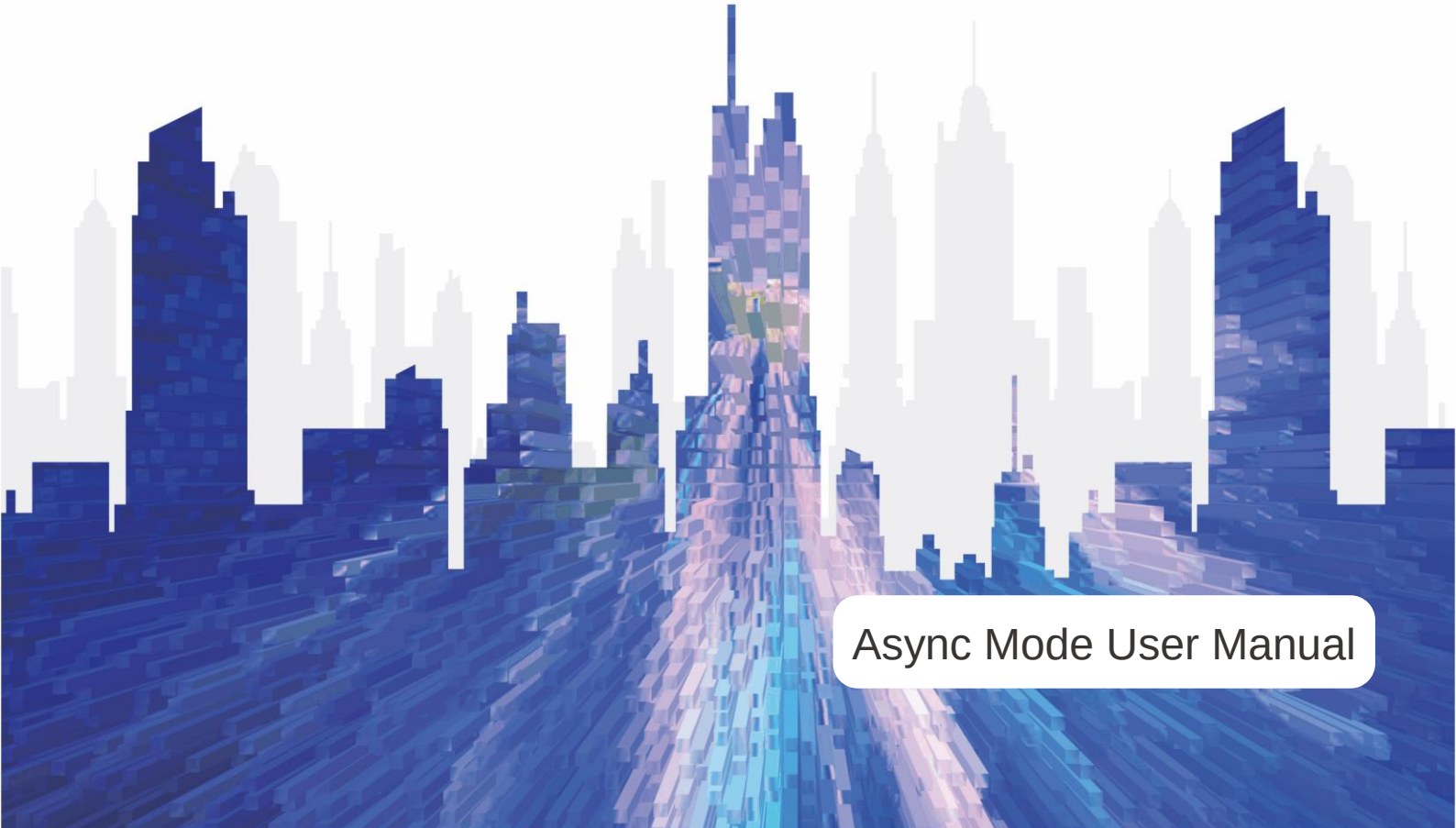
# ViPlex Express

Async Mode User Manual

# Contents

# 1 Software Introduction

ViPlex Express is a content publishing management system for PC, which is available for Windows and allows users to edit and play solutions on LCD or LED displays. In async mode, ViPlex Express is also used to control multimedia players. This document introduces you to the functions and operations in async mode.

## Two Working Modes

ViPlex Express has two working modes, and you can switch to your desired mode based on the application scenario.

- **Studio Mode**

  When a solution is being played in ViPlex Express, the solution is also played synchronously on the display. This mode is applicable to synchronous playback.

  The playback window is on the extended display. You can use the screen monitoring function to view the playback on your primary monitor.

- **Async Mode**

  ViPlex Express sends solutions to multimedia players. The solutions will be stored in the multimedia players and played according to their playback plans. This mode is applicable to the scenario when multimedia players load displays.

## Professional Solution Editing

ViPlex Express is designed with a professional solution editing function allowing you to edit solutions with various contents and complex schedules as required.

- **Multiple pages**

  A solution can be added with multiple pages that are played in order from top to bottom.

- **Flexible layout**

  You can use a system template or customize a template when adding a page. You can set the number, coordinates, width, and height of windows based on your needs in a template.

- **A variety of media**

  On a page, you can add general windows, cut-to-display window, Office documents, images, videos, GIF, text, colorful text, digital clocks, analog clocks, timers, weather, RSS, streaming media, and web pages.

- **Multiple properties**

  Every type of media has multiple properties that can satisfy your needs and present a variety of solutions.

- **Scheduling as you wish**

  You can set a timeslot and cycle for each page to play. The schedules of a page can be batch applied to other pages. If the timeslots of several pages overlap, the pages will be played in order from top to bottom

- **Quick preview**

  Clicking the preview button allows you to preview the current page. The preview window immediately refreshes when you move on to another page.

## All-round Terminal Control

In async mode, ViPlex Express enables you to fully control multimedia players, such as brightness adjustment, time synchronization, font management, terminal upgrade, video source switching, screen status control, play log query, network configuration, and RF management.

# 2 Getting Started

## 2.1 Preparing a PC

Minimum requirements:

- OS: Windows 7 SP1 64-bit

- CPU: i5
- RAM: 4 GB
- HDD: 60 GB

## 2.2 Installing Software

### Prerequisites

- Framework 4.6.x is installed.
- The official version of Visual C++ 2017 runtime components are installed.
- The installation package of ViPlex Express is obtained.

### Where to Obtain

https://www.vnnox.com/download

### Operating Procedure

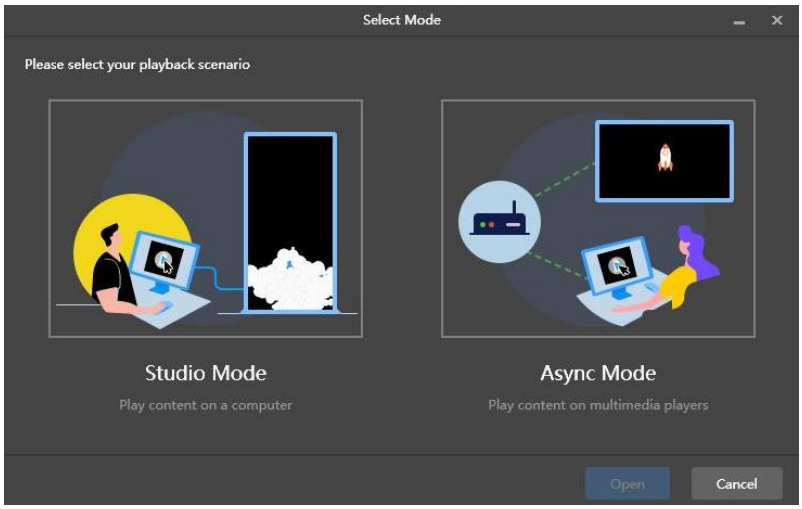
Double click the installer and install ViPlex Express according to the setup wizard.

## 2.3 Selecting Working Mode

### First Installation

After ViPlex Express is first installed, a **Select Mode** dialog box appears when you open ViPlex Express. Select **Studio Mode** and click **Open**.

Figure 2-1 Selecting a mode




### Other Situations

If you have installed ViPlex Express or selected a working mode before, the dialog box shown in Figure 2-1 will not appear. If ViPlex Express is in studio mode by default after opened, switch to the async mode by following the steps below:

In the top-right corner, choose > **Working Mode** > **Async Mode** and click **OK**. ViPlex Express will be in async mode after a restart.

## 2.4 Connecting to Displays

Figure 2-2 and Figure 2-3 use the TB6 Taurus series multimedia player as an example to show the connection.

Figure 2-2 Ethernet cable


- **Ethernet cable**

  The PC with ViPlex Express installed is connected to multimedia players via Ethernet cable.

  The DHCP of multimedia players is enabled, the DHCP in the top-left corner of ViPlex Express is turned on. Select a local IP address and click **OK**. ViPlex Express will automatically connect to the Taurus. If the connection is not stable, set a static IP address for the PC.

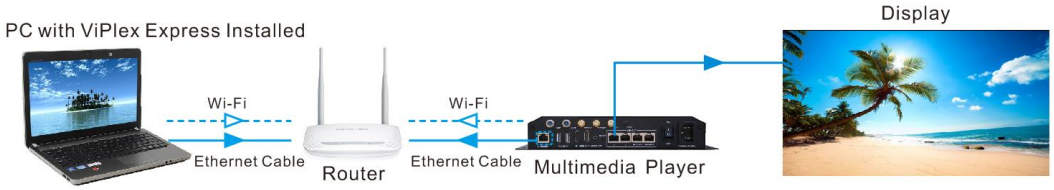
  Note: Before enabling the DHCP service, turn off the firewall of the PC or set the ICMP echo reply policy.

- **Wi-Fi**

  The PC with ViPlex Express installed is connected to multimedia players via Wi-Fi.

  When the multimedia player has a built-in Wi-Fi AP, you can use this method without the need for configuration. For instance, when the multimedia player has a built-in Wi-Fi AP, the default SSID is “AP+*Last 8 digits of the SN*” and the default password is printed on the SSID label of the product.

Figure 2-3 LAN




- **Wired LAN**

  The PC with ViPlex Express installed and multimedia players connected to the same wired LAN via Ethernet cable.

  If this method is used, the configuration is not required.

- **Wireless LAN**

  The PC with ViPlex Express installed and multimedia players connected to the same wireless LAN via Wi-Fi.

  This method is available when multimedia players support Wi-Fi Sta. The DHCP of multimedia players is enabled. Log in to multimedia players with ViPlex Express and connect to the Wi-Fi AP of the router on the network configuration page.

## 2.5 Logging In to Terminals

After you select async mode, the terminal management page of async mode will be displayed.

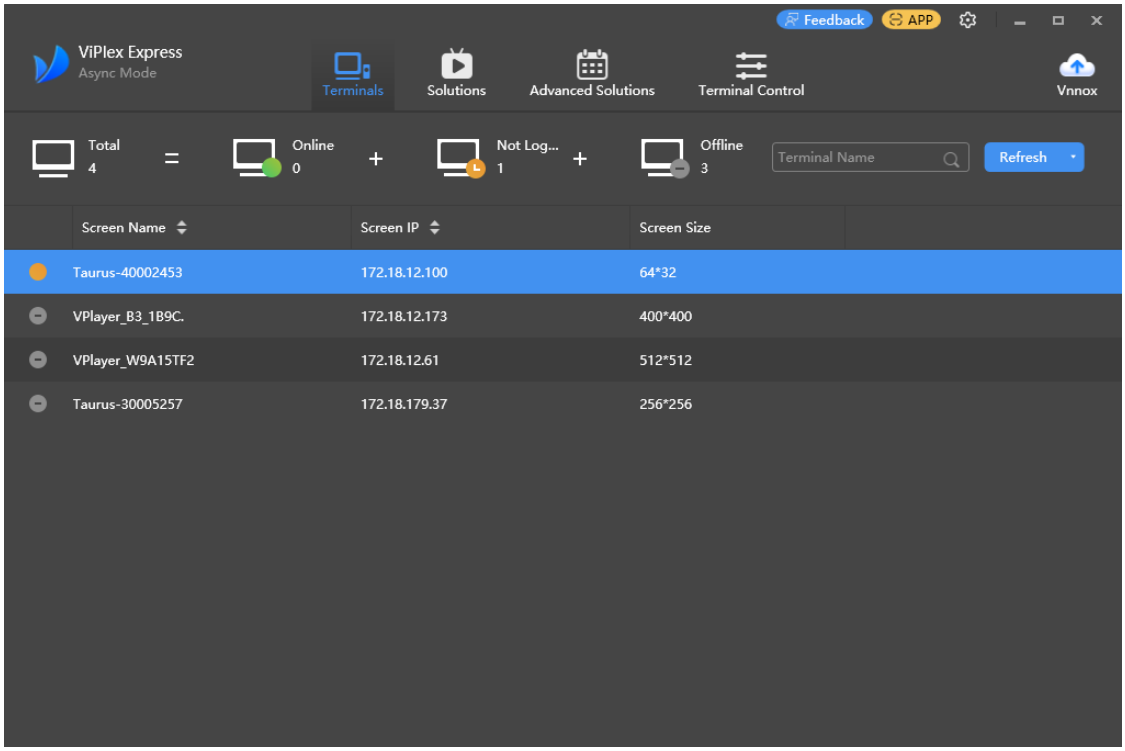
### Required Information

Login user name and password of the multimedia player, for example, the default login user name of the Taurus series multimedia players is “admin” and the default password is “123456” (Taurus earlier than V4.6.0) or “SN2008@+” (Taurus V4.6.0 and later).

### Logging In to Terminals

Step 1 Click **Refresh** to refresh the screen list.

Figure 2-4 Terminal management




After detecting a terminal, ViPlex Express will try to log in to the terminal with the default account or the account used for the last login.

If terminals and ViPlex Express are not on the same network segment and their network segments can be pinged.

Click next to **Refresh**, select **Specify IP** and enter an IP address or IP range to connect to terminals manually.

- : Denotes that the terminal is online and you can log in to it. Go to Step 2.
- : Denotes the terminal is offline and you cannot log in to it.
- : Denotes you have successfully logged into the terminal.

Step 2 Click **Connect** next to screen information.

Step 3 Enter the password for the "admin" user and then click **OK**.

After successful login, ViPlex Express saves the account information automatically.

## Related Operations

After successful login, if the password is verified as a weak password, will be displayed next to the terminal name. You are advised to change the password to a complex one to enhance security.

Right-click the screen information, and the related operations will be displayed:

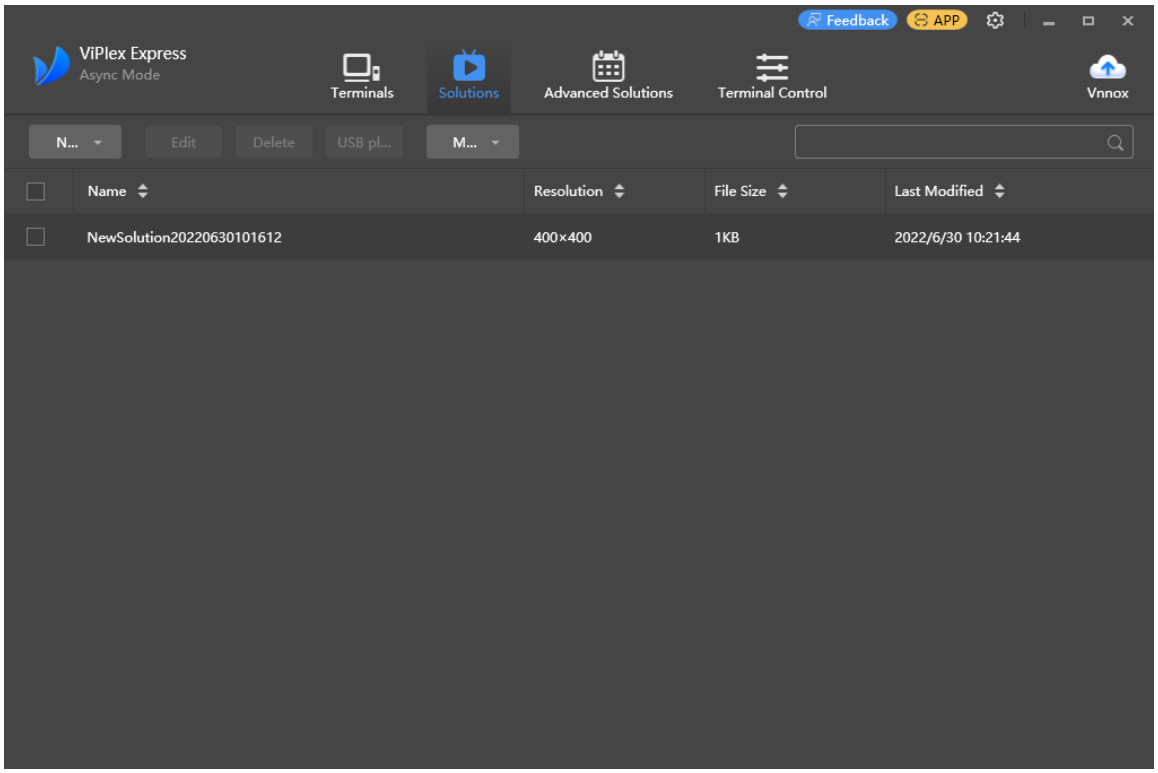
- Log Out: Log out of the terminal.
- Obtain SN: Obtain the SN of the terminal. Batch obtaining of SNs is supported.
- Rename: Rename the terminal.
- Change Password: Change the connection password of the Taurus Wi-Fi AP and the login password for the "admin" user.
- Forget Password: Delete the password saved during the last login.
- Download Operation Log: Download the operation logs of asynchronous terminals.

# 2.6 Creating Solutions

After updated, the solution data in async mode will be synchronized to studio mode.

Step 1 Choose **Solutions** to access the solution management page.

Figure 2-5 Solution management




Step 2 Click **New** and select **Regular Screen** or **Ultra-Long Screen** from the drop-down menu.

The **Solution** Information dialog box appears.

Figure 2-6 Solution information for a regular screen

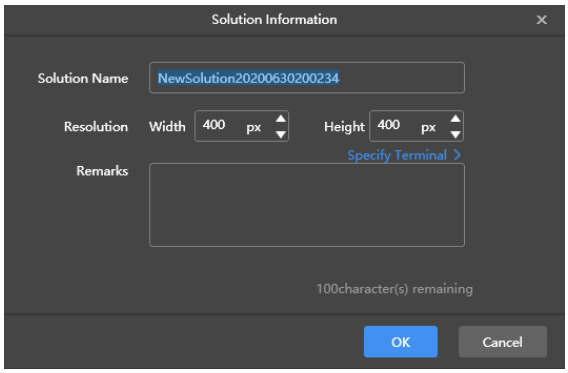
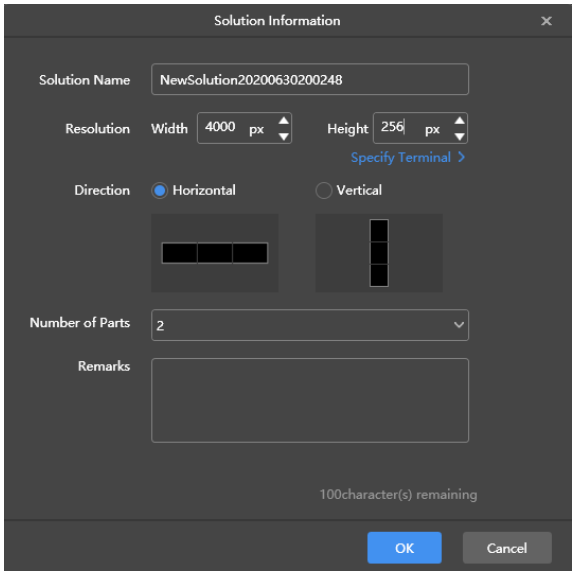


Figure 2-7 Solution information for an ultra-long screen




Step 3 Set a name, resolution, and other information for the solution, then click **OK** to access the solution editing page.

- The resolution of a solution for a regular screen (hereinafter referred to as "regular-screen solution") must be consistent with the resolution of the screen.
- The resolution of a solution for an ultra-long screen (hereinafter referred to as "ultra-long-screen solution") must be consistent with the configured screen width and height.

Step 4 After the solution editing is done, click **Save**.

Step 5 (Optional) At the upper right of the page, click  to view the schedule of each page in the solution.

Step 6 (Optional) At the upper right of the page, click  to preview the current page.

When the preview window is opened, you can also select other pages to preview. If you make changes to the current page, click  to refresh the preview window.

Step 7 After the solution editing is done, click **Publish** and select players to publish the solution.

## 2.7 Publishing Solutions

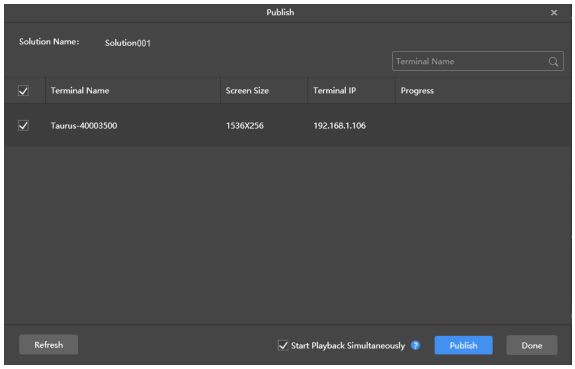
Solutions containing media can be published.

Step 1 Choose Solutions.

Step 2 In the solution list, move your mouse over a solution and click  .

The **Publish** dialog box appears.

Figure 2-8 Publishing a solution



Step 3 Click **Refresh** to display all the terminals that are logged in.

Note: During solution publishing, ViPlex Express automatically converts the video formats not supported by the terminal.

Step 4 (Optional) Select Start Playback Simultaneously.

Start Playback Simultaneously: The terminals used for synchronous playback will start playing the solution at the same time.

Step 5 Select one or more terminals and click **Publish**.

Step 6 After the solution is published successfully, click **Done**.

**Note:**

Unltr-long-screen solutions do not support **Start Playback Simultaneously**.

## 2.8 Controlling Terminals

Users can control the brightness, display status, video source switching, etc. of a terminal in real time or as scheduled. For details, see 4 Terminal Control.

# 3 Solution Management

## 3.1 Creating Solutions

- For different screens, you can create regular-screen solutions and ultra-long-screen solutions.
- After updated, the solution data in async mode will be synchronized to studio mode.

### 3.1.1 Creating a Regular-Screen Solution

#### Related Information

- A regular-screen solution contains one or more pages and each page contains one or more media items.
- The pages of a solution are played in order from top to bottom.

#### Operating Procedure

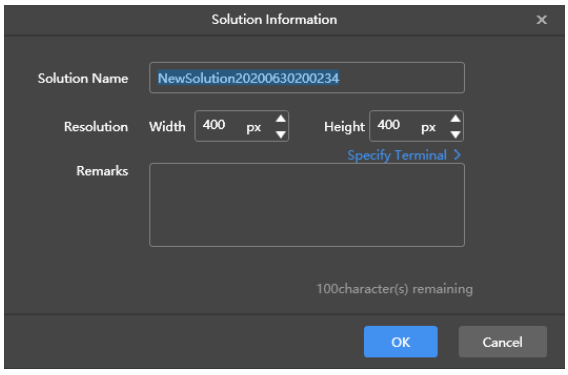
Before you create a solution, get the screen resolution in advance.

Step 1 Choose **Solutions** to access the solution management page.

Step 2 Click **New** and select **Regular Screen** from the drop-down menu.

The **Solution Information** dialog box appears.

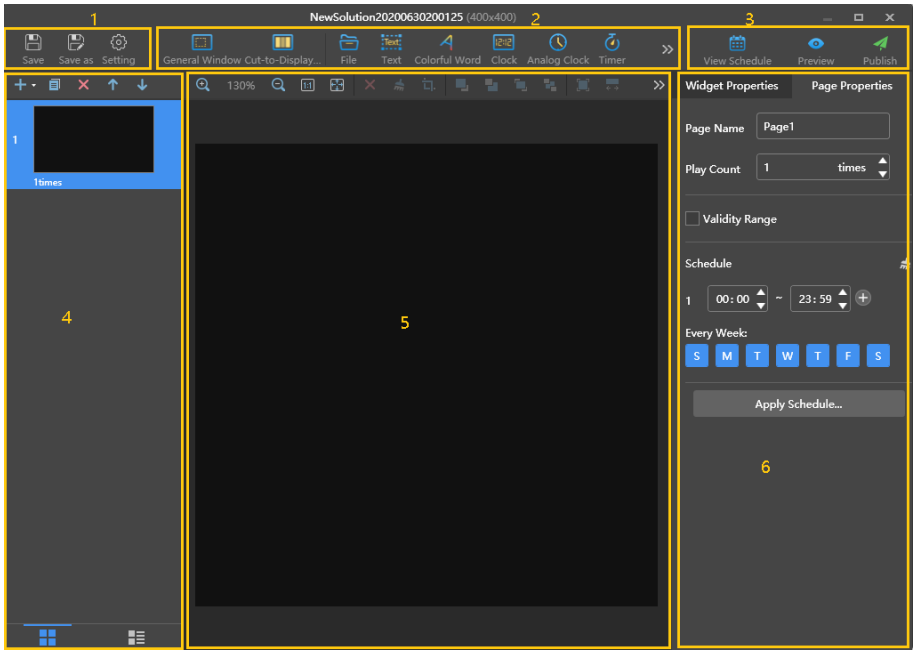
Figure 3-1 Solution information



Step 3 Set a name and resolution for the solution, then click **OK** to access the solution editing page, as shown in Figure 3-1.

You can also set a resolution by clicking **Specify Terminal** and the resolution will be the same as the resolution of the terminal you select.

Figure 3-2 Solution editing page




The description of the solution editing page is shown in Table 3-1.

Table 3-1 Description of the solution editing page

| No. | Function | Description | |
|---|---|---|---|
| 1 | Saving a solution, saving a solution as another solution and setting solution information | Used for saving a solution, saving a solution as another solution and setting solution information | |
| 2 | Adding media<br>You can click an icon to add a corresponding media item. | : General window | : Cut-to-display window |
| | | : File | : Text |
| | | : Colorful text | : Digital clock |
| | | : Analog clock | : Timer |
| | | : Weather | : Environment monitoring |
| | | : Table | : RSS |
| | | : Streaming media | : Web page |
| 3 | Viewing schedules, previewing pages, and publishing solutions | Used for viewing schedules, previewing the current page and publishing solutions | |
| 4 | Editing solution pages<br>You can add, copy, and delete pages and adjust the order of pages.<br>Pages are played in order from | : Add | : Open the **Page Template** dialog box |
| | | : Copy | : Delete |

| No. | Function | Description | |
|---|---|---|---|
| | top to bottom. |  : Move up |  : Move down |
| | |  : Thumbnail view (Only the thumbnails of pages are displayed.) |  : List view: (The thumbnails of pages and the names of the media items contained in the currently selected page are displayed.) |
| 5 | Editing media on pages |  : Zoom editing area in |  : Zoom editing area out |
| | |  : Show the editing area in the original size |  : Automatically fit the editing area according to the software interface |
| | |  : Delete selected media |  : Clear all media |
| | |  : Crop image |  : Bring forward |
| | |  : Send backward |  : Bring to front |
| | |  : Send to back |  : Fill the entire screen |
| | |  : Fit the screen horizontally |  : Fit the screen vertically |
| | |  : Align top |  : Center vertically |
| | |  : Align bottom |  : Align left |
| | |  : Center horizontally |  : Align right |
| 6 | Editing properties | Used for editing widget and page properties<br>• Widget Properties: Widgets are the media added to a page. The properties of different types of media vary. Click a widget to select it before you edit its properties.<br>• Page Properties: Set the name, play count, validity range, and playback schedule of a page.<br>– Play Count: Set the number of times to play a page continuously.<br>– Validity Range: After this option is selected, the **Start Date** and **End Date** parameters are displayed. Expired pages will be skipped during solution playback.<br>– Schedule: Allows you to specify the timeslots to play a page and select the days to repeat the playback. If the timeslots of different pages overlap, the pages will be played in order from top to bottom.<br>– Apply Schedule: Allows you to apply the schedule of the current page to other pages. You can select multiple pages and apply a schedule to them at the same time. | |

**Notes**

- When you add an Excel file, the number of rows of the Excel file must be less than or equal to 600 and the total width of the columns must be less than or equal to the width of an A4 landscape paper. It is recommended that you set the page layout of the Excel file to A4 landscape.
- Users can set the text color and merge the cells in the Excel file to be imported. Other properties of the cells in the Excel file currently cannot be displayed. Please scan the **Feedback** QR code in the navigation bar to give feedback if needed.
- A valid URL is required when you add RSS, streaming media, or web page media.

- When you add weather media, the terminal must be connected to the Internet to obtain real-time weather information.
- When you add environment monitoring media, connect to the sensor logically in ViPlex Express after the sensor is connected to the terminal. For details, see 4.17 Sensor.
- For the limitations on cut-to-display windows, see 8 Limitations on Cut-to-Display Windows for Regular Screens.

Step 4 After the solution editing is done, click **Save**.

Step 5 (Optional) At the upper right of the page, click  to view the schedule of each page in the solution.

Step 6 (Optional) At the upper right of the page, click  to preview the current page.

When the preview window is opened, you can also select other pages to preview. If you make changes to the current page, click  to refresh the preview window.

Step 7 After the solution editing is done, click **Publish** and select players to publish the solution.

### 3.1.2 Creating an Ultra-Long-Screen Solution

## Applications

If the pixel width of the resolution of a screen is greater than the pixel width of the maximum loading capacity of a multimedia player, but the screen resolution does not exceed the maximum loading capacity of the multimedia player, you can use ultra-long-screen solutions.

**Note:**

For the limitations on the playback parameter specifications for ultra-long screens, see Table 9-1.

## Application Example

The resolution of a screen is 23040×98 and the screen works with the TB60 multimedia player for content playback.

- Number of parts: 23040/ 096=5.625 (Here an integer is required, so the number of parts is 6.)
- Screen width to be configured: 23040/6=3840
- Screen height to be configured: 98×6=588

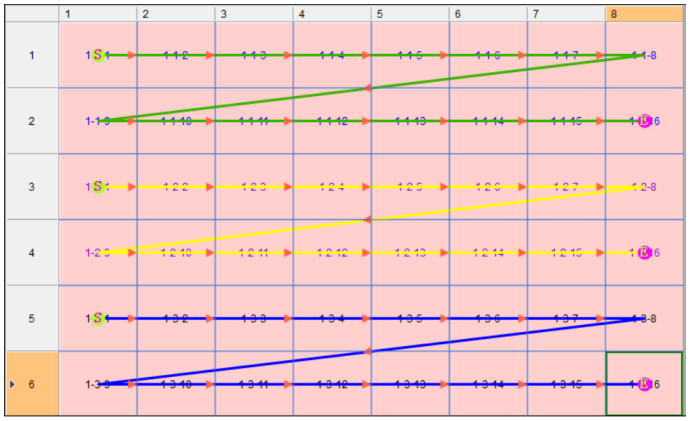
**Note**

The maximum pixel capacity of the TB60 is 2.3 million. Within the maximum pixel capacity, the maximum pixel width is 23040 and the maximum pixel height is 4096. For the detailed pixel capacity limits of other models of products, see Table 9-1.

## Screen Configuration

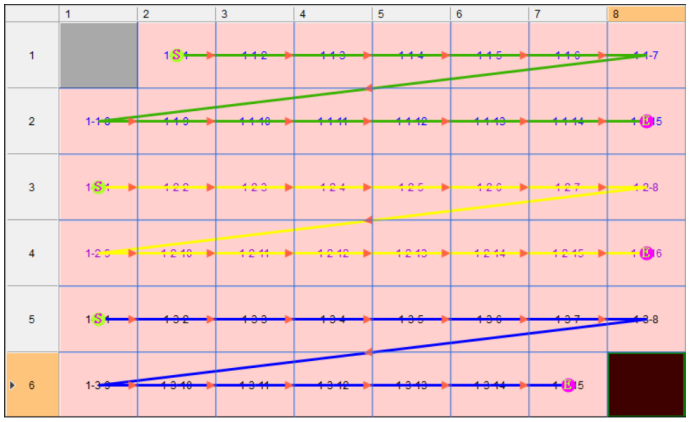
When you set the connection of receiving cards, if an Ethernet port loads two rows/columns or more, the connection must follow the shape of the letter Z, as shown in Figure 3-3.

Figure 3-3 Ultra-wide screen connection



If you want to set receiving cards to blank, you can only set the receiving cards at both ends to blank, as shown in Figure 3-4.

Figure 3-4 Blank receiving cards of an ultra-wide screen



## Operating Procedure

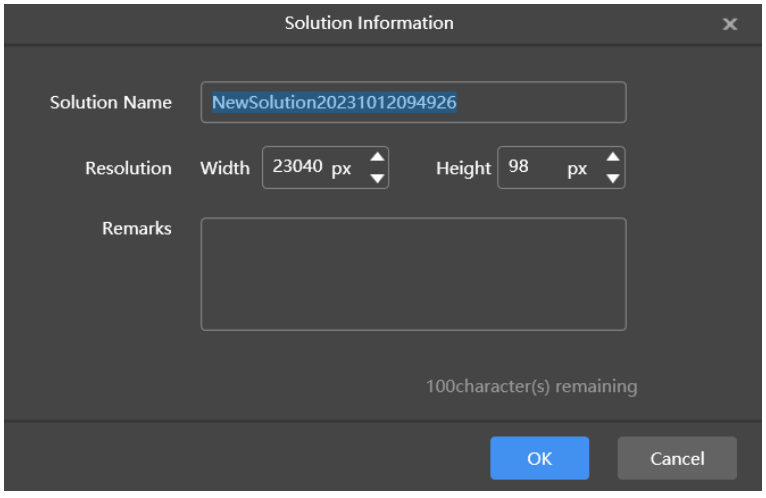
The preceding application will be used as an example to introduce how to create an ultra-long-screen solution.

Step 1 Choose **Solutions** to access the solution management page.

Step 2 Click **New** and select **Ultra-Long Screen** from the drop-down menu.

The **Solution Information** dialog box appears.

Figure 3-5 Solution information of an ultra-wide screen



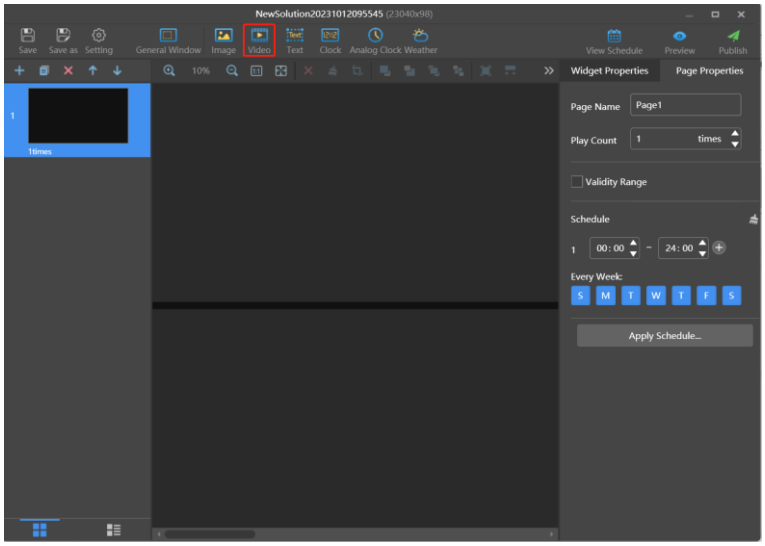
Step 3 Set the solution information and click **OK**.

- The resolution of the solution must be consistent with the actual pixel width and height of the screen.
- Only images, text, videos and colorful text can be placed across the boundary.

Step 4 At the top of the solution editing page, click **Video**.

In the page media editing area, the page is displayed based on the actual screen resolution.

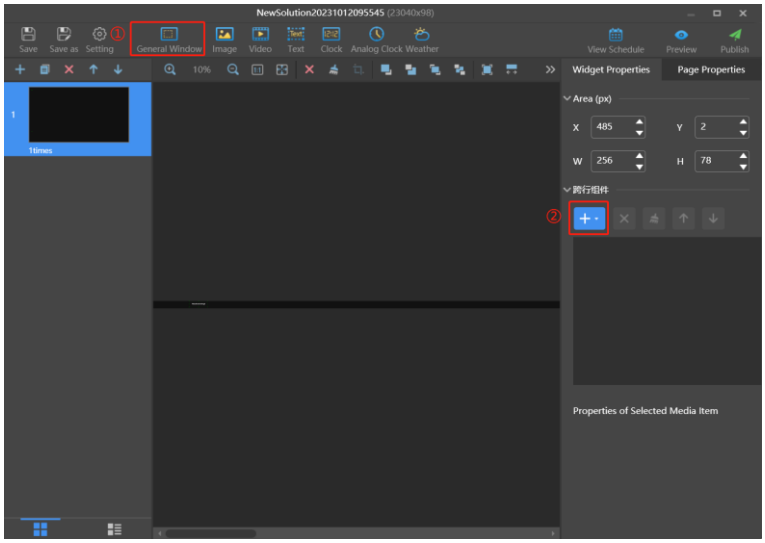
Figure 3-6 Ultra-long-screen solution editing page




Step 5 Select a video (multiple videos can be added) from the folder and click **Open**.

To set playlist playback, choose **General Window** > **+** to add multiple videos.

Figure 3-7 Setting playlist playback




Step 6 (Optional) At the upper right of the page, click  to preview the current page.

The preview window is displayed based on the configured screen aspect ratio.

Step 7 After the solution editing is done, click  .

Step 8 Select players and click **Publish** to publish the solution.

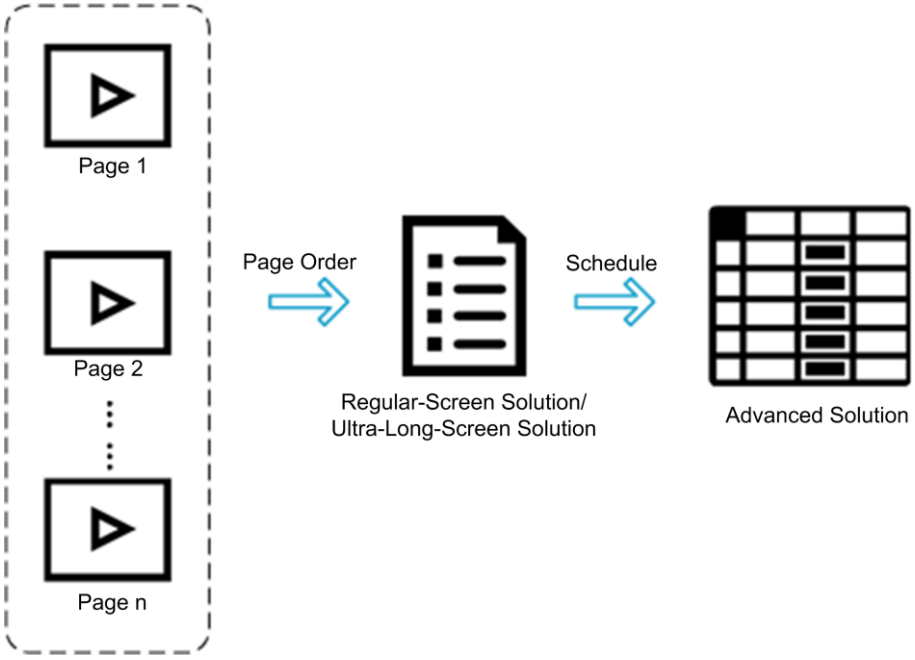
**Note**

- Ultra-long-screen solutions do not support synchronous playback.
- To ensure smooth playback, playing videos and text simultaneously is not recommended.

## 3.2 Scheduling Solutions

### Applications

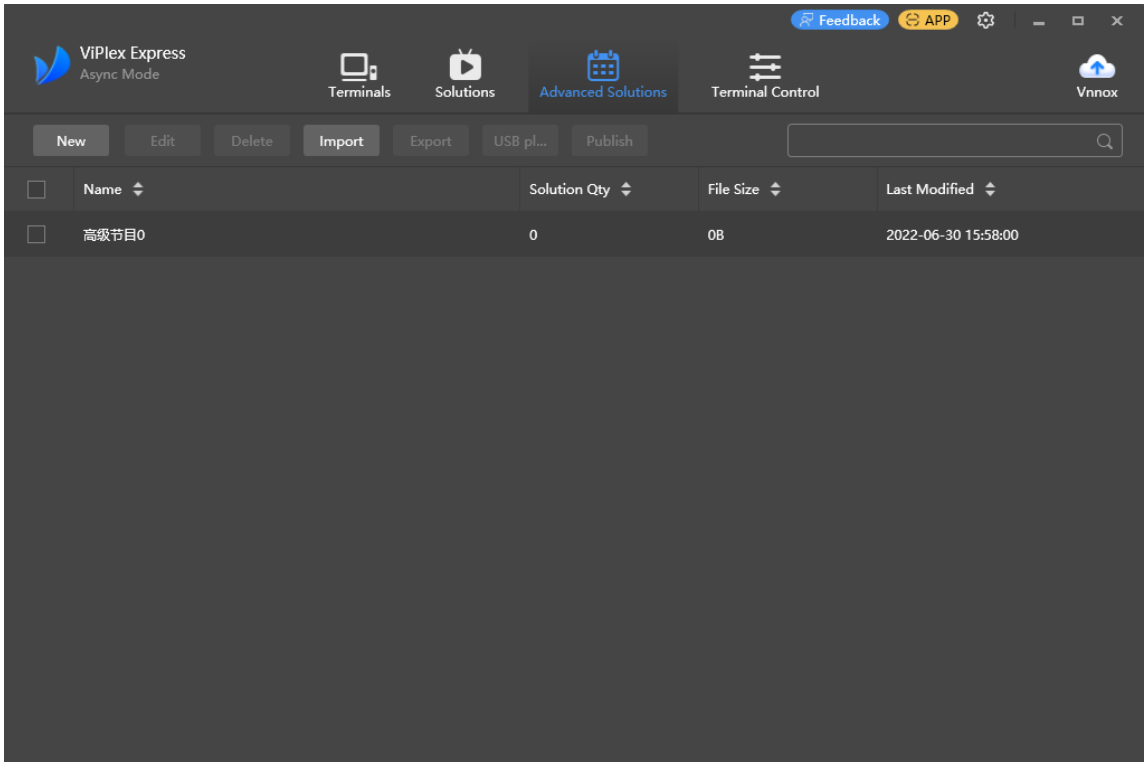
An advanced solution is a collection of scheduled regular-screen solutions or ultra-long-screen solutions.




### Operating Procedure

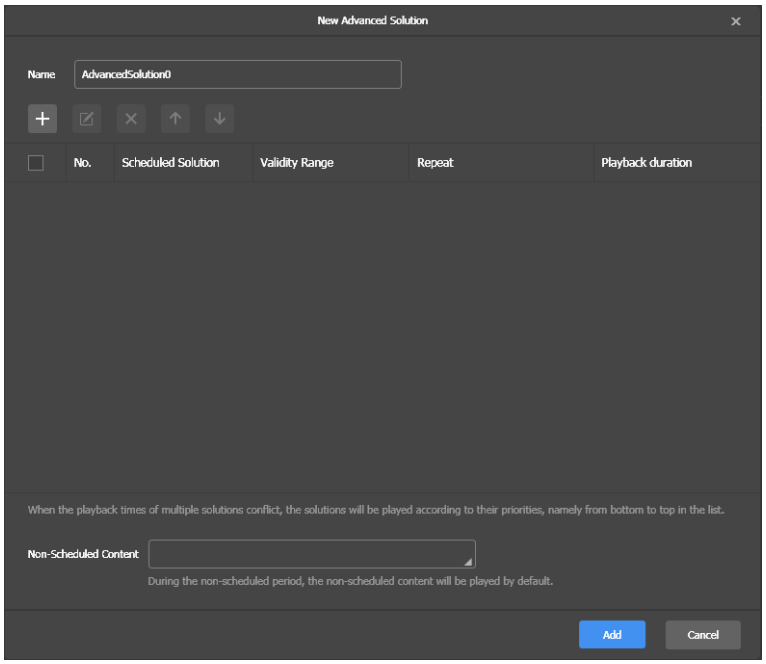
Step 1 Choose **Advanced Solutions** to access the advanced solutions page.

Figure 3-8 Advanced solutions




Step 2 Click **New** to open the **New Advanced Solution** page.

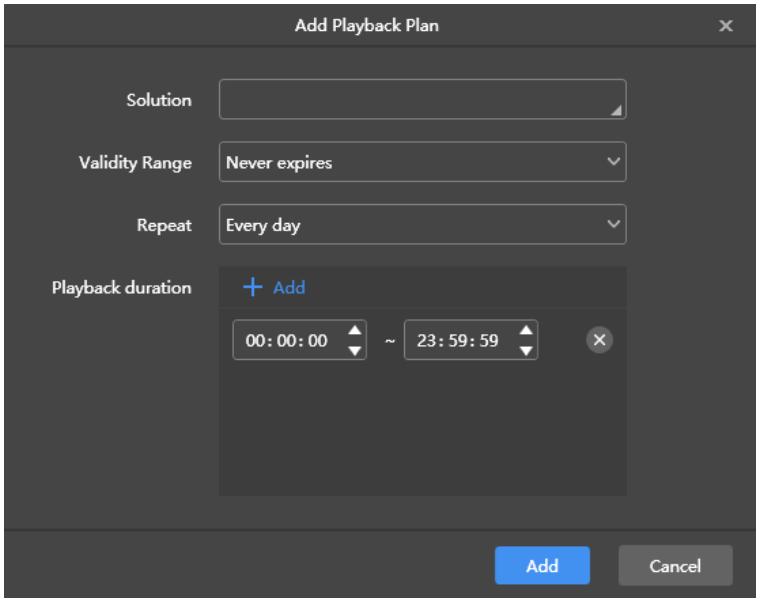
Figure 3-9 New advanced solution




Step 3 Enter a name for the advanced solution.

Step 4 Click  .

Figure 3-10 Adding playback plan




Step 5 Select a solution and set its validity range, repeat method, and playback durations.

Step 6 Click **Add**.

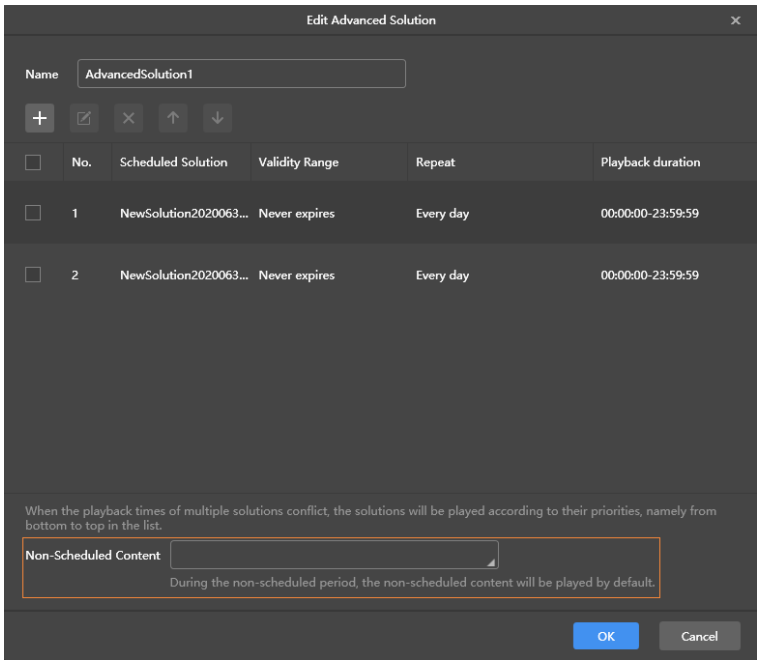
Step 7 Repeat Step 5 and Step 6 to add more solutions.

Step 8 After solutions are added, click **Cancel**.

Step 9 (Optional) Click the box next to **Non-Scheduled Content**, select a solution and click **OK**.

The non-scheduled content will be played by default during the non-scheduled period.

Figure 3-11 Adding non-scheduled content




Step 10 Click **Add**.

# 3.3 Publishing Solutions

## Applications

Send regular-screen solutions, ultra-long-screen solutions and scheduled advanced solutions to terminals.

## Related Information

- A solution containing media can be published.
- Only one solution can be sent to a terminal each time.
- A solution can be sent to multiple terminals.

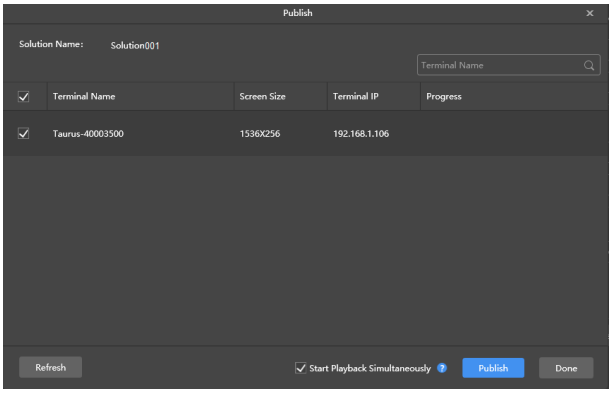
## Operating Procedure

Step 1 Choose Solutions or Advanced Solutions.

Step 2 In the solution list, move your mouse over a solution and click  .

The **Publish** dialog box appears.

Figure 3-12 Publishing a solution




Step 3 Click **Refresh** to display all the terminals that are logged in.

Note: During solution publishing, ViPlex Express automatically converts the video formats not supported by the terminal.

Step 4 (Optional) Select **Start Playback Simultaneously**.

Start Playback Simultaneously: The terminals used for synchronous playback will start playing the solution at the same time.

Step 5 Select one or more terminals and click **Publish**.

If the storage space of the terminal is insufficient, click **Clean Up & Republish** of the corresponding terminal to clean up storage. The solution will be published automatically after the cleanup.

Step 6 After the solution is published successfully, click **Done**.

**Note:**

Unltr-long-screen solutions do not support **Start Playback Simultaneously**.

# 3.4 USB Playback

## Applications

When a multimedia player can play solutions imported from a USB drive, users can import solutions to a USB drive by using the USB playback function in ViPlex Express and then insert the USB drive into the multimedia player to enable solution playback.

## Related Information

- A solution containing media supports USB playback.
- Multiple solutions can be exported to a USB drive each time.

  During USB playback, the specified solution is played by default.

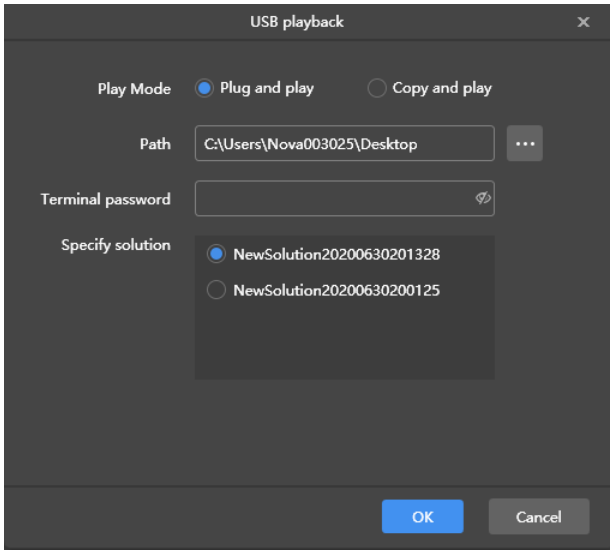
## Operating Procedure

Step 1 Choose **Solutions** or **Advanced Solutions**.

Step 2 In the solution list, move your mouse over a solution and click  , or select one or more solutions and click **USB Playback**.

The USB playback dialog box appears.

Figure 3-13 USB playback




Step 3 Specify a playback mode.

- Plug and play: The solution starts to play as soon as you insert the USB drive where the solution is stored in the terminal. Do NOT remove the USB drive during playback.
- Copy and play: The solution starts to play after the solution in the USB drive is copied to the terminal. Do NOT remove the USB drive during playback.

Step 4 Click  to choose a location to store the solutions to be exported.

Step 5 Enter the connection password of the terminal.

After the USB drive where solutions are stored is inserted into the terminal, the solutions can be played only when the password is correct.

Step 6 Select a solution and click **OK**.

Step 7 After solutions are exported successfully, click **Done**.

# 3.5 Exporting/Importing Solutions

## Applications

Transfer solutions by exporting and importing solution files with ViPlex Express.

## Related Information

- A solution containing media can be exported.
- Regular-screen solutions, ultra-long-screen solutions, and scheduled advanced solutions can be exported and imported.

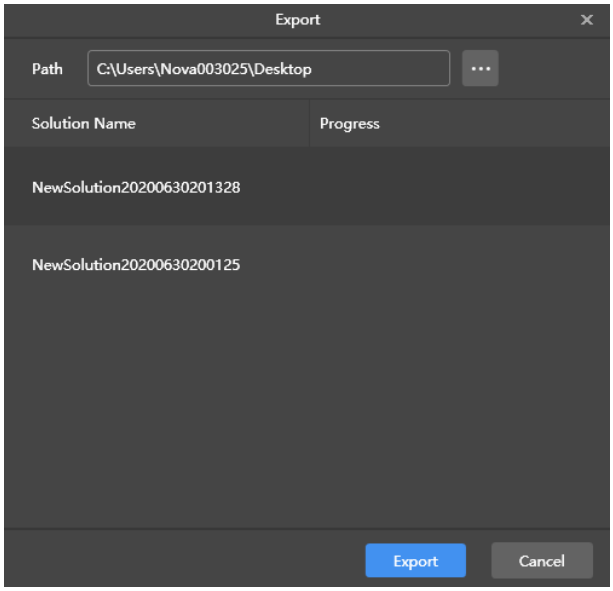
## Operating Procedure

**Export solutions**

Step 1 Choose **Solutions** or **Advanced Solutions**.

Step 2 From the solution list, select one or more solutions and then choose **More** > **Export**.

Figure 3-14 Exporting solutions




Step 3 Click ... to choose a location to store the solutions to be exported.

Step 4 Click **Export**.

**Note**

During solution exporting, ViPlex Express automatically converts the video formats not supported by the terminal.

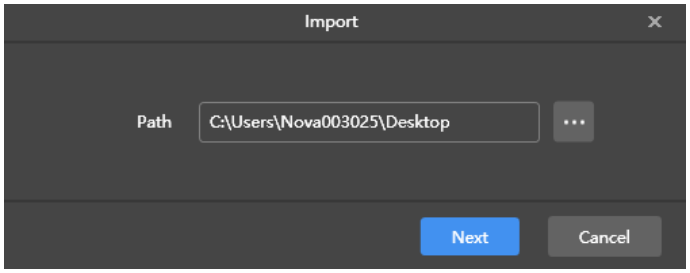
Step 5 After the solutions are exported successfully, close the dialog box.

**Import solutions**

Step 1 From the **Solutions** page, choose **More** > **Import**.

Or click Import on the Advanced Solutions page.

Figure 3-15 Importing solutions




Step 2 Click ... to choose the location of the local files.

Step 3 Click **Next**.

Step 4 After the solutions are imported successfully, click **Done**.

# 4 Terminal Control

## Function List

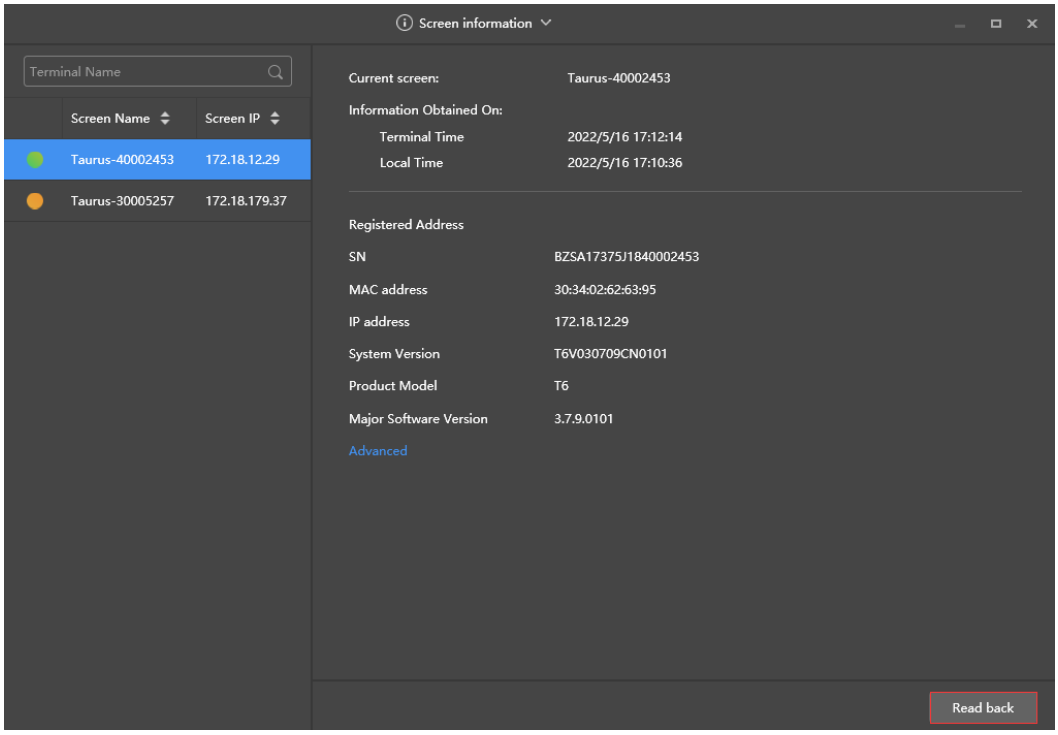
| Function | Sub-Function | Taurus LED Players | Taurus LCD Players | VPlayer |
|---|---|---|---|---|
| Playback management | Adjust volume in real time | √ | √ | |
| | Manage terminal solutions | √ | √ | |
| Brightness adjustment | - | √ | | |
| Video source | Configure video source parameters | √ | | |
| | Switch video source | √ | | |
| Screen status control | - | √ | | |
| Time synchronization | Sync time manually | √ | √ | |
| | Sync time with NTP | √ | √ | |
| | Sync time with RF | √ | | |
| Restart configuration | - | √ | √ | |
| Color temperature | - | √ | | |
| Monitoring | - | √ | √ (Available memory usage and CPU usage are not available.) | |
| Play logs | Query play logs | √ | √ | |
| | Export play logs | √ | √ | |
| Font management | Add fonts | √ | √ | |
| | Delete fonts | √ | √ | |
| Network configuration | Configure wired network | √ | √ | |
| | Configure Wi-Fi AP | √ | √ | |
| | Configure Wi-Fi Sta | √ | | |
| | Configure mobile network | √ | √ | |
| | Configure network detection | √ | √ | |
| Server configuration | Bind to VNNOX Standard/AD | √ | √ | |
| Terminal upgrade | Online upgrade | √ | √ | √ |

| Function | Sub-Function | Taurus LED Players | Taurus LCD Players | VPlayer |
|---|---|---|---|---|
| | Local upgrade | √ | √ | √ |
| Power control | - | √ | √<br>(No support for multi-function card power) | |
| RF management | - | √ | | |
| Sensor | - | √ | | |
| Screen information | - | √ | √ | |

## Common Operations

- Click the **Read back** button to read terminal information back to ViPlex Express and display it.

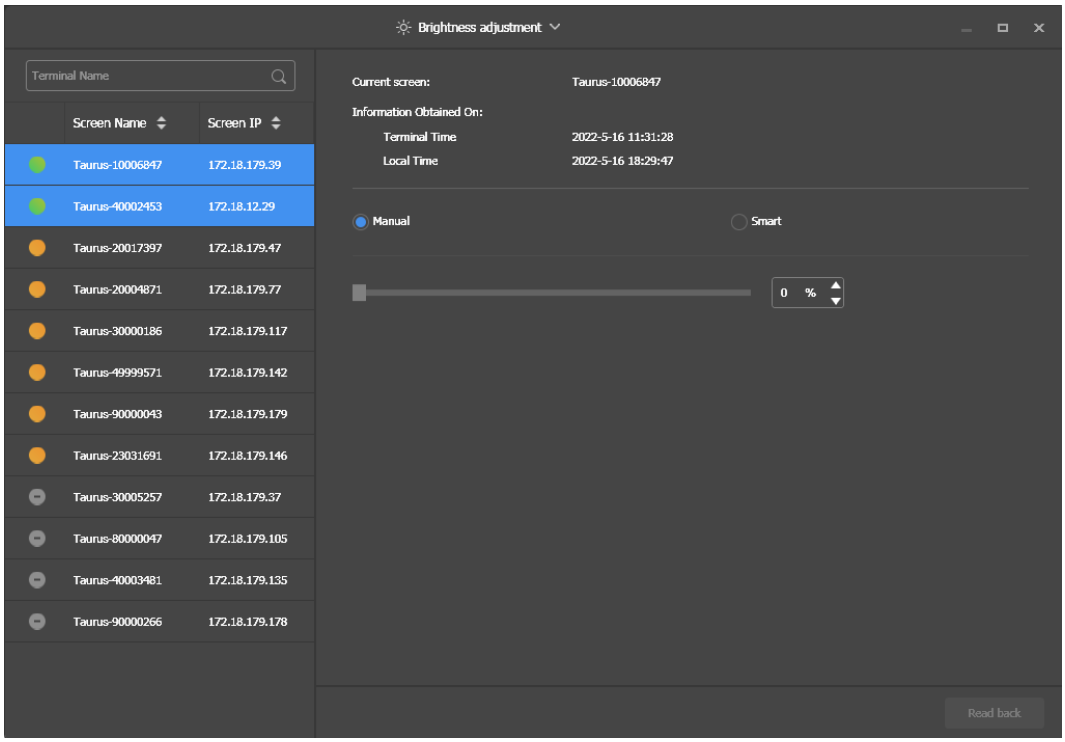
Figure 4-1 Readback




- In the terminal list, you can select multiple terminals with the **Ctrl**+**Shift** keyboard shortcut.

  Selecting multiple terminals is not available in **Playback management**, **Video source**, **Network configuration**, **Sensor**, and **Screen information**.

Figure 4-2 Selecting multiple terminals




# 4.1 Playback Management

Manage the playback mode, volume, and content of terminals.

## 4.1.1 Adjusting Volume in Real Time

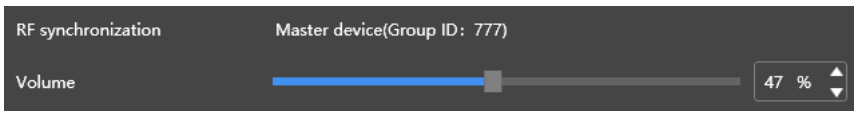
Step 1 Choose Terminal Control > Playback Management.

Step 2 Select the target terminal from the terminal list.

Step 3 In the **Playback Configuration** area, adjust the volume by dragging the slider or entering a value.

When the information related to RF synchronization is displayed, as shown in Figure 4-3, it indicates that volume synchronization is enabled on the current terminal. See relevant operations in 4.16 RF Management. RF synchronization requires you to specify a master device and slave devices. Users only need to set the volume of the master device. The slave devices will keep the same volume as the master device via an RF signal.

Figure 4-3 RF synchronization-volume



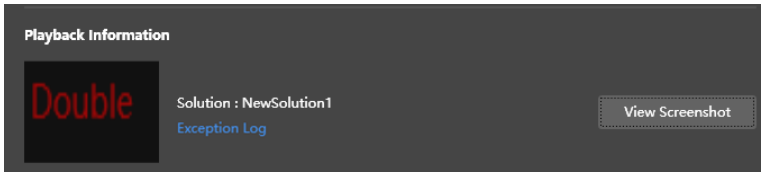

## 4.1.2 Managing Terminal Solutions

**Note:**

Only T30/T50/T60/TB30/TB40/TB50/TB60 support exception log and requirements check.

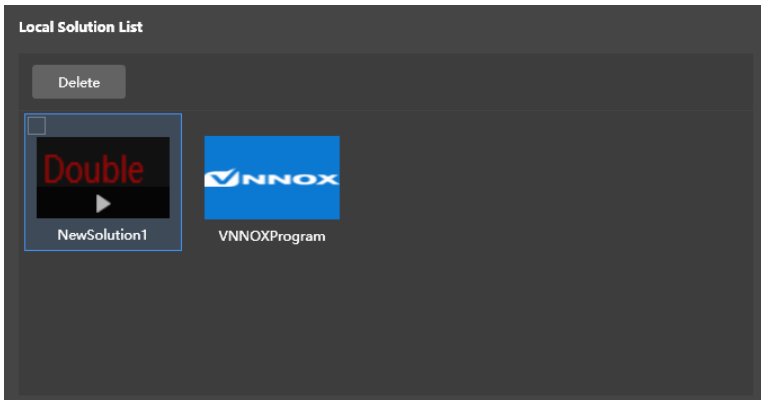
- Viewing screenshot: Click **View Screenshot** to view the real-time screenshot of the solution which is being played on the terminal.

Figure 4-4 Viewing the screenshot



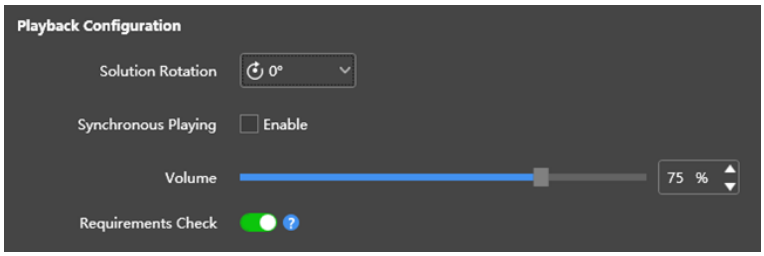

- Exception log: Click **Exception Log** to view the details of the exceptions occuring during playback.
- Playing a solution: Move the mouse to the thumbnail of the solution and click .

Figure 4-5 Solution list




- Stopping playing a solution: Move the mouse to the thumbnail of the solution and click .
- Deleting a solution: Select a solution in the solution thumbnail list and click **Delete**.
- Rotating a solution: Select a rotation angle from the drop-down box next to **Solution Rotation**. The rotation angle is absolute.
- Synchronous playing: Enable or disable the synchronous playback.
- Requirements Check: After this function is enabled, the device can automatically detect the media not meeting the requirements.

Figure 4-6 Playback configuration

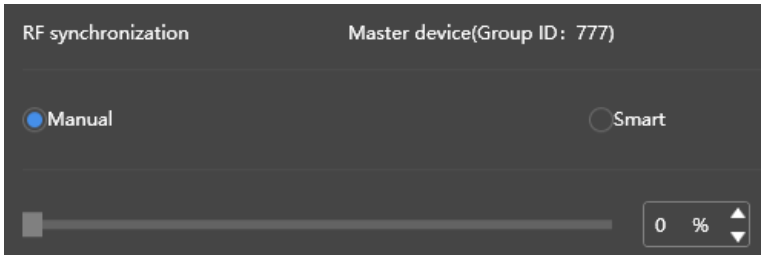


# 4.2 Brightness Adjustment

Manually adjust the brightness or set rules of smart brightness adjustment.

When the information related to RF synchronization is displayed, as shown in Figure 4-7, it indicates that brightness synchronization is enabled on the current terminal. See relevant operations in 4.16 RF Management. RF synchronization requires you to specify a master device and slave devices. Users only need to set the brightness of the master device. The slave devices will keep the same brightness as the master device via the RF signal.

Figure 4-7 RF synchronization-brightness



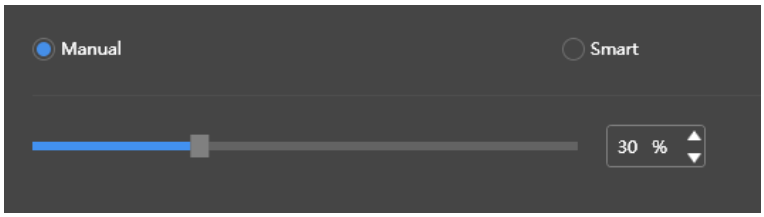

## 4.2.1 Manual Adjustment

Step 1 Choose Terminal Control > Brightness adjustment.

Step 2 Select the target terminal in the terminal list.

Step 3 Choose **Manual**, and drag the slider or enter a value to adjust screen brightness.

Figure 4-8 Manual adjustment



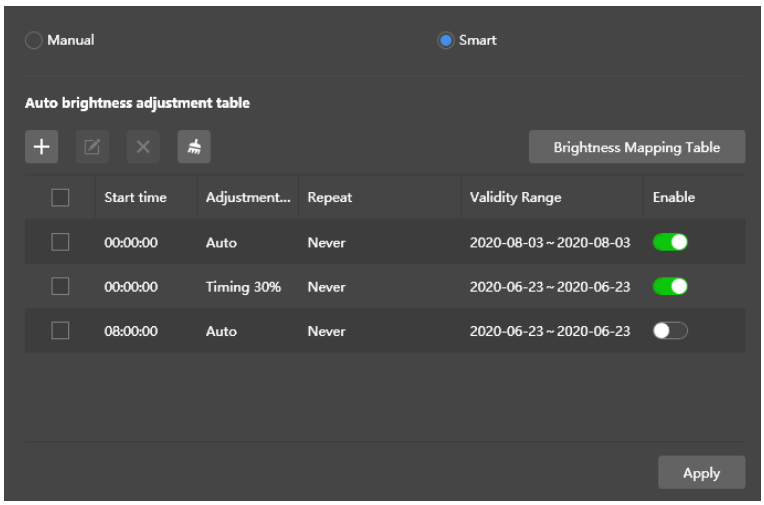

## 4.2.2 Smart Adjustment

Step 1 Choose Terminal Control > Brightness adjustment.

Step 2 Select the target terminal in the terminal list.

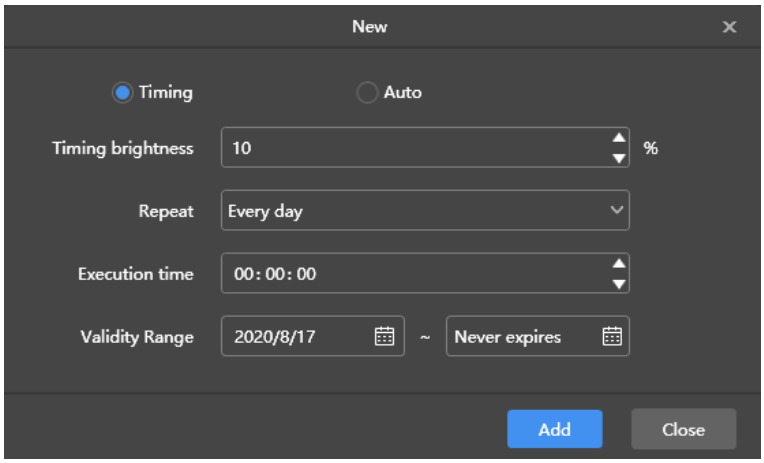
Step 3 Choose **Smart** and click  . In the window that appears, choose **Timing** or **Auto**, set the corresponding brightness adjustment rules, and then click **Add**.

Figure 4-9 Smart brightness adjustment




- Timing brightness adjustment: During the period you set to enable smart adjustment, the screen brightness will be the fixed value you manually set.

Figure 4-10 Scheduled brightness adjustment




- Automatic brightness adjustment: During the period that you set to enable auto adjustment, the screen brightness will be automatically adjusted according to the automatic brightness mapping table.

  The automatic brightness mapping table allows users to divide the ambient brightness into several subsections, set corresponding screen brightness for each subsection, and specify a brightness collection interval and the number of times to collect brightness. The screen brightness automatically changes according to the ambient brightness subsection to which the collected ambient brightness belongs.

Figure 4-11 Automatic brightness adjustment

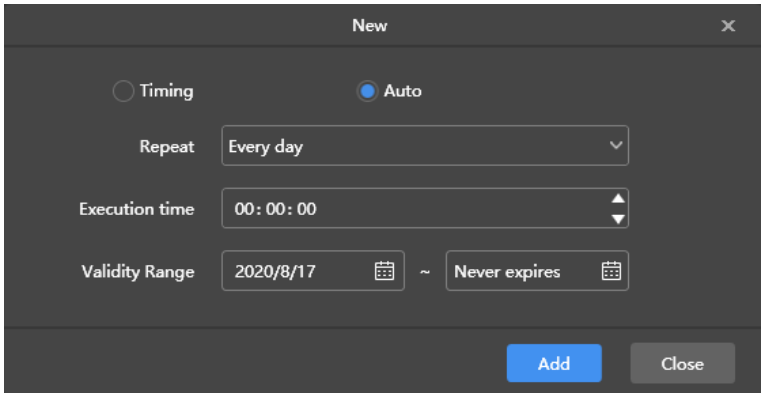
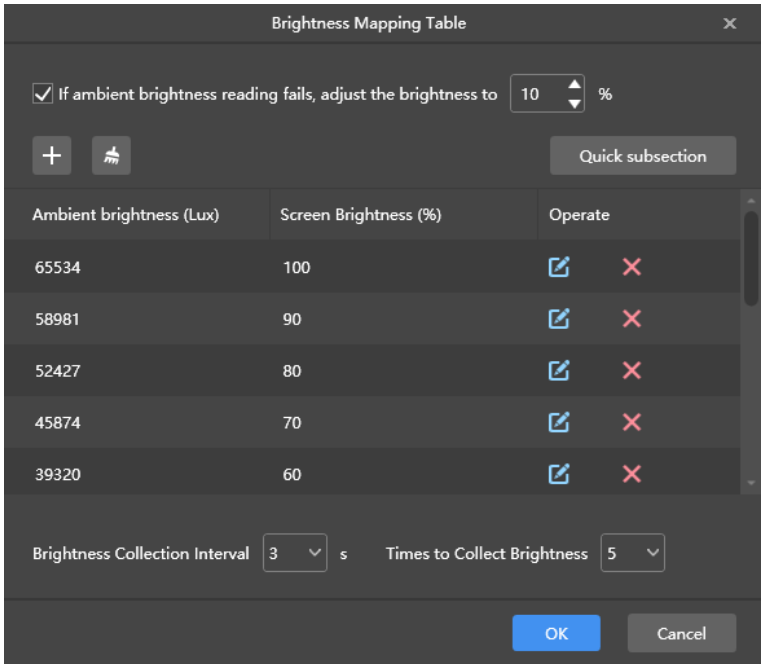



Figure 4-12 Brightness mapping table




Step 4 After configuration, click **Apply**.

## 4.3 Video Source

Configure video source parameters and specify the rule of setting the input source to HDMI or the internal video source.

### 4.3.1 Video Source Parameter Configuration

Set the output offset position of the video source, resolution of the internal video source, and resolution of the HDMI video source.

Step 1 Choose Terminal Control > Video Source.

Step 2 Select the target terminal from the terminal list.

Step 3 In the **Internal Source Resolution** area, specify a resolution and click **Apply**.

This resolution refers to the operating system resolution of the Taurus multimedia player and must be higher than the screen resolution.

**Note:**

Only the TB30, TB40, TB50 and TB60 support custom resolutions.

Step 4 In the **Parameter Configuration** area, configure the following parameters.

- Output Position: Set the start position of the image displayed on the screen.
- HDMI Source Resolution: Refers to the resolution of the external video source input from the HDMI IN connector.

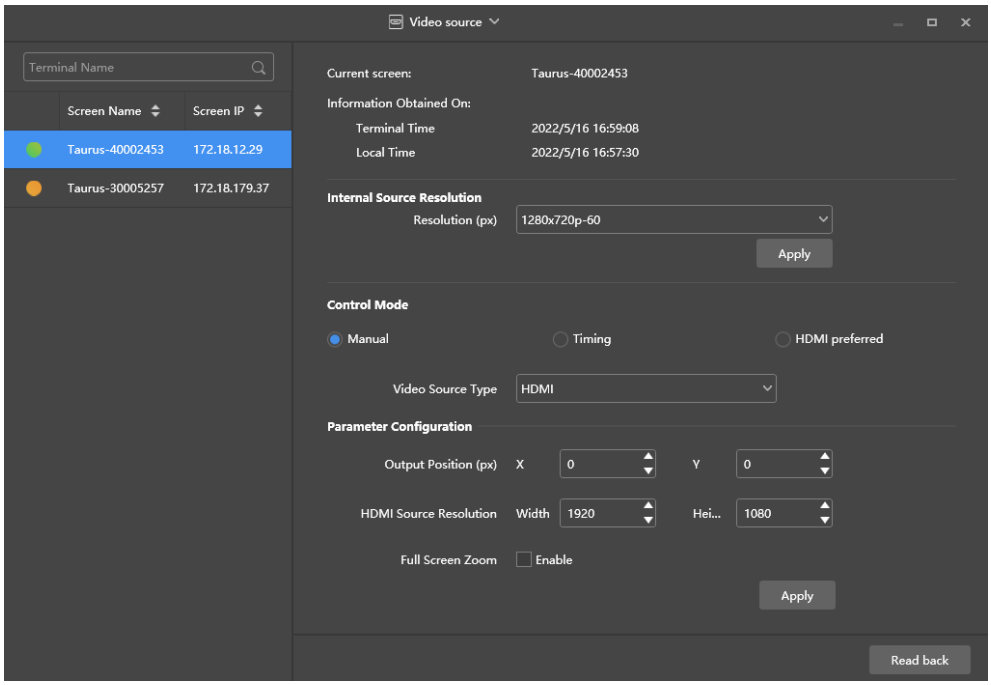
  In studio mode, users can enable full screen zoom to let the image automatically fit the screen.

  Requirments of full screen zoom in studio mode:

  – 64 pixels ≤ Video source width ≤ 2048 pixels

  – Support for zooming out only

Figure 4-13 Parameter configuration




Step 5 After the configuration, click **Apply**.

## 4.3.2 Manual Switching

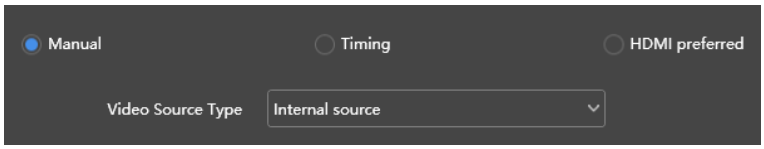
Immediately switch between the internal input source and HDMI input source.

Step 1 Choose Terminal Control > Video source.

Step 2 Select the target terminal in the terminal list.

Step 3 In the **Control Mode** area, choose **Manual** and configure the parameters.

Figure 4-14 Manual switching




Step 4 Click **Apply**.

### 4.3.3 Scheduled Switching

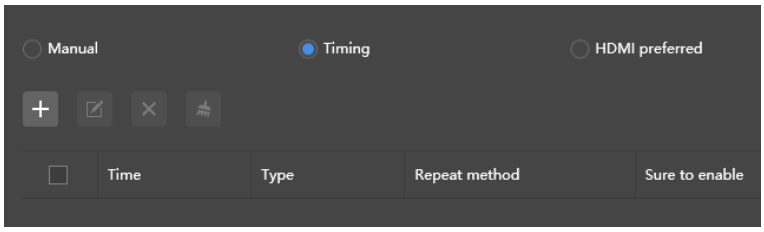
Switch between the internal input source and HDMI input source as scheduled.

Step 1 Choose Terminal Control > Video source.

Step 2 Select the target terminal in the terminal list.

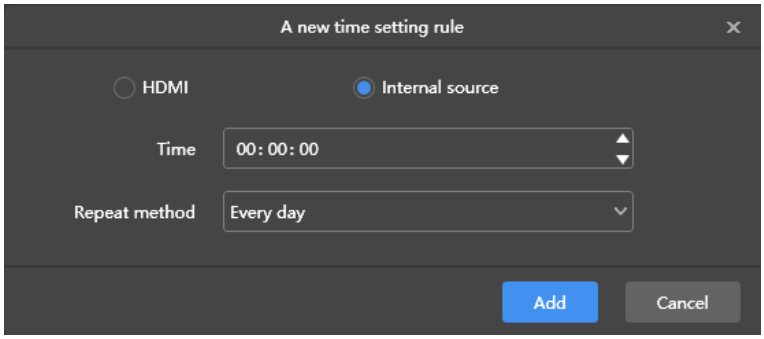
Step 3 In the **Control Mode** area, choose **Timing**.

Figure 4-15 Scheduled switching




Step 4 Click  . In the pop-up dialog box, choose **Internal** or **HDMI**, and then set the time and cycle to use the video source. At last, click **Add**.

Figure 4-16 Creating a scheduled rule




Step 5 After the configuration, click **Apply**.

### 4.3.4 HDMI Preferred

The HDMI port is preferred for playing the video in synchronous mode.

Step 1 Choose Terminal Control > Video source.

Step 2 Select the target terminal in the terminal list.

Step 3 In the Control Mode area, choose HDMI preferred.

Step 4 After configuration, click **Apply**.

# 4.4 Screen Status Control

Set the current playing status of the screen.

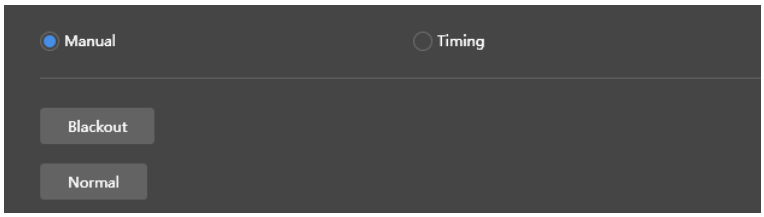
## 4.4.1 Manual Control

Step 1 Choose Terminal Control > Screen Status Control.

Step 2 Select the target terminal in the terminal list.

Step 3 Choose **Manual** to enter the manual settings page.

Figure 4-17 Manual Control




Step 4 Click Blackout or Normal.

Here the blackout is to decrease the screen brightness to 0% instead of turning off the power.

## 4.4.2 Timing Control

Step 1 Choose Terminal Control > Screen Status Control.

Step 2 Select the target terminal in the terminal list.

Step 3 Choose **Timing** and click  . In the window that appears, click **Blackout** or **Normal**, set the playback time and interval, and then click **Add**.

Figure 4-18 Scheduled control

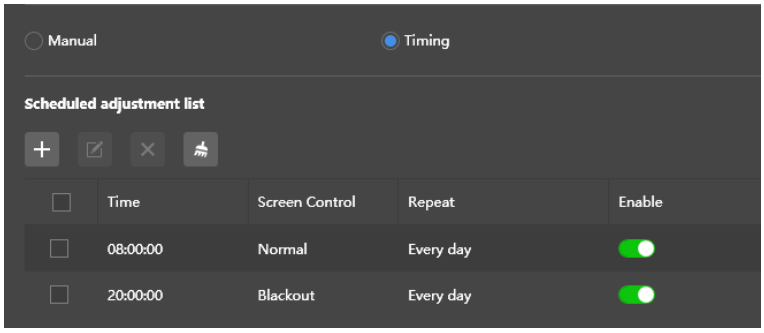
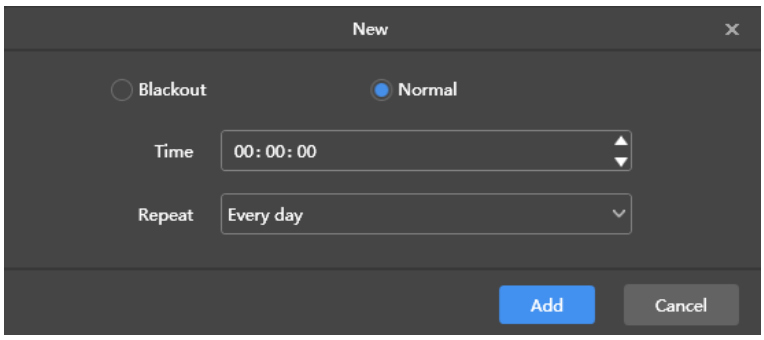


Figure 4-19 Creating a scheduled rule




Step 4 After the settings, click **Apply**.

## 4.5 Power On/Off

### Scenarios

Schedule the power on/off of players.

### Operating Procedure

Step 1 Choose Terminal Control > On/Off.

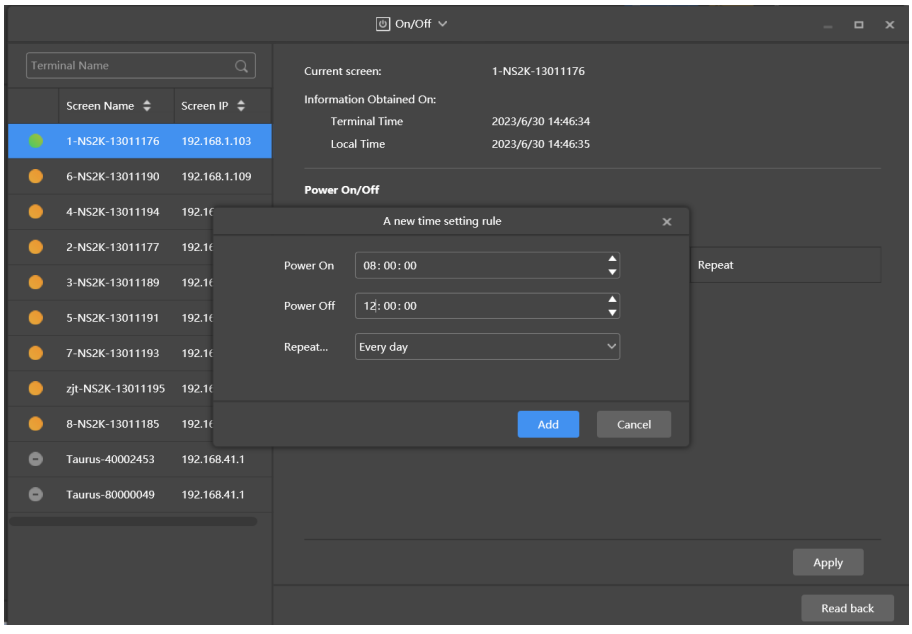
Step 2 In the **Power On/Off** area, click + to create a scheduled control command.

Step 3 Specify the time to power on and off the player and select a repeat method.

The interval between the power-on time and power-off time cannot be less than 2 minutes. When the power-off time is earlier than the power-on time, the device will be powered off on the next day.

Step 4 After the settings, click **Add** to save the command.

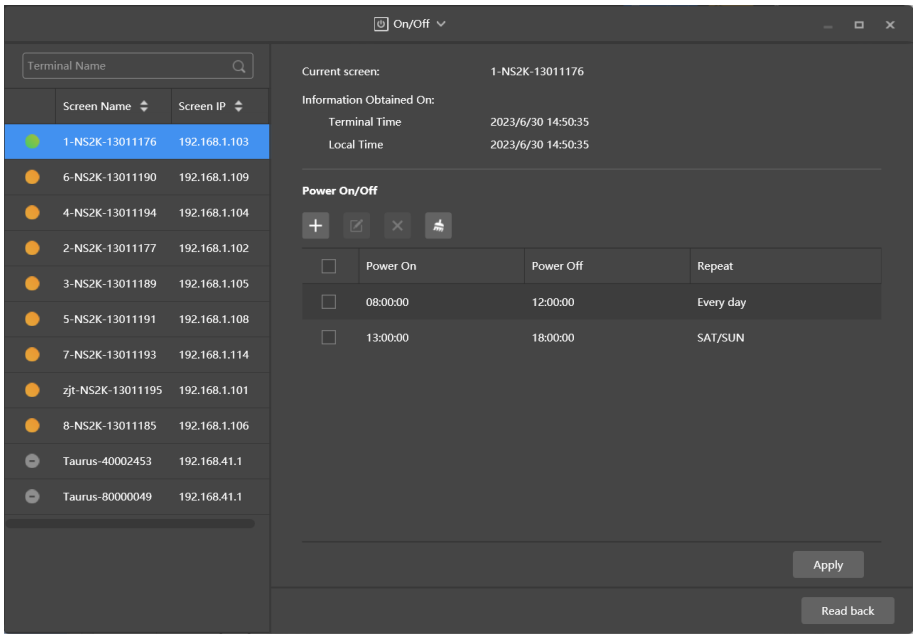
Figure 4-20 Creating a scheduled control command.




Step 5 Select a player from the terminal list.

Step 6 Select a command and click **Apply** to apply the command. (If no command is selected, all the commands will be applied by default.)

Figure 4-21 Scheduling power on/off




## 4.6 Time Synchronization

Time synchronization is used for syncing the time of terminal players.

Table 4-1 Time synchronization methods

| Method | Time Reference | Application Scenario |
|---|---|---|
| Manual | Time of the PC with ViPlex Express installed | Manually set the time zone of the terminal. |
| Automatic | GPS time synchronization: Radio signal from a GPS satellite | Sync the time of the Taurus with GPS, NTP, or RF. All these three methods are applicable to synchronous playback.<br>• The accuracy of GPS time synchronization depends on the satellite signal and it is suitable for outdoor applications without obstructions around<br>• The accuracy of NTP time synchronization depends on the network speed and it is suitable for situations with a low requirement for synchronization.<br>• RF time synchronization does not depend on the network and has a high synchronization performance. It is suitable for situations with an increased requirement for synchronization. |
| | NTP time synchronization: Time of the NTP server | |
| RF | Time of the reference device | |

**Note:**

- To enable synchronous playback, you need to turn on the synchronous playback function after syncing the time automatically or with RF.

### 4.6.1 Manual Time Synchronization

Sync the time of the terminal with the date and time of the selected time zone.

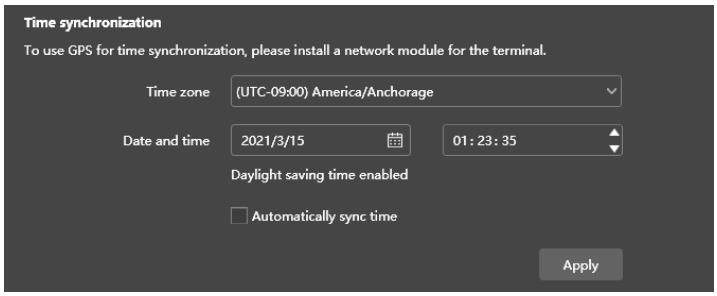
Step 1 Choose Terminal Control > Time synchronization management.

Step 2 Select the target terminal from the terminal list.

Step 3 Select a time zone from the **Time Zone** drop-down box. You can also adjust the current date and time as required.

If the current time zone observes daylight saving time and the current date is within the range of daylight saving time, **Daylight saving time enabled** will be displayed. Otherwise, it will not be displayed.

Figure 4-22 Selecting a time zone




Step 4 After the settings, click **Apply**.

### 4.6.2 GPS Time Synchronization

#### Prerequisites

- Before GPS time synchronization, users need to buy and install network modules.
- The Taurus terminal version is V3.3.0 or later.

#### Operating Procedure

Step 1 Choose Terminal Control > Time synchronization management.

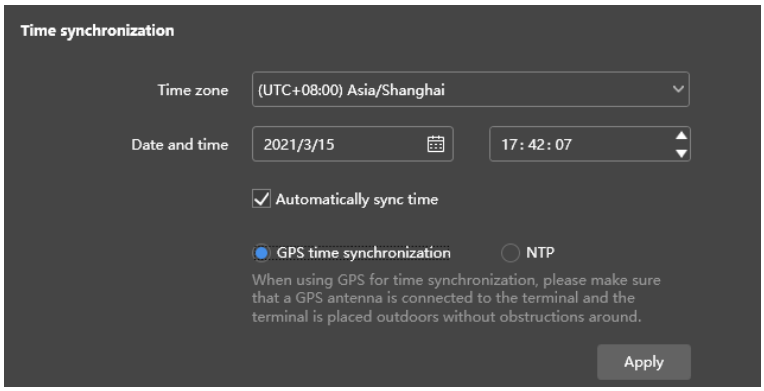
Step 2 Select the target terminal from the terminal list.

Step 3 (Optional) Select a time zone from the **Time zone** drop-down box.

If the current time zone observes daylight saving time and the current date is within the range of daylight saving time, **Daylight saving time enabled** will be displayed. Otherwise, it will not be displayed.

Step 4 Check **Automatically sync time** and select GPS time synchronization.

Figure 4-23 GPS time synchronization




Step 5 After the settings, click **Apply**.

## 4.6.3 NTP Time Synchronization

Sync the time of terminal players with the time of the NTP server.

Step 1 Choose Terminal Control > Time synchronization management.

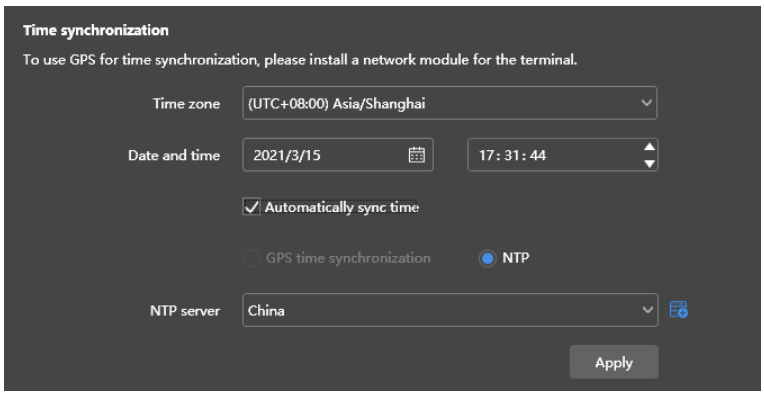
Step 2 Select the target terminal from the terminal list.

Step 3 (Optional) Change the time zone in the **Time Zone** drop-down box.

If the current time zone observes daylight saving time and the current date is within the range of daylight saving time, **Daylight saving time enabled** will be displayed. Otherwise, it will not be displayed.

Step 4 Check **Automatically sync time** and **NTP**, and then select an NTP server to sync the time of the terminal with the time of the NTP server. If the existing NTP servers cannot meet the requirements, click  to customize a server.

Figure 4-24 Selecting an NTP server




Step 5 After the settings, click **Apply**.

## 4.6.4 RF Time Synchronization

### Related Information

To use RF time synchronization, you need to set one of the Taurus units on the RF network as the master device and others as slave devices.

- The master device is used for time reference and the time of the slave devices is synced with the time of the master device via the RF signal.
- The Taurus allows the master device to sync time with an NTP server.

## Prerequisites

- The Taurus products support RF time synchronization, such as T3, T6, TB3, TB4, TB6, and TB8.
- Before RF time synchronization, RF modules must be installed. ViPlex Express can detect and display the RF module status.

## Operating Procedure

**Set the master and slave devices**

Step 1 Choose Terminal Control > RF management.

Step 2 Select the target terminal from the terminal list.

Step 3 Turn on RF synchronization.

Step 4 Set the current device as the master device or slave device.

Step 5 Set a group ID.

If you enter the group ID of the master device for a slave device, the slave device will be assigned to the same group as the master device.

Step 6 Select Time synchronization.

After RF synchronization is applied, the time, brightness, volume, and environment monitoring data of the slave devices will be kept the same as the master device via the RF signal. Select the options that require RF synchronization.

Figure 4-25 Master device

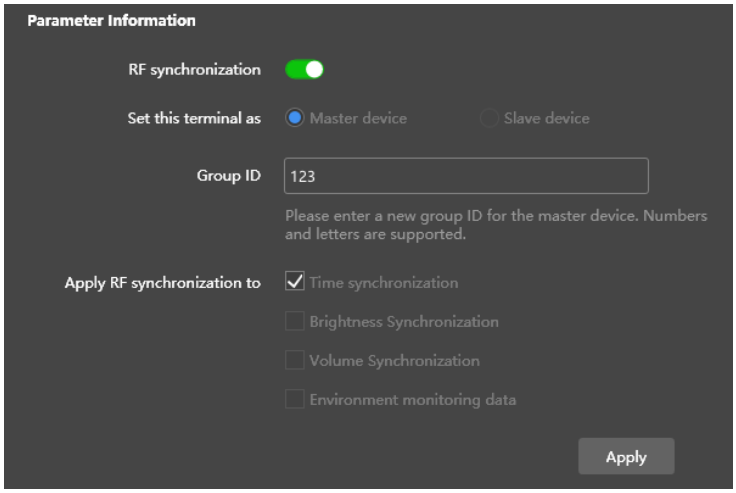
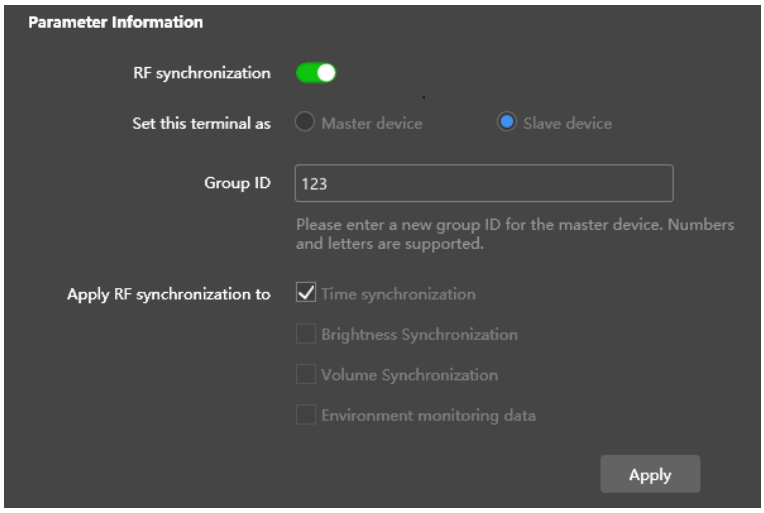


Figure 4-26 Slave device




Step 7 Click **Apply**.

**Set a time synchronization method for the master device**

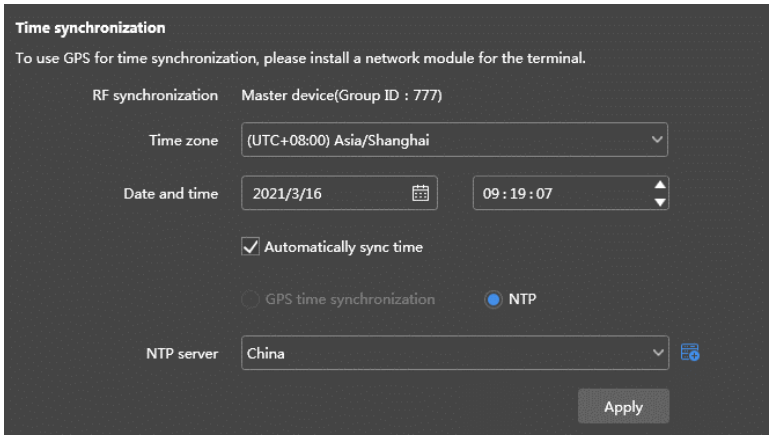
You need to set time synchronization rules for the master device only and the time of the slave devices will be kept in sync with the time of the master device via the RF signal.

Step 8 Choose Terminal Control > Time synchronization management.

Step 9 Select the master terminal from the terminal list.

The information relating to RF synchronization is displayed, which indicates that RF synchronization of the current terminal is enabled.

Figure 4-27 RF synchronization-Time synchronization




Step 10 View the time zone and time of the current terminal.

If the current time zone observes daylight saving time and the current date is within the range of daylight saving time, **Daylight saving time enabled** will be displayed. Otherwise, it will not be displayed.

Step 11 Configure rules for time synchronization.

- Manual time synchronization: Select a time zone from the **Time Zone** drop-down box to sync the time of the terminal with the date and time of the time zone. You can also adjust the current date and time as required.

- GPS time synchronization: Check **Automatically sync time** and select GPS time synchronization.

**Note:**

GPS time synchronization can be implemented when the master device meets the prerequisites in 4.6.2 GPS Time Synchronization.

- NTP synchronization: Check **Automatically sync time**, select NTP time synchronization, and then select an NTP server to sync the time of the terminal with the time of the NTP server. If the existing NTP servers cannot meet the requirements, click  to customize a server.

Step 12 After the settings, click **Apply**.

# 4.7 Restart Configuration

Restart terminals immediately and configure restart rules.

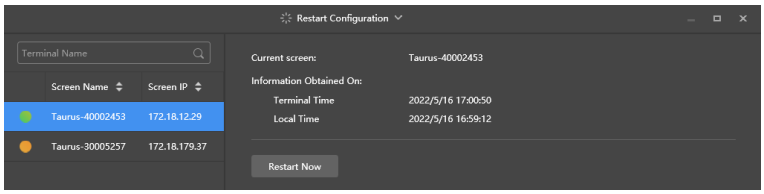
## 4.7.1 Restarting Immediately

Step 1 Choose Terminal Control > Restart Configuration.

Step 2 Select the target terminal in the terminal list.

Step 3 Click Restart Now.

Figure 4-28 Restart




Step 4 Click **OK** in the pop-up dialog box to restart the terminal immediately.

## 4.7.2 Scheduled Restart

Step 1 Choose Terminal Control > Restart Configuration.

Step 2 Select the target terminal from the terminal list.

Step 3 Click  . Set the time and interval to restart a terminal in the pop-up dialog box and then click **Add**.

Figure 4-29 Scheduled adjustment

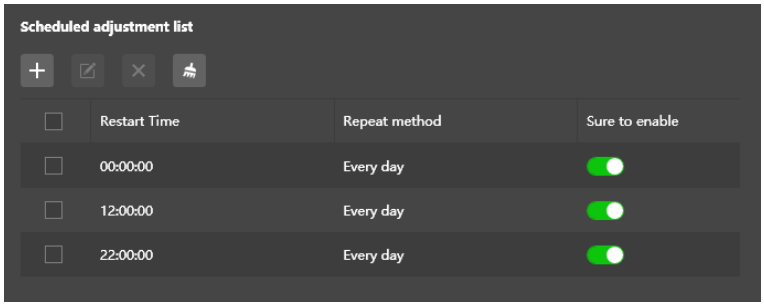
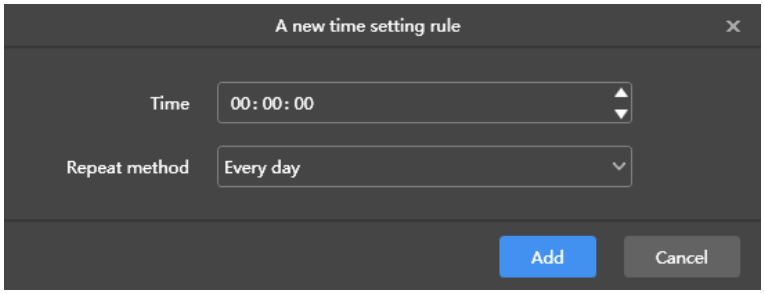


Figure 4-30 Creating a scheduled rule




Step 4 After the settings, click **Apply**.

## 4.8 Color Temperature

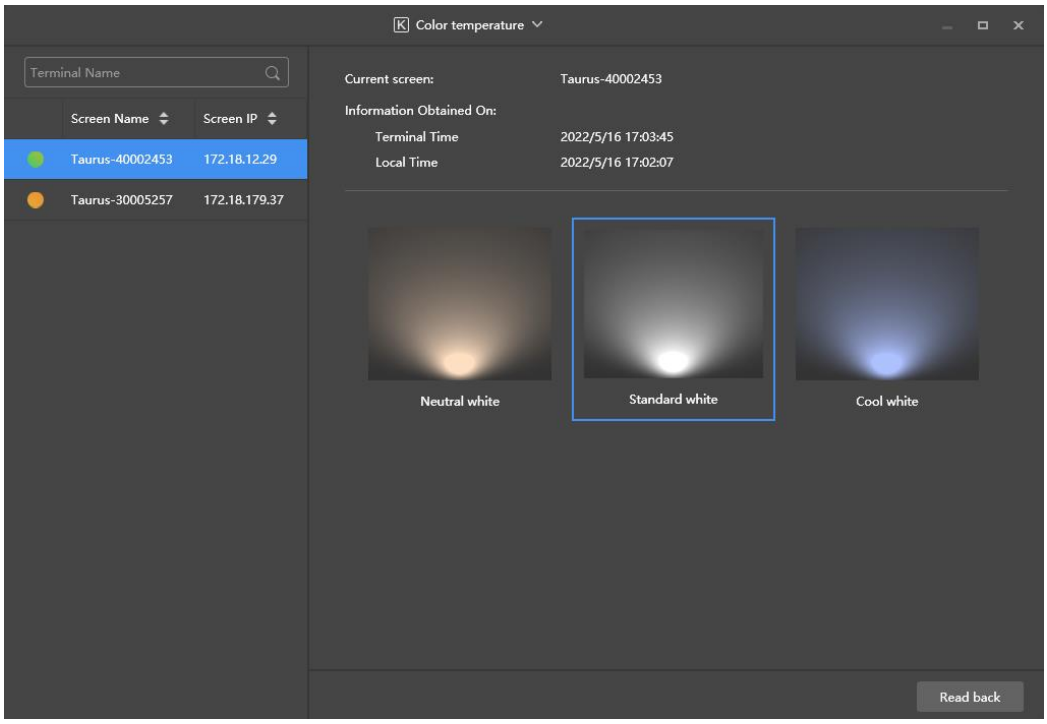
Set the color temperature of the screen, including neutral white, standard white, and cool white.

Step 1 Choose Terminal Control > Color temperature.

Step 2 Select the target terminal in the terminal list.

Step 3 Select a color temperature type.

Figure 4-31 Color temperature




## 4.9 Monitoring

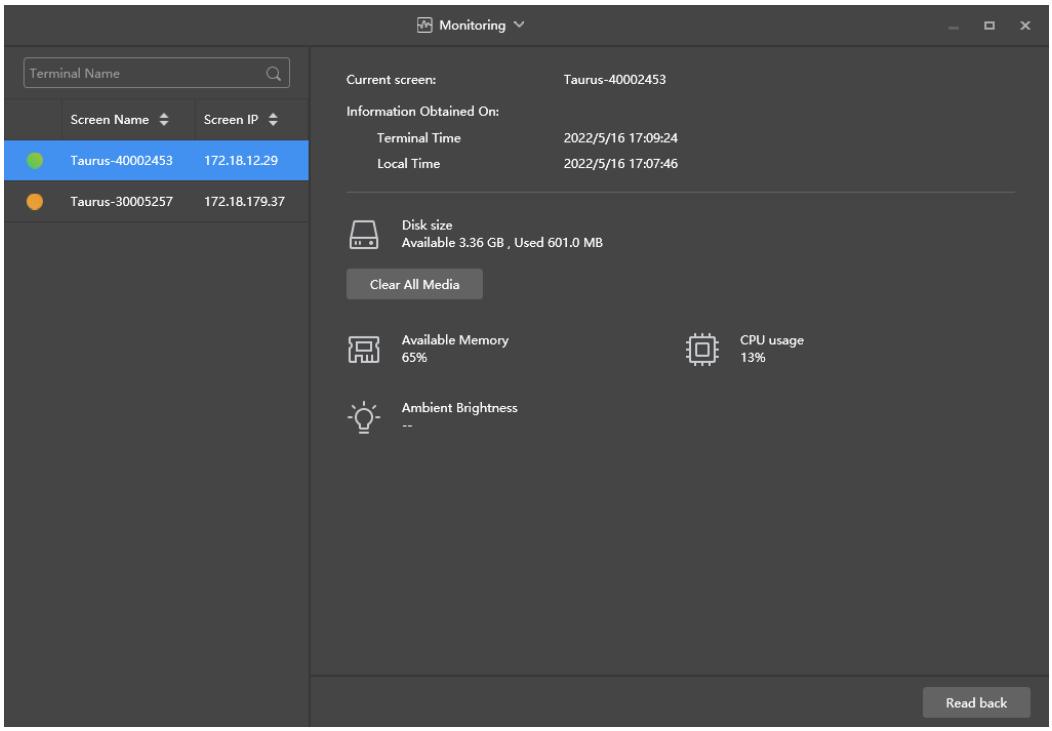
Step 1 Choose Terminal Control > Monitoring.

Step 2 Select the target terminal in the terminal list.

Step 3 Check the terminal hardware information listed below. If the terminal has an external storage device, you can also check the external storage information.

- Disk size
- Memory availability
- CPU usage
- Ambient brightness

Figure 4-32 Monitoring




Step 4 Click **Clear All Media,** select the cleanup scope and click **OK**.

## 4.10 Play Logs

View and export play logs.

### 4.10.1 Querying Play Logs

Step 1 Choose Terminal Control > Play logs.

Step 2 Select the target terminal in the terminal list.

Step 3 Choose the time range of the play log that you want to view and then click **Query**.

Step 4 In the play log list, click a play log name to view the summary and detailed information of the log.

### 4.10.2 Exporting Play Logs

Step 1 Choose Terminal Control > Play logs.

Step 2 Select the target terminal in the terminal list.

Step 3 In the play log list, select the target play log.

Step 4 Click **Export**.

Step 5 In the pop-up dialog box, choose the export path and format.

Step 6 Click **OK**.

## 4.11 Font Management

Manage the fonts supported by the Taurus.

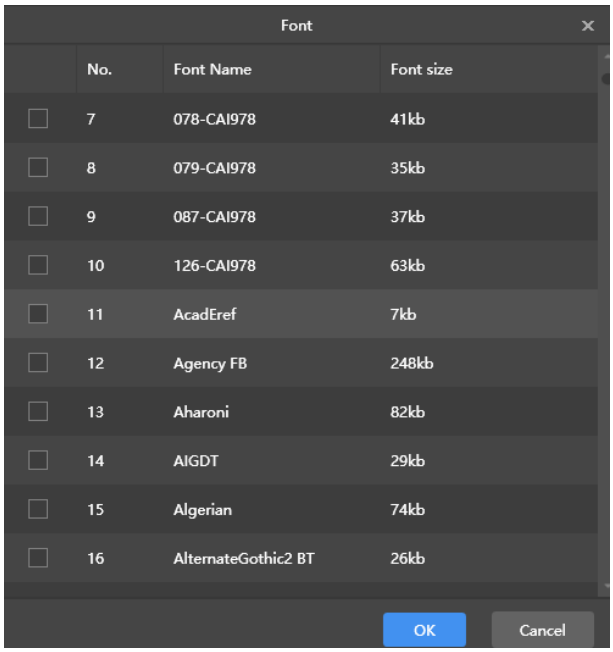
### 4.11.1 Adding Fonts

Step 1 Choose Terminal Control > Font management.

Step 2 Select the target terminal in the terminal list.

Step 3 Click + next to **Name** to acquire local fonts on the PC.

Figure 4-33 Local fonts

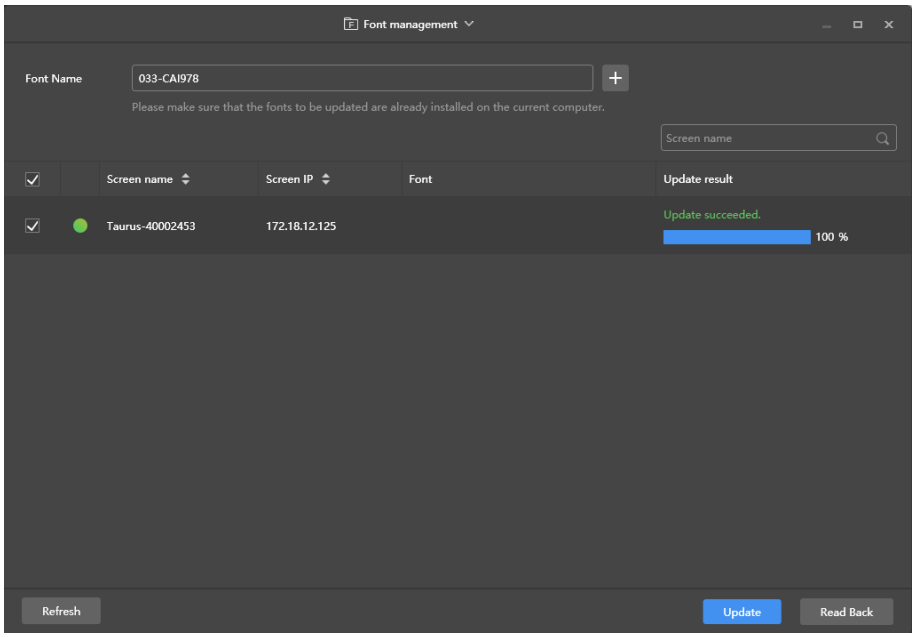



Step 4 Select the target font in the pop-up dialog box.

Step 5 Click **OK**.

Step 6 Click **Update**. The update progress will be shown in the **Update result** column.

Figure 4-34 Adding a font



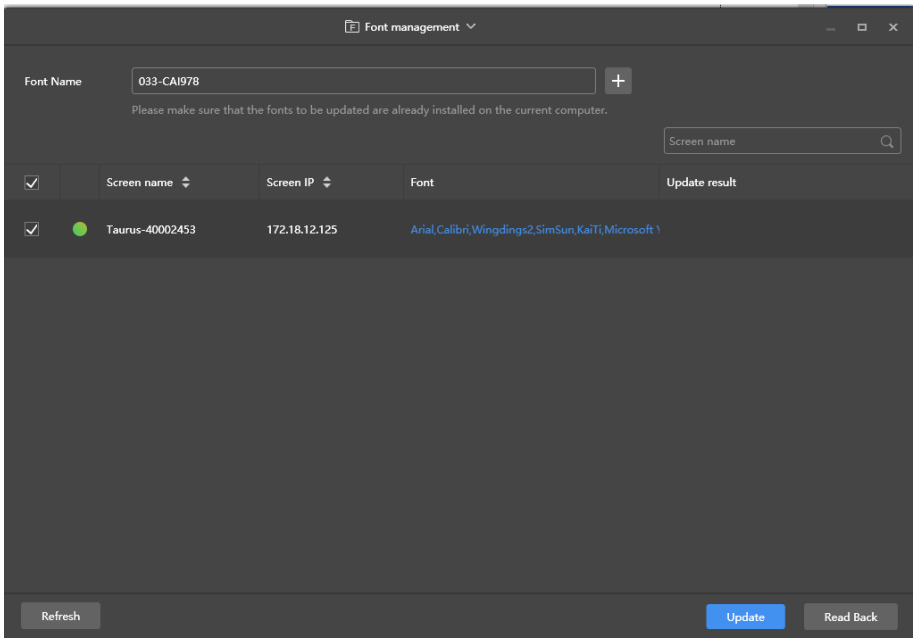

## 4.11.2 Deleting Fonts

Step 1 Choose Terminal Control > Font management.

Step 2 Select the target terminal in the terminal list.

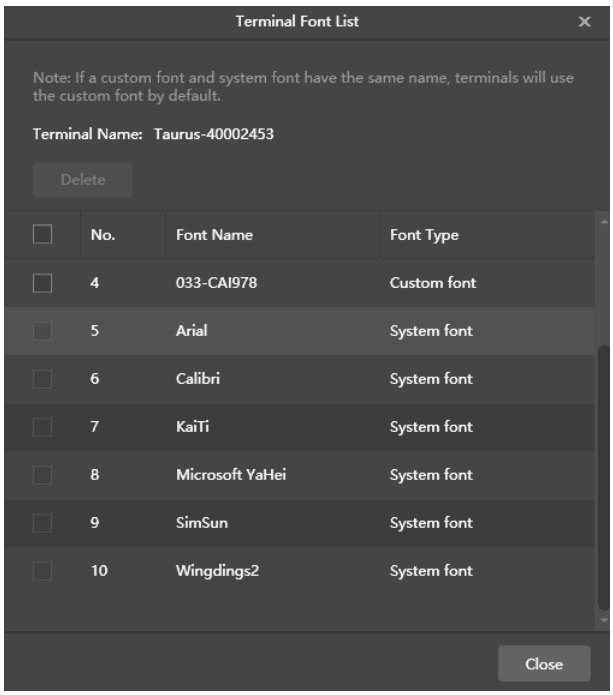
Step 3 Click **Read back** at the bottom right to read back the fonts on the terminal.

Figure 4-35 Reading back a font




Step 4 Click the link in the **Font** column of the target terminal. The **Font list in terminal** page is displayed.

Figure 4-36 Terminal font list




Step 5 Select target fonts.

Step 6 Click **Delete**.

## 4.12 Network Configuration

Configure the current network, including wired network, Wi-Fi AP, Wi-Fi Sta, and mobile network.

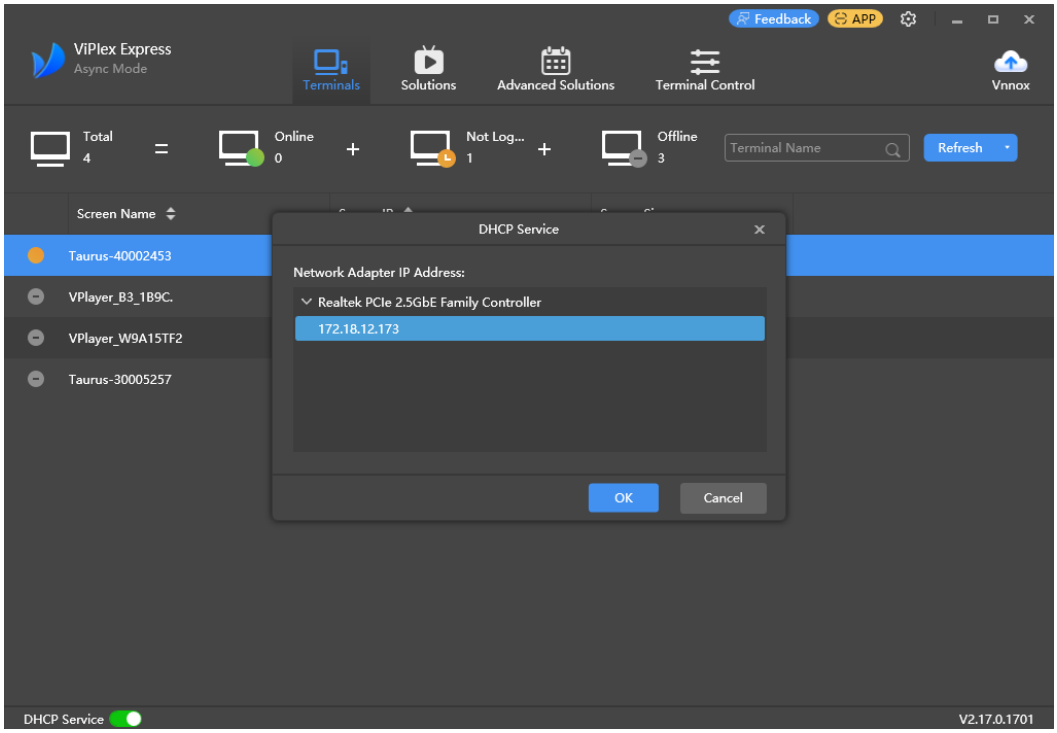
### 4.12.1 Configuring Wired Network

#### Application Scenarios

- Set IP address based on the actual needs while connecting terminals to the Internet via Ethernet cable.
- When the PC with ViPlex Express installed and the multimedia player are connected with an Ethernet cable, turn on the DHCP of the multimedia player and the DHCP service at the bottom left of ViPlex Express, select a local IP address, and then click **OK** to connect to the Taurus automatically.

  If the connection is not stable, set a static IP address for the PC.

Figure 4-37 DHCP service (ViPlex Express)




## Related Information

When the Taurus is delivered, the DHCP is turned on by default.

## Operating Procedure

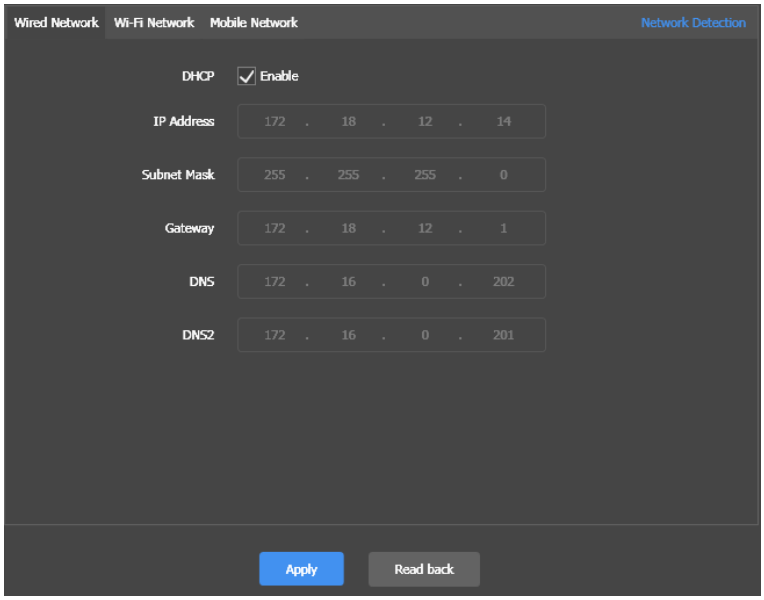
Step 1 Choose Terminal Control > Network configuration.

Step 2 Select the target terminal in the terminal list.

Step 3 In the **Wired network configuration** area, perform the following operations based on actual needs.

- Select **Enable** next to **DHCP** to get an IP address automatically.
- Deselect **Enable** next to **DHCP** and configure a static IP address.

Figure 4-38 Wired network configuration




Step 4 Click **Apply**.

## 4.12.2 Configuring Wi-Fi Network

Configure the Wi-Fi AP and Wi-Fi Sta of the terminal.

### 4.12.2.1 Configuring Wi-Fi AP

Change the SSID, password and channel of a terminal and set AP isolation.

Step 1 Choose Terminal Control > Network configuration.

Step 2 Select the target terminal from the terminal list.

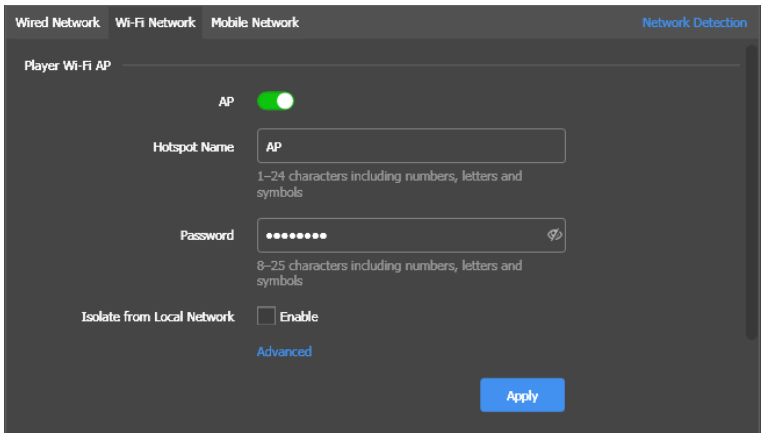
Step 3 Go to **Wi-Fi Network** > **Player Wi-Fi AP** and do the following as required.

- AP: Turn on/off the terminal Wi-Fi AP.
- Hotspot Name and Password: Change the SSID and password of the terminal Wi-Fi AP.

  The default SSID of the terminal Wi-Fi AP is “AP + *Last 8 digits of the SN*” and the default password is printed on the SSID label of the product.
- Isolate from Local Network: After enabled, the Wi-Fi AP of the terminal is isolated from the local network and users cannot access the local network by connecting to the Wi-Fi AP.
- Advanced > Channel: Switch the channel of the Wi-Fi AP.

  The channel can be switched when the terminal software is V2.2.0 or later.

Figure 4-39 Player Wi-Fi AP configuration



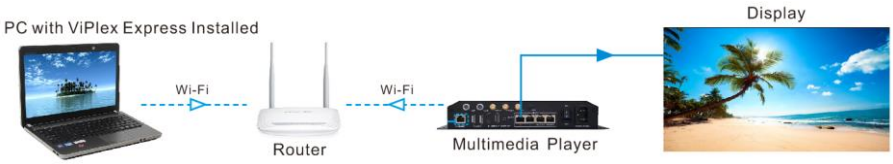

Step 4 Click **Apply**.

### 4.12.2.2 Configuring Wi-Fi Sta

## Application Scenarios

The Taurus terminals designed with dual Wi-Fi modes, such as T3, T6, TB3, TB6, and TB8, support the following functions after users configure Wi-Fi Sta for the Taurus with ViPlex Express.

- If the router is connected to the Internet, terminals can access the Internet via the router after Wi-Fi Sta is configured.
- The PC with ViPlex Express installed and the multimedia player are connected to the same WLAN via the Wi-Fi AP of the router.




## Operating Procedure

Step 1 Choose Terminal Control > Network configuration.

Step 2 Select the target terminal from the terminal list.

Step 3 Go to **Wi-Fi Network** > **Wi-Fi Configuration** area and turn on Wi-Fi.

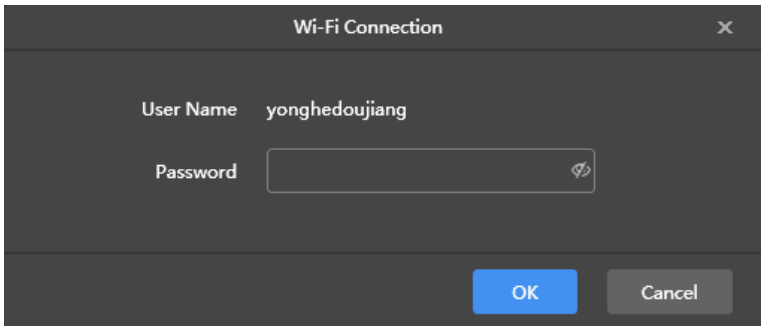
Figure 4-40 Wi-Fi configuration


Step 4 Double click the Wi-Fi information of the router, enter the password and then click **OK**.

**Note:**

When the terminal version is V3.8.2 or later, Wi-Fi without a password can be connected. To connect Wi-Fi without a password, you do not have to enter a password in Step 4 and only need to click **OK**.

Figure 4-41 Wi-Fi connection




#### 4.12.2.3 Switching Wi-Fi Mode

## Application Scenarios

For the Taurus terminals designed with a single Wi-Fi mode, such as T1-4G, TB1-4G, TB2-4G, TB4, and TB4A, users can switch the built-in Wi-Fi AP mode to Wi-Fi Sta mode with ViPlex Express to allow for WLAN connection configuration of the Taurus terminals.

## Prerequisites

Table 4-2 Product model and version requirements

| Taurus | Firmware Version | ViPlex Express Version |
|---|---|---|
| T1-4G | V3.2.0 and later | V2.6.2.0201 and later |
| TB1-4G | | |
| TB2-4G | | |
| TB4 | | |

| Taurus | Firmware Version | ViPlex Express Version |
|---|---|---|
| TB4A | | |
| TB30 | | |
| TB40 | | |
| TB50 | | |
| TB60 | | |

## Operating Procedure

**Note:**

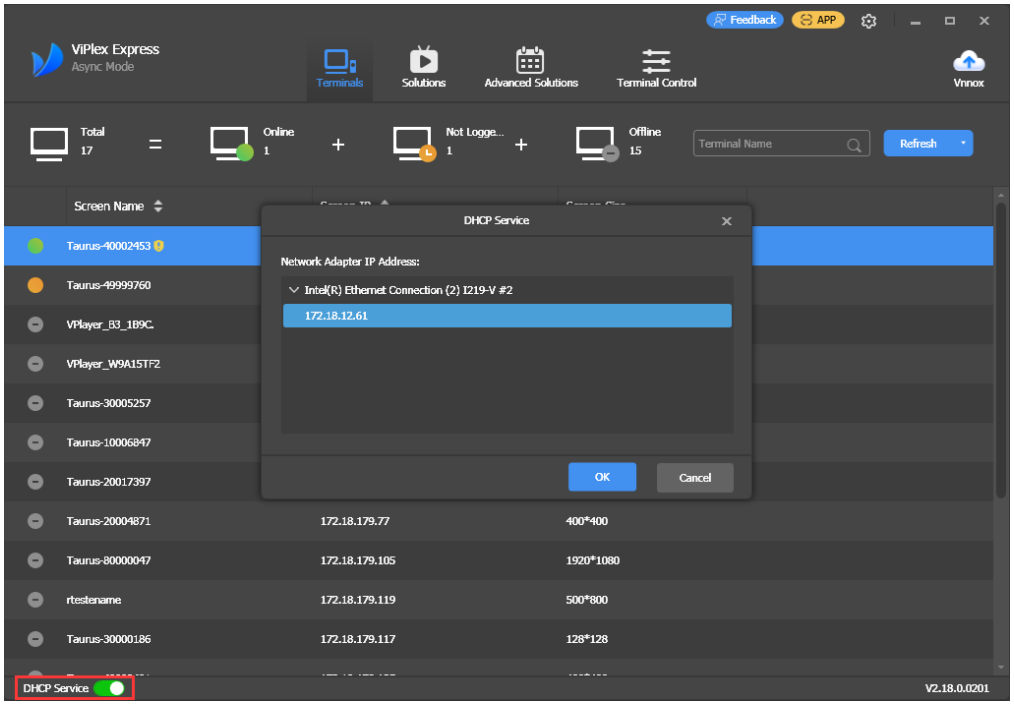
This section introduces how to switch the built-in Wi-Fi AP mode of a terminal to Wi-Fi Sta mode. To ensure that the mode switching is not affected by network disconnection, connect the PC with ViPlex Express installed to the terminal with an Ethernet cable.

### Log In to Terminals

Step 1 Open ViPlex Express.

Step 2 At the bottom left of the page that appears, turn on the DHCP service, select a local IP address and click **OK**.

Figure 4-42 DHCP service switch




Step 3 Click **Refresh** to refresh the screen list.

After detecting a terminal, ViPlex Express will try to log in to the terminal with the default account or the account used for the last login.

- : Denotes that the Taurus is online and you can log in to it. Go to Step 4.
- : Denotes the Taurus is offline and you cannot log in to it.

- : Denotes you have successfully logged into the Taurus.

Step 4 Click **Connect** next to the screen information.

Step 5 Enter the password for the "admin" user and click **OK**.

The login user name of the Taurus series multimedia players is "admin" and the default password is "123456".

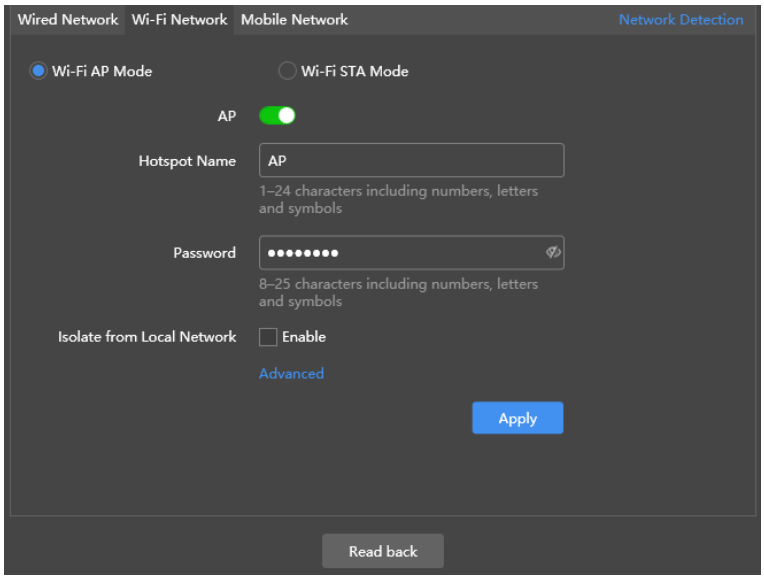
**Switch the Wi-Fi Mode**

Step 6 Choose Terminal Control > Network configuration.

Step 7 Select the target terminal from the terminal list.

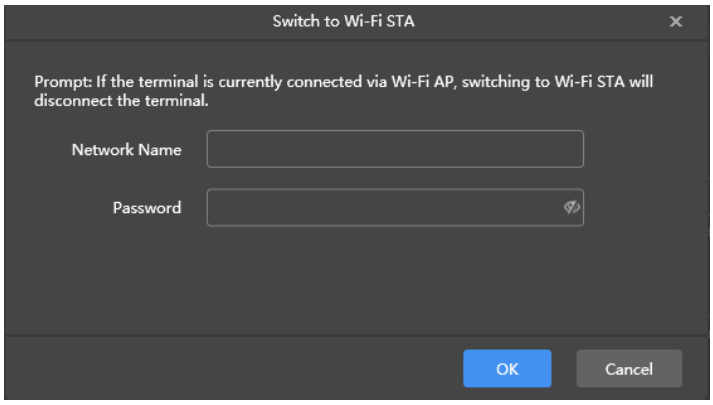
Step 8 Click Wi-Fi Network.

Figure 4-43 Network configuration

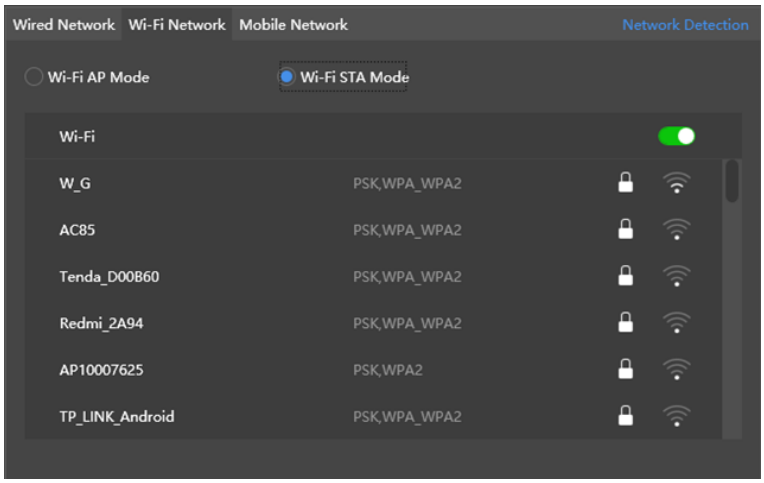



Step 9 Select **Wi-Fi-STA Mode**. In the box that appears, enter the network name and password of the Wi-Fi AP.

Figure 4-44 Wireless network configuration




Step 10 Click **OK**. The connection is successful, as shown in the figure below.




**Notes:**

- Make sure the **CLOUD** indicator is always on, which denotes that the Internet connection is available.
- Make sure the frequency band of the connected Wi-Fi is 2.4 GHz.

Step 11 Unplug the Ethernet cable between the PC and the Taurus.

The priority of the Internet connection methods for the Taurus is in the following order: Wired network > Wi-Fi network > 4G network. After you switch to Wi-Fi Sta mode in ViPlex Express, if a wired network is connected at the same time, the Wi-Fi network will be disconnected automatically.

### 4.12.3 Configuring Mobile Network

Terminals with a network module can access the Internet via a mobile network. ViPlex Express automatically detects mobile network status and displays the detection result.

Step 1 Insert the 4G card into the SIM card slot.

Step 2 Choose Terminal Control > Network configuration.

Step 3 Select the target terminal in the terminal list.

Step 4 Go to **Mobile Network** > **Physical SIM** and turn on mobile network.

Step 5 Click  to expand the APN configuration page.

Step 6 Click **Add**.

Step 7 Enter parameters according to the APN information provided by the carrier and then click **OK**.

Step 8 Select the APN and click Connect.

**Notes:**

- Step 5 to Step 8 are required for customizing an APN or setting an APN for a new SIM card.
- To add and connect to an APN for multiple terminals, select the terminals, click **Add & Connect to APN**,.enter the required information, and click **OK**.

### 4.12.4 Configuring Network Detection

Terminals ping the cloud platform and www.baidu.com to detect network connection status by default. Users can also configure required addresses to ping and enable or disable the addresses.

Step 1 Choose Terminal Control > Network configuration.

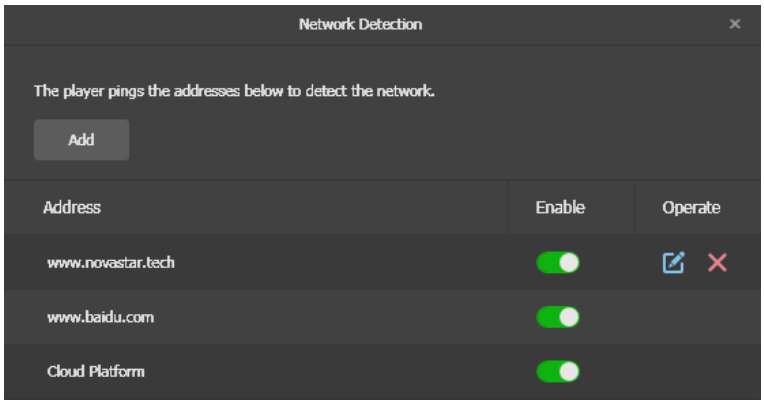
Step 2 Select the target terminal in the terminal list.

Step 3 Click **Network Detection** to configure detection addresses.

- Click **Add** to add an address.
- Click  to modify an address.
- Click  to delete an address.

The default configuration cannot be modified and deleted.

Figure 4-45 Network detection




Step 4 Enable or disable detection addresses.

- Set the toggle button under **Enable** to  to detect the terminal network by pinging the corresponding address.
- Set the toggle button under **Enable** to  to detect terminal network not by pinging the corresponding address.

Step 5 Click **Apply**.

## 4.13 Server Configuration

Bind to VNNOX Standard/AD. Authentication information is required during the configuration.

How to obtain player authentication information:

Log in to VNNOX (www.vnnox.com) and choose  > **Player Authentication** on the homepage of the cloud platform.

### 4.13.1 Binding to VNNOX Standard/AD

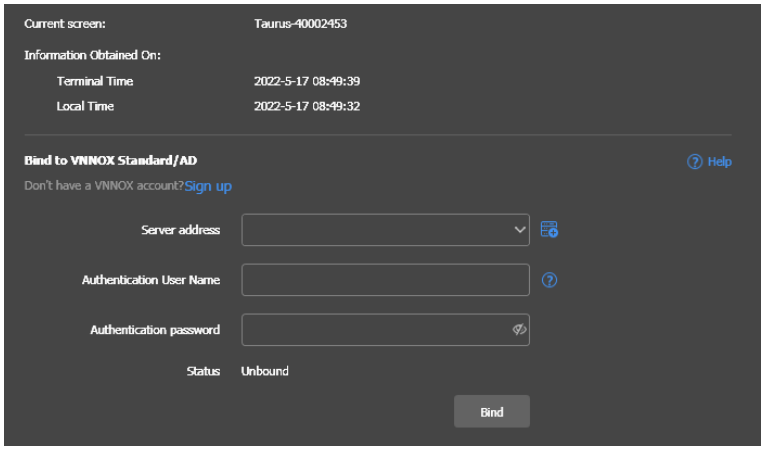
You can bind a terminal to VNNOX Standard/AD.

Step 1 Choose Terminal Control > Server configuration.

Step 2 Select the target terminal from the terminal list.

Step 3 In **Bind to VNNOX Standard/AD**, select a server and enter the authentication user name, authentication password and player name. The authentication information must be consistent with the information in VNNOX.

Figure 4-46 Binding to VNNOX Standard/AD




Step 4 Click **Bind**.

### 4.13.2 Viewing iCare Binding Information

**Notes:**

This function is displayed only when the device has been bound to iCare.

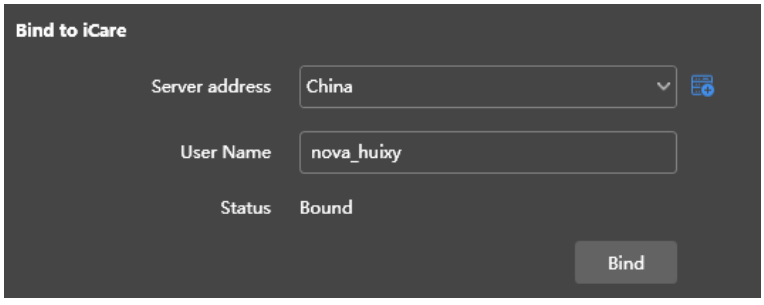
View the binding information of the current terminal.

Step 1 Choose Terminal Control > Server configuration.

Step 2 Select the target terminal from the terminal list.

Step 3 In **Bind to iCare**, view the binding information of the current terminal.

Figure 4-47 Binding information



# 4.14 Terminal Upgrade

- When the Taurus is earlier than V2.1.4, it cannot be directly upgraded to V3.0.0 or later. Users have to upgrade it to V2.1.4 by local upgrade first.
- When the Taurus is later than V2.1.4, there is no limit to the version during the upgrade.

**Note:**

Do not disconnect the power supply during the upgrade. The Taurus will restart once.

## 4.14.1 Online Upgrade

Upgrade terminal versions online. Before you begin, please make sure that your PC can access the Internet.

Step 1 Choose Terminal Control > Terminal Upgrade.

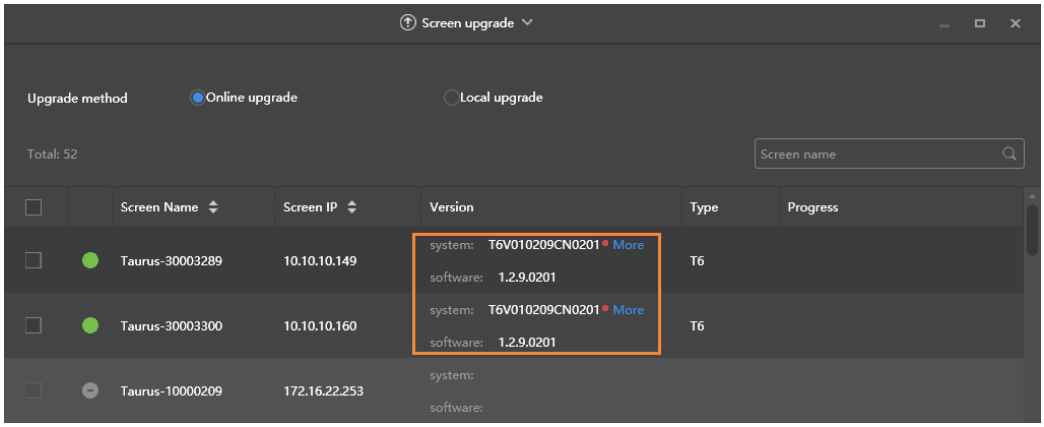
Step 2 Select Online Upgrade.

The system decides whether a terminal needs to be upgraded.

- Yes. The current version information and 

will be displayed, as shown in Figure 4-48. Go to Step 3.
- No. Only the current version information is displayed. No further operation is required.

Figure 4-48 Online upgrade




Step 3 Click **More** and view the related information of the new version.

Step 4 In the terminal information list, select one or more upgradable terminals and click **Upgrade**.

The upgrade progress is displayed.

## 4.14.2 Local Upgrade

Use local files to upgrade terminal versions.

Step 1 Choose Terminal Control > Terminal Upgrade.

Step 2 Select Local Upgrade.

Step 3 Select the upgrade package path.

Step 4 In the terminal information list, select one or more upgradable terminals and click **Upgrade**.

The upgrade progress is displayed.

### 4.14.3 Flashing Firmware

Flashing firmware can roll back the terminal firmware to any version earlier than V4.6.0.

## Prerequisites

- terminals of V4.6.0 and later supports firmware version rollback via flashing firmware.
- The terminal and PC with ViPlex Express installed are connected via serial cable.
- The required version package is obtained.
- Make sure the terminal is connected correctly during flashing.
- Flashing firmware for the first time requires users to install the driver. See detailed operations in Step 1 to Step 2.

## Operating Procedure

Example: Roll back Taurus V4.6.0 to V4.5.0.

Step 1 Ask the technical engineers for the driver installation file.

Step 2 Unzip the installation file and double click “DriverInstall.exe” to install the driver.

Step 3 Unzip the Taurus firmware packages of V4.6.0 and V4.5.0.

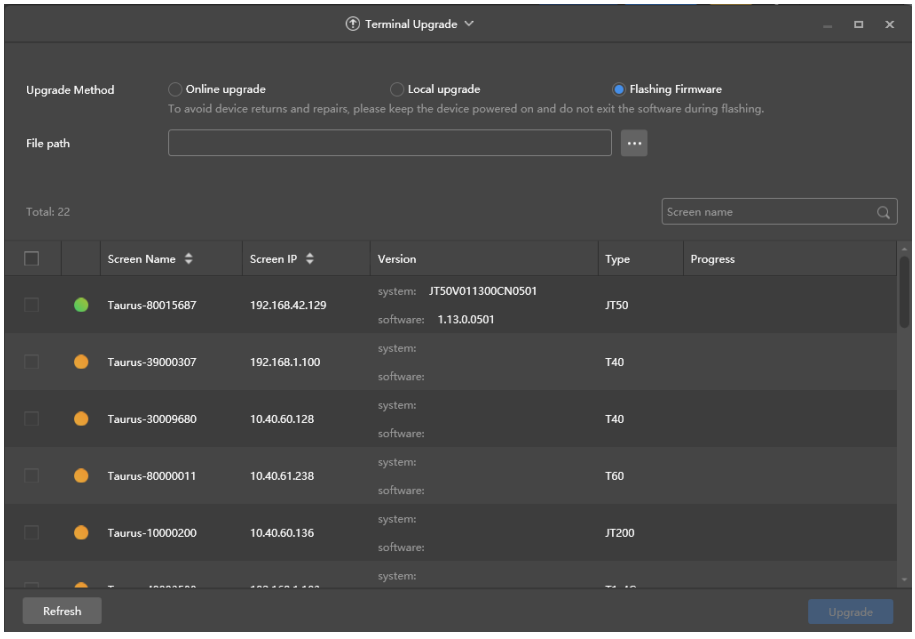
Step 4 Copy the “.ini” configuration file in the V4.6.0 firmware package to the unzipped V4.5.0 firmware package.

Step 5 Zip the V4.5.0 firmware package containing the “.ini” configuration file.

Step 6 In ViPlex Express, choose Terminal Control > Terminal Upgrade.

Step 7 Select Flashing Firmware.

Figure 4-49 Flashing firmware



Step 8 Click  , select V4.5.0 flashing package from the folder that appears, and click **Upgrade**.

Step 9 (Optional) After the flashing is complete, check whether the flashing in successful on the **Terminal Upgrade** page.

If the flashing is abnormal, flash the terminal firmware again with the factory flashing software.

## 4.15 Power Control

When the power switch in ViPlex Express is turned on, the relay will operate and the circuit is connected. When the power switch in ViPlex Express is turned off, the relay will release and the circuit is disconnected.

### 4.15.1 Configuring Power Tags

#### Application Scenarios

Customizing a tag for each relay allows terminal relays with the same tag to operate or release uniformly.

#### Prerequisites

- The terminal is connected to a relay card.
- The terminal software is V2.2.0 or later.

  If the terminal software is earlier than V2.2.0, the **Power control** page of the earlier versions will be displayed and a prompt will be displayed to remind the user to upgrade the terminal to V2.2.0 or later.

#### Operating Procedure

Step 1 Choose Terminal Control > Power control.

Step 2 Select the target terminal from the terminal list.

Step 3 Click **Configure Power Tag** to access the **Power Tag** page. Do the following according to the actual conditions.

- Board power: Control power supplies using relays on terminals. The default tag is **Screen Power** which can be customized.
- External power: Control power supplies using relays on terminals with customized baseboards (Only when the TKS series terminals have customized baseboards and are installed with relays, external power supplies can be connected.). The default tag is **Screen Power** which can be customized.
- Multi-function card power: Control power supplies using relays on the MFN300 multi-function card. Only the tags selected and set for the multi-function card in NovaLCT can be viewed.

Step 4 Click **OK**.

### 4.15.2 Controlling Power Manually

Step 1 Choose Terminal Control > Power control.

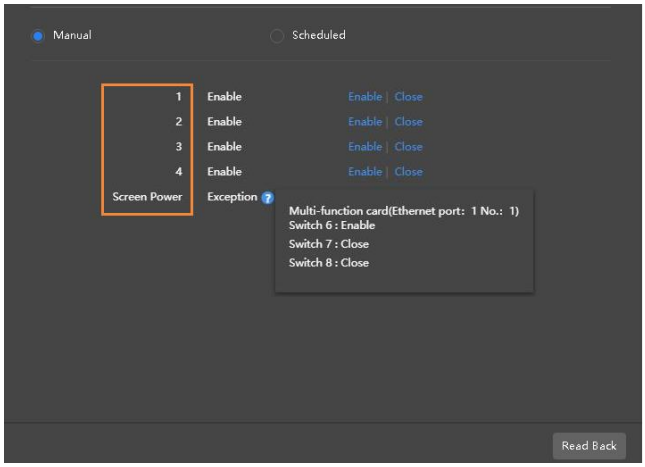
Step 2 Select the target terminal from the terminal list.

Step 3 Select **Manual** to enter the manual setting page.

Step 4 Turn on or off the power switch.

An example of information on the multi-function card power supply is shown in Figure 4-50.

Figure 4-50 Manual setting




The tags in the orange box can be associated with one or more relay circuits. When multiple relay circuits are associated and each of them is turned on (or off), **Enable** (or **Close**) is displayed. Otherwise, **Mixture** is displayed and the detailed information of each circuit is provided.

### 4.15.3 Controlling Power as Scheduled

Step 1 Choose Terminal Control > Power control.

Step 2 Select the target terminal from the terminal list.

Step 3 Choose **Scheduled** and click . In the window that appears, specify the device to be controlled, time and interval, and then click **OK**.

Step 4 After the settings are done, click **Apply**.

## 4.16 RF Management

Set parameters related to RF synchronization and apply the parameters to time synchronization, brightness synchronization, volume synchronization and environment monitoring data synchronization and enable or disable

The Taurus products that support RF management include the T3, T6, TB3, TB4, TB6, and TB8.

Before using RF synchronization, install an RF module. ViPlex Express can detect and display RF module status.

Step 1 Choose Terminal Control > RF management.

Step 2 Select the target terminal from the terminal list.

Step 3 Turn on RF synchronization.

Step 4 Set the current terminal as the master device or a slave device.

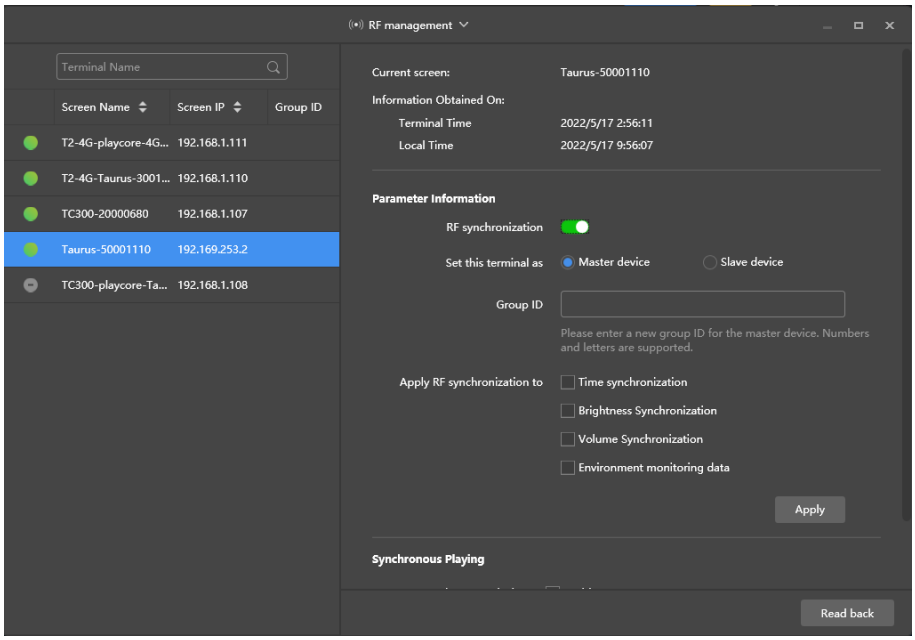
Step 5 Set a group ID.

Enter the group ID of the master device for a slave device, and this slave device and the master device will be grouped.

Step 6 Select the options that require RF synchronization.

After RF synchronization is applied, the time, brightness, volume, and environment monitoring data of the slave device will keep the same as the master device via the RF signal.

Figure 4-51 RF management



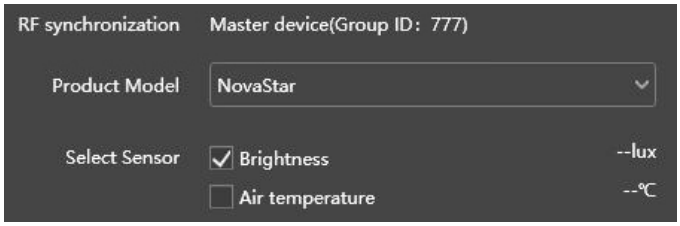

Step 7 Click **Apply**.

## 4.17 Sensor

If a sensor is connected to the terminal, the user needs to connect to the sensor logically in ViPlex Express to enable the terminal to collect environment monitoring data.

When the related information of RF synchronization is displayed, as shown in Figure 4-52, it indicates that environment monitoring data synchronization is enabled on the current terminal. For related operations, see 4.16 RF Management. RF synchronization requires users to specify a master device and slave devices. Users need to set the sensors of the master device only and the monitoring data of the slave devices will be the same as the master device via RF signal.

Figure 4-52 RF synchronization- environment monitoring data




Step 1 Choose Terminal Control > Sensor.

Step 2 Select the target terminal from the terminal list.

Step 3 Select a sensor manufacturer. Sensors of only NovaStar, Nenghui and Jingxun Changtong are supported.

Step 4 Select a sensor type.

- NovaStar: Brightness, temperature
- Nenghui: Air temperature, air humidity, air pressure, wind direction, $CO_2$, wind speed, PM2.5, PM10, noise, brightness
- Jingxun Changtong: Wind direction, wind speed, PM2.5, PM10, air pressure, air temperature, air humidity, noise, brightness

Figure 4-53 Sensor types


Step 5 After the configuration is done, click **Apply**.

## 4.18 Screen Information

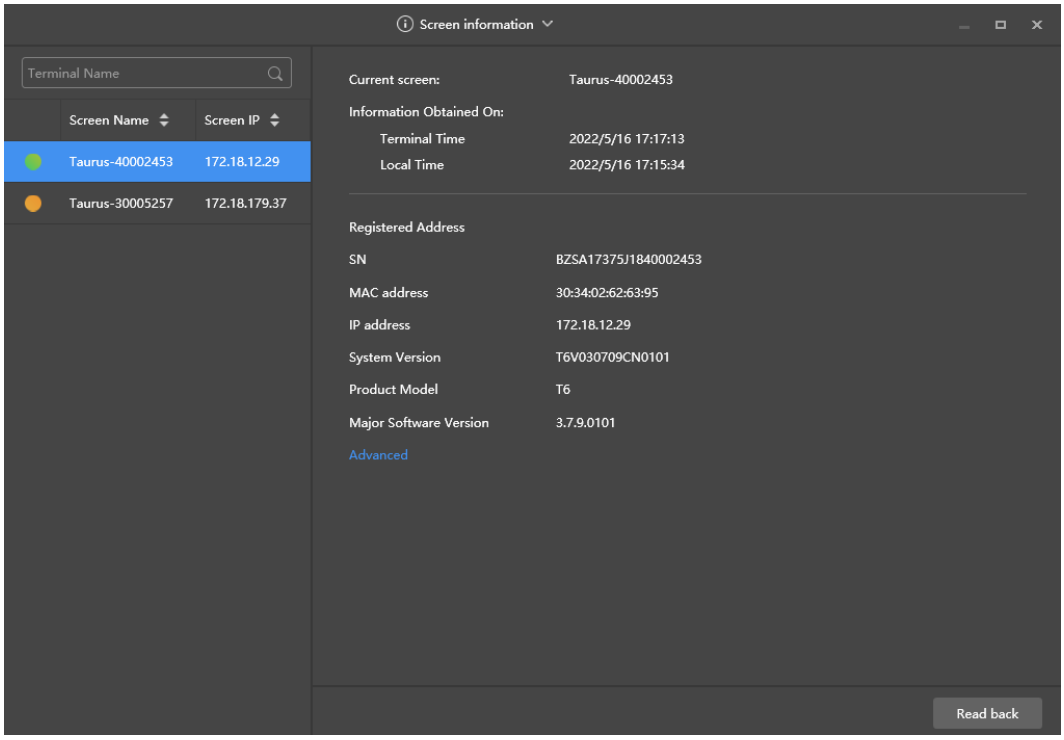
The information displayed here includes the terminal MAC address, terminal IP address, system software version, product model, application software version.

Step 1 Choose Terminal Control > Screen information.

Step 2 Select the target terminal from the terminal list.

Step 3 View the terminal information

Figure 4-54 Terminal information



# 5 VNNOX Login

At the top right of the page, click 

to enter VNNOX login page. VNNOX supports remote content management and terminal control.

For related operations, see VNNOX user manual.

# 6 System Settings

At the top right of the page, click  and select the required menu.

Table 6-1 System settings

| Menu | Description |
|---|---|
| Language | Set the display language. |
| Working Mode | Select working mode, including studio mode and async mode. |
| RF management | Manage the playback of all terminals except the reference device when the RF time synchronization mode is enabled.<br>Before the operation, enter the password “admin”. |
| Custom server | Add, modify, or delete custom servers.<br>Users can choose customized servers on the pages of connecting to cloud publishing and monitoring services and the page of setting NTP synchronization. |
| Preferences | ● Set the location to save files, including ViPlex Express configuration files, data, temporary files, etc.<br>● Specify an FTP library version to improve the network adaptability of ViPlex Express.<br>● Choose whether to remember the connection password. After **Remember Password** is deselected, users have to enter the password when connecting to a terminal each time.<br>● Enable or disable automatic refresh of terminal list, and set the refresh interval. |
| Video Tutorials | View the instructional videos of ViPlex Express. |
| Check for Updates | Check for and install new updates of ViPlex Express. |
| Help | View the documentation related to the software. |
| About | Display the version of ViPlex Express and the official website of NovaStar. |

# 7 Audio and Video Decoder Specifications

## 7.1 Image

| Type | Codec | Supported Image Size | Container | Remarks |
|---|---|---|---|---|
| JPEG | JFIF file format 1.02 | 48×48 pixels~8176×8176 pixels | JPG, JPEG | Not Support Non-interleaved Scan<br>Software support SRGB JPEG<br>Software support Adobe RGB JPEG |

| Type | Codec | Supported Image Size | Container | Remarks |
|---|---|---|---|---|
| BMP | BMP | No Restriction | BMP | N/A |
| GIF | GIF | No Restriction | GIF | N/A |
| PNG | PNG | No Restriction | PNG | N/A |
| WEBP | WEBP | No Restriction | WEBP | N/A |

## 7.2 Audio

| Type | Codec | Channel | Bit rate | Sampling rate | File Format | Remarks |
|---|---|---|---|---|---|---|
| MPEG | MPEG1/2/2.5 Audio Layer1/2/3 | 2 | 8kbps~320Kbps , CBR and VBR | 8KHZ~48KHz | MP1, MP2, MP3 | N/A |
| Windows Media Audio | WMA Version 4, 4.1, 7, 8, 9, wmapro | 2 | 8kbps~320Kbps | 8KHZ~48KHz | WMA | Non-support WMA Pro, lossless and MBR |
| WAV | MS-ADPCM, IMA-ADPCM, PCM | 2 | N/A | 8KHZ~48KHz | WAV | Support 4bit MS-ADPCM, IMA-ADPCM |
| OGG | Q1~Q10 | 2 | N/A | 8KHZ~48KHz | OGG, OGA | N/A |
| FLAC | Compress Level 0~8 | 2 | N/A | 8KHZ~48KHz | FLAC | N/A |
| AAC | ADIF, ATDS Header AAC-LC and AAC-HE, AAC-ELD | 5.1 | N/A | 8KHZ~48KHz | AAC, M4A | N/A |
| AMR | AMR-NB, AMR-WB | 1 | AMR-NB 4.75~12.2kbps @8kHz<br>AMR-WB 6.60~23.85kbps @16kHz | 8KHZ, 16KHz | 3GP | N/A |
| MIDI | MIDI Type 0 and 1, DLS version 1 and 2, XMF and Mobile XMF, RTTTL/RTX, OTA, iMelody | 2 | N/A | N/A | XMF, MXMF, RTTTL, RTX, OTA, IMY | N/A |

## 7.3 Video

| Type | Codec | Supported Image Size | Maximum Frame Rate | Maximum Bit Rate (Ideal Case) | File Format | Remarks |
|---|---|---|---|---|---|---|
| MPEG-1/2 | MPEG-1/2 | 48×48 pixels~1920×1080 pixels | 30fps | 80Mbps | DAT, MPG, VOB, TS | Support Field Coding |
| MPEG-4 | MPEG4 | 48×48 pixels~1920×1080 pixels | 30fps | 38.4Mbps | AVI, MKV, MP4, MOV, 3GP | Not support MS MPEG4 v1/v2/v3, GMC, DivX3/4/5/6/7 …/10 |
| H.264/ AVC | H.264 | T3&T6&TB3&TB4&TB6&TB8: 48×48 pixels~4096×2304 | T3&T6&TB3&TB4&TB6&TB8: 4K@25fps, | T3&T6&TB3&TB4&TB6&TB8: 100Mbps | AVI, MKV, MP4, MOV, 3GP, TS, FLV | Support Field Coding, MBAFF |

| Type | Codec | Supported Image Size | Maximum Frame Rate | Maximum Bit Rate (Ideal Case) | File Format | Remarks |
|---|---|---|---|---|---|---|
| | | pixels<br>Other models: 48×48 pixels~1920×1080 pixels | 1080P@60fps<br>Other models: 1080P@60fps | Other models: 57.2Mbps | | |
| MVC | H.264 MVC | 48×48 pixels~1920×1080 pixels | 60fps | 38.4Mbps | MKV, TS | Support Stereo High Profile only |
| H.265/ HEVC | H.265/ HEVC | T3&T6&TB3&TB4&TB6&TB8: 64×64 pixels~4096×2304 pixels<br>Other models: 64×64 pixels~1920×1080 pixels | T3&T6&TB3&TB4&TB6&TB8: 4K@60fps, 1080P@60fps<br>Other models: 1080P@60fps | T3&T6&TB3&TB4&TB6&TB8: 100Mbps<br>Other models: 57.2Mbps | MKV, MP4, MOV, TS | Support Main Profile, Tile & Slice |
| GOOGLE VP8 | VP8 | 48×48 pixels~1920×1080 pixels | 30fps | 38.4 Mbps | WEBM, MKV | N/A |
| H.263 | H.263 | SQCIF(128×96), QCIF(176×144), CIF(352×288), 4CIF(704×576) | 30fps | 38.4Mbps | 3GP, MOV, MP4 | Not support H.263+ |
| VC-1 | VC-1 | 48×48 pixels~1920×1080 pixels | 30fps | 45Mbps | WMV, ASF, TS, MKV, AVI | N/A |
| MOTION JPEG | MJPEG | 48×48 pixels~1920×1080 pixels | 30fps | 38.4Mbps | AVI | N/A |

Note: Output data format is YUV420 semi-planar, and YUV400 (monochrome) is also supported for H.264.

# 8 Limitations on Cut-to-Display Windows for Regular Screens

| Product | TB4, TB6, TB8 | TB1-4G (Optional 4G), TB2-4G (Optional 4G) |
|---|---|---|
| Recommended screen resolution (width × height) | 4096 × 288 pixels | 1920 × 1080 pixels |
| Number of parts | Cut horizontally: Actual screen width/Playback window width ≤8<br>Cut vertically: Actual screen height/Playback window height ≤8 | |

# 9 Limitations on Playback Parameters for Ultra-long Screens

Table 9-1 Ultra-long-screen-solution playback parameter description

| | | |
|---|---|---|
| **Maximum Pixel Width/Height** | **TB10** | Pixel capacity up to 650,000<br>Maximum pixel width: 23,040<br>Maximum pixel height: 4096 |
| | **TB30** | Pixel capacity up to 650,000<br>Maximum pixel width: 23,040<br>Maximum pixel height: 4096 |
| | **TB40/TB50** | Pixel capacity up to 1,300,000<br>Maximum pixel width: 23,040 |

| | | |
|---|---|---|
| | | Maximum pixel height: 4096 |
| | **TB60** | Pixel capacity up to 2,300,000<br>Maximum pixel width: 23,040<br>Maximum pixel height: 4096 |
| **Minimum Solution Resolution** | | 3841 |
| **Maximum Image Resolution and Quantity** | | Up to 10 images can be displayed simultaneously when the resolution lower than 1080p.<br>Up to 2 images can be displayed simultaneously when the resolution higher than 2K and lower than 4K. |
| **Maximum Video Resolution and Quantity** | | Resolution: No restrictions<br>Quantity: 1 (You are advised to set the video resolution according to the screen resolution.) |
| **Maximum Pixel Width of Text** | | • Text sharpening enabled<br>– Maximum pixel width: 23040<br>– Maximum number of characters: 3000<br>• Text sharpening disabled<br>– Maximum pixel width: 16384<br>• Maximum number of characters: Table 9-2 |
| **General Window Quantity** | | 1 |
| **Supported Image Formats** | **ViPlex Express** | JPG, JEPG, BMP, GIF, PNG, WEBP |
| | **VNNOX Standard** | JPG, PNG, ICO, JPEG, BMP, GIF |
| **Supported Video Formats** | | MP4, FLV |

Table 9-2 Scrolling text limitations

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Horizontal Scrolling** | **Font Size** | 8 | 12 | 14 | 16 | 18 | 24 | 32 | 64 | 96 | 128 | 256 |
| | **Number of Characters** | 2048 | 1365 | 1170 | 1024 | 911 | 685 | 512 | 256 | 170 | 127 | 62 |
| **Vertical Scrolling** | **Font Size** | 8 | 12 | 14 | 16 | 18 | 24 | 32 | 64 | 96 | 128 | 256 |
| | **Number of Characters** | 1504 | 1002 | 859 | 752 | 668 | 501 | 376 | 188 | 125 | 94 | 47 |

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