

1. MODBUS-RTUcommand

register	read and write	parameter meaning	instruct	remark
0x0001	R/-	empty height	01 03 00 01 00 01 D5 CA	Unitmm, filtered data
0x0003	R/-	water level	01 03 00 03 00 01 74 0A	Unitmm, filtered data
0x0005	R/W	installation height	01 03 00 05 00 01 94 0B 01 06 00 05 [AA] [BB] [CC] [DD]	Unit: cm Distance from radar to water bottom, water level equal to installation height minus Go high. To read the water level, first set the installation height.
0x3F4	R/W	device address	01 03 03 F4 00 01 C5 BC 01 06 03 F4 [AA] [BB] [CC] [DD]	Range: 0x01 - 0xFD Broadcast support 0xFF
0x3F6	R/W	baud rate adjustment	01 03 03 F6 00 01 64 7C 01 06 03 F6 [AA] [BB] [CC] [DD]	48 96 144 192 384 560 576 1152 1290 Read, write baud rate, actual baud rate/100
0x07D4	R/W	range	01 03 07 D4 00 01 C5 46 01 06 07 D4 00 [AA] [BB] [CC]	Default: 0X0A, unit mMaximum range is related to product model

Other notes:

1. Read and write function code 03,write single register 06, default address is: 1
2. Data format: 8N1 validation: CRC16 (polynomial A001)
3. The above register numbers are decimal and need to be converted to hexadecimal. To operate these registers via MODBUS protocol, for example, to open field search mode, we need to send 01 06 07 DB 00 05 38 86

First byte, device address

Second byte, function code 0x03 Read register value,

0x06Overwrite register value Third byte, register address

Byte five or six, function code bit 0x03: Number of registers to be read Function code bit

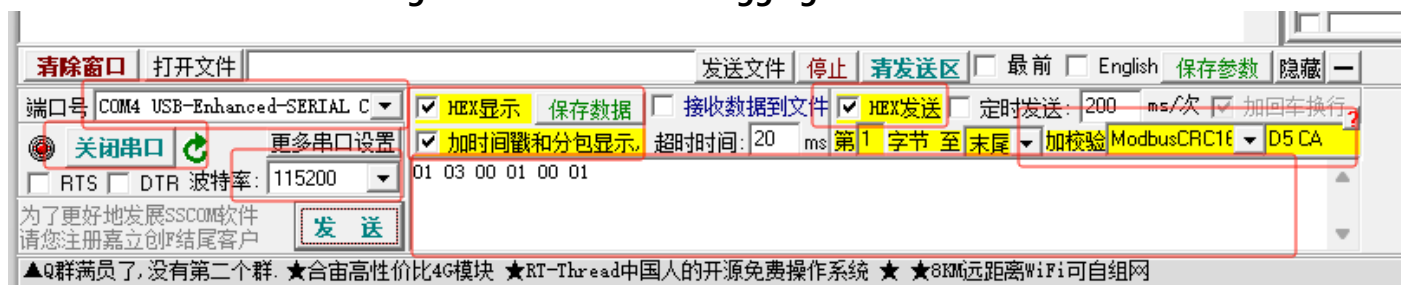
0x06: Data to be stored in registers

7th byte, CRCcheck

When we need to write registers, there will be [AA] [BB] [CC] [DD] parameters, and the values of these parameters need to be determined according to requirements.

2. MODBUS-RTUInstruction Analysis

These items need to be configured in the serial debugging assistant



Note: Select the corresponding serial port for port number, turn onHEX display,HEX transmission, adjust the baud rate to the baud rate corresponding to the equipment specification, and add check

means that the check bit of 7 and 8 bytes will be automatically added by default. If the return value is packetized, the timeout time will be set to 200 ms.

Example 1: Read empty high: Send 01 03 00 01 00 01 D5 CA command

Back 01 03 02 00 30 B8 50

01: Equipment address number

03: Read function code

02: Number of data bytes

00 30: Get the filtered null high value hexadecimal number, need to convert to decimal 48mm

B8 50: Checkpoint code

Example 2: Write 1000cm installation height: Send 01 06 00 05 03 E8 99 75 command

01: Equipment address number

06: Write function code

00 05: Register address

03 E8: hex write installation height value (decimal 1000 to hex is 03E8)

99 75: Check Code

Write successfully will return the corresponding command received: 01 06 00 05 03 E8 99 75

Example 3: Change the device address to 02: Send 01 06 03 F4 00 02 49 BD command

Return 02 06 03 F4 00 02 49 8E command

02: is the address of the new device. To use other instructions later, the address number of the device needs to be changed to 02.

For example, to query the address of a new device, it is necessary to send 02 03 00 01 00 01 D5 F9 check code.

Example 4: 115200 baud rate changed to 9600

Send 01 06 03 F6 00 60 69 94 command

Return 01 06 03 F6 00 60 69 94 Instruction

Read, write baud rate, actual baud rate/100

(then 9600 is 96) decimal 96 conversion = hexadecimal 60

So write 00 60

After successfully changing the baud rate, you need to adjust the baud rate of the serial debugging assistant to the corresponding changed baud rate.

