Technical Manual for IP video-intercom system

XtendLan

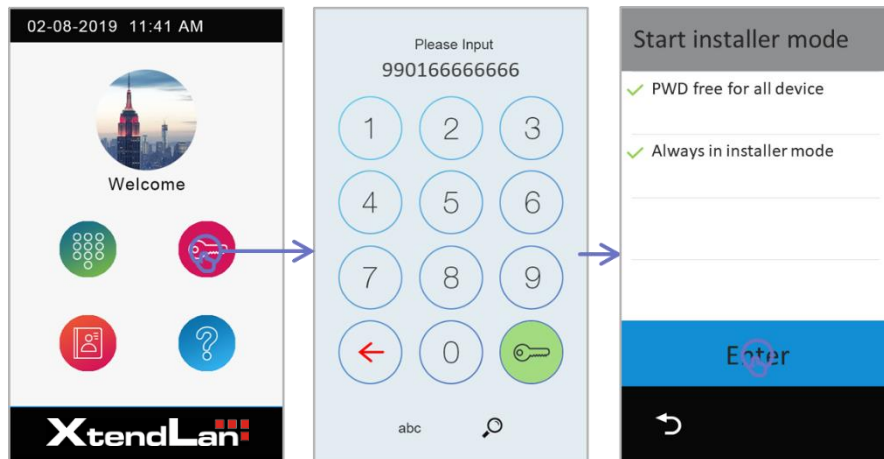# Contents

1. Installer Configuration

Before configure, all device should be connected.

DPC-IP850 Installer Mode

To configure DPC-IP850 installer need to set DPC-IP850 in installer mode.
when DPC-IP850 in standby, tap "Unlock" -> input "9901 + installer password" (by default,
installer password is 66666666, input 990166666666)

PWD free for all device:

All other devices with same installer password will not require to input password when it
is enabled

Always in installer mode

Keep in "Installer mode" unless manually exit or power down. Without selected, DPC-
IP850 will exit "Installer Mode" after 1 hour.

After tap "Enter" to set door station into "Installer Mode"

DPM-IP71TM Installer Password

When setting up monitor's installer settings, if without password-free monitor will require a
installer password, default password is 66666666

3
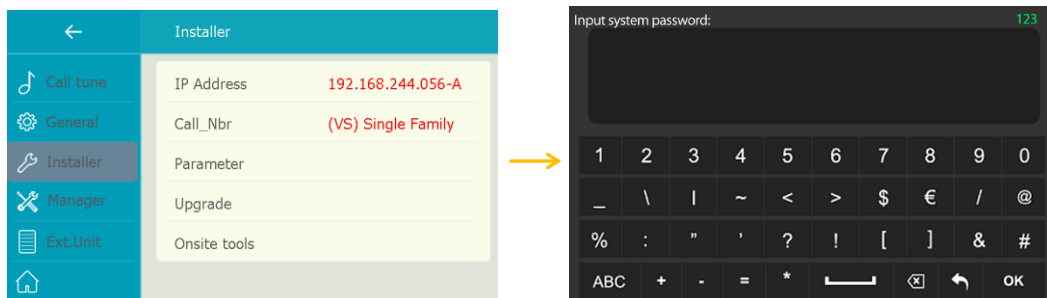
1.1 IP address

According to different project requires, installer should set up IP address correctly.
With less than 256 devices, installer could also use "Auto-IP" to skip IP address settings.
Auto-IP: Each device will assign itself a unique IP address in appoint subnet work. (IP Mask will be fix to 255.255.240.0)

Monitor DPM-IP71TM

On monitor, tap "Settings" -> "Installer" -> Input installer password if required (66666666 by default)

IP assigned:
- **STATIC**, Static IP address by manually input all IP address configures.
- **DHCP & Auto IP**, Using DHCP address or if there is no router for DHCP will be Auto-IP automatically.

Address health check:
> Tap to check this monitor's configured IP address is duplicate in the network or not.
> "**Error: IP exist!**", IP address already assigned by other devices.
> "**Self IP address checking passed**", IP address is unique in the network.

Installer could also get how IP address obtain from as below:
In "Installer" page, on item "IP address", last letter of address shows:

-S: Static IP address
-D: Obtain from DHCP server
-A: Assign by Auto-IP
-U: Unlink, network error

Door Station DPC-IP850

On DPC-IP850, set into installer mode, tap in the middle of blue bar on the top of screen ->

"Setting" -> "IP address"

IP assigned:
- **STATIC**, Static IP address by manually input all IP address configures.
- **DHCP & Auto IP**, Using DHCP address or if there is no router for DHCP will be Auto-IP automatically.
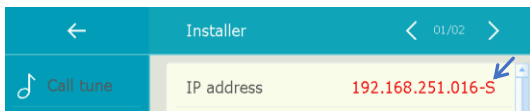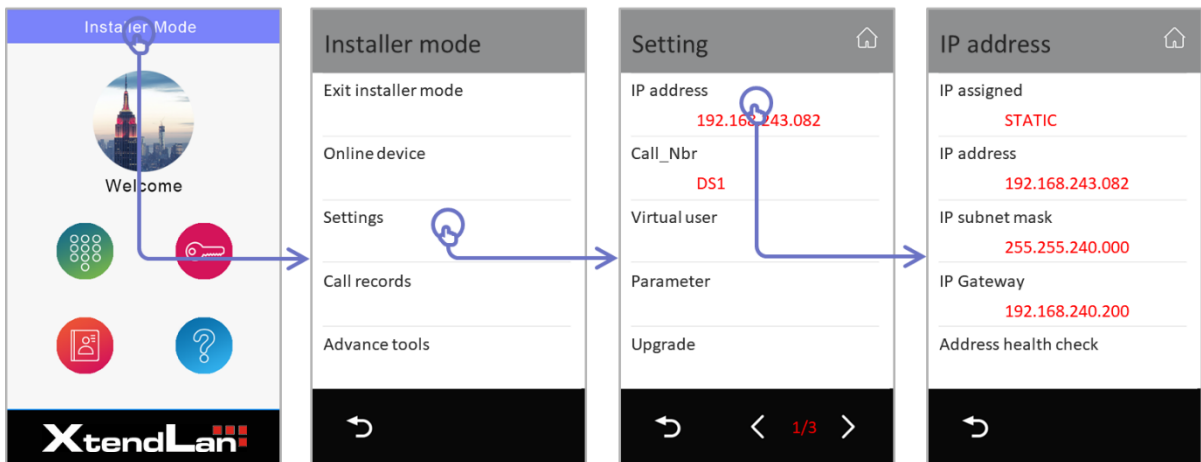
Address health check:

Tap to check this monitor's configured IP address is duplicate in the network or not.

"**Error: IP exist!**", IP address already assigned by other devices.

"**Self IP address checking passed**", IP address is unique in the network.

Door Station DPC-IP610

DPC-IP610 is set in "DHCP & Auto-IP" by default settings, installer must configure IP separately when using static IP address.

Configure via monitor remotely:
Connect separately DPC-IP610 one-to-one with DPM-IP71TM (all in default settings), when in standby, on monitor tap "settings" -> "ExternalUnit" -> "OutdoorStations" -> tap "OS1" -> "Parameter" -> "Network setting"
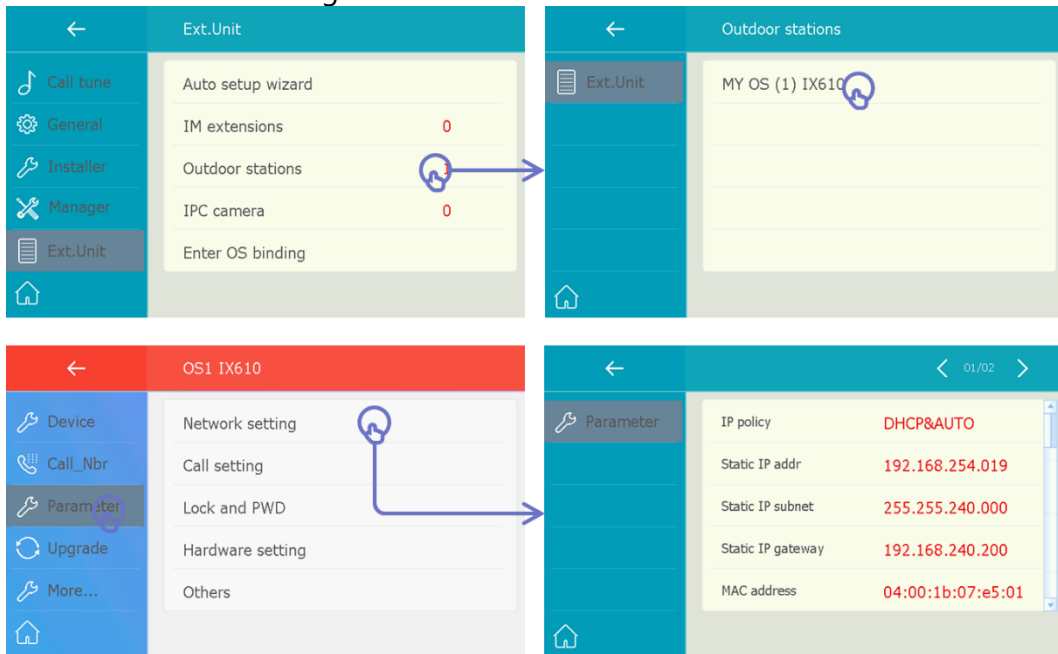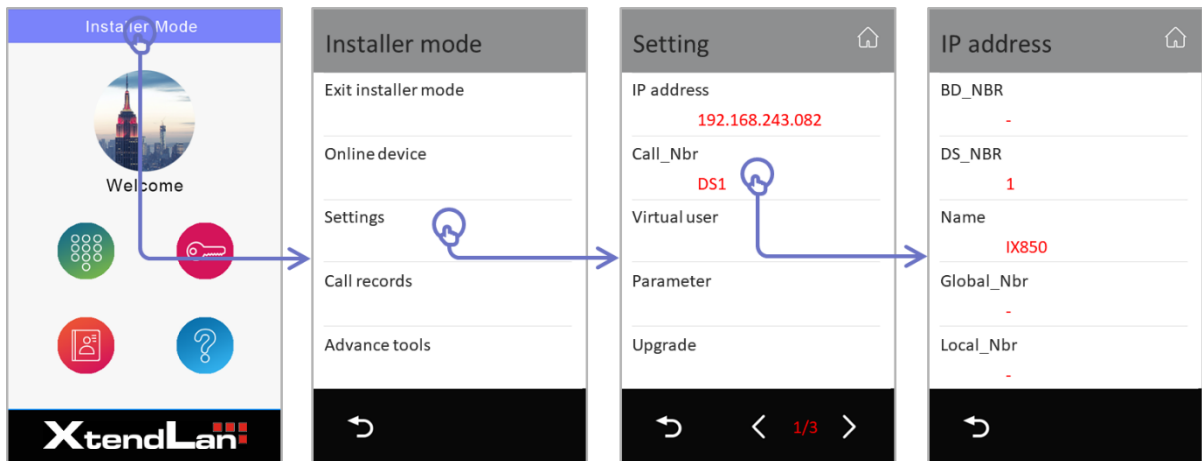

Input parameters in "Network setting":
IP Address / IP Mask / IP Gateway, and change IP_DHCP enable to disable.

1.2 Address Setup

Installer should set up each device address accordingly to project requirements.

Door Station DPC-IP850

In "Installer Mode" (Unlock with code 9901 and tap in the middle of blue bar at top), tap "settings" -> "Call_Nbr"

BD_NBR:

"**-**": For one building project, default BD_NBR. (input 0099 = "-", means for standalone)

"**0000**": for common door station.

"**0001~8999**": for building number, 0001 means 1st building/block, 2nd means 2nd…etc.

DS_NBR:

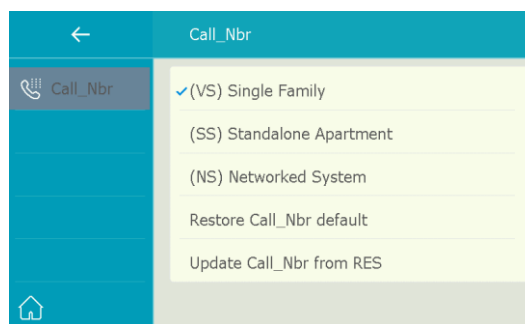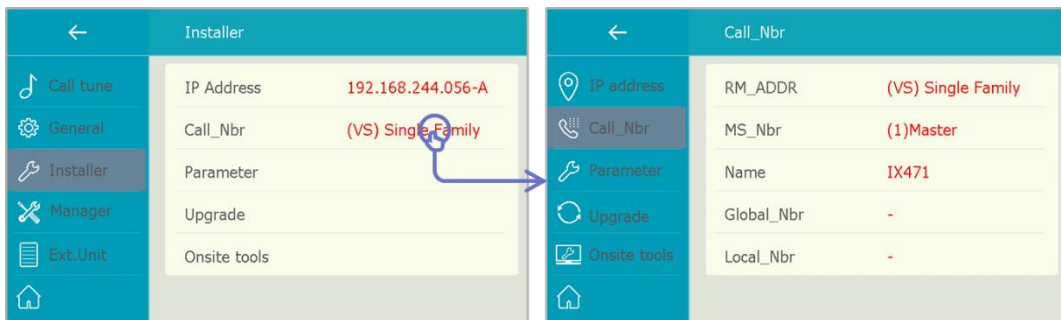"**1~32**": door station number. 1 means 1st door station, 2 means 2nd door station…etc.

Name:

The "Name" input here will sync to monitor's monitoring list automatically.

Global_Nbr: Reserve for Guard Unit

Local_Nbr: Reserve for Guard Unit

Door Station DPM-IP71TM

Tap "Settings" -> "Installer" -> "Call_Nbr" -> input password if required (66666666 by default)

RM_ADDR:

"**(VS)Single Family**": For villa single one-to-one installation, no need to input room number.

"**(SS)Standalone Apartment**": for standalone building, input 4digits room number only. Tap to input 4digits number.
Ex: Tap "(SS)" and input 0001 for room standalone building.

"**(NS)Networked System**": for standalone building, input 8digits number, first 4digits for building/block number, last 4digits for room number.
EX: 00010003 1st building 3rd monitor; 00030005 3rd building 5th monitor

"**Restore/Update from RES**": Reserve for configurations database file (RES file) update and backup.

MS_NBR:

Master and slave number, 01 is master monitor, 02~32 is slave monitor.

Name:

The "Name" input here will sync to door station's calling list automatically.

Global_Nbr:

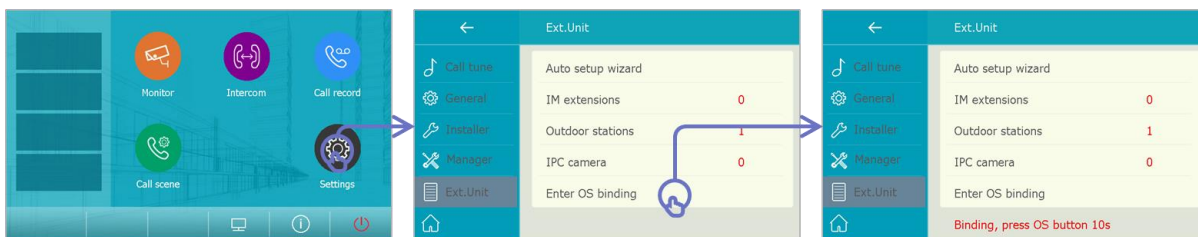Extra call number for common door station calling to this monitor.

Local_Nbr:

Extra call number for door station in same building calling to this monitor

Door station DPC-IP610

For button door station DPC-IP610 to setup which monitor the call button calling to.
By default setting, DPC-IP610 call button calling to monitor address in "(VS) Single Family".

With press and hold call button, each 5s will flash once	

Hold and press call button for 10s. **Release when night light led flash twice, with one long beep means it is bind with master monitor.**	

On the master monitor need to be called, tap "Settings" -> "ExternalUnit" -> "Enter OS binding", and when "Binding, please press OS button 10s" shows on the bottom,

on the outdoor station need to bind, long press call button for 10s (during press, night view light will flash once each 5s), release door station reply as long beep mean is successful. Push the call button and check if monitor responds to call or not.

1.3 IP Camera Setup

Using IP camera XtendLan for door-phone system, XtendLan IP camera default setting is DHCP

When camera and IP system in DHCP

On any monitor, tap "Settings" -> "ExternalUnit" -> "IP_Camera" -> "ADD" -> "Add by search", all connected IP camera will add to monitor list.
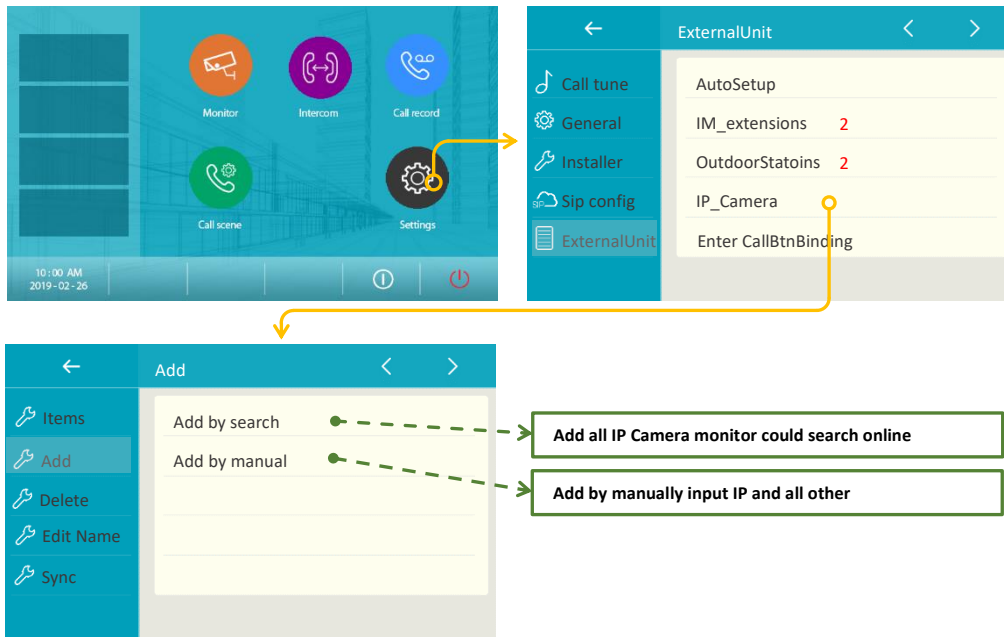
In "IP_Camera":

Item: Show all exist IP camera list
Add: Add IP camera by search or by manual input IP and access
Delete: Delete IP camera in current IP camera list
Edit Name: Rename IP camera locally.
Sync: Sync current IP camera list to door station so other monitors could sync IP camera list.

When camera and IP system in Static IP or Auto-IP

Install and run "Onvif Device Manager" Download, Make sure PC and IP Cameras are in same subset network.

1. Getting Started

After ONVIF Device Manager has been launched, your device is automatically detected and displayed at the end of the device list on the left. If the device has not been detected automatically, check the connection and click "*Refresh*".

and Input "Username" and "Password" for IP Cameras, click "Log in".
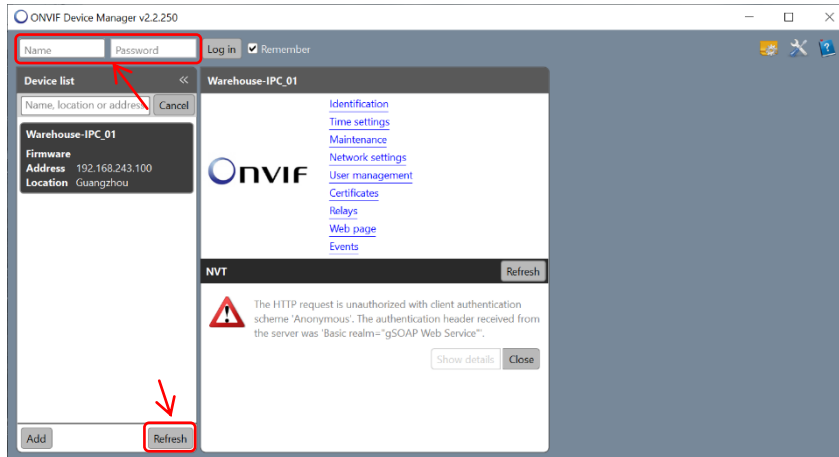
2. Change IP Network settings

Click "Network settings", and on the network settings
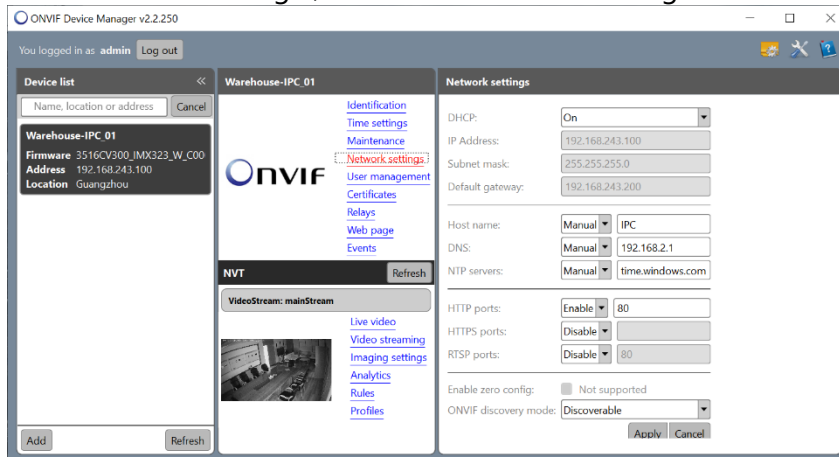
For Auto-IP please change address as follow:

IP address: 192.168.243.xxx

IP Mask: 255.255.240.0

Default Gateway: 192.168.243.200

For Static IP address input configures according to you need.

Sync IP camera List to Other Monitors.

For those monitors in same building use sync monitoring list so don't need to add for each one.
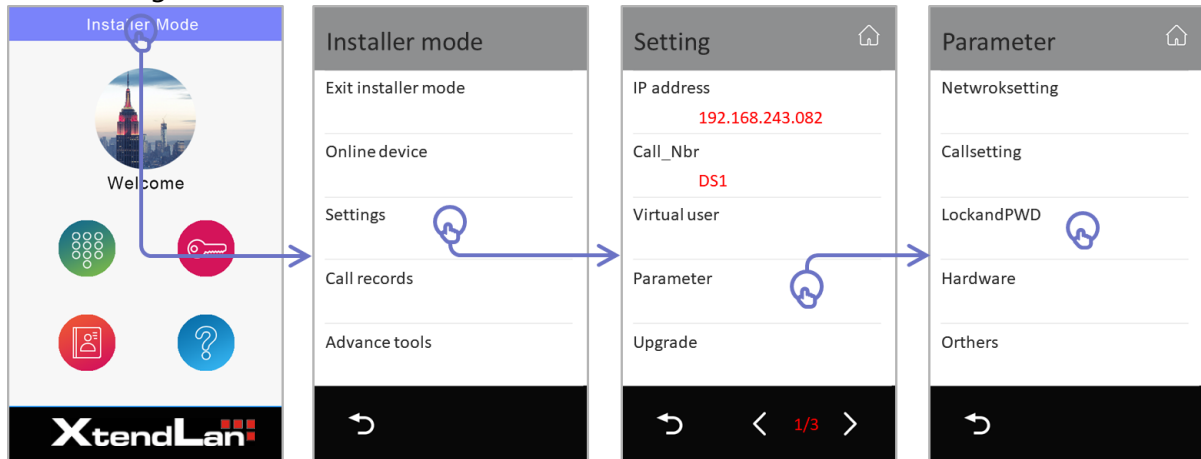On monitor's IP Camera.
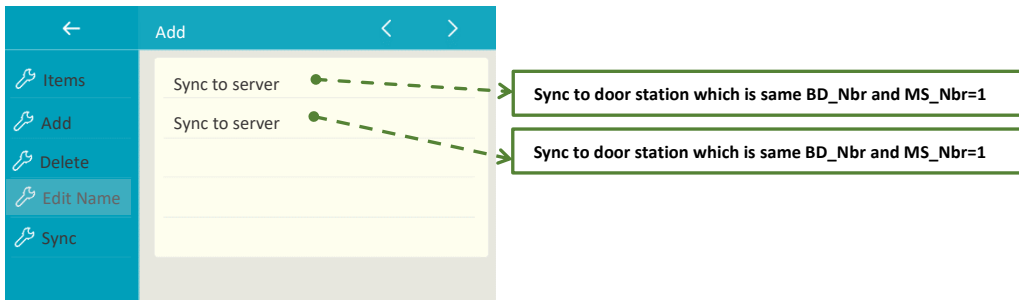
Sync to server, monitor will generate a monitoring list, and sync to door station DS1.
Sync from server, monitor will get IP camera list storage in door station DS1.

1.4 Unlock settings

Door Station DPC-IP850

when DPC-IP850 in "Installer mode", tap "blue bar in the middle" -> "Settings" -> "Parameter" -> "Unlock setting"

Find below Parameters:

Lock1 mode:
    Normally open or normally close for the lock release.
Lock1 unlock timing:
    Unlock delay timing.

Also, below parameters, see also "2. Management – Public code"

Common unlock enable (0 or 1):
    Enable or disable unlock via password.
Common unlock code (4 digits):
    Public password of this door station.
Remote unlock code read (0 or 1):
    Allow or disallow change public code remotely.
Remote unlock code change (0 or 1):
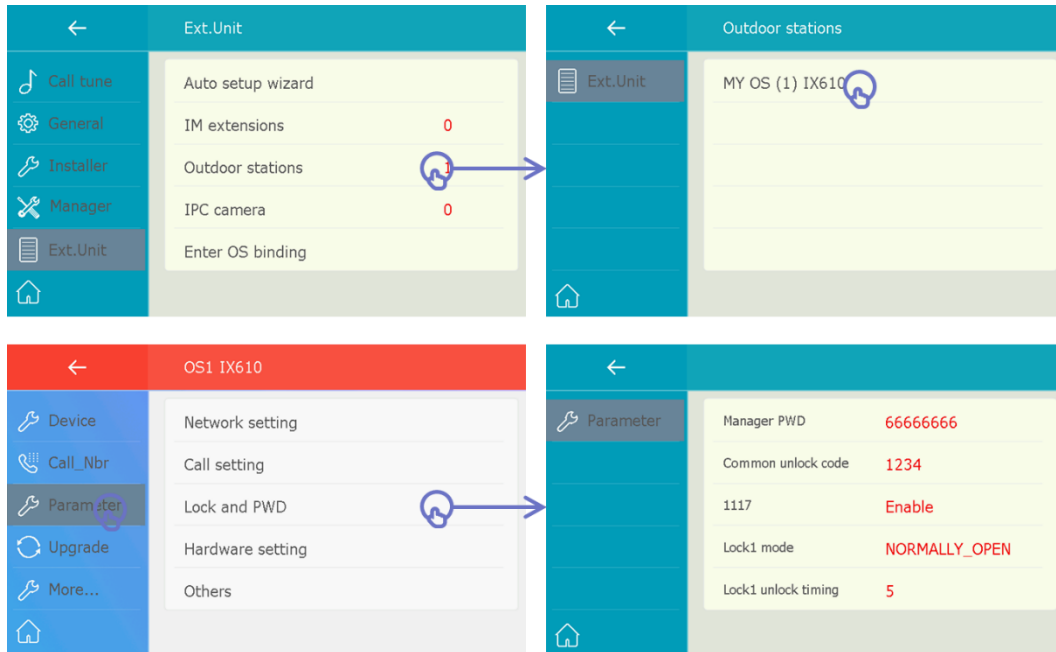   Allow or disallow monitor check public code.
Code error protection (0 or 1):
    Enable or disable error unlock code input alarm.

Other parameters are reserved

Door station DPC-IP610

On monitor which door station calling to, tap "settings" -> "ExternalUnit" -> "OutdoorStations" -> tap "OS1" -> "Parameter" -> "Lock and PWD"

Find below Parameters:

Lock1 mode:

Normally open or normally close for the lock release.
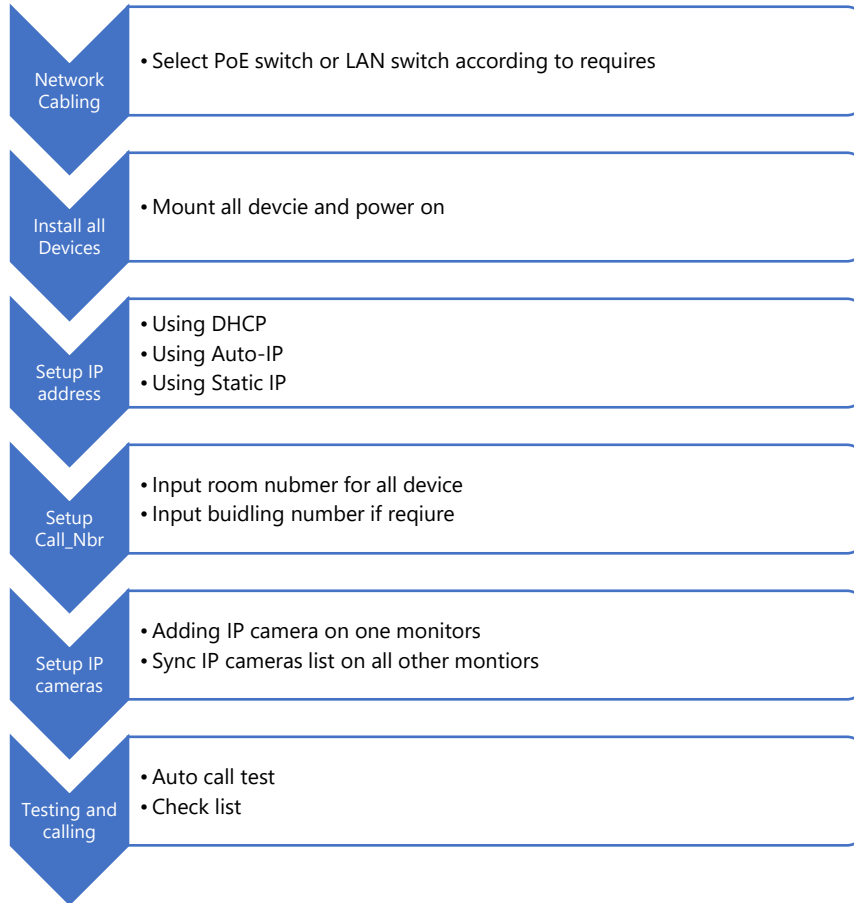
Lock1 unlock timing:

Unlock delay timing.

Other parameters are reserved

1.5 Installer Configuration Example

Simplest examples for how to set up a project

A simple guild line for install IP system

Network Cabling
- Select PoE switch or LAN switch according to requires

Install all Devices
- Mount all devcie and power on

Setup IP address
- Using DHCP
- Using Auto-IP
- Using Static IP

Setup Call_Nbr
- Input room nubmer for all device
- Input buidling number if reqire

Setup IP cameras
- Adding IP camera on one monitors
- Sync IP cameras list on all other montiors

Testing and calling
- Auto call test
- Check list

Ex1.Single Family

Project for one family install in a villa house
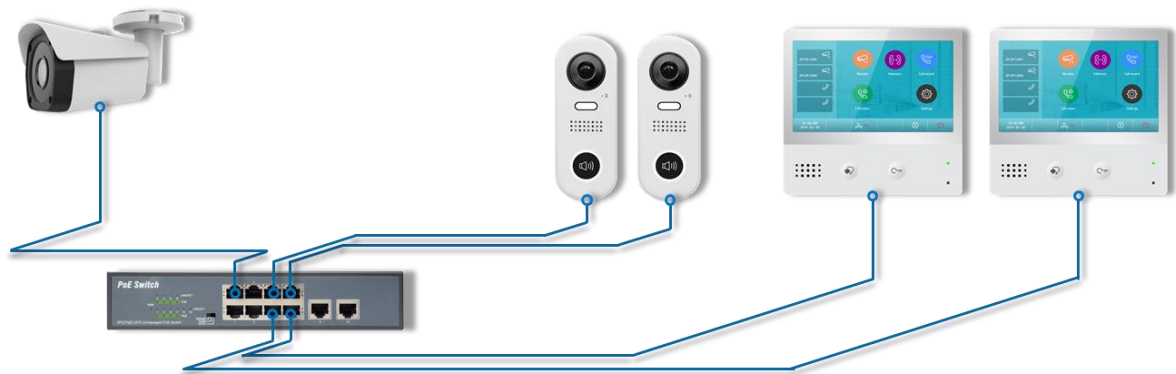2 x Door station DPC-IP610
2 x Monitor DPM-IP71TM
Some IP Cameras
All monitors/door stations in default setting or brand new from box.
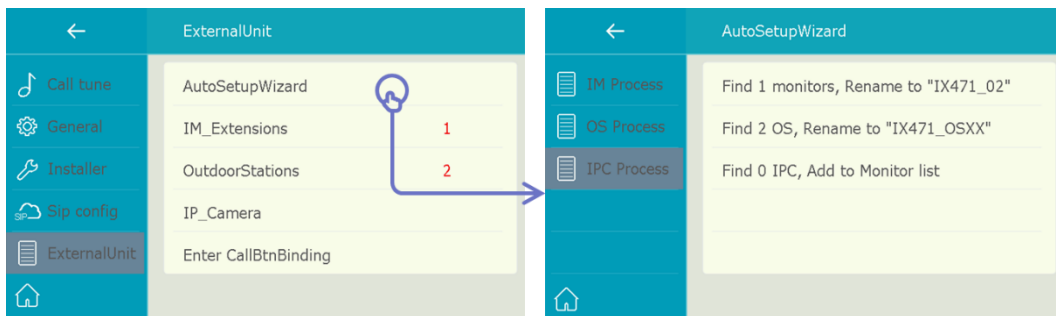Using DHCP & Auto-IP

Wiring

Configuration

After all monitor power up and in standby, on one of monitor:
Tap "Settings" -> "ExternalUnit" -> "AutoSetupWizard"

Setup will run automatically, after running all setup for this project is done.

Ex2.Standard Apartment

Project for only 1 building but 2 different apartments.
2 x Door station DPC-IP850
4 x Monitor (2 for each apartment)
4 x DPC-IP610 (2 for each apartment)
Some cameras.
All monitors/door stations in default setting.
Using DHCP & Auto-IP

Wiring

Configuration

After all monitor power up and in standby,

1. **Configure Door stations.**

On door station 1:

Into "Installer Mode" and enable "Onsite manage password-free" and "Always in this mode".
And tap "blue bar on the top" -> "Settings" -> "Call_Nbr" -> input "Name" example "Front Door"

On door statin 2:

Input "Installer Mode" and tap "blue bar on the top" -> "Settings" -> "Call_Nbr" -> change "DS_Nbr" to 02 -> input "Name" example "Back Door"

2. **Configure Monitors**

On Room1 monitor1:

Tap "Settings" -> "Installer" -> "Call_Nbr" -> "RM_ADDR" -> "(SS) Standalone Apartment" and input "0001" -> Input "Name" example "Wilbur" -> Input Local_Nbr "101" for DPC-IP850 to call.

On Room1 monitor2:

Tap "Settings" -> "Installer" -> "Call_Nbr" -> "RM_ADDR" -> "(SS) Standalone Apartment" and input "0001" -> Input 02 for "MS_Nbr" -> Input Local_Nbr "101" for DPC-IP850 to call.

On Room2 monitor1:

Tap "Settings" -> "Installer" -> "Call_Nbr" -> "RM_ADDR" -> "(SS) Standalone Apartment" and

input "0002" -> Input "Name" example "Alan" -> Input Local_Nbr "102" for DPC-IP850 to call.

On Room1 monitor2:
Tap "Settings" -> "Installer" -> "Call_Nbr" -> "RM_ADDR" -> "(SS) Standalone Apartment" and input "0002" -> Input 02 for "MS_Nbr" -> Input Local_Nbr "102" for DPC-IP850 to call.

3. Configure Outdoor station DPC-IP610
On Room1 montior1:
Tap "Settings" -> "ExternalUnit" -> "Enter CallBtnBinding", and press outdoor station 1 call button for 10s, and press call button to call.
Repeat to add outdoor station 2.

On Room2 monitor1:
Repeat.

4. Configure IP Camera
On all monitor:
Tap "Settings" -> "ExternalUnit" -> "IP_Camera" -> "ADD" -> "Add by search"

5. Exit Installer mode and finish
On door station 1:
Input "Installer Mode" and tap "blue bar on the top" -> "Exit installer mode"
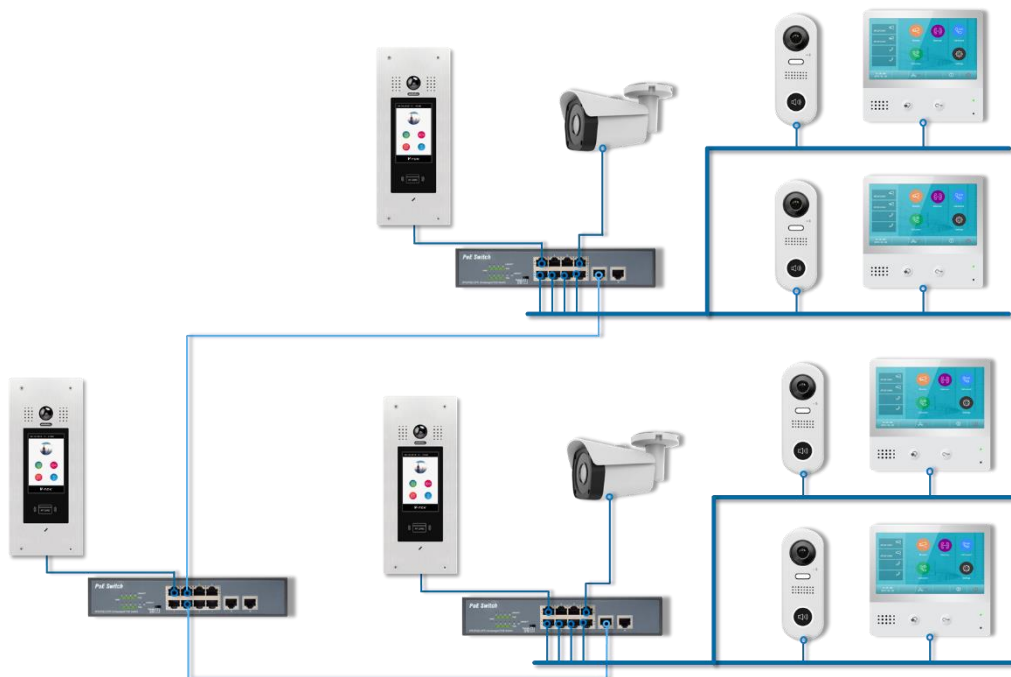
Ex3. Networked System

Project for only 1 building but 2 different apartments.
3 x Door station DPC-IP850 (1 common door station, each building 1 door station)
4 x Monitor (2 for each building)
4 x DPC-IP610 (2 for each apartment)

Wiring

Configuration

After all monitor power up and in standby,

1. Configure Door stations.

On common door station:
Into "Installer Mode" and enable "Onsite manage password-free" and "Always in this mode".
And tap "blue bar on the top" -> "Settings" -> "Call_Nbr" -> setup as below:
BD_Nbr = 0000
DS_Nbr = 01 (Default)
Name = "Gate Door"

On Building1 door station:
Into "Installer Mode" and tap "blue bar on the top" -> "Settings" -> "Call_Nbr" -> setup as below:
BD_Nbr = 0001
DS_Nbr = 01 (Default)
Name = "Build1 Door"

On Building1 door station:
Into "Installer Mode" and tap "blue bar on the top" -> "Settings" -> "Call_Nbr" -> setup as below:
BD_Nbr = 0002

DS_Nbr = 01 (Default)
Name = "Build2 Door"

2. Configure Monitors

On Building1 Room1 monitor:

Tap "Settings" -> "Installer" -> "Call_Nbr" -> Set up as below:

Room_Addr: "(NS) Network System" -> input 00010001

MS_Nbr = 01(default)

Name = "Wilbur"

Global_Nbr = A1 extra call number for common door station to call

Local_Nbr = 101 extra call number for building door station to call

On Building1 Room2 monitor:

Room_Addr: "(NS) Network System" -> input 00010002

MS_Nbr = 01(default)

Name = "Alan"

Global_Nbr = A2 extra call number for common door station to call

Local_Nbr = 102 extra call number for building door station to call

On Building2 Room1 monitor:

Room_Addr: "(NS) Network System" -> input 00020001

MS_Nbr = 01(default)

Name = "Alan"

Global_Nbr = B1 extra call number for common door station to call

Local_Nbr = 201 extra call number for building door station to call

On Building2 Room2 monitor:

Room_Addr: "(NS) Network System" -> input 00020002

MS_Nbr = 01(default)

Name = "Alan"

Global_Nbr = B2 extra call number for common door station to call

Local_Nbr = 202 extra call number for building door station to call

3. Configure Outdoor station DPC-IP610

On Building1 Room1 monitor:

Tap "Settings" -> "ExternalUnit" -> "Enter CallBtnBinding", and press outdoor station 1 call button for 10s, and press call button to call.

On all other:

Repeat.

4. Configure IP Camera

On one of monitor in Building1:

Tap "Settings" -> "ExternalUnit" -> "IP_Camera" -> "ADD" -> "Add by search", then tap "Delete" camera that belongs to "Building2", after tap "Sync", and "Sync to server"

On all other monitors in Building1:

Tap "Settings" -> "ExternalUnit" -> "IP_Camera" -> "Sync" -> "Sync from server".

On Building2:
Repeat.

5. **Exit Installer mode and finish**
On common door station:
Input "Installer Mode" and tap "blue bar on the top" -> "Exit installer mode"

2. Management

Calling/Unlock, daily operation.

2.1 Management Setting Menu

Management menu for after-installed setup, setting such as Unlock code and Access card is in this setting menu.

When DPC-IP850 in standby, tap "Unlock" -> input "**9902** + installer password" (by default, installer password is 66666666, input 990166666666)
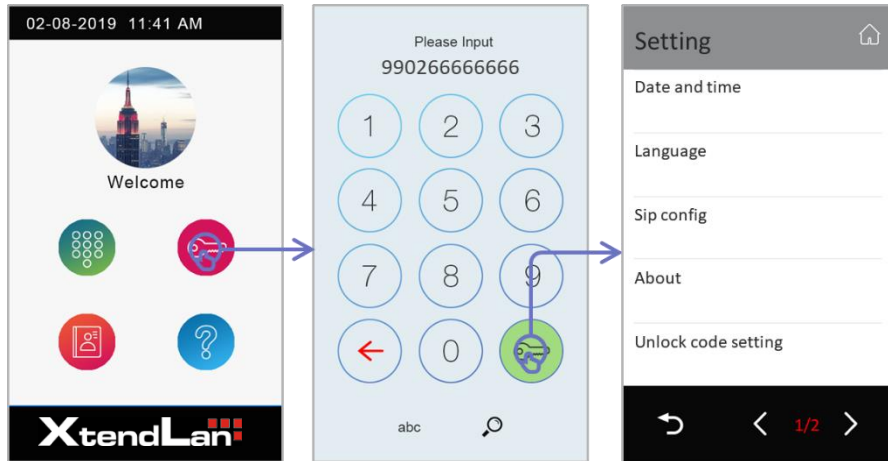
2.2 Public Unlock Code

Chang Public Code

In "management setting menu" -> "Unlock code setting" -> "Change public unlock code" ->
Input current code (1234 by default) -> input new code twice.

Options

In "Unlock code setting" -> "Options" -> there is below options
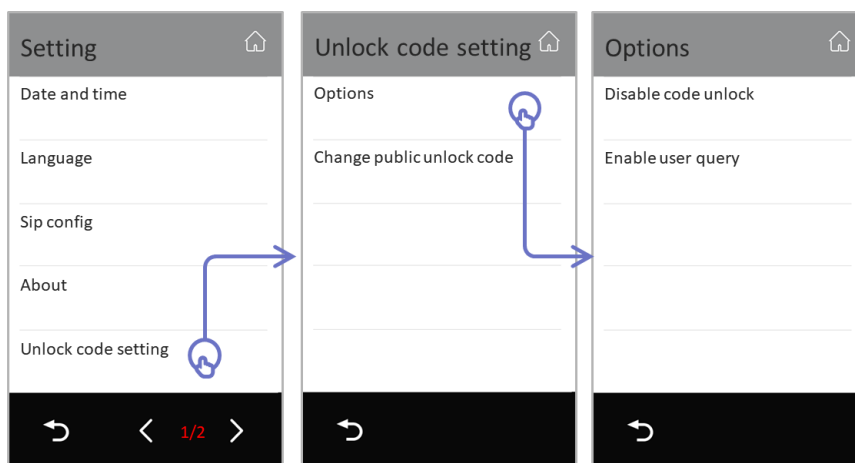
Disable code unlock

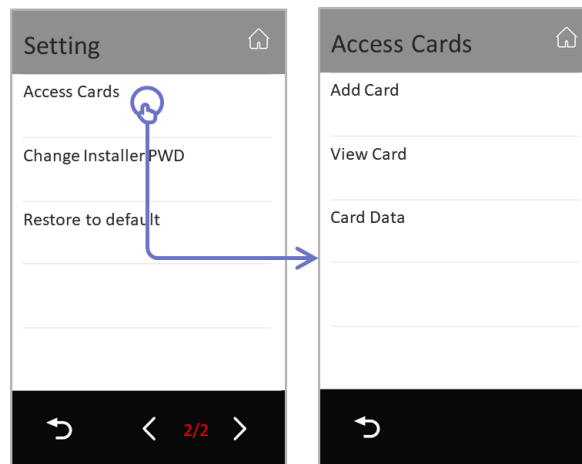Not allow to use public unlock code to unlock door station.

Enable User query

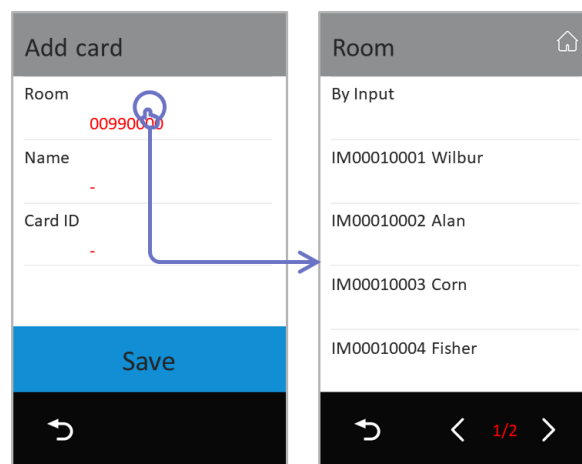Allow users to check public unlock on monitor.

2.3 Access Card Management

In "Management setting menu" -> page 2 "Access Cards"

Monitor could also manage its own cards. See "Daily Operation Manual"

Add Card

Tap "add card" in "Access cards" to add access card

Room:
 Select an online monitor or manual input Room_Addr.

Name:
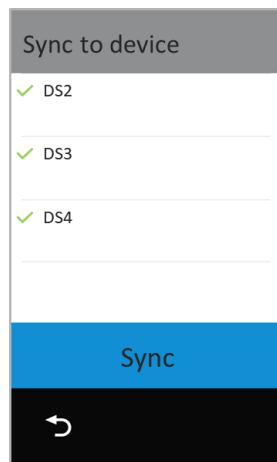 Manual input card holder's name, as remark

Card ID:
 Manual input card ID or swipe card in the card reader.

Save:
 Apply card to door station.

After add all cards, tap "Return" door station will ask to sync card data to other door station, so no need to add again.
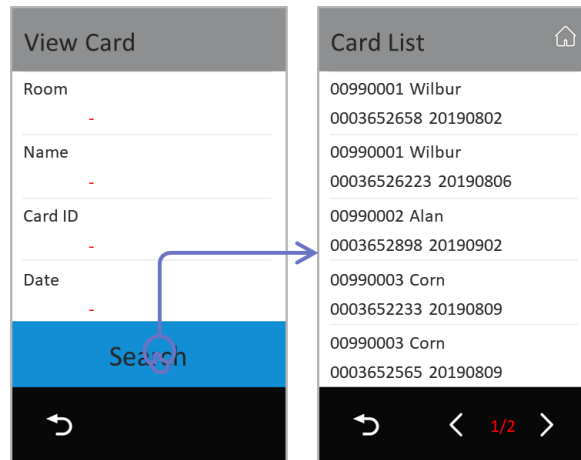Card sync could also do later on the door station.

Sync to device
✓ DS2
✓ DS3
✓ DS4
Sync
↩

All online door station could sync will show in this menu (door stations in the same building and common door stations), tick door stations needed to be sync, and then tap "Sync".

View Card

Tap "View Card" in "Access card" to check added cards

Input search condition, if keep all blank means to show all cards.

Room:
Input room number.
Name:
Input card holder's name
Card ID:
Input fully 10 digits Card ID
Date:
Input card create date

Or swipe a card to check.

In the search list, tap "delete" icon on item to delete card, or tap "delete" icon on the title bar to delete all card in the list.
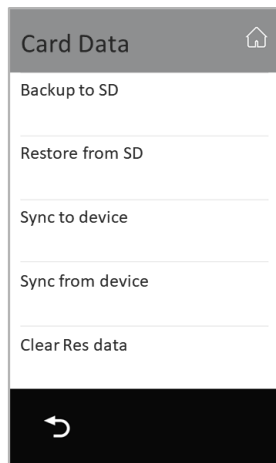
Description for card list:

00990001(Room_Addr) **Wilbur** (Card Name)
0003652658(Card ID)**20190802**(Card create date)

Card Data

Tap "Card Data" in "Access Card" to sync, backup and restore card data.

Backup to SD:

Backup all card data to SD card

Restore from SD:

Restore card data from SD card

Sync to device:

Sync all card data to online door station

Sync from device:

Sync card data from an online door station
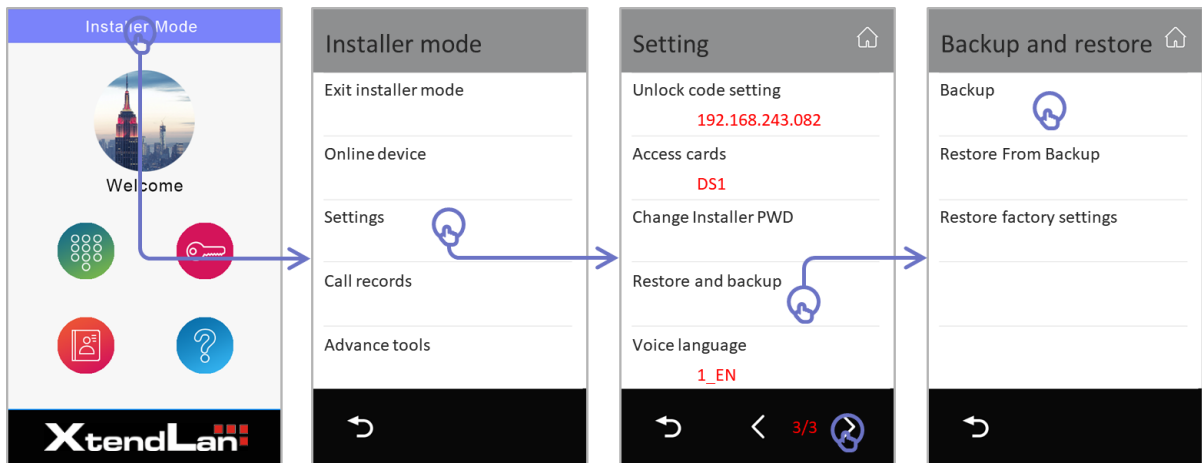
Clear Res data:

Clear this door station's card data

3. System Maintenance

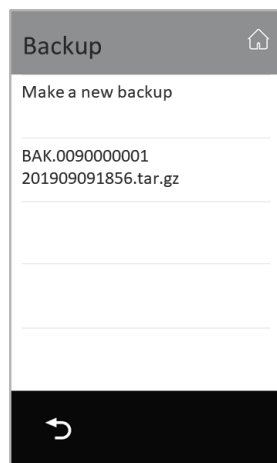Backup and restore project data, upgrade.

3.1 Backup and Restore

a. Backup All Data

When door station DPC-IP850 in "Installer Mode", tap in the middle of blue bar -> "settings" -> to Page3 -> "Backup and Restore" -> "Backup"
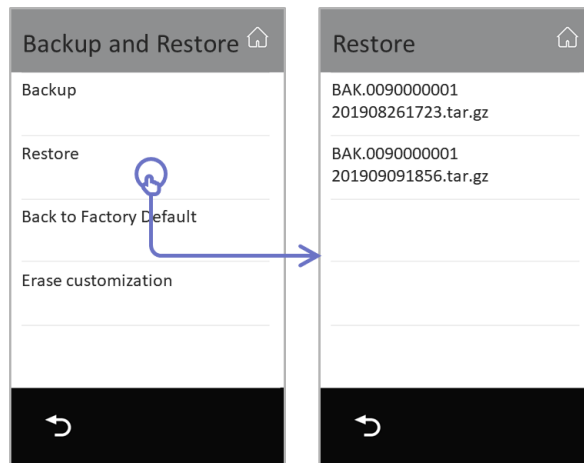

In backup menu, as below:

Make a new backup:

To make a new backup of this door station to SD card.

All backups in SD card will display in the list, tap any of backup in the list to cover this backup with new data.

b. Restore

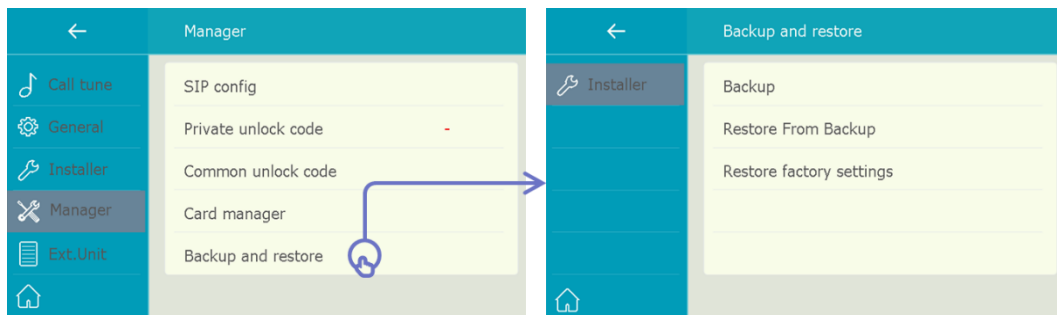Restore all data from SD card, tap "Restore" in "Backup and Restore" page

Tap backup in the list to restore the backup.

c. Back to Factory Default

Tap to back all settings to factory default.

d. Back and Restore Monitor

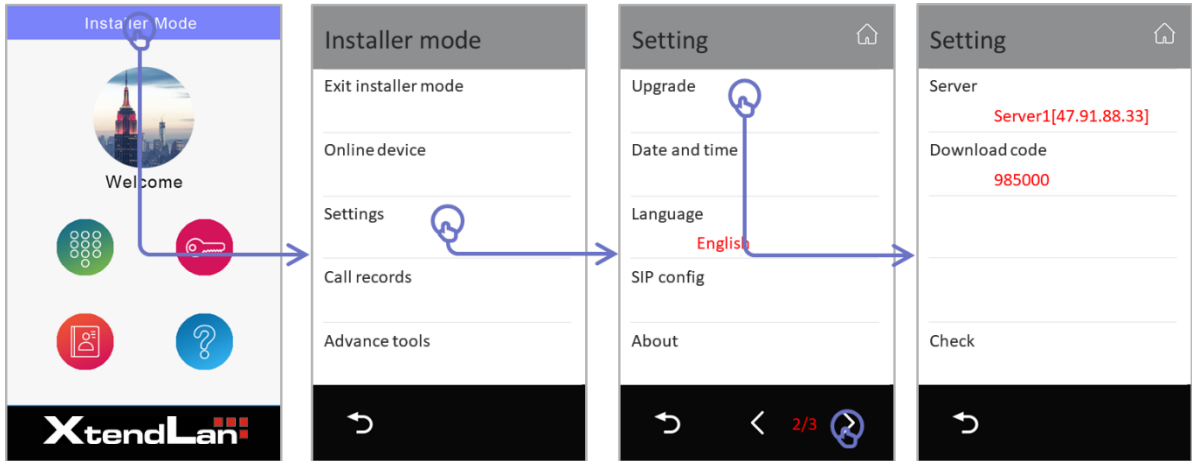Tap "Settings" -> "Manger" -> "Backup and restore", as below:

3.2 Upgrade

Firmware, data upgrade. Upgrade could also be RES file from cloud, any data download from cloud server or local server are called upgrade

a. Door station DPC-IP850

When door station in "installer mode", tap middle of blue bar -> "settings" -> "backup and restore" "Upgrade" in 2nd page.

Server:

Select a server or SD card for files download for upgrade.

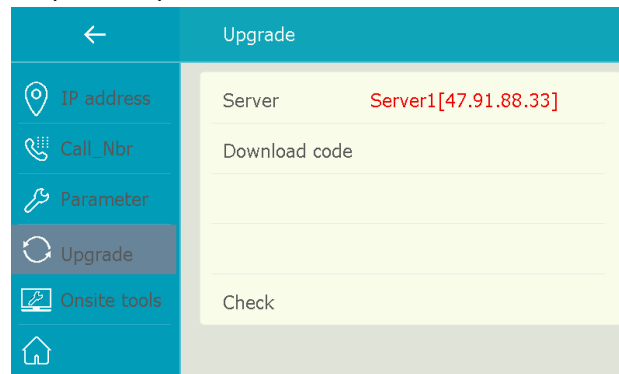Download code:

Input download access code

Check:

Apply changes and check for updates

Above information will provide by ASM technical support when required. English standard version as below

Server	Download code
47.91.88.33	985000

b. Monitor DPM-IP71TM

On the DPM-IP71TM needed to upgrade, tap "Settings" -> "Installer" -> "Upgrade" -> input installer password if required, update as below:

	Upgrade
⊙ IP address	Server Server1[47.91.88.33]
☏ Call_Nbr	Download code
🔧 Parameter	
↻ Upgrade	
🖥 Onsite tools	Check
⌂	

Server:

Select a server or SD card for files download for upgrade.

Download code:

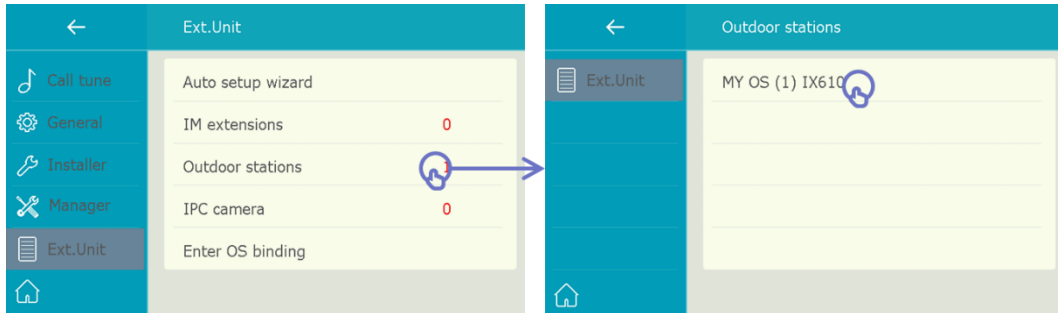Input download access code

Check:

Apply changes and check for updates

Above information will provide by ASM technical support when required. English standard version as below

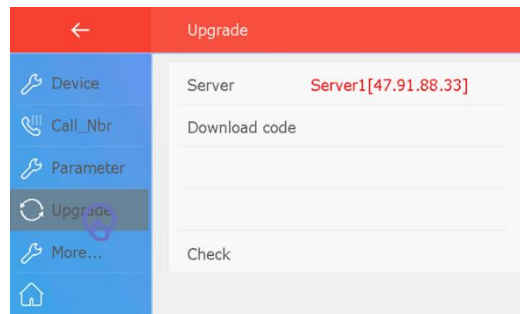| Server	Download code
47.91.88.33	9471000

c. Door stationDPC-IP610

DPC-IP610 could only online via DPM-IP71TM, please connect with DPM-IP71TM and binding the OS to the DPM-IP71TM. (or search by online)

On monitor, tap "Ext.Unit" -> "Outdoor stations" -> select the door station need to update.

Tap "Upgrade"

Server:

Select a server or SD card for files download for upgrade.

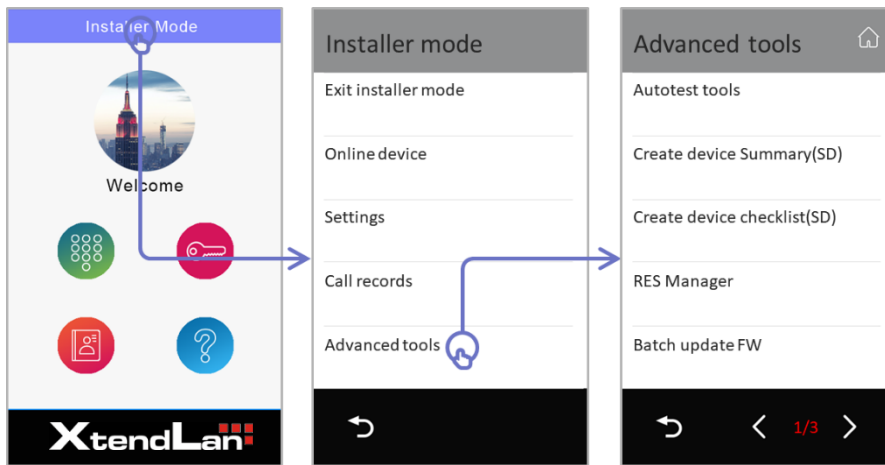Download code:

Input download access code

Check:

Apply changes and check for updates

Above information will provide by ASM technical support when required. English standard version as below

Server	Download code
47.91.88.33	961000

d. Remote upgrade all

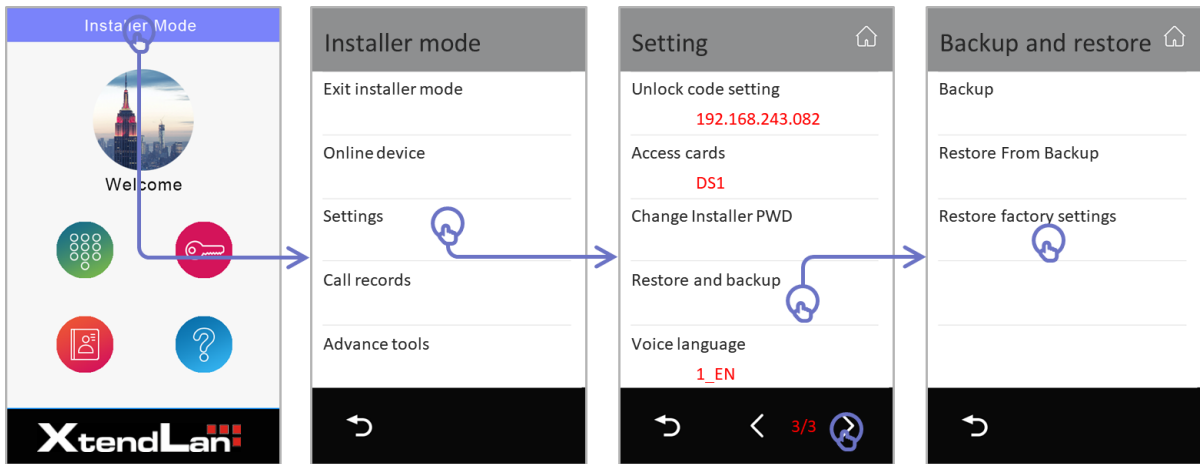When door station in installer as below, in installer men -> tap "Advanced tools"

Tap "Batch upgrade" to upgrade all online device
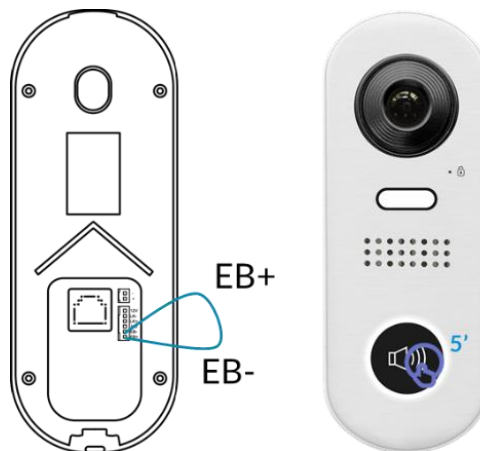
3.3 Factory Default Setup

1. Door station DPC-IP850

When door station DPC-IP850 in "Installer Mode", tap in the middle of blue bar -> "settings" -> "Factory default"
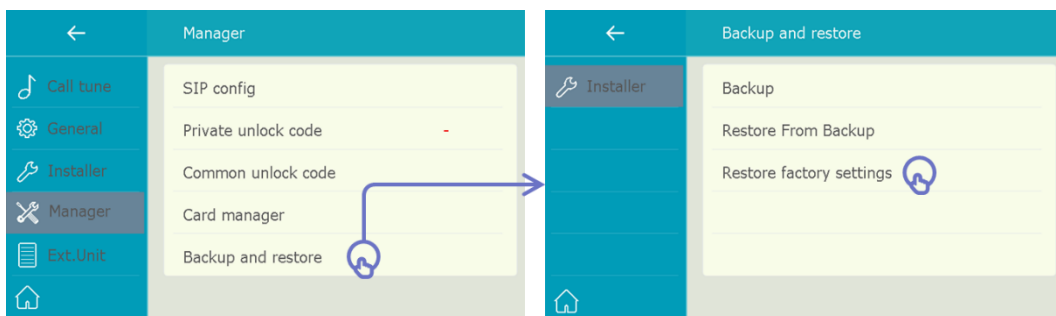

2. Door station DPC-IP610

Bridge EB+ and EB-, and long press 15s to setup factory default

Monitor DPM-IP71TM

Tap "Settings" -> "Manger" -> "Backup and restore" -> "Restore factory settings", as below

4. Installer Advance Tool

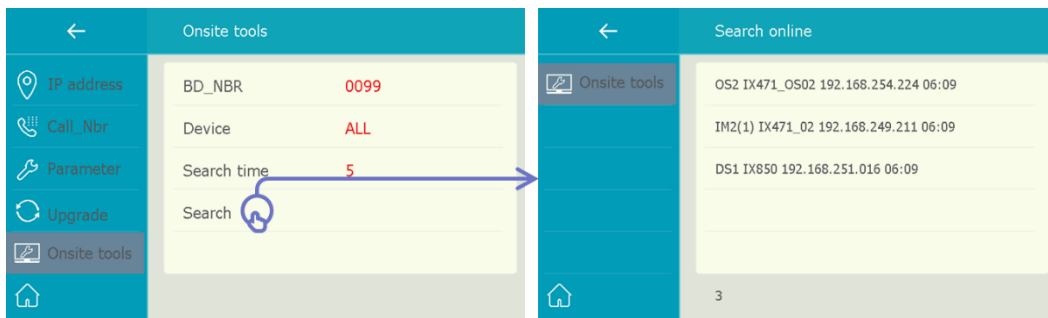Installer auxiliary, virtual user, 2 Wire compatibility and \RES configuration.

4.1 Installer Auxiliary

e. Remote configure

Remote configure IP device from other online IP device:

Operate from IP monitor

Tap "Settings" -> "Installer" -> input installer password if required -> **"IP address"** -> **"Onsite tools"**, you will see as below:

BD_Nbr:
    Search condition, building number, 0099 means "(SS)Standalone building".
Device:
    Search condition, device type.
Maximum:
    Maximum devices of the search list.

Tap "Search" to show all comply online devices, description as below:
OS2 (Device type and address) **DPM-IP71TM_OS2** (Name) **192.168.254.224** (IP address) **06:09** (Up time)

Tap on item need to be configure, you will see as below:

Device:
    Device information summary
Call_Nbr:
    Configure call number(address) setups
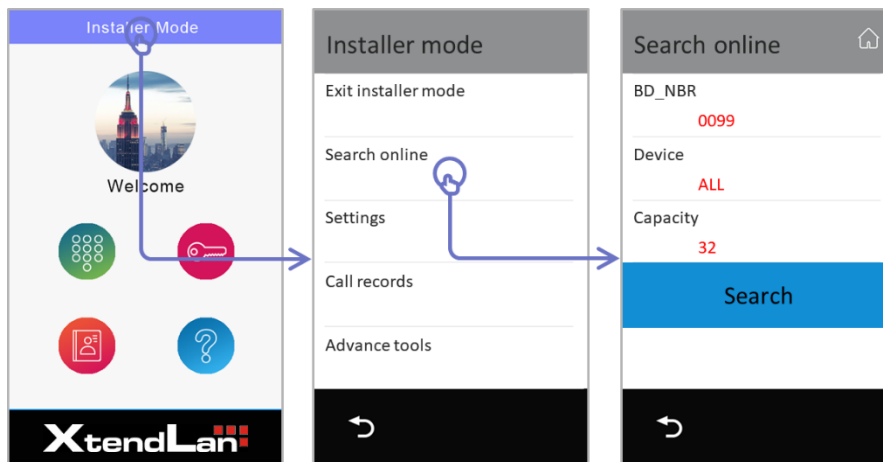
Parameter:
Configure device's parameter
Upgrade:
Upgrade firmware for this device
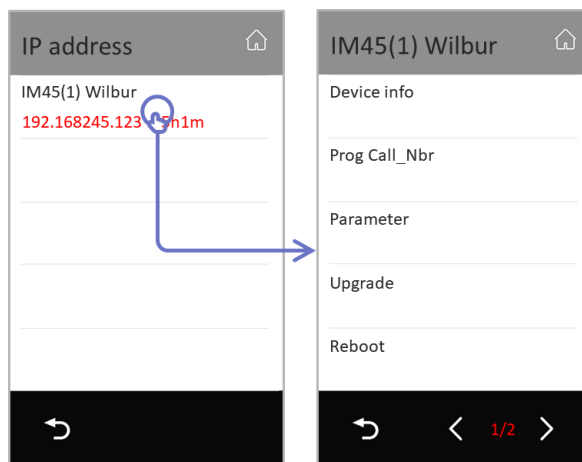Reboot:
Reboot this device

Operate from IP Door station

Set door station DPC-IP850 into "Installer Mode"

Search condition same as above.

Tap "Search" to show all comply online devices:

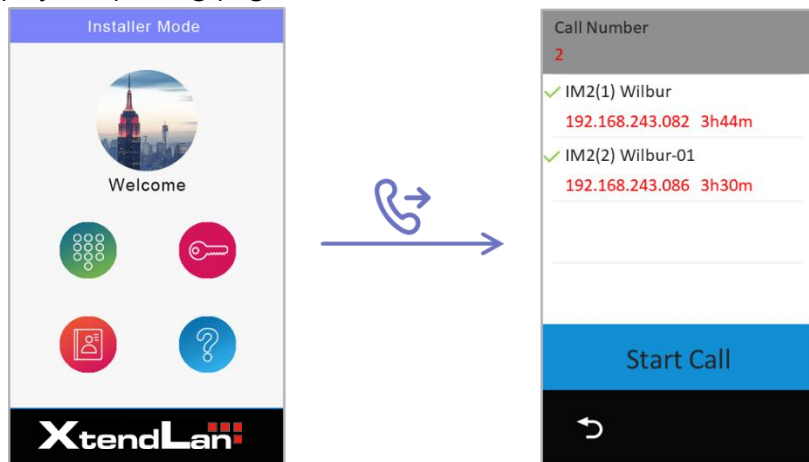Setting items are same as above, specially, on page 2:
Ping:
Test network reachability to this device's IP address
Restore and backup:
Backup this device's installer configurations to SD card

f. DPC-IP850 Call Parsing

Set door station DPC-IP850 into "Installer Mode", tap "phone book" or "keypad" to initial a calling, system will display call parsing page as below:
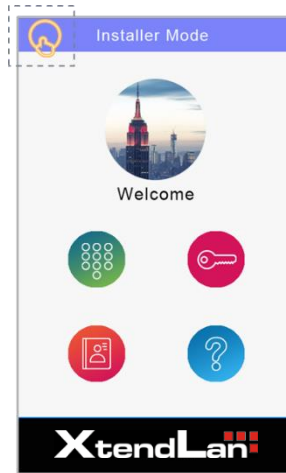

All monitor relate to this call item will be display on the list, tap "Start Call" to call all monitor in the list. Or tap item in the list to "Remote Configure"
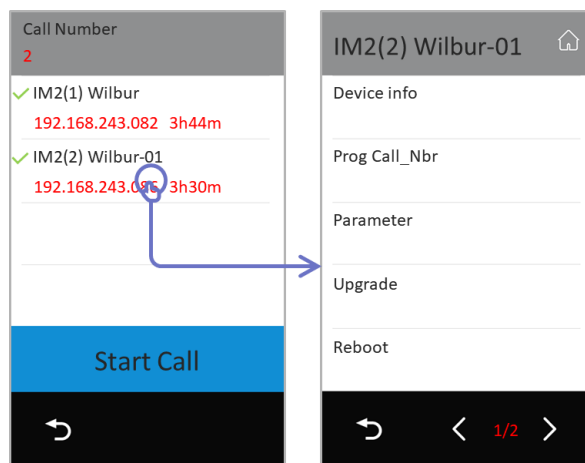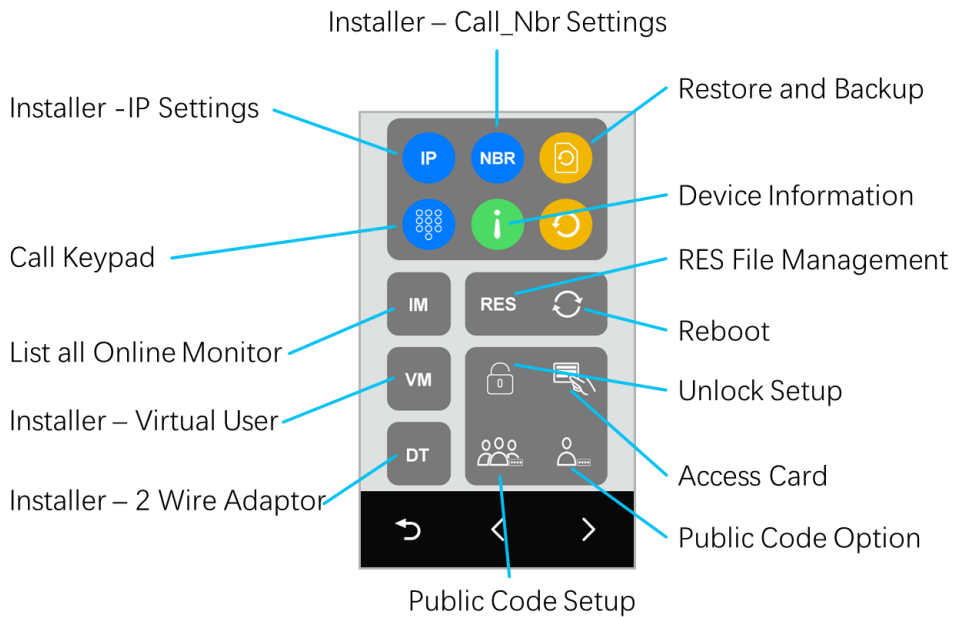
g. DPC-IP850 Installer Shortcut Menu

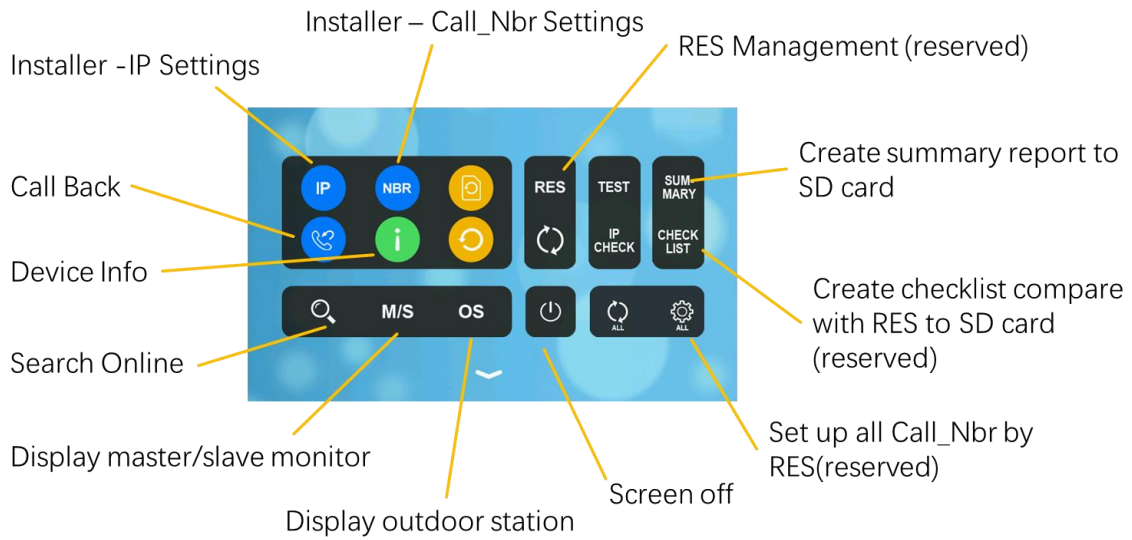When DPC-IP850 in installer mode, tap "top left corner" as below, into installer shortcut menu

Installer shortcut menu as below:

h. DPM-IP71TM Installer Shortcut Menu

Tap "Settings" -> "Installer" -> input installer password if required -> **"Onsite tools" ->** input password (66666666 by default), you will see as below:

Also, after, in the main menu press "UNLOCK" key, you will see also this menu.

Installer – Call_Nbr Settings

RES Management (reserved)

Installer -IP Settings

Create summary report to SD card

Call Back

Device Info

Create checklist compare with RES to SD card (reserved)

Search Online

Set up all Call_Nbr by RES(reserved)

Display master/slave monitor
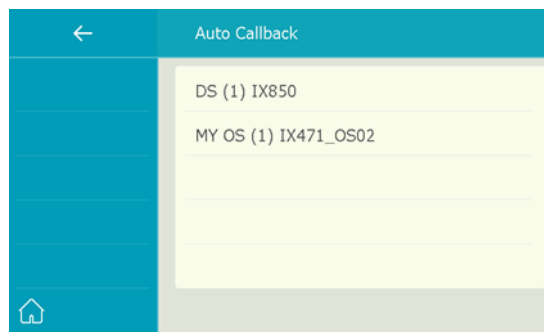
Screen off

Display outdoor station

i. Auto Call Back

When monitor in standby and in main menu, press and hold "Unlock Key" for 5s, door station will start a calling to this monitor.
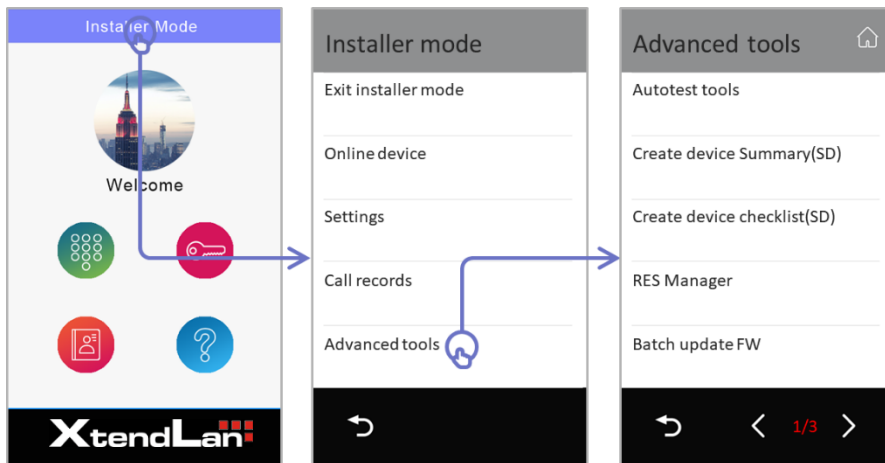

If there are more than 1 door station available to call back to this monitor, after 5s pressing of unlock button monitor will display as below:

Tap door station in the list to start a simulate calling.

4.2 Advance Installer Tool

When door station in installer as below, in installer men -> tap "Advanced tools"

a. Autotest tools

Calling reliability test, to make a series of calling to test the system
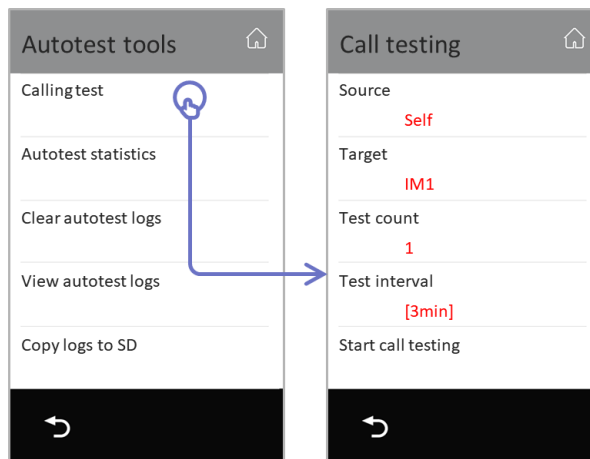
Source:

Select calling door station in this testing.

Target:

Select called monitor in this testing.

Test count:

Counts for door station calling to monitor

Test interval:

Interval time between two callings

Start call testing:

Apply all settings and start a call testing.

Other items in "Autotest tools"

Autotest statistics:
   List statistic of all testing done before.
Clean autotest logs:
   Clean all testing data and logs done before.
View autotest logs:
   Check all test logs.
Copy logs to SD:
   Copy all logs to SD card.

b. Create device summary (SD)

Tap to create all online device R8001 RES file to SD card.
R8001 RES file, is a .CSV file that list all devices' address settings and IP settings.

c. Create device checklist (SD)

If there is R8001 devices' list already upload to door station, tap this door station will check all devices to see if it is reachable and create a device checklist.
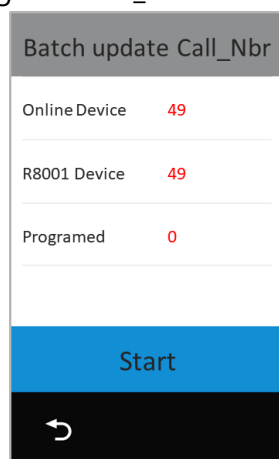
d. RES Manager

Backup, restore and sync RES file.

e. Batch update FW

Enforce all online monitor to update firmware from server.

f. Batch update Call_Nbr

Update all Call_Nbr according to Room_ADDR in RES file – R8001.

Online Device:
   Current online device quantity.
R8001 Device:
   Device quantity in RES file – R8001 (Device list).

Programmed:
    Device quantity which is programmed by RES file update.

g. Batch device reboot

Enforce all online device to reboot

h. Batch change installer PWD

Change online device's installer password, only device with the same password as door station will be changed. (By default, is 66666666)

i. Batch update parameter

Update all Call_Nbr according to Room_ADDR in RES file – R8001.

4.3 Virtual User

Virtual user is monitor without physical device, but sign with a ROOM_Addr, and calling to virtual user will calls to mobile APP.
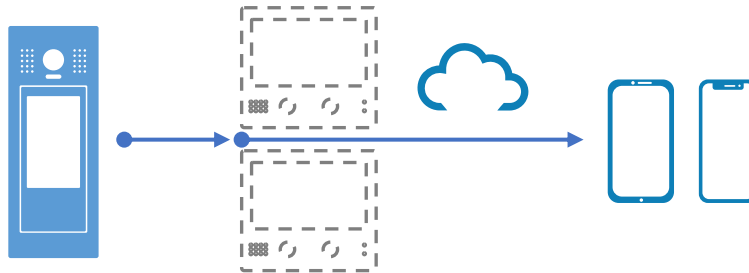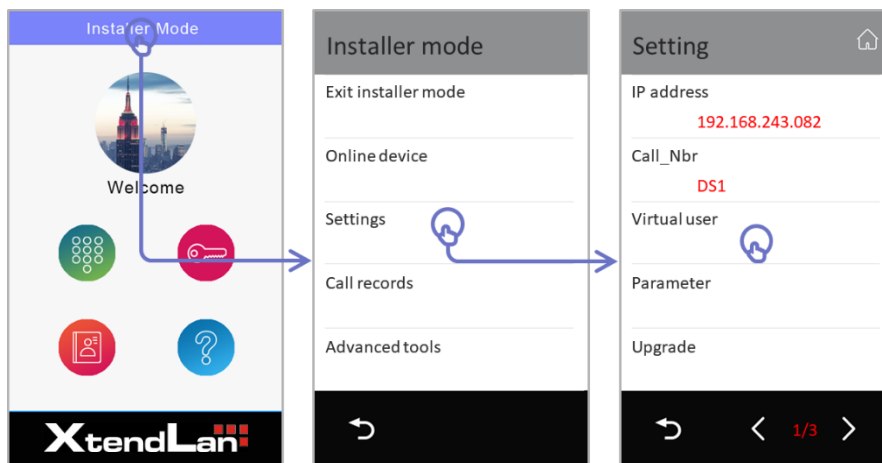

Only on "DS1" of each building and connect with internet could manage "virtual user".
Only door station with virtual user data could call to virtual users.
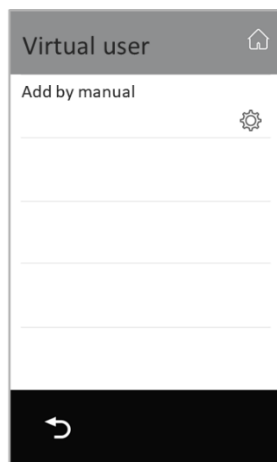
Into "Virtual user" setup menu:
When door station DPC-IP850 in "Installer Mode"
Tap "Middle of top blue bar" -> "Settings" -> "Virtual user", as below:

Virtual user menu as below:

a. Add and Delete Virtual User

Add

In "Virtual user", tap "Add by manual"
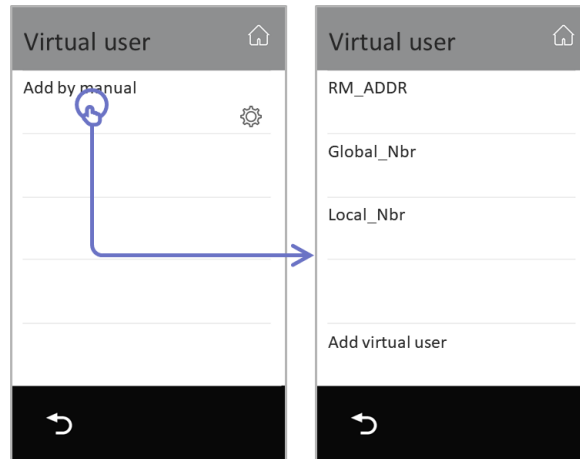
RM_ADDR:
     As virtual user, it is same with monitor, input 4 digits room number. (If room number conflict with monitor, virtual user will not be vailed)

Global_Nbr:
     Global_Nbr for this virtual user.

Local_Nbr:
     Local_Nbr for this virtual user.

Add virtual user:
     Apply all inputs.

Delete

In "Virtual user", tap "Delete icon" to delete a select icon.

b. Manage a Virtual User

Tap "virtual user" in the list needed to manage:

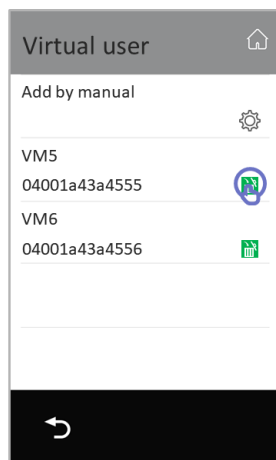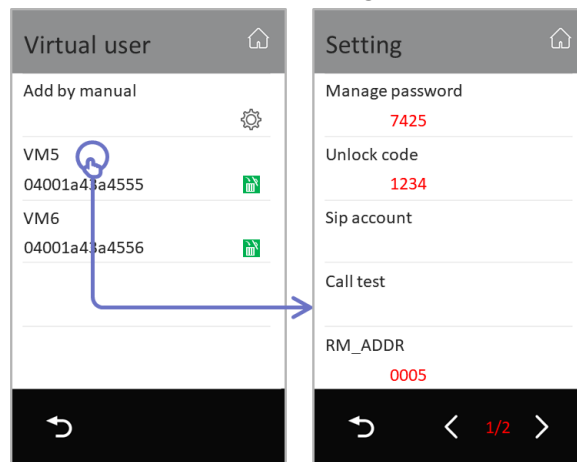| Virtual user	Setting
Add by manual	Manage password
	7425
VM5	Unlock code
04001a43a4555	1234
VM6	Sip account
04001a43a4556	Call test
	RM_ADDR
	0005
	1/2

Manage settings as below:

Manage password:

4 digits as unlock code, input "Call_Nbr + Manage password" for end user into his "Manage settings menu"

Unlock code:

Unlock code for this virtual user.

Sip account:

Show "QR code" for this virtual user's APP registration.

Call test:

Tap to call to APP.

RM_ADDR:

Current virtual user's RM_ADDR.

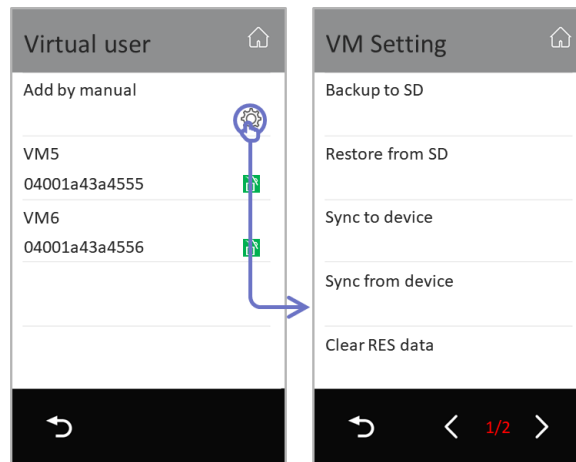Global_Nbr:

Global_Nbr for this virtual user.

Local_Nbr:

Local_Nbr for this virtual user.

Name:

Name for this virtual user.

c. Virtual user data maintenance

Tap "Setting icon" beside "Add by manual" to maintain virtual user data

Backup to SD:

  Backup "virtual user" data to SD card.

Restore from SD:

  Restore "virtual user" data from SD card.

Sync to device:

  Sync to "virtual user" data to other door stations. Only door station with virtual user data could call to virtual users

Sync from device:

  Sync "virtual user" data from another door station.
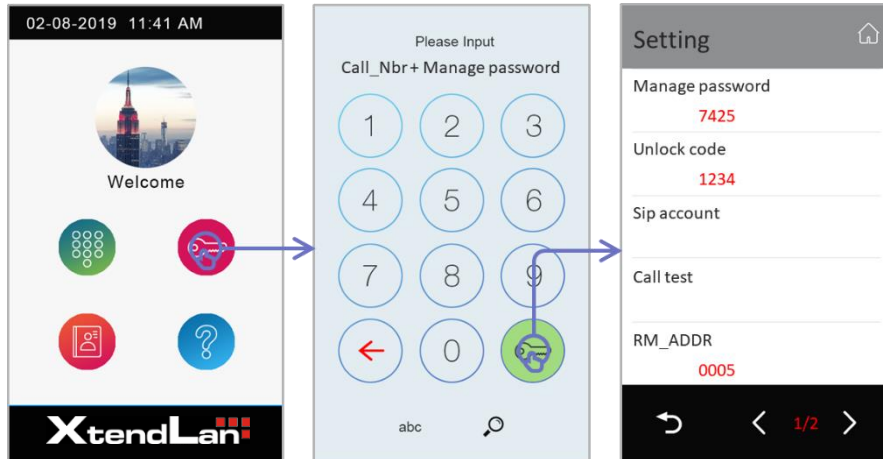
Clear RES data:

  Clear all virtual user data.

Create VM from RES:

  Create virtual user data from RES database file.

d. Daily operation for user

End user manage menu

Input virtual user's Call_Nbr + Manage password, (input way same as unlock code)

Tap "Sip account" to show QR Code for end user.

Calling

Calling to virtual user just as normal monitor, calling by:
>
> **Room address**
> **Global_Nbr**
> **Local_Nbr**

Only door station with virtual user data could call to virtual users

Unlock

Same as monitor.
By private unlock code
Call_Nbr + unlock code
By access card
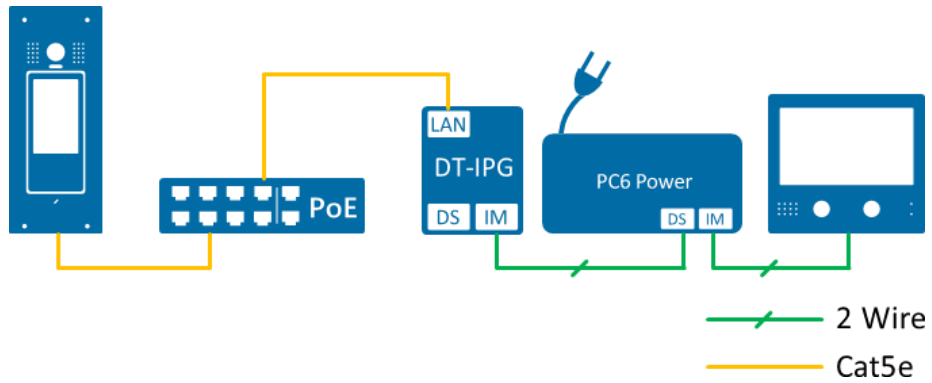Add access card by door station to this virtual user as monitor. And swap card to unlock.

4.4 2-Wire system compatibility

DPC-IP850 could call to 2-Wire monitor via IPG module.

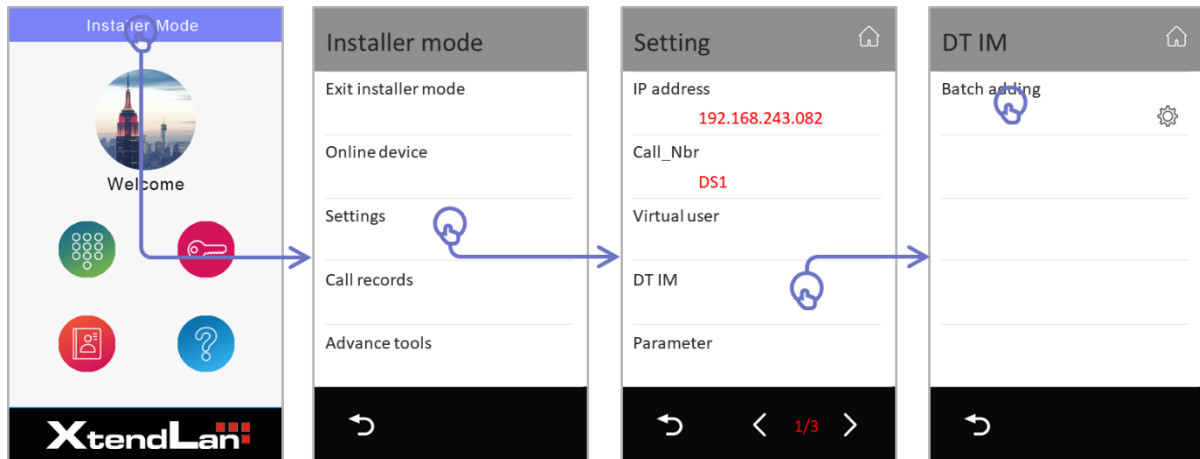Connect IPG to same network as DPC-IP850 as below:

Due to IPG's IP is 192.168.243.1~192.168.243.63 (Depends on DIP switch or settings by DX_Builder) and Mask as "255.255.255.0", please make sure DPC-IP850 IP in same subnetwork.

a. Add and Delete DT (2-wire) monitor list.

Add

When "DPC-IP850" in installer mode, tap middle on the top blue bar -> "Settings" -> "DT IM" -> "Batch adding"

Adding menu as below:
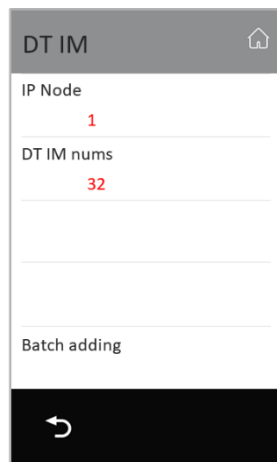
      IP Node:

            IPG's IP Node (normally is the DIP switch value, or setup by DX_Builder)

      DT IM nums:

            2 wire monitors connected on IPG

All 2 wire monitors' Room_ADDR in DPC-IP850 will be 88XX. (Example 8801/8832), after manual adding for first IPG, next adding Room_ADDR will from 8833 (each new adding of IP Node will extend 32 addresses)

If requires particular Room_ADDR please set via RES database configure files.

Delete

In "DT IM", tap "Delete icon" to delete a select DT monitor
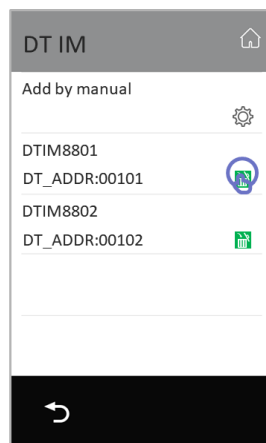
b. **Manage DT IM monitor**

Tap "virtual user" in the list needed to manage:
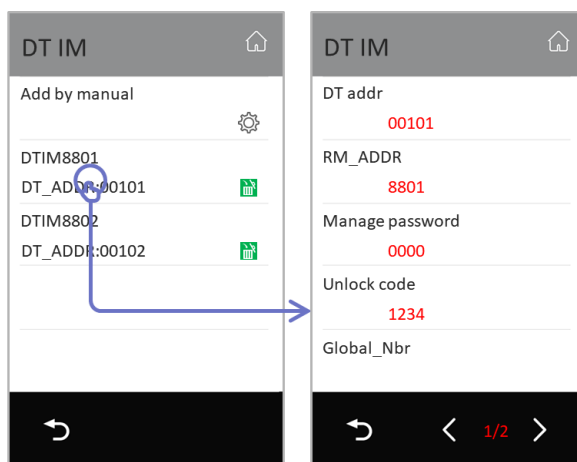
Manage settings as below:

DT addr:

Current DT monitor address in 2 wire system. First 3 digits means IP_Node, last 2 digits means 2 wire monitor address. (00101 means monitor01 which on IPG001)

RM_ADDR:

Current 2 Wire monitor address transfer in Room_ADDR in DPC-IP850 calling system.

Manage password:

4 digits as unlock code, input "Call_Nbr + Manage password" for end user into his "Manage settings menu"

Unlock code:

Unlock code for this 2-wire monitor.

Global_Nbr:

Global_Nbr for this 2-wire monitor.

Local_Nbr:

Local_Nbr for this 2-wire monitor.

Name:

Display name for this 2-wire monitor.

c. DT 2-wire IM data maintenance

Tap "Setting icon" beside "Batch adding" to maintain DT IM data
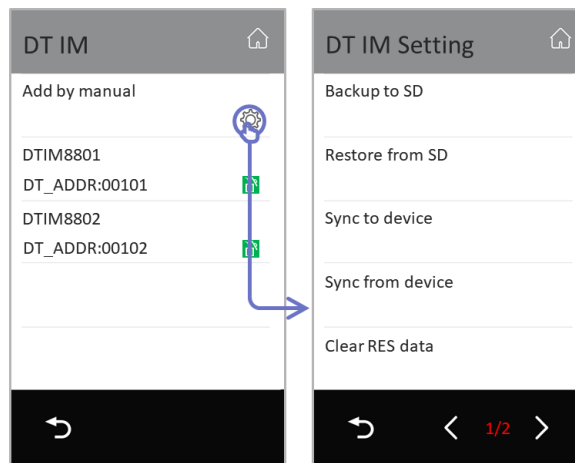
Backup to SD:
> Backup "DT IM" data to SD card.

Restore from SD:
> Restore "DT IM" data from SD card.

Sync to device:
> Sync to "DT IM" data to other door stations. Only door station with virtual user data could call to virtual users

Sync from device:
> Sync "DT IM" data from another door station.

Clear RES data:
> Clear all virtual user data.

Create VM from RES:
> Create virtual user data from RES database file.

d. Daily operation for user

Calling

Calling to virtual user just as normal monitor, calling by:

        Room address
        Global_Nbr
        Local_Nbr

Only door station with virtual user data could call to virtual users

Unlock

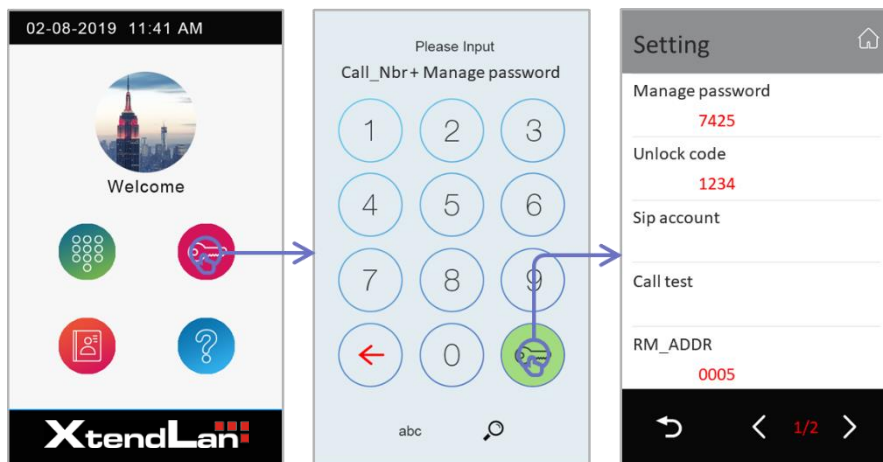Same as monitor.
By private unlock code
Call_Nbr + unlock code
By access card
Add access card by door station to this virtual user as monitor. And swap card to unlock.

End user manage menu

Input virtual user's Call_Nbr + Manage password, (input way same as unlock code)

5. Terminology and Specification

5.1 Device type and abbreviations

Building Door Station (**BDS**)
Doors stations only works for one building.

Indoor Monitor (**IM**)
Indoor monitors inside building

Guard Unit (**GL**)
Guard unit call all monitors or be called

Out Door Station (**OS**)
Door station belong to each room, as slave device of master monitor.

Common Door Station (**CDS**)
Door stations could Call to all buildings.

Emergence Station (**ES**)

As below:
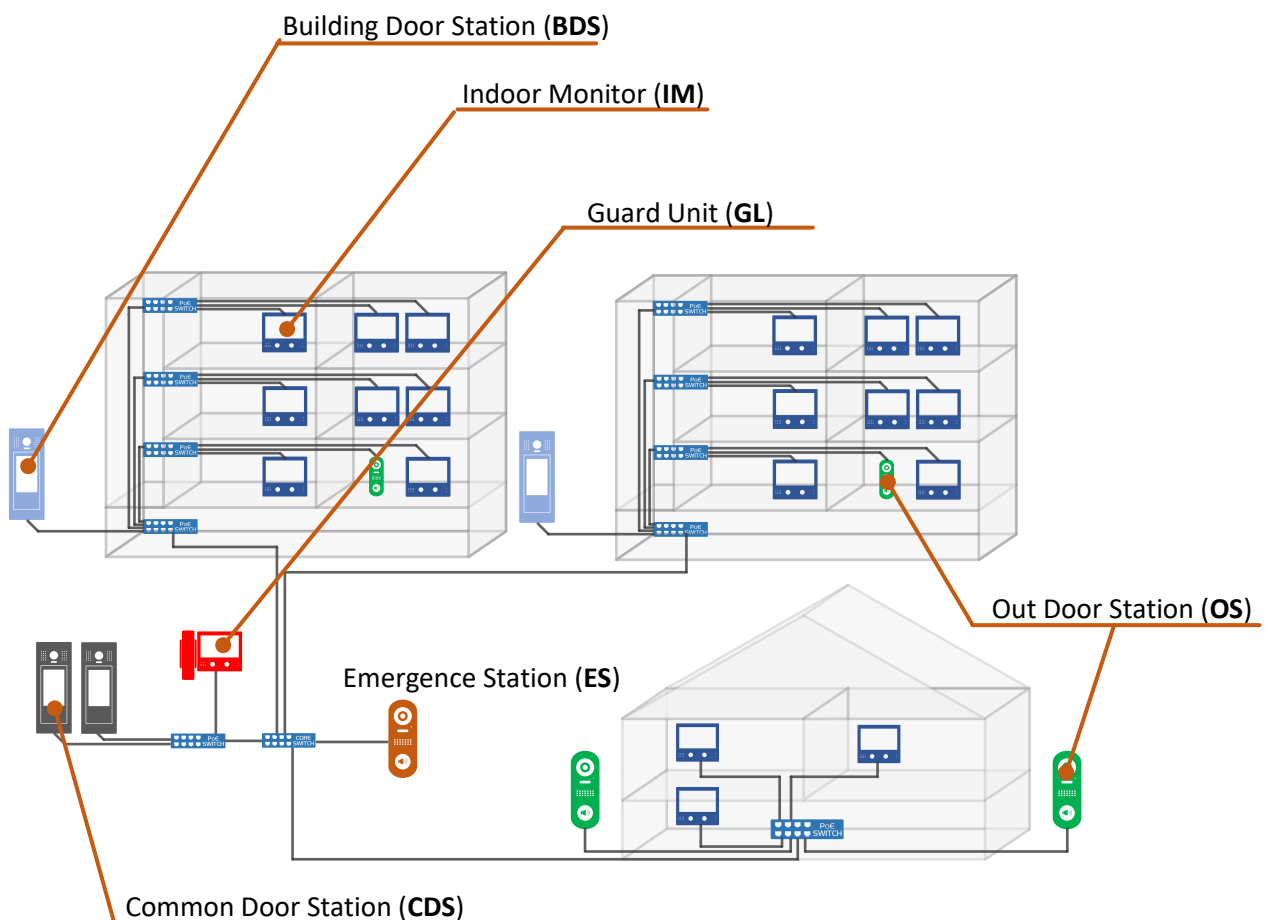
5.2 System Type

Villa system for single family **(VS)**
Single villa intercom, for only one room/ family.

Standalone apartment system **(SS)**
Standalone building, no other buildings, monitor all in same building

Networked system **(NS)**
Multi buildings or blocks, complex intercom.

As below:

Villa system for single family (**VS**)

Standalone apartment system (**SS**)

Networked system (**NS**)

5.3 Basic network topology and wiring

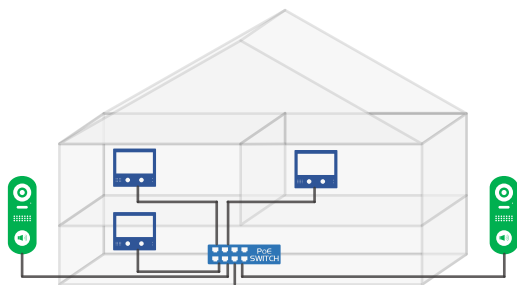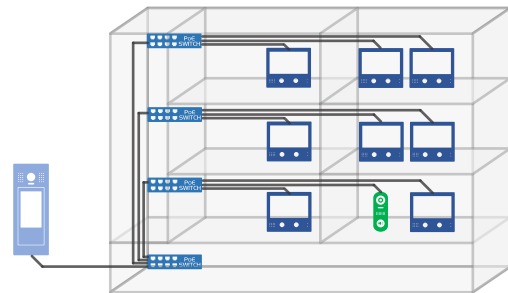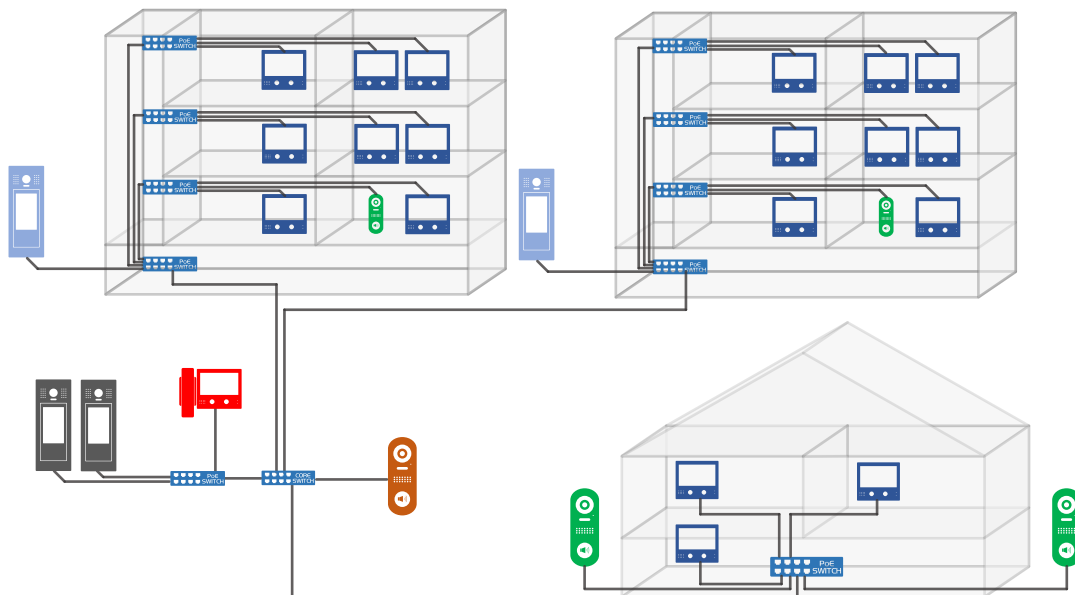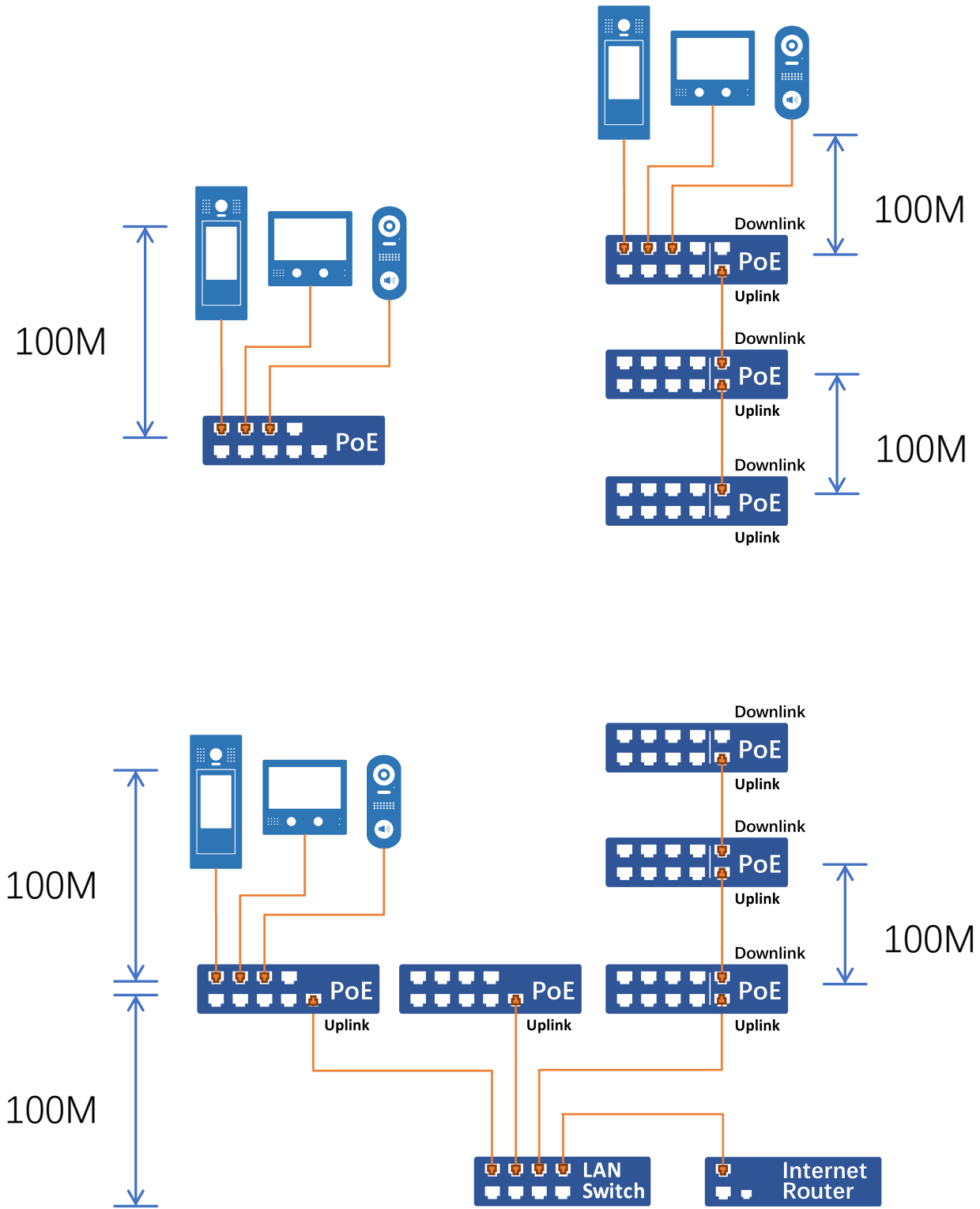## 5.4 Capacity and Network Device Limits

a. Capacity

Villa system for single family (VS)

Master Monitor:	1, IM (1)
Slave Monitor:	31, IM (2~31)
Outdoor Stations:	32, OS (1~32)

Standalone apartment system (SS)

Door Stations:	48, DS (1~48)
Guard Units:	48, GL (1~48)
Monitor Users:	9800 addressable numbers, IM (1~9800)
Virtual Users:	Max. 1000
External Units:	same as VS system type

Networked system (NS)

Common Door Stations:	MAX.48, CDS (1~48)
Common Guard Units	MAX.48, CGL (1~48)
Building interconnected	1999 (addressable numbers 1~1999)

b. Physical Network structure limited

1. System with simple Layer-2 Switch

   Total Device less than 128pcs
   Not require switch VLAN enable, intercom all available.

   Total Device from 129~512
   Enable switch VLAN(4port), Intercom among monitors will be disable.

   Total Device from 513~1024
   Enable switch VLAN(8port), Intercom among monitors will be disable.

2. By using 3-Layer Router and VLAN

   Device Total in Each VLAN (VLAN on Layer-3 switch): Max. 128

   Device Total：Max. 32,512 (VLAN < 254)
   Layer-3 Router/Switch must be used as core switcher, intercom all available.

5.5 Network device requirements

a. Network Requirements Summary

A network design can be as simple as a single PoE switch or as complicated as utilizing multiple switches, depends on system capacity and locations.
Multicasts are capable of being routed, but are not routed by default on any typical Layer 3 switch or router. Multicast packets can be routed using PIM (Protocol Independent Multicast).

1. POE switch requirement:
Class 0 PoE connection is required

UP link port、VLAN option (depends on network structure)

2. Cable requirement:
Qualified Cat5E / Cat6, all copper wires
Each cable length should be less than 100m

6.1 Ports Using in XtendLan IP system

As below internet port are using in 2Easy_IP system, please make sure those ports are open and not been block by network firewall.

Protocol	Ports	Notes
DHCP	68	DHCP client
DNS	53	DNS for email domain name lookup
HTTP	80	CGI commands (SIF/CGI protocol)
HTTPS	443	Embeded Web server
NTP	123	Network time
RTCP	20000 - 30000	Audio and Video
RTP	20000 - 30000	Audio and Video
RTSP	10080	
SIP	5060	Default SIP port
TCP	8840~8849	System FW and resource remote upgrade
UDP	25000~25009, 28000~28100	System general communication

6. Specifications

PoE Switch

Power Source   Power-over-Ethernet (IEEE 802.3af Class 0)
LAN Interface   10 BASE-T / 100 BASE-TX Ethernet (RJ-45)
Network Protocols   TCP, UDP, SIP, DHCP, AUTOIP, TFTP, RTSP, RTP, RTCP, IGMP, MLD, NTP, DNS
Media codec   Audio, G.711; Video, H.264
Bandwidth Usage   Audio,128Kbps; Video, 24Kbps ~ 8,192Kbps
Communication   Hands-free
Wire Type   Cat-5e or Cat-6
Wiring Distance   100m (Approx. 330')
Operating temperature -10 to +50 (oC)

DPC-IP610/DPC-IP850: DC7121

Camera   Type 1/3.7" Ultra Sense, ISP with 77dB WDR
Len angle   170 degree with Fisheye correction
Minimum illumination 5 lux

DPC-IP610/DPC-IP850: NT99141

Camera   Type 1/4" CMOS
Len angle   90 degree
Minimum illumination 8 lux

TFT Screen

TFT Screen (DPM-IP71TM)   7 inch, 800*480 resolution
TFT Screen (IX439)   4.3 inch, 480*272 resolution
TFT Screen (DPC-IP850)   5 inch, 480*800 resolution

All door stations

Ingress Protection   IP65
Impact Protection IK08