AADESIGN TECHNOLOGY CO.

V-BELL DP-104 SIP IP VIDEO DOOR PHONE

Installation and User Guide

2014

WELCOME

Congratulations on purchasing the V-Bell DP-104 SIP IP Video Door Phone. This door phone is suitable for all your business, and home, door entry communication needs. The DP-104 SIP IP Video Door Phone connects to your computer network and allows either peer to peer (P2P) calls (calls direct to an IP address of another VoIP device) or calls to another number via the SIP server, moreover, it is easily to setup and configuration via a web browser.

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Chapter 1 Introduction

The **DP-104 SIP IP Video Door Phone** is a new, elegant video door intercom with a compact shape that has an easy-to-install surface mount. It works with SIP based phone systems and is compatible with most modern IP-PBX systems supporting both audio and video.

If you want to identify who is at your door before you answer the phone or before letting them in, then the door phone is available with a built-in IP camera supporting up to 1280 x 720 HD video. This video can be viewed in a web browser and shows real-time video on a PC or on a mobile phone/tablet that supports iOS and Android.

The DP-104 SIP Video Door Phone allows entry with the simple press of a key. It is great for unattended lobbies, front doors, gates, warehouse doors, or anywhere visitors may require assistance. Therefore, it is equally suited for commercial, residential, or public facilities.

1.1 Features

- COMS 1280 x 720 HD Camera Sensor
- Support H.264 , Motion-JPEG Video codec
- Super High-Performance Echo Cancellation technology
- The shortest voice delay (below 1~0.5 second)
- Support VoIP technology and SIP (FRC3261) protocol
- Support SIP Register mode and Peer to Peer mode
- Compatible with most modern IP-PBX systems
- Support most SIP Client compatibility
- Support RTSP Protocol
- Build-in One Relay output port (control door lock or siren)
- Build-in One DI port (for Door sensor, PIR, Emergency button)
- COMS 1280 x 720 HD Camera Sensor
- Lens : 112 degrees Wide Range Video View angle
- Support G711u, AAC voice codec
- Build-in Hardware AEC (Acoustic Echo Cancellation)
- Support Auto-answer
- Build-in one Call Button
- Build-in RFID Card Reader (optional)
- Build-in Power over Ethernet (PoE)(IEEE802.3af) (optional)

Chapter 2 Quick Install

The V-Bell DP-104 SIP IP Video Door Phone requires minimal configuration for a typical installation.

2.1 Open carton

Open the carton and take out the DP-104 Door Phone

Your package should include:

- One DP-104 SIP IP Video Door Phone
- One Roof for surface-mounted
- One Panel for surface-mounted
- One DI/DO cable
- One connector
- Three screws

If items are missing or damaged, notify your Avadesign representative. Keep the carton and packing material.

2.2 What else you need

- One external power adapter: OUTPUT: DC 12V 1.0A
- One RJ-45 cable

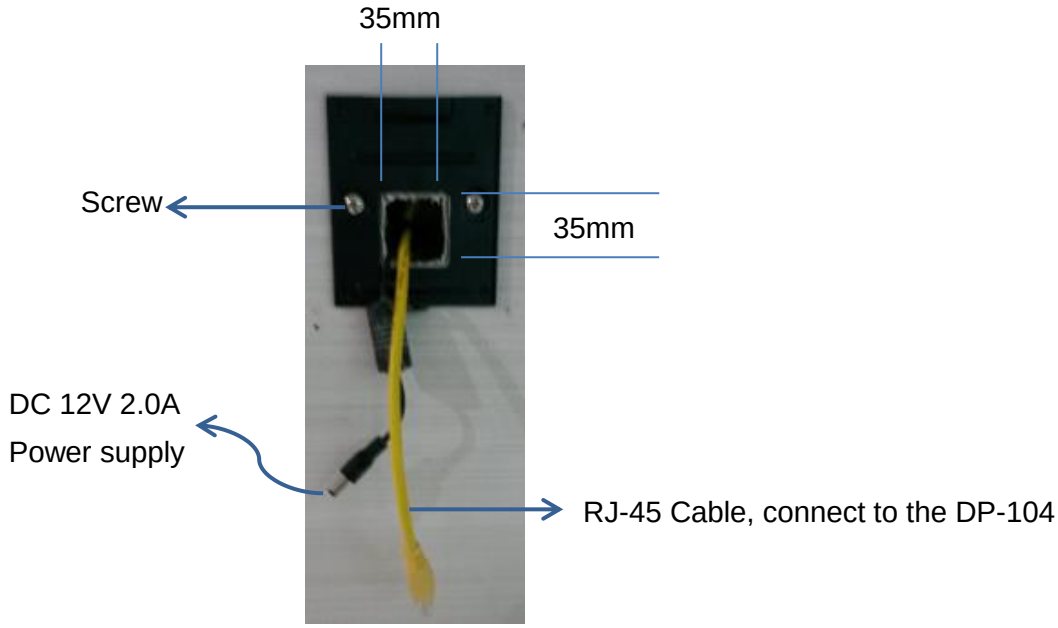
p.s. You also can buy the power adapter from Avadesign Technology Co., Ltd. This is an optional item.

2.3 Remove two stickers

There are two layers of transparent stickers on the surface of DP-104 SIP IP video door phone. For the voice quality and pressing the “CALL” button smoothly, please remove the first layer of sticker at first. Then remove the second layer of sticker that shown as .below.

2.4 Wiring and mounting on the wall:

- Select a location, Surface-mount the DP-104 Door Phone at desired location.
- Feed the Ethernet cable through the cable square hole which dimensions 35 x 35mm shown as below:



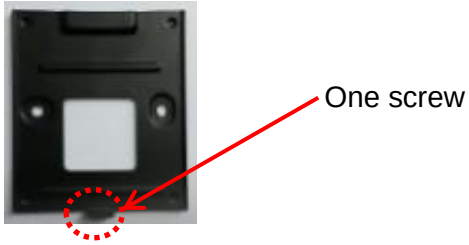
- Fix the door phone on the wall using a roof or a panel and two screws as shown the diagrams below:

Fig. 1 Mounting on the wall with Roof

or

Fig. 2 Mounting on the wall with Panel

You can fix the DP-104 IP video door phone on the roof/panel with a screw.



2.5 Plug in

Connect RJ-45 cable and power supply to the DP-104 SIP IP video door phone. Then plug into an available outlet.

RJ-45 Cable

Rear view of the DP-104

Apply DC Power
DC 12V 1.0A

The polar of power line:
Red line is for positive **(+)**
Black line is for negative **(-)**

The Qualia service

The Qualia Service is the cloud service and free charge that provided by Avadesign Technology for the DP-104 SIP IP Video Door Phone application.

2.6 Access Qualia service

The V-Bell DP-104 SIP IP Video Door Phone will access the Qualia service directly and start to work automatically.

Now, you can test the DP-104. The DP-104 SIP IP Video Door Phone allows entry with pressing a key. Caller at the front door and press “CALL” button, person inside the building can talk to callers, look at caller, then open the door.

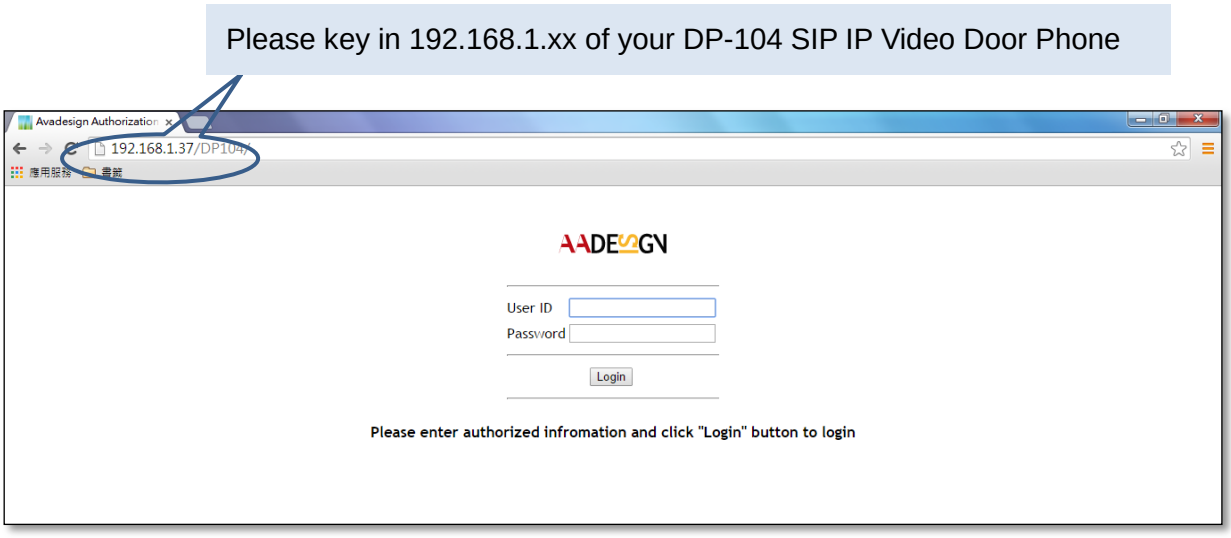
Chapter 3 Full Web Configurations

User can choose either Qualia service or register to SIP server which is accessed via a web browser.

3.1 Register to SIP server

3.1.1 Enter web configure page

When you register the DP-104 door phone to SIP server, please open your chrome browser and type an IP address. We suggest user can use IP finder utilities to find out the IP address of your new DP-104 SIP IP video door phone that described as chapter 4 of this manual at page 18~20. For example: type **http://**192.168.1.xx of the DP-104 door phone in the address bar and press Enter. The screen is shown as follows.



p.s. If DHCP fail, please go to the default IP 192.168.1.100 for advance application.

Please input with username: admin and password: admin then click “Login” button on the screen.

Login Page

Web configuration consists of left menu bar for major function categories and displays detailed setting for each function as clicks.

- **Status**
- **Service**
- **Device**
- **System**

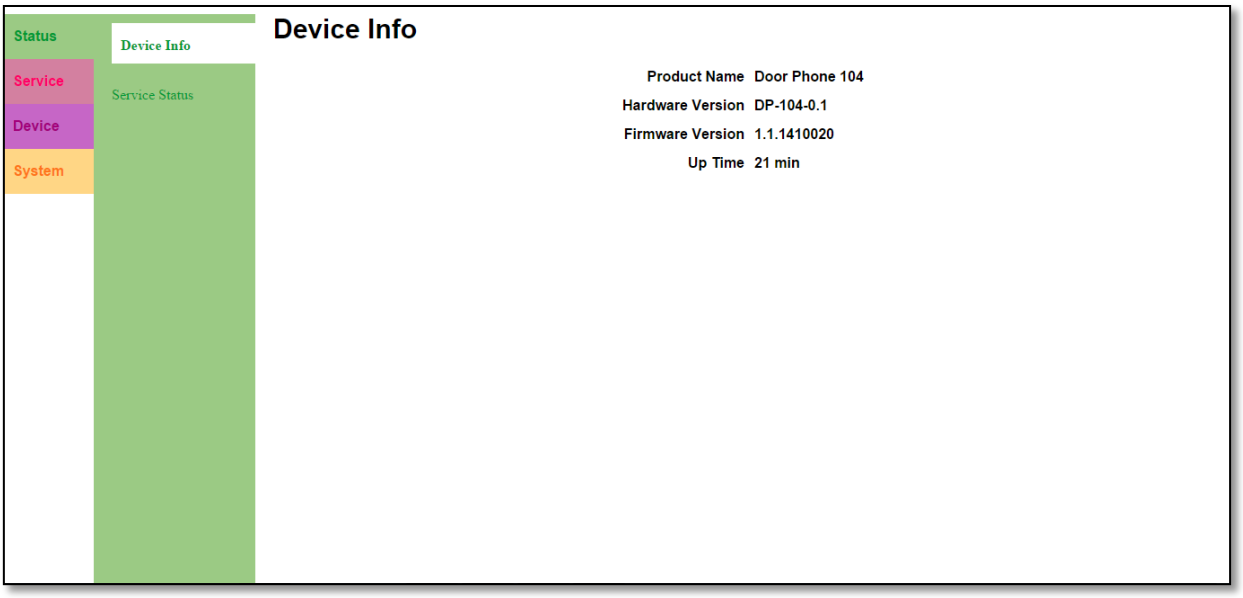
The various configuration menus are explained below.

3.2 Status

3.2.1 Device Info

Then you can see the screen as below which show the device information:

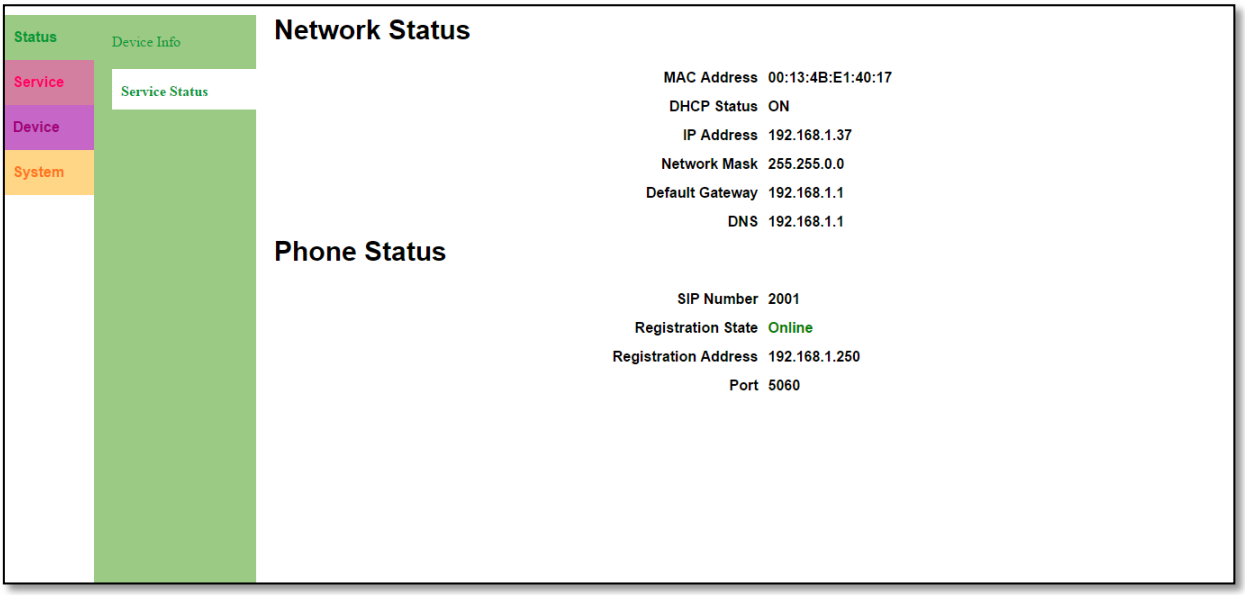
Status — Device Info



3.2.2 Service Status

You also can see the service status as below:

Status — Service Status



3.3 Service

3.3.1 Phone ➔SIP

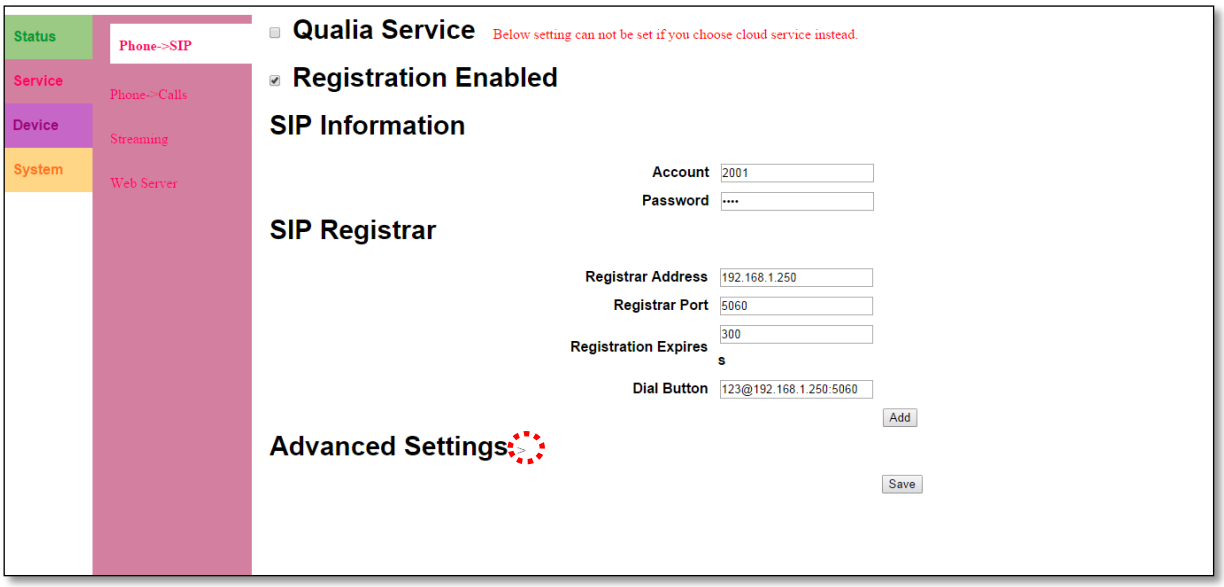
Now you can select “service” in the first level of menu then click on “Phone -> SIP” bar in the second level of menu to register your DP-104 SIP IP video door phone to SIP server.

Disable Qualia Service. And input your data to each fields.

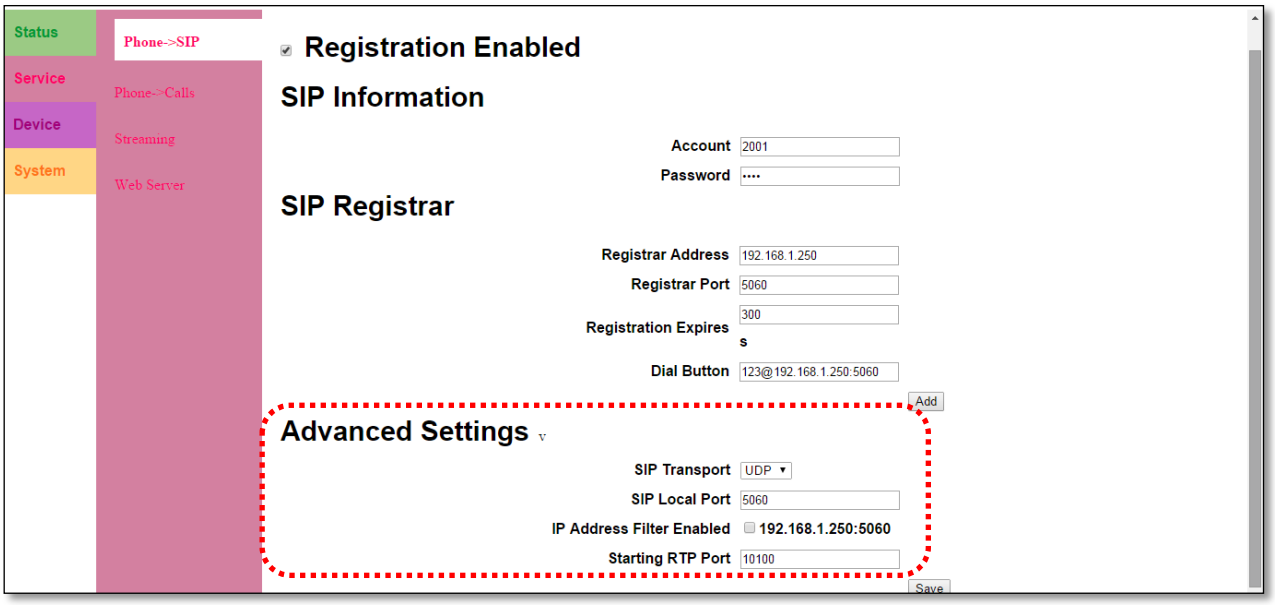
You can click on “Add” button to add more dial button for use.

When you have finished the input data of each field, clicking on “save” button on the screen to save your registration data. The screen is shown as follows.

Service — Phone ➔ SIP



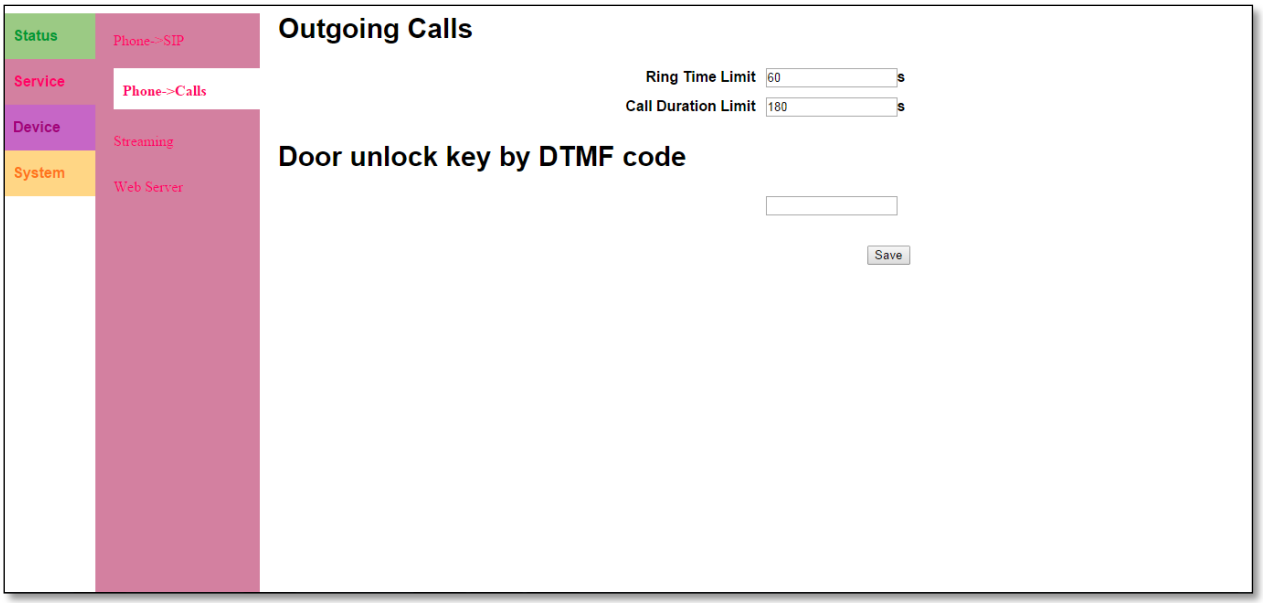
If you would like to make SIP transport, local port…and so on advance setup, please move the cursor to the arrow sign which at the end of “Advanced Settings” and click the left button of your mouse. Then you can input data for advance setting as below:



3.3.2 Phone ➔ Calls

Next step, you can setup the ring time and call duration for outgoing calls of the DP-104 SIP IP video door phone by clicking on “Phone->Calls” bar in the second level of menu. You also can input a DTMF code to unlock the door that shown as follows.

Service — Phone ➔Calls

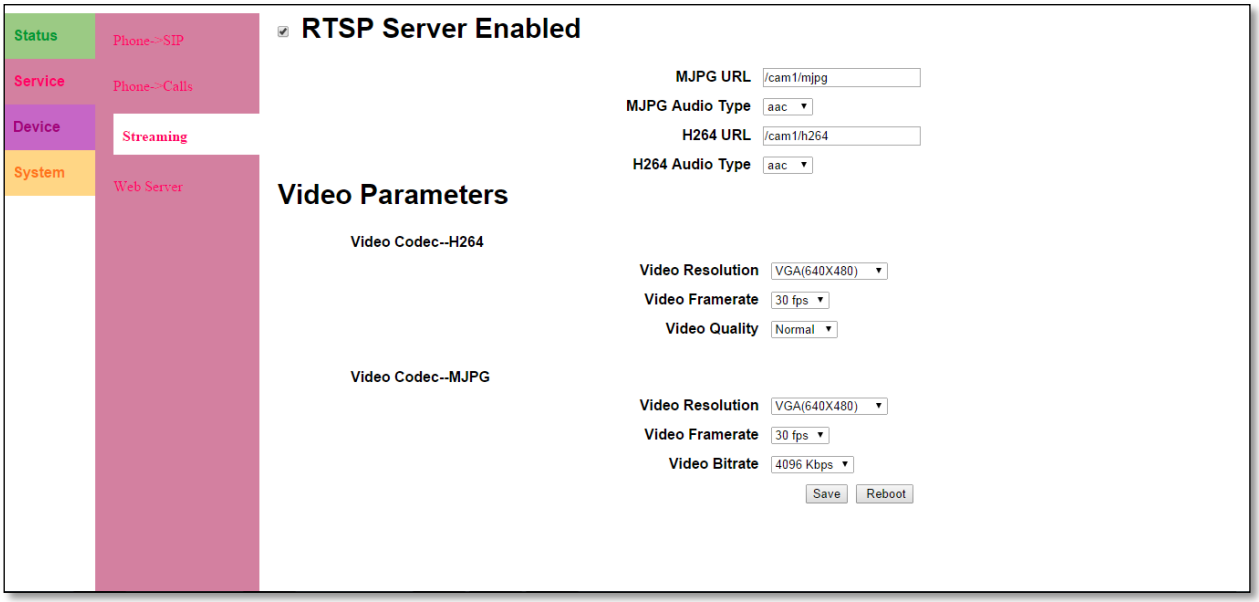


3.3.3 Streaming

The Real Time Streaming Protocol (RTSP) enables you to watch live video from DP-104 SIP IP video door phone connected to the RTSP server.

Now you can enable RTSP server by clicking on “Streaming” bar in the second level of menu for real-time watching who is at your door. You also can setup the resolution of image, video frame rate and video quality for the live video of IP camera of the DP-104 SIP IP video door phone that shown as follows.

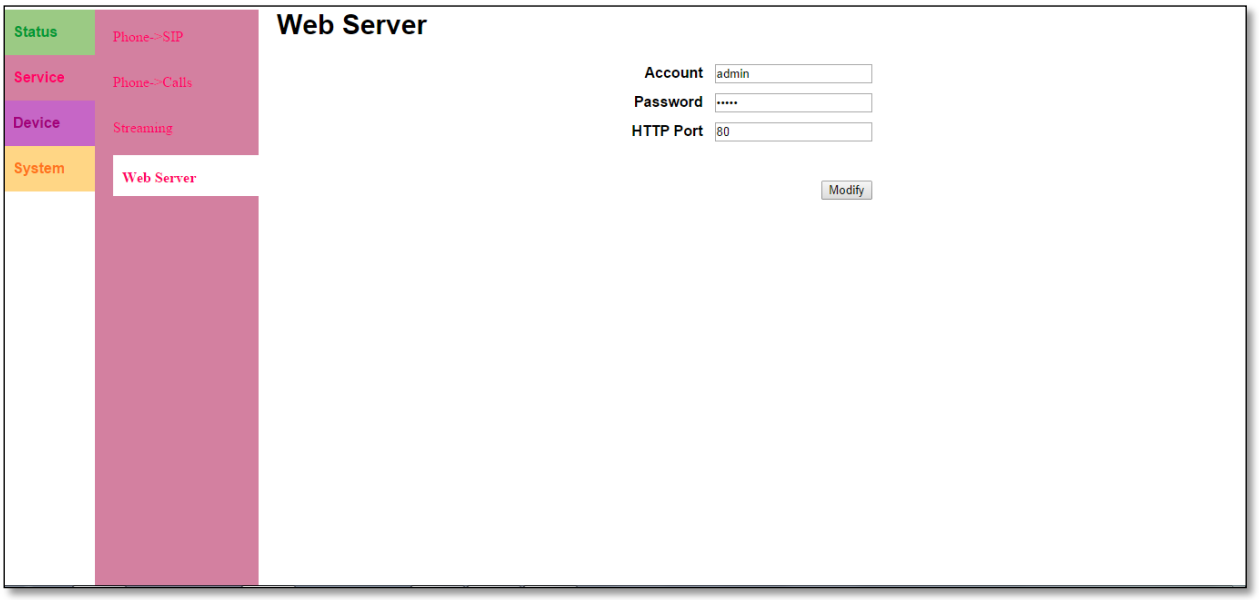
Service — Streaming



3.3.4 Web Server

If you would like to change the account name and password, please click on “web server” bar in the second level of menu as follows.

Service — Web Server

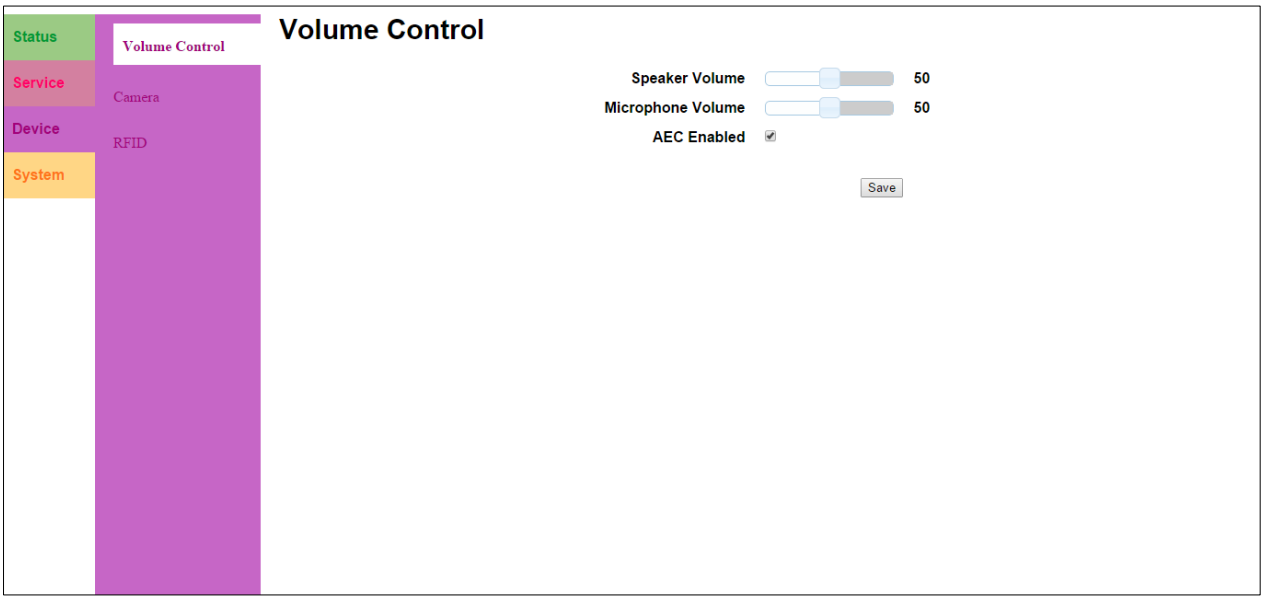


3.4 Devices

3.4.1 Volume Control

If you would like to adjust the volume of speaker and microphone, please select “device” in the first level of menu and click on “Volume Control” bar in the second level of menu as follows:

Device — Volume Control



3.4.2 Camera

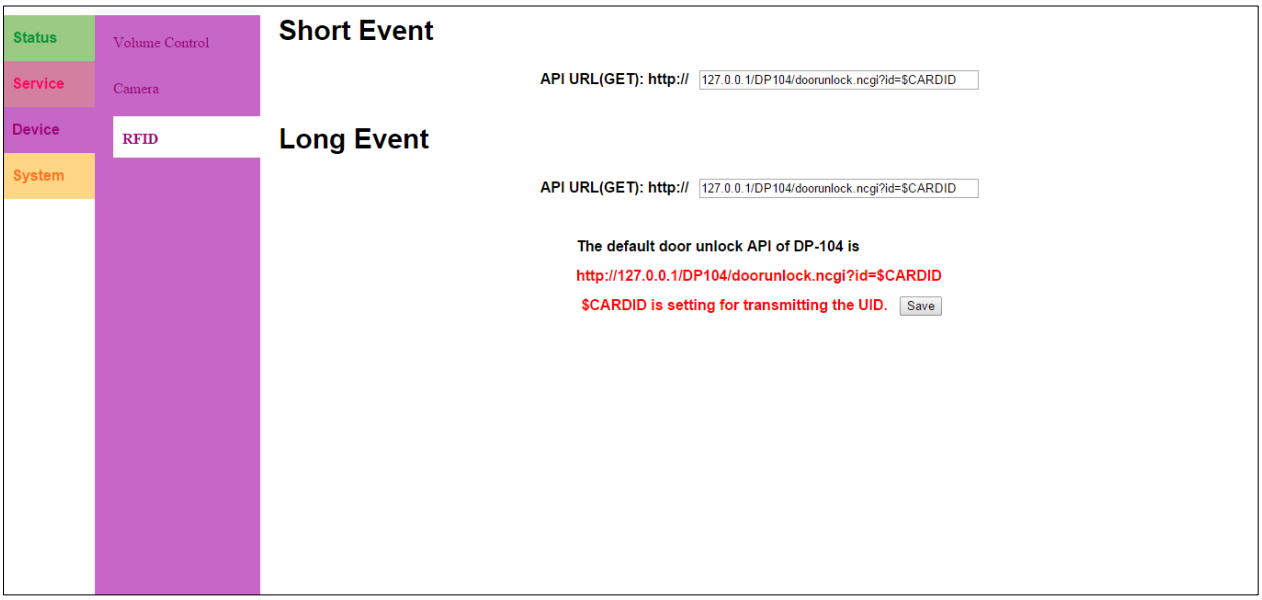
If you would like to adjust the brightness and contrast of IP camera of the DP-104 SIP IP video door phone, please select “device” in the first level of menu and click on “Camera” bar in the second level of menu. You also can decide to open or close the light of the camera LED that shown as follows:

Device — Camera

3.4.3 RFID

We describe how to do RFID (Radio Frequency Identification) set up here. Please select “device” in the first level of menu and click on “RFID” bar in the second level of menu as follows:

Device — RFID



Short Event: User place his/her card in the sensor zone of DP-104 IP door phone less than 2 seconds then execution.

Long Event: User place his/her card in the sensor zone of DP-104 IP door phone more than 2 seconds then execution.

API URL (GET): The open door http API of DP-104 IP door phone is http://127.0.0.1/DP104/doorunlock.ncgi?id=$CARDID

You do NOT need to input card number. And no card number saves in the DP-104 SIP IP video door phone.

3.5 System

3.5.1 Network

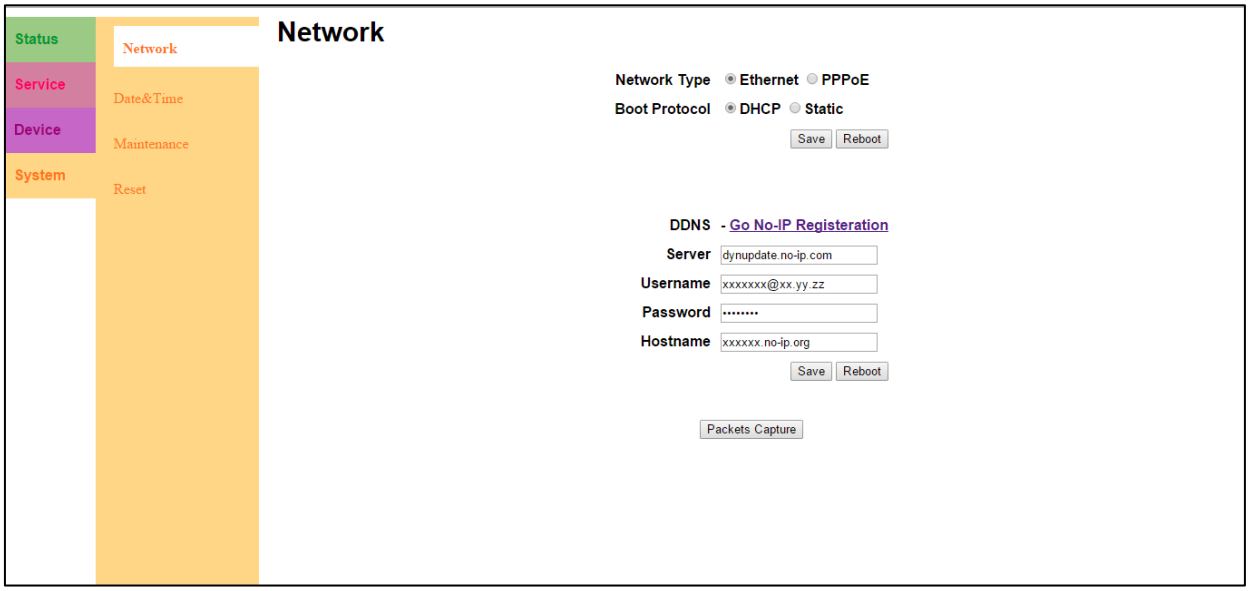
The network settings can be found in the menu “Network“. Depend on different network environment for each user. You can go to “System” item in the first level of menu and click on “Network” bar in the second level of menu to define the type of your network.

DP-104 SIP IP video door phone supports Ethernet and PPPoE. Ethernet is the most widely-installed local area network (LAN) technology. The Point-to-Point Protocol over Ethernet (PPPoE) is a network protocol for encapsulating PPP frames inside Ethernet frames.

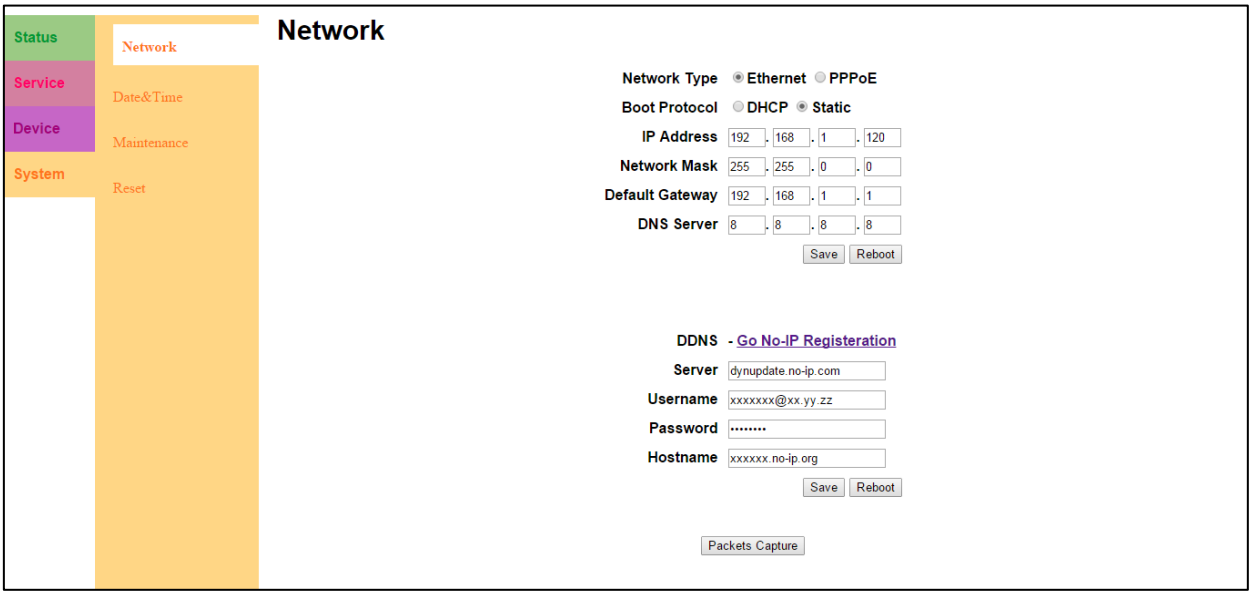
If you click Ethernet, please choose DHCP or Static IP that shown as below. The Dynamic Host Configuration Protocol (DHCP) is a standardized network protocol used on Internet Protocol (IP) networks for dynamically distributing network configuration parameters, such as IP addresses

for interfaces and services.

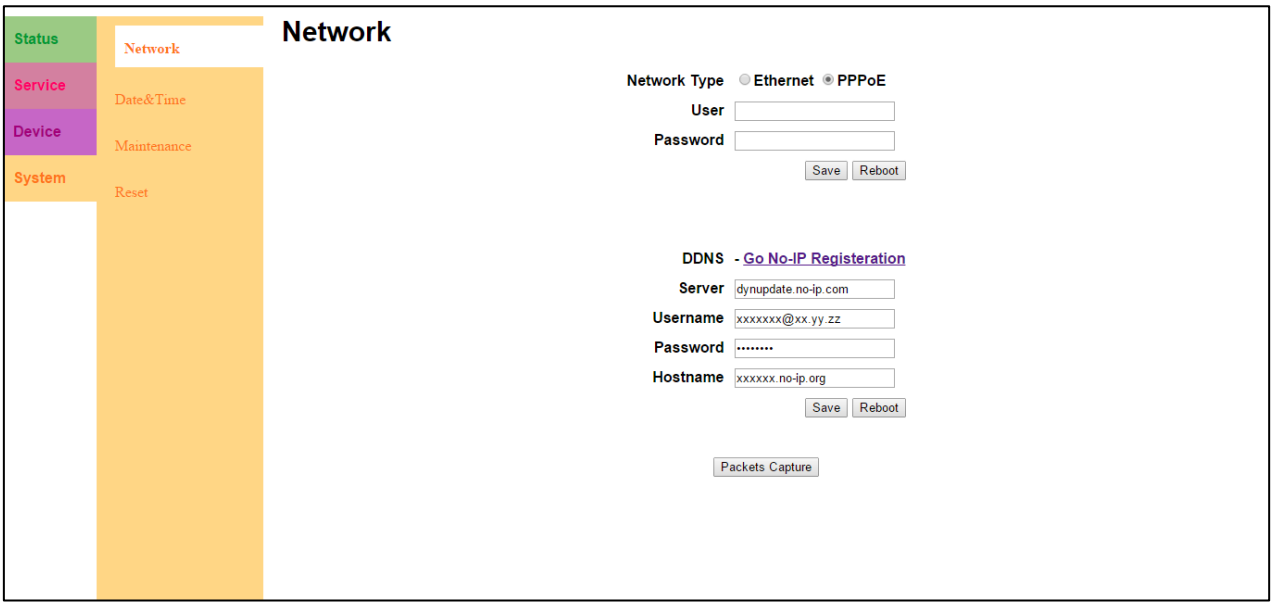
System — Network — Ethernet — DHCP



System — Network — Ethernet — Static



System — Network — PPPoE

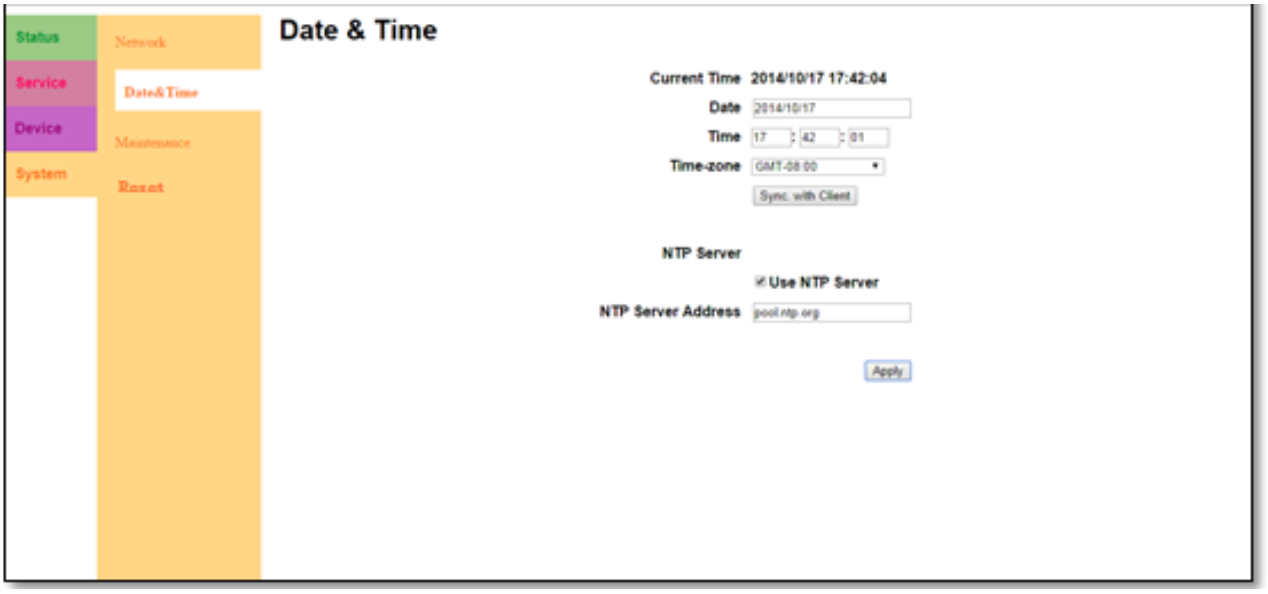


3.5.2 Date & Time

You can set up the date and time of the DP-104 SIP IP video door phone by manual or NTP (Network Time Protocol) server. If you choose to setup the date and time by manual, please input data for “Date”, “Time”, and “Time-zone” fields then click on the button of “synchronize with client”.

If you would like to synchronize the time automatically, please enable the NTP server that shown as below.

System — Date & Time



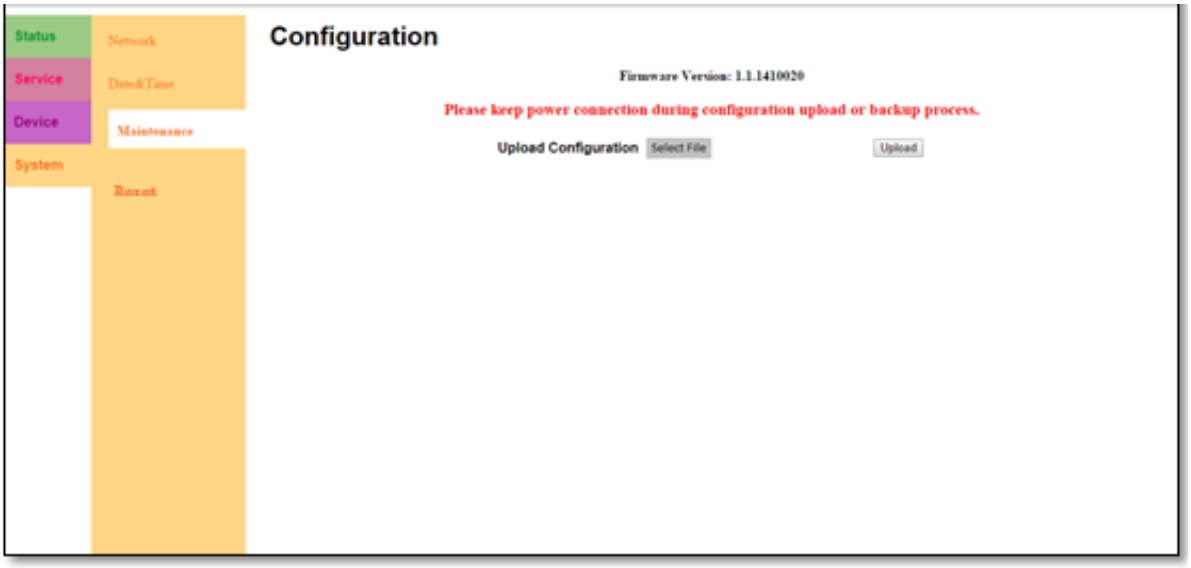
3.5.3 Maintenance

3.5.3.1 Upgrade DP-104 Firmware

Before you select “System” in the first level of menu and click on “Maintenance” bar in the second level of menu to make new configuration, you need to download the firmware file of the DP-104 SIP IP video door phone. Please visit http:/220.135.186.178/dp104/firmware to download the firmware file and save in your computer.

During upload the file for configuration, please keep the power supply is connect to plug-in. After the upgrade is complete, please check and confirm the firmware version has changed.

System — Maintenance

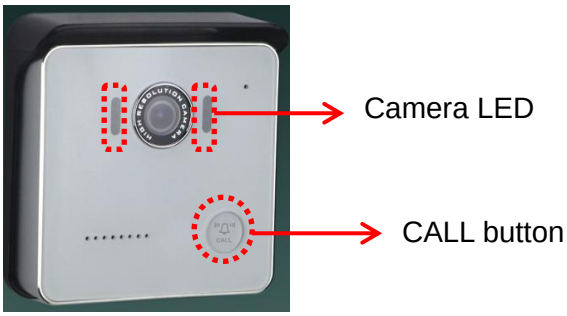


3.5.4 Reset

3.5.4.1 How to return to default setting for your DP-104 SIP IP video door phone?

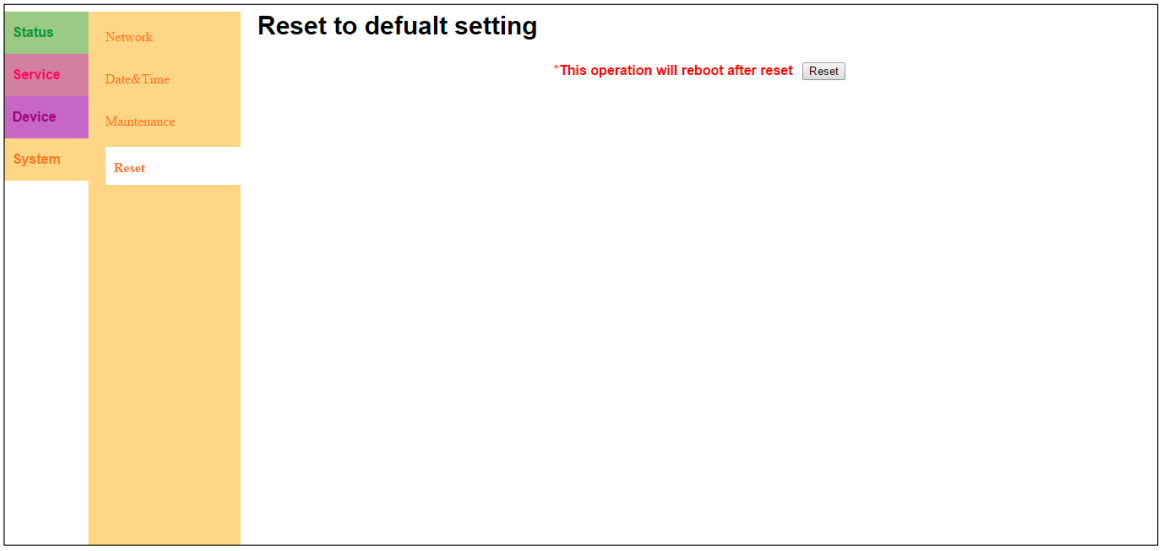
DP-104 SIP IP video door phone provides two different methods to recover the default setting for user.

(1) For resetting device to default settings plug in and hold CALL button at the front panel of DP-104 until the camera LED flash quickly about 5 seconds then release the button. The DP-104 IP video door phone will restart automatically and return to default setting.



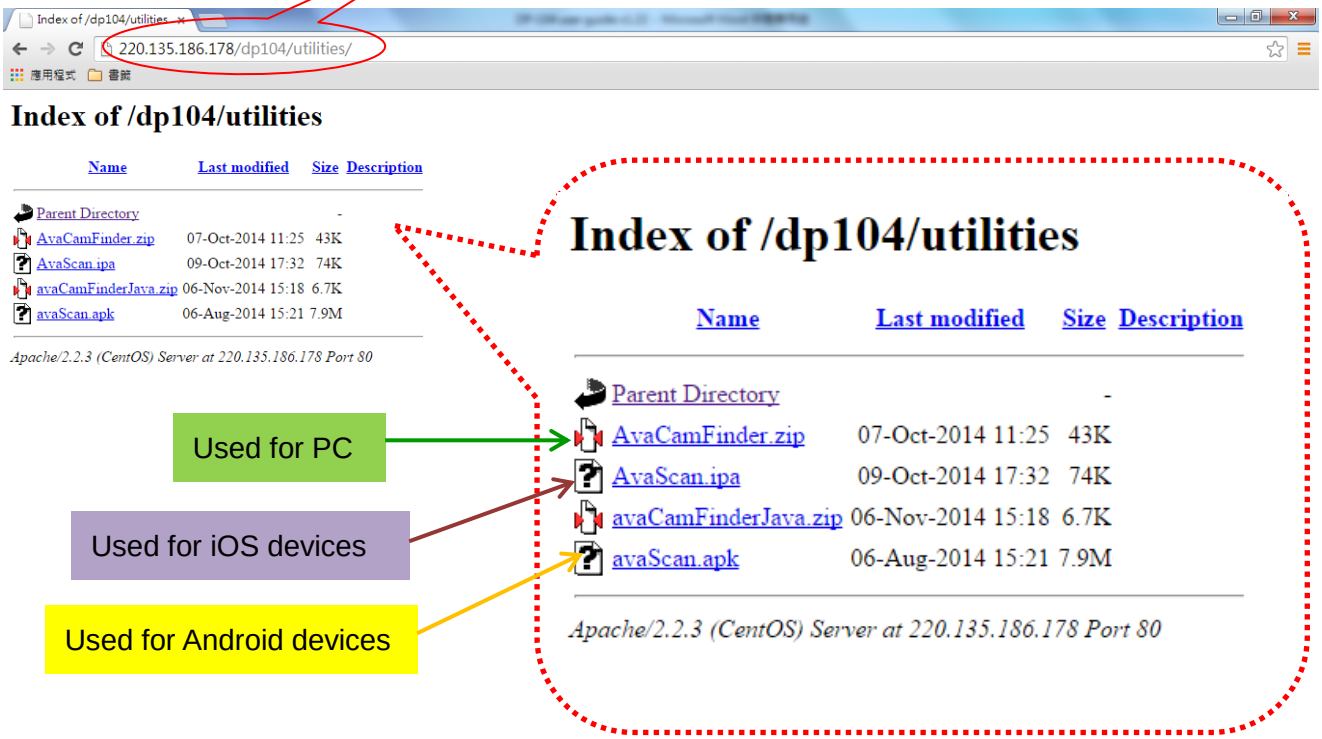
(2) For the version of v1.1.1411060 late, you can select “System” in the first level of menu and click on “Reset” bar in the second level of menu to recover the default setting that shown as following diagram.

System — Reset



Chapter 4 How to find the IP address of your DP-104 SIP IP Video Door Phone

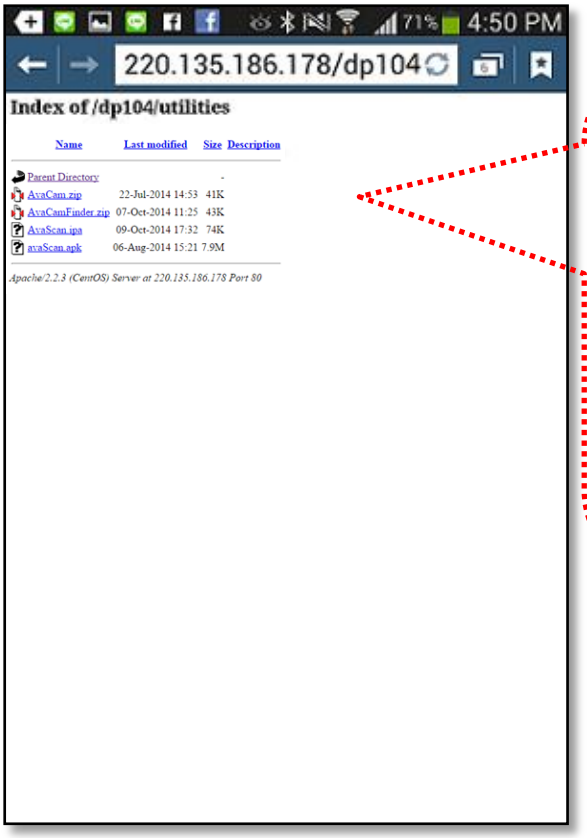
If find out the IP address of DP-104 SIP IP video door phone is difficult for you, please open the web browser and type **http://** 220.135.186.178/dp104/utilities/ in the address bar and press Enter. The screen is shown as below.

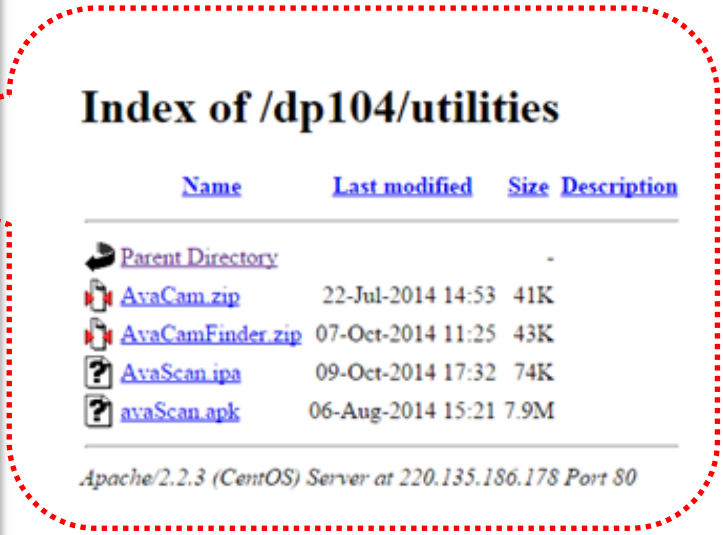


AvaCamFinder.zip is used for your computer. Please click on “AvaCamFinder.zip “and download the file to your PC or Notebook. Then install it. The icon will display on the desk of your PC or Notebook. Click on this icon , you will find the IP address of your DP-104 SIP IP video door phone shows on the screen as follows.

AvaScan.ipa is used for your mobile devices that developed by iOS such as iPad or iPhone. Please download the file with name of AvaScan.ipa on your iPad or iPhone and install it. The icon will appear on the screen of Apps on your iPad or iPhone. Click on this icon , you will find the IP address of your DP-104 SIP IP video door phone show on the screen that is similar with above diagram.

avaScan.apk is used for your mobile devices that developed by Android. Please open the Internet browser on your smartphone or tablet and point to an IP address 220.135.186.178/dp104/utilities/. Then you also can see the screen shown on your smartphone as below.





Please download the file with name of avaScan.apk to your smartphone or tablet and install it. The icon of avaScan will appear on the screen of Apps on your smartphone. Click on this icon , you can choose “search Cam” to see the IP address of your DP-104 SIP IP video door phone that shown as right side..

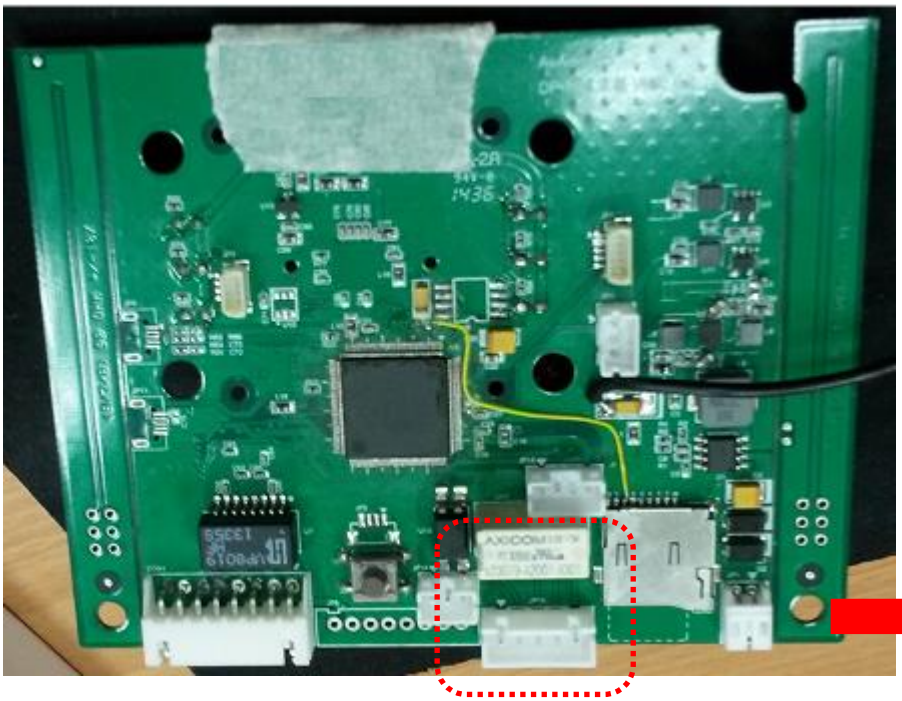
You get the IP address of DP-104 is 192.168.1.20

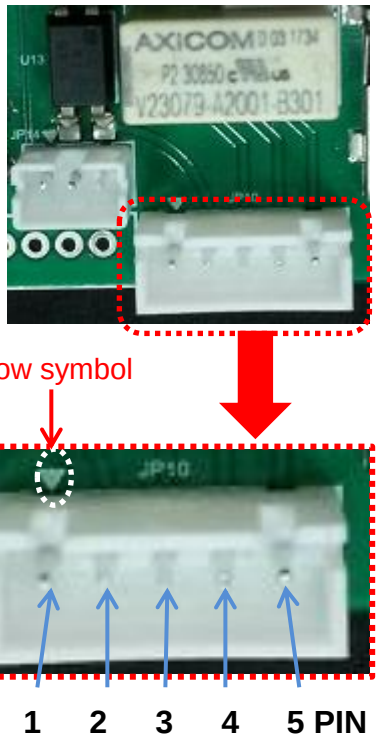
Search Cam

Chapter 5 DI/DO of DP-104 SIP IP video door phone instruction

This section describes how to connect door lock/unlock control signal or alarm signal on the printed circuit board (PCB) of DP-104 SIP IP video door phone.

PCB of DP-104





DP-104 JP10 illustration:

PIN 1: DI+

PIN 2: DI-

PIN 3: DO Normal Close (NC)

PIN 4: DO COM

PIN 5: DO Normal Open (NO)

Avadesign provides a DI/DO cable for users as below:

PIN 5: DO Normal Open (NO) (black)

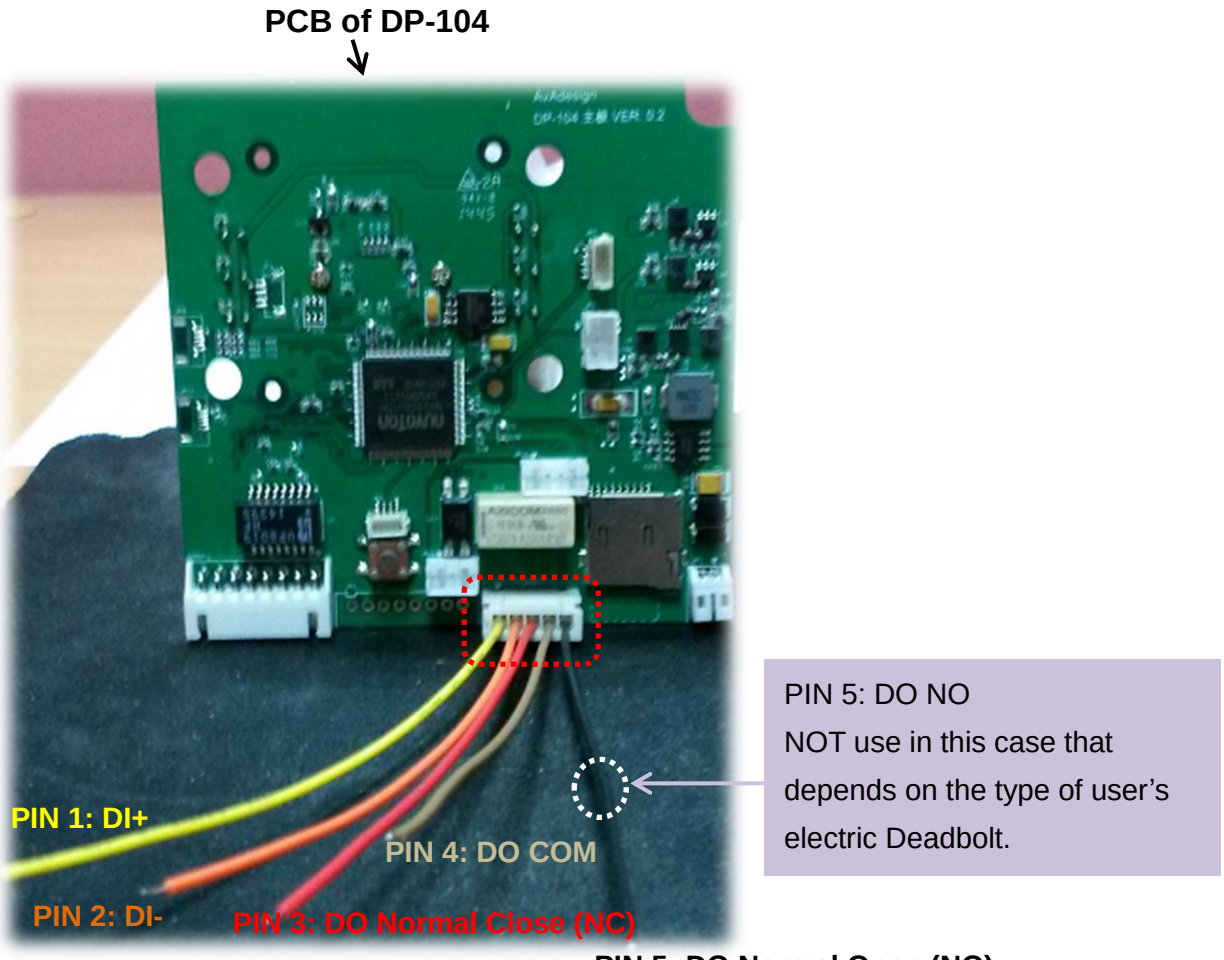
PIN 4: DO COM (brown)

PIN 3: DO Normal Close (NC) (red)

PIN 2: DI- (orange)

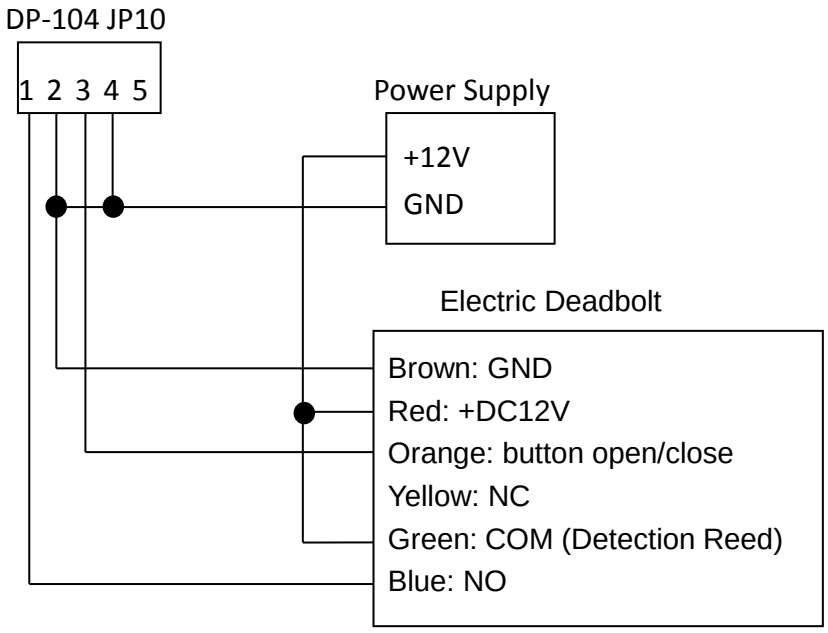
PIN 1: DI+ (yellow)

Connect DI/DO cable to the PCB of DP-104 as below diagram:

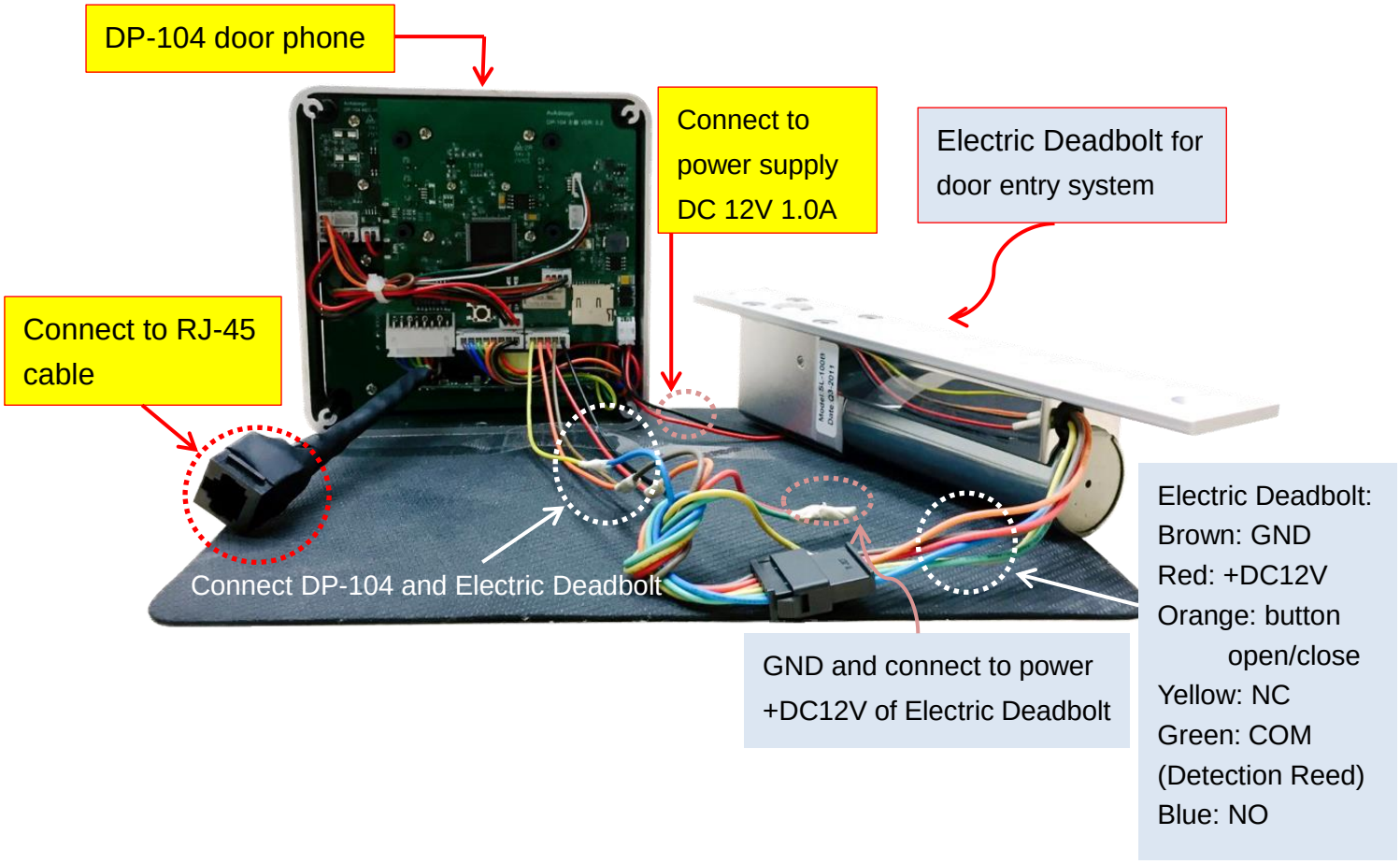


PIN 5: DO Normal Open (NO)

DI connects to the sensor for notifying the status, so that the CPU to do the appropriate action. DO connect to control device. According to the status of device can be accessed (NC—COM) or (NO—COM). The PCB controls the power ON/OFF status of device by relay.



Connect condition of DP-104 SIP IP video door phone and Electric Deadbolt is shown as below.



Chapter 6 Mechanical dimensions for the DP-104 SIP IP video door phone

- Dimensions (H x W x D): 114x114x35mm
- Weight: 290g
- Color of Door phone Faceplate: White

DP-104

Order Information:

Model No.	Standard	Adapter	PoE	RFID
DP-104	✓			
DP-104P	✓		✓	
DP-104R	✓			✓
DP-104PR	✓		✓	✓
DP-104A	✓	✓		
DP-104AP	✓	✓	✓	
DP-104AR	✓	✓		✓
DP-104APR	✓	✓	✓	✓

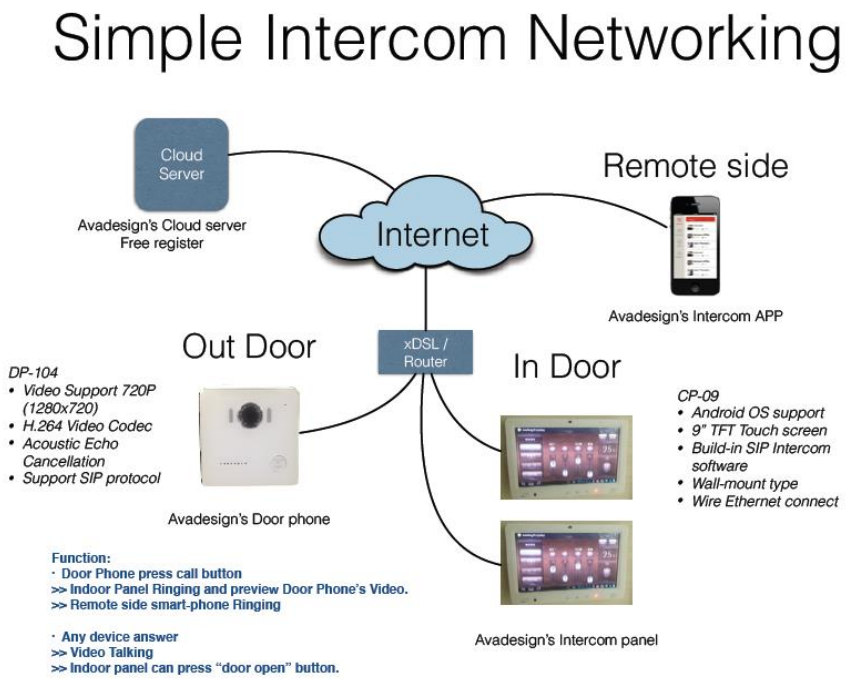
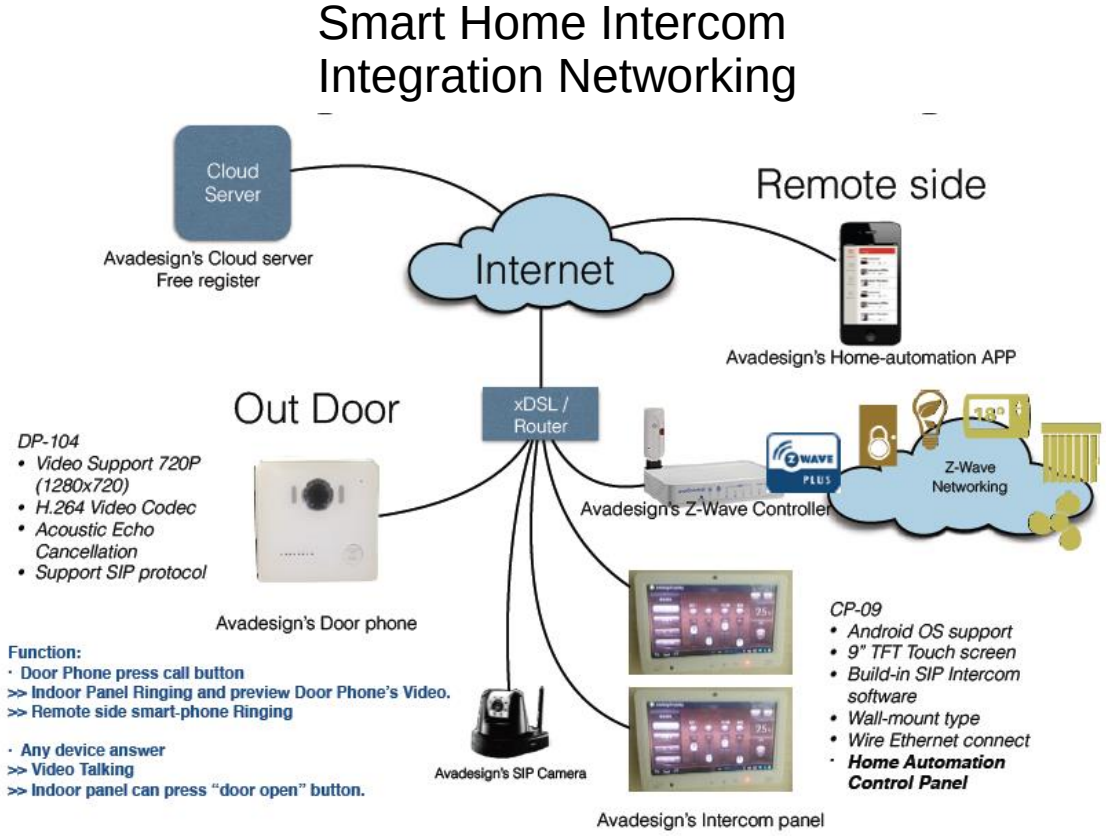
Mounting accessories *(Surface-Mount Bezel included with all Door phone Kits)*

- Roof

Dimensions (H x W x D): 127x120x44mm

- Panel

Dimensions (H x W x D): 96x82x3mm

Chapter 7 Applications

The application of DP-104 SIP IP Video Door Phone is shown as follows.