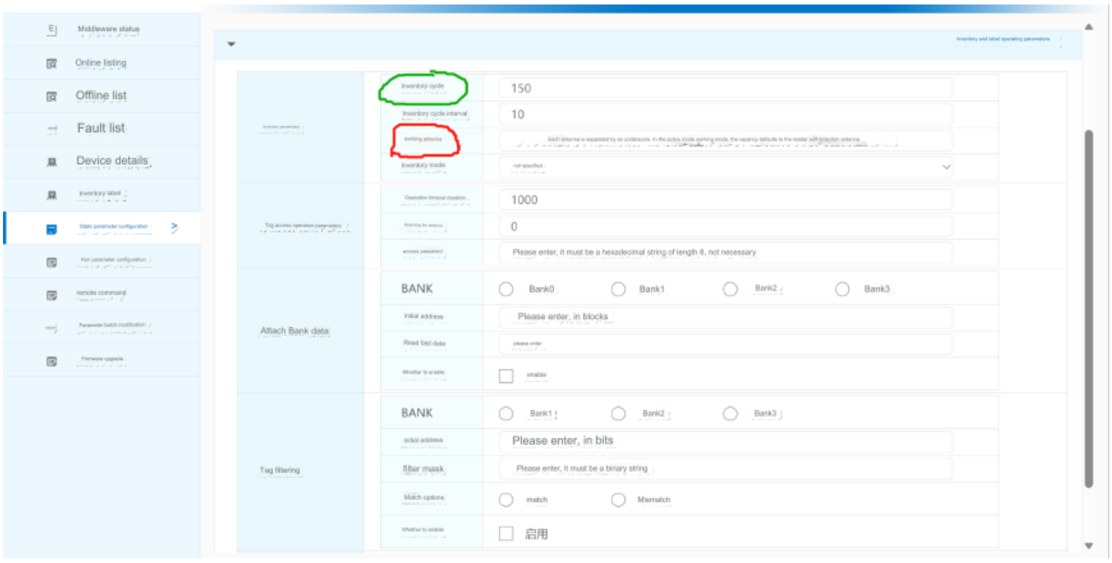
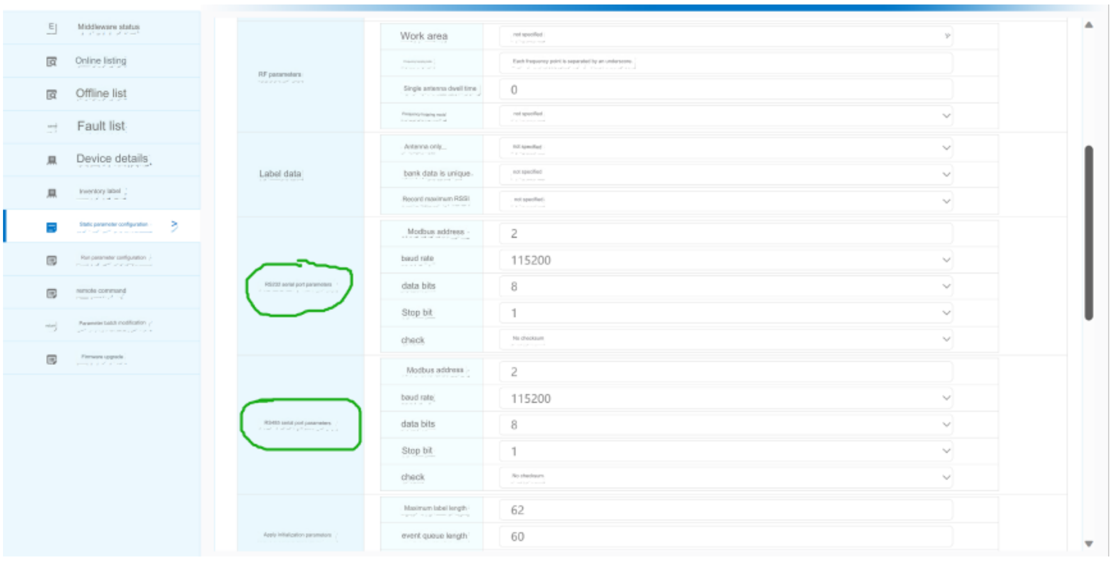


Inventory parameters
Inventory cycle: 150
Inventory cycle interval: 10
working antenna: Each antenna is separated by an underscore. In the active mode working mode, the vacancy defaults to the reader self-detection antenna.
Inventory mode: not specified

Tag access operation parameters
Operation timeout duration: 1000
[illegible]: 0
access password: Please enter, it must be a hexadecimal string of length 8, not necessary

Attach Bank data
BANK: ○ Bank0 ○ Bank1 ○ Bank2 ○ Bank3
Initial address: Please enter, in blocks
Read text data: please enter
Whether to enable: ☐ enable

Tag filtering
BANK: ○ Bank1 ○ Bank2 ○ Bank3
initial address: Please enter, in bits
filter mask: Please enter, it must be a binary string
Match options: ○ match ○ Mismatch
Whether to enable: ☐ 启用



RF parameters
Work area: not specified
[illegible]: Each frequency point is separated by an underscore.
Single antenna dwell time: 0
Frequency hopping mode: not specified

Label data
Antenna only...: not specified
bank data is unique: not specified
Record maximum RSSI: not specified

RS232 serial port parameters
Modbus address: 2
baud rate: 115200
data bits: 8
Stop bit: 1
check: No checksum

RS485 serial port parameters
Modbus address: 2
baud rate: 115200
data bits: 8
Stop bit: 1
check: No checksum

Apply initialization parameters
Maximum label length: 62
event queue length: 60

1. Parameters that must be configured in advance

Working antenna: This is a parameter that must be configured. If only a single antenna is used, directly fill in the antenna number, such as 1; if multiple antennas are used, each antenna is directly separated by an underscore, such as antennas 1, 2, and 3. Should be filled in 1_2_3

2. Optional common configuration parameters

Inventory cycle: The total duration of a reader-writer inventory is: inventory cycle x number of antennas. Example: If antennas 1 and 2 are used and the inventory period is 150ms, the total inventory time is 150x2=300ms. Please adjust according to the actual situation on site. For reading a small number of tags (within 10 tags), generally use the default value. If the number of tags is large, you can increase this parameter value appropriately.

RS232 serial port parameters and RS485 serial port parameters can be set according to the actual situation

1. Register description

The tag inventory operation accesses register address 0xB00, and the number of accessed registers is 125. The total inventory execution time can be calculated as described above. When the modbus client issues a command to access the 0xB00 address, the reader/writer will return the register value after the "total inventory time". It is recommended that the time the modbus client waits for a reply is set to: total inventory time + 1500ms. The 125 register values are exactly 250 bytes. Under the default configuration of the "Modbus simple inventory tag format option" of the reader/writer, the data format is as follows:

Total number of tags (2 bytes), antenna ID (1 byte), EPC byte length (1 byte), EPC code (EPC byte length bytes),..., antenna ID (1 byte), EPC byte length (1 byte), EPC code (EPC byte length bytes)

The blue part represents the data of a tag. If all the data representing tag information is less than 250 bytes, the remaining bytes will be all 0s.

The serial port address is 0x02, serial port Modubs/RTU example:

send:

```
02 03 0B 00 00 7D 87 FC
```

Receive：

```
02 03 FA 00 02 02 0C E2 00 41 45 31 16 00 28 20 70 3F DF 02 0C E2 00 41 45 31 16 00 68 20 70 3F
3F 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 4D C5
```

The one marked in red is the total number of tags, the one marked in green is the antenna ID, the one marked in blue is the EPC byte length, the one marked in purple is the EPC code, and the one marked in orange is filled with all 0s

Modbus/TCP：

Send：

```
00 00 00 00 00 06 02 03 0b 00 00 7d
```

Receive：

```
00 00 00 00 00 fd 02 03 fa 00 02 01 0c e2 00 41 45 31 16 02 45 25 00 17 8e 01 0c e2 00 41 45 31
16 02 26 24 70 18 07 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
```

00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

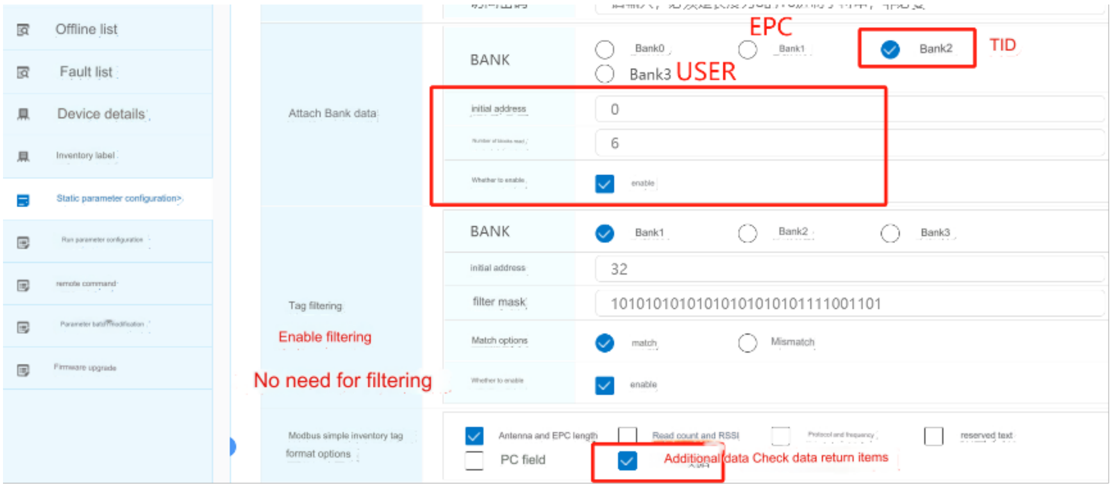
The one marked in red is the total number of tags, the one marked in green is the antenna ID, the one marked in blue is the EPC byte length, the one marked in purple is the EPC code, and the one marked in orange is filled with all 0s

1. Pay special attention to

For using the modbus function through the serial port, please pay attention to setting the correct serial port 485 address. The default address of both serial ports is 2; for using the modbus function through TCP/IP, the port number is 8080.

MODbus " Enable reading additional data

Web Page configuration method



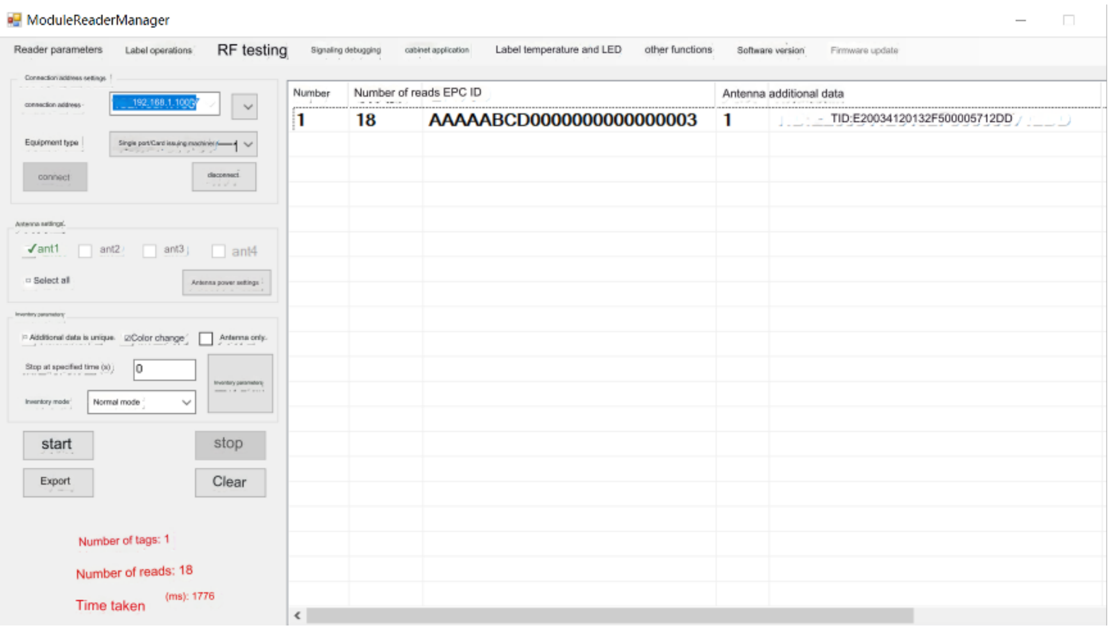
Attach Bank data
BANK: ○ Bank0 ○ Bank1 ● Bank2 ○ Bank3
initial address: 0
Number of blocks read: 6
Whether to enable: ☑ enable

Tag filtering
BANK: ● Bank1 ○ Bank2 ○ Bank3
initial address: 32
filter mask: 10101010101010101010111001101
Match options: ● match ○ Mismatch
Whether to enable: ☑ enable

Modbus simple inventory tag format options: ☑ Antenna and EPC length ☐ Read count and RSSI ☐ Protocol and frequency ☐ reserved text ☐ PC field ☑ Additional data

Demo

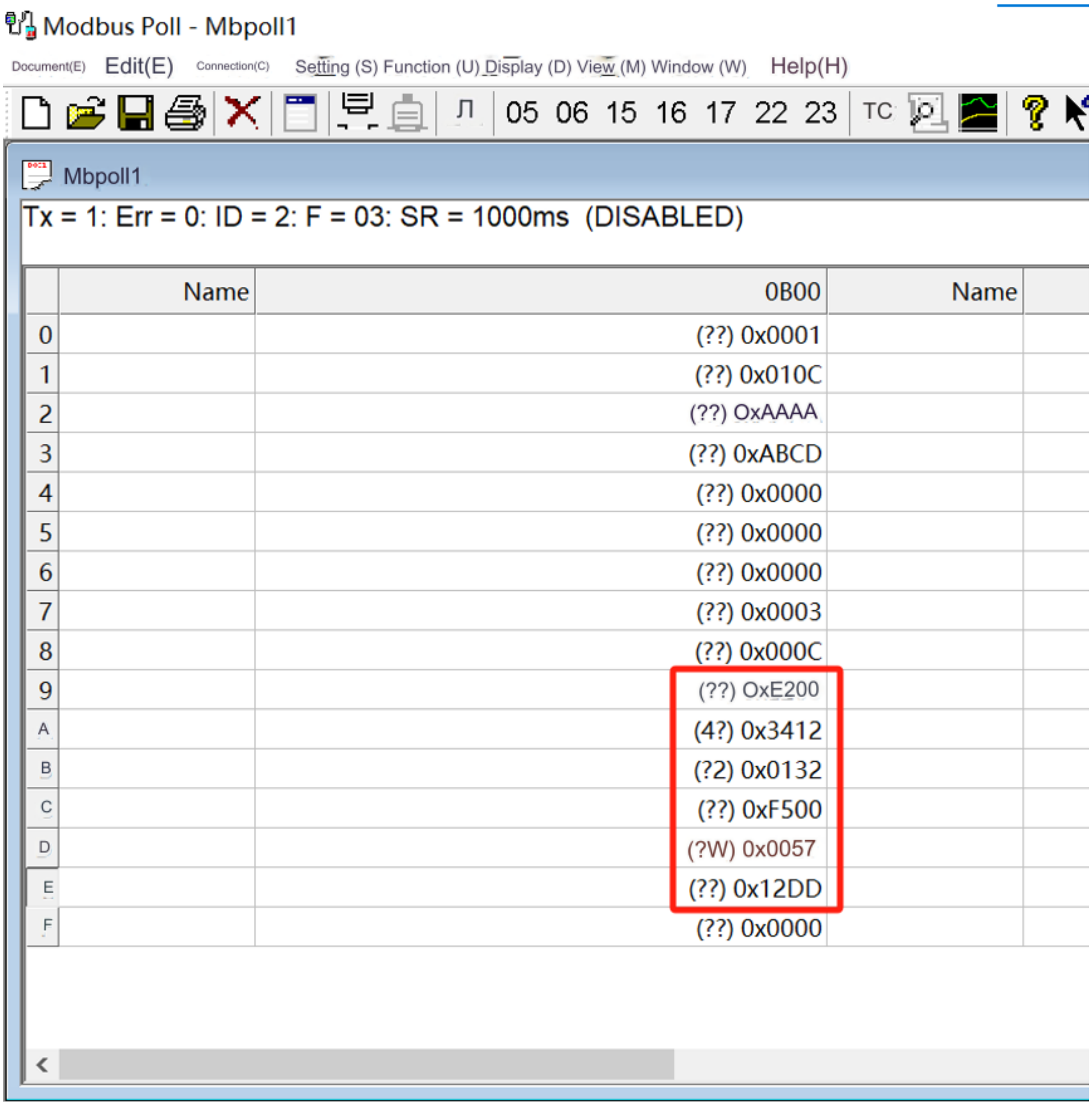
Modbus



Connection address settings
connection address: 192.168.1.100
Equipment type: Single port/Card issuing machine
Antenna settings: ✓ant1 ☐ ant2 ☐ ant3 ☐ ant4 ☐ Select all
Inventory parameters: ☐ Additional data is unique ☑ Color change ☐ Antenna only
Stop at specified time (s): 0
Inventory mode: Normal mode

Number	Number of reads	EPC ID	Antenna	additional data
1	18	AAAABCD0000000000000003	1	TID:E20034120132F500005712DD

Number of tags: 1
Number of reads: 18
Time taken (ms): 1776



Tx = 1: Err = 0: ID = 2: F = 03: SR = 1000ms (DISABLED)

	Name	0B00	Name
0		(??) 0x0001	
1		(??) 0x010C	
2		(??) OxAAAA	
3		(??) 0xABCD	
4		(??) 0x0000	
5		(??) 0x0000	
6		(??) 0x0000	
7		(??) 0x0003	
8		(??) 0x000C	
9		(??) OxE200	
A		(4?) 0x3412	
B		(?2) 0x0132	
C		(??) 0xF500	
D		(?W) 0x0057	
E		(??) 0x12DD	
F		(??) 0x0000	