

# Taurus Series

## Multimedia Players



Version: V1.0.0

Doc. Number: NS120100152

**Implementation  
Instruction of the  
Synchronous  
Playing Solution**

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# Change History

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Version	Release Date	Description
V1.0.0	2017-07-20	The first version

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# 1 Overview

## 1.1 About This Solution

Taurus series multimedia players support the synchronous playing function for multiple displays in asynchronous mode. This document is intended to instruct on-site workers and technicians to complete configurations related to the synchronous playing function.

## 1.2 Synchronous Playing Conditions

All following conditions are required to be met for synchronous playing:

- The player supports the synchronous playing function.  
The Taurus series multimedia player, launched by NovaStar, perfectly supports the synchronous playing function, uses advanced synchronous playing technology and scheduling technology to perform automatic calibration and synchronization in the playing process of each media based on time.
- Enable the synchronous playing function.  
Taurus series products feature the perfect software supporting program, and the user could enable the synchronous playing function through the ViPlex or VNNOX cloud publishing system.
- Time synchronization of Taurus series products  
Playing and scheduling technologies are based on time, and therefore time synchronization should be ensured for synchronous playing. Taurus series products support NTP and Lora time synchronization methods either of which can be selected as required.
- Feature the same playing plan without random transition or media.  
Playing plans sent to multiple Taurus series products must be the same without random transition or media.

## 1.3 Time Synchronization

When NTP time synchronization is used, time synchronization of the Taurus series products will be performed with NTP server as the time standard in LAN or Internet.

### Advantages

- Use network time synchronization technology without additional hardware.

- Time synchronization accuracy depends on the Internet speed, and therefore applicable to the case with low time synchronization requirement. It is recommended to use such technology in LAN or good 4G network.

### Disadvantages

- Time synchronization depends on the Internet conditions and speed.
- Additional 2GB network traffic will be consumed per month by a single terminal when 4G network is used.

## 1.4 Lora Time Synchronization

When NTP time synchronization is used, master and slave devices are required to be set for Taurus series products. Time of the slave device is synchronized with that of the master device through Lora network.

### Advantages


- It is independent of network environment with good time synchronization performance and applicable to the case with high time synchronization requirement.
- No network traffic will be consumed.
- Time synchronization is available for the groups of the Taurus series products.

### Disadvantages

- The Lora device should be purchased.
- There are limits on distance, and configurations should be performed based on the specific conditions to ensure that radio-frequency signal can be received.

## 1.5 Required Softwares

Table 1-1 Software acquiring methods

Type	Description	Method
ViPlex Handy	It is a LAN-based display management software, including the one applicable to Android and iOS operating systems, is mainly used for display management as well as solution editing and publishing.	<p>Scan the following OR code to download and install the APP.</p>  <p>You can also download the ViPlex Handy for iOS</p>

		from App Store.
ViPlexExpress	It is a LAN-based display management software applicable to the Windows operating system, and is mainly used for display management as well as solution editing and publishing.	Visit <a href="http://www.novastar.tech">www.novastar.tech</a> , download and install the required software.
VNNOX	It is a safe cloud publishing service, and is mainly used for solution remote editing and publishing.	Visit <a href="http://www.vnnox.com">www.vnnox.com</a> for register and login.

## 1.6 Required Hardware Devices

When Lora time synchronization is used, it is required to purchase Lora devices, as shown in Table 1-2.

Table 1-2 Required hardware devices

Required Hardware Devices	Model
Lora devices	<ul style="list-style-type: none"><li>• E32-1W: Installed on the master device.</li><li>• E32-100: Installed on the slave device.</li></ul>

# 2 Implementation of NTP Synchronization Plan

Taurus series multimedia players support NTP time synchronization in the LAN or public network for which configured NTP server and the world-wide used NTP server independent of configuration are required respectively.

## 2.1 NTP Time Synchronization in the LAN

### 2.1.1 NTP Server Configuration

Configure the NTP server in the LAN and **record the domain name or IP address**.

The Personal Computer (PC) can be set with the NTP server by default. Refer to <http://note.youdao.com/share/?id=2efee9a613935113fa0f9a874b89047f&type=note#/> for details.

### 2.1.2 Taurus Configuration

Taurus series products can be configured with ViPlex only in the LAN. ViPlex includes ViPlex Handy and ViPlex Express. The user can choose one as required.

#### 2.1.2.1 Configuration with ViPlex Handy (Android and iOS)

- Step 1 Log in to the Taurus, and refer to 4.1.1 “Taurus Login with ViPlex Handy (Android and iOS)” for specific operations.
- Step 2 Click the screen name to enter the **Screen management** page.
- Step 3 Enable the synchronous playing function.
  1. Select **Advanced Setting, Advanced features**.
  2. Turn **Sync\_play** on.
- Step 4 Return to **Advanced Setting** page.
- Step 5 Configure NTP time synchronization.
  1. Select **Correct Time**.
  2. Click **Time mode**, select **NTP**, and click **OK**.
  3. Click **Server**.
  4. Turn **Time Auto-sync** on.

5. Click **New**, enter the name and visit the address of the NTP server, and then click **OK**. The visit address must be the same as the configured domain name or IP address.
  6. Click **OK**.
- Step 6 Repeat above steps to configure other Taurus series products requiring synchronous playing till all Taurus series products have been configured.

### 2.1.2.2 Configuration with ViPlex Express (Windows)

- Step 1 Log in to the Taurus. Refer to 4.1.2 “Taurus Login with ViPlex Express (Windows)” for specific operations.
- Step 2 Enable the synchronous playing function.
1. Select **Screen Control**.
  2. Select **Play management**.
  3. Select the target terminal in the terminal list, and select **Startup** next to **Synchronous Playing**.
  4. Click **Yes** in the pop-up dialog box.
  5. Close the **Play management** window.
- Step 3 Configure NTP time synchronization.
- Currently not supported.
- Step 4 Repeat above steps to configure other Taurus series products requiring synchronous playing till all Taurus series products have been configured.


## 2.2 NTP Time Synchronization in the Public Network

Configure each Taurus series product respectively when the synchronous playing and settings are enabled with ViPlex. Batch configuration could be available based on VNNOX. In the public network, VNNOX is recommended to reduce manual operations.

### Before You Begin

Bind the asynchronous player of VNNOX through ViPlex.


### Operating Procedures

- Step 1 Visit <http://www.vnnox.com> and click **Login** in the upper right corner.
- Step 2 Select the server node and click **Ok**.
- Step 3 Enter the account name and password, and click **Login**.
- Step 4 Enable the synchronous playing function in batch.
1. Select **Player Management, Players** in the pop-up menu of  in the upper right corner.
  2. Select asynchronous players corresponding to all Taurus series products requiring enabling the synchronous playing function.



3. Click **Real-time control** and select **open the synchronous broadcasting** from the drop-down box.

Step 5 Configure NTP time synchronization.

1. Select **Players Management, Time Synchronization** in the pop-up menu of  in the upper right corner.
2. Click **New** in the page of time synchronization task.
3. Enter the time synchronization task name, select **NTP** as the type of the time synchronization task, and then click **Next**.
4. Select **China** or **America** as required, and click **Ok**.
5. Click **Add** in the **Players** tab of the time synchronization task attribute page.
6. Select asynchronous players corresponding to all Taurus series products requiring enabling the synchronous playing function, and click **Ok**.
7. Click **Save** or **Save&Close**.

# 3 Implementation of Lora Time Synchronization Plan

Lora time synchronization requires setting one Taurus in Lora network as the master device and others as the slave devices. Only the master device is used as the standard time instead of loading the display, and the slave device is used for loading the display.

Time synchronization of the slave device is based on that of the master device. Range of the time synchronization is limited. Taurus supports NTP-standardized time synchronization for the master device. If the same NTP server is configured for the master devices of different Lora networks and the networks are normal, large-scale time synchronization can be enabled.

One Taurus series product requires one Lora device. The Taurus and Lora device of **E32-100** and **E32-1W** models should be purchased before the project implementation.

## 3.1 Lora Device Installation

The Lora device of **E32-1W** model is installed on the master device, and the Lora device of **E32-100** model is installed on the slave device.

- Step 1 Make sure to power off the Taurus.
- Step 2 Connect the antenna to the Lora device.

Figure 3-1 Lora Device

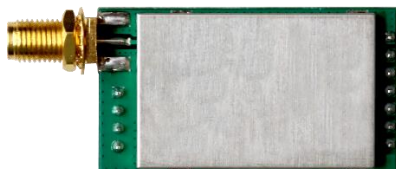


Figure 3-2 Antenna



Step 3 Install the Lora device on the Taurus. Figure 3-3 and Figure 3-4 show the Taurus of T3 model and T6 model installed with Lora devices.

Figure 3-3 Install the Lora Device on Taurus of T3 model

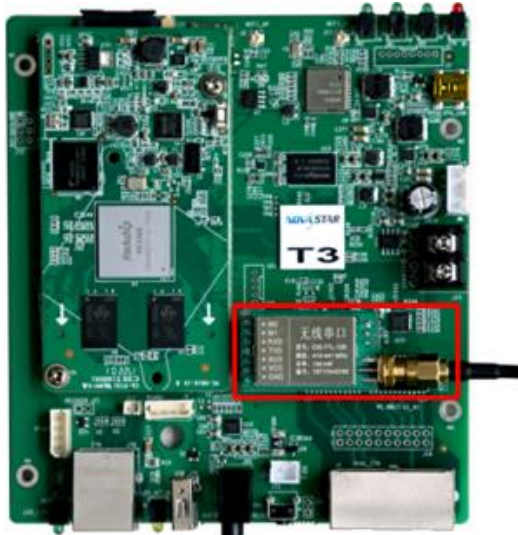


Figure 3-4 Install the Lora Device on Taurus of T6 Model



## 3.2 Taurus Configuration

When the public network is not available, the ViPlex, including ViPlex Handy and ViPlex Express, is applied to configure the Taurus, and the user could choose one as required.

When the public network is available, VNNOX is recommended for batch configuration to reduce manual operations.

### 3.2.1 Configuration with ViPlex Handy (Android and iOS)

- Step 1 Log in to the Taurus. Refer to 4.1.1 “Taurus Login with ViPlex Handy (Android and iOS)”.
- Step 2 Click the screen name to enter the **Screen management** page.
- Step 3 Enable the synchronous playing function. Please ignore this operation for the master device.
  1. Select **Advanced Setting, Advanced features**.
  2. Turn **Sync\_play** on.
- Step 4 Return to the **Advanced Setting** page.
- Step 5 Configure Lora time synchronization.
  1. Select **Correct Time**.
  2. Click **Time mode**, select **Lora**, and click **OK**.
  3. Click **Time parameter**.
    - Group ID: Use the same organization ID for the Taurus required enabling the time synchronization function to make such Taurus series products divide into the same Lora network.
    - Device type: Set the current Taurus as the master or slave device, and only one master device can exist in one organization. The slave device performs time synchronization through Lora network with the master device as time standard.
    - Time Auto-sync: When time synchronization of the master device is desired to be performed using the NTP server as the standard, automatic time synchronization function should be enabled, and NTP server address should be set.
  4. Click **OK** after the configuration.
- Step 6 Repeat above steps to configure other Taurus series products requiring synchronous playing till all Taurus series products have been configured.

### 3.2.2 Configuration with ViPlex Express (Windows)

- Step 1 Log in to the Taurus, and refer to 4.1.2 “Taurus Login with ViPlex Express (Windows)” for specific operations.
- Step 2 Enable the synchronous playing function. Please ignore this operation for the master device.
  1. Select **Screen Control**.
  2. Select **Play management**.



3. Select the target terminal in the terminal list, and select **Startup** next to **Synchronous Playing**.
  4. Click **Yes** in the pop-up dialog box.
  5. Close the **Play management** window.
- Step 3 Configure NTP time synchronization.
- Currently not supported.**
- Step 4 Repeat above steps to configure other Taurus series products requiring synchronous playing till all Taurus series products have been configured.

### 3.2.3 Configuration with VNNOX

#### Before You Begin

Bind the asynchronous player of VNNOX with ViPlex.

#### Operating Procedures

- Step 1 Visit <http://www.vnnox.com> and click **Login** in the upper right corner.
- Step 2 Select the server node and click **Ok**.
- Step 3 Enter the account name and password, and click **Login**.
- Step 4 Enable the synchronous playing function in batch.
  1. Select **Player Management, Players** in the pop-up menu of  in the upper right corner.
  2. Select asynchronous players corresponding to all Taurus series products requiring enabling the synchronous play function which is not required for the master device.
  3. Click **Real-time control** and select **open the synchronous broadcasting** from the drop-down box.
- Step 5 Configure Lora time synchronization.
  1. Select **Players Management, Time Synchronization** in the pop-up menu of  in the upper right corner.
  2. Click **New** in the page of time synchronization task.
  3. Enter the time synchronization task name, select **Lora** as the type of the time synchronization task, and then click **Next**.
  4. Select a standard device for time synchronization, and then click **Ok**.
  5. Click **Add** in the **Players** tab of the time synchronization task attribute page.
  6. Select asynchronous players corresponding to all slave devices requiring enabling the synchronous play function, and click **Ok**.
  7. When NTP server time synchronization is required, select the **Configure** tab, set NTP to **Yes**, and select the **NTP** server. Otherwise, ignore this step.
  8. Click **Save** or **Save&Close**.

# 4 General Operations

## 4.1 Taurus Login

Taurus series products feature the Wi-Fi AP function which is taken as the example by this chapter to introduce Taurus Login methods.

Other connection methods require hardware or software configuration. Refer to “Taurus Series Multimedia Players Quick Start Guide”.

### 4.1.1 Taurus Login with ViPlex Handy (Android and iOS)

#### Before You Begin

- Acquire the SSID and password of Wi-Fi AP of Taurus series products. SSID is default to be composed of AP and the last 8 numbers of SN, and the password is default as “**12345678**”.
- Acquire the login password of user “admin” of which the default password is “**123456**”.




#### Operating Procedures

ViPlex Handy can connect numerous Taurus series products.

Step 1 Connect Wi-Fi AP of the Taurus series products.

Step 2 Start ViPlex Handy.

System can automatically detect the Taurus series products and refresh **Screen list**. Users can also slide down **Screen list** to manually refresh the list.

- : denotes that Taurus is online and you can log into it.
- : denotes that Taurus is offline and you cannot log into it.
- : denotes that Taurus login is successful.

Step 3 Click **Connect** next to the screen name.

Step 4 Enter the user name and password and click **Login**.

## 4.1.2 Taurus Login with ViPlex Express (Windows)

### Before You Begin

- Acquire the SSID and password of Wi-Fi AP of Taurus series products. SSID is default to be composed of AP and the last 8 numbers of SN, and the password is default as “**12345678**”.
- Acquire the login password of user “admin” of which the default password is “**123456**”.

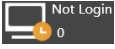


### Operating Procedures

ViPlex Express can connect numerous Taurus series products.

Step 1 Connect Wi-Fi AP of the Taurus series products.



Step 2 Start the ViPlex Express.

Step 3 Click **Refresh** and the screen list will be displayed on the page.

- : denotes that Taurus is online and you can log into it.
- : denotes that Taurus is offline and you cannot log into it.
- : denotes that Taurus login is successful.

After the Taurus is found by ViPlex Express, the ViPlex express will try to log into to the Taurus with the default account or the account used for last login.

Step 4 Taurus login is successful or not.

- Yes.  appears and no further operation is required.
- No.  appears and then perform Step 5.

Step 5 Click **Connect** on the right of the screen information.

Step 6 Enter the username and password, and click **OK**.