SI-002 User Manual

Version 1.0 , Jun 2016

Service and usage information for

SI-002

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Warranty

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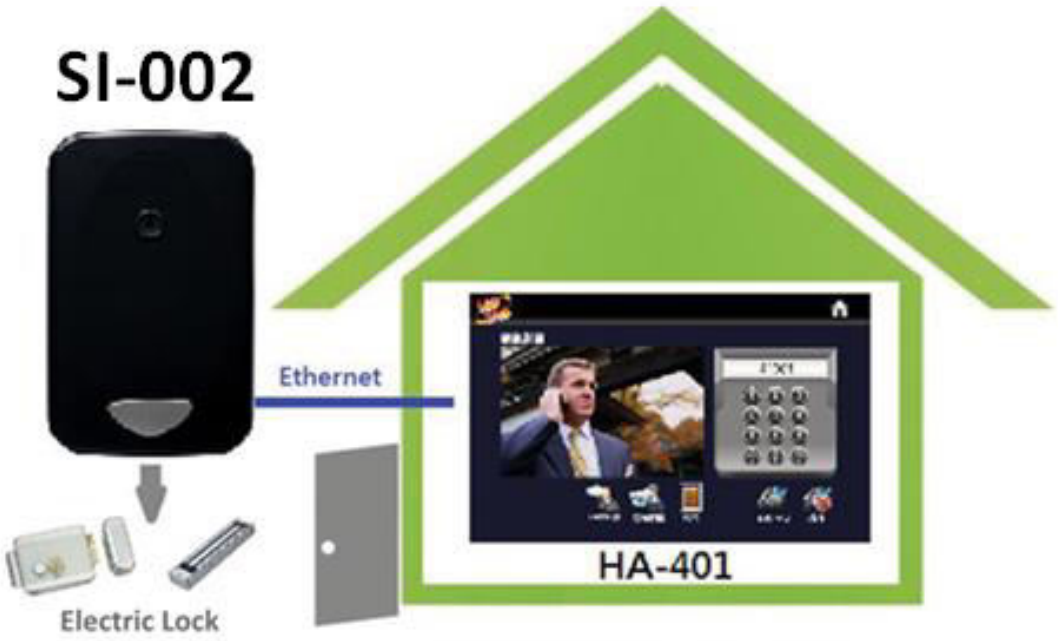
1. Introduction



SI-002 is video intercom door station that supports VoIP technology and SIP communication protocol. With HA-401 product, households can see visitors' images and have a video conversation with them when the door bell ringing, after identity confirmation, they can open the door remotely. Using high-resolution CMOS camera and advanced echo cancellation technology can show a clearer picture and excellent audio quality and timeliness of transport. It is a compact video intercom solution for building residential.

1.1. Features

- Full-duplex voice and video intercom
- Support for SIP communications architecture
- Using high-resolution camera 1080P (1920 x 1080)
- Advanced echo cancellation technology
- Built-in high sensitivity microphone and speaker
- Built-in call button
- Built-in Relay output channel (door control or alarms output)
- Built-in Digital input channel (door magnetic switch detection or external emergency button)

1.2. Specification

System		
CPU	Cortex A8 CPU (720 MHz)	
SRAM	512 MB	
Flash Memory	512 MB	
EEPROM	16 KB	

Communication		
Ethernet Port	10/100 Base-TX (Auto-negotiating, Auto MDI/MDI-X, LED indicators)	

Digital Input		
Channels	2	
Input Type	Dry contact (Source)	
Dry Contact Level	Off Voltage Level: Open	On Voltage Level: Close to GND

Relay Output	
Channels	1
Output Type	Form C (N.O./COM./N.C.)
Contact Capacity	0.6A @ 125 VAC; 2A @ 30 VDC

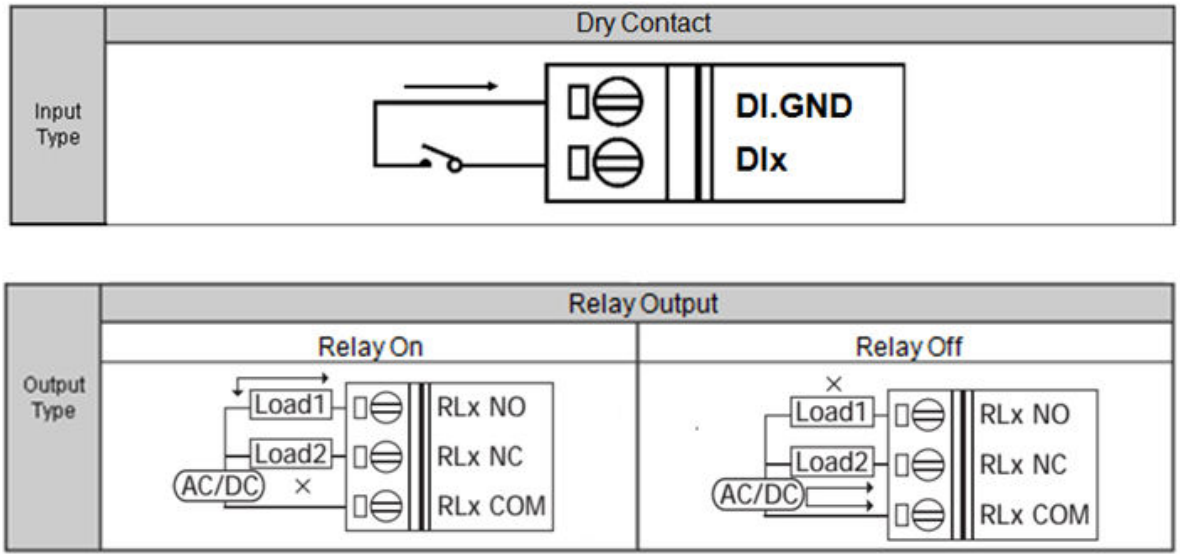
HMI	
Camera	1080P (1920 x 1080), CMOS Sensor
Audio	AMP 2.5 W; Digital microphone

Mechanical	
Dimensions	102 mm x 161 mm x 41 mm (W x L x H)
Installation	Wall Mounting (Suitable for the European 86 mm x 86 mm outlet box)

Environment	
Operating Temperature	-25 ˚C ~ +60 ˚C
Storage Temperature	-30 ˚C ~ +80 ˚C
Humidity	10 ~ 90 % RH, non-condensing

Power Supply	
Input Range	+10 V_{DC} ~ +48 V_{DC}
Power Consumption	1.5 W @ 24 V_{DC} Max.
Protection	Reverse Polarity Protection

1.3. DIO Wiring Connection



1.4. Overview

Here is a brief overview of the components and its descriptions for module status.

1.4.1. Front Panel

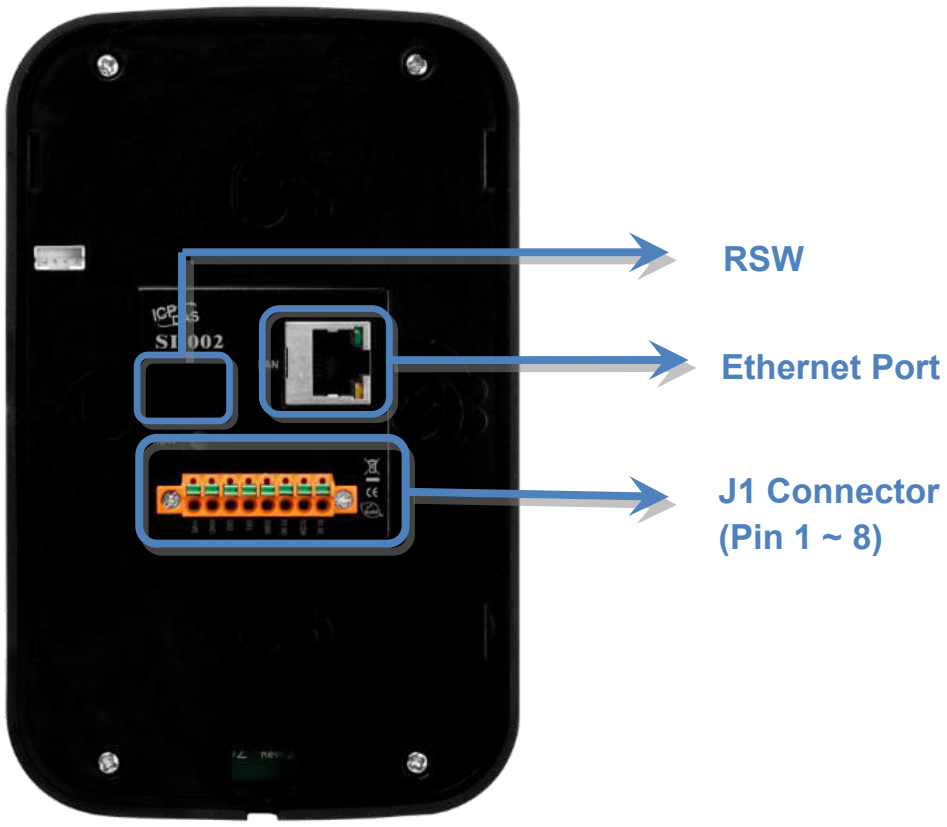
➤ Call Button with LED Indicator

When the module is off line and user push call button, the module will dial to preset sip client. When the module is online and user push call button, the module will end current call.

LED Indicator is shown current status, as shown in the below.

LED Action	Current status
High brightness	On line
Low brightness	Off line

1.4.2. Back Panel



➤ RSW (Rotary Switch)

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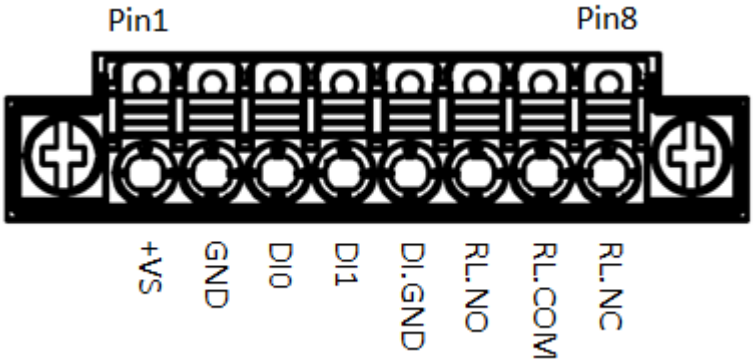
RSW Value	Function
A	Set network interface to DHCP mode
B	Set network interface to static IP mode. IP: 192.168.72.30 Mask: 255.255.0.0 Gateway: 192.168.1.1
E	FW Update Mode
F	Recover system settings
Other	N/A

➤ Ethernet Port

An Ethernet port is an opening on SIP network equipment that Ethernet cables plug into. Ethernet ports accept cables with RJ-45 connectors.

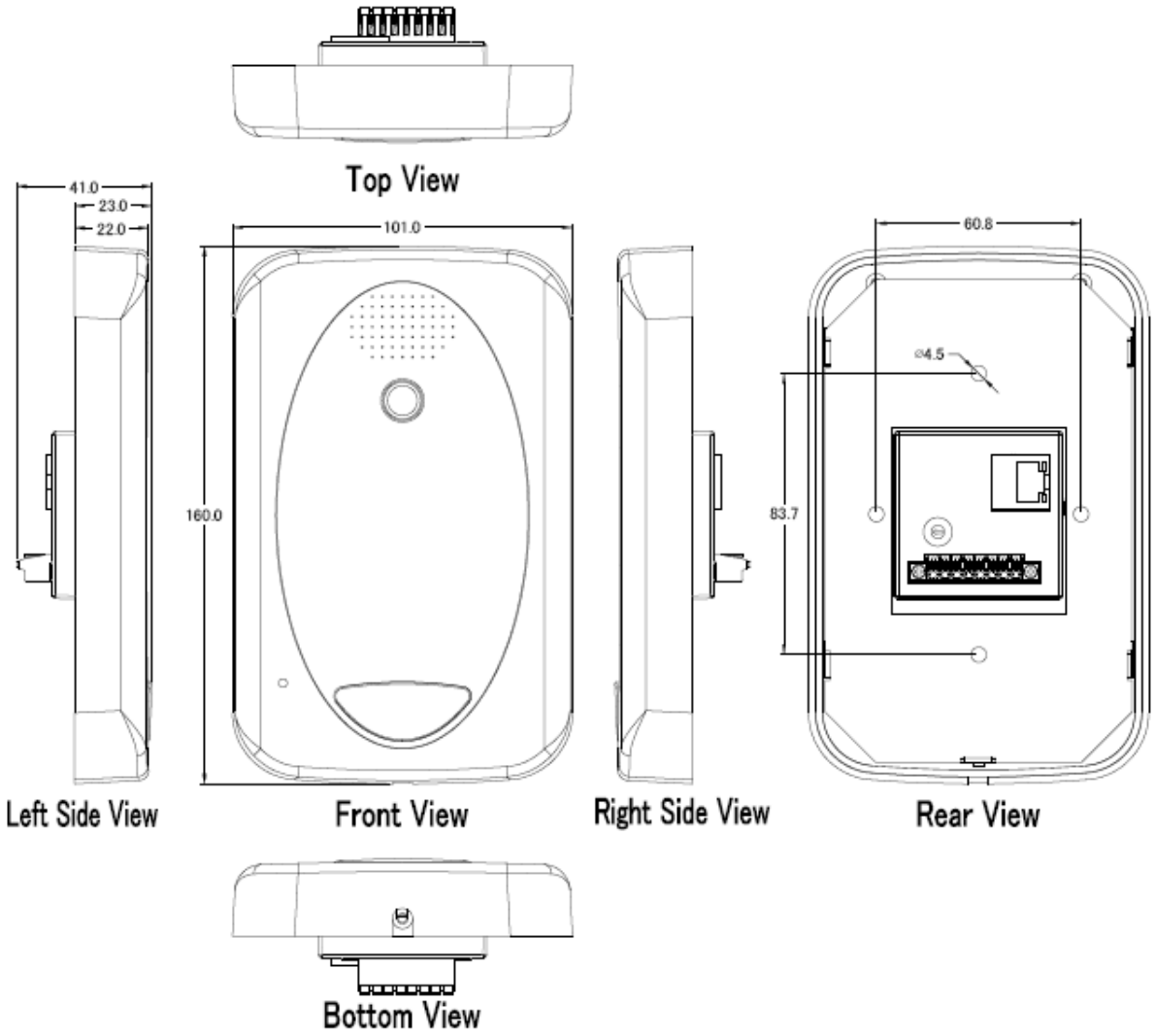
➤ J1 Connector



Pin	Name	Description
1	+Vs	V+ of Power Supply(
2	GND	GND of Power Supply
3	DI0	Digital Input CH0
4	DI1	Digital Input CH1
5	DI.GND	Digital Input GND
6	RL.NO	Relay Normally-Open
7	RL.COM	Relay Common
8	RL.NC	Relay Normally-Closed

1.5. Dimensions

All dimensions are in millimeters.

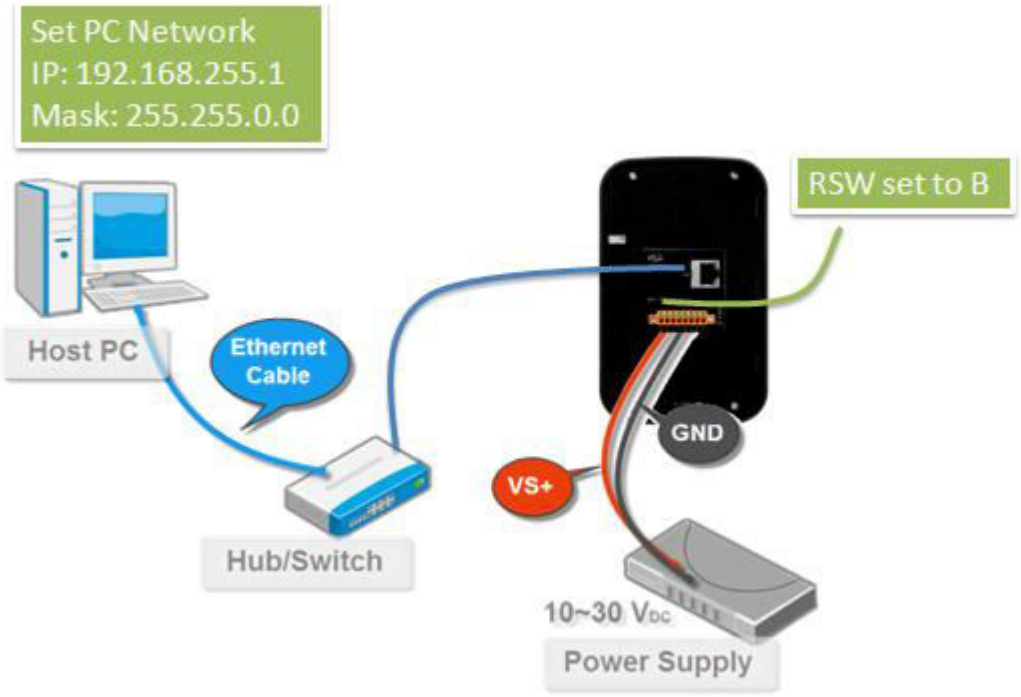


2. Getting Started

If you are a new user, begin with this chapter, it includes a guided tour that provides a basic overview of installing, configuring and using the SI-002.

2.1. Connecting to Network, PC and Power

The SI-002 is equipped with an RJ-45 Ethernet port for connection to an Ethernet hub/switch and PC. Please set RSW of SI-002 and PC Network as below.



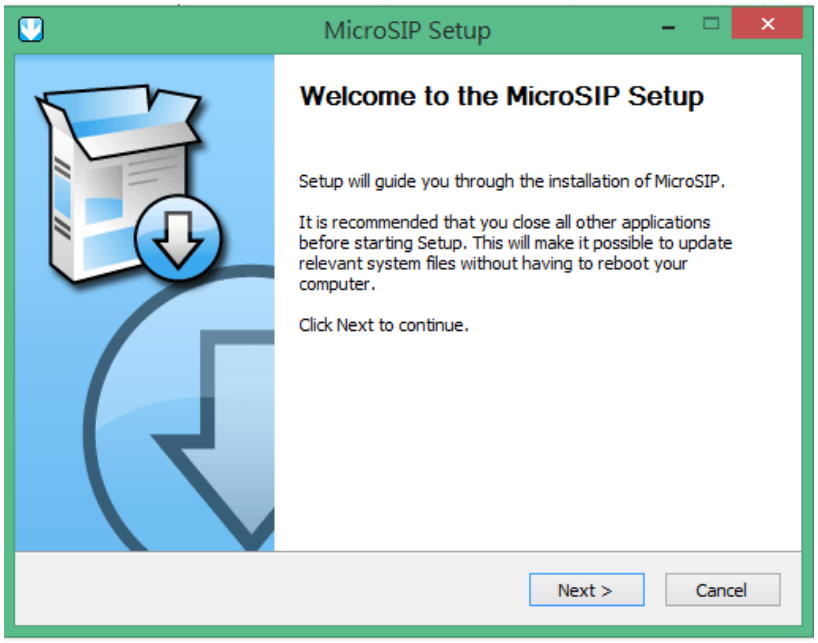
2.2. Installing the MicroSIP Utility

The MicroSIP Utility is a open source portable SIP softphone based on PJSIP stack for Windows OS. The user can use this Utility to connect with SI-002.

Step 1: Get the MicroSIP Utility tool

The MicroSIP Utility can be obtained from below link:
http://www.microsip.org/downloads

Step 2: Follow the prompts to complete the installation



2.3. Using SI-002 connect to MicroSIP Utility

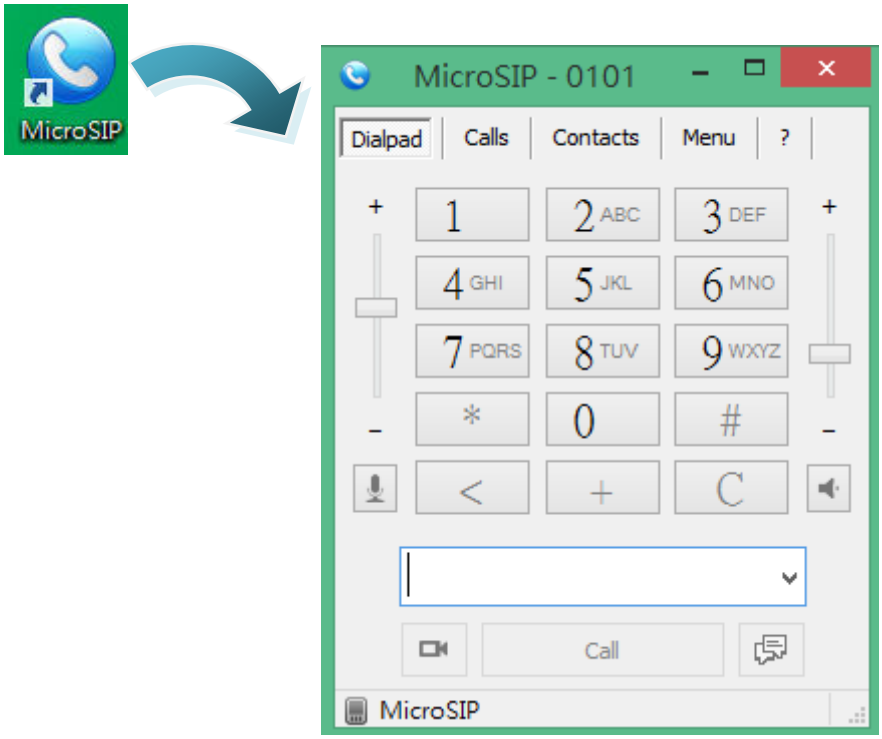
When RSW of SI-002 set to B, SI-002 will use a default IP settings to connect PC. The default IP settings are as follows:

SI-002	
IP Address	192.168.72.30
Subnet Mask	255.255.0.0

PC side	
IP Address	192.168.255.1
Subnet Mask	255.255.0.0

Step 1: Run the MicroSIP Utility

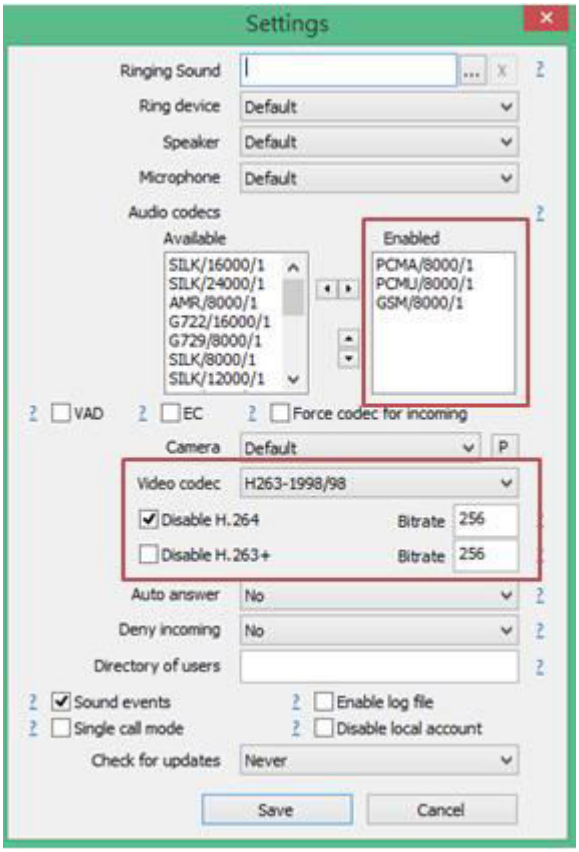
Double-click theMicroSIP Utility shortcut on your desktop.



Step 2: MicroSIP settings

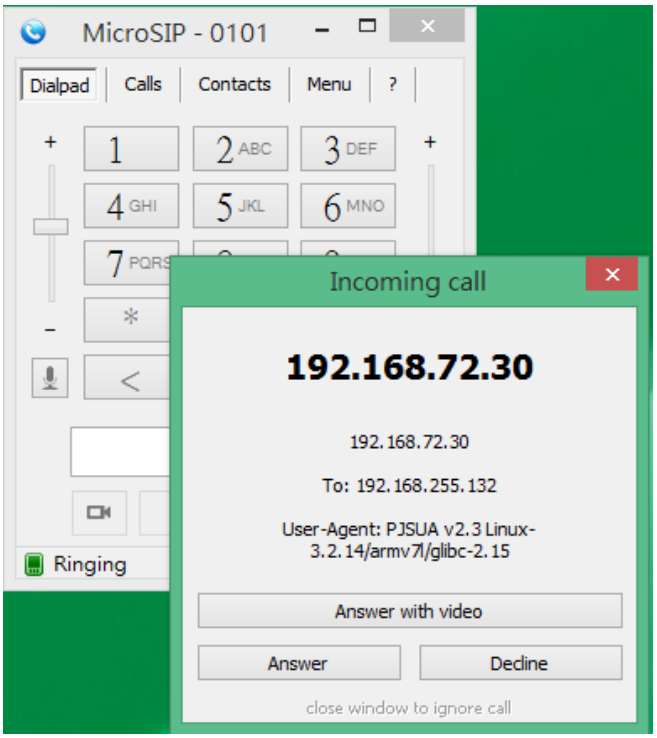
a. Click Menu => Settings

b. Select audio codec (enable PCMU, PCMA, GSM) and video codec (enable H.263+)



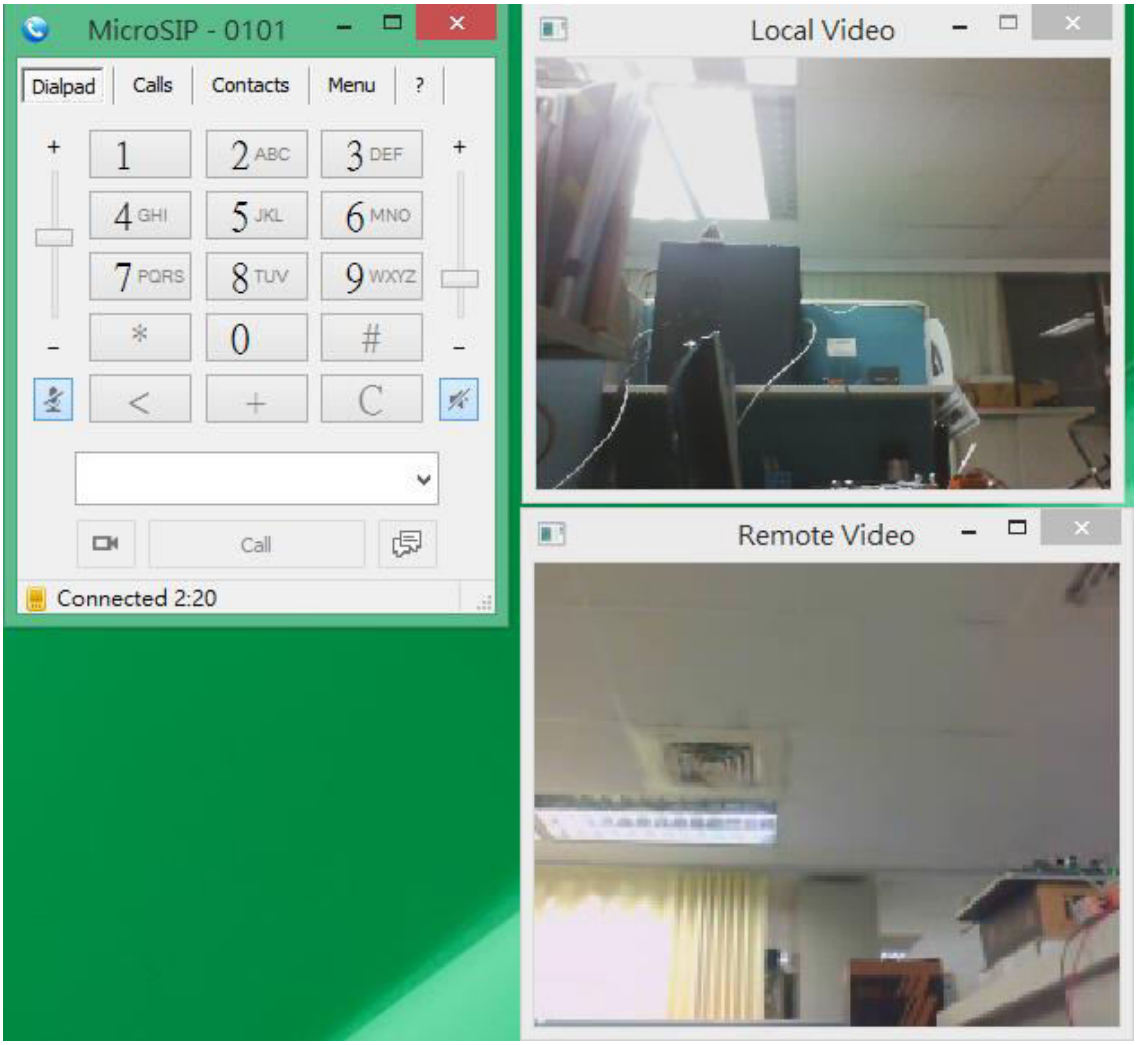
Step 3: Making a Phone call

Press call button of SI-002 to call MicroSIP and then the MicroSIP will show Incoming call. Press "Answer with video" button of MicroSIP to answer call.



Step 4: Answer call

Press "Answer with video" button of MicroSIP to answer call. The PC will show local video and remote video and hear voice from SI-002.



3. Web Applications

The SI-002 contains an advanced web configuration system that provides users with configure SI-002 through a standard web browser.

3.1. Connect to SI-002 web site

3.1.1. Installing the eSearch Utility

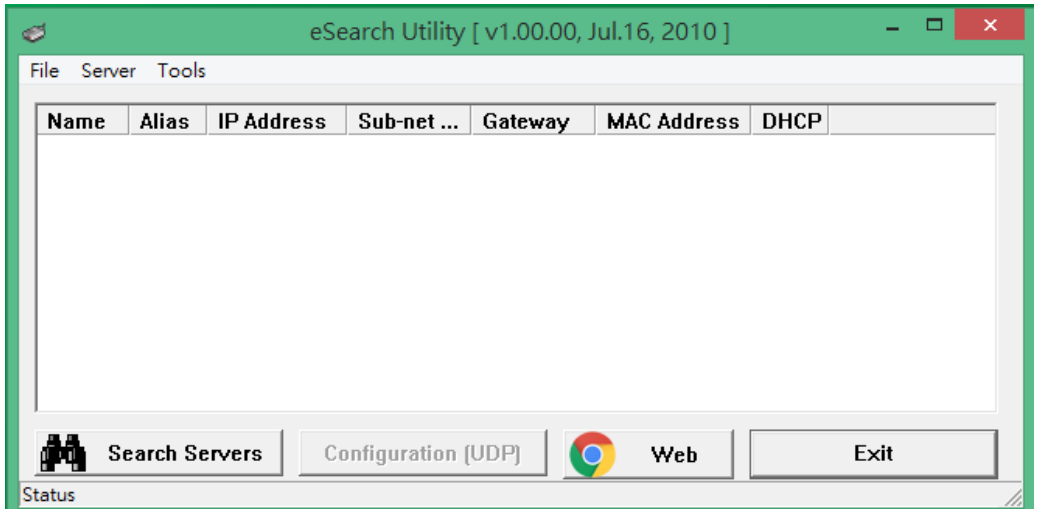
The user can get current IP of SI-002 by eSearch Utility.

Step 1: Get the eSearch Utility tool

The eSearch Utility can be obtained from below link:
http://www.icpdas.com/root/product/solutions/software/utilities/vxcomm.html

Step 2: Run the eSearch Utility

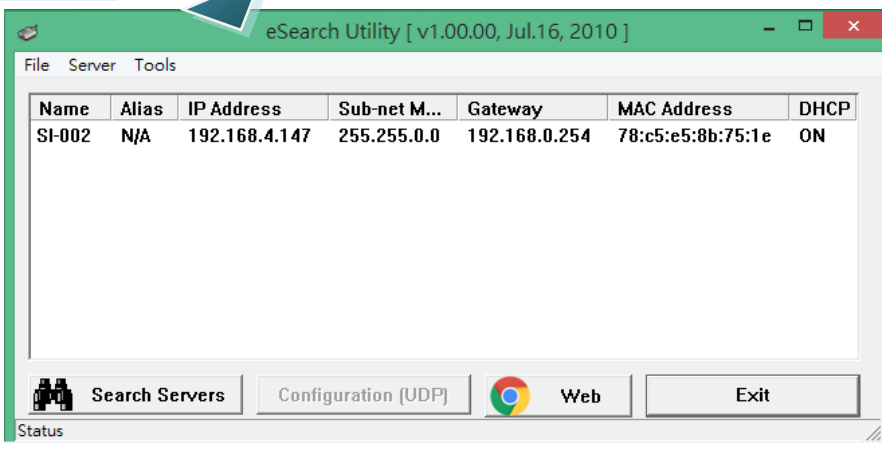
Double-click the eSearch Utility shortcut.



Step 3: Choose “Search Servers” button

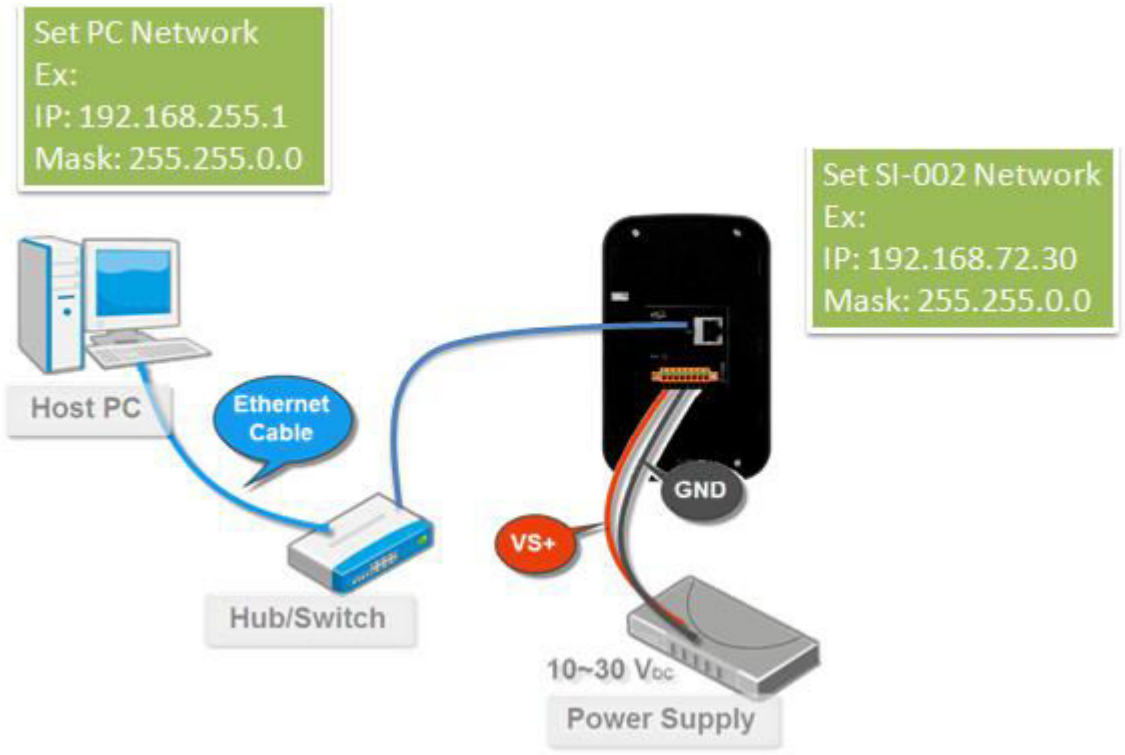
After pressing "Search Servers' button, that will search all of the SI-002 modules on your network.

After search, it will show all of SI-002 modules, the user can get IP of SI-002



3.1.2. Connecting

You can log in to the SI-002 web site from any computer by web browser. Before you open the web browser to configure the module, it needs to connect the SI-002 and your PC to the same sub network, as shown in the below.



Step 1: Open a browser

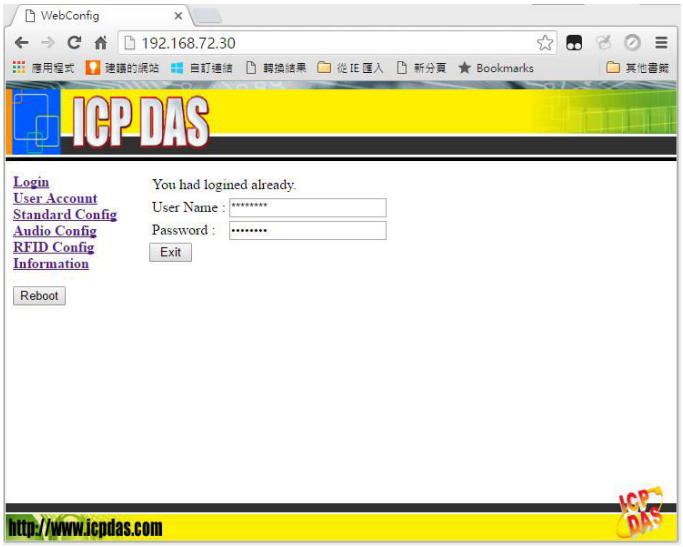
In several browsers, Mozilla Firefox and Internet Explorer are both reliable and popular internet browsers.

Step 2: Type the URL address of the SI-002

URL is http://IP/ (ex: http://192.168.72.30/), If you haven't changed the default IP address of theSI-002, it will be 192.168.72.30.

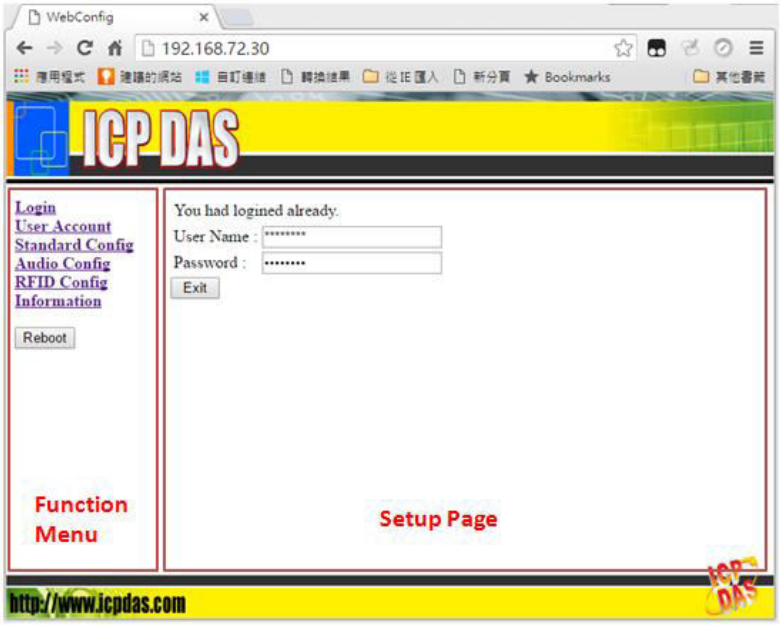
Step 3: Connect to SI-002

After PC connect to SI-002, it will show login screen and it means communication has been established.



3.2. Web Configuration

When the browser connects with the SI-002, the first page is shown in the below. The left side is the function menu and the other side is the setup page.



3.2.1. Function menu

The function menu has below function.

- Login
- User Account
- Standard Config
- Audio Config
- RFID Config
- Information

  Reboot

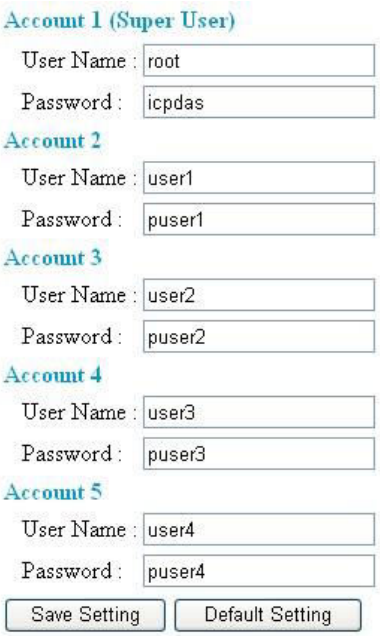
The “Reboot” button can provide the user to restart the SI-002 module.

3.2.2. Login

The user login and logout interface

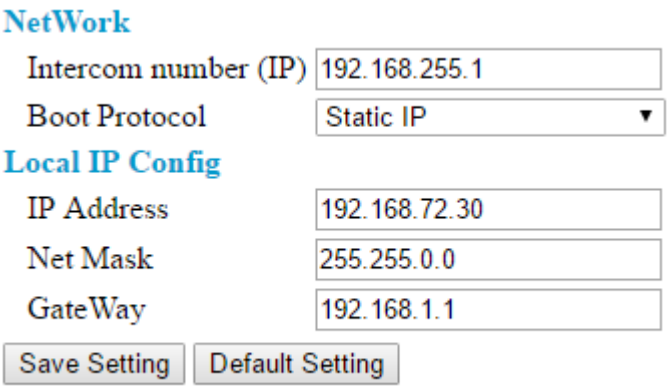
3.2.3. User Account

The user account setting limits which user can configure the module settings. The super user (Account 1, name=”root”, password=”icpdas”) is an only the user that can edit this page. The default user name and password is shown in the below.



3.2.4. Standard Config

When changing the setting in this page, the user must restart the SI-002 to enable new settings.



- NetWork

a. Intercom number (IP)：The user can set the Intercom number that the SI-002 wants to connect to. This field can be IP (ex: 192.168.255.1) or Intercom number with PBX IP (ex: 0101@192.168.255.1).

b. Boot Protocol：Static IP / DHCP Connection

SI-002 supports “Static IP” and “DHCP” mode. The user can choose one of

these modes to set the IP address of SI-002 when booting.

- Local IP Config:

a. IP Address：When Boot Protocol is “Static IP”, the user can set IP address of SI-002 in this field.

b. NetMask：When Boot Protocol is “Static IP”, the user can set subnet mask of SI-002 in this field.

c. GateWay：When Boot Protocol is “Static IP”, the user can set gateway of SI-002 in this field.

3.2.5. Audio Config

The user can set the output volume and input volume in this page. When changing the setting in this page, the user must restart the SI-002 to enable new settings.

- Output Volume：0~10

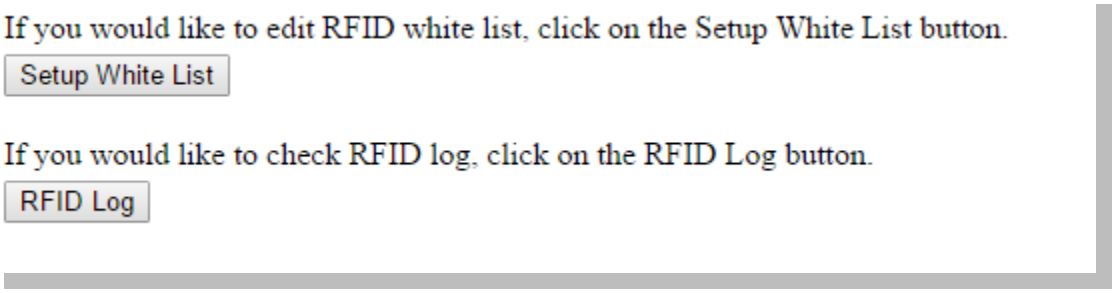
  The maximum output volume is 10.

- Input Volume：0~10

  The maximum input volume is 10.

3.2.6. RFID Config

In this page, the user can edit RFID White list by "Setup White List" button and get RFID history by "RFID Log" button.

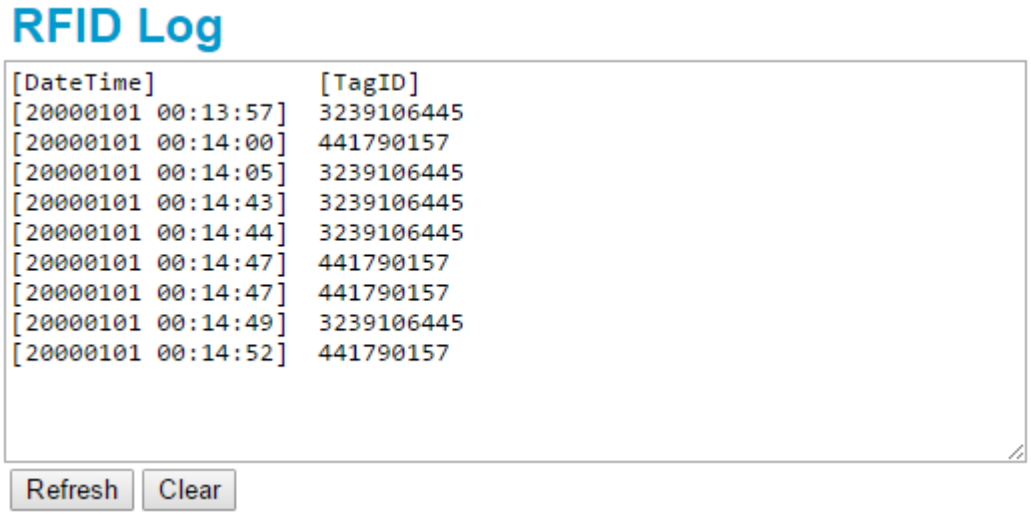


- Set White List

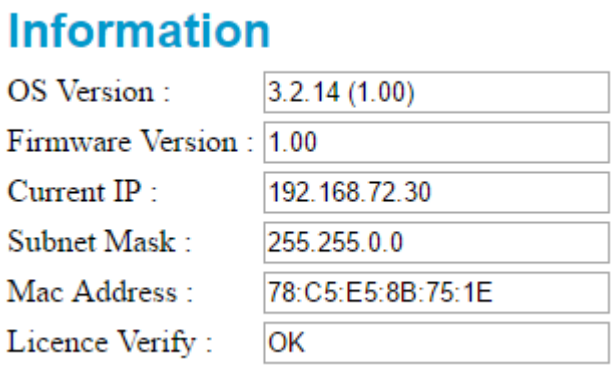
  The user can fill Tag ID of RFID in this page, if SI-002 detect the same Tag ID, it will drive the relay from off to on status.

- RFID Log

  In the page, the user can get RFID history, It will show time and Tag ID.



3.2.7. Information



- OS Version：Show OS version.
- Firmware Version：Show application program version.
- Current IP：Show current IP.
- Subnet Mask：Show current subnet mask.
- Mac Address：Show current Mac address.
- License Verify：Show the result that the license is verified. If it shows “OK”, it

means the licence is passed.