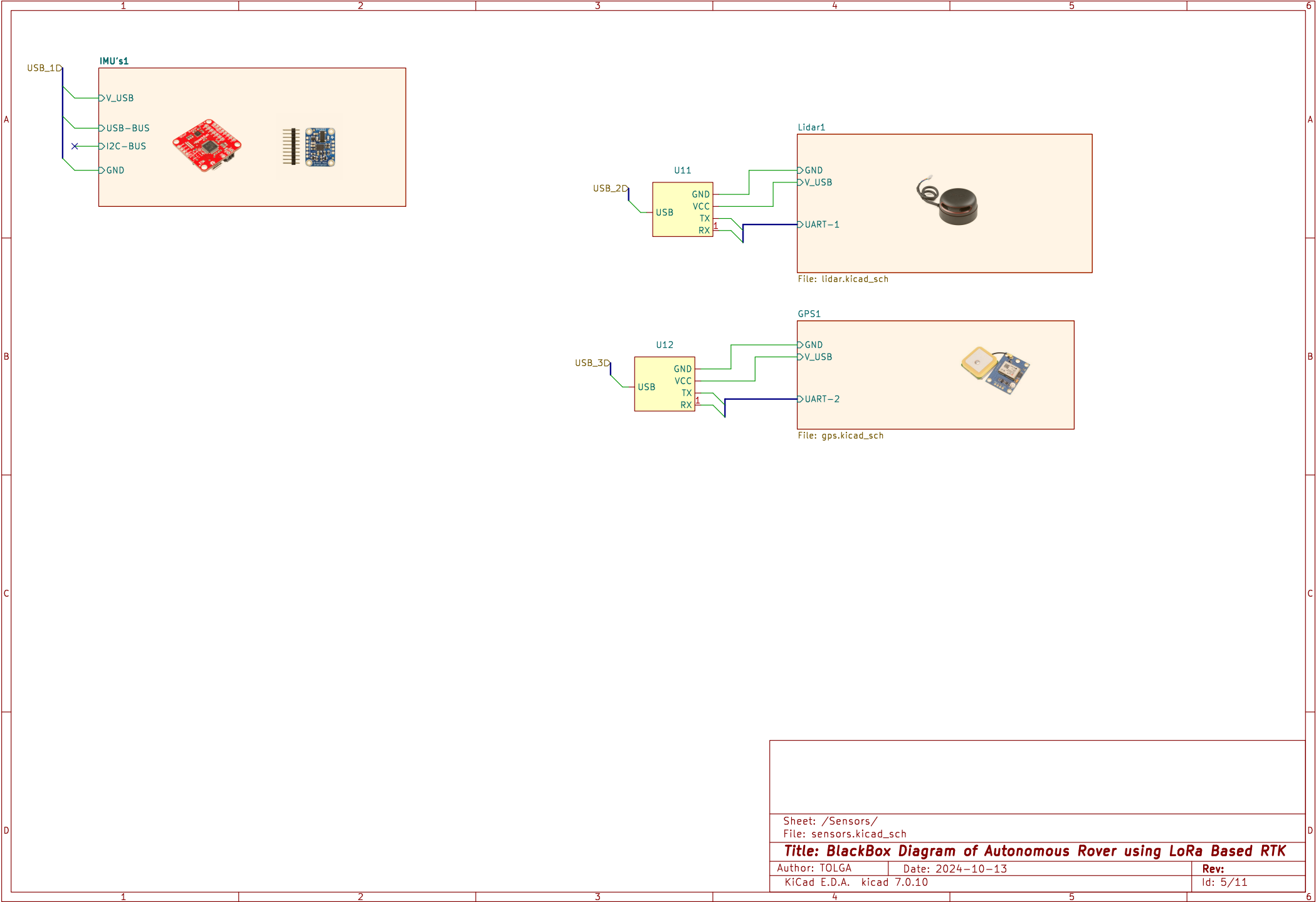




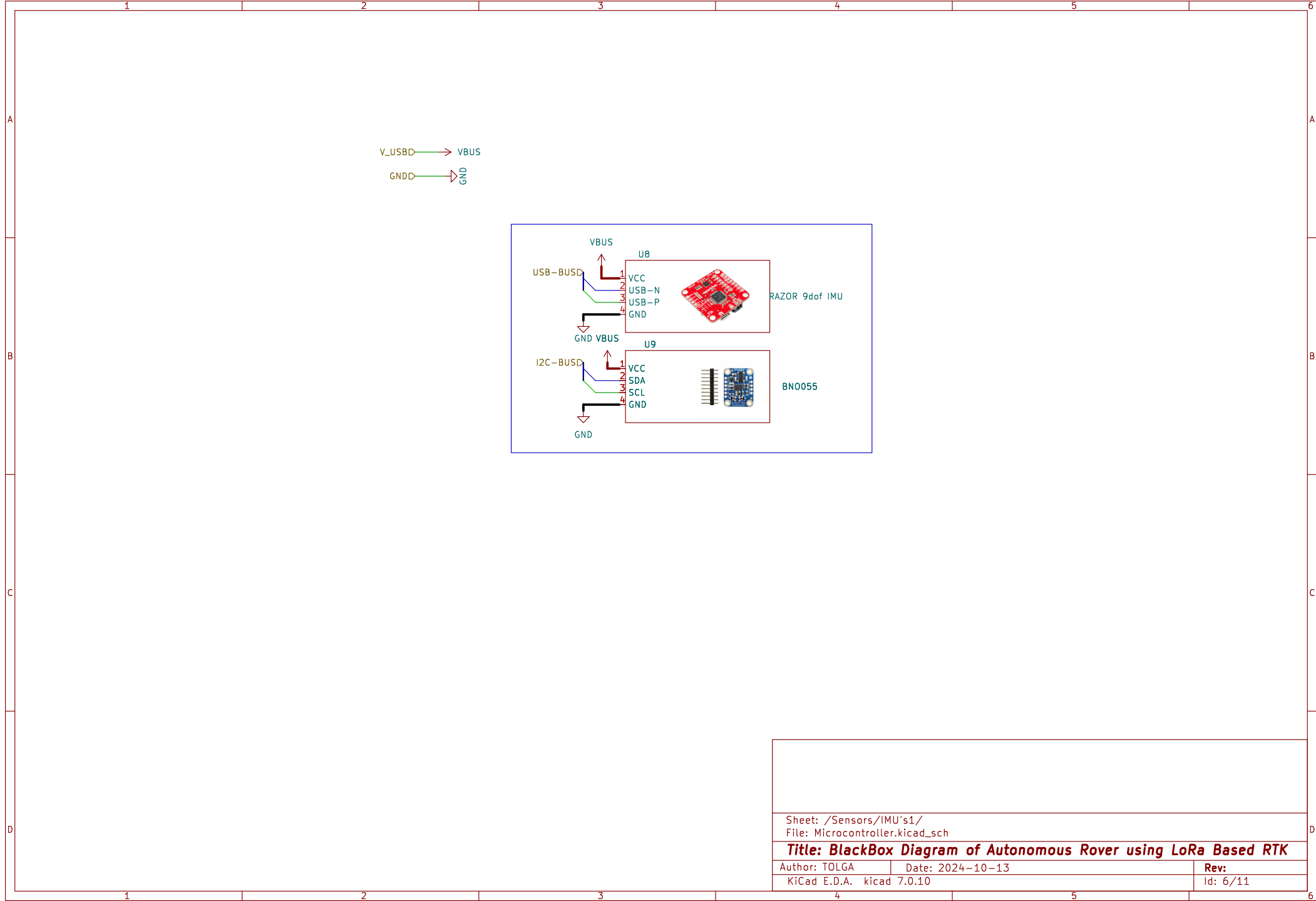
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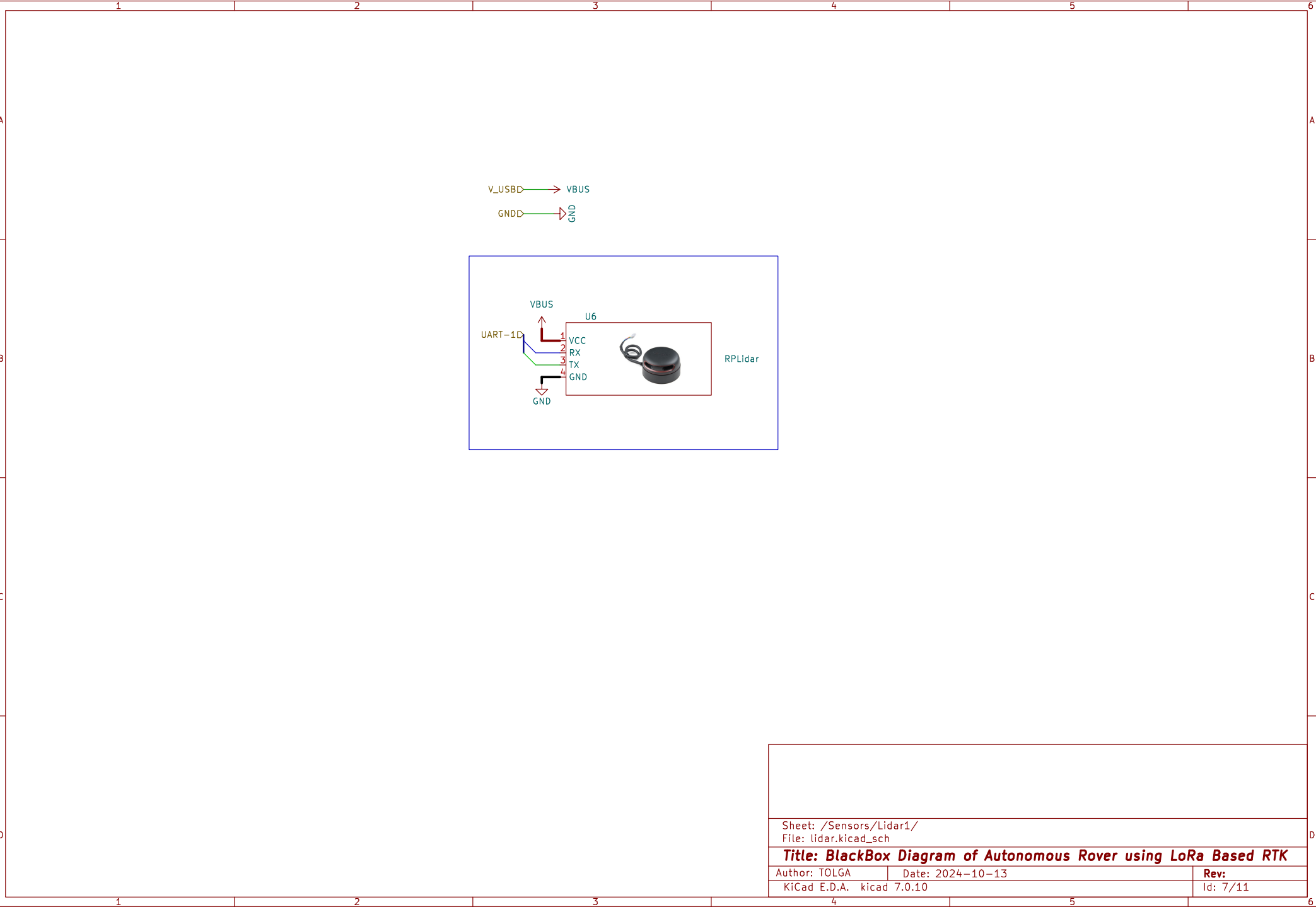
Title: BlackBox Diagram of Autonomous Rover using LoRa Based RTK

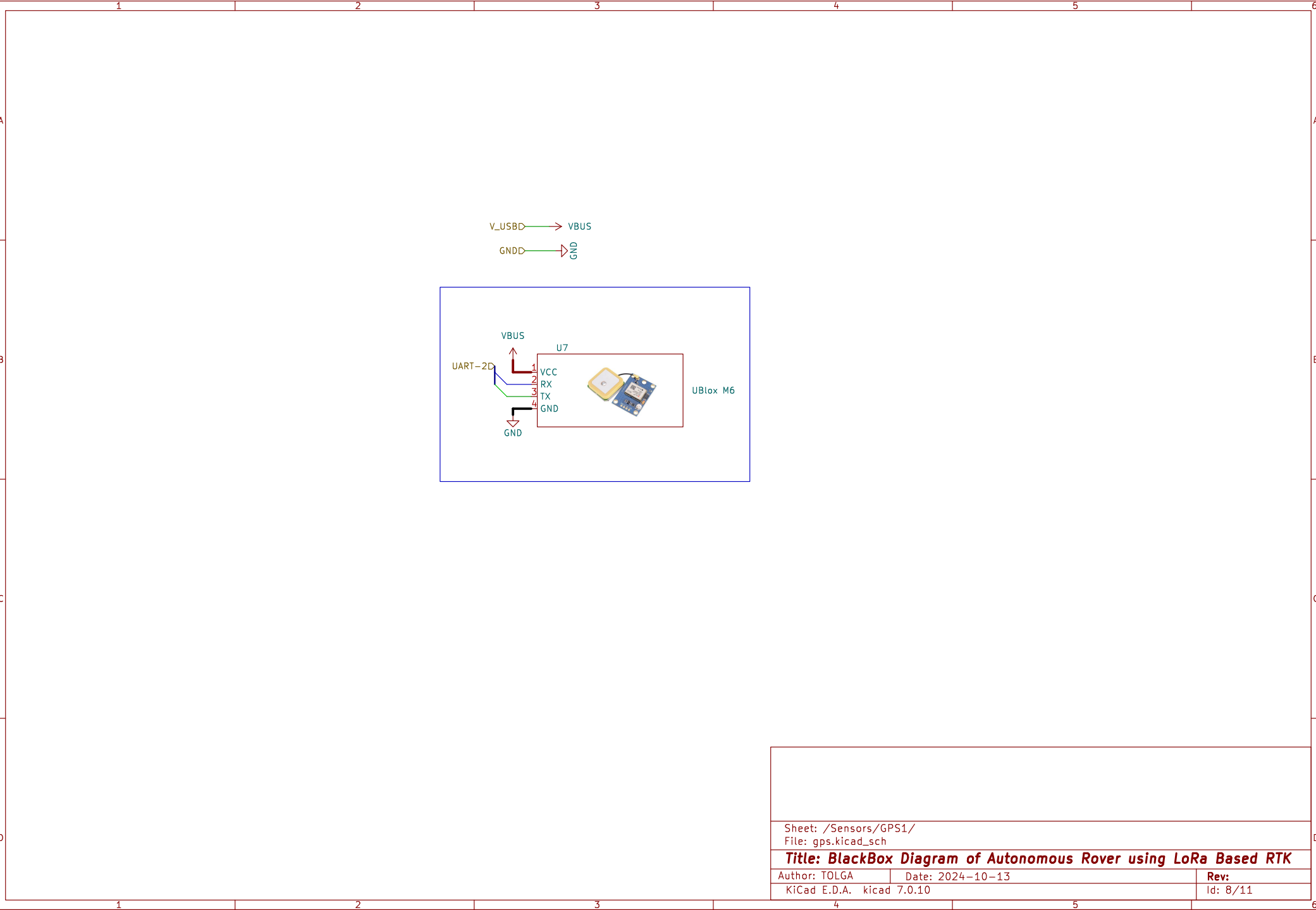
Author: TOLGA	Date: 2024-10-13	Rev:
KiCad E.D.A. kicad 7.0.10		Id: 3/11

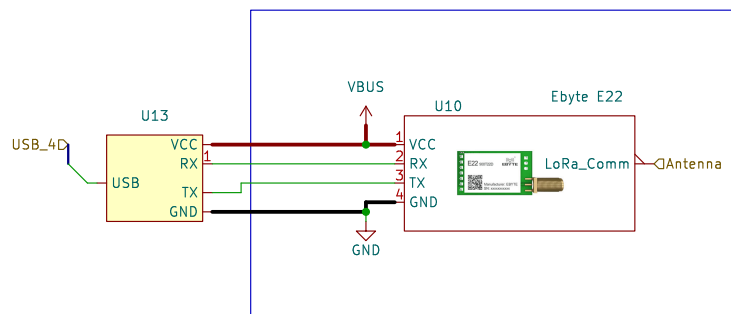


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Author: TOLGA	Date: 2024-10-13	Rev:
KiCad E.D.A. kicad 7.0.10	Id: 5/11	









LoRa

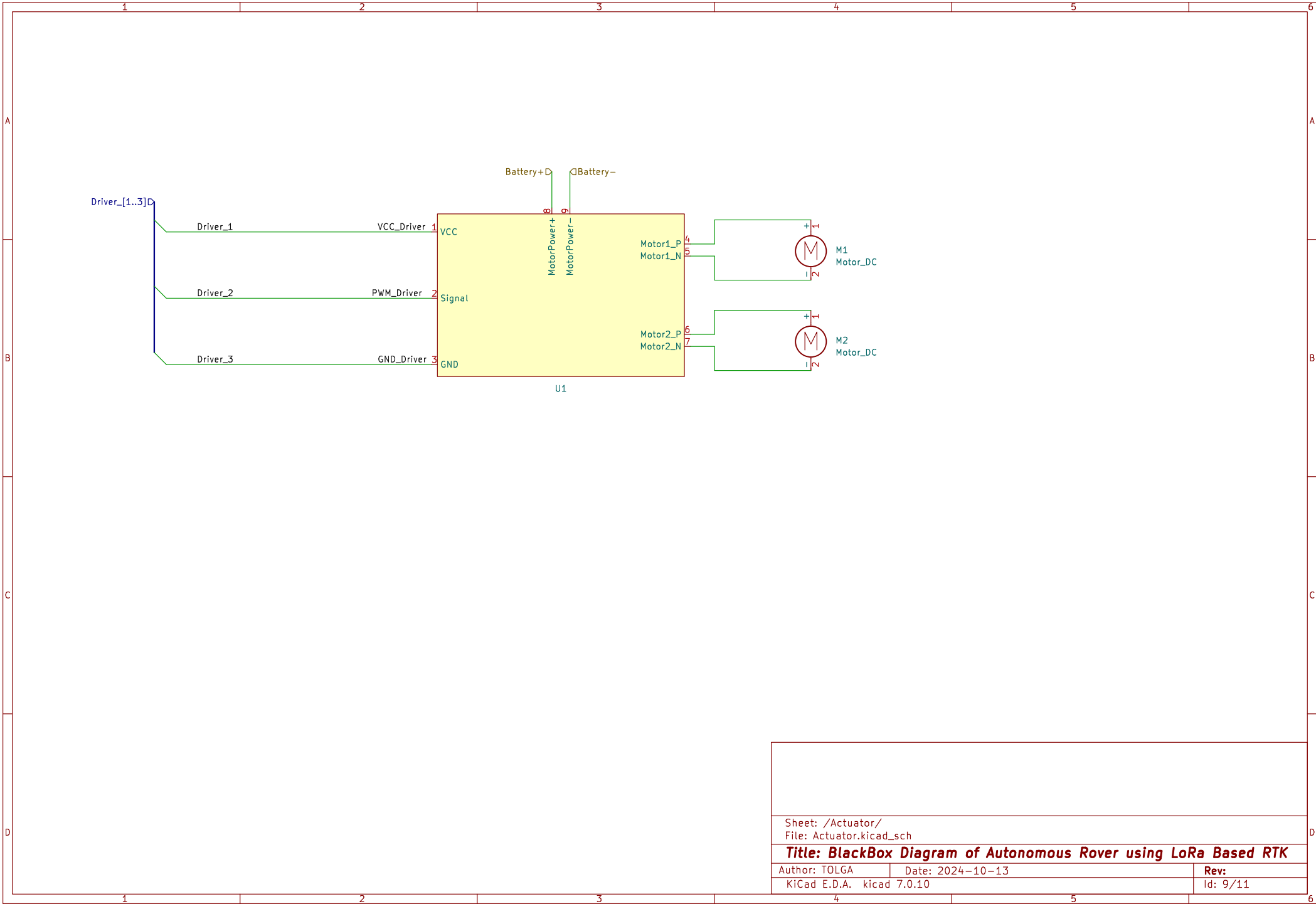
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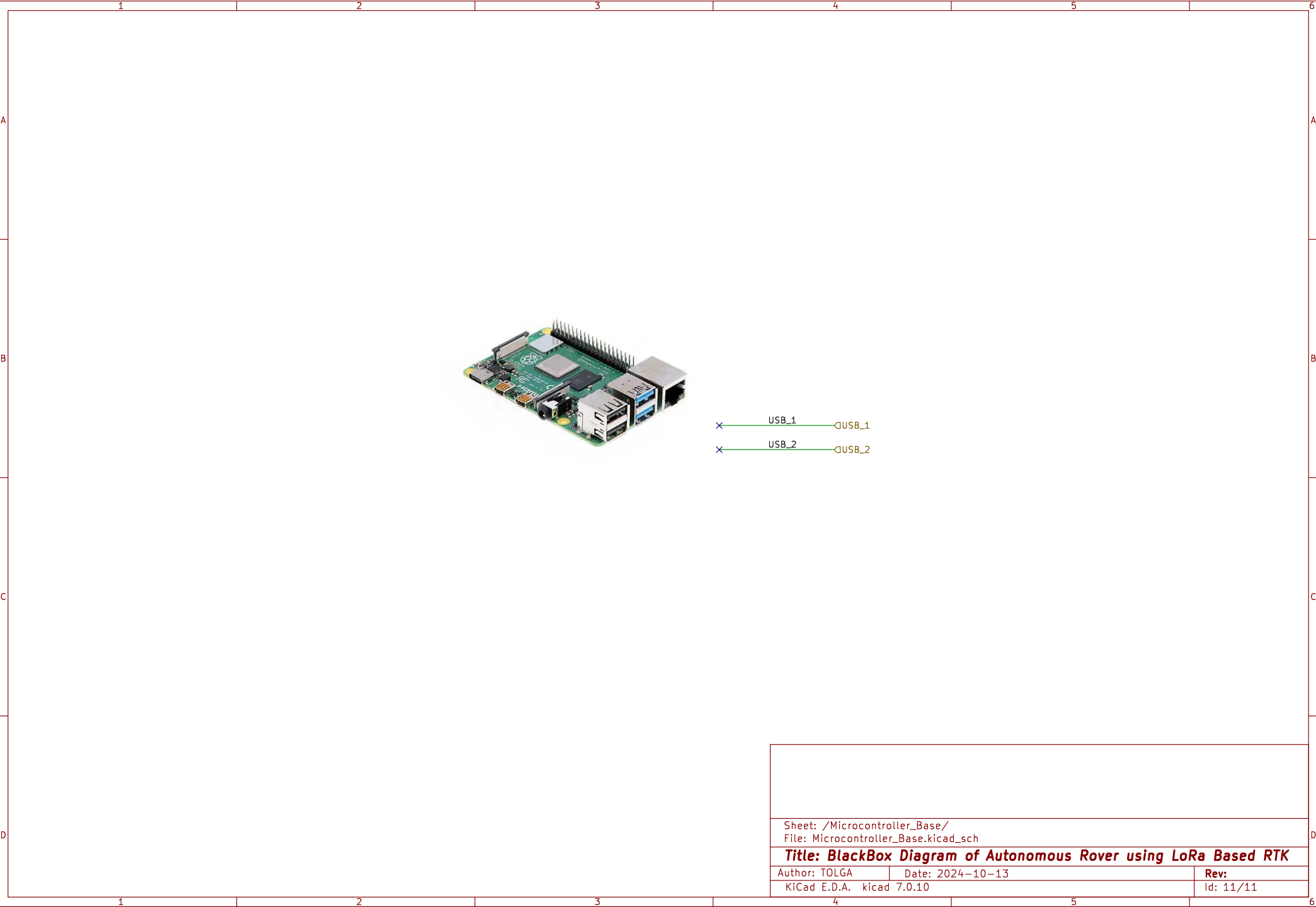
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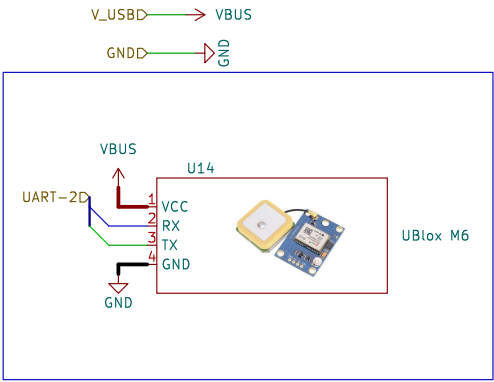
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Rev:
Id: 4/11

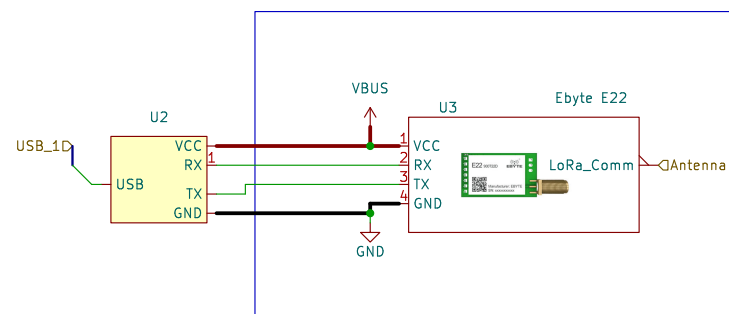




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LoRa

Sheet: /Base_Lora/
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Title: BlackBox Diagram of Autonomous Rover using LoRa Based RTK

Author: TOLGA Date: 2024-10-13

KiCad E.D.A. kicad 7.0.10

Rev:

Id: 10/11