PENSARLED

TB Series

Synchronized Playback Setup Guide

2025

Overview

About this Document

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

Requirements of Synchronous Playback

The following are required by synchronous playback:

- The player supports the synchronous playback function.

The TB series multimedia player, powered by Pensar LED, perfectly supports the synchronous playback function, and uses advanced synchronous playback technology and scheduling technology to perform automatic calibration and synchronization during the playback of each media based on time.

- The synchronous playback function is enabled.

The TB can work with various software, and the user could enable the synchronous playback function through ViPlex Express, ViPlex Handy or VNNOX.

- Time of the TB is synchronized.

Playback scheduling is based on time, and therefore time synchronization must be ensured for synchronous playback. TB support NTP, RF and GPS time synchronization methods. Users can select a method as required

- The same playback plan without random transition or media must be sent to all the TB.

Playing plans sent to multiple TB must be the same without random transition or media.

Overview

Specifications of Synchronous Playback

Playback Scenarios	Media Specifications			
	T1-4G/TB1-4G/TB2-4G TCC70/TCB300	T3/T6 TB3/TB4A/TB4/TB6/TB8	T4H	T30/T50/T60 TB30/TB40/ TB50/TB60
Multiple solution pages	1x 480p	1x 1080p	1x 1080p	1x 1080p

Notes The product models in the same column employ the same platform. Do not use models of different platforms.

Requirements for media:

- Each solution page contains one media only.
- The media must be an image or video.
- Media properties must be the same.
- Media width and height cannot exceed their limits. (480p: 720×480; 1080p: 1920×1080)

Overview

Required Configuration Tools

Name	Description	Access Address
ViPlex Handy	Screen management software for Android phones and iPhones.	https://www.vnnox.com/download?l=en
ViPlex Express	LAN-based screen management software for Windows.	
VNNOX	Content publishing platform, which is a web application	https://www.vnnox.com/?l=en

How to Implement NTP Synchronization

NTP Time Synchronization on the LAN (Recommended)

NTP Server Configuration

Configure the NTP server on the LAN and record the domain name or IP address.
The Personal Computer (PC) can be set as a NTP server by default.
Refer to http://note.youdao.com/share/?id=2efee9a613935113fa0f9a874b89047f&type=note#/ for details.

TB Configuration

TB can be configured by using ViPlex Handy or ViPlex Express on the LAN.

Using ViPlex Handy for Configuration

Prerequisites

The phone and the TB are connected to the same LAN.

Operating Procedure

Step 1
Open ViPlex Handy and access the Local Control page.

Step 2
On the Local Devices page, tap Connect next to the start device. The default password is “123456”.

Step 3
Upon successful connection, tap the device name to access the Device Management page.

Step 4
Select Advanced Settings to access the Advanced Settings page.

Step 5
Select Advanced Functions and set the Synchronous Playback switch as status.

Step 6
Return to the Advanced Settings page.

Step 7
Configure NTP time synchronization.

1. Select Time Synchronization.

2. Tap Synchronization Mode, select NTP and click OK.

3. Tap NTP server.

4. Tap , and enter the name and address of the NTP Server.
The information must be consistent with those configured in 2.1.1 NTP Server Configuration.

5. Tap OK.

Step 8
Return to the Advanced Settings page. Tap at the top right.

Step 9
Repeat Step 5 to Step 8 to configure other TB requiring synchronous playback.

How to Implement NTP Synchronization

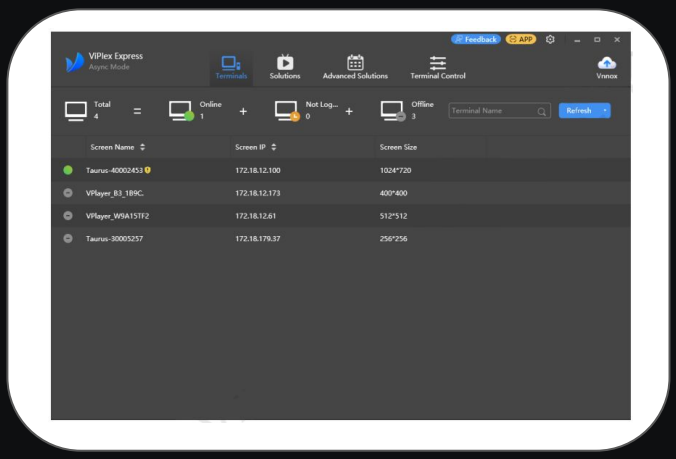
Operating Procedure

Step 1
Open ViPlex Express and access the **Terminal Control** page in the async mode

Step 2
Log in to the TB used for synchronous playback in order.

1. Place the mouse over the terminal information and click **Connect** on the right.
2. In the **Connect** dialog box, enter the password and click **OK**.

The default password is "123456". After successful login, turns .



Step 3
Select **Terminal Control**.

Step 4
Enable the synchronous playback function in batch.

1. Select **Playback Management**.
2. Select all the TB used for synchronous playback from the terminal list.
3. Check **Enable** behind **Synchronous Playback**.
4. In the pop-up dialog box, click **OK**.

Step 5
Configure NTP time synchronization in batch.

1. Select **Time synchronization management**.
2. Select all the TB used for synchronous playback from the terminal list.
3. Check **Auto sync time with NTP server**.
4. Click , and configure NTP server.
5. Click **Apply**.

How to Implement NTP Synchronization

NTP Time Synchronization on the Public Network

Prerequisites

The TB has been bound to VNNOX.

Operating Procedure for VNNOX Standard

Step 1
Visit https://www.vnnox.com/?l=en and log in to VNNOX Standard.

Step 2
Choose **Player Control**.

Step 3
Enable the synchronous playback function in batch.

1. Choose **Synchronous Playback**.

2. Select all the TB used for synchronous playback from the terminal list.

3. Set the **Synchronous Playback** switch as status.

4. Click **Apply**.

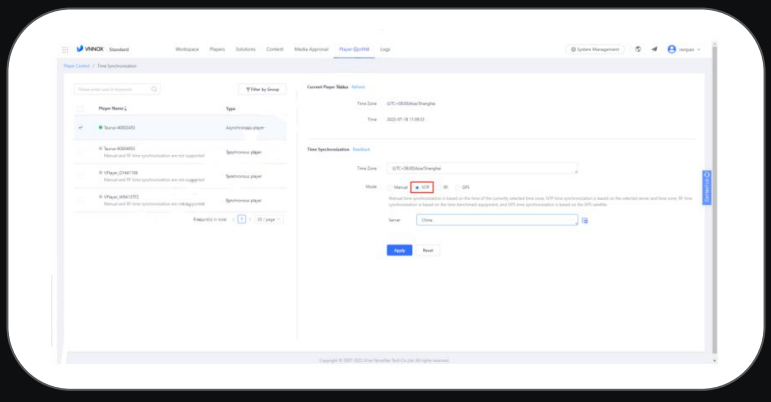
Step 4
Configure NTP time synchronization in batch.

1. Choose **Time Synchronization**.

2. Select all the TB used for synchronous playback from the terminal list.

3. Select **NTP** as the time synchronization mode and choose an NTP server from the drop-down list. If an NTP server needs to be added, you can click to configure it

4. Click **Apply**



How to Implement NTP Synchronization

Operating Procedure for VNNOX AD

Step 1
Visit https://www.vnnox.com/?l=en and log in to VNNOX Standard.

Step 2
Enable the synchronous playback function in batch.

1. Choose **> Players Management > Players.**

2. Select all the TB used for synchronous playback from the terminal list.

3. Choose **Real-time control > Synchronous playback > On.**

Step 3
Configure NTP time synchronization in batch.

1. Choose **> Players Management > Time synchronization.**

2. If you want to customize an NTP server, choose the **NTP server configuration** tab, click Add, and configure the NTP server. Otherwise, skip this step.

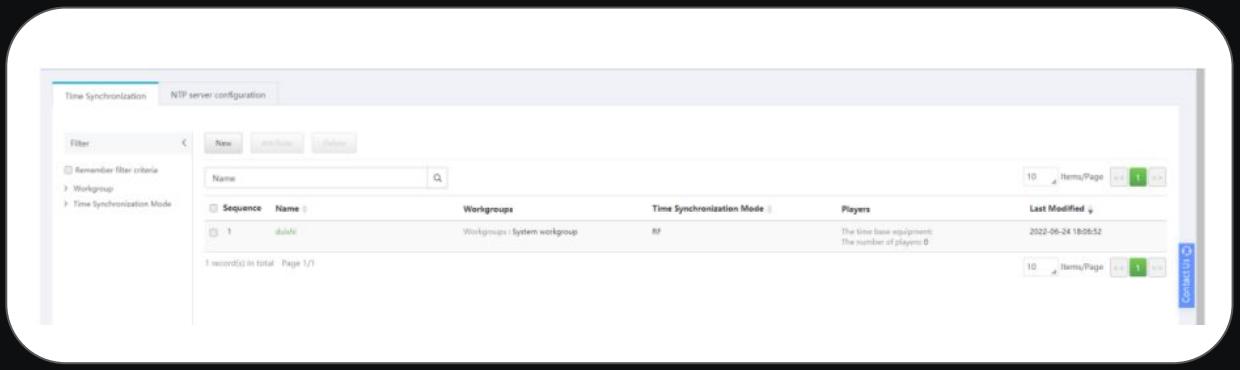
3. On the **Time Synchronization** tab page, click **New**.

4. Enter a time synchronization task name, select **NTP** as the time synchronization mode, and then click **Next**.

5. Select an NTP server and click **OK.**

6. Click **Add** in the **Players** tab of the time synchronization task attribute page.

7. Select all the TB used for synchronous playback from the terminal list and click OK. 8. Click Save or **Save&Close**.

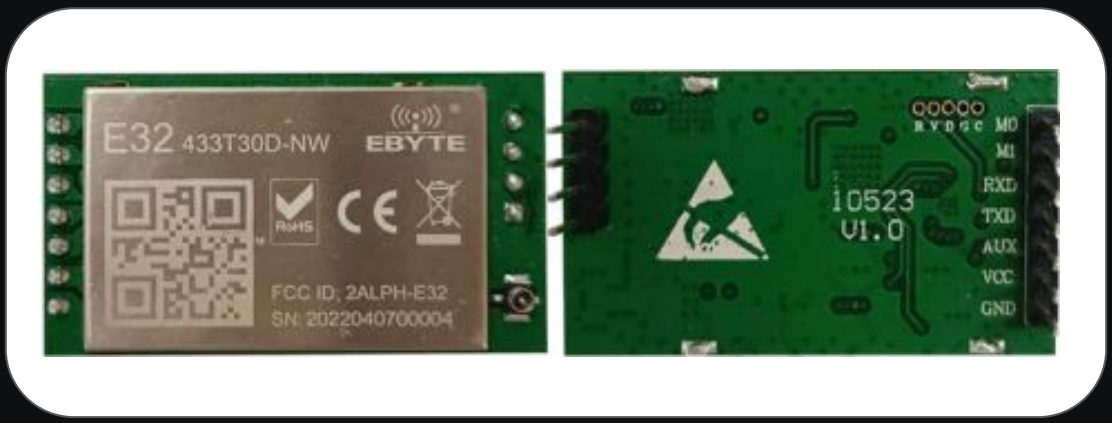


How to Implement RF Synchronization

RF time synchronization requires users to set one TB in RF network as the master device and others as slave devices. The master device is used as the time reference only and do not load a screen. The slave devices are used to load screens. The time of the slave devices is synchronized with the time of the master device.

RF Module Installation

The RF modules of E32-433T30D-NW model should be purchased before the project implementation.

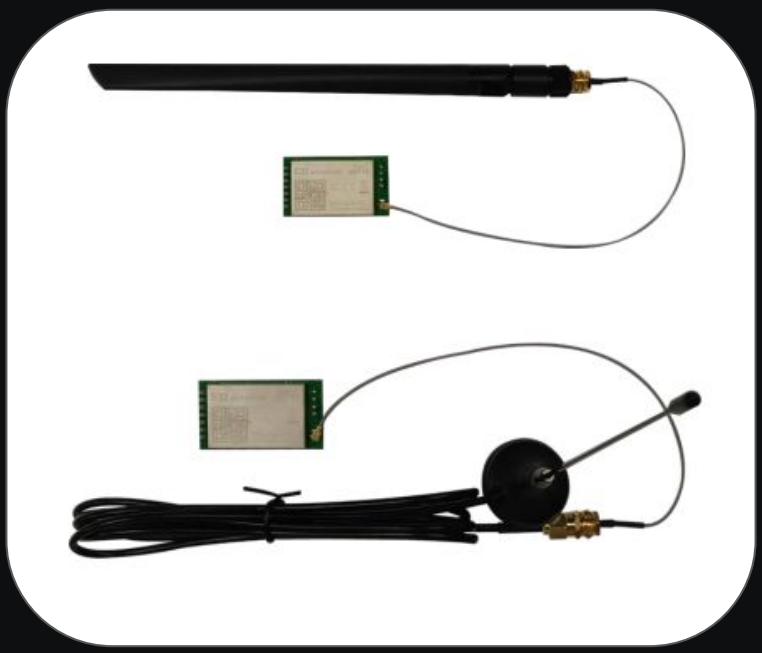


One RF module is installed with one TB. The T60 is used as an example and the installation position of the RF module is shown

How to Implement RF Synchronization

RF Module Installation

The antenna connection of RF module is shown



TB Configuration

On the LAN, ViPlex Handy or ViPlex Express can be used to configure RF time synchronization.

On the public network, VNNOX can be used to configure RF time synchronization.

Using ViPlex Handy for Configuration

Ensure the phone and the TB are connected to the same LAN.

Step 1
Open ViPlex Handy, and access the **Local Control** page.

Step 2
In the **Local Devices** list, tap **Connect** correspond to the starting device. Enter the password and click **OK**. The default password is "123456".

Step 3
After successful connection, tap the device name to enter the **Device Management** page.

Step 4
Choose **Advanced Settings** to enter the **Advanced Settings** page.

Step 5
Choose Advanced Functions, and set the Synchronous Playback switch as  status. The synchronous playback function of the master device do not need to be enabled.

Step 6
Return to the **Advanced Settings** page.

Step 7
Configure RF time synchronization.

1. Select **Time Synchronization**.

2. Tap **Synchronization Mode**, select **RF**, and tap **OK**.

3. Set time synchronization parameters.

   - **Group ID**: Use the same group ID for the TB requiring enabling the time synchronization function to assign the TB products to the same RF network.

TB Configuration

- **Device Type**: Set the current TB as the master device or slave device. A group contains only one master device. The time of the slave devices is synchronized with the time of the master device through RF network.

- **Auto Time Synchronization**: To synchronize the time of the master device with the time NTP server, enable automatic time synchronization and set the NTP server.

Step 8
Return to the **Advanced Settings** page, and tap  at the top right. Select other device in the list, and tap **OK**.

Step 9
Repeat the Step 5 to Step 8 to configure other TB requiring synchronous playback till all TBs have been configured.

Using ViPlex Express for Configuration

Ensure the PC and the TB are connected to the same LAN.

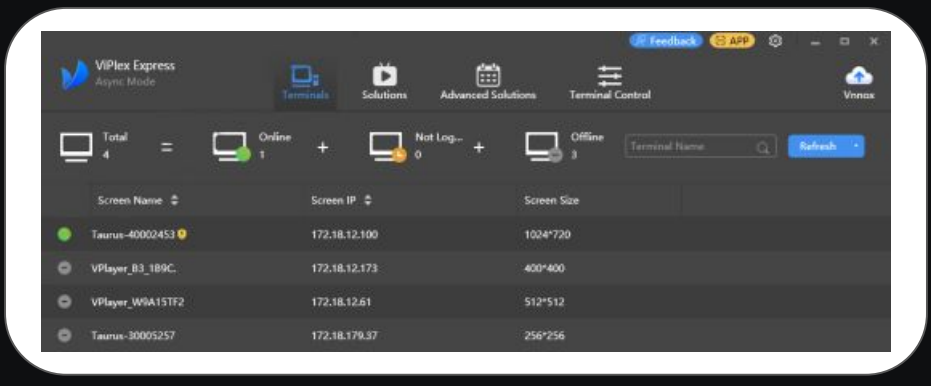
Step 1
Open ViPlex Express and access the **Terminal Control** page in async mode.

Step 2
Log in to the TB used for synchronous playback in order.

1. Place the mouse over the terminal information, and click **Connect** on the right.

2. In the **Connect** dialog box, enter the password, and click **OK**.

The default password is "123456". After successful login, turns .



TB Configuration

Step 3
Select **Terminal Control**.

Step 4
Enable the synchronous playback function in batch.

1. Select **Playback Management**.
2. Select all the slave devices from the terminal list. The synchronous playback function of the master device do not need to be enabled.
3. Check **Enable** behind **Synchronous Playback**.
4. In the pop-up dialog box, click **OK**.

Step 5
Configure RF time synchronization.

1. Select **RF Management**.
2. Select all the slave devices from the terminal list.
3. Set the **RF Synchronous** switch as status.
4. Select the **Master device**, set the group ID, and select **Time synchronization**.

The time of the slave devices is synchronized with the time of the master device through RF network.

5. Click **Apply**.
6. Select all the slave devices from the terminal list.
7. Set the **Synchronous Playback** switch as  status.
8. Set the group ID, and select **Time synchronization**.

Use the same organization ID for the TB requiring enabling the time synchronization function to assign the TB products to the same RF network.

9. Click **Apply**.

TB Configuration

Using VNNOX for Configuration

Ensure the TB has been bound to VNNOX.

Step 1
Visit https://www.vnnox.com/?l=en and log in to VNNOX Standard.

Step 2
Choose **Player Control**.

Step 3
Enable the synchronous playback function in batch.

1. Choose **Synchronous Playback**.
2. Select all the slave devices from the terminal list. The synchronous playback function of the master device do not need to be enabled.
3. Set the **Synchronous Playback** switch as  status.
4. Click Apply.

Step 4
Configure RF time synchronization.

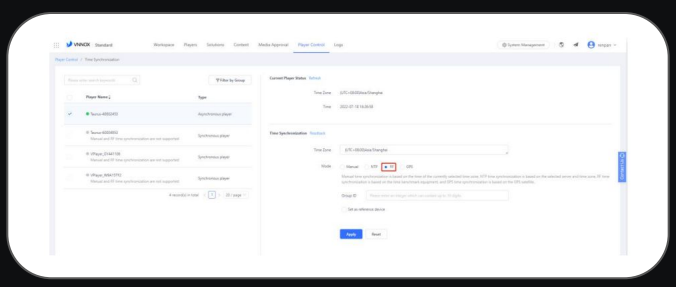
1. Choose Time Synchronization.
2. Select the master device from the terminal list.
3. Select RF as the time synchronization mode.
4. Set the Group ID, and select Set as reference device. Set the NTP server as required.

When NTP server is enabled, the time of the master device will be synchronized with the time of the NTP server. When NTP is disabled, the time of the master device will be synchronized with the time of the selected time zone.

5. Click **Apply**.
6. Select all the slave devices from the terminal list.
7. Select **RF** of the time synchronization mode, and set the **Group ID**.

Use the same group ID for the TB requiring enabling the time synchronization function to assign the TB products to the same RF network.

8. Click Apply.



TB Configuration

Operating Procedures for VNNOX AD

Step 1
Visit https://www.vnnox.com/?l=en and log in to VNNOX AD.

Step 2
Enable the synchronous playback function in batch.

1. Choose ⊞ **> Players Management > Players.**
2. Select all the slave devices from the terminal list. The synchronous playback function of the master device do not need to be enabled.
3. Choose **Real-time control > Synchronous playback > On**.

Step 3
Configure RF time synchronization.

1. Choose ⊞ **> Players Management > Time Synchronization.**
2. Click New on the page of time synchronization tasks.
3. Enter the time synchronization task name, select **RF** 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 all the slave devices from the terminal list 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.**

How to Implement GPS Synchronization

4G module and SIM Card Installation

The 4G module and the SIM card should be purchased before the project implementation.

4G Module

Installation Position of 4G Module

One 4G module and one SIM card is installed with one TB. Take the TB of model T60 as an example. The installation positions of 4G module and the SIM card slot are shown. The installation methods of 4G modules and SIM cards vary according to product models.

Sim Card Slot

How to Implement GPS Synchronization

TB Configuration

On the LAN, ViPlex Express is used to configure GPS time synchronization. On the public network, VNNOX Standard is used to configure GPS time synchronization.

Using ViPlex Express for Configuration

Ensure the PC and the TB are connected to the same LAN.

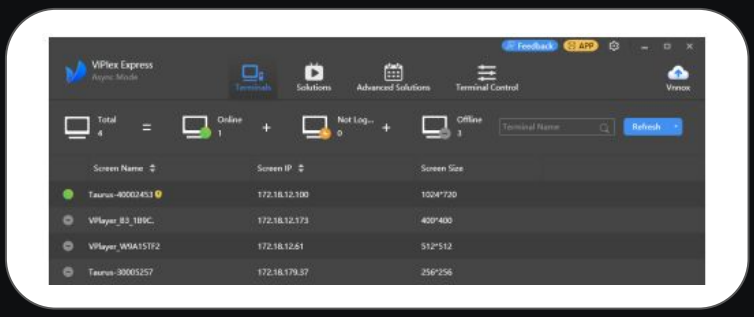
Step 1
Open ViPlex Express and access the **Terminal Control** page in the async mode.

Step 2
Log in to the TB used for synchronous playback in order.

1. Place the mouse over the terminal information, and click **Connect** on the right.
2. In the **Connect** dialog box, enter the password, and click **OK**.

The default password is "123456". After successful login, 🟠 turns 🟢.

Step 3
Select Terminal Control.



Step 4
Enable the synchronous playback function in batch.

1. Select **Playback Management**.
2. Select all the TB used for synchronous playback from the terminal list.
3. Check **Enable** behind **Synchronous Playing.**
4. In the pop-up dialog box, click **OK**.

Step 5
Configure GPS time synchronization in batch.

1. Select **Time synchronization management.**
2. Select all the TB used for synchronous playback from the terminal list.
3. Check **Auto sync time,** and select **GPS time synchronization.**
4. Click **Apply**.

How to Implement GPS Synchronization

Using VNNOX for Configuration

Ensure TB has been bound to VNNOX Standard.

Step 1
Visit https://www.vnnox.com/?l=en and log in to VNNOX Standard.

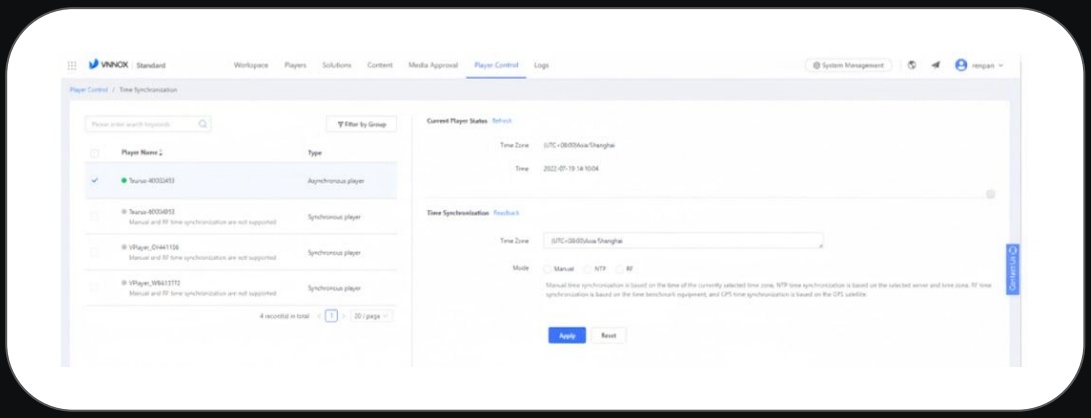
Step 2
Choose **Player Control**.

Step 3
SEnable the synchronous playback function in batch.

1. Choose **Synchronous Playback**.
2. Select all the TB used for synchronous playback from the terminal list.
3. Set the **Synchronous Playback** switch as  status.
4. Click **Apply**.

Step 4
Configure GPS time synchronization.

1. Choose **Time Synchronization**.
2. Select all the TB used for synchronous playback from the terminal list.
3. Select GPS as the time synchronization mode.
4. Click **Apply**.



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