

Communication protocol

- A serial port to send command byte.

1). A serial port communication parameters (baud rate, the default value of 115200 BPS, it can be set through software)

Baud rate: 9600 BPS check digit: N data bits, stop bits: 1

Baud rate: 115200 BPS check digit: N data bits, stop bits: 1

2). Type the command module, the external controller to GY - MCU90615 module (hexadecimal)

1. Frame head: 0 xa5

Instruction format: frame head + command + checksum (8 bit) (such as read automatically temperature instruction = 0 xa5 + 0 x45 + 0 xea)

2. Command :

Continuous output instructions:

0 xa5 + 0 x45 + 0 xea----- temperature data (module return 0 x45 data type)

Query output command:

0 xa5 + 0 x15 + 0 xba ----- temperature data (module return 0 x45 data type)

Configuration instructions: come into force after the restart when power supply drop)

Baud rate configuration:

0 xa5 + 0 xae + 0 x53 ----- 9600

0 xa5 + 0 xaf + 0 x54 -----115200 (the default)

Electricity is sent automatically temperature data configuration:

0 xa5 + 0 x51 + 0 xf6 ----- after power on automatically output temperature data

0 xa5 + 0 x52 + 0 xf7 ----- after the electricity is not automatically output temperature data (the default)

- A serial port to receive:

1). A serial port communication parameters (baud rate, the default value of 115200 BPS, it can be set through software)

Baud rate: 9600 BPS check digit: N data bits, stop bits: 1

Baud rate: 115200 BPS check digit: N data bits, stop bits: 1

2). Modules, output formats, each frame contains 9 bytes (hexadecimal) :

1. Byte0: 0x5a frame head mark

2. Byte1: 0x5a frame head mark

3. Byte2: 0x45 this frame data types (0 x45: temperature data)

4. Byte3: 0x04 data (the four data 2 group as an example)

5. Byte4: 0 x00 - 0 XFF data 1 high order 8-bit

6. Byte5: 0 x00 - 0 XFF data 1 low order 8-bit

7. Byte6: 0x00 to 0 XFF data 2 high order 8-bit

8. Byte7: 0 x00 - 0 XFF data 2 low order 8-bit

9. Byte8: 0 x00 - 0 XFF checksum (low data accumulation and front, leaving 8)

3) data calculation method

- Temperature calculation method:

Low temperature high = 8 8 | < < 8 bits (results for practical Angle is multiplied by 100)

Example: send instructions: A5 45 EA, receives a frame of data:

< 5 a - a - 45-04-0 c - 78-19 - A7 > 0 d -

Indicates TO (signed 16 bit, represents the target temperature) : TO = 0 x0c78/100 = 31.92

Indicates TA (signed 16 bit, environment temperature) : TO = 0 x0d19/100 = 33.53

Introduction for using:

The module for serial output data, the user through a serial port connection, sending output instruction, such as 0 xa5 + 0 x45 + 0 xea for module, the module will be continuous output temperature data; If want to pass the query output can send 0 xa5 + 0 x15 + 0 xba to modules, each sending, the module will return a temperature data, the query frequency should be lower than 10 hz, for higher than 10 hz please use continuous output mode, namely send xa5 + 0 0 x45 + 0 xea instructions;

NOTIC: The module IO is level TTL, can connect eith MCU pin directly, as well as chip PL2303, CH340 and FT232,etc. But never connect to computer 9 pins series directly.