5. Data Protocol For US-D1

5.1 UART Data Protocol Specifications

- Baud Rate: 115200 b/s
- Data bit: 8
- Parity bit: N
- Stop bit: 1
- Voltage Level: 3.3V

A single data packet consists of six(6) bytes. Table 2 defines the packet structure.

Table 2: UART Data Packet Definition

From	US-D1 Altimeter	To	Receiver
Byte	Data	Note	
1	0xFE	Packet Head	
2	0x02	Version ID	
3	0x**	Altitude (Least Significant 8 Bits)	
4	0x**	Altitude (Most Significant 8 Bits)	
5	0x**	SNR	
6	0x**	Checksum (see formula below)	

Notes:
- '*' refers to a variable bit containing dynamic data.
- Altitude: The altitude bytes can be combined (total 16 bits) to represent the altitude information in centimeters. The structure would be: 0x[MSB][LSB], where MSB and LSB are each two hexadecimal numbers (8 bits).
- Checksum: The Checksum Byte could be used in the following:
  - checksum = (Version_ID + Altitude_H + Altitude_L + SNR) & 0xFF
  - If checksum = 1, check passed
  - if checksum = 0, check failed