TapPlay™ P900

User Manual

Receiver: TP-P900

Transmitter: TP-PDH (HDMI dongle), TP-PDC (Type C dongle)

Decking Station: TP-PDS

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1. Overview

TP-P900 wireless video processor stands out as a tailor-made solution for expansive display setups that seamlessly integrates multiple video sources and interactive peripherals for BYOM.

TP-P900 features a 1-channel 4K HDMI input and 2 channels of 4K HDMI outputs. Its Wi-Fi 6 wireless router supports simultaneous connections for up to 16 devices with 3x3 output splicing for seamless screen casting while ensuring concurrent internet access. Additionally, TP-P900 also features advanced functions such as file sharing, cloud casting, electronic whiteboard and annotation, output rotation, wireless pairing, customisable home screen, window casting and so on.

This product is specifically designed for personal offices, government conference meeting, expansive incorporate rooms, and other environments, making communication more simplified, clearer, and more efficient.

Key Features

TP-P900

- Full wireless presentation and BYOM support
- Support wireless input up to 1080P@60Hz, 1x HDMI input up to 4K@30Hz and 2x HDMI 2.0 output up to 4K@60Hz
- Support Windows/Android application and PnP HDMI/Type-C dongles for wireless connection
- Support wireless casting like Miracast and Airplay
- Support switching between casting and local HDMI input
- Support wireless pairing
- Support USB peripherals like camera, mic, and speaker for wireless connection to PC/laptop
- Support USB camera selection
- Support mouse, keyboard control
- Support wireless touch back for PC/Android
- Fully compatible with VC platforms
- Support multiview for up to 9 windows with preview
- Support customisable home screen at bootup
- Built-in whiteboard and on-screen annotation
- 16 GB on-board storage
- Support file sharing via app
- Support on-screen PPT control
- Support on-screen control for management
- Support master control
- Support window cast
- Support output rotation
- Support reverse control by PC via app
- Low latency and rapid content sharing

TP-PDC/TP-PDH:

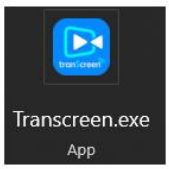
- Support wireless transmission from PC/Mac to base unit
- Support quick switch of the PC signal for less than 1s by clicking
- Blue LED, indicating active source signal and power/link
- Support wireless pairing
- Support USB peripherals such as camera, mic, and speaker over Wi-Fi sharing

TP-PDS:

- Dual-slot for dongle decking, perfect for TP-PDC and TP-PDH

TP-P900 related devices and applications

A typical TP-P900 can work with two different types of dongles, '**tranScreen**' for Android/Windows/Mac and Airplay for IOS. Depending on the application or size of the meeting room, users can purchase more dongles, e.g., HDMI dongle/ Type C dongle if necessary.



Name	Description
Base Unit	Base unit TP-P900
Dongles/Transmitters	For PC/Mac to share the desktop/extended desktop.
‘tranScreen’ app	For Android/Windows/Mac devices to share the screen.
Airplay for IOS	For IOS devices to share the screen.
Decking station	Decking station for dongles, compliable with TP-PDC and TP-PDH

Accessories List

ID	Name	Description
1	Power adapter	International plug inter-changeable power adapter, of which the plugs include Europe and UK standard.
2	Download Card	1 piece download card that user can find related manuals on our website.

2. Specification

HDMI Output	2x HDMI
Video Output Resolution	Up to 3840x2160@60
HDMI Input	1x HDMI
HDMI Input Resolution	Up to 3840x2160@30
USB interface	1x USB 3.0 Type A and 1x USB 2.0 Type A
Storage	16GB
Compatible dongles	TP-PDC and TP-PDH
Compatible 3rd party protocols	Airplay/DLNA/Miracast
Compatible software screen casting	Windows/Android/IOS/Mac OS
Compatible hardware screen casting	Windows/Mac OS
Simultaneously Connection	Up to 16
LAN port	1x RJ45 (1000Mbps)
Audio Output	3.5mm audio
Control	On-screen control, tranScreen app
Multiview	Up to 9 split screens
Wireless transmission protocol	WIFI6: 5GHz/2.4GHz 802.11a/b/g/n/ac
Wireless transmission bandwidth	867Mbps
Bluetooth	Bluetooth V5.0
Average Transmission Delay	<150ms@10m/1080P
Visual Transmission Distance	>30m@1080P
Dimension (W x D x H)	189x129x26 (mm)
Weight	550g
Operate Temperature	0 – 50 degrees
Storage Temperature	20 – 60 degrees
Operate Humidity	0 – 85% (non-condensing)
Storage Humidity	0 – 90% (non-condensing)
Power Supply	DC 5V/3A
Power Consumption	Standby: <0.1W Normal: 4±0.5W

3. Panel Layout

Overview

- Hardware Interface
  - TP-P900 Front Panel
  - TP-P900 Back Panel
  - TP-PDH/TP-PDC Front panel
- Software Interface
  - Home Screen

3.1 Hardware Interface

3.1.1 TP-P900 Front Panel

ID	Name	Description
1	Front LED indicator (red)	Static Red: Power ON
2	Front LED indicator (blue)	Static Blue: Hotspot is ON
3	Front LED indicator (green)	Static Green: Ready to share Flashing Green: Sharing

Mounting

The mounting points for the unit are located at the bottom of the base unit.

3.1.2 TP-P900 back Panel

ID	Name	Description
1	DC Power socket	Power socket to boot up the unit
2	LAN Ethernet port	1000Mbps Ethernet port
3	Dual-HDMI output	Connect HDMI cables from these ports to an HD or 4K/HDMI2.0 display
4	Rear USB 2.0 connector	USB port for TP-DGH pairing, mouse control, USB touch screen and USB device such as USB camera and speaker etc.
5	Rear USB 3.0 connector	USB port for TP-DGH pairing, mouse control, USB touch screen and USB device such as USB camera and speaker etc.
6	Line audio output	2 channel analog audio output
7	HDMI Input	Connect an HDMI cable from this port to an HD or 4K/HDMI1.4 input such as a media player or PC.

USB port

- The USB port can be used to pair dongles with the base unit.
- The USB port can be used to connect a USB-based touch screen or mouse/keyboard for controlling when a PC desktop is mirroring to the screen.

3.1.3 Dongle Front Panel

TP-PDH (left) and TP-PDC (right) are dongles, used for toggling the mirroring from personal PC or Mac onto the main screen.

- When LED indicator is static solid Blue, 1) it's ready to mirror desktop onto the main screen, 2) if the dongle is connected to the base unit, that means pairing is done.
- When LED indicator is static transparent Blue, it's mirroring.
- When LED indicator is blinking Blue, it indicates 1) the dongle is plugged in and initialising or waiting for user to start the application, 2) if the dongle is connected to the base unit, that means pairing/software updating is in progress.
- When LED indicator is Off (no light), it indicates 1) the dongle is not plugged in; 2) the dongle is faulty; 3) the USB port of PC/Mac might be faulty.

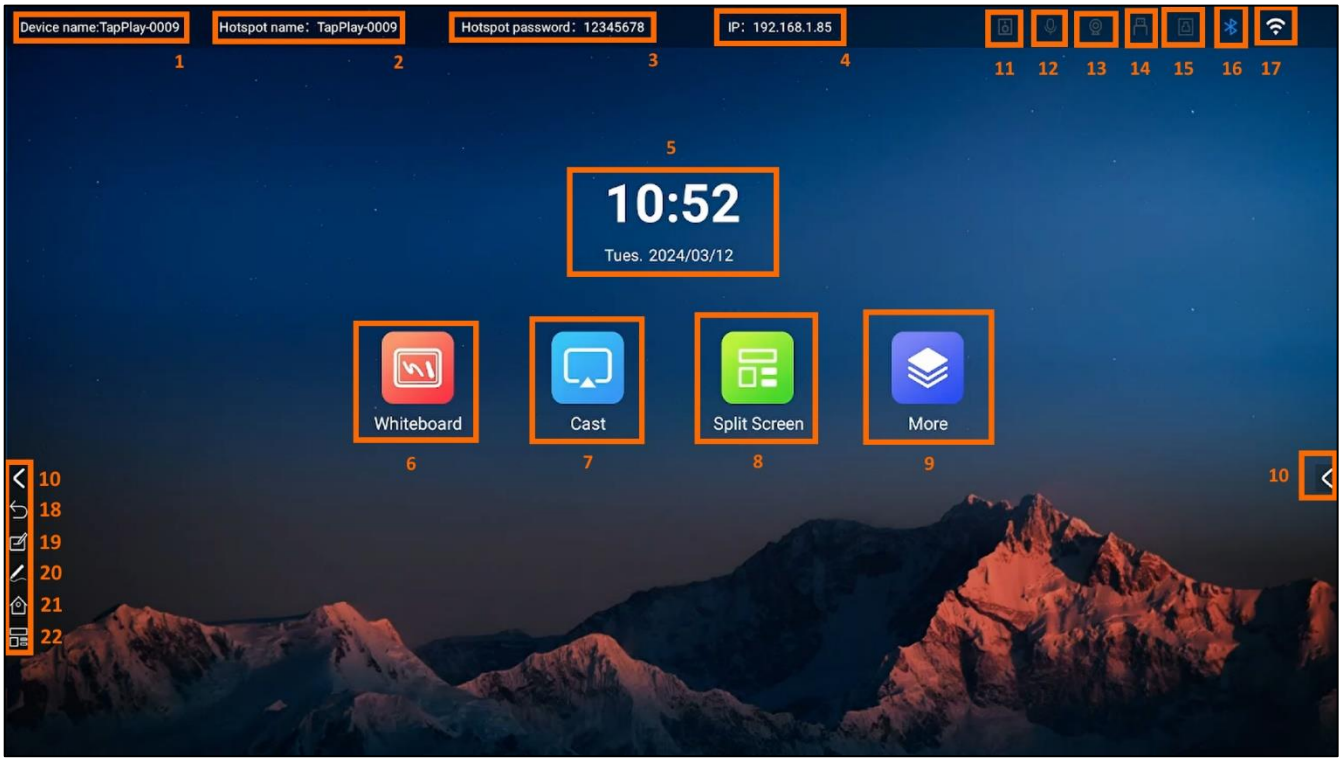
ID	Name	Description
1	HDMI connector	HDMI connector of the dongle can be plugged into a PC/Mac for sharing screen.
2	USB connector	1) Power supply or 2) can be plugged into the base unit for pairing or upgrading of dongles.
3	Type C (DP) connector	1) Type C (DP) connector of the dongle can be plugged into a PC/Mac for sharing screen or 2) can be plugged into the base unit for pairing or upgrading of dongles. (requires an USB Type-A to USB Type-C adaptor)

4	Touching button	Touch the sensor button to start mirroring desktop onto the main screen. Touch again the sensor button to terminate the sharing.
5	LED indicator	Indicates the status of the dongle.

Note: TP-PDC contains a fully functional type-C interface with DP Altmode inside, which supports audio and video transmission. The type C connector on the PC also requires a fully functional type C connector for mirroring.

3.2 Software Interface

3.2.1 Home Screen



ID	Name	Description
1	**Device name**	Device name of the base unit.
2	**Hotspot name**	Wi-Fi name of the base unit access point.
3	**Hotspot password**	Wi-Fi password of the base unit.
4	**IP**	IP address of the base unit connected to Wi-Fi.
5	**TIME**	Show time and date of the unit.
6	**Whiteboard**	Whiteboard function.
7	**Cast**	Show methods of casting including transmitter cast, PC cast and Cloud cast. User can also access the following functions in this section: **One-to-multiple Cast**: User can share content from a single source to multiple base units. **Could Cast**: Cast over cloud (The performance may vary highly depending on the network condition.) **File Sharing**: Files such as PPT and images can be shared from P900 to users connected to the unit via app. **Cast Setting**: Configure settings for P900 when casting.
8	**Split Screen**	Show and set up layouts for different split screens.
9	**More**	Show advanced functions (23) – (31) in home screen.
10	**Info**	Show/Hide icons (18) - (22) in home screen.
11	**Speaker**	When TP-P900 is connected with a speaker, the icon will be displayed.
12	**Microphone**	When TP-P900 is connected with a microphone, the icon will be displayed.
13	**Camera**	When TP-P900 is connected with a USB camera, the icon will be displayed.

14	**USB**	When TP-P900 is connected with a USB stick, the icon will be displayed.
15	**Ethernet**	When TP-P900 is connected with an Ethernet cable, the icon will be displayed.
16	**Bluetooth**	When TP-P900 Bluetooth is ON, the icon will be displayed.
17	**Wi-Fi**	When TP-P900 Wi-Fi is ON, the icon will be displayed.
18	**Return**	Return to previous page.
19	**Whiteboard**	Whiteboard function
20	**Annotation**	On-screen annotation
21	**Home Screen**	Return to home screen.
22	**Split Screen**	Show and set up layouts for different split screens.
23	**Setting**	Configure settings for TP-P900 **Network**: Change network configuration for the base unit. **Display**: Change output resolution of the unit. User can also configure parameters like contrast and brightness. **Sound**: Adjust volume of the unit. **Timer**: Set up power up/down timer. **Data&time**: Set up time for the unit. **Language**: Change the display language of P900. **About**: Show firmware of the unit. **Wallpaper**: Change the background image at home page. **Other**: Display/Hide side and status bar. **Reboot**: Reboot the unit. **Bluetooth**: Turn ON/OFF Bluetooth of the unit and connect to remote units. **Rotation**: Rotate HDMI output display.

24	**Chrome**	Chrome browser function.
25	**Gallery**	View photos and videos in TP-P900 or external storage.
26	**Calculator**	Calculator function.
27	**Signal Source**	Switch source on screen between TP-P900 and HDMI input.
28	**FileBrowser**	Browser and manage files in TP-P900 and external storage.
29	**Carousel**	Photo/video Looping function: User can select multiple photos and videos and loop them at a certain time gap.
30	**Welcome**	Welcome Message function. Users can select from a preset layout or design their own welcome message to display on screen. By enabling '**auto play**', the welcome message will be automatically displayed when the unit is booted up.
31	**WhiteBoard**	Whiteboard Function.

4. Installation

This section gives an overview of the ways to install and connect the base unit.

4.1 Installation methods for the base unit

Introduction to the installation methods:

The base unit can be installed either by table mounting or wall mounting in a meeting room.

The articulated antennas are rotatable for better signal.

Attention: For optimal performance, install the base unit close to the display and avoid obstacles between the base unit and dongles.

Required tools

• A drill (type of drill depends on the type of wall)

• 2 mounting screws (mounting screws are not included in the package) (between 6 and 8 mm)

How to install

1. Drill two holes in the wall.
2. Insert 2 flat screws into the 2 holes and fasten.
3. At the bottom of the base unit, plug 2 flat screws into 2 holes of its smallest diameter to fasten.

Note: Mounting screws are not included in the box. The type of screws depends on the type of wall (stone, wood, plasterboard, ...) the base unit is mounted to. Make sure the head of the screw is not larger than the hole at the bottom of the base unit.

4. Place the base unit on the wall and fix it with the 2 screws.

Antenna placement rules

- The antennas should be oriented vertically, perpendicular to the ceiling and parallel to the walls.
- The antennas should be installed far enough (at least 50cm/1.6ft) from metallic surfaces to avoid reflections and far enough (at least 1m/3.3ft) from other radio equipment that operates in the same frequency range, e.g., other Wi-Fi access points, cordless telephone, microwave ovens. It is also better to install antennas at least 15 cm (6 inches) from concrete walls.
- The best situation is a direct line of sight between antennas and transmitters. Any obstruction can cause the signal to follow a longer propagation path, which may result in performance degradation.
- Due to the radio pattern of the dipole antennas, the antennas should not be placed just above the position of the user. The advised position for the antennas is at the side of the meeting room.

4.2 Power Connection

The base unit can be powered by external power adapters.

How to connect the external power adapter

1. Connect the power adapter with the power lead and plug it into the power input of the base unit.
2. Choose the appropriate power plug (UK, or EU) to be installed on the power lead.
3. Plug the power lead into the wall outlet.

4.3 Video Connection

1. Connect the **HDMI Output** of the base unit to a 4K or Full-HD display by a HDMI cable.
2. Connect the **HDMI Input** of the base unit to a 4K or Full-HD video source such as a media player or PC by a HDMI cable.
3. Connect the power adapter to the base unit DC power socket**,** connect the power plug to an

outlet and switch the base unit on.

4. The system will then display the home page and user can switch the input signal to the HDMI input with '**Signal source**' option.

   Note that TP-P900 has duplicate HDMI outputs that can be connected to two separate screens.

4.4 Audio Connection

The base unit can transmit the audio output of the PC/Mac, re-direct and send it with the video signal. The audio will be output at line levels from mini jack socket 3.5mm connector and via the HDMI output connectors simultaneously.

It's up to the user to decide whether to send the audio signal together with the video signal.

How to connect separate audio

1. Connect an audio cable with mini jack socket 3.5mm connector into audio port of the base unit.
2. Connect the other side to the sound system of the meeting room.

PC/Mac Sound

By default, the internal speaker of PC/Mac will be muted, and the audio will be routed to the base unit after PC/Mac successfully mirrors desktop to the main screen, which is to avoid repeated audio.

When sharing is terminated, local speaker will return to previous status and the volume on PC/Mac can be adjusted.

4.5 LAN/Wi-Fi connection

The base unit can be connected to a local network or directly to a PC/Mac.

1. Connect an Ethernet cable with RJ45 connector into the LAN port of the base unit.
2. Connect the other side to LAN.
3. Configure network setting in the base unit and connect it to any available Wi-Fi point.

LAN/Wi-Fi connection can be used for:

- Network integration of the base unit in guest or company network.

4.6 Use of USB devices

USB control: A USB mouse or touch screen can be connected to the base unit.

USB mouse

- Single click to select.
- Right-click to return.

Touch screen

- Click to select.

External USB Devices over Wi-Fi Sharing

TP-P900 supports USB Camera and USB speakerphone over Wi-Fi sharing.

There are 2 USB ports in rear panel of TP-P900 for connecting the external USB devices such as microphone and camera, to start meeting with all kinds of video conference software such as Teams and Zoom.

1. Make sure the room USB peripherals and display are well connected with TP-P900 with cables.
2. Make sure that the PC/Mac is well connected with the base unit by the application.
3. Launch any VC application such as Zoom from desktop and choose **Settings>Video>Camera>TranScreen Camera**

   Settings>Audio

   For Speaker, select '**Transcreen Audio**'

   For Microphone, select '**Transcreen Audio**'
4. Click '**Sharing Devices**' button in the application and then click '**Open Camera**' in the application.

Note that this function only works when the base unit and the PC are under the same network and connected via application.

5. Quick Start

5.1 Mobile device: Wireless Connection

1. Connect the mobile device to the base unit via WiFi and download '**transcreen.app**' from Seada (https://seada.co.uk/downloads/) or type in '**transcreen.app**' in any browser and download the application needed.
2. For IOS devices, use Airplay to mirror the desktop.

5.2 Pairing dongles with base unit

1. Connect TP-PDH/TP-PDC to USB port of the base unit.
2. When the dongles are plugged in and boot up, a message will pop up showing '**Pairing in progress, cast later**'.
3. After pairing is completed, a message will show '**Paired successfully**' on the home page. After that, the dongle can be un-plugged and connected to PC/Mac for use.

If the WiFi setting is changed or the firmware of the base unit has been updated, all dongles have to be paired again. One dongle can only be paired with a single base unit at a time and the dongle will always make connection to the last base unit it is paired with.

Wireless dongle Paring: TP-P900 supports wireless dongle pairing: (1) Plug the dongle into PC/Laptop; (2) Ensure that the PC/Laptop is connected to the same network as TP-P900; (3) right-click the status icon and select Pairing Tool -> Wireless Pairing/Router Pairing and (4) User can then remotely pair dongles to units by entering the IP address of the unit or Wi-Fi name and password of the unit.

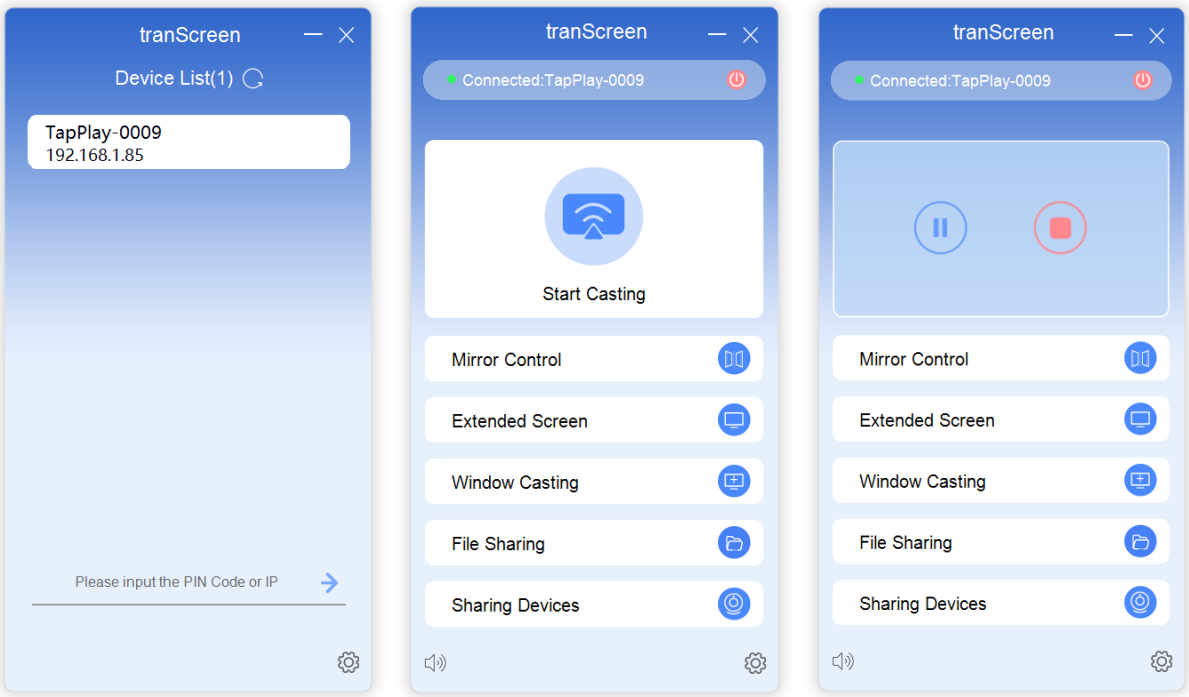
5.3 Mirroring

5.3.1 Windows PC/Mac with application

The base unit can be operated by either the dongle or the application. If there are multiple participants in a meeting, it is possible to have multiple connection methods.

3. Connect the PC/Mac to the base unit via WiFi and download '**transcreen.app**' from Seada (https://seada.co.uk/downloads/) or type in '**transcreen.app**' in any browser and download the application needed.
4. Run the application. There will be a list of available base units displayed and user can click '**Connect**' to choose the base unit.

5. When the base unit is connected, user can click '**Start Casting**' to mirror the desktop onto the main screen.
6. Click '**Stop Sharing**' to stop mirroring or click '**Pause Sharing**' to pause the mirroring.



7. User can right-click the status icon in Windows taskbar to open up the menu.

- '**Audio Drive'**: Enable/Disable audio from the PC/Mac to TP-P900.
- '**Touchback Control'**: Enable/Disable touchback of the current PC/Mac from TP-P900

5.3.1.1 Options for Windows PC/Mac

Click each icon in the window to access more function.

- **Mirror Control:**

  If '**Control Button**' is enabled on the base unit, users can use this function to control back TP-P900 from their PC/Mac. This will be useful if user wants to change any setting on the unit but cannot access to either mouse or touchscreen that is connected to the unit.

- **Extended Screen**

  Transfer extended desktop of the active source. The primary screen is displayed on the laptop and the extended screen is displayed on the main screen.

- **Window Casting**

  Cast the window of a particular software on the PC/Mac onto the display. Note that in Window Casting, the touchback function will be disabled.

- **File Sharing**

  Transfer files to the base unit. When the button is clicked, a notification will pop up on the base unit requesting the permission to receive the file. After accepting, the file will be saved on the storage of TP-P900, and user can view or share this file to other users.

- **Sharing Devices**

  If there is a USB camera, speaker or microphone connected to the base unit, by clicking '**Open Camera**', user can recall this USB camera in VM software such as Zoom and Microsoft Teams. If this camera is an all-in-one videobar or a speakphone is connected to the base unit, by clicking '**Enable Audio**', user can recall audio from the base unit as well in VM software. User can also flip the video from the camera in case that some VM software automatically flips it.

- **Volume Slider:**

  Adjust the playback volume of the main screen when mirroring of the PC/Mac is active.

5.3.1.2 Nine view mirroring

TP-P900 can mirror up to 9 sources onto main display simultaneously, which supports PC/Mac and mobile devices.

5.3.2 Mobiles Devices

Sharing on Android devices

1. Download the '**tranScreen.apk**' application.
2. Connect mobile device to the same network as the base unit.
3. Open the application in the mobile device, and the homepage will pop up.
4. Select the base unit to connect to.
5. Click '**Start Casting'** to start mirroring.
6. Click '**Stop**' to stop mirroring.

Sharing on IOS devices

1. Connect the IOS device to the same WiFi network as TP-P900.
2. Activate the control center and click the '**Airplay**' Icon on the Apple device.
3. Select the TP-P900 to start mirroring.
4. User can mirror the screen/music/video/picture of the IOS device wirelessly to the base unit.

5.3.3 Miracast on Android Devices and WIN10 PC

Android Devices

1. Make sure WiFi or WLAN is enabled.
2. Swipe down the top of phone's screen and click the wireless projection icon in the popup page.
3. The wireless projection window will pop up and find the base unit in the available list to connect.
4. After entering password, the mirroring will start.
5. Click the '**wireless projection**' icon again to disconnect and stop mirroring.

WIN10 PC Miracast

1. Make sure WiFi or WLAN is enabled.
2. Click the '**Notification**' icon on the right-bottom corner in the menu bar.
3. Click '**Project**' icon to enter password on the home screen to connect and mirror.
4. After entering password, mirroring will start.
5. Click the '**Project**' icon again to disconnect and stop mirroring.

5.4 Cast Setting

On touchscreen or with mouse connected to the base unit, user can configure settings for TP-P900 in Cast Setting section:

5.4.1 Device Name

User can change the name of the device, and it will be displayed on the home screen.

5.4.2 Number of Split-screen

Change the number of Split-screen of the base unit. TP-P900 supports up to 9 split screens.

5.4.3 BYOM

Enable/Disable connected USB camera/All-in-one videobar/speakphone. User can also test if they are working in this function.

5.4.4 Smart Presentation Pen

Function under development to work with Seada Smart Presentation Pen.

5.4.5 Purchase More Functions

Authorised for extra functions.

5.4.6 Main Transmitter

If this function is enabled, a transmitter will be set up as a main transmitter and user can only use this transmitter to share contents on screen.

5.4.7 Cast Authorisation

If this function is enabled, when user starts casting, a window will pop up on the screen connected to the base unit asking for permission to cast. User can only cast contents onto the screen after the request has been accepted.

5.4.8 Display Control Button

After this function has been enabled, a control box will pop up on the right-bottom of the screen connected to the base unit. By clicking this control box, a sub menu will pop up and user can use this menu to (1) enable/disable remote touchback of certain PCs; (2) recall content sharing of certain PCs and (3) disconnect content sharing from certain PCs.

5.4.9 Display PPT Flip Icon

After this function has been enabled, when sharing content with PPT, a special toolbox will show on the shared content on the output display and user can use this toolbox with either touch screen or mouse to scroll over the PPT.

5.4.10 Chromecast

Enable/Disable Chromecast.

5.4.11 Miracast

Enable/Disable Miracast.

5.4.12 HDMI Out Audio

Enable/Disable audio from HDMI output.

5.4.13 HDMI Output Control

After this function has been enabled and before the unit is restarted, the HDMI output of the base unit will be shut down. After the unit has been restarted, if no operation is made, after 20 seconds, HDMI output of the base unit will be shut down again.

5.4.14 HDMI/TYPE-C Plug and Play

Enable/Disable the use of dongles.

5.5 PIN Code

User can choose the pin code for sharing content to the base unit in this section. The pin code can be in three different formats: (1) 6-digit code; (2) 6-digit universal code and (3) 8-digit universal code. User can also disable the pin code so everyone will be able to share the content.

By enabling '**Display Floating Bar**', a floating bar will always be displayed on the top of the HDMI output showing the sharing pin code for the base unit.

5.6 Display Mode

User can change the display mode of the shared content on the display in this section.

5.7 Version

Check and upgrade firmware for the unit.