amroad

VIDEO DOOR PHONE
DB3100R

MANUAL FOR SYSTEM INTEGRATOR

Amroad Technology Inc.

Copyright

Document No. DB3100R 2012-0402
www.amroad.com.tw

DISCLAIMER

Amroad reserves the right to change product specification without prior notice.
Changes may be made to the information in this publication without obligation to notify. Amroad shall not be liable for technical or editorial errors contained herein.

TRADE MARKS

Contents

Chapter 4 : Use of the Video Door Phone 17

Chapter 5 : Configuring Video Door Phone 23

Chapter 1: Introduction

Welcome

Thank you for choosing this Video Door Phone. This device is designed to work as Video Door Phone of inside large building to form a SIP-based door entry system. Besides taking advantages of IP technologies, this device links to other SIP devices. It will work with most IP PBX systems supporting audio and video, and it can be configured via a web interface.

This product contains following main features:

- Talk to visitors with real time video and voice on IP Video Phone or Video Indoor Station
- SIP 2.0 (RFC3261) Compliant
- Support H.263 video format.
- Support G.711 audio formats.
- RFID card reader (ISO14443A/13.56MHz (MIFARE Standard) with embedded RFID card database
- Support Peer-to-Peer Mode
- Build-in wide angle lens
- Wall Lamp (White LEDs)
- Build-in speaker and microphone.
- Scan RFID card to open the door
- Support PoE (Power over Ethernet, 802.3af) module (External power supply AC 48V In)
- Web user interface for configuration and management.

Figure 1: DB3100R

Please read this user guide before installing the device. Please contact your dealers or system integrators if you have questions.

General Application of Door Entry System

There are two major series of Video Door Phone: community series and single unit series. They are applied on dif erent conditions.

DB3100R is designed for Unit in Luxury Apartment Building Application. It can work with IPBX servers to communicate with other SIP-based devices. DB3100R works not only as an intercom system but is also able to integrate RFID card reader and connect to other SIP devices to form a complete door entry system.

Unit in Luxury Apartment Building

Unit in Luxury Apartment Building is illustrated. Please see Figure 2 for reference.

- Using a home IP PBX to connect all SIP-based devices.
- Communicate with each device simply with extension numbers.
- Connect to SIP VoIP services via Internet.

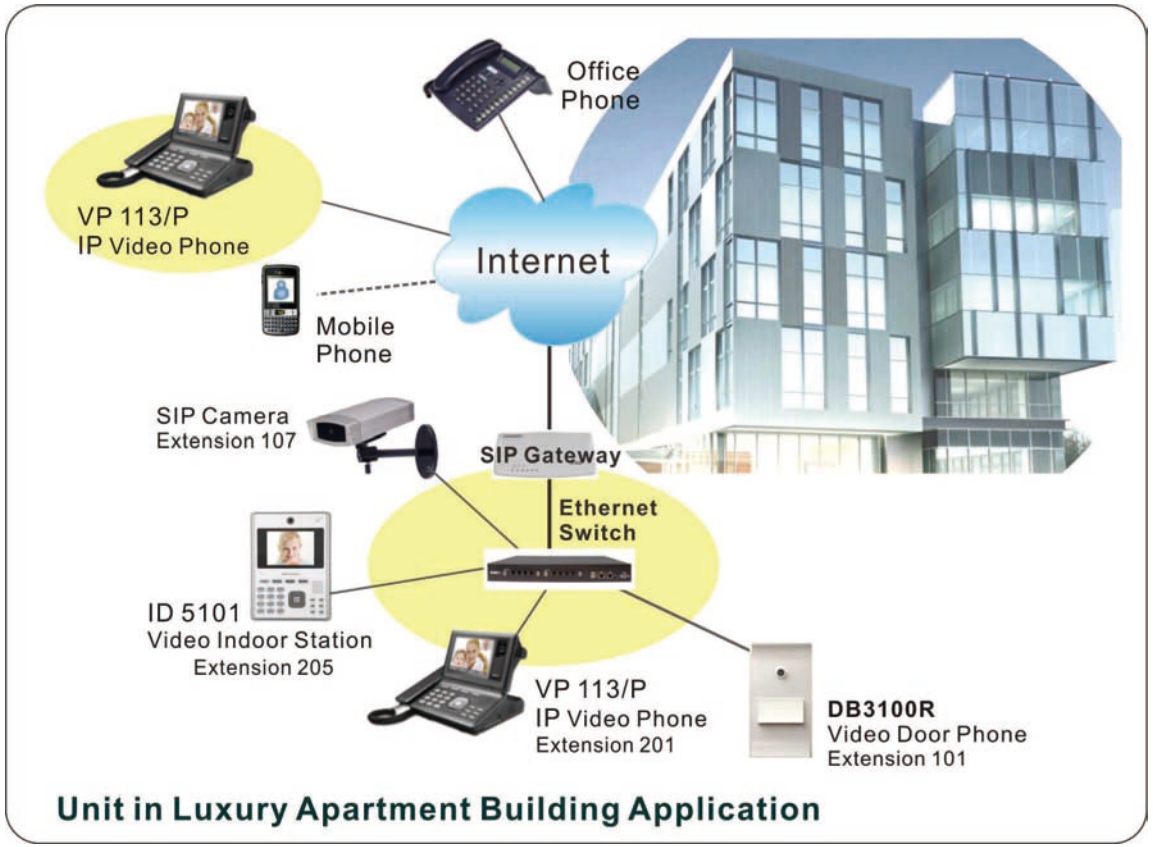


Figure 2: Unit in Luxury Apartment Building Application

Use of SIP

SIP, initial of Session-Initiation-Protocol, it is an application-layer control (signaling) protocol for creating, modifying, and terminating sessions with one or more participants. These sessions include Internet telephone calls, multimedia distribution, and multimedia conferences. In short, SIP is a most commonly used protocol that has been used to interconnect SIP Enabled PBXs and/or SIP User Agents to each other to establish voice and video sessions between SIP based devices over IP Network.

There are few typical applications of SIP products, please refer to Figure 4:

• Ring the Door Bell from Video Door Phone (DB3100R) to IP Video Phone (VP113/P)/Video Indoor Station (ID5101)/IPC Softphone

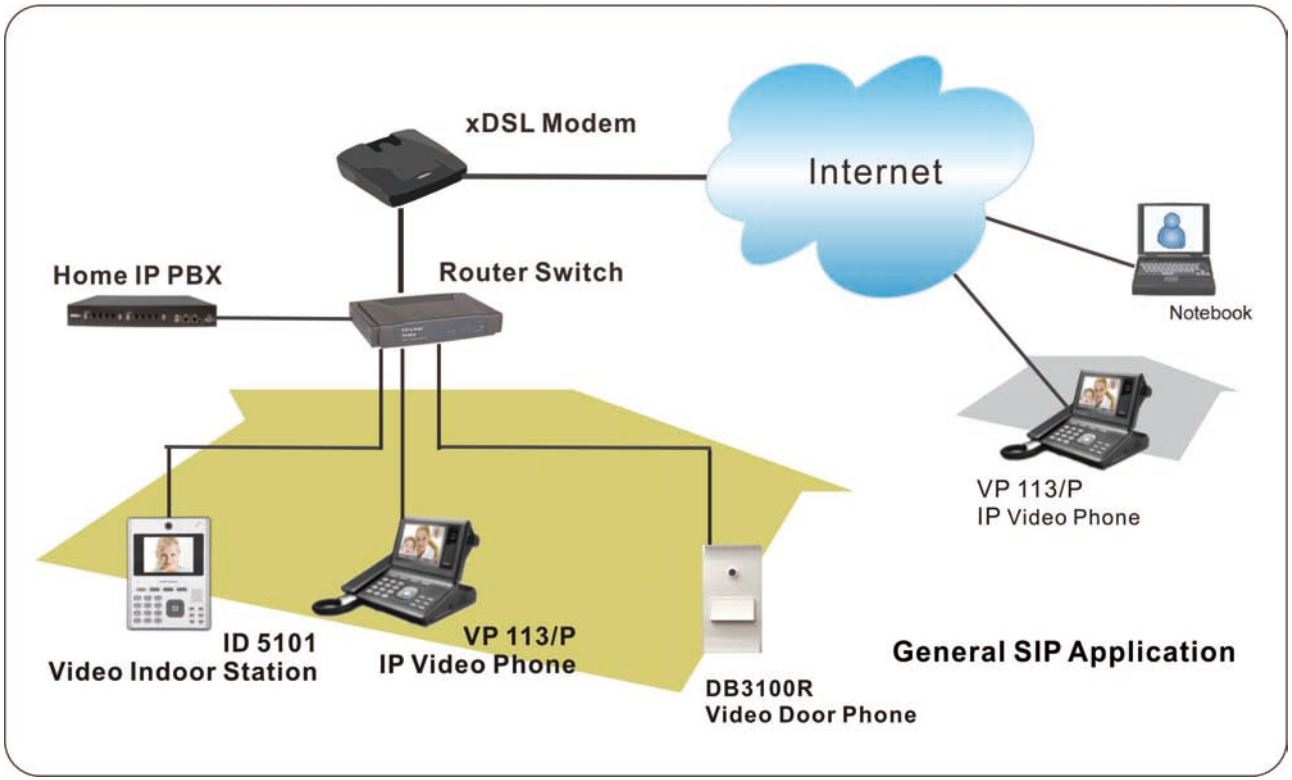


Figure 3: General SIP Application

• Make a DB3100R live-video view phone call from IPC Softphone /IP Video Phone / Video Indoor station.
• Make a video phone call from ID5101 Video Indoor Station to VP113 IP video phone.

Chapter 2 : Knowing Video Door Phone

Package Contents

The following items are included in your Video Door Phone package. Check this list before installation to ensure that you have received all items.

1. Video Door Phone Main Unit
2. Front Panel
3. Flush-Mounted Box
4. 2-pin Terminal block
5. 5-pin Terminal block + Cord End Terminal (7 pieces)
6. Screw Pack
7. Relay Board
8. Long Screws (x4)
9. Short Screws (x2)
10. Screws (for firmness in concrete)
11. Master RFID Card
12. H Type Terminal Connector for Power Wire
13. Tool for removing the Front Panel from Video Door Phone Unit
14. Quick Installation Guide & Quick Start Guide (English and Chinese)

Please contact your dealer immediately if any item(s) is missing.

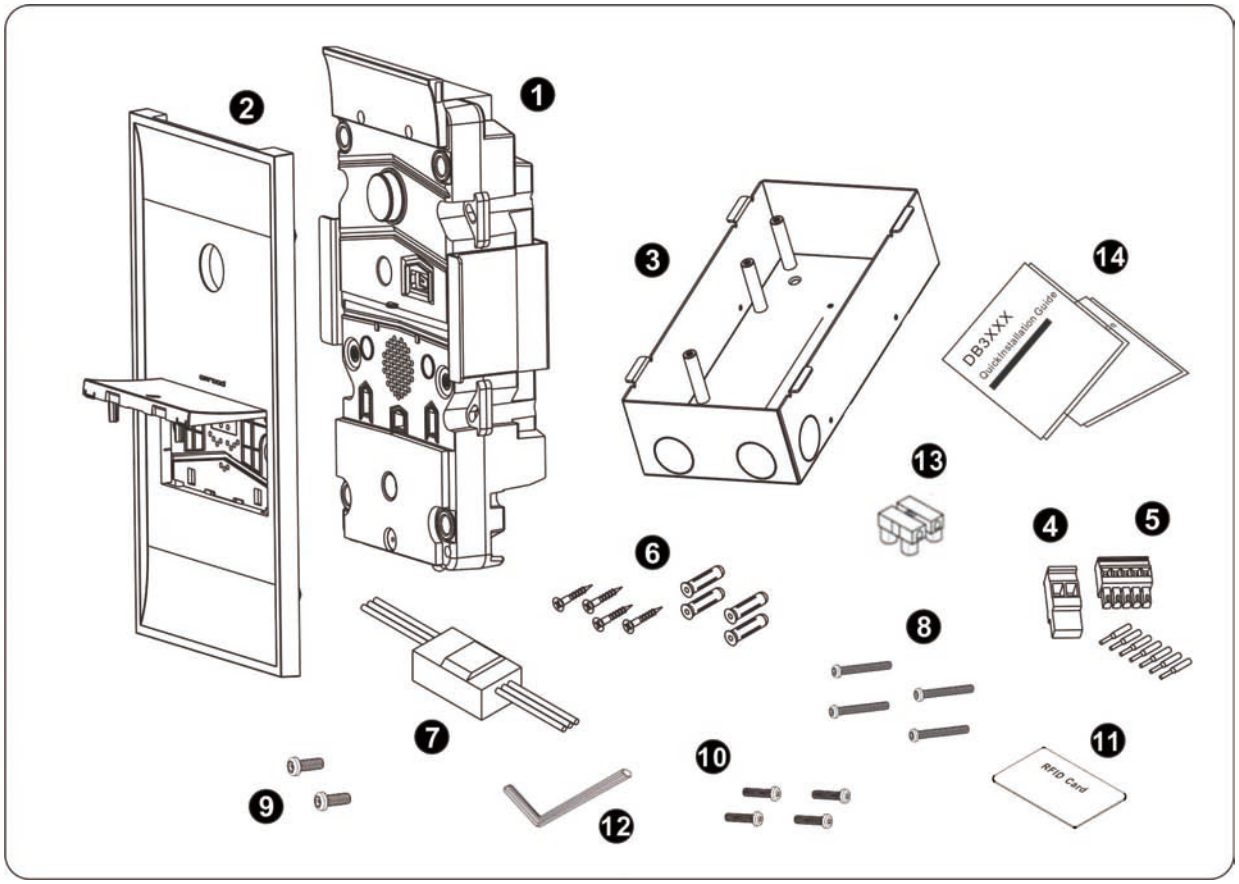


Figure 4: Package Contents

Front Panel

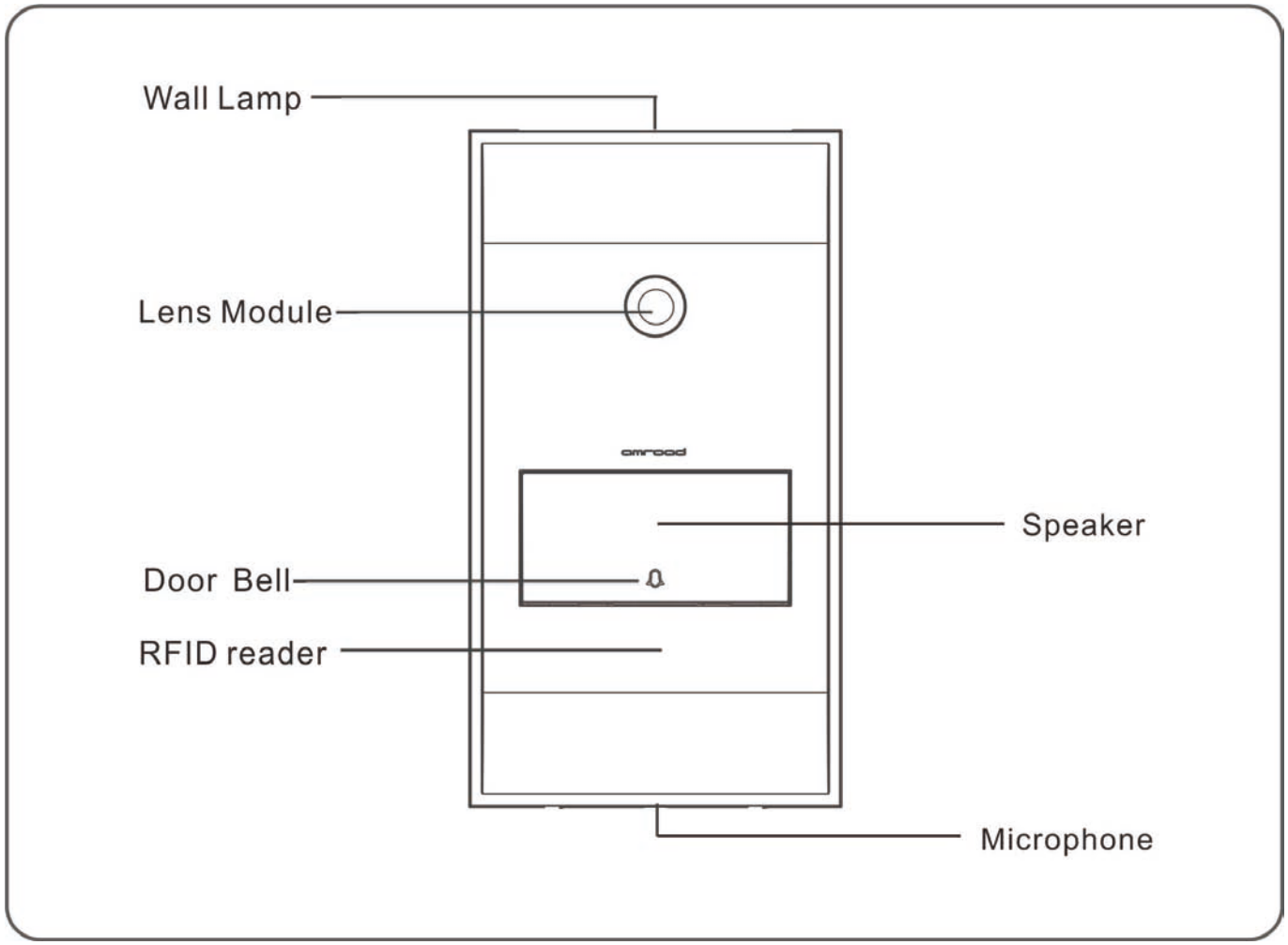


Figure 5: Front Panel

Rear Panel & Side View

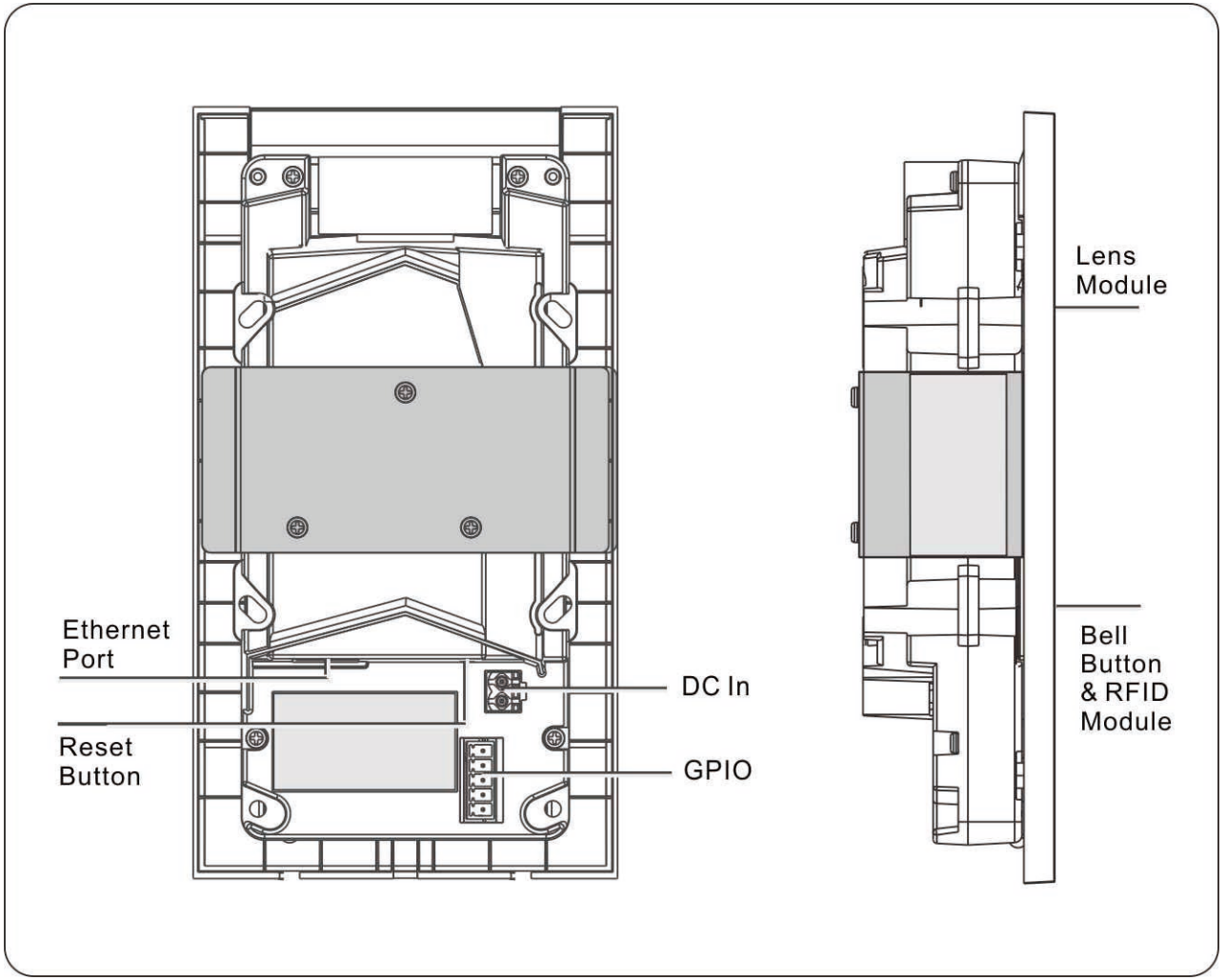


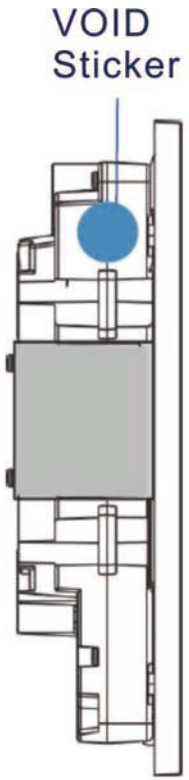
Figure 6: Rear Panel & Side View

VOID Sticker

There is a “VOID” sticker on the left side of the DB3100R.

This VOID sticker is used to prevent opening the case and tampering concealment. Amroad shall not be responsible under warranty if the VOID sticker is broken or removed.

WARNING: “VOID” means “WARRANTY VOID IF SEAL BROKEN”
Amroad shall not be responsible under warranty if the VOID sticker is broken or removed.



Dimensions

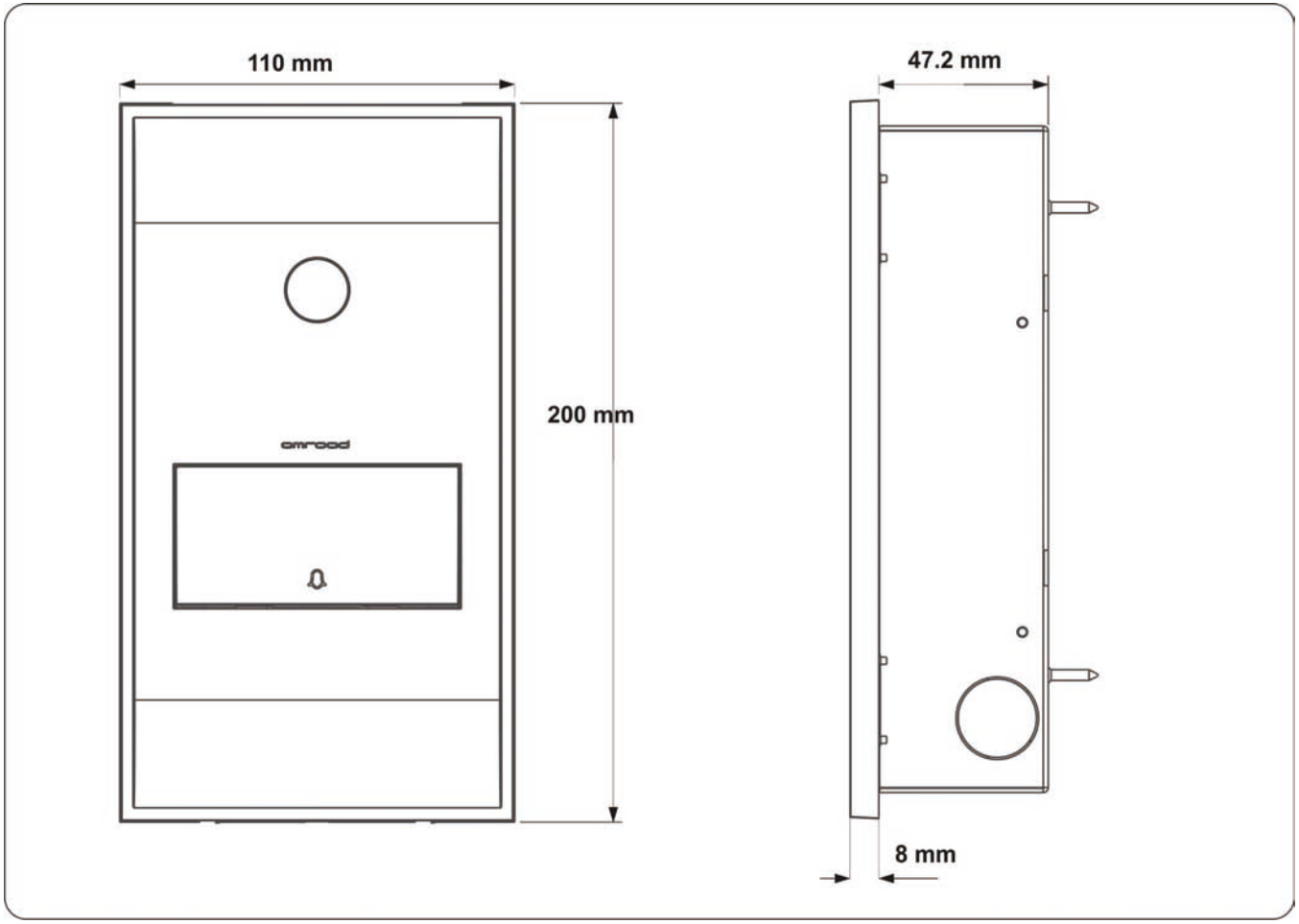


Figure 7: Dimensions

Chapter 3 : Installing Video Door Phone

Suggested Installation Position

The view angle of the lens module is limited, so the installation position for Video Door Phone is crucial. The video door phone comes with a Flush-Mounted Box. In order to get a better view and the view angle of this door phone, the height of the bottom of the Flush-Mounted Box is suggested about 141 cm far away from the ground (please also refer to the diagram in the following sections) according to building conditions. Please refer to the Figure.

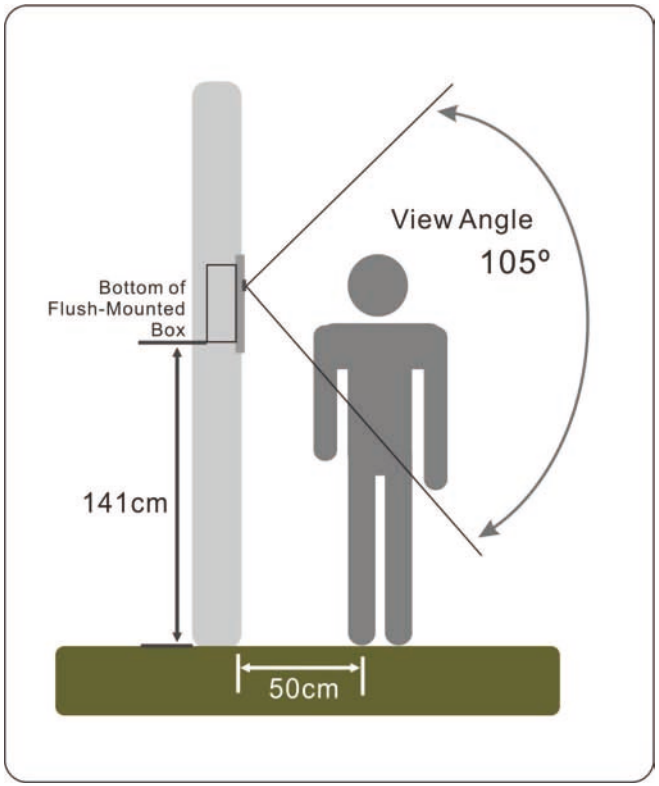


Figure 8: Suggested Installation Position

View Angle

The Lens module of this device is able to see color images. To view clear live-video images from IP Video Phone or Video Indoor Station, the view angle of this video door phone should be less than 105°.

NOTE: The height of the camera lens is suggested at the distance of 155 cm above the f oor.

Installion Procedures

1. Prepare Flush-Mounted Box

Before installing the Flush-Mounted Box, you can fasten four screws on Flush-Mounted Box as shown in Figure. This will make Flush-Mounted Box be mounted on the wall more firmly and securely after grouting foam concrete.

Use a Plug to connect Corrugated Tube to Flush-Mounted Box. The corrugated tube allows cable and wirings to pass through. The cable and wirings are Ethernet cable, DC power, and Relay control.

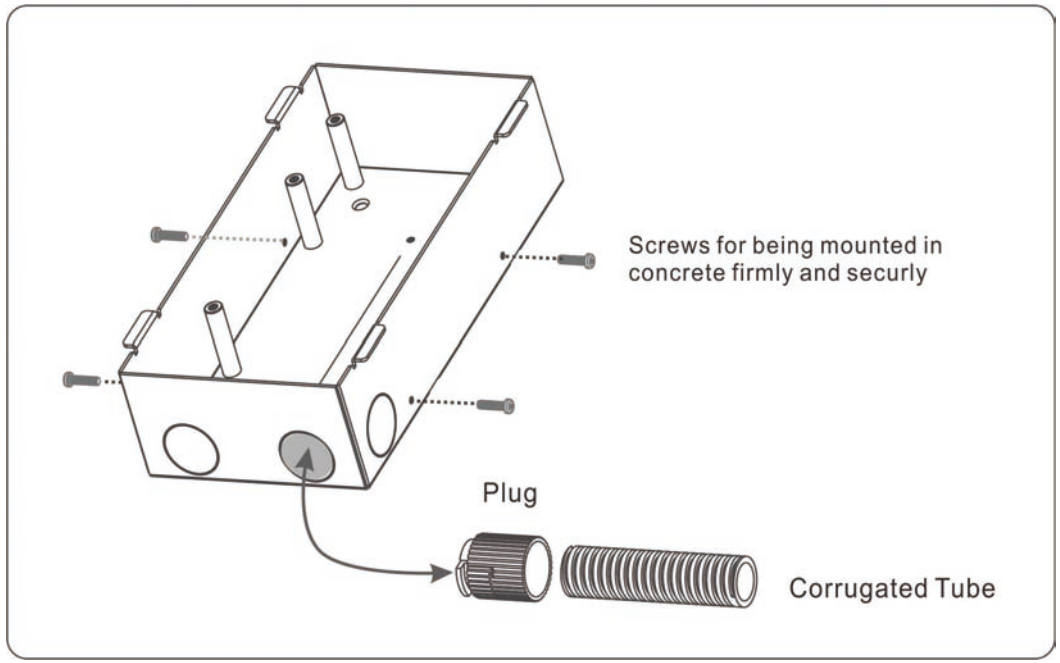


Figure 9: Tighten four Screws and Connect Corrugated Tube

2. Secure Flush-Mounted Box on Steel Frame

Before attaching Plaster Board and grouting Foam Concrete on the wall, it's necessary to secure Flush-Mounted Box on Steel Frame.

The heights of the Steel Bars for installing Flush-Mounted Box are suggested as shown in Figure. The height between the bottom of the Flush-Mounted Box and f oor is 141 cm. And the depth of the Flush-Mounted Box is 47.2mm.

Use four Drill Screws to secure Flush-Mounted Box on Steel Bars in the Steel Frame. At the same time, a bubble level is used to ensure Flush-Mounted Box is level.

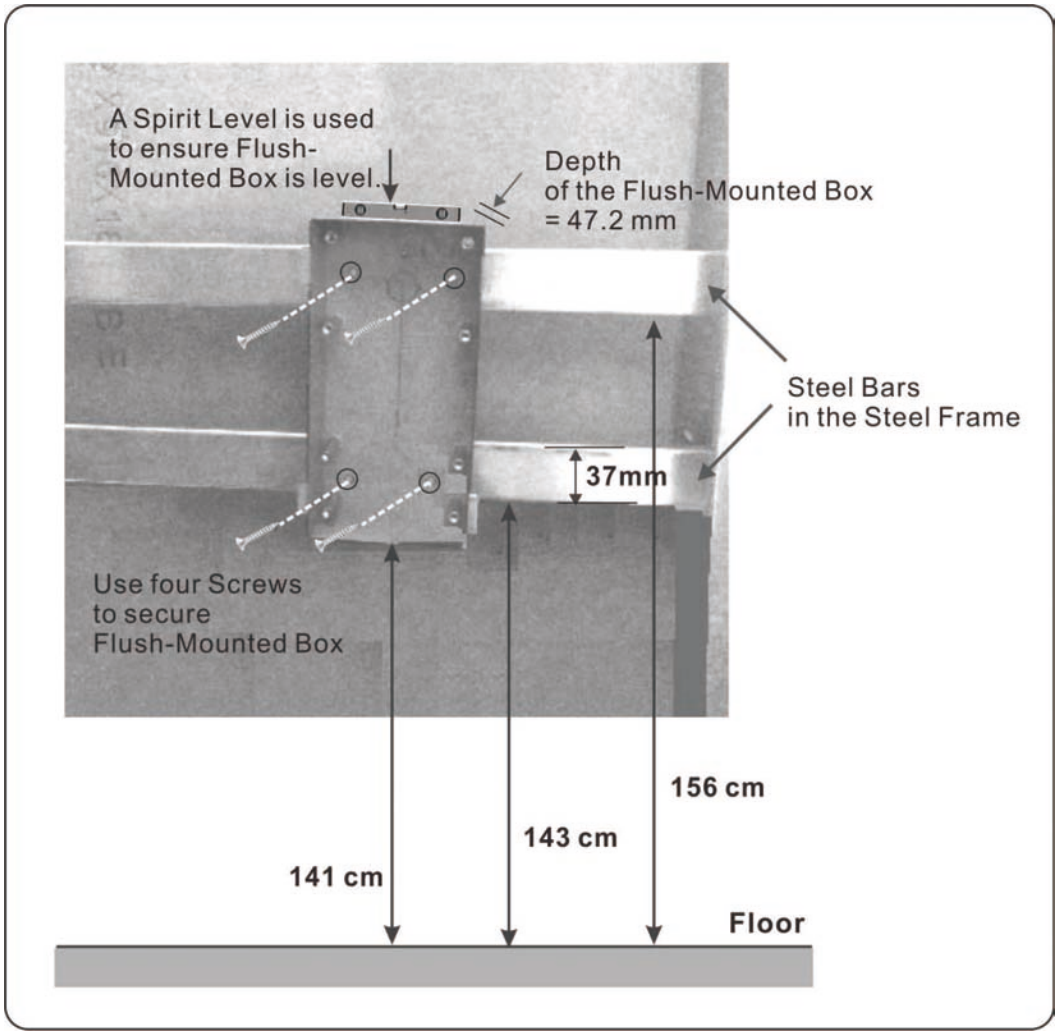


Figure 10: Secure Flush Mounted Box to Steel Frame

3. Wire and Cable Connection

Wire and cable go through wall and corrugated tube, and are used for DC power, network connection, and relay control. There are IO connectors on the rear side of the DB3100R. They are for DC power, Ethernet port (RJ-45 connector), and GPIO wire. Please refer to the Figure and following section- GPIO & Relay Control. For space saving, AR Relay Board can be placed on the top of the rear side and connect GPIO wires.

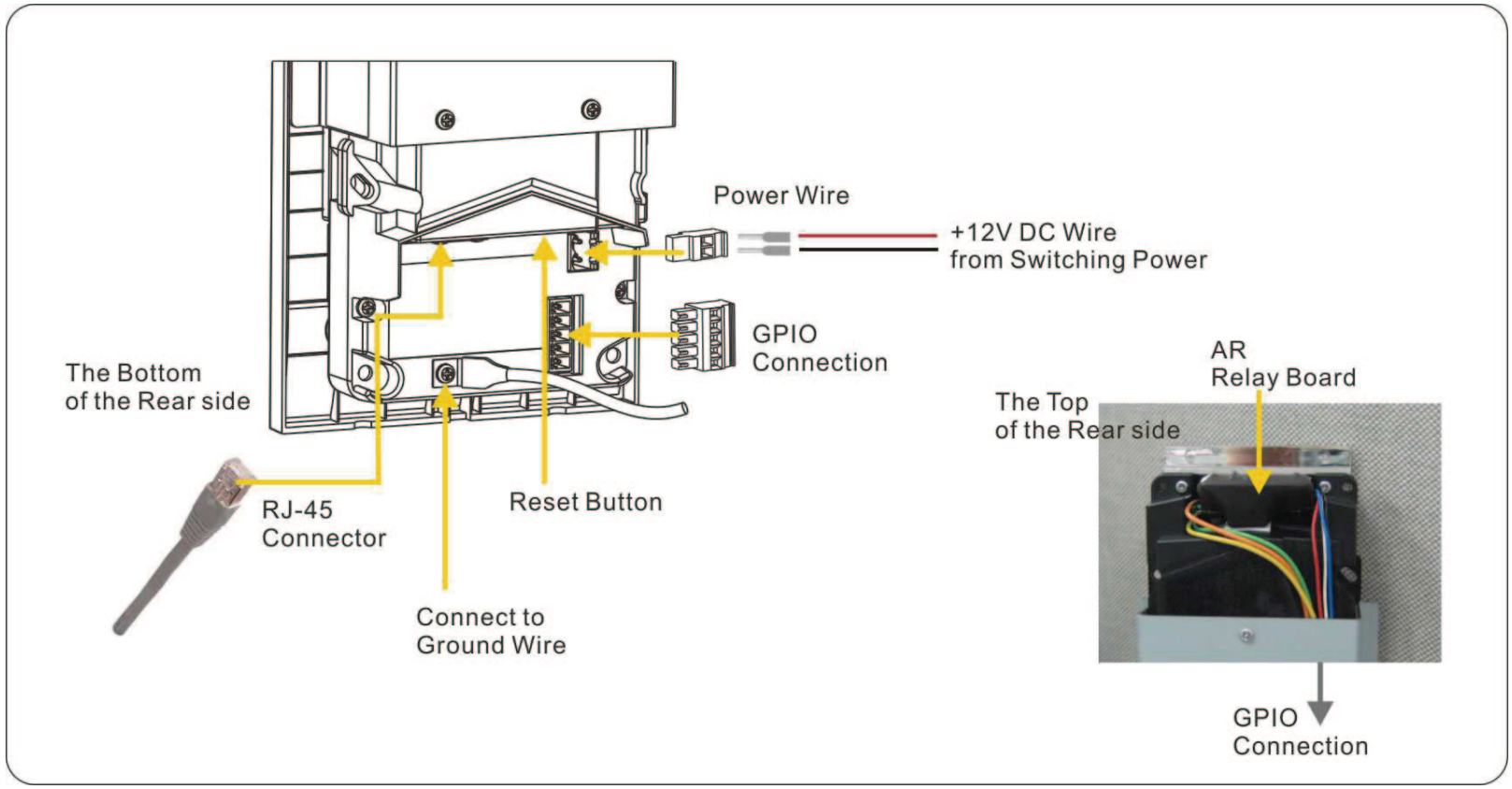


Figure 11: Wire and Cable Connection on the Rear Side of DB3100R

4. Installing DB3100R Unit

Before installing DB3100R on the wall, Flush-Mounted Box should be first mounted on the wall firmly. The following diagram shows the detail on how to install DB3100R Unit into Flush-Mounted Box.

Secure DB3100R Main Unit to Flush-Mounted Box by tightening four long screws.

Then, attach Front Panel by putting front cover on DB3010R Main unit and firmly press Front Panel to snap into DB3100R Main Unit. Lift Doorbell button and use two short screws to secure Front Panel.

NOTE:
Before securing DB3100R Main Unit to Flush-Mounted Box, you should have connected Ethernet cable, power wire, relay control wiring.

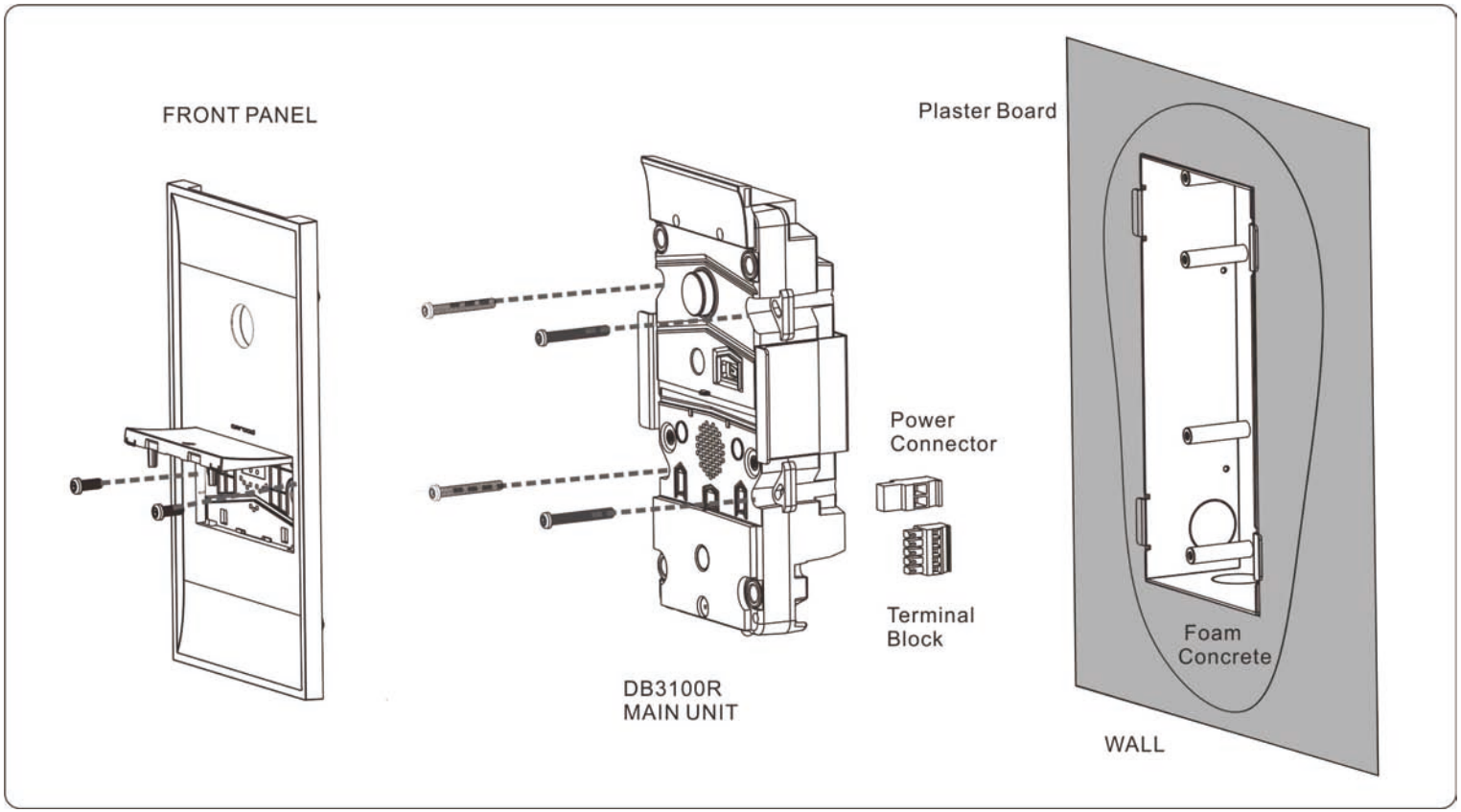


Figure 12: The details on how to install DB3100R Unit

GPIO (General Purpose Input/Output) & Relay Control

The following table explains input and out put pins of GPIO and Relay Control.

Port definition	Description
GND	Connect to Ground (GND)
DI2 (Digital Input port 2)	DI2 is used to connect to PIR (Movement Detector, Intruder Detector).
DI1 (Digital Input port 1)	DI1 is used for is used for detecting whether the door is closed or not.
DO2 (Digital Output port 2)	Once DI2 is triggered, DO2 will turn on external light for 30 seconds.
DO1(Digital Output port 1)	Connect to AR Relay Board to control Electronic Door Lock.

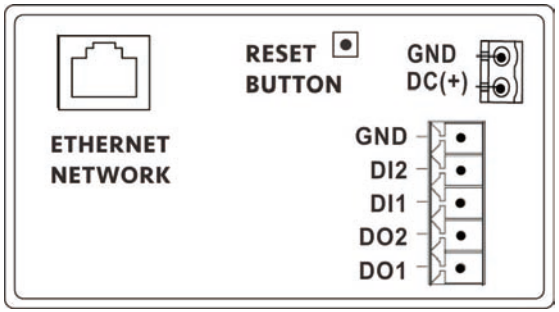


Figure 13: IO Connectors on the Rear Side of the DB3100R

Reset Button

There is a reset button on the back of the DB3100R.

The default IP type setting of the Video Door Phone is "**DHCP** Client ".

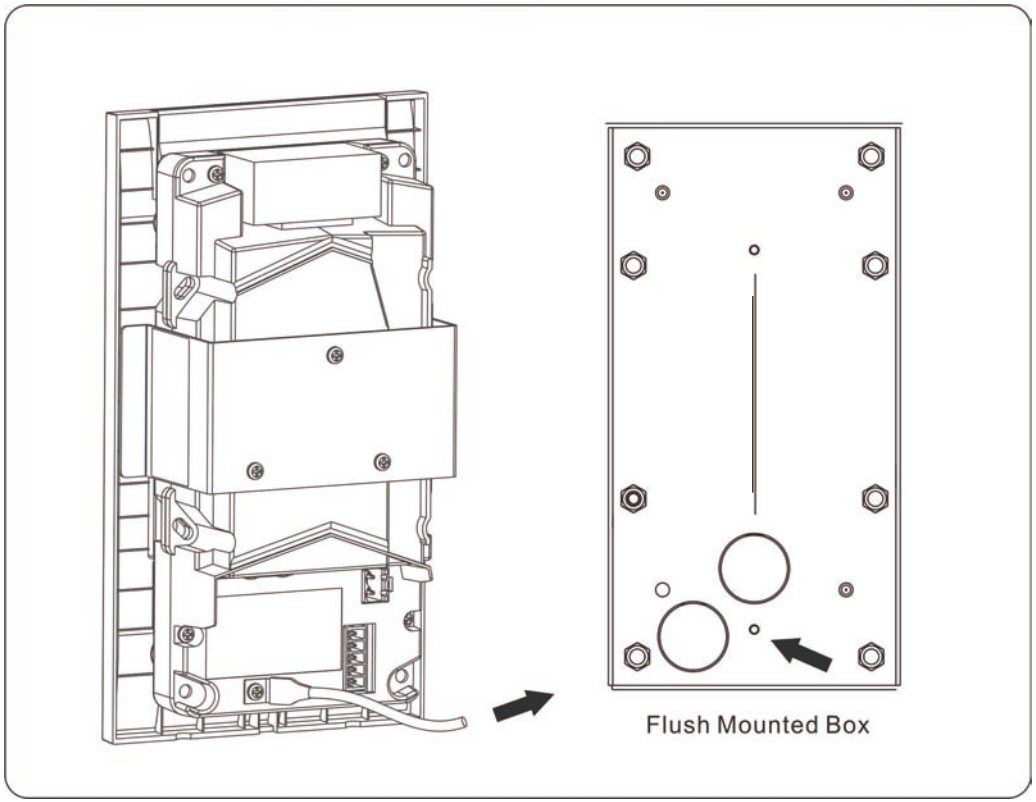
A. Pressing the reset button for **3** seconds=>DB3100R will turn into Statics IP mode as "**192.168.0.50**" and reboot by itself.

B. Or pressing for over **6** seconds =>Turn to DHCP mode as the default value and reboot by itself (Restore to factory setting).

NOTE: For more detailed information on GPIO, please refer to Appendix A. IO Application.

Connecting to Ground Wire

To prevent power surge and lighting strike from damaging DB3100R, Flush-Mounted Box should be connected to the ground wire (earth wire) of the building. Connect the wire of DB3100R to Flush-Mounted Box as shown in Figure. Remember to tighten the screws on both sides.



NOTE:
Flush-Mounted Box should be connected to the ground wire (earth wire) of the building. Power Switching for DB3100R should also be connected to the ground wire (earth wire).
To prevent power surge and lighting strike from damaging DB3100R.

Figure 14: Connecting to Ground Wire

Chapter 4 : Use of the Video Door Phone

Making Calls From Video Door Phone

Using the Video Door Phone is quite easy. You will see "Door bell" on the front side.
Press " Door Bell " button to make a call.

Figure 15: Press Door Bell

Answering Calls on IP Video Phone

To answer the call from Video Door Phone on IP Video Phone is the same as a normal call. You may answer with following ways:

- Pick up the handset.
- Press the **SPEAKER** button.
- Press "**Answer**" soft-function key.

Open the Door

You may press the "**#**" key on IP Video phone to open the door with electronic door lock during answering the call, but should add an extender relay board to connect with Electronic-door-lock. Please refer to Appendix A.

Common Controls

- You may press the "**2**" or "**8**" key of the Video phone to adjust the CMOS brightness.

DB3100R RFID Card Usage

Residents scan RFID card on the scanning zone. DB3100R will verify the database to determine whether to Open door or not.

Issue Master RFID Card First Time

Without any cabling, just scan RFID card on the DB3100R scanning zone when the DB3100R device 1st time on-line. The RFID card will be seen as Master RFID Card.

NOTE:
1. Before using Master RFID Card, you need to enable Add User Function by Master RFID Card on RFID page of Entrance Setting unit of WEB UI (User Interface).

2. If you scan another RFID card instead of Master RFID Card on DB3100R scanning zone for the first time, the first-time scanned RFID card will become Master RFID Card.

Issue a New Card with Master RFID Card:

Scan Master RFID Card on DB3100R First.

Within 10 seconds, scan new RFID card on DB3100R, DB3100R will store new Card number Into Database. The new RFID card is authorized and can be used to scan on RFID scanning zone and open door.

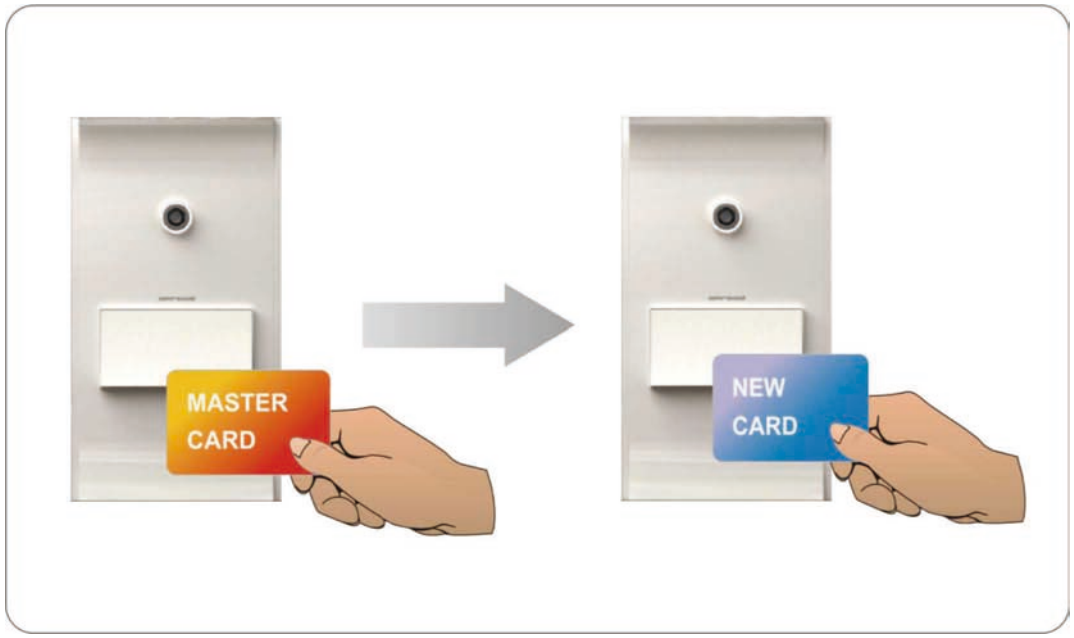


Figure 16: Scanning RFID Cards

Wall Lamp and RFID LED Indicators

On the top of the DB3100R's front panel, there are white light LEDs for acting as Wall Lamp. When doorbell is pressed, wall lamp turns on gradually and projects dif use light. When the conversation is ended, wall lamp turns of slowly.

The 3-color LED indicator is located under the doorbell botton for information and status of scanning RFID card.

LED	COLOR	STATUS	DESCRIPTION
WALL LIGHT	WHITE	ON	When Doorbell is pressed, wall lamp turns on gradually and projects diffuse light…
		OFF	When the conversation is over, wall lamp turns off slowly…
3-Color LED for RFID SCANNING	(Front Panel)	OFF	When RFID module fails…
	Solid White	ON	While RFID Module is ready…
	YELLOW/ WHITE	Twinkle (Green, White)	When RFID reader is sensing a RFID card…
	GREEN	Twinkle	Card is accepted and door will be open… Twinkle for 3 times (0.5sec On, 0.5 sec Off…)
	RED	Twinkle	Card is NOT accepted and door will NOT be open… Twinkle for 3 times (0.5sec On, 0.5 sec Off…)
	BLUE	Register Master RFID Card	Scan Master RFID Card for the first time… If it is successful, blue light twinkle 3 times (1sec On, 1 sec Off…)
		Scan Master RFID Card to issue new card	After scanning Master RFID Card, blue light will light for 10 seconds. (Within 10 seconds, new card should be scanned on RFID reader.)

Status LED

There is another 3-color LED Indicator hidden behind the front panel at the bottom-right corner. Once DB3100R is out of order, this LED helps technical support staf in troubleshooting.

Green LED	Red LED	Blue LED	Description
OFF	OFF	OFF	Normal Condition (SIP Mode)
OFF	ON for 1 second	OFF	Boot is initiated.
Blinking (3-sec On , One-sec Of)	OFF	OFF	Boot procedure 1st stage, OS Initial
OFF	ON	OFF	Boot procedure 2nd stage, AP Ready
Blinking (Green-> Blue->Red)	Blinking (Green-> Blue->Red)	Blinking (Green-> Blue->Red)	Firmware Upgrade
OFF	OFF	On 5 seconds Once	Reset! Device becomes Static IP mode.
Blinking 3 times (0.5-sec On/Of)	OFF	OFF	Press RESET button for 6 seconds to restore device to its factory default setting.
OFF	OFF	Blinking (3-sec On, one-sec Of) once	SIP is NOT registered.
OFF	Blinking (3-sec Of , one-sec On)	OFF	Network is Disconnected.
OFF	Blinking (One-sec On, 3-sec Of)	OFF	Network is connected, but the device fails to obtain IP address.
OFF	Blinking (One-sec On, One-sec Of)	OFF	Alarm is triggered.

Audio Announcement

To fit some specific scenarios, DB3100R will automatically play following audio announcement to remind residents.

Audio Announcement	Scenario
“Please Scan Your New Card”	DB3100R plays this audio announcement after scanning Master RFID Card on RFID scanning zone and user is ready to issue new card.
“Your New Card has been Added”	DB3100R plays this audio announcement when scanning new card on RFID scanning zone and new card is registered by DB3100R’s database.
“Fail to Add Your New Card”	DB3100R plays this audio announcement when scanning new card on RFID scanning zone and new card is rejected to be registered by DB3100R.
“The Door Is Not Closed.”	DB3100R will play this audio announcement while resident’s door is not closed well. (Resident should have installed Electronic Door Lock and detector- magnetic switch)
“Burglar! Burglar! Watch Out!”	DB3100R will play this audio announcement when resident’s DB3100R Video Door Phone is damaged by intruder. (There is a micro switch hidden behind front panel.)

Chapter 5 : Configuring Video Door Phone

Finding Video Door Phone on Networks

The default connection type setting of the Video Door Phone is "**DHCP Client**", it is a typical network mode. There is a software utility provided by your local distributor or local dealer which is able to help you to find your Video Door Phone when using dynamic IP address. Please execute following utility:

AmRoad Search Tool.exe

You will see a window pop up on screen. This utility will search whole network segment automatically when utility is activated, then it will show search results. You may press the "Search" button to search again. The search result includes following elements:

MAC Address: This MAC is a unique number that provided by manufacturer.
IP Address: Here shows the IP address of found Devices (Video Door phone).
Device Name / Device Type: Here shows which type of devices are found. For example, you may find Video Door Phone/ IP Video Phone in the same network.

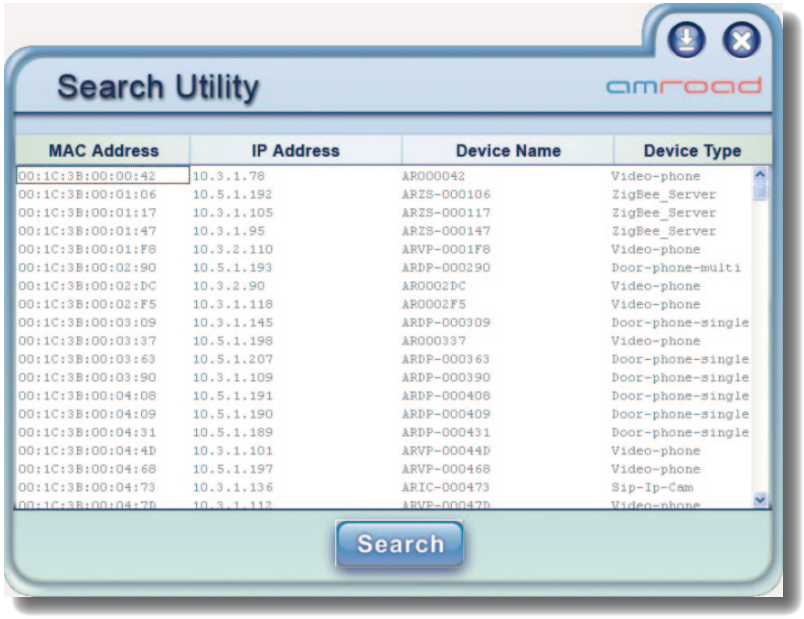


Figure 17: Search Tool - Search Utility

Entering Web User Interface

Input the **IP address** of this product on your browser, then you will see home page of the Video Door Phone appearing.

Web UI is protected by Login ID and Password. Press the "**Login**" button, then you will see input fields: **Login ID** and **Password**. Please key in the correct ID and password, and then press second "**Login**" button to enter Web UI. The default ID and password are:

Login ID: admin

Password: admin

NOTE: 1. While configuring WEB UI (User Interface), please do not operate this product so as to prevent this product being out of order.
2. Do not input special symbols **"**, ****, and **&** in the fields on the WEB UI. Otherwise, you may fail to save your setting normally.
3. After configuring some Web pages and pressing "SAVE" button, you need to wait a little longer for system to save the configuration.

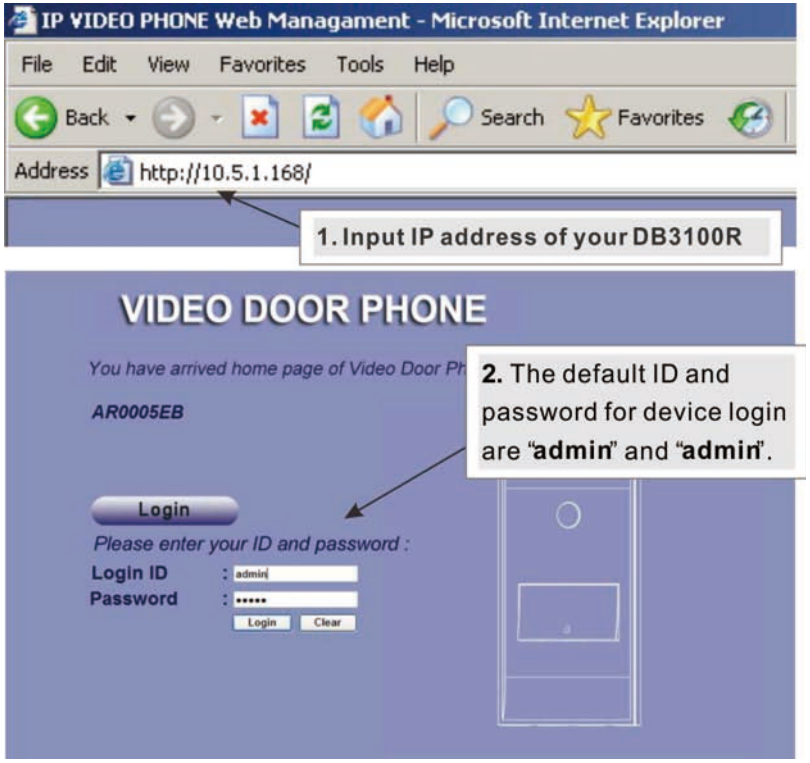


Figure 18: System Login

System - Basic Settings

Item	Description
Device ID	This ID is a unique number that assigned by manufacturer.
Date & Time	Here shows date and time set on this video door phone.
Set New Date and Time	These fields allow user to set correct date and time according to the local–standard. You may synchronize phone time to match your PC by pressing “Sync with PC” button.
TimeZone	This field allows you to select your time zone to fit your location. You can enable the Daylight-Saving feature if needed. NOTE: Daylight Saving Time is a way of getting more light out of the day by advancing clocks by one hour during the summer.

Figure 19: System - Basic

Network Time Protocol	Enable NTP Calibration service to allow the system to calibrate the time with NTP server through Internet.
NTP Server Address	You may use your preferred NTP server by input new address here.

System - Networking Settings

Item	Description
MAC Address	This is a quasi-unique identifier attached to most network adapters.
IP Type The default value is DHCP Client. There are three options: DHCP Client, Static IP and PPPoE.	
A. DHCP Client:	The system will automatically assign your Video Door Phone an IP address.
B. PPPoE:	This allows you to set Internet connection with ID Account and Password. NOTE: For PPPoE connection mode, we suggest that bandwidth-128kbps would have better video quality.
C. Static IP:	You have to input IP address, Subnet Mask, Default Gateway, Primary DNS and Secondary DNS data.
Save	Click this button to save your setting.

Figure 20: Network

System Login Name

The default ID and password for system login are **admin** and **admin**.
User may change his Login ID and Password on the webpage by entering new Login ID and Password.

Figure 21: Login Name

System Reboot

When user needs to reboot DB3100R remotely, just click "**Reboot**" button on this webpage to start this action. After confirm rebooting, Web User Interface will back to the home page, but the video door phone may take 30~60 seconds to restart its system.

NOTE: DO NOT operate the DB3100R while system is rebooted (reset).

Figure 22: System Reboot

Streaming Settings – Video

You may set change the video settings in this page.

Figure 23: Video Setting

Item	Description
Bandwidth	You may select preferred bandwidth for video and audio streaming. There are 4 options: 128Kbps, 256Kbps, 384Kbps, and 512Kbps. Please check which bandwidth is suitable for you with your service provider. Default setting is 256Kbps.
Codec Priority–	**First** – You may select the Video streaming priority - H.263. **Second** –You may select the Video streaming priority - H.263, or Disable.
Power Line Frequency	You may select the power frequency according to your local power specifications. Wrong power frequency may cause the video f icking abnormally. Default setting is 60Hz.
CMOS Static Brightness	This item allows you to adjust the brightness of CMOS according to the lighting environment of the installed location. Higher value makes the video brighter.
CMOS Color Balance	This item allows you to adjust the color of video. Select according to the lighting environment: Fluorescent Light, Yellow Lamps and Orange Lamps. NOTE: Fluorescent Light – This condition is suited for white lighting environment. Yellow Lamps – This condition is suited for indoor yellow bulb environment. Orange Lamps – This condition is suited for indoor orange color or more red color environments.

Item	Descrition
Save	Click this button to save your setting.

NOTE: If DB3100R can't get the correct value of the CMOS brightness in some environment, please adjust the brightness value via IP Video phone by pressing "**2**"(brighter) or "**8**"(darker) during conversation.

Streaming Settings – Audio

Item	Description
Code Priority	You may select the Audio streaming priority – G.711.
Scene	Select Disable, Enable or User Define. When "**User Define**" is selected, the following two items appears: **Noise Threshold (db):** Default: -40. The voice intensity that is lower than the value (-40db) will be neglected. (Acceptable value -40~-52) **Target Level (db):** Default: -23 The voice intensity that is around normal intensity will be processed to be the value (-23db). (Acceptable value -20~-32)

Figure 24: Audio Setting

VAD	You may enable or disable **Voice-Active-Detection** function here. The DB3100R will detect background noise and send silence packet to the other end if this feature is enabled. This allows called party to hear better audio quality.
CNG	You may enable or disable **Comfortable-Noise-Generate** function here. The DB3100R will generate background noise when receiving silence packet from the other end if this feature is enabled. This allows called party to hear better audio quality.
Speaker Volume	This item allows you to select volume of speaker. There are 10 levels, 0 ~ 9.
Internal Alarm Volume	Select "**High**" to turn Internal Alarm Volume Up, or select "**Low**" to turn Internal Alarm Volume Down.
Save	Click this button to save your setting.

SIP Settings

You may setup advanced SIP service parameters in this page:

Item	Description
	Authentication
Display Name	This name will show on the IP phones of called parties. You can fill in the preferred name here. For example, Doorphone NOTE: Please enter **Doorphone** in the field of Display Name. When Door Bell is pressed, there will be "Door-bell" sound, and enable "Preview Picture" function on Amroad IP Video Phone/Video Indoor Station.
User Number	You may fill in the phone number here, normally it is pro-vided by service provider. To work with IP PBX, you may fill in extension number. For example, 524
Account ID	You may fill in your account name of SIP service in this field. For example, 524
Account Pass-word	You may fill in the password of your SIP service account. For example, 524

Figure 25: SIP Setting

SIP Proxy Server	
Service	You may select "Enable" or "Disable" the SIP Proxy Server in the dropdown menu. NOTE: For **Peer-to-Peer mode**, both devices (DB3100R and remote device) need to select Disable in the dropdown menu. And, fill in each other's IP address.
IP Address	You may fill in the IP address of SIP Proxy Server in this field. NOTE: For Peer-to-Peer mode, user needs to input IP address of the Remote device.

Item	Description
SIP Registrar Server	
IP Address	You may fill in the IP address of SIP Registrar Server here.
Registrar Expire Time	Set the time for SIP registration authorization The default is 3600 seconds.
Media Timer (0~180)	This setting allows your video door phone to force release automatically a conversational call when your phone doesn't receive any media packets from the remote side during a period of time. NOTE: If you want to disable this feature, please fill in "0" sec.
No Answer Timer	When visitor presses the door bell and no one answer the call, the DB3100R will ring for a time period. You may select the time period- **15sec, 30sec, 45sec, or 60sec**. Default is **15 seconds**. NOTE: The setting should be based on your IP PBX.
Preview Multi-cast	You can select "Enable" to enable PREVIEW function to view live image when doorbell is pressed and before it is answered by Amroad IP Video Phone or Video Indoor Station.
Incoming Allowed List Service:	White List1~List5 Fill in extension numbers(s) in these fields to allow these resident's SIP-based devices to monitor through DB3100R by dialing DB3100R's extension number. All other SIP-based devices can call in and monitor if all five fields leave blank.
ICMS	Input the IP address of ICMS. This function is customized and it allows DB3100R to send pictures of visitors to ICMS.
Save	Click this button to save your setting.

Entrance Settings – Extensions

You may configure call services in this page:

Item	Description
Called Party Extension Number	Fill in the extension number. When Door Bell button is pressed, the device will dial to the extension number. (The extension number or group that is assigned by IP PBX.) NOTE: In the Peer-to-Peer mode, you need fill in the complete extension number and IP address. e.g. 102@10.3.1.128
Called Out Extension Number	Fill in the extension number. When ALARM is occurred, the device will dial to the called party extension number. (The extension number or group that is assigned by IP PBX.)
Internal Alarm	
Alarm will be triggered while stealing	This is a "Burglarproof" function. Please disable this function when the device is not ready or during the device is repaired.
Service	You can enable or disable the function of "Alarm will be triggered while stealing". Select **Disable** or **Enable** for alarm sound when the alarm is triggered.
Notice Number via Message (SIP)	You may fill in the IP Video phone number here. The device will inform the IP Video Phone when the internal alarm is triggered.

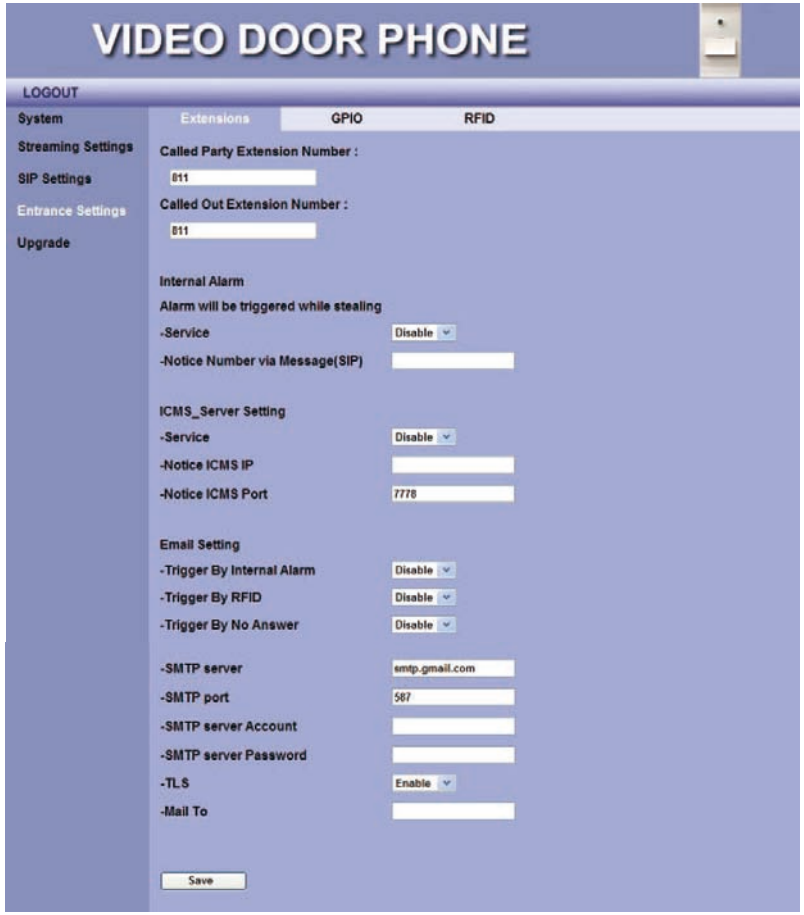


Figure 26: Entrance Settings

Item	Descrition
ICMS_ Server Setting Amroad ICMS (Intelligent Community Management Server)	
Service	You can enable or disable the function of ICMS_ Server Setting.
Notice ICMS IP	Enter the IP address of ICMS Server. ICMS will receive the message when Internal Alarm is triggered.
Notice ICMS Port	Enter the port number of ICMS Server. The default Port Number is 7778. ICMS will receive the message when Internal Alarm is triggered.
Email Setting DB3100R will take a picture after sensor is triggered, scanning RFID card, or nobody answering the Video Door Phone DB3100R. You can disable or enable the following three items for system to send email with picture.	
Trigger By Internal Alarm	After internal alarm is triggered, DB3100R will take a picture. You can enable/disable the function for system to send email with picture.
Trigger By RFID	After someone scans RFID card, DB3100R will take a picture. You can enable/disable the function for system to send email with picture.
Trigger By No Answer	Nobody answers the DB3100R for a specific time period, DB3100R will take a picture. You can enable/disable the function for system to send email with picture.
System sending Email needs the related SMTP setting. SMTP is a relatively simple, text-based protocol. Input the valid account number and password for the SMTP.	
SMTP server	Host name or IP address of the SMTP server for notification. e.g. smtp.gmail.com
SMTP port	To specify the port of the SMTP server. If the field is empty, the default value is 25. The “smtp.gmail.com” port is 587.
SMTP server Account	Input SMTP server Account. NOTE: Just enter the local-part of the email address (ex, John123), and you don’t need to enter the domain name (ex, @gmail.com)

Item	Descrition
SMTP server Password	Input SMTP server Password.
TLS	Set enable/disable for mail transmission that “Confirms Client to the Server identity” action is needed or not. TLS (Transport Layer Security) is a network protocol that ensures privacy between email servers on communicating applications.
Mail To	Input e-mail address which you want to send to.
Save	Click this button to save your setting.

Entrance Settings – GPIO

You may configure GPIO in this page:

Item	Descrition
DO1 Service	DO1 Service is used to connect with AR Relay Board to control"Electronic Door Lock". The function can be triggered by the following ways. A. Using Registered RFID Card B. During conversation, you may press "**#**" keypad to open door.
Device Relay Output	You can select Positive/Negative to connect to Positive/Negative- triggered Electronic Door Lock.
Switch-on duration (sec)	This item lets you set the time (seconds) for DO1 (Relay Board) to open "Electronic Door Lock". After the time period, Relay Board will close "Electronic Door Lock". The default is 3 seconds.

Figure 27: GPIO Setting

DI1 Detect Sensor Type	There are two options: "High->Low", and "Low->High". You can select the voltage polar of digital input "**High->Low**" or "**Low->High**" for triggering.
DI1 Alarm Service	Select "Disable"/"Enable" to turn Off/On DI1 Alarm when DI1 detects that the door is not closed well.
Press "#" to unlock by	You can select the timer "Immediately", "One Second", or "Two Second". Press the "#" key from IP Video Phone/Video Indoor Station to open "Electronic Door Lock" during answering the call.
DO2 Service	Once DI2 is triggered, DO2 will turn on external light for 30 seconds.

Item	Descrition
Device Relay Out-put	You may select the voltage polar “High” or “Low” for triggering.
Trigger By Digit Input 2	The Digit Input 2 (DI2) is a trigger point for DO2 Service. It depends on the voltage polar “High (Low->High)” or “Low (High->Low)”. NOTE: DI2 is used to connect to PIR (Movement Detector, Intruder Detector).
Save	Click this button to save your setting.

NOTE: Be careful with the wires connection of GPIO, especially the default polar voltage of hardware (digit output pins) is high. Please select and set the related Electronic circuit to meet the hardware initial voltage.

Entrance Settings –RFID

You can get the related RFID information and delete the issued RFID Cards here.

Item	Descrition
Master Card	This field will display the card number of the Master Card. By default, this field is null. This master card can issue new cards for the new tenants. By factory default, this field is null, you can scan a new RFID Card, and it can be set as Master Card.
Adds User Function by Master Card	This item is to select Enable/Disable the master card for issuing new cards. NOTE: If "Disable" is selected, user is unable to issue new card.
Numbers of RFID Card User	This field displays the number of RFID cards that are issued currently.

Figure 28: RFID Setting

Save	Click this button to save your setting.
Export CSV File	Click Download button to export CSV file to open or save the file Card_No.csv on your computer. All issued RFID cards from this Video Door Phone will be listed in the CSV file.
Erase ALL RFID Cards Function	This item is used to delete all RFID Card numbers. When "Enable" is selected, it allows user to erase all RFID card numbers or specific RFID card number. Press **Erase ALL RFID Cards** to delete all RFID Card numbers.

Item	Descrition
Erase RFID Number	You can input the specific issued RFID card number in the field and press **Erase RFID Card** to delete it.

Upgrade –Upgrade

This section allows you to upgrade firmware of DB3100R through network.

Item	Descrition
Hardware Version	This field shows hardware version number.
Software Version	This field shows current firmware version number.
Language	This field shows the language of speech announ-ment.
Select Application Pack	Press “Browse” button and select Application Pack from your local disk. NOTE: Application Pack and Software File should be uploaded at the same time.
Select Software file	You may press **Browser** button to pop up a **File** di-alog box to select the location of the new firmware that you wish to upgrade.
Upgrade	After select the new firmware, you can press **Up-grade** button to start the upgrading. You will see progress bar showing the upgrade status. **WARNING:** DO NOT turn off or disconnect the Eth-ernet cable during upgrade, for it may cause serious damage to this device.

Figure 29: Upgrade

RFID Module Ver-sion	This field shows RFID Module version.
Restore Factory Default	Press the **Restore Default** button and wait for system to restore its original factory default setting.

Upgrade –Configuration

Item	Descrition
Import File	User may press **Browse** button to select the location of the configuration file to import, which you may previously save to a local directory through the Export File option.
Upload	After selecting the configuration file, you can press **Upload** button to start the importing.
Export File	You can also use Export File to back up DB3100R settings on your computer.
Download	Press **Download** button to export, and you are prompted to click “Open” or “Save” for NewConfiguration.xml.

Figure 30: Upgrade- Configuration

AR APS

Adminstrator can perform system management function through this AR APS (Auto Provision Server) webpage.

Item	Descrition
APS_Server	This allows adminstrator perform system management through the following URL. APS_Server: https://rc.amroad.com.tw/aps/TaServlet/doorphone.php
Save	Click this button to save your setting.

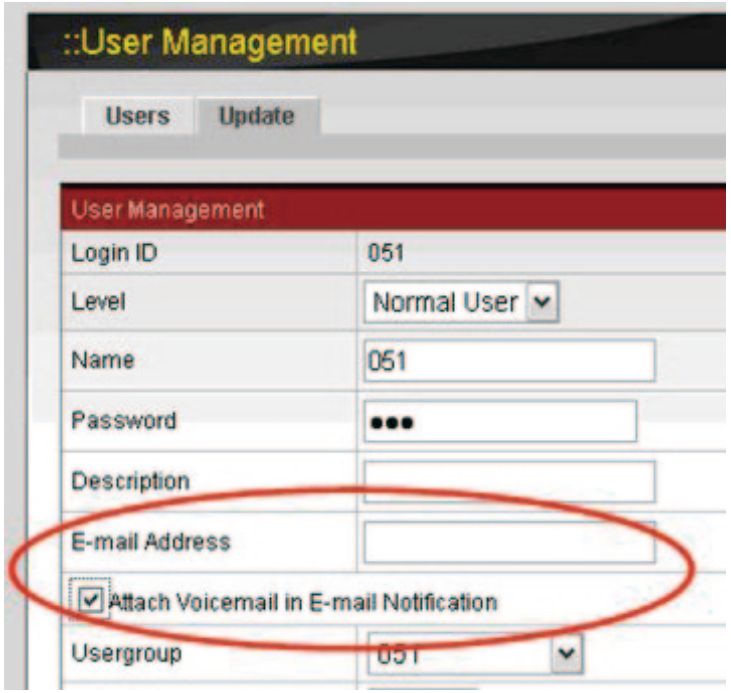
Figure 31: AR APS

Functions Performed by the IP-PBX (Compatible with Amroad IP-PBX)

Simultaneous Ring –The Distribution Policy is set to Ring All. e.g. When a visitor calls the group call (say extension 500), group members (say extensions 155, 157, and 166) will all ring simultaneously.

Call Forwarding – Enter a number to which incoming calls are forwarded when unanswered. The number could be an extension or a PSTN number with appropriate outbound prefix.

E-Mail/Voicemail Notification – IP PBX has a built-in voice mail subsystem with a sophisticated IVR menu. A call to an extension unanswered could be configured to enter voice mail recording procedure. After leaving a message, a notification e-mail will be sent to the user owns the extension with or without the message in the form of an attached WAV file.



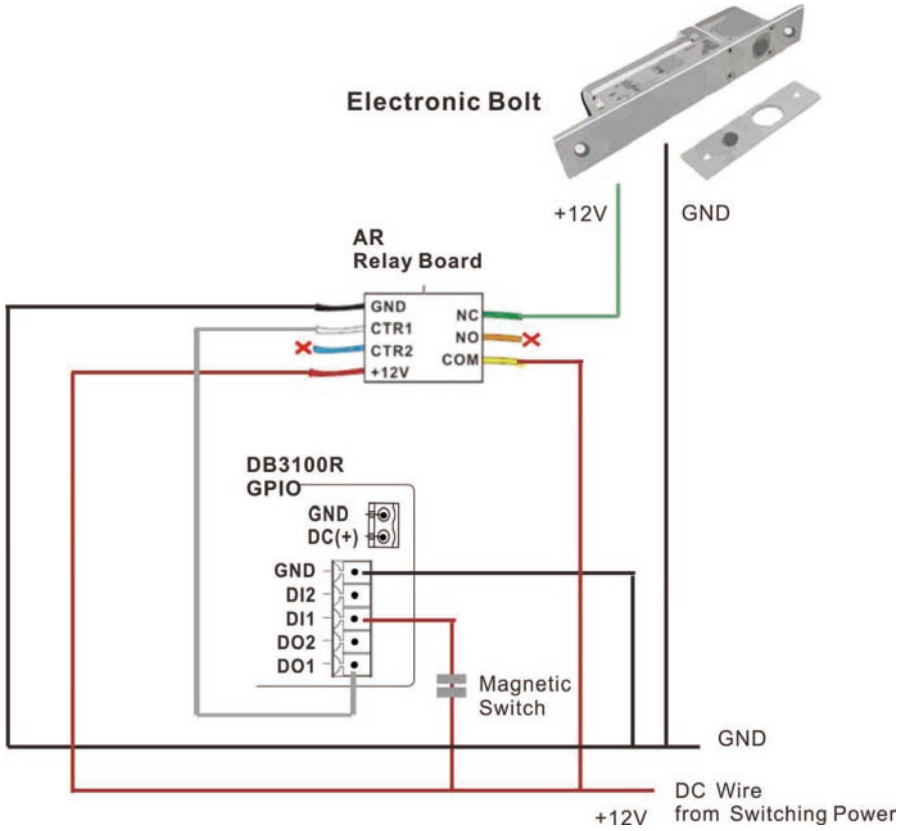
Appendix A : IO Application

Electronic Lock

The DB3100R can connect with various Electronic locks, including Electronic Strikes, Electronic Bolts and Electromagnetic locks.

Wiring Connection and Web Page Setup

There are two types of Electronic door lock applications as below. One is Electronic Bolt, and the other is Electronic Strike. For more Electronic locks, please follow the similar method for connection.

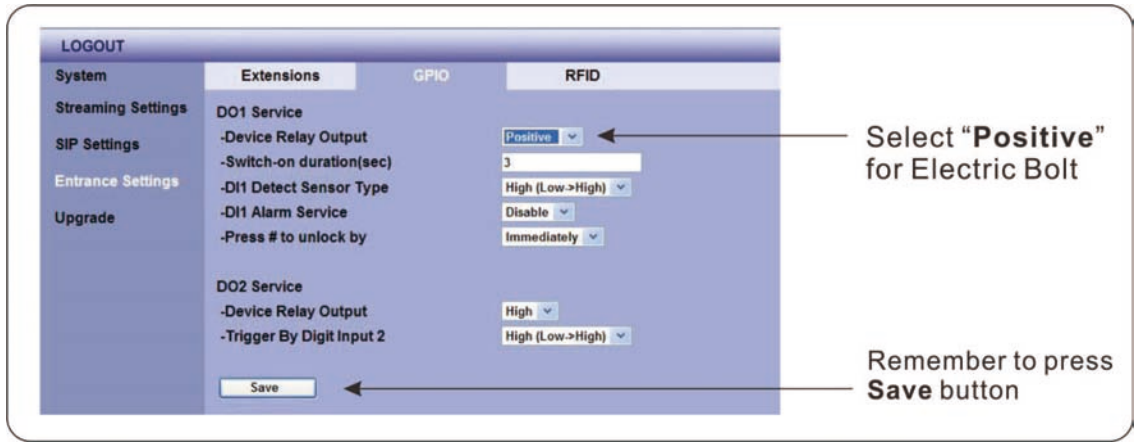


Electronic Bolt

Electronic Bolt

- The Electronic Bolt is closed when +12 V is supplied.
- The Electronic Bolt is opened when +12V is not supplied.

This function can let you press the pound (#) key on IP Video Phone/Video Indoor Station to open the door during answering the doorbell.



When the wire connection is completed, we need to select the "**Positive**" for Electronic Bolt on the GPIO page of Entrance Setting on DB3100R WEB User Interface.

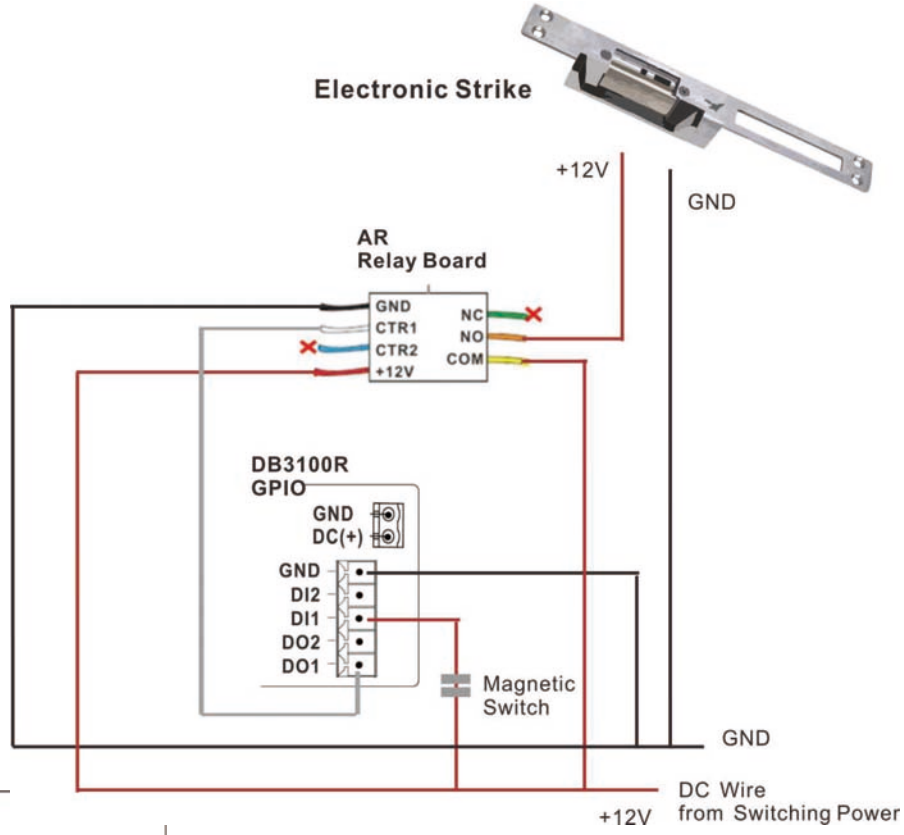
DI1 (Trigger Default) : High (Low->High)	DI1 is used for is used for detecting whether the door is closed or not.
DO2 (Trigger Default) : High ->Low	Once DI2 is triggered, DO2 will turn on external light for 30 seconds.
DI2 (Trigger Default) : High (Low->High)	DI2 is used to connect to PIR (Movement Detector, Intruder Detector).

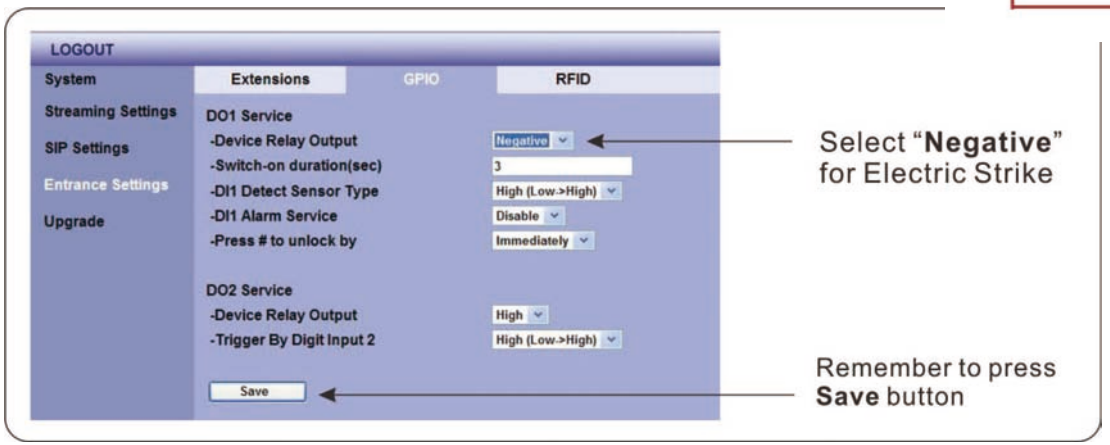
NOTE: MS (Magnetic Switch) is used to detect whether the door is closed or not.

Electronic Strike

Electronic Strike
- The Electronic Strike is opened when +12 V is supplied.
- The Electronic Strike is closed when +12V is not supplied.

This function can let you press the pound (**#**) key on IP Video Phone/Video Indoor Station to open the door during answering the doorbell.





When the wire connection is completed, we need to select the "**Negative**" for Electronic Strike on the GPIO page of Entrance Setting on DB3100R WEB User Interface.

Appendix B : Regulatory Information

FCC STATEMENT

This product has been tested and complies with the specifications for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used according to the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which is found by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment or devices
- Connect the equipment to an outlet other than the receiver's

receiver is connected.
. Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: To assure continued compliance, any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. (Example - use only shielded interface cables when connecting to computer or peripheral devices).

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and
(2) This device must accept any interference received, including interference that may cause undesired operation.

"Changes or modifications are not expressly approved by the manufacturer could void the user's authority to operate the equipment."

CE DECLARATION OF CONFORMITY (EUROPE)

Manufacturer declares that this product conforms to the specifications listed below, following the provisions of the European R&TTE directive 1999/5/EC:

- EN 301 489-1, 301 489-17 General EMC requirements for Radio equipment
- EN 609 50 Safety
- EN 300-328-1, EN 300-328-2 Technical requirements for Radio equipment

Caution: This equipment is intended to be used in all EU and EFTA countries. Outdoor use may be restricted to certain frequencies and/or may require a license for operation. Contact local Authority for procedure to follow.

Note: Combinations of power levels and antennas resulting in a radiated power level of above 100 mW equivalent isotropic radiated power (EIRP) are considered as not compliant with the above mentioned directive and are not allowed for use within the European community and countries that have adopted the European R&TTE directive 1999/5/EC.

amroad

18F-4 No.150, Jian 1st Rd., Zhonghe Dist.,
New Taipei City 235, Taiwan, R.O.C

Website: www.amroad.com.tw
E-mail: sales@amroad.com.tw

TEL: +886-2-8226-5686