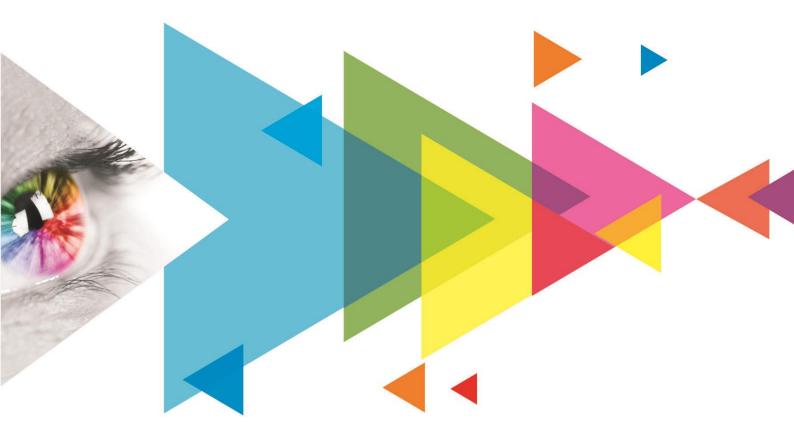


# TU20 Pro & TU15 Pro LED Playback Control Processors



# **User Manual**

# **Change History**

Document Version	Release Date	Description
V1.1.0	2023-08-11	<ul> <li>Added instructions for how to upgrade the remote manually.</li> <li>Updated the instructions for system upgrade.</li> <li>Update the instructions for screensaver.</li> <li>Update the instructions for play program after boot.</li> </ul>
V1.0.0	2023-04-04	First release

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# **1** Introduction

This document introduces the operating method of the TU20 Pro and TU15 Pro to help users get started with the LED playback control processors quickly.

The TU20 Pro and TU15 Pro are playback control processors specially designed by Xi'an NovaStar Tech Co., Ltd. (hereinafter referred to as NovaStar) for indoor LED screens. They integrate the Android system and sending card functions into one unit, and allow third-party apps to run on them, featuring powerful interaction and playback control capabilities.

The TU20 Pro and TU15 Pro support wireless screen mirroring from Windows, macOS, iOS and Android terminals. For a standard 1080p video, the mirroring transmission is at up to 60 fps with a system latency of less than or equal to 80 ms at 8 meters. For different application scenarios, it provides 4 modes to let the document presentation, video playback and remote meetings have the optimal display effect.

In addition, the TU20 Pro and TU15 Pro support control by the ViPlex Handy and VNNOX Care apps.

- Through ViPlex Handy, program editing, program publishing and screen control can be easily performed. For related operations, please refer to the *ViPlex Handy Media Player Control App User Manual*.
- Through VNNOX Care, screen configuration, screen topology and automatic screen configuration backup can be quickly completed. For related operations, please refer to the help center of VNNOX Care.

TU20 Pro and TU15 Pro share the same operations. The screenshots provided in this document take the TU20 Pro as examples.

# **2** Getting Started

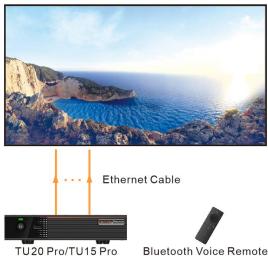
Do the following steps to quickly get started with the LED playback control processors.

### Step 1: Set Up the Hardware

- Step 1 Open the package.
- Step 2 Prepare the accessories, such as Ethernet cable, remote, and mirroring dongle.
- Step 3 Build the hardware environment according to the following diagram. You can also connect common peripherals as needed, such as mouse, keyboard, sound system, camera and infrared touch frame.

Figure 2-1 Hardware architecture

LED Screen



- Step 4 Connect the Ethernet cables from the LED screen to the Ethernet output ports of TU20 Pro/TU15 Pro in the order shown below.
  - Figure 2-2 Rear panel TU20 Pro (6 Ethernet ports) / TU15 Pro (4 Ethernet ports)



Step 5 Connect the power cable to power on the device.

### Step 2: Install Related Apps

Search for ViPlex Handy and VNNOX Care in the app store, download and install them.

- Through ViPlex Handy, program editing, program publishing and screen control can be easily performed.
- Through VNNOX Care, screen configuration, screen layout and automatic screen configuration backup can be quickly completed.



### Step 3 Configure the LED Screen

Step 1 Open VNNOX app and connect to the LED playback control processor.

	Local Configuration	
Current Network: 奈	TU20Pro_20000683	
<b>TU20Pro-</b> 400*400   V	-20000683 1.0.0.3201	
🔍 Configuration	iii Screen Control	More

Step 2 Click Configuration to enter the configuration page.

### TU20 Pro & TU15 Pro LED Playback Control Processors User Manual

<	Configuration		
•	Screen configuration	Screen Connection	
	Screen Parameter Backup	🛞 Test Pattern	
۲	Restore Backup Parameter	Upgrade MediaPlayer	

- Step 3 Click Screen configuration and follow the instructions to download the receiving card configuration file and light up the screen.
- Step 4 Click Connect Screen, follow the instructions to enable Mapping, and complete screen topology by taking photos with the mobile phone.

The above is the overall operation process. For detailed steps, see the app user manual.

### Step 4 Initialize the System

For the first-time use of the LED playback control processor, do the following steps to complete the initialization settings.

Step 1 Set the system language. You can choose Chinese or English.

Step 1	• • • • •	
Language S	election	
	English	
	Press On the remote $ $	•

Figure 2-3 Choosing a language

Step 2 (Optional) Pair the system with the remote for Bluetooth connection. To do this, hold down the menu and Home buttons on the remote simultaneously until the **Connecting to the remote** window appears at the bottom of the screen.



### Figure 2-4 Pairing with the remote

Step 2 Remote Control Pairing	• • • • •	
		Skip >
	Simultaneously press and hold the button on the remote $\;  {f n}  \equiv $ to pair	Back

Step 3 (Optional) Select the Wi-Fi network you want to connect the system to and enter the password.

Step 3	• • • • • •	
Connect to	Wi-Fi	
	TU20Pro_10000030	
	Select the Wi-Fi network you would like to access Skip >	•
	Back	

Figure 2-5 Connecting to a Wi-Fi network

Step 4 (Optional) Customize the device name. A custom name is convenient for you to use other devices to search for.

### Figure 2-6 Customizing device name

Step 4	• • • • •	
Device name		
	TU20Pro_10000030	
	You can customize your device name to make it easier for other devices to search and connect Skip >	
	Back	

Step 5 (Optional) Pair the system with the mirroring dongle by inserting the dongle into the USB port of the LED screen. The dongle will be paired automatically with the system.



Step 6 The initialization settings are done. You can see the Beginner's Guide or start using the LED playback control processor directly.

### Figure 2-8 Home screen



# **3** Usage of the Remote

### 3.1 Buttons on the Remote

Figure 3-1 Description of buttons on the remote



### 3.2 Bluetooth Pairing Method

Hold down the menu and Home buttons on the remote simultaneously until the **Connecting to the remote** window appears at the bottom of the screen.

# 4 Screen Mirroring

### 4.1 Wireless Mirroring

### 4.1.1 Mirroring from Mobile Phone

### **Mirroring from Android**

- Step 1 Use the phone to scan the QR code on the **Wireless Mirroring** page to download the tranScreen app and install it on the phone.
- Step 2 Connect the phone to hotspot of the LED playback control processor (default name: TUxx Pro\_xxxx; default password: 12345678).
- Step 3 Run the tranScreen app on the phone. On the displayed **Select for Devices** window, select the device you want to connect to, and tap **Confirm**.
- Step 4 Tap Mirror and then tap Start now on the displayed window to start mirroring.

Figure 4-1 Running the tranScreen app

tranScreen	
tranScreen	

### Mirroring from iOS

- Step 1 Connect the phone to hotspot of the LED playback control processor (default name: TU*xx* Pro\_xxxx; default password: 12345678).
- Step 2 Swipe up from the bottom edge of any screen to open the control center.
- Step 3 Tap Screen Mirroring and select the device to start mirroring.

### Figure 4-2 Screen mirroring - iOS



### 4.1.2 Mirroring from PC

### **Mirroring from Windows**

Step 1 On the PC, open a browser, enter the website address "meexus.cn/English.html" and download the LinkED for Windows client.

NDVAJSTAR	T STATE	
	Ш	ะเนร
	Focus on the display and	l control to make meetings easier
L Setting	LinkED for Android	LinkED for iPad
	LinkED for Windows	LinkED for iPhone
	Contract Chrome	

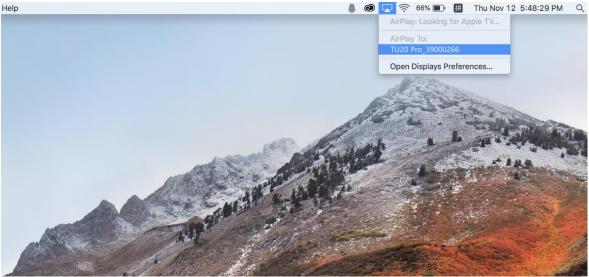
- Step 2 Connect the PC to hotspot of the LED playback control processor (default name: TUxx Pro\_xxxx; default password: 12345678).
- Step 3 Run the client on the PC. The connected device will be detected by the client automatically. Then, click **Start projection**.

Wireless projection	Ũ	- ×
Currently connected device: T	U20Pro_20000683(192.168.43.1)	
Device list	Pincode/IP screen pr	ojection
TU20Pro_20000683		
192.168.43.1		
<b>■</b> (1)	Start projection	闻

### Mirroring from macOS

- Step 1 Connect the PC to hotspot of the LED playback control processor (default name: TU*xx* Pro\_xxxx; default password: 12345678).
- Step 2 Click the AirPlay icon in the menu bar at the top of your screen, and select the device you want to mirror the screen to.





### 4.1.3 Mirroring via Dongle

- Step 1 For the first-time use, or after you change the device name, hotspot name or hotspot password, you must insert the mirroring dongle into the USB port of the LED Playback control processor for pairing.
- Step 2 Insert the paired dongle into the USB port of the PC.

# A connection successful V 3.4.2.0

Step 3 When a pop-up window with the "Connection successful" message appears on the desktop, press the round button on the dongle to start mirroring.

### 4.1.4 Mirror Control

The system supports mirror control. The speaker can walk around the room freely and use the Android mobile device (phone or tablet) to reversely control the computer that is being mirrored.

- Step 1 Use the mobile device to scan the QR code on the **Wireless Mirroring** page to download and install the tranScreen app.
- Step 2 Connect the mobile device to the hotspot of the LED playback control processor (default name: TU*xx* Pro\_xxxx; default password: 12345678).
- Step 3 Run the tranScreen app. On the displayed **Device List** window, select the device you want to connect to, and tap **Confirm**.
- Step 4 For the first-time opening, tap **Start Casting** on the displayed window to start mirroring.
- Step 5 Tap **Mirror Control** to start reverse control.

Figure 4-4 Connection successful

### TU20 Pro & TU15 Pro LED Playback Control Processors User Manual

### Figure 4-5 Mirror Control

10:27		🌣 🗖
	tranScreen	\$
1TU20Pro_100	08215	<u>23</u>
192.168.43.1		C/it
	Start Castin	ng
-		
Photo	Video	
Þe		6
Mirror Control	Remote	Screenshot Note
Camera&Speak		

### 4.1.5 Wireless Notes

The system supports wireless notes function. The audience can use the mobile device (phone or tablet) to take a snapshot of the content mirrored by the speaker on the display device. The snapshot will be transmitted and saved to a specified location of the audience's mobile device instantly.

- Step 1 Use the mobile device to scan the QR code on the **Wireless Mirroring** page to download and install the tranScreen app.
- Step 2 Connect the mobile device to the hotspot of the LED playback control processor (default name: TU*xx* Pro\_xxxx; default password: 12345678).
- Step 3 Run the tranScreen app. On the displayed **Device List** window, select the device you want to connect to, and tap **Confirm**.
- Step 4 In the system, enable **Display master control ball** in the menu to open the **Wireless Control Button** window. On the window, enable the **Screenshot Note** function.

### Figure 4-6 Wireless control button



Step 5 In the tranScreen app, tap **Wireless Notes**. A snapshot of the mirrored content will be taken instantly and saved to the specified location.

### Figure 4-7 Wireless notes

10:27		···! 🗢 🗖
	tranScreen	\$
17U20Pro_1000	08215	<u>23</u>
192.168.43.1		Vis
	Start Castir	ng
	$\bigcirc$	
Photo	Video	
Mirror Control	Remote	Screenshot Note
Q Camera&Speak		

### 4.1.6 Wireless Speech

The system supports wireless speech function. The mobile device (phone or tablet) can be used as a microphone, and the audience can make a speech directly via the mobile device. The sound will be transmitted to the sound system in the room.

- Step 1 Use the mobile device to scan the QR code on the **Wireless Mirroring** page to download and install the tranScreen app.
- Step 2 Connect the mobile device to the hotspot of the LED playback control processor (default name: TU*xx* Pro\_xxxx; default password: 12345678).

- Step 3 Run the tranScreen app. On the displayed **Device List** window, select the device you want to connect to, and tap **Confirm**.
- Step 4 In the system, enable **Display master control ball** in the menu to open the **Wireless Control Button** window. On the window, enable the **Camera & Speak** function.

Figure 4-8 Wireless central control				
Wireless C	Control Button		Θ	
	Connected Devices	Lock	Host	
0	iPhone		*	
Scre	enshot Note	Camera&Speak		

Step 5 In the tranScreen app, tap Camera & Speak. On the displayed screen, tap and hold Press to talk.

	tranScreen	\$
1TU20Pro_100	<u>\$</u>	
192.168.43.1		Un
	Start Casti	~
	Start Castin	ig
	Ø	
Photo	Video	
<b>→</b> €		6
Mirror Control	Remote	Screenshot Note
•		
Camera&Speak		

### Figure 4-9 Camera & Speech

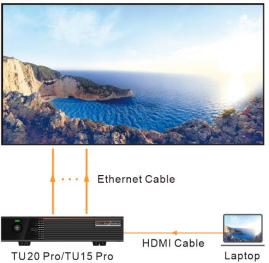
### **4.2** Wired Mirroring

### 4.2.1 Connect Signal Source

Connect the LED playback control processor to the device you want to mirror the screen from via HDMI cable.

### Figure 4-10 Wired mirroring

LED Screen



### 4.2.2 Switch Signal Source

You can switch the signal source via the following method.

Step 1 Select **Source** on the home screen or press the menu button on the remote to enter the source menu.

		@ <del>3</del>	* *
_			
<ul> <li>Android</li> </ul>			
	5		0

Figure 4-11 Source

Step 2 Select the source that you want to present and press the **OK** button on the remote to complete switching.



### 5 **Display Effect Adjustment**

To have a more comfortable viewing experience, you can adjust the display effect via the following 3 methods.

### Select An Application Mode

For different applications, the LED playback control processor provides 4 modes to let the document presentation, video playback and remote meetings have the optimal display effect.

Step 1 On the remote, press the menu button to enter the menu.

		@ <del>~</del> *
⊖ Source	Effect Adjustment	
Standard Mode Sightness Saturation Contrast Temperature Hue Eye Comfort Mode	Eest	

Figure 5-1 Effect adjustment

- Select Effect Adjustment and press the OK button to enter the effect adjustment screen. Step 2
- Step 3 Select a mode based on your actual need.
  - Standard Mode: This is the default mode and covers most applications.
  - Soft Mode: This mode is suitable to applications where there is a lot of text, such as document presentation, PPT slide show, etc.
  - Theater Mode: This mode is suitable to video and movie playback applications.
  - Meeting Mode: This mode is suitable to the applications where there are many figures, such as a remote meeting.

### Customize a Display Effect

You can fine-tune the effect parameters after selecting an application mode to satisfy personalized requirements.

- Step 1 On the remote, press the menu button to enter the menu.
- Step 2 Select Effect Adjustment and press the OK button to enter the effect adjustment screen.
- Step 3 Adjust the brightness, saturation, contrast, color temperature and hue parameter values to customize the display effect.
- Step 4 (Optional) If you are not satisfied with the effect after adjustment, press the Reset button to reset the parameter values to the defaults.

### **Enable Eve Comfort Mode**

You can enable the eye comfort mode via one click only.

On the remote, press the menu button to enter the menu. Step 1



Step 2 Toggle the **Eye Comfort Mode** switch to enable or disable the mode.

# E Note

After you enable the eye comfort mode, the display will become a little yellowish.

### 6 **Program Playback Control**

The LED playback control processor supports program playback control. Users can perform program playback and simple program editing in the system. What's more, programs can also be edited in ViPlex Handy and published to the LED playback control processor. For detailed operations, please click Me > Help > User Manual in ViPlex Handy and refer to the user manual.

### 6.1 Create a Program

- Step 1 On the home screen of the system, select Program Playback Control to enter the playback control page.
- From the navigation bar on the left, click New Program. Step 2
- Set the number of pages for the program by clicking to add pages. Each program supports up to 50 Step 3 pages.

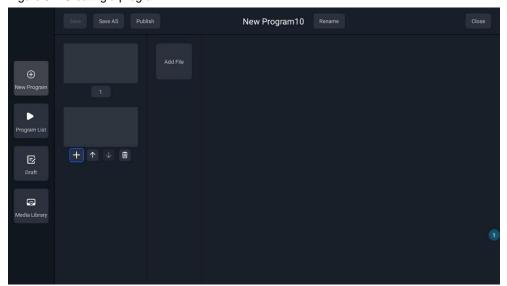


Figure 6-1 Creating a program

Select a page, click Add File to open the media library and select an image or video. Step 4

> The playback duration of an image is 10s by default and it cannot be changed. The image display mode can also be set. Options include FULL SCREEN, HORIZONTAL STRETCH and VERTICAL STRETCH.

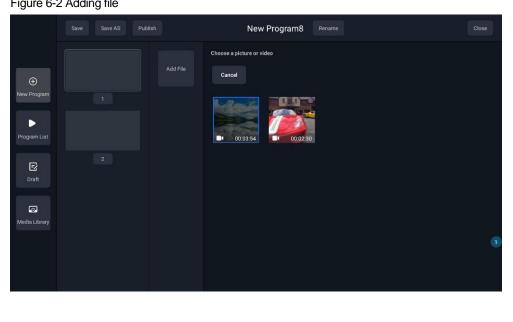


Figure 6-2 Adding file

- Step 5 After all the pages are added, you can click to adjust the page order or click to delete unnecessary pages.
- Step 6 Save or publish the program as needed.
  - When the program is published, it will be played on the screen immediately.
  - If you click save or save as, the programs will be saved in the drafts for you to publish or edit in the future.

### 6.2 Play Programs

- Step 1 On the home screen of the system, select Program Playback Control to enter the playback control page.
- Step 2 From the navigation bar on the left, click **Program List**.
- Step 3 Select the published program, including the programs created and published through the meeting system or VNNOX care.
- Step 4 Press the **OK** button on the remote to start full-screen playback.

Figure 6-3 Program list

	Program Playback Control
	Bulk Deletion
⊕ New Program	
	New Program8
Program List	Delete
<b>E</b> Draft	
o Media Library	
	•

To delete a program, select it and click **Delete**.

### 6.3 Manage Drafts

- Step 1 On the home screen of the system, select **Program Playback Control** to enter the playback control page.
- Step 2 From the navigation bar on the left, click **Draft**.
- Step 3 Select a saved program and choose to publish, edit or delete it as needed.

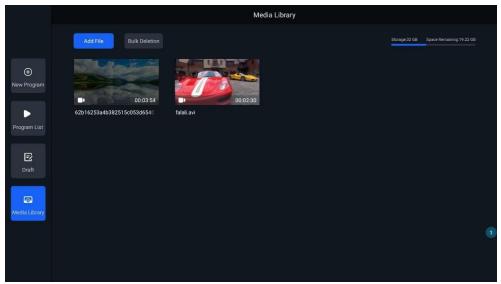
### Figure 6-4 Draft

	Draft
	Bulk Deletion
⊕ New Program	
	New Program9
Program List	Publish Modify Delete
E2 Draft	
•	
Media Library	
	٠

### 6.4 Manage Media Library

- Step 1 On the home screen of the system, select Program Playback Control to enter the playback control page.
- Step 2 From the navigation bar on the left, click Media Library.
- Step 3 Select the files in the connected USB drive and add them to the media library. The files in the media library can be used directly when you create a new program or edit a program in the future.

At the top right corner, the total and remaining storage space of the device are shown. If there are not enough storage space, you can delete a single media file or batch delete several files.



### Figure 6-5

# **7** Settings Management

### 7.1 File Management

You can do the following steps to manage the files.

- Step 1 On the home screen of the system, select File Explorer to enter the file explorer page.
- Step 2 (For first-time use only) Click **Continue** at the bottom right to allow for the use permissions.

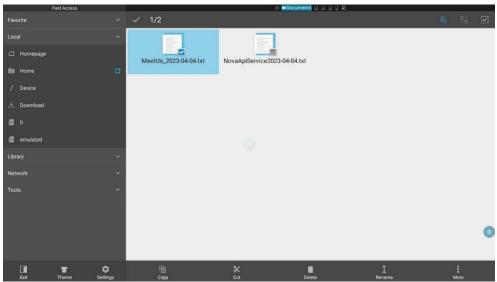


Step 3 Select the folder where the target file is located.

Fast Access				රHomepage 🗆 🕏		
Favorite		=		Homepage		_ ⊗
Local			л			
🖆 Homepage		Images 0	Music 0	Movies 0	Documents 2	APP 3
🛅 Home		SD 0 1.11 GB				20.32 GB
/ Device		emulated 1.11 GB				20.32 GB
🛓 Download		Tools				ý.
@ 0		Bookmarks				<u>^</u>
emulated		📥 Download	News		👛 Weather	
Library		Facebook	Docum		Movies	
Network		S APP	🎵 Music		🖼 Images	
Tools		Google				
						0
Exit Theme	<b>Ç</b> Settings	+ New	Q Search	() Refresh	× Toolbox	口 Windows
	Settings					

Figure 7-1 ES File Explorer

- Step 4 Select the target file and press the **OK** button on the remote to open the file.
- Step 5 (Optional) Hold down the **OK** button on the remote or the left mouse button on the target file to enable the file operation options at the bottom of the display, such as copy, cut, delete and rename.



### Figure 7-2 ES File Explorer - Copy / Cut / Delete / Rename

### 7.2 Network Settings

### 7.2.1 Wired Network

- Step 1 On the home screen of the system, select **More Apps** to enter the app screen.
- Step 2 Select **Settings** to enter the menu screen. In the menu, select **Network > Wired Network** to enter the wired network settings screen.

	Se	ettings	
Network	> Network > Wired network		
Picture	Wired Network	Manual	
	) IPv4	192.168.0.10	
General	Subnet Mask		
System	> Default Gateway		
			1

Figure 7-3 Wired network

- Step 3 Set the Wired Network parameter to Automatic to automatically obtain the IP address.
- Step 4 Go back to the home screen. If the 🖵 icon appears at the top right corner, the network connection is successful.

### 7.2.2 Wireless Network

- Step 1 On the home screen of the system, select **More Apps** to enter the app screen.
- Step 2 Select **Settings** to enter the menu screen. In the menu, select **Network > Wireless Network** to enter the wireless network settings screen.
- Step 3 Select an available Wi-Fi network near you and enter the password in the displayed window.



### Figure 7-4 Entering the Wi-Fi password

	Settings	
Network > Wireless Network		
WLAN		•
NovaStar_Mobile	Connected Successfully	* ( <del>`</del> ,
TU20 Pr		÷ چ
Please Enter	the password for TU20 Pro_10000030	•
NovaSta	Ф	Ŷ
Splicer_		• 🔶
AC4		• 📀

Step 4 Press **OK** to connect to the Wi-Fi network.

### 7.2.3 Hotspot

- Step 1 On the home screen of the system, select **More Apps** to enter the app screen.
- Step 2 Select **Settings** to enter the menu screen. In the menu, select **Network > Hotspot** to enter the hotspot settings screen.
- Step 3 Set a password for the hotspot.

Figure 7-5 Setting a new hotspot password

Settings		
Network > Hotspot		
Hotspot Switch		•
Hotspot Password	12345678	>
Channel	Auto	>
Please Set New Password Changing the hotspot password requires re-pairing the adapter. 12345678 Tips: Supports English letters or numbers, 8-16 characters		

Step 4 Press **OK** to enable the hotspot.

# 🖹 Note

After you change the hotspot name or hotspot password, you must insert the mirroring dongle into the USB port of the LED playback control processor for pairing again.

### 7.2.4 Bluetooth

- Step 1 On the home screen of the system, select **More Apps** to enter the app screen.
- Step 2 Select **Settings** to enter the menu screen. In the menu, select **Network > Bluetooth** to enter the Bluetooth settings screen.



### Step 3 Turn on the Bluetooth switch.

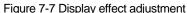
		Settings		
Network Picture Sound General	> > > >	Network → Bluetooth Bluetooth Switch Scanning for available device Device Name: TU20 Pro_10000030 My Devices	•	
	>	Remote	>	
		Other Devices		
			>	
		MatePad Pro	>	
			>	1

Step 4 Select the target device to pair it with the system.

### 7.3 Display Effect Adjustment

- Step 1 On the home screen of the system, select **More Apps** to enter the app screen.
- Step 2 Select **Settings** to enter the menu screen. In the menu, select **Picture** to enter the picture effect adjustment screen.

3			, <b>,</b>				
				Settings			
		>					
Ø	Picture	>	옷 Standard Mode	<b>©</b> Soft Mode	🛞 Theater Mode	Meeting Mode	
		>					
		>					
		>			-•		
					-		
			Color Temperature			88%	
			Eye Comfort Mode			-	1
			Eye Comon Mode			-	



Step 3 For the detailed adjustment method, see 5 Display Effect Adjustment.

### 7.4 Sound Settings

Step 1 On the home screen of the system, select **More Apps** to enter the app screen.

Step 2 Select Settings to enter the menu screen. In the menu, select Sound to enter the sound settings screen.

### Figure 7-8 Sound settings

				Settings		
ين	5 N		>	Volume		
e			>	force 3.5mm audio output	•=	
4	⊁ S	ound	>			
E			>			
œ		ystem	>			
						0



### 7.5 General Settings

### 7.5.1 App Management

- Step 1 Select **Settings** to enter the menu screen. In the menu, select **General > Apps** to enter the app management screen.
- Step 2 Do the following settings for the installed apps.
  - Force Stop: Force the app to stop.
  - Launch App: Run the selected app.
  - Uninstall: Uninstall the selected app.
  - Clear Data: Clear the cached data of the selected app.

### Figure 7-9 App management

				Settings	
e te	Network	>	General > Apps Management		
		>	p Apk Install	Apk Install	
		>	Chrome	Version 3.6.5	
8		>	ES File Explorer	Force Stop Launch App	
		>	MirrorServer		
			Settings	Data 28.67 kB Cache 16.38 kB	Clear Data
			Sharjeck Global		
			0 Timer		
			C vic		

### 7.5.2 Date and Time

- Step 1 Select **Settings** to enter the menu screen. In the menu, select **General > Date & Time** to enter the date and time settings screen.
- Step 2 Do the following date and time settings for the system.

- Automatic Time Obtain via Network: Enable this function to synchronize the system date and time with the network time. You can also disable this function and then manually set the system date and time.
- 24-Hour Time: Turn on the switch to let the time be displayed in the 24-hour time format. If you do not turn on the switch, the time will be displayed in the 12-hour time format by default.
- Date Format: Set the date format to Year-Month-Day (default), Day-Month-Year or Month-Day-Year.

### Figure 7-10 Date and time

			Settings			
		>	General → Date & Time			
	Network Picture	>	Automatic Time Obtain via Network	•	•	
		, ,			>	
•		>			>	
۲		>			>	
			24-Hour Time	•	•	
			Date Format		>	

### 7.5.3 Language and Keyboard

- Step 1 Select **Settings** to enter the menu screen. In the menu, select **General > Language & Keyboard** to enter the language and keyboard settings screen.
- Step 2 Do the following language and keyboard input method settings for the system.
  - Language: Set the system language to English, 中文(简体) (default), or 中文(繁体).
  - Keyboard: Set the keyboard input method to Android keyboard (AOSP).

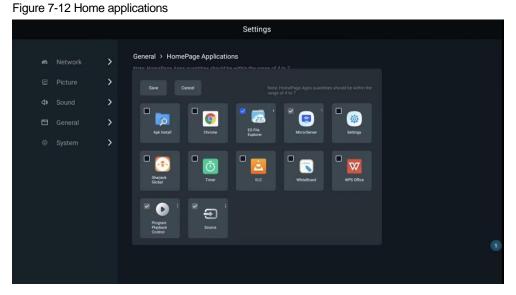
### Figure 7-11 Language and keyboard

			Settings			
© ≎	Network Picture Sound General	> > > >	General > Language & Keyboard Language Keyboard	Android P	English <b>》</b> English 中文(简体) 中文(繁體)	
0		>				
						•

### 7.5.4 Home Application

- Step 1 Select **Settings** to enter the menu screen. In the menu, select **General** > **Home Application** to enter the home app settings screen.
- Step 2 Click Add. In the pop-up window, select the apps to be added to the homepage and their placement order.

You can select 4 to 7 home applications. Among them, the **MirrorServer** (wireless mirroring), **Source** and **Program Playback Control** apps cannot be deselected and their order cannot be changed.



Step 3 After the home apps are changed, you can click **Reset** to reset the homepage settings to the factory default settings.

### 7.5.5 Wallpaper

- Step 1 Select **Settings** to enter the menu screen. In the menu, select **General > Wallpaper** to enter the wallpaper settings screen.
- Step 2 Set the system wallpaper to a built-in wallpaper in the system or a custom wallpaper.
  - System wallpaper: Select a target wallpaper and press the Set as Wallpaper button on the selected wallpaper.
  - Custom wallpaper: Press the **Custom** button to open ES File Explorer, select a local picture, and press the **OK** button on the remote.

# Settings Image: Setting and Seting and Setting and Setting and Setting an

### 7.5.6 Image Quality Enhancement

Step 1 Select **Settings** to enter the menu screen. In the menu, select **General > Image Enhancement** to enter its settings screen.

### Step 2 Enable Image Enhancement.

Step 3 Select an image quality enhancement mode from Nature, Standard or Ultimate.

The display effect can be dramatically improved from the three dimensions of contrast, details and color. The overall sense of image gradation is richer and more delicate; the edge details are clear and sharp; the color is bright and vivid.

Figure 7-14 Image quality enhancement

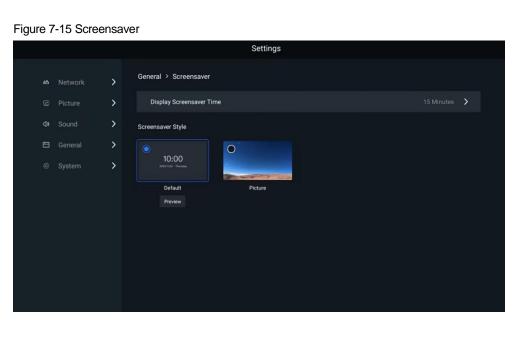
			5	Settings			
	>	General → Image E	Enhancement				3
Picture	>	Image Enhancen	nent			••	
	>	Nature	Standard	Ultimate			
	>						
	>						

### 7.5.7 Screensaver

- Step 1 Select Settings to enter the menu screen. In the menu, select General > Screen Saver.
- Step 2 Select the time after which screensaver is enabled. Options are **15 Minutes**, **30 Minutes**, **1 Hour** and **Never**.

You can click any button on the remote to exit the screensaver.

Step 3 Select a screensaver style. You can choose between default (date and time) and pictures.



### 7.5.8 Assistive Touch

- Step 1 Select Settings to enter the menu screen. In the menu, select General to enter its settings screen.
- Step 2 Turn on the **Assistive Touch** switch and press the small triangle icons at the left and right display edges to open the sidebar.

				Settings		
	92		>		>	
		Picture	>		>	
			>		>	
			>		>	
			>		>	_
>					>	<
					>	
					•	
				Dehumidify It is recommended to enable this function if in relatively humid environments.	•=	

- Sack button. Click or tap to go back to the previous operation
- The second s
- Pencil button. Click or tap to open the commenting tool.
- Whiteboard button. Click or tap to open the whiteboard tool.
- Series Series

# 📄 Note

You can only use the connected mouse or touchscreen to operate on the assistive touch menu. The remote cannot work on this menu.

### 7.5.9 Dehumidification

- Step 1 Select Settings to enter the menu screen. In the menu, select General to enter its settings screen.
- Step 2 Enable **Dehumidify**. The switch is off by default, and it will take effect in real time after it is enabled.

LED products are moisture-sensitive. To extend the screen service life in a relatively humid environment, dehumidify the screen before long-term use again after the screen is not used for a period of time.

When dehumidification is enabled, the system initiates various dehumidification processes, taking into account the duration during which the device remained powered off. Consequently, the screen automatically adjusts its brightness and undergoes an aging process accordingly. The power-off duration of the device is calculated as the period between the previous shutdown time and the subsequent startup time.

### Figure 7-17 Dehumidification

		Settings	
	>		>
	>		>
	>		>
🖽 General	>		>
System	>		>
			>
			>
			•••
		Dehumidify It is recommended to enable this function if in relatively humid environments.	-
			•

### 7.6 System Settings

### 7.6.1 Play Program After Boot

- Step 1 Select **Settings** to enter the menu screen. In the menu, select **System > Play Program after boot** to enter its screen.
- Step 2 Enable **Play Program after boot** and the program will be played automatically when the device is turned on.

### Figure 7-18 Play program after boot

			Settings	
ڪھ		>	System > Play program after boot	
E	Picture	>	Play program after boot	
⊲»		>	Note: After enabling, the device needs to be powered off and restarted for the change to take effect.	
		>		
۲		>		

### 7.6.2 Factory Reset

- Step 1 Select **Settings** to enter the menu screen. In the menu, select **System > Factory Reset** to enter the factory reset settings screen.
- Step 2 Press the Factory Reset button to reset the LED playback control processor to its factory status.

### Figure 7-19 Factory reset

		Settings
	>	System > Factory Reset
Picture	>	Factory Reset
	>	Warning: Restoring to factory settings will restore the conference screen to its initial state. At the same time, local data such as documents, photos, videos, applications, etc. will be deleted and cannot be recovered. Please proceed with caution.
	>	be deleted and cannot be recovered. Please proceed with caution.
	>	
		•

# 📄 Note

- Factory reset will erase all the data including local documents, images, videos, applications, etc. The data cannot be recovered.
- After you do the factory reset, you need to do commercial activation for the mirroring dongle again.

### 7.6.3 System Upgrade

- Step 1 Select Settings to enter the menu screen. In the menu, select System > System Upgrade to enter the Android system update screen.
- Step 2 Insert the USB drive that contains the update package into the USB port on the device. (The update package file extension name is ".nuzip" and the package must be placed in the root directory of the USB drive.)
- Step 3 When the screen displays "USB drive root directory contains upgrade files, upgrade is available", press the **Local Upgrade** button.

The update process takes about 3 to 5 minutes. During the update process, do not power off the device, and do not disconnect the USB drive. (These operations are dangerous and may damage the device.)

### Figure 7-20 System update

Settings						
9 <u>9</u>	Network	>	System → System Update			
	Picture	>				
		>	Local Upgrade			
		>	Please use an upgrade package file with a matching model and a suffix of. nuzip, and ensure it is placed in the root directory of the mobile device.			
	System	>	USB drive not mounted, please insert USB drive			

### 7.6.4 Upgade the Remote Manually

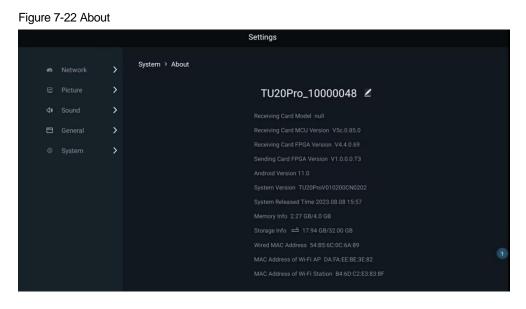
- Step 1 Select Settings to enter the menu screen. In the menu, select Network > Bluetooth.
- Step 2 The upgrade option will be displayed when there is an available upgrade for the remote. Click **Upgrade**. Once the upgrade is complete, a system prompt will be displayed: "Remote upgraded successfully".

		Settings	
괜	Network	Network > Bluetooth	
		Bluetooth Switch	••
¢»		Scanning for available device Device Name: TU20_10000009	•
		– My Devices	
		Remote	Connected 🔨
			Upgrade Remove

### Figure 7-21 Upgrade the remote

### 7.6.5 About

- Step 1 Select **Settings** to enter the menu screen. In the menu, select **System > About** to enter the **About** screen.
- Step 2 Check and change the device name, and check the following information.
  - Receiving card model/MCU version/FPGA version
  - Sending card FPGA version
  - Android version
  - System released time
  - Memory info
  - Storage info
  - Wired MAC address
  - MAC address of Wi-Fi AP
  - MAC address of Wi-Fi Station



### 7.6.6 User Guide

Select Settings to enter the menu screen. In the menu, select System > User Guide and view the guide.



Figure 7-23 User guide

### 7.6.7 Device Self-Test

- Step 1 Select Settings to enter the menu screen. In the menu, select System > Device self-test to enter its screen.
- Step 2 Check the device running status and the following information.
  - FPGA-ddr initialization status
  - Ethernet port sub card link status
  - Program package type
  - Product name
  - MAC address of ARM communication port
  - Product SN



Figure 7-24 Self-test							
	Settings						
5		>	System > Self Test				
e		>	🧭 Device is Normal				
⊲∗		>	FPGA, ddr Initialization Status Normal				
=		$\rightarrow$	Ethernet Port Sub Card Link Status Normal				
0	System	>	Product Package Type Official Version				
			Product Name TU20ProV010200CN0701				
			MAC Address Of ARM Communication Port 54:B5:6C:0F:EE:7D				
			Product SN 2KKA03724N0A10008215				

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