Implementation Demo

Section 003
Group 11
Charlie Zhang and Daniel Suzuki

Nov 25, 2024

Amirhossein Akbarian
Sending distress signals from client to caretaker

Design Changes

Electrical Schematic Revision 1: Initial design revision
Electrical Schematic Revision 2: UART1 change
Git commit !#9e8843d: HC-05
Electrical Schematic Revision 3: Buzzer
Git commit !#da8e54d: NPN, 3,3V to 5V
Git commit !#65c287b: 1 Hz to 4Hz

Test demonstration

1. Straightforward Distance Test

Measure signal transmission delay between sender and receiver devices placed 15 meters apart indoors. Press the **SW_MEC_5G** button on the sender device and, with a timer, measure how long it takes for the receiver device to receive the signal. Passes if the red LED on the receiver's device begins flashing within 3 seconds of the button being pressed

2. Distance Through Wall Test

Assess signal transmission efficiency with a wall between sender and receiver devices, 5 meters apart indoors. Press the **SW_MEC_5G** button on the sender device and observe the green LED on the sender's device. Passes if the green LED on the sender's device lights up within 3 seconds of pressing the button.

3. Duration of Lights Test

Verify the green and red LED on the sender stays active for the specified duration after signal transmission. Press the **SW_MEC_5G** button on the sender and monitor the green and red LEDs' behavior using a timer. **Passes if the green** and red LEDs remain continuously on and flashing on and off respectively for at least 60 seconds.