

Dahua Video Intercom Integration Guide

Yeastar P-Series Appliance Edition

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Integrate Yeastar P-Series PBX System with Dahua Video Intercom Devices

This integration guide introduces how to achieve communication between Dahua Outdoor Station and Indoor Monitor, and provides guidance on forwarding Outdoor Station calls to Linkus clients or an external number. By configuring Dahua video intercom devices, you can use Dahua video intercom devices to make and receive phone calls, thus implementing door access control more easily.

Targets

Follow the steps listed below to achieve the targets:

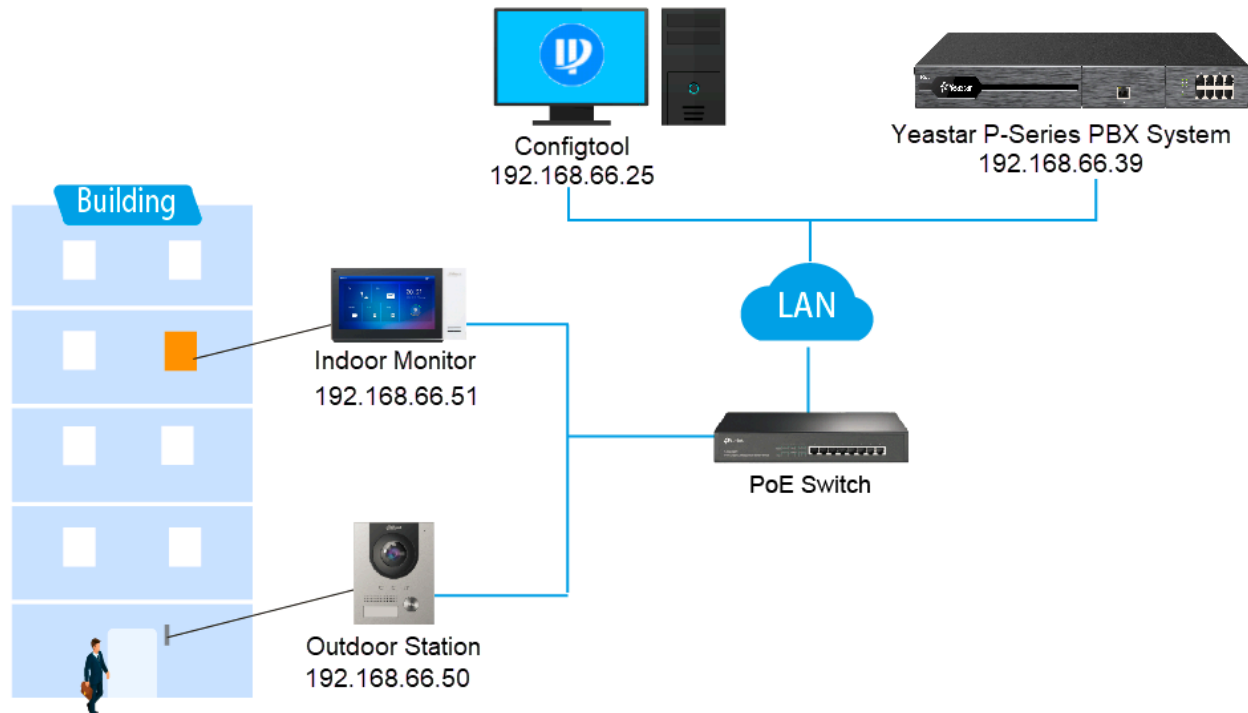
- [Activate Dahua Video Intercom Devices using Configtool](#)
- [Register Dahua VTH Indoor Monitor to Yeastar P-Series PBX System](#)
- [Register Dahua VTO Outdoor Station to Yeastar P-Series PBX System](#)
- [Set up Communication between Dahua Outdoor Station and Indoor Monitor](#)
- [Receive Calls and Open the Door via Linkus Clients](#)
- [Forward VTO Outdoor Station Calls to an External Number](#)

Test environment

In this guide, the Dahua video intercom devices and Yeastar P-Series PBX System are in the same local network. Check the test environment in the following table.

Device	Firmware Version	IP Address
Yeastar P570	37.5.0.33	192.168.66.39
Dahua Configtool	V5.000.0000001.8	192.168.66.25
DHI-VTO2201F-P (Dahua IP Villa Outdoor Station)	V4.500.9992000.0.R	192.168.66.50
DHI-VTH2421FW (Dahua IP Color Indoor Monitor)	V4.500.9992001.0.R	192.168.66.51

The following figure is a schematic of device network connection.



Highlights

By registering the Dahua video intercom devices with Yeastar P-Series PBX System, you can achieve the following features:

- **Conduct real-time video communication with the visitor**

In addition to audio communication, the Outdoor Station can conduct video communication with various endpoints.

- Indoor Monitor
- Linkus Web Client
- Video IP phone

- **Simultaneous ringing and flexible access control with different endpoints**

You can configure the **Ring Strategy** feature to make the Outdoor Station calls be sent to Yeastar Linkus clients or other extension endpoints simultaneously. In this way, you can answer and open the door via Linkus clients or other extension endpoints at hand, no matter you are in the office or on the road.

- **Auto-forward visitor calls to an external number without missing any calls**

If you don't want to miss any calls when absent, you can configure the **Call Forwarding** feature, by which the calls will be forwarded to an external number. In this way, remote access control can be easily implemented.

Activate Dahua Video Intercom Devices using Configtool

The Dahua Configtool provides a central and versatile way to manage Dahua devices, including device initialization, device IP modification, parameter configuration and other features, which streamlines the process of the device configuration and management.

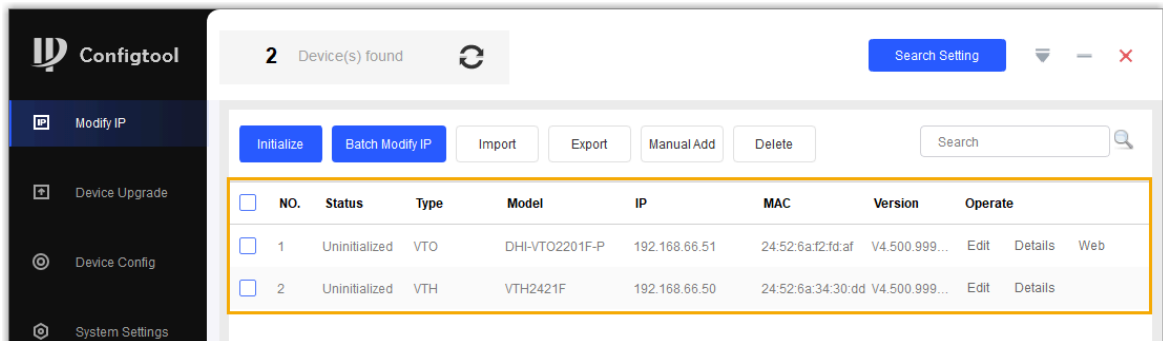
Prerequisites

- You need to download [Configtool](#) and install it on your PC.
- The Dahua video intercom devices are connected to the same LAN as the PC running the Configtool application, or the devices would not be detected.

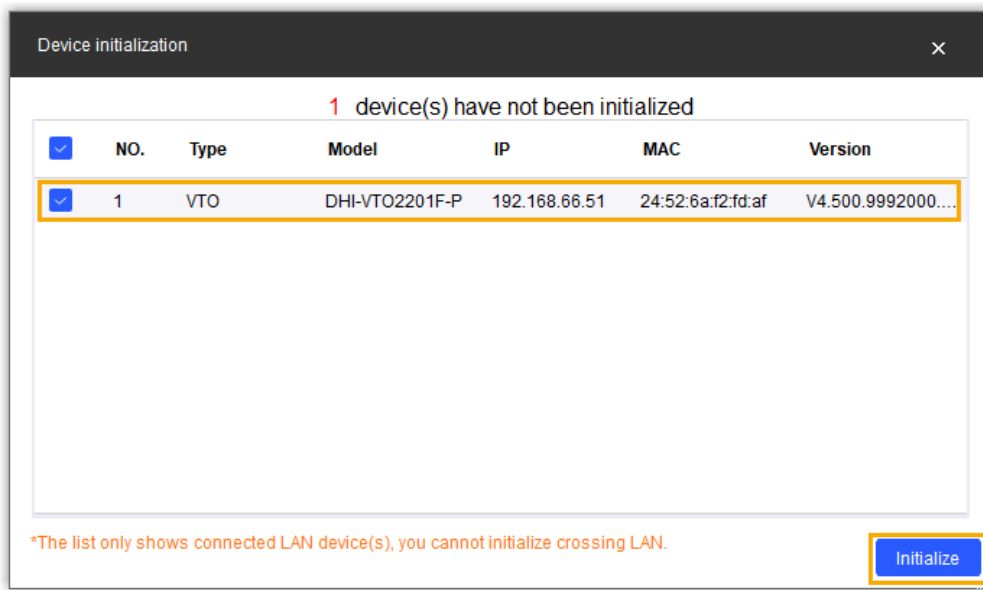
Activate VTO Outdoor Station using Configtool

1. Run the Configtool application, click  on the top of the window to search for devices.

Dahua devices that are connected to the same LAN will be detected and displayed in the device list.



2. In the device list, select the checkbox of an uninitialized VTO device, click **Initialize**.
3. In the **Device initialization** pop-up window, click **Initialize** to initialize the VTO device.



4. Set credentials for the VTO device.

Device initialization

1 device(s) have not been initialized

Username: admin

New Password: [masked]

Weak Medium Strong

Confirm Password: [masked]

Use a password that has 8 to 32 characters, it can be a combination of letter(s), number(s) and symbol(s) with at least two kinds of them. (excluding single quote('), double quote("), colon(:), semicolon(;), connection symbol(&))

☒ Email Address: eve****ong@yeastar.com (for password reset)

*After you have set new password, please set password again in "Search Setting".

Next

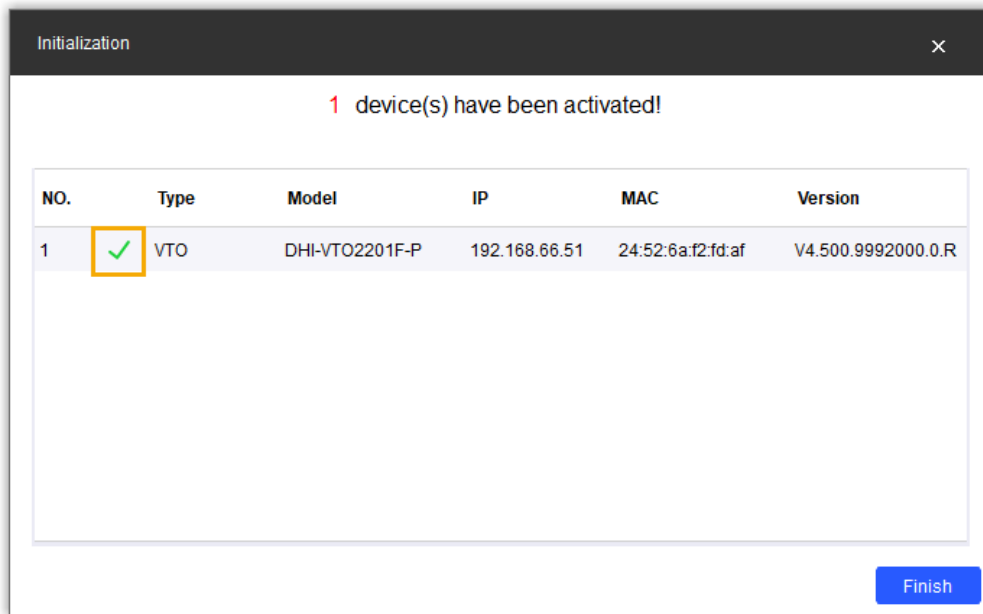
- **Username:** The default user name is *admin* and can not be modified.
- **New Password:** Set a password for the device.
The bar below shows password strength.
- **Confirm Password:** Enter the password again for confirmation.
- **Email Address:** Enter an email address.

**Note:**

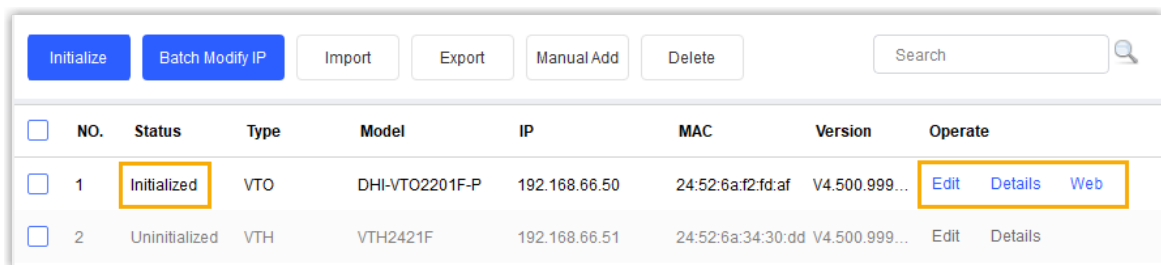
This email address can be used to reset the password if forgotten or lost.

5. Click **Next**.


A green check mark is displayed, indicating that the device is successfully initialized.

6. Click **Finish** to finish the initialization.

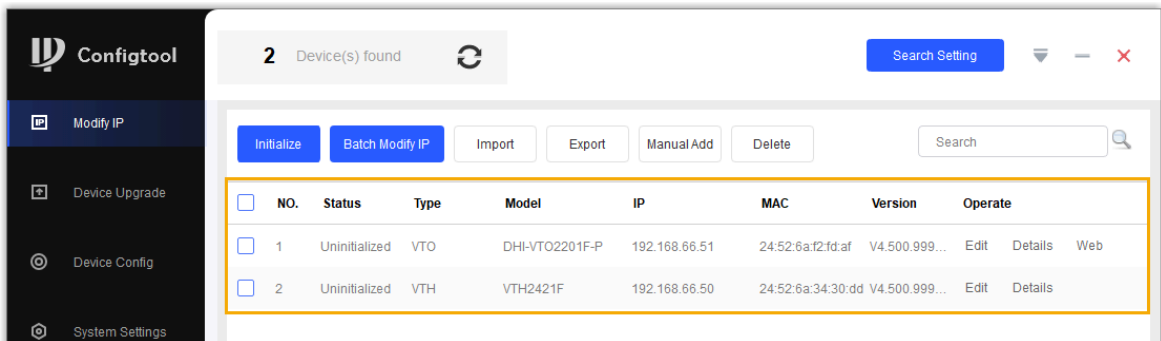
The **Status** of the VTO device displays "Initialized", and the operation options are available now.



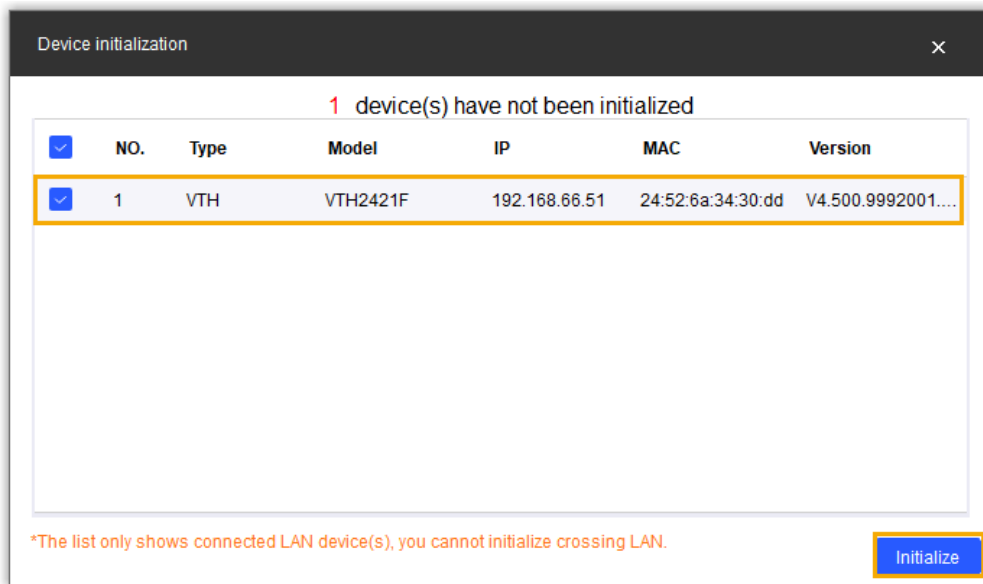
Activate VTH Indoor Monitor using Configtool

1. Run the Configtool application, click  on the top of the window to search for devices.

Dahua devices that are connected to the same LAN will be detected and displayed in the device list.



2. In the device list, select the checkbox of an uninitialized VTH device, click **Initialize**.
3. In the **Device initialization** pop-up window, click **Initialize** to initialize the VTH device.



4. Set credentials for the VTH device.

Device initialization

1 device(s) have not been initialized

Username: admin

New Password: [masked] Weak Medium Strong

Confirm Password: [masked]

Please input 6 bytes from numbers.

☒ Email Address: eve****ong@yeastar.com (for password reset)

*After you have set new password, please set password again in "Search Setting".

Next

- **Username:** The default user name is *admin* and can not be modified.
- **New Password:** Set a password for the device.

**Note:**

The VTH device only supports numeric password.

The bar below shows password strength.

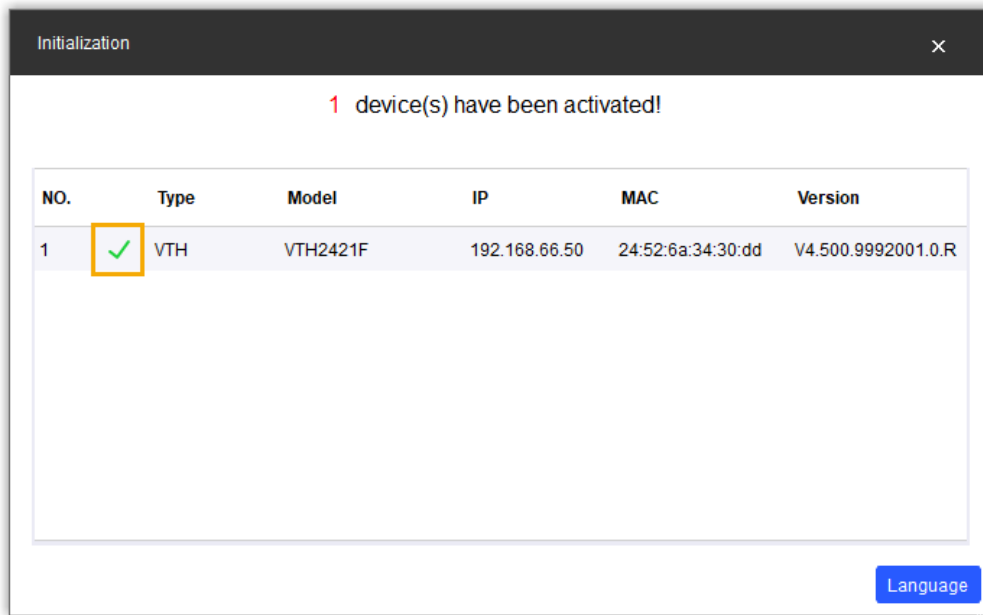
- **Confirm Password:** Enter the password again for confirmation.
- **Email Address:** Enter an email address.

**Note:**

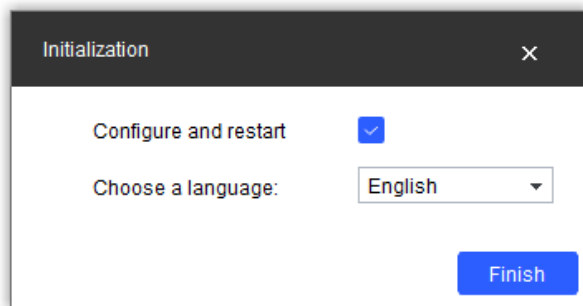
This email address can be used to reset the password if forgotten or lost.

5. Click **Next**.

A green check mark is displayed, indicating that the device is successfully initialized.



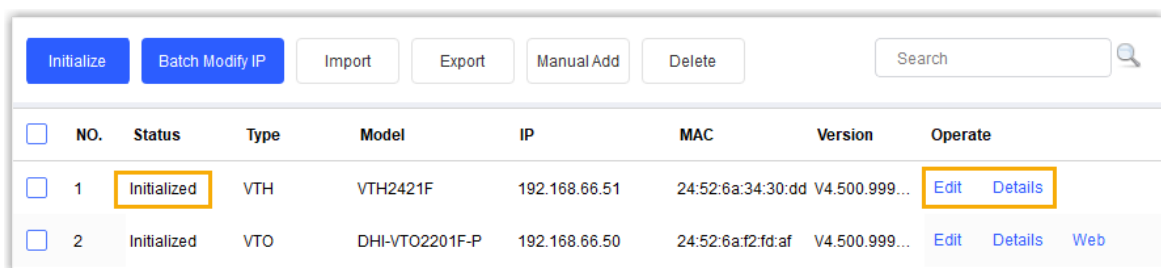
6. Click **Language** to set up the display language of the Indoor Monitor panel.



- Select the checkbox of **Configure and restart**.
- In the drop-down list, choose your desired language.
- Click **Finish** to finish the initialization.

The VTH Indoor Monitor is restarted.

The **Status** of the VTH device displays "Initialized", and the operation options are available now.



Modify device IP address

If the IP address of the initialized device is different with the current network segment of PC, you need to change their IP addresses to be in the same segment, or you could not edit the device via Configtool .

1. On the Configtool application, go to **Modify IP**.
2. Click **Search Setting**, enter the credentials of the device to be configured.

- a. In the **Username** field, enter the user name of the device.
- b. In the **Password** field, enter the password of the device.
- c. Retain other settings.
- d. Click **OK**.

The device list is refreshed automatically.

3. Click **Edit** at the **Operate** column of the desired device.
4. In the **Modify IP address** pop-up window, select the network mode according to your need.



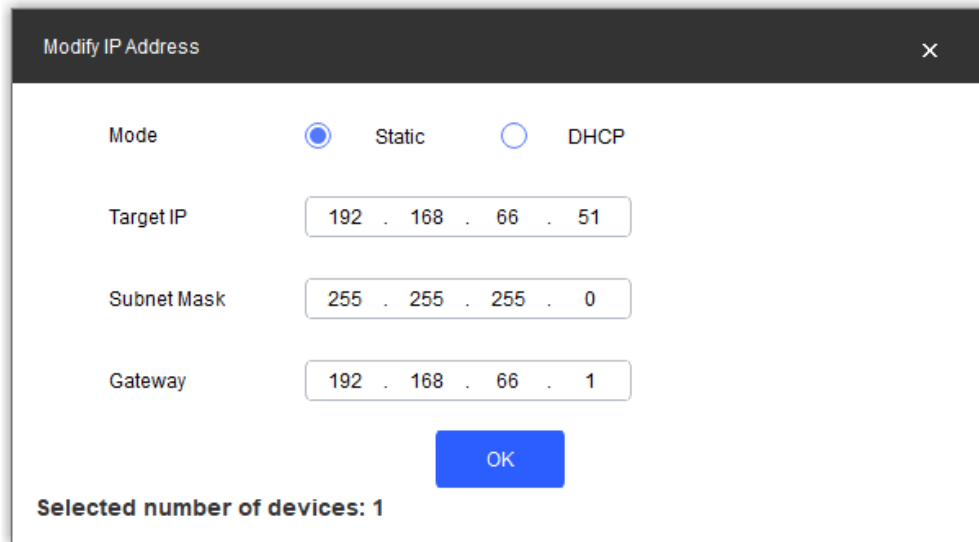
Note:

VTO device only supports **Static** mode.

- If **DHCP** mode is selected, click **OK** directly.

An IP address of the current segment will be assigned to the device automatically.

- If **Static** mode is selected, set up the following network parameters manually.

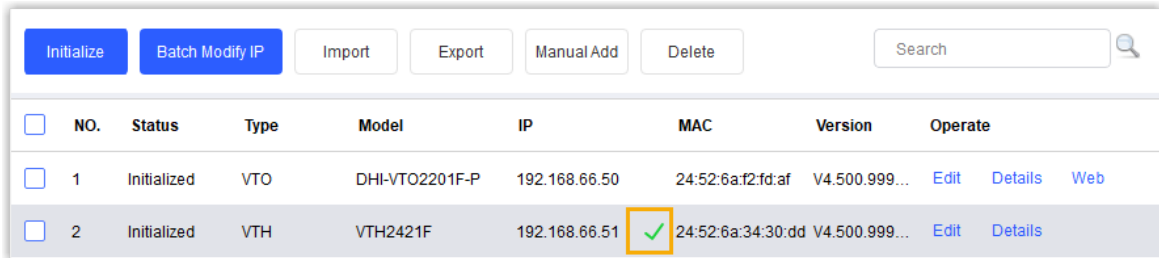


The 'Modify IP Address' dialog box shows the configuration for a device. The 'Mode' is set to 'Static'. The 'Target IP' is 192.168.66.51, the 'Subnet Mask' is 255.255.255.0, and the 'Gateway' is 192.168.66.1. An 'OK' button is at the bottom right. At the bottom left, it says 'Selected number of devices: 1'.

- **Target IP:** Enter an available IP address of the current segment.
- **Subnet Mask:** Enter the subnet mask.
- **Gateway:** Enter the gateway.

5. Click **OK**.

A green check mark is displayed, indicating that the IP address is successfully modified.



<input type="checkbox"/>	NO.	Status	Type	Model	IP	MAC	Version	Operate
<input type="checkbox"/>	1	Initialized	VTO	DHI-VTO2201F-P	192.168.66.50	24:52:6a:f2:fd:af	V4.500.999...	Edit Details Web
<input type="checkbox"/>	2	Initialized	VTH	VTH2421F	192.168.66.51	24:52:6a:34:30:dd	V4.500.999...	Edit Details

6. Click  to refresh the device list.

The new IP address is displayed in the list.

What to do next

[Register Dahua VTH Indoor Monitor to Yeastar P-Series PBX System](#)

[Register Dahua VTO Outdoor Station to Yeastar P-Series PBX System](#)

[Set up Communication between Dahua Outdoor Station and Indoor Monitor](#)

Register Dahua VTH Indoor Monitor to Yeastar P-Series PBX System

This topic describes how to register Dahua VTH Indoor Monitor to Yeastar P-Series PBX System.

Prerequisites

Before you start, make sure the Indoor Monitor has been activated.

For more information, see [Activate VTH Indoor Monitor using Configtool](#).

Procedure

[Step1. Create an extension for VTH Indoor Monitor](#)

[Step2. Register the VTH Indoor Monitor to the PBX](#)

Step1. Create an extension for VTH Indoor Monitor

1. Log in to PBX web portal, go to **Extension and Trunk > Extension**, click **Add** to add a new extension.
2. In the **Extension Type**, select **SIP Extension**.
3. Change the user information and extension information, or leave the default settings.






Note:

The length of the SIP extension registration password MUST be between 8-15 characters.

In this example, add a SIP extension 1051 for Dahua VTH indoor monitor.

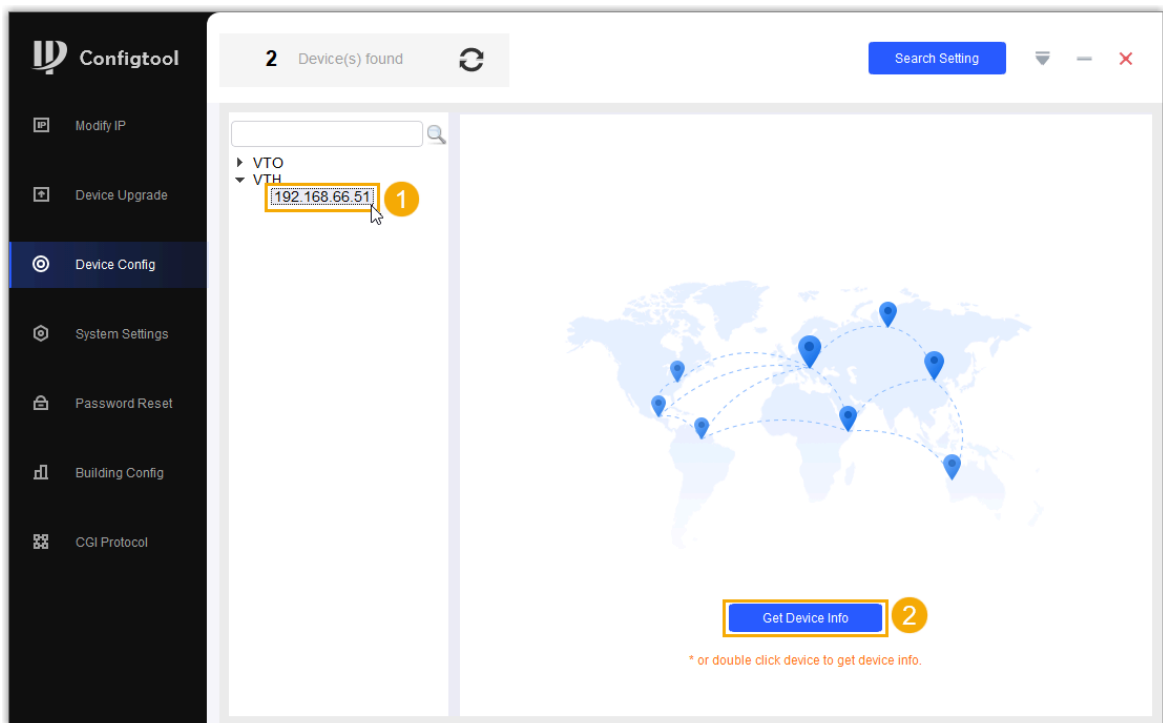
Extension Information

* Extension Number	* Caller ID
<input type="text" value="1051"/>	<input type="text" value="1051"/>
* Registration Name	* Registration Password
<input type="text" value="1051"/>	<input type="password" value="....."/>   

4. Click **Save** and **Apply**.

Step2. Register the VTH Indoor Monitor to the PBX

1. On the Configtool application, go to **Device Config**.
2. Select the IP address of the desired VTH Indoor Monitor, and click **Get Device Info**.



3. In the **Login** pop-up window, enter the device credentials, and click **OK**.

The VTH device settings are shown in the Configtool application.

4. In the **Local Info** section, complete the following settings.

- a. In the **Room** field, enter the extension number of the VTH Indoor Monitor.

b. In the VTH drop-down list, select **Main VTH**.

The user name and password of the main VTH device are filled in automatically.

5. In the **SIP Server** section, enter the following required information.


- **Sip Server IP:** Enter the IP address of the PBX. In this example, enter 192.168.66.39.
- **Sip Server Port:** Enter the SIP registration port of the PBX. In this example, enter 5060.
- **Sip Register Pwd:** Enter the registration password of the VTH extension.
- **Initiale Mode:** Select the check box of this option.

6. Click **OK**.

A notice prompts that the configuration is successful.

7. Click **OK** to finish the setting.

Result

Check the extension status in the PBX web portal, the endpoint icon of the VTH extension displays  in the **Online Status** column.

Register Dahua VTO Outdoor Station to Yeastar P-Series PBX System

This topic describes how to register Dahua VTO Outdoor Station to Yeastar P-Series PBX System.

Prerequisites

Before you start, make sure the Outdoor Station has been activated.

For more information, see [Activate VTO Outdoor Station using Configtool](#).

Procedure

[Step1. Create an extension for VTO Outdoor Station](#)

[Step2. Register the VTO Outdoor Station to the PBX](#)

Step1. Create an extension for VTO Outdoor Station

1. Log in to PBX web portal, go to **Extension and Trunk > Extension**, click **Add** to add a new extension.
2. In the **Extension Type**, select **SIP Extension**.
3. Change the user information and extension information, or leave the default settings.






Note:

The length of the SIP extension registration password MUST be between 8-15 characters.

In this example, add a SIP extension 1050 for Dahua VTO Outdoor Station.

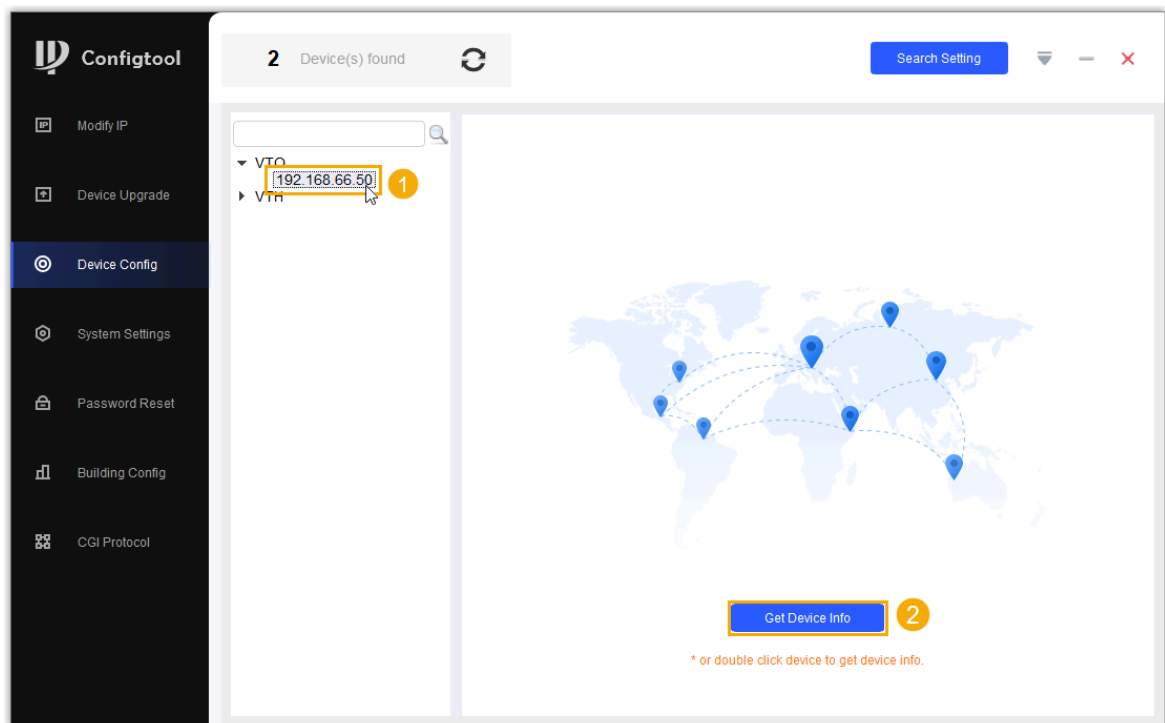
Extension Information

* Extension Number	* Caller ID
<input type="text" value="1050"/>	<input type="text" value="1050"/>
* Registration Name	* Registration Password
<input type="text" value="1050"/>	<input type="password" value="....."/>   

4. Click **Save** and **Apply**.

Step2. Register the VTO Outdoor Station to the PBX

1. On the Configtool application, go to **Device Config**.
2. Select the IP address of the desired VTO Outdoor Station, and click **Get Device Info**.



3. In the **Login** pop-up window, enter the device credentials, and click **OK**.

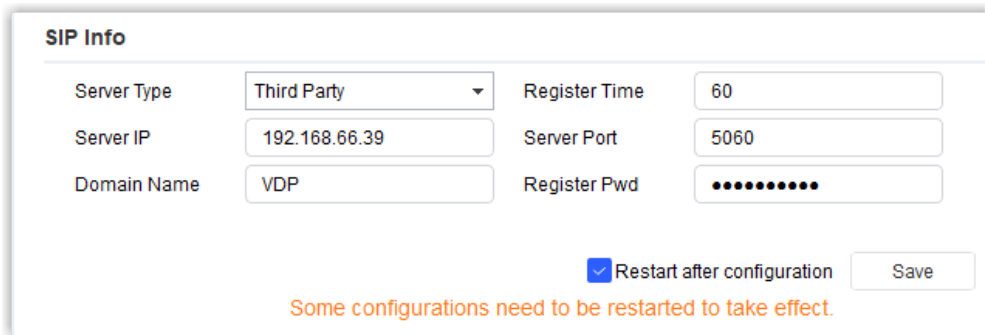
The VTO device settings are shown in the Configtool application.

4. In the **Device Info** drop-down list, select **Villa Station**.
5. In the **PhysicsInfo** section, complete the following settings.

PhysicsInfo	
<input type="checkbox"/> Building	0
<input type="checkbox"/> Unit	0
<input checked="" type="checkbox"/> GroupCall	
VTO No.	1050
CallRoom	1051
Center Number	888888

- a. In **CallRoom** field, enter the extension number of the VTH Indoor Monitor. In this example, enter 1051.
- b. In **VTO No.** field, enter the extension number of the VTO Outdoor Station. In this example, enter 1050.

6. In the **SIP Info** section, complete the following settings.




- **Server Type:** Select **Third Party**.
- **Register Time:** Set a registration time or retain the default setting.
- **Server IP:** Enter the IP address of the PBX. In this example, enter 192.168.66.39.
- **Server Port:** Enter the SIP registration port of the PBX. In this example, enter 5060.
- **Domain Name:** Retain the default setting.
- **Register Pwd:** Enter the registration password of the VTO extension.
- **Restart after configuration:** We recommend you to select this check box as some configurations need to be restarted to take effect.

7. Click **Save**.

A notice prompts that the configuration is successful.

8. Click **OK** to finish the setting.

Result

- The VTO Outdoor Station is restarted.
- Check the extension status in the PBX web portal, the endpoint icon of the VTO extension displays  in the **Online Status** column.

Set up Communication between Dahua Outdoor Station and Indoor Monitor

This topic describes how to set up the communication between Dahua video intercom devices together with Yeastar P-Series PBX System.

Prerequisites

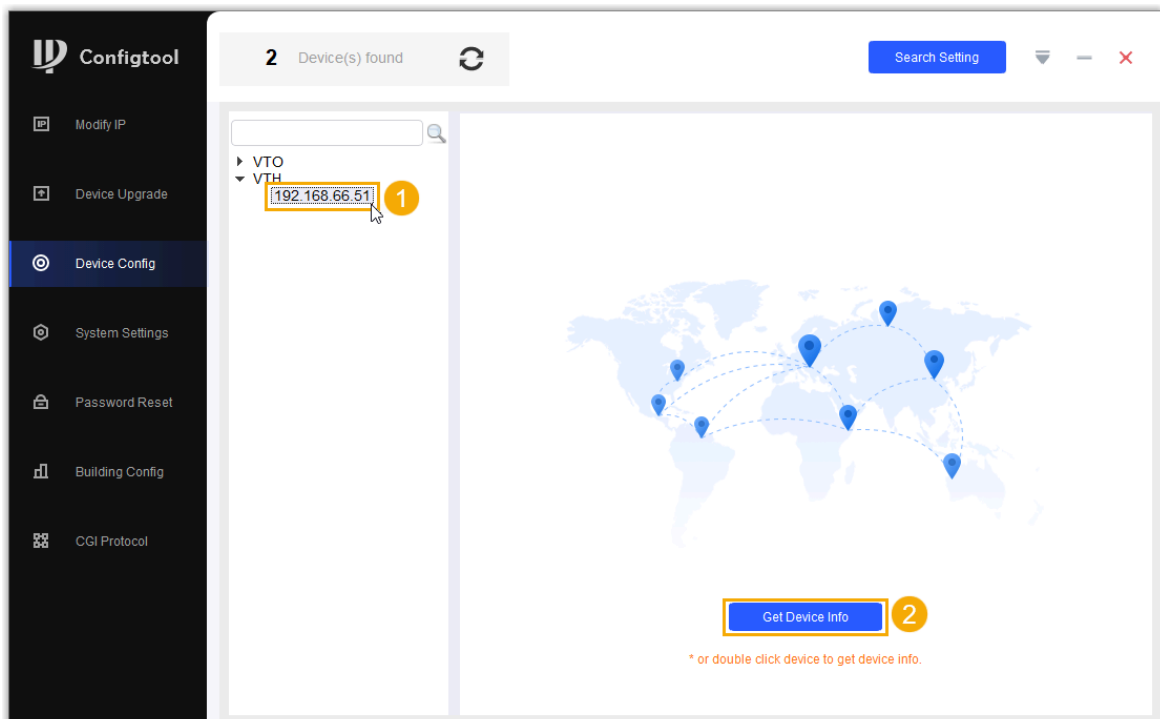
Make sure that you have registered Dahua video intercom devices to the PBX.

For more information, see the following topics:

- [Register Dahua VTH Indoor Monitor to Yeastar P-Series PBX System](#)
- [Register Dahua VTO Outdoor Station to Yeastar P-Series PBX System](#)

Procedure

1. On the Configtool application, go to **Device Config**.
2. Select the IP address of the VTH to be configured, then click **Get Device Info**.



3. In the **Login** window, enter the device credentials, and click **OK**.

4. On the VTH device configuration page, click **Network Terminals** tab, complete the following settings.

The screenshot shows the 'Network Terminals' configuration page. At the top, there are tabs: 'Network Config', 'Network Terminals' (which is selected and underlined), 'Password', 'WireZone', and 'AlarmMode'. Below the tabs, the title 'Network Terminals' is displayed. The configuration area includes a dropdown menu for 'Master VTO' with 'Main VTO' selected. Below this are four input fields: 'Master VTO Name' with 'Main VTO', 'Master VTO IP' with '192 . 168 . 66 . 50', 'Master VTO User' with 'admin', and 'Master VTO Pwd' with masked characters. At the bottom left, there is a checked checkbox for 'VTO Enable Status'. A 'Save' button is located at the bottom right.

- **Network Terminals:** Select **Master VTO**.
 - **Master VTO Name:** Automatically synchronized to the selected device.
 - **Master VTO IP:** Enter the IP address of the VTO Outdoor Station. In this example, enter 192.168.66.50.
 - **Master VTO User:** Enter the user name. In this example, enter `admin`.
 - **Master VTO Pwd:** Enter the [password](#) set in device initialization.
 - **VTO Enable Status:** Select the check box of this option.
5. Click **Save**.

A notice prompts that the configuration is successful.

6. Click **OK** to finish the setting.

Result

- You can now check the real-time monitor video sent by Outdoor Station on the Indoor Monitor panel.
- Click the button on Outdoor Station, a call will be sent to the Indoor Monitor; Users can directly tap the unlock icon on Indoor Monitor to unlock the door.

Receive Calls and Open the Door via Linkus Clients


This topic describes how to achieve Dahua Outdoor Station calls be sent to the Linkus Clients where the VTH extension is registered. In this way, users can receive visitors' calls and unlock the door on any of the Linkus Clients.

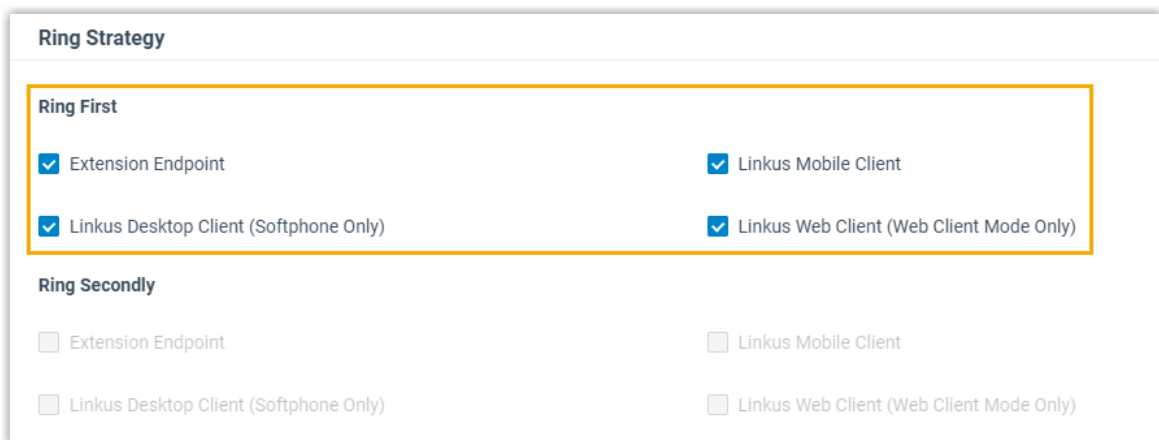
Prerequisites

Make sure that you have activated the Dahua Outdoor Station and Indoor Monitor devices, and registered them to the PBX. For more information, see the following topics:

- [Activate Dahua Video Intercom Devices using Configtool](#)
- [Register Dahua VTH Indoor Monitor to Yeastar P-Series PBX System](#)
- [Register Dahua VTO Outdoor Station to Yeastar P-Series PBX System](#)
- [Set up Communication between Dahua Outdoor Station and Indoor Monitor](#)

Procedure

1. Log in to PBX web portal, go to **Extension and Trunk > Extension**.
2. Click  beside the VTH extension (1051) to configure it.
3. On the VTH extension (1051) configuration page, click the **Presence** tab.
4. In the **Ring Strategy** section, select the desired endpoints to ring simultaneously.



Ring Strategy	
Ring First	
<input checked="" type="checkbox"/> Extension Endpoint	<input checked="" type="checkbox"/> Linkus Mobile Client
<input checked="" type="checkbox"/> Linkus Desktop Client (Softphone Only)	<input checked="" type="checkbox"/> Linkus Web Client (Web Client Mode Only)
Ring Secondly	
<input type="checkbox"/> Extension Endpoint	<input type="checkbox"/> Linkus Mobile Client
<input type="checkbox"/> Linkus Desktop Client (Softphone Only)	<input type="checkbox"/> Linkus Web Client (Web Client Mode Only)

5. Click **Save and Apply**.

Result

- When the Outdoor Station sends a call, the Indoor Monitor and Linkus clients (registered with the same extension 1051) will ring simultaneously.
- To open the door via Linkus clients, dial the feature code **#123#**.


Forward VTO Outdoor Station Calls to an External Number

To prevent from missing any visits, users can configure Dahua VTH Indoor Monitor to forward the VTO Outdoor Station calls to an external number by configuring the call forwarding feature on Yeastar P-Series PBX System.

Prerequisites

- Make sure the VTH extension (1051) is selected in the desired outbound route.
- Make sure that you have activated the Dahua Outdoor Station and Indoor Monitor devices, and registered them to the PBX. For more information, see the following topics:
 - [Activate Dahua Video Intercom Devices using Configtool](#)
 - [Register Dahua VTH Indoor Monitor to Yeastar P-Series PBX System](#)
 - [Register Dahua VTO Outdoor Station to Yeastar P-Series PBX System](#)
 - [Set up Communication between Dahua Outdoor Station and Indoor Monitor](#)

Procedure

1. Log in to PBX web portal, go to **Extension and Trunk > Extension**.
2. Click  beside the VTH extension (1051) to configure it.
3. On the VTH extension (1051) configuration page, click the **Presence** tab.
4. In the **Call Forwarding** section, configure Call Forwarding destination for internal calls.
 - a. Select the checkbox of **No Answer**.
 - b. Set the destination to **External Number**.
 - c. **Optional:** If you have set an outbound dial pattern in the desired outbound route, enter the [prefix of outbound route](#).
 - d. In the field beside **Prefix**, enter an external number.

Call Forwarding

Internal Calls

☐ Always

☒ No Answer

☒ When Busy

External Number ▼

Prefix

157

Voicemail ▼

5. Click **Save** and **Apply**.

Result

- The Outdoor Station call will be forwarded to the external number if there is no answer from Indoor Monitor over the ringing duration.
- During the call, you can open the door by directly dialing a feature code **#123#**.