

GY-56 UART communication's packet data

The GY-56 ultrasonic sensor module communicates using UART (Universal Asynchronous Receiver/Transmitter) protocol to transmit distance measurement data. Here's a typical outline of the packet data structure used in UART communication for the GY-56 sensor:

1. **Start Byte:** Usually a specific byte (often 0xFF or 0x55) indicating the start of a new data packet.
2. **Command Byte:** Specifies the type of data being transmitted. For distance measurement, this might be a specific command byte that indicates distance data.
3. **Data Bytes:** Actual measurement data, typically represented as a 16-bit integer (2 bytes) indicating the distance measured in millimetres or centimetres.
4. **Checksum Byte:** A byte used for error checking, often a simple XOR of all preceding bytes to ensure data integrity.
5. **End Byte:** Marks the end of the data packet. This could be another specific byte (like 0xFF or 0xAA) indicating the end of the packet.

Here's a simplified example of how the packet might look:

- Start Byte (1 byte)
- Command Byte (1 byte)
- Data Bytes (2 bytes for distance measurement)
- Checksum Byte (1 byte)
- End Byte (1 byte)

For instance, a possible packet could be structured as:

- Start Byte: 0xFF
- Command Byte: 0x01 (indicating distance measurement)
- Data Bytes: 0x01 0xF4 (corresponding to a distance of 500 mm)
- Checksum Byte: Calculated checksum based on preceding bytes
- End Byte: 0xAA

Please note, the exact bytes used for start, end, and checksum might vary based on the specific implementation or manufacturer's design. It's crucial to refer to the datasheet or documentation provided with your GY-56 module for precise details on the UART communication protocol it uses