LoRa Gateway RS485 Report automatically protocol

Start symbol(1byte) + Data length(1byte) + Address(1byte) + Sensor type(1byte) + Sensor data(X byte) + Check code(2byte) + Stop symbol (1byte)

- **Start symbol**: 7FH;
- **Data length**: 1byte ,the range is from **Address** to **Check code**(include **Address**, not include **Check code**) ;
- **Address**: LoRa gateway's RS485 address,depends on the command 042;
- **Sensor type**: received Sensor type,
  01H-TAG0708 series
  03H-TAG08B(humidity unit is 0.1%,and the TAG08B default humidity unit is 0.1%).
  06H-TAG09(double temperature);

- **Sensor data**: Sensor ID + Status + Battery voltage + Temperature + Humidity + RSSI
  Sensor ID:4 byte,
  Status:1 byte;
  　　　bit7: Battery voltage status, 1-low Voltage, 0- Voltage normal;
  　　　bit6: Temperature alert status,1- Temperature alert, 0- Temperature normal.
  　　　bit5-0: reserved;

  Battery voltage: 2 byte, unit: 1mv, MSB first,
  　　　　i.e.　0C 50 means voltage is 3.152V;

  Temperature 1:2byte,unit:0.1°C, MSB first,
  　　　　bit15: Sensor is normal or abnormal`
  　　　　　1- abnormal
  　　　　　0- normal
  　　　bit14:temperature is positive(+) or negative(-),
  　　　　0-positive,
  　　　　1-negative,
  　　　bit13-0: temperature value
  　　　i.e. 01H 1FH means temperature is 28.7°C,
  　　　　41H 1FH means temperature is -28.7°C,
  　　　　80H 00H means Sensor abnormal;
  Humidity :1byte,unit:% or 2byte,unit:0.1% or 0 byte (TAG09)
  Note: 1 byte,TAG07B or TAG08B (humidity unit is %)
  2 byte,TAG08B(humidity unit is 0.1%,and the TAG08B default humidity unit is 0.1%).
  0 byte,TAG09(no humidity value display)
  if it is FFH means no humidity,
  i.e. 2DH means humidity is 45%.
  02H CFH means humidity is 71.9%

Note:Only TAG09 for dual temperature sensor, contains temperature 2, other sensor only temperature 1;

Temperature 2:2byte,unit:0.1℃, MSB first,

bit15: Sensor is normal or abnormal`

1- abnormal

0- normal

bit14:temperature is positive(+) or negative(-),

0-positive,

1-negative,

bit13-0: temperature value

i.e. 01H 1FH means temperature is 28.7℃,

41H 1FH means temperature is -28.7℃,

80H 00H means Sensor abnormal;

RSSI: 1 byte, unit:-dBm;

- **Check code**: 2 byte, LSB first, can see the **Check code** calculate function CRC16 at document RS485 modbus protocol v1.1
- **Stop symbol**: 03H.