Protocol of AL2445 Slave Controller

Change Board address：
DIP switch is Binary dial switch, board address start from 1.
Communication Interface: TCP/IP sever
Communication Protocol: MODBUS RTU
Default IP：192.168.0.155
Default Port：6666

Address 2 bytes	Function code 1 bytes	Data Length 1 byte	Data 1	…	Data n	CRC Low-order byte	CRC High-order byte

Open command above：
BYTE[0] 0X00 address high-order byte
BYTE[1] 0X01 address low-order byte
BYTE[2] 0X06 write code
BYTE[3] 0X02 two data
BYTE[4] 0x01-0x18 (1-24 channel locks)
BYTE[5] 0x11 (open)
BYTE[6] 0Xxx (CRC low-order byte)
BYTE[7] 0Xxx (CRC high-order byte)

Returned value：
BYTE[0] 0X00 address high-order byte
BYTE[1] 0X01 address low-order byte
BYTE[2] 0X06 write code
BYTE[3] 0X02 two data
BYTE[4] 0x01-0x18 (1-24 channel locks)
BYTE[5] 0x00 or 0x11(when lock open, sensor is NO, 0X11 is open, if sensor is NC, 0X00 is open)
BYTE[6] 0Xxx(CRC low-order byte)
BYTE[7] 0Xxx(CRC high-order byte)

Send

BYTE[0]	BYTE[1]	BYTE[2]	BYTE[3]	BYTE[4]	BYTE[5]	BYTE[6]	BYTE[7]	
0X00	0X01	0X06	0X02	0X01	0x11	0x5d	0x5f	
Return								
BYTE[0]	BYTE[1]	BYTE[2]	BYTE[3]	BYTE[4]	BYTE[5]	BYTE[6]	BYTE[7]	
0X00	0X01	0X06	0X02	0X01	0x11	0x5d	0x5f	Open status
0X00	0X01	0X06	0X02	0X01	0x00	0x9d	0x03	Close status

Read command of open/closed cabinet door：
BYTE[0] 0X00 address high-order byte
BYTE[1] 0X01 address low-order byte
BYTE[2] 0X03 read command
BYTE[3] 0X02 one data
BYTE[4] 0X33 read lock status
BYTE[5] 0x00-0x18(1-24ch lock，0x00 means read all)
BYTE[6] 0Xxx(CRC low-order byte)
BYTE[7] 0Xxx(CRC high-order byte)

Return value：
BYTE[0] 0X00 address high-order byte
BYTE[1] 0X01 address low-order byte
BYTE[2] 0X03 read command
BYTE[3] 0X02 two data
BYTE[4] 0x01-0x18(1-24ch lock)
BYTE[5] 0x00 or 0x11(when lock open, sensor is NO, 0X11 is open, if sensor is NC, 0X00 is open)
BYTE[6] 0Xxx(CRC low-order byte)。
BYTE[7] 0Xxx(CRC high-order byte)。

Return value of group locker：
BYTE[0] 0X00 high-order byte
BYTE[1] 0X01 low-order byte
BYTE[2] 0X03 read command
BYTE[3] 0X04 four data
BYTE[4] 25-32ch lock message，8 bytes from low to high are the status of lock channel 25-32. When lock is open, sensor is NO: 1 is close, 0 is open.
BYTE[5] 17-24ch lock message，8 bytes from low to high are the status of lock channel 17-24. When lock is open, sensor is NO: 1 is close, 0 is open.
BYTE[6] 9-16ch lock message，8 bytes from low to high are the status of lock channel 9-16. When lock is open, sensor is NO: 1 is close, 0 is open.
BYTE[7] 1-8ch lock message，8 bytes from low to high are the status of lock channel 9-16. When lock is open, sensor is NO: 1 is close, 0 is open.
BYTE[8] 0Xxx(CRC low-order byte)
BYTE[9] 0Xxx(CRC high-order byte)

Read status of the 1st box of locker group no.1：
Send

BYTE[0]	BYTE[1]	BYTE[2]	BYTE[3]	BYTE[4]	BYTE[5]	BYTE[6]	BYTE[7]
0X00	0X01	0X03	0X02	0X33	0x01	0x49	0x6f

Return

BYTE[0]	BYTE[1]	BYTE[2]	BYTE[3]	BYTE[4]	BYTE[5]	BYTE[6]	BYTE[7]	
0X00	0X01	0X03	0X02	0X01	0x11	0x5d	0xc3	Open status

0X00 0X01 0X03 0X02 0X01 0x00 0x9d 0xcf Close status

Read status of locker group no.1 ：

Send

BYTE[0]	BYTE[1]	BYTE[2]	BYTE[3]	BYTE[4]	BYTE[5]	BYTE[6]	BYTE[7]
0X00	0X01	0X03	0X02	0X33	0x00	0x88	0xaf

Return

BYTE[0]	BYTE[1]	BYTE[2]	BYTE[3]	BYTE[4]	BYTE[5]	BYTE[6]	BYTE[7]	BYTE[8]	BYTE[9]
0X00	0X01	0X03	0X04	0Xff	0xff	0xff	0xff	0xa0	0xac

Read IR status command：

BYTE[0] 0X00 high-order byte

BYTE[1] 0X01 low-order byte

BYTE[2] 0X03 read command

BYTE[3] 0X02 one data

BYTE[4] 0X22 read lock status

BYTE[5] 0x00-0x18(1-24ch lock，0x00 means read all)

BYTE[6] 0Xxx(CRC low-order byte)

BYTE[7] 0Xxx(CRC high-order byte)

Return：

BYTE[0] 0X00 high-order byte

BYTE[1] 0X01 low-order byte

BYTE[2] 0X03 read command

BYTE[3] 0X02 two data

BYTE[4] 0x01-0x18(1-24ch lock)

BYTE[5] 0xee or 0xff(0xee is no object, 0xff means has object)。

BYTE[6] 0Xxx(CRC low-order byte)

BYTE[7] 0Xxx(CRC high-order byte)

Return value of locker group:

BYTE[0] 0X00 high-order byte

BYTE[1] 0X01 low-order byte

BYTE[2] 0X03 read command

BYTE[3] 0X04 four data

BYTE[4] 25-32ch locker message, 8 bytes from low to high are the status of locker channel 25-32. 1 is no object, 0 is has object.

BYTE[5] 17-24ch locker message, 8 bytes from low to high are the status of locker channel 17-24. 1 is no object, 0 is has object.

BYTE[6] 9-16 locker message, 8 bytes from low to high are the status of locker channel 9-16. 1 is no object, 0 is has object.

BYTE[7] 1-8 locker message, 8 bytes from low to high are the status of locker channel 1-8. 1 is no object, 0 is has object.
BYTE[8] 0Xxx(CRC low-order byte)
BYTE[9] 0Xxx(CRC high-order byte)

Read IR status of 1st box of locker group No. 1:
Send

BYTE[0]	BYTE[1]	BYTE[2]	BYTE[3]	BYTE[4]	BYTE[5]	BYTE[6]	BYTE[7]
0X00	0X01	0X03	0X02	0X22	0x01	0x45	0x3f

Return

BYTE[0]	BYTE[1]	BYTE[2]	BYTE[3]	BYTE[4]	BYTE[5]	BYTE[6]	BYTE[7]	
0X00	0X01	0X03	0X02	0X01	0xee	0x1d	0x83	没物体
0X00	0X01	0X03	0X02	0X01	0xff	0xdd	0x8f	有物体

Read status of locker group No. 1：
Send

BYTE[0]	BYTE[1]	BYTE[2]	BYTE[3]	BYTE[4]	BYTE[5]	BYTE[6]	BYTE[7]
0X00	0X01	0X03	0X02	0X22	0x00	0x84	0xff

Return

BYTE[0]	BYTE[1]	BYTE[2]	BYTE[3]	BYTE[4]	BYTE[5]	BYTE[6]	BYTE[7]	BYTE[8]	BYTE[9]
0X00	0X01	0X03	0X04	0Xff	0xff	0xff	0xff	0xa0	0xac

Read lock status and IR status of lock group No.1：
BYTE[0] 0X00 high-order byte
BYTE[1] 0X01 low-order byte
BYTE[2] 0X03 read command
BYTE[3] 0X02 one data
BYTE[4] 0X55 read lock status
BYTE[5] 0x00 (all status)
BYTE[6] 0Xxx(CRC low-order byte)
BYTE[7] 0Xxx(CRC high-order byte)

Return：

BYTE[0] 0X00 high-order byte
BYTE[1] 0X01 low-order byte
BYTE[2] 0X03 read command
BYTE[3] 0X08 eight data
BYTE[4] 25-32ch locker message, 8 bytes from low to high are the status of locker channel 25-32. 1 is close, 0 is open.
BYTE[5] 17-24ch locker message, 8 bytes from low to high are the status of locker channel 17-24. 1 is close, 0 is open.

BYTE[6] 9-16ch locker message, 8 bytes from low to high are the status of locker channel 9-16. 1 is close, 0 is open.
BYTE[7] 1-8ch locker message, 8 bytes from low to high are the status of locker channel 1-8. 1 is close, 0 is open.
BYTE[8] 25-32ch locker message, 8 bytes from low to high are the status of locker channel 25-32. 1 is no object, 0 is has object.
BYTE[9] 17-24ch locker message, 8 bytes from low to high are the status of locker channel 17-24. 1 is no object, 0 is has object.
BYTE[10] 9-16 locker message, 8 bytes from low to high are the status of locker channel 9-16. 1 is no object, 0 is has object.
BYTE[11] 1-8 locker message, 8 bytes from low to high are the status of locker channel 1-8. 1 is no object, 0 is has object.
BYTE[12] 0Xxx(CRC low-order byte)
BYTE[13] 0Xxx(CRC high-order byte)

Read status of locker group no.1：
Send

BYTE[0]	BYTE[1]	BYTE[2]	BYTE[3]	BYTE[4]	BYTE[5]	BYTE[6]	BYTE[7]
0X00	0X01	0X03	0X02	0X55	0x00	0xa3	0x0f

Return

BYTE[0]	BYTE[1]	BYTE[2]	BYTE[3]	BYTE[4]	BYTE[5]	BYTE[6]	BYTE[7]	BYTE[8]	BYTE[9]	BYTE[10]	BYTE[11]	BYTE[12]	BYTE[13]
0X00	0X01	0X03	0X08	0XFF	0XFF	0XFF	0XFF	0XFF	0XFF	0XFF	0XFF	0Xb6	0Xb5