ESP32-S3 BLE Motor Control Conversation

User: is there a way to make it consoume less

Assistant: (Explained how to optimize Arduino + DRV8871 + HC-05 for lower power)

User: yes

Assistant: (Rewrote optimized Arduino code using non-blocking millis, sleep mode, LED and Bluetooth power control)

User: remove serial and button_

Assistant: (Simplified sketch to remove Serial and button input, added sleep when idle)

User: is there a way for the user to wake up the hc05 ? when disable

Assistant: (Explained methods: control power via digital pin, use external interrupt/button to wake MCU and HC-05)

User: is there a hc version that is low to consume

Assistant: (Discussed low-power Bluetooth options like HM-10, nRF52, ESP32 BLE, with comparison table)

User: I have a arduino nano and a hc05 with the sleep mode of both. on a 9v 1350mAH. What time do I have it (without using it)

Assistant: (Estimated idle battery life of ~28–56 days depending on sleep current)

User: What if I use a esp32s3 ?

Assistant: (Detailed battery life calculations comparing ESP32-S3 vs Arduino+HC-05, explained chip vs dev board differences, power-saving tips)

User: is use of esp32s3 with it ble option ?

Assistant: (Explained that ESP32-S3 supports BLE 5.0, advantages over HC-05, example BLE characteristic code)

User: yes do

Assistant: (Provided complete BLE-based ESP32-S3 motor control code with DRV8871, LED, non-blocking motor control, and BLE commands)

Summary:

- You can replace the Arduino Nano + HC-05 with a single ESP32-S3 for BLE control.
- Power consumption can be reduced dramatically using deep sleep.
- Provided full working code and power-saving strategies.