Replicating CAN Communication for the Joystick

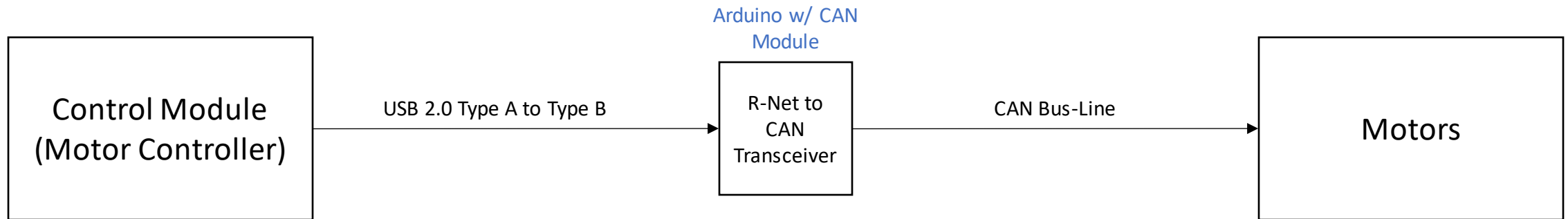ECE Senior Design T315

Motors and Control Module Interface

Figure: Higher Level CAN Interface Diagram
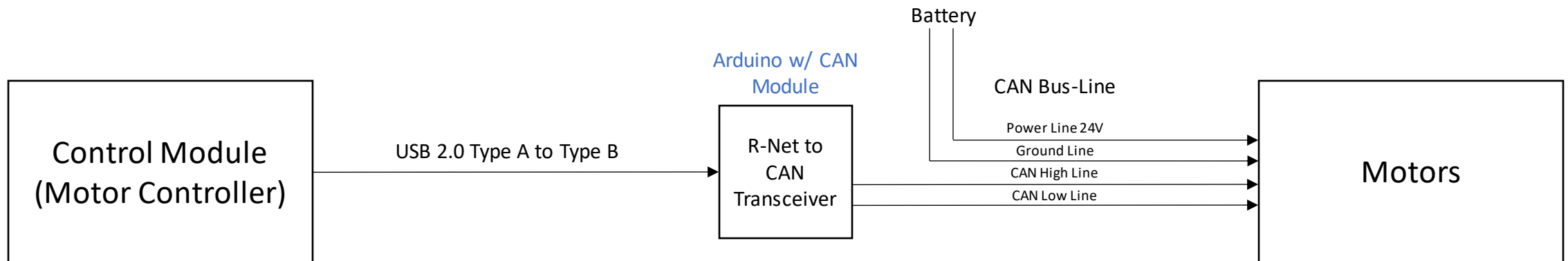
Figure: CAN Interface Wiring Diagram
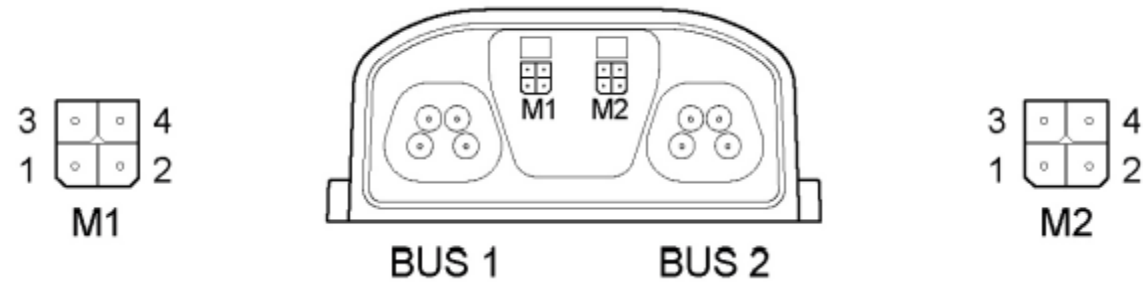
R-NET to CAN Joystick Encoder Module Wiring

Figure: Joystick Encoder Diagram

M1/M2 Pinout	Function
Power 24V	1
Ground	2
CAN Low	3
CAN High	4

Figure: Joystick Encoder Pinout

R-NET to CAN Signals in Control Module

- Determine Joystick CAN values for speed and direction
- Define possible R-NET Commands
  - Motor speed
    - 14300100#E802
  - CAN message to move Joystick forward
    - 02000100#XXYY
    - 02000100#0064
- Identify possible CAN messages for sending and receiving
  - Sending: Joystick direction every 10 ms, Power Module current for speed every 200 ms, Joystick serial number every 50 ms
  - Receiving:
  - Exchange: configuration mode (7B3#), Power Module and Joystick serial number exchange, (1FRSTtUu#)
- Build CAN frames to send to Transceiver using defined R-NET commands and possible CAN frames