C5-IPC

Network Switcher for C5 System

Product Picture

Description

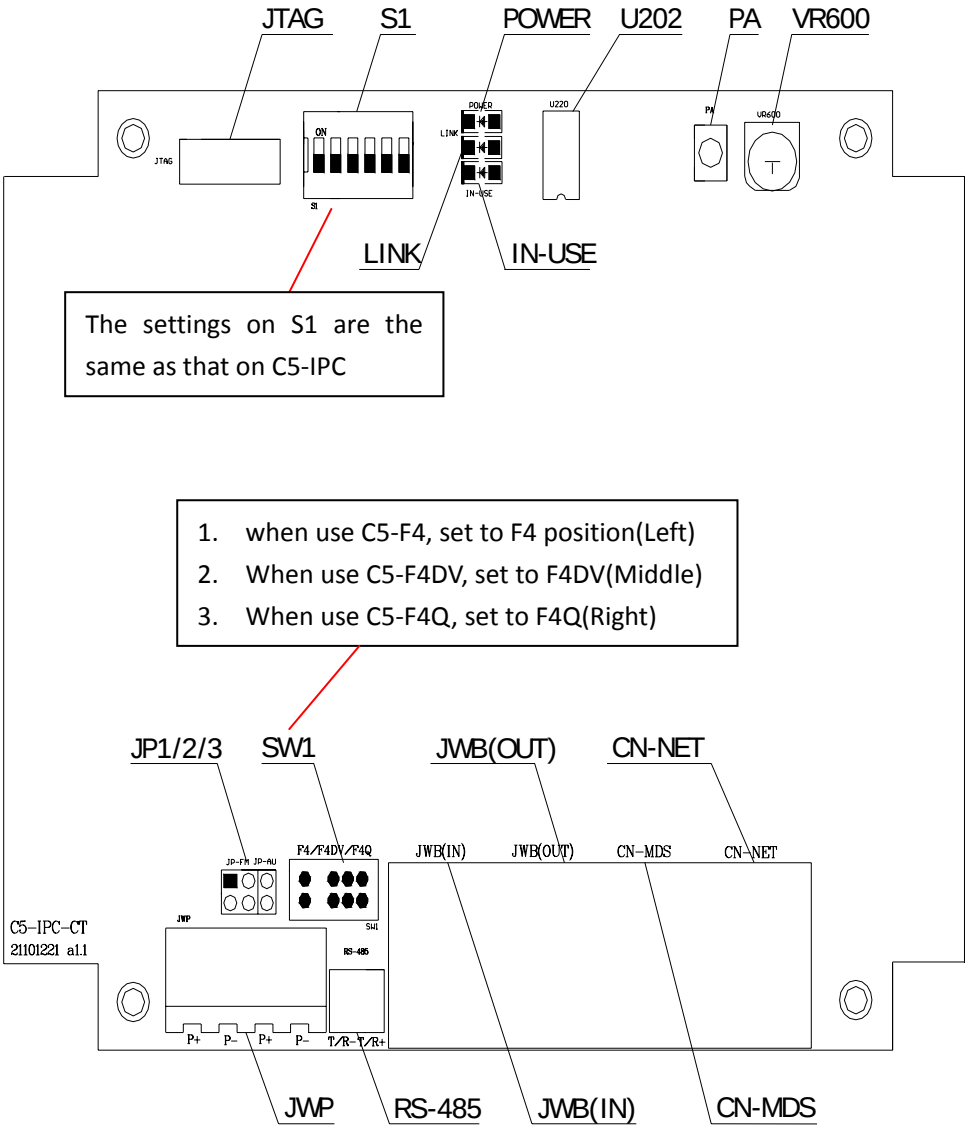
- C5-IPC is a network switcher that is a essential part in IP system. It's used to connect the parts in one block such as monitor, door station, to IP network. And only one C5-IPC is required in one block.

Feature

- A watchdog is designed into the circuit to prevent itself from system crash.
- LED Indicators to show system status
- RJ45 Standard port
- IP address setting & store
- Access cards storage
- Adjust talking volume
- Support TCP/IP network and support optical fiber transmission or Wide Band network access
- Adopt MPEG4 Protocol to process video and G.729 Protocol to process audio
- Adopt Philips Triedia DSP high performance chip
- Include 100M Ethernet and RS485 ports

1. Ports and function

1.1 Ports：



1.2 Port Description

Item	Silk-screen	Description
Power Indicator	POWER	Always ON while working
Signal Indicator	LINK	◆ flicker：Signal is transmitted in bus ◆ always ON：Communication Error in bus
Status indicator lamp	IN-USE	◆ flicker slowly: Connected to IP8210 normally ◆ always ON：Calling or monitoring status

Continuous:

Item	Silk-Screen	Description
Reset	PA	1. Press and hold PA button for 3 seconds to initialize C5-IPC 2. If initialization complete successfully, power off, and re-power C5-IPC, LINK & IN-USE Indicators will flicker once simultaneously, then INK Indicator will flicker till IN-USE indicator is always ON. **Note(1) that initialization will set all door station connected to non-controller.**
DIP Switch	S1	Details refer to DIP Switch Setting
PC Port	JTAG	Upgrade C5-IPC program by PC that is connected by RS232 Converter
PC Port	RS485	Set parameters of C5-IPC by PC that is connected by RS485-USB Converter(Details refer to PC setting)
Power Input	JWP	P+ : positive,18V; P - : negative; Two couple of Power input ports
Bus Signal Input	JWB（IN）	The port that is a RJ45 port includes audio, data & video. It can be connected to door station only
Bus Signal Output	JWB（OUT）	The port that is a RJ45 port includes audio, data & video. It’s connected to C5-F4 or C5-F4Q Distributor.
Bus Signal Input	CN-MDS	Port: RJ45 Connected to MDS only
Network Signal Input	CN-NET	Port: RJ45 Connected to LAN
Jumper	JP1/JP2/JP3	Remove the three jumpers if C5-MDS connected. Or else all the jumpers must be plugged in the sockets if only one door station is connected.

(1) About Controller & Non-controller:

Controller that is also called resource administrator, is a role that manage system operation, such as

call, monitor. When a block is connected to IP network, C5-IPC is the resource administrator of the block, so all the door stations connected must be set to non-controller by setting door station (Details refer to settings of door station in door station manual.), or initialization of C5-IPC. Whereas when there is only one block and no need to construct a network, one of door stations in the block should be set to controller(resource administrator), and others must be set to non-controller.

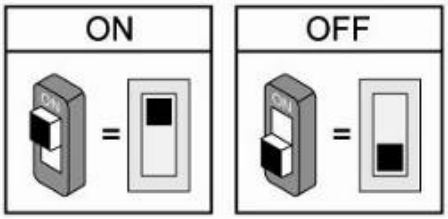
2. Installation

Rail mounting or Wall mounting is optional.

3. Parameter Setting

DIP Switch Setting

DIP Switch Status：



a) S1 Setting（Defaults are OFF）

Port	Function	Status	Description
DIP1	MDS	ON	C5-MDS connected
		OFF	No C5-MDS connected
DIP2	Audio Channel	ON	Enable 4 channels for audio if C5-F4Q connected
		OFF	mono-channel for audio if C5-F4 connected
DIP3	Video Channel	ON	Enable double channel for video(Reserved)
		OFF	mono-channel for video if C5-F4 or C5-F4Q connected
DIP4	Two door stations call different monitors simultaneously	ON	Enable（Reserved）
		OFF	Disable
DIP5	Guard Monitor	ON	Press call button of monitor to call Guard Monitor whose address is 0099
		OFF	Press call button of monitor to call Guard Unit
DIP6	Guard Unit with Camera	ON	Screen of monitor will turn on when receiving calling from Guard Unit
		OFF	Screen of monitor won't turn on when receiving calling from Guard Unit

a) PC Setting

◆ Step1：C5-IPC is connected to PC as Figure 1 shows（RS-485 connector of RS485-USB converter should be plugged into the RS-485 port of C5-IPC.）

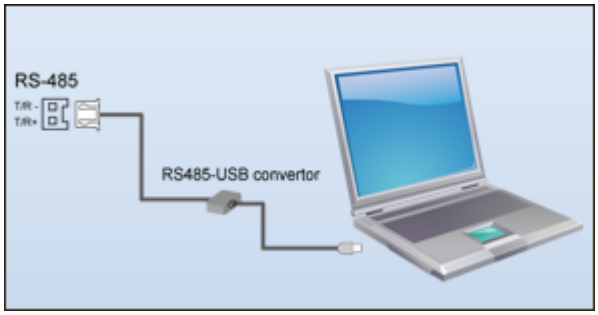


Figure 1

◆ Step2: Double click the software as Figure 2 shows,

Figure 2

Step3：Com Setting：（1）click setting → com setting

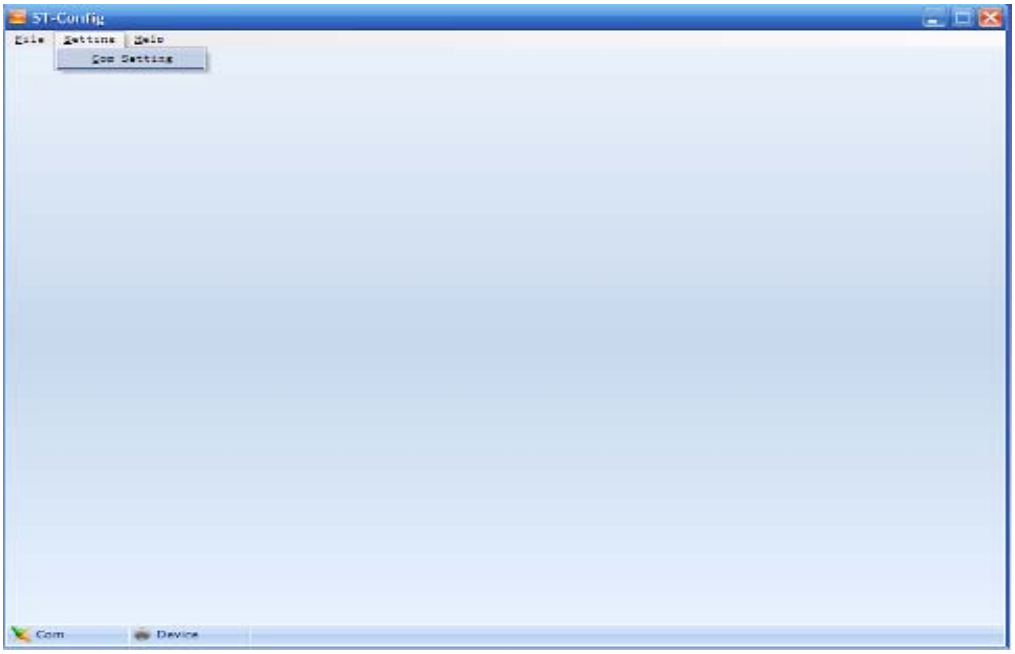


Figure 3

（2）Choose the corresponding com in the com setting window, then press OK button.(Figure 5)

Note that the com of RS485-USB converter could be different in different PC. If the converter has been connected to PC, the com information can be obtained in Device Manager of Windows. The com behind the USB Serial Port is the one just as Figure 4 shows.

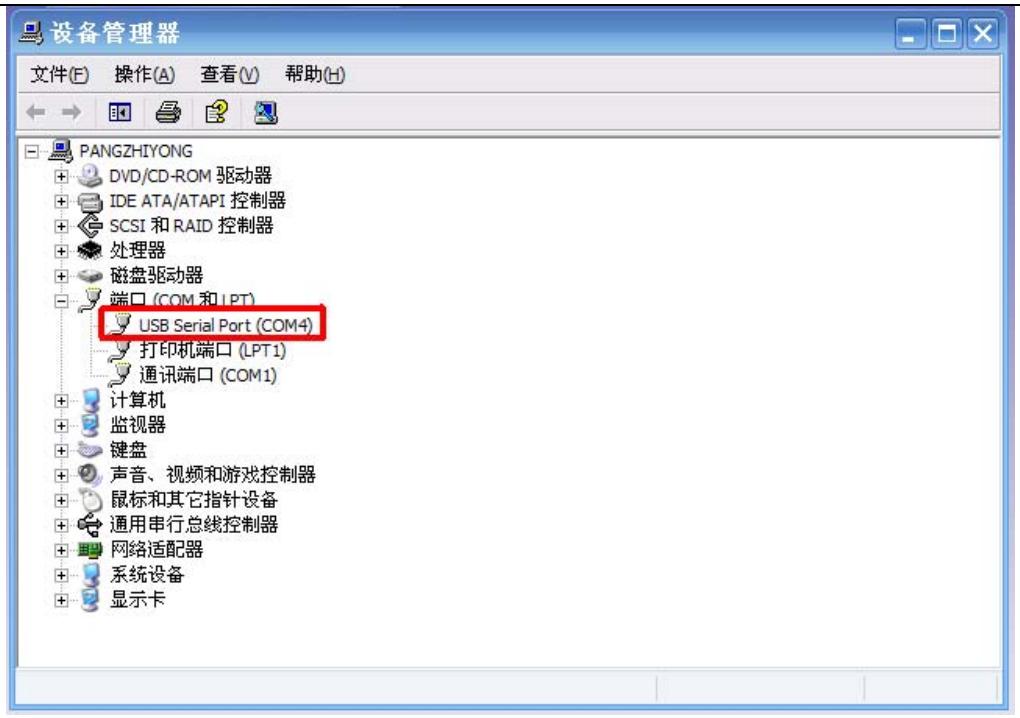


Figure 4

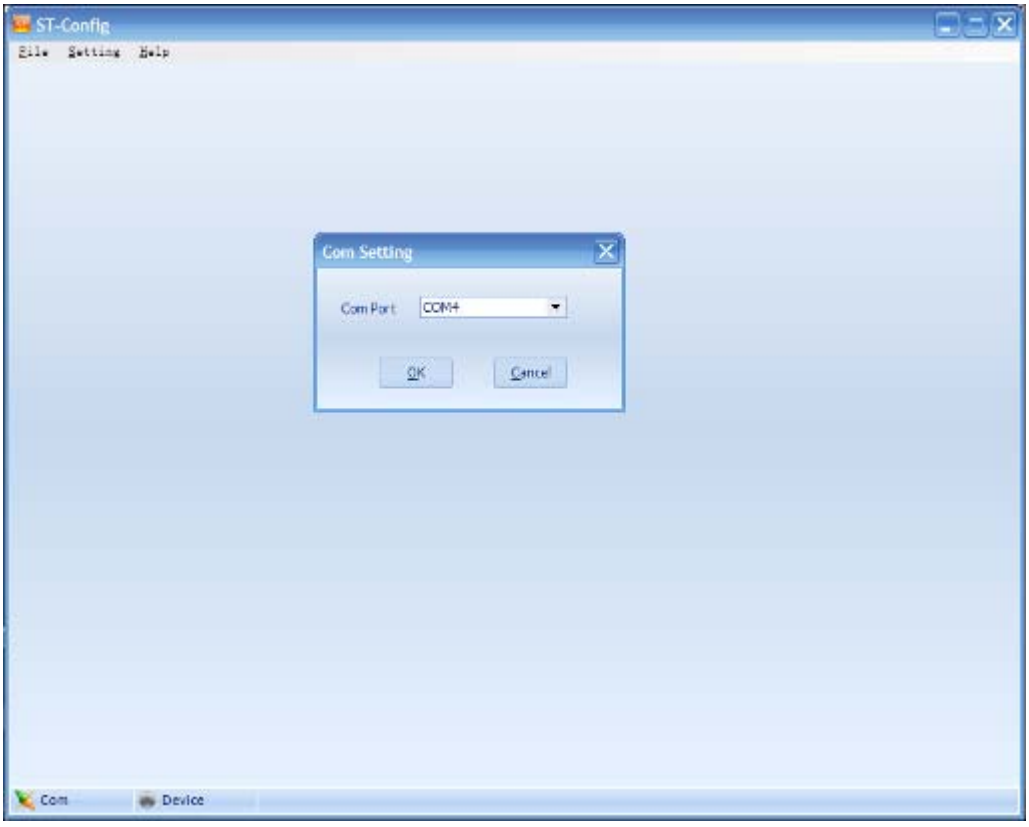


Figure 5

Step4：If communication established, the gray flashing Device icon bottom left of the software will be green light, and a confirmation widows will pop on to ask if parameters of C5-IPC is read automatically. Click Y(Yes) or N(No) button to enter C5-IPC setting interface.

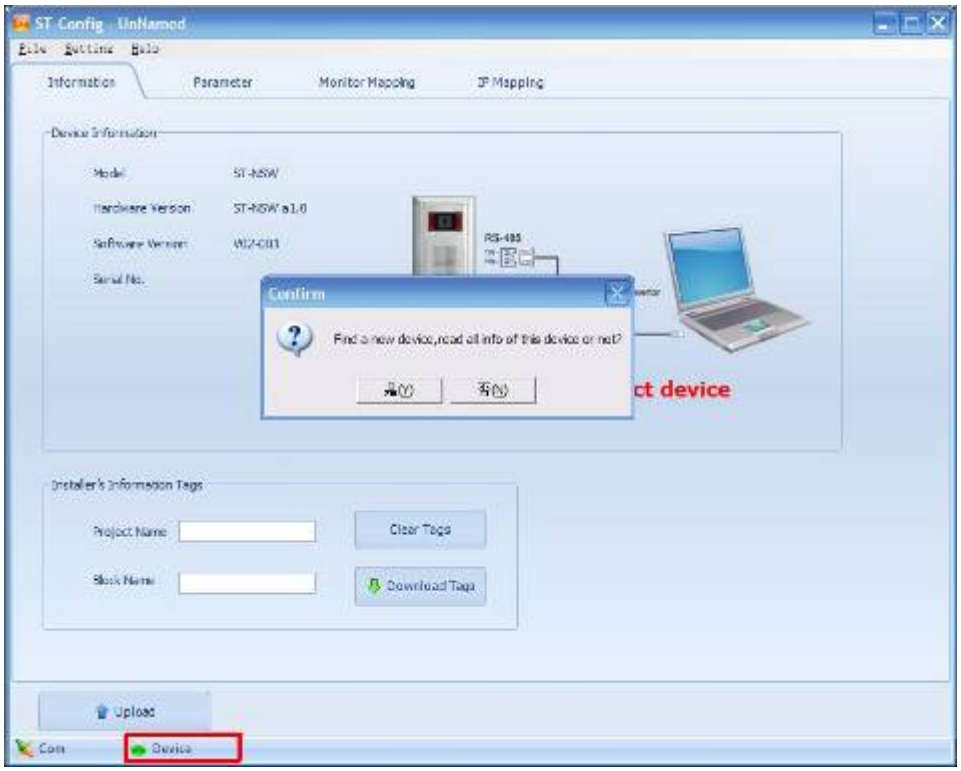


Figure 6

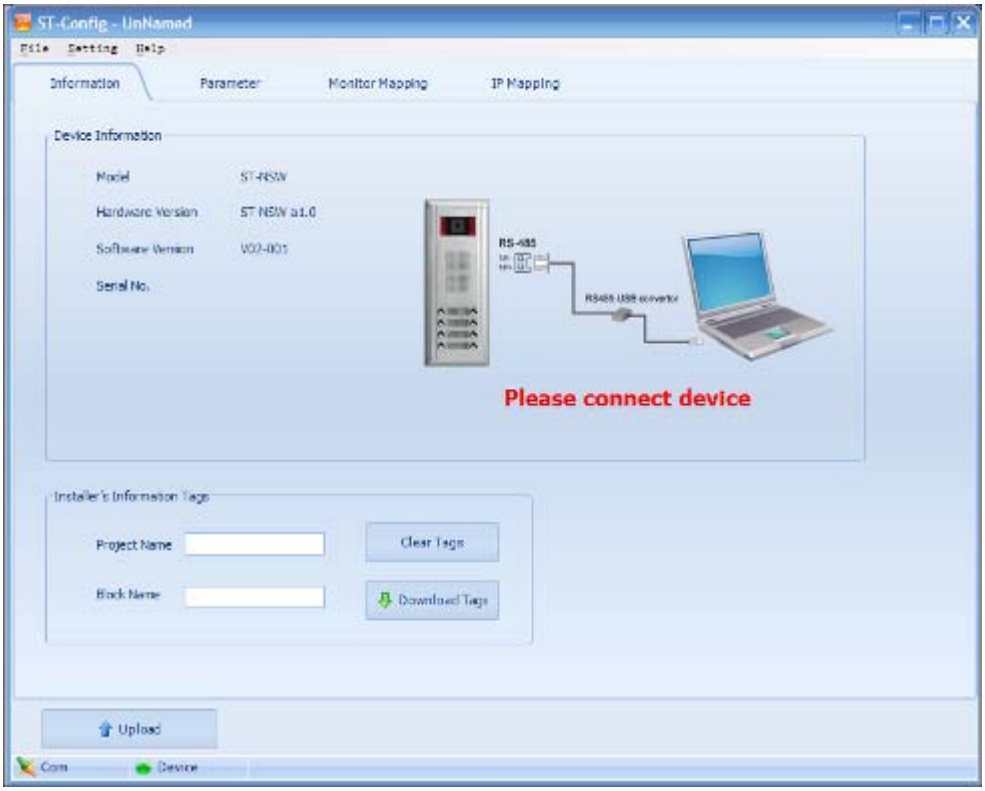


Figure 7

➢ Step5： Click Parameter menu,

◆ Click General Parameter menu to set basic setting of C5-IPC (As Figure 8 shows),

Monitor Timing：To set limitation of monitoring operation, its range is 6 to 600s ;

Wait Timing ：To set called monitor's wait and ring time, its range is 10 to 600s ;

Talk Timing ：To set limitation of monitor's talking operation, its range is 6 to 600s ;

Mon Count ：To set limitation of monitor's open, its range is 1 to 9 ;

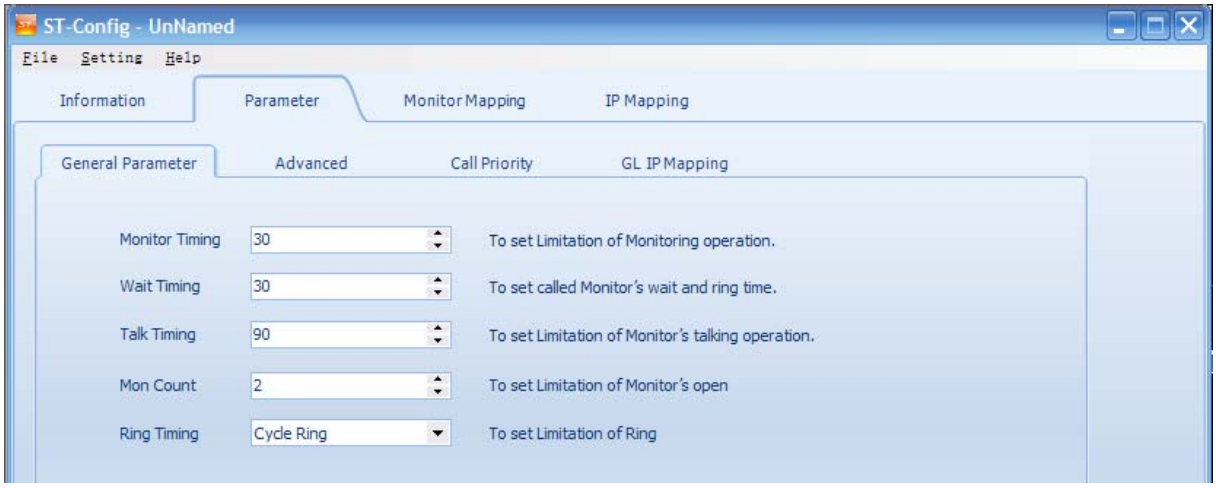


Figure 8

◆ Click Advanced menu as Figure 9 shows

Address extend：To set address extend mode;

Room Range ：To set room range;

Use IP Table ：To enable or disable the IP table;

IP-PW Timing ：To set IP-Switch reset timing.

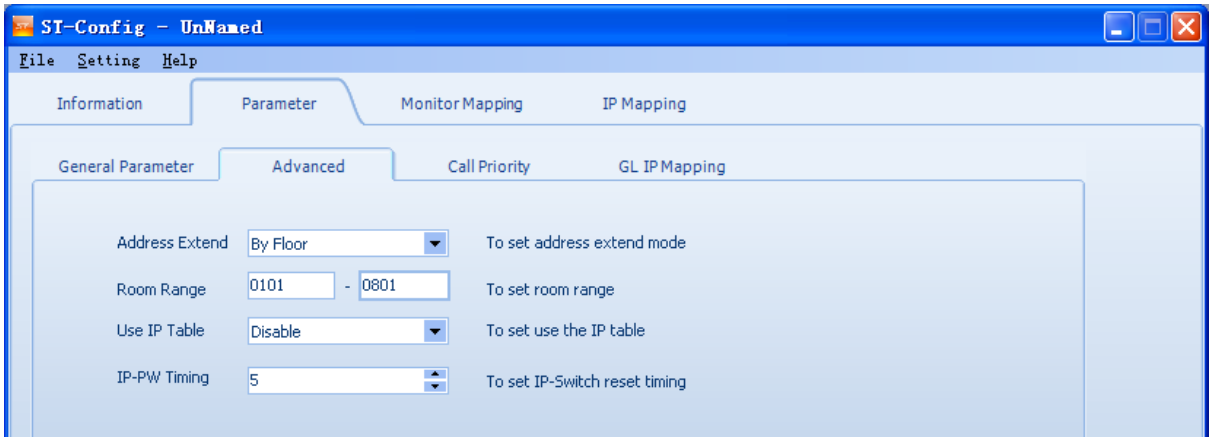


Figure 9

◆ Click Call Priority to set call priority. The highest level is 1, the lowest level is 4. While operating, the calling could be interrupted by higher level calling.

GL-ST： To set guard unit call monitor priority

GL-MR：To set guard unit call door station priority

DM-ST：To set common door station call monitor priority

MR-ST：To set door station call monitor priority

MR-GL：To set door station call guard unit priority

ST-GL： To set monitor call guard unit priority

GL-MN：To set guard unit monitor door station or common door station priority

OU-IP： To set intercom between different blocks priority

IP-IP： To set intercom in a block priority

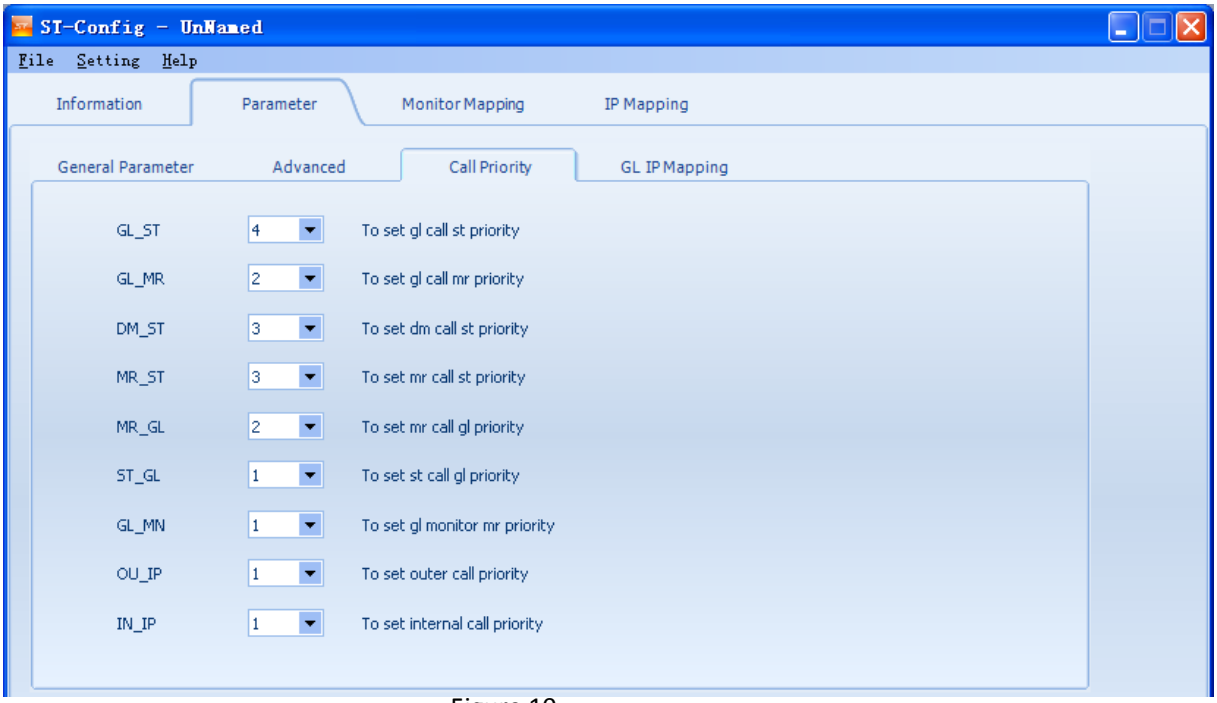


Figure 10

◆ Click GL IP Mapping menu to set call receiving sequence(Figure 11). Number of guard unit in one system is up to 8. They receive calling signal in sequence. While monitor or door station is calling guard unit, if the first guard unit is busy, the second one that is standby will respond the calling. If second one is busy too, the next one that is standby will respond the calling… and so on. Note that the range of guard unit address is 192.168.0.247 to 192.168.0.254 . The default of the first one is the one whose IP address is 192.168.0.254. Setting description is as fallows:

GL1 IP Address： To set the first one to receive calling, Default is 192.168.0.254

GL2 IP Address： To set the second one to receive calling, Default is none.

GL3 IP Address： To set the third one to receive calling, Default is none.

GL4 IP Address： To set the fourth one to receive calling, Default is none.

GL5 IP Address：To set the fifth one to receive calling , Default is none.

GL6 IP Address：To set the sixth one to receive calling , Default is none.

GL7 IP Address：To set the seventh one to receive calling , Default is none.

GL8 IP Address：To set the eighth one to receive calling , Default is none.

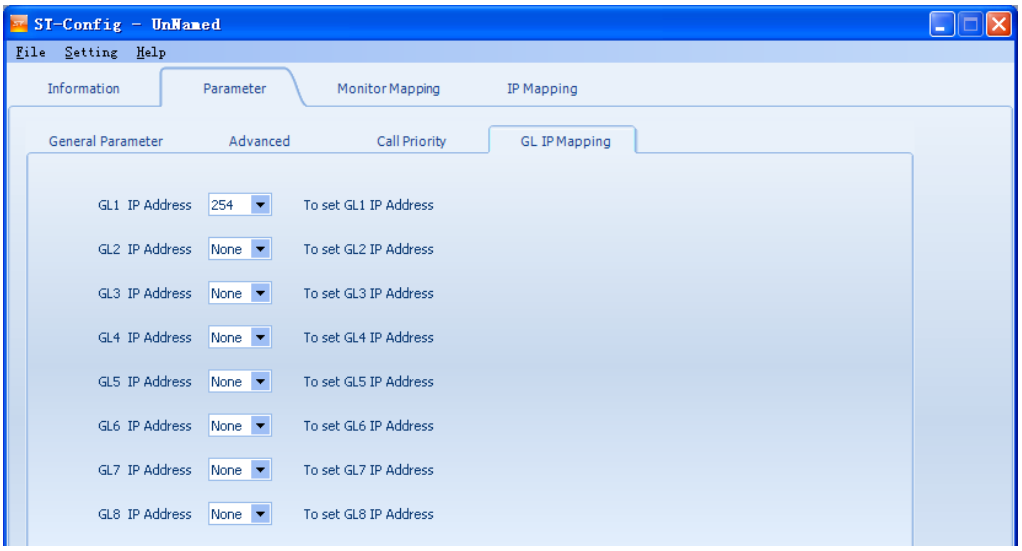


Figure 11

➢ Step 6： Click Monitor Mapping menu to set room number of expended monitor.

Normally, the default room number of the first expended monitor equals the master room number increased by 3000, and the second one equals the master room number increased by 6000. For example, if the master monitor number is 0201, the first expended monitor will be 3201, and the second one will be 6201. If expended room number can’t be set as above on some occasion, such as a block is higher than 30 floors, we could use the software to set room number of expended monitor.

As Figure 12 shows, Click Add button, input RoomNo that indicates master room number, Expand1 that indicates the first Expanded monitor & Expand2 that indicates the second one, then press OK.

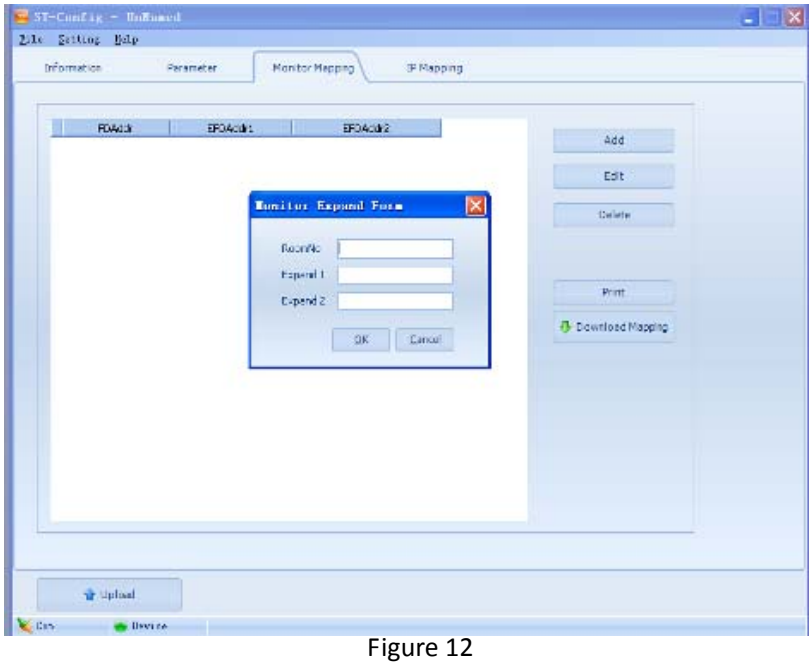


Figure 12

➢ Step7： After parameters are set, come back to General Parameter menu, and Click Download Parameter button. If the data have been successfully download to C5-IPC, a message window (Figire 13)shows in the middle of software to inform us download success. Note that if we want to set all the parameters to defaults, click Restore To Default button, then click Download Parameter button.

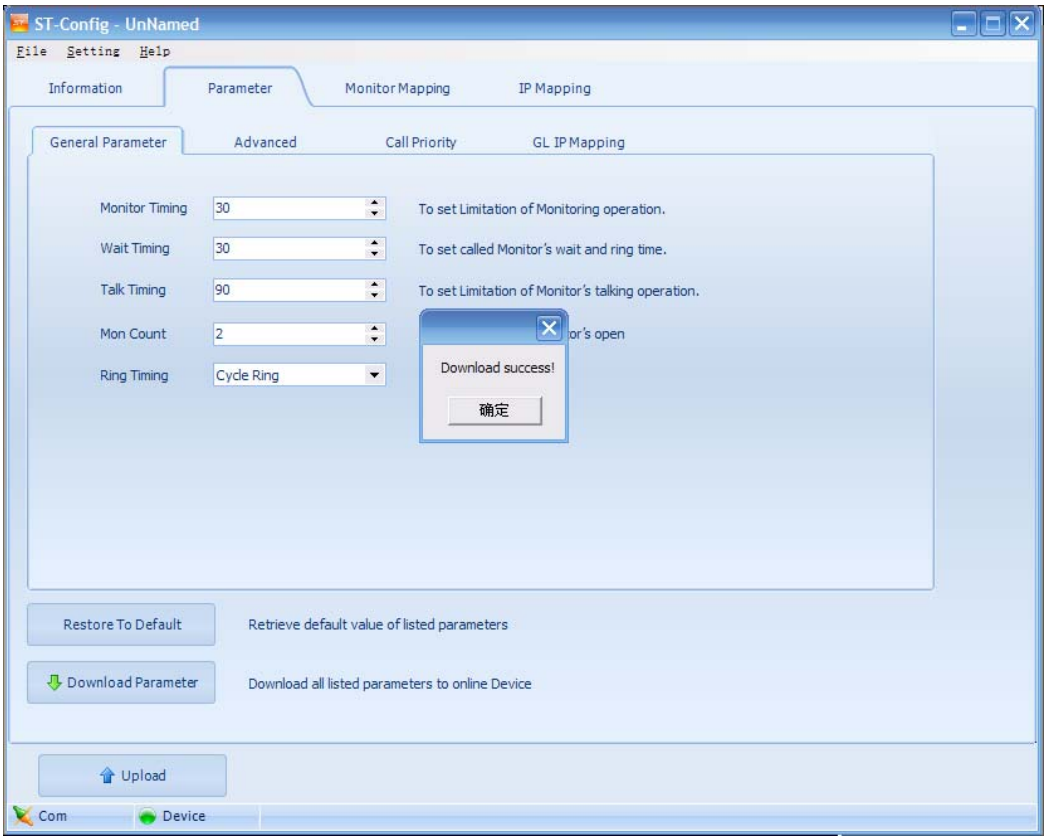


Figure 13

b) IP Address Setting:

i. Function of IP Address Setting Software(AVConfig)

- Set IP address of specified of C5-IPC
- View the configuration parameters of the specified device
- Adjust configuration parameters, you can instantly update a single device or all devices
- Address table editing and updating
- View specified C5-IPC's IP address table

ii. IP address setting method

Setting steps as follows:

- Power C5-IPC;
- Connected to PC directly or network(Caution refers to Note1);
- Change PC IP Address to 192.168.0.xxx(Caution refers to Note2) as follow

Network Neighborhood ->Local Area Connection –> Attribute –>Internet Protocol（TCP/IP）

Double Click Internet Protocol (TCP/IP) and change IP address to 192.168.0.xxx

- Start AVConfig Software(Figure 14) and change parameters as following steps;

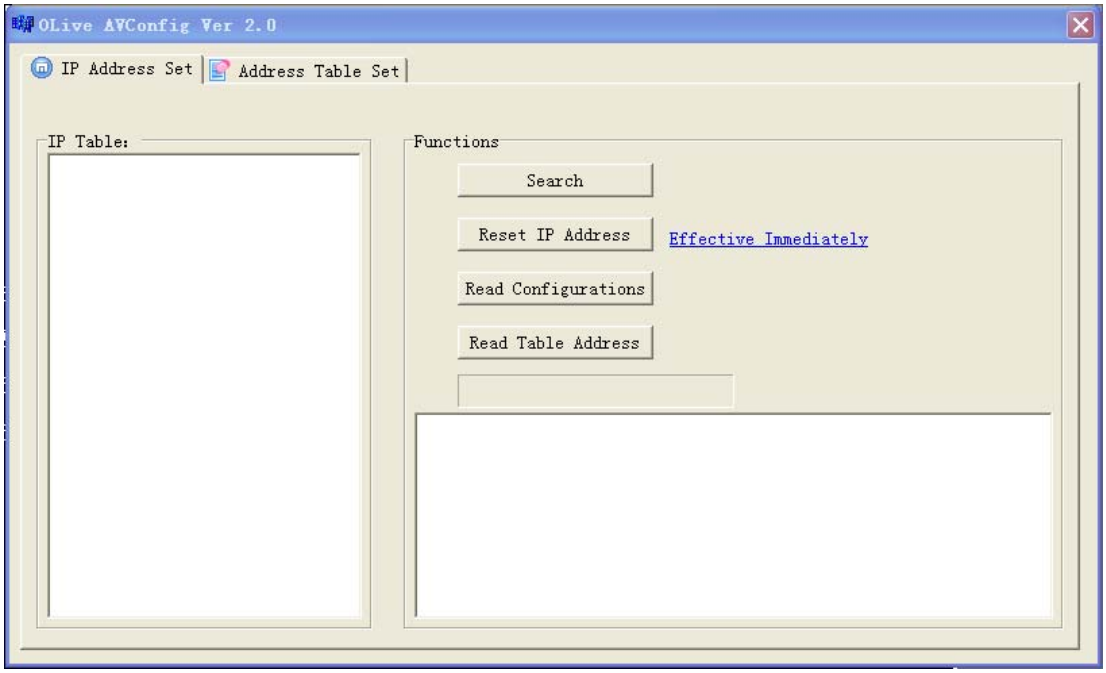


Figure 14

◆ [Search]: Search for all the online equipments in the network as Figure 15 shows(Cautions refer to Note1 and Note2).

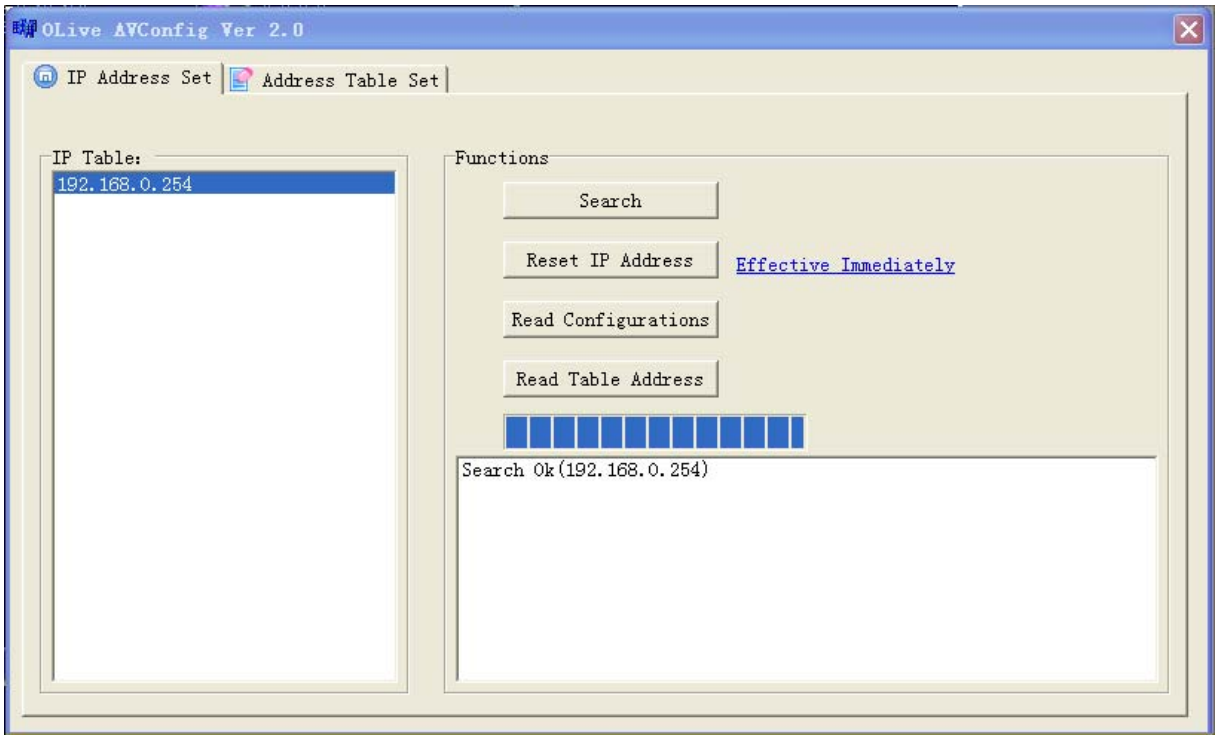


Figure 15

◆ [Reset IP Address]: Change IP address and MAC address of the selected C5-IPC IP address could be changed as follows(Figure 16):

Firstly, select a C5-IPC searched in the list of IP table, click Reset IP Address, and input the IP address and MAC address you want to change to, but subnet mask(IP_Mask) and gateway(IP_Gate) should not be changed, then click 确定 button to confirm, thus IP address update complete(Figure 17). **Note that IP Address and MAC address of every C5-IPC must be unique (Details refer to Note3).** At last, we could search again to check if the IP address is successfully changed.

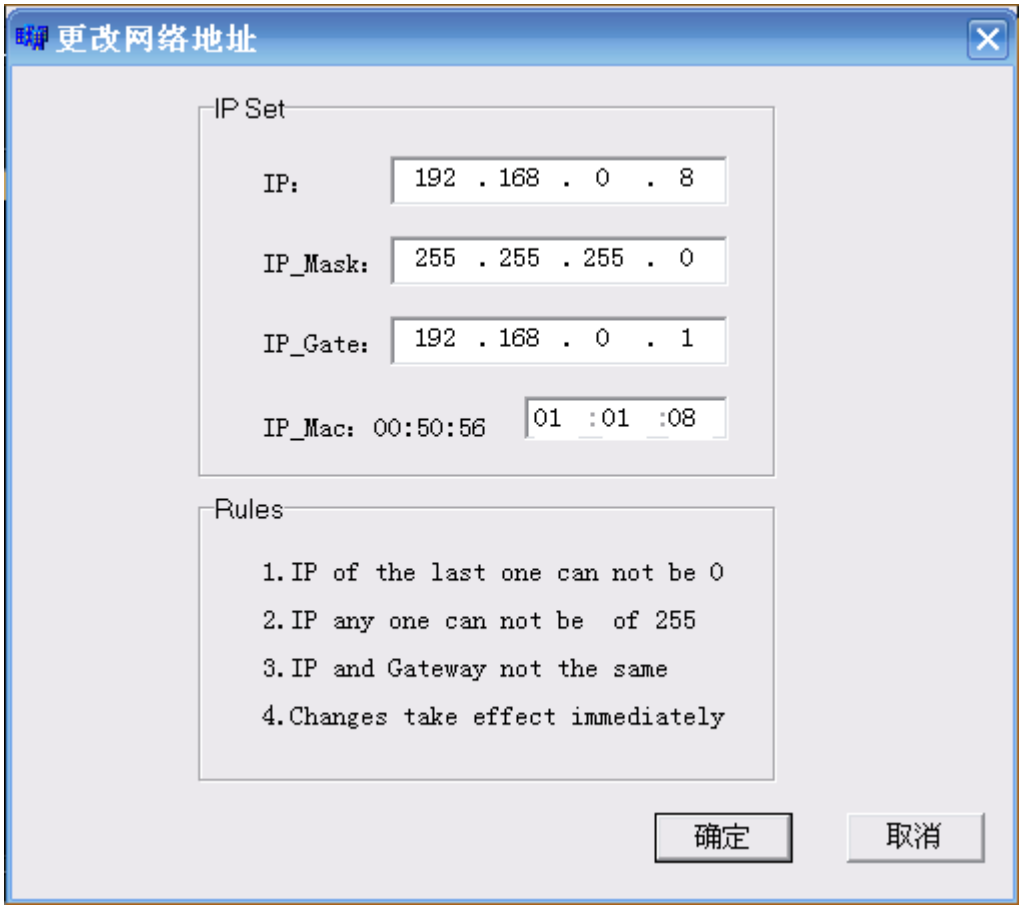


Figure 16

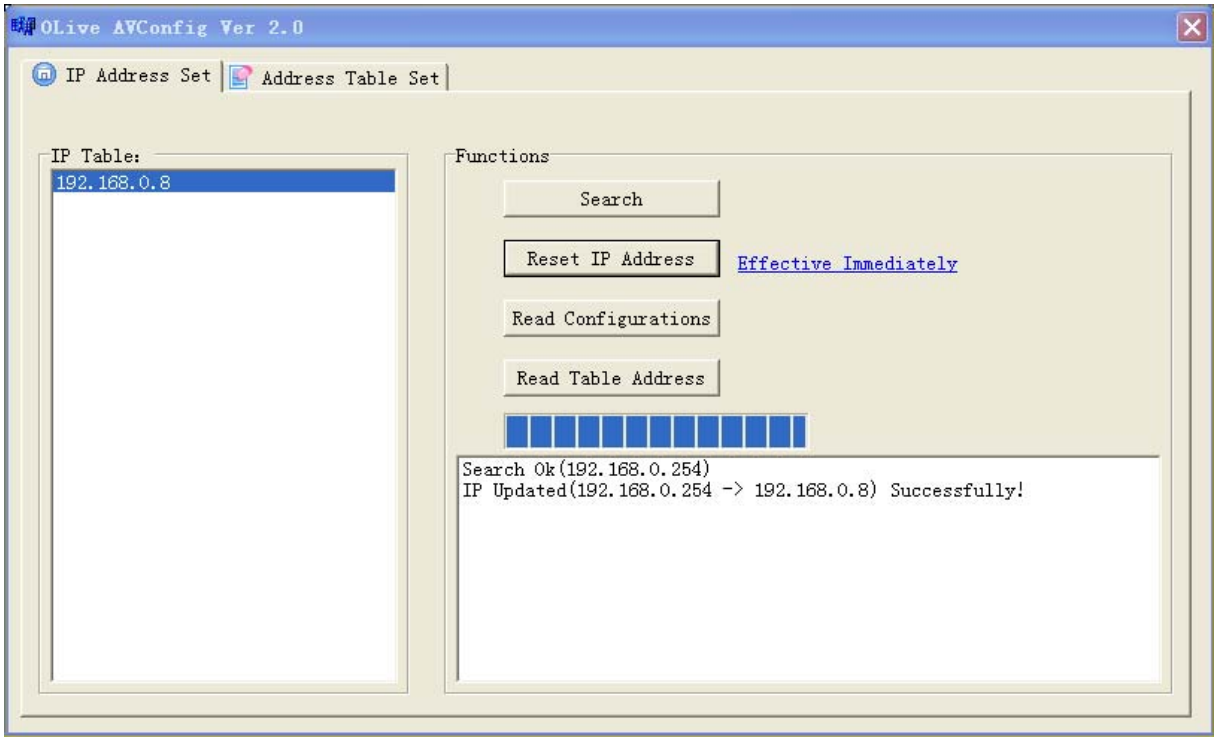


Figure 17

◆ [Read Configurations]: Read configuration parameters of the selected C5-IPC

Details is as follows:

Click Read Configurations button, in the UART Parameters frame change Mode to RS485 and change Baud Rate to 9600, in the Timeout Frame change both of Video & Audio to 360 秒, then click Single Set button to confirm change.

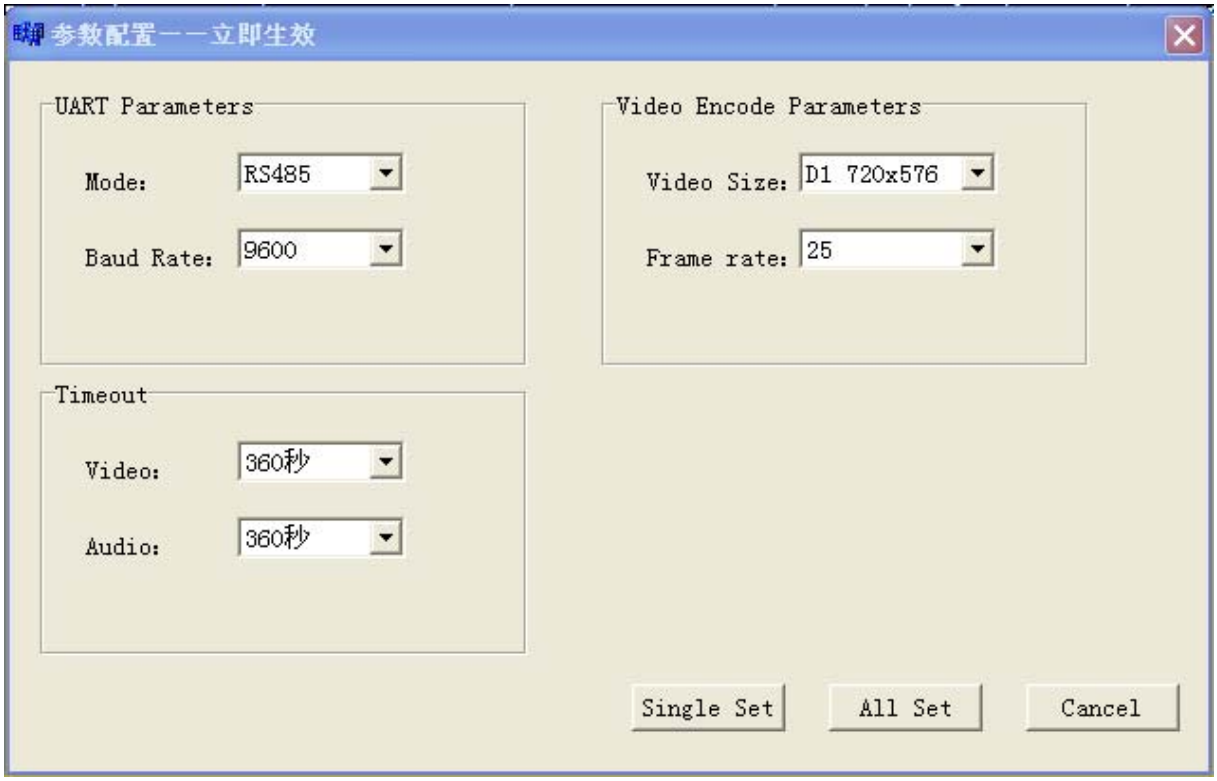


Figure 18

Note1: If all the C5-IPCs has the same IP address, the software just can view one of them. For the default address of all C5-IPCs is the same(192.168.0.2), only one C5-IPC should be separately connected to computer to set parameter in order to avoid confusion.

Note2: Its IP address can't be the same as C5-IPC, otherwise C5-IPC can't be searched by software.

Note3: IP address is fixed to 192.168.0.xxx, and the range of xxx is 2 to 254. In other words, xxx can't be 1 and 255. **The IP address range of C5-IPC connected to door station or common door station is 192.168.0.2 to 192.168.0.246 . Whereas 192.168.0.247 to 192.168.0.254 is for guard unit and IP-Agent(PC). IP address and MAC address(IP_Mac) of every C5-IPC or PC must be unique.** 192.168.0.1 is reserved for system.

4. Specification：

Working Voltage：	DC 18V， Power Supply model：PS2 or PS5-18V
Standby Current：	80mA
Working Current：	300mA（When IP8210 connected）
Video Signal：	CCIR, 1Vp-p , 75Ω
Audio Signal：	300~3,400 KHz, 0~240 mV, 120Ω
Transmission Mode：	TCP-IP
Port：	RJ45
Network Interface：	Standard Ethernet interface
Video Resolution：	D1（720*576）
Dimension(W*H*D)：	140*120*70mm
Working Temperature：	-10°C - 40°C