- Login interface

Open the APP startup interface, the login interface shown in Figure 1 appears, enter the account password, and click Login. The user name is admin, and the default initial user password is admin. See Figure 1 for details.

Matrix keyboard

Figure 1

1.1 The user can click the button on the right side of the password bar to display or hide the password and clear the password;

1.2 The user can click the button on the right side of the user bar to select the historical login record account to log in;

二、Home interface

Click User Login to enter the main interface. The home page module is displayed by default, and the following interface is displayed, mainly including **[**PTZ Mode], **[**TV Wall], **[**AI Platform], **[**Setting], **[**EXIT]. See Figure 2 for details

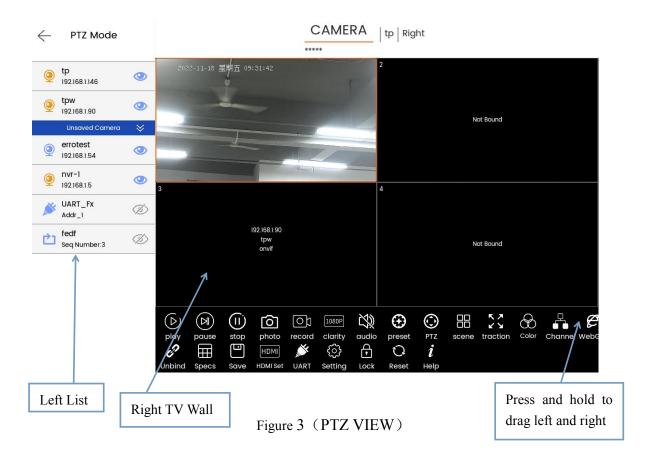
Decode Matrix Keyboard EXIT							
PTZ Mode	TV Wall	AI Platform	Setting				
0	Ţ	AI)	\$				

Figure 2

\equiv Introduction to main functional modules

3.1、PTZ mode module

The [PTZ Mode] function module is mainly used to preview and control cameras bound to the LAN, including window operations such as [Play], [Pause], [Stop], [Photo], [record], [clarity], [Audio], [Preset], [PTZ], [Scene], [traction], [Color], [Channel], [WebGUI], [AI Model], etc; TV wall operations include [Unbind], [Specs], [Save], [HDMI Set], [UART], [Setting], [Reset], [Lock] and [Help]. See Figure 3-10 for details.



3.1.1 Left list

For IPC, NVR, round robin resource, serial port device, camera icon (the first) represents NVR or IPC device, serial port icon (the fifth) represents serial port protocol device, and round robin icon (the sixth) represents round robin resource;

3.1.2 Right TV wall

TV wall window interface;

3.1.3, TV wall binding and selection

3.1.3.1 Drag the left camera and bind it to the right window;

3.1.3.2 Select the camera and click the corresponding camera control button in the lower right corner;

3.1.4 TV wall control

3.1.4.1 [Unbind] Unbind the video source from the window;

3.1.4.2 [Specs] (Specification) Switch the number of TV wall windows, including 1 * 1,

2 * 2 and 3 * 3. The default is 2 * 2;

3.1.4.3 [Save] Permanently save the binding relationship between the video source and the window, and it will be automatically associated after the device is powered off and restarted;

3.1.4.4 [HDMI set] The current TV wall or window is projected through the HDMI interface, as shown in Figure 4, and Figure 5 shows the preview of the HDMI display;

\leftarrow	PTZ Mode						C ***	CAME	RA	tp Rig	ht			
0	tp 1921681146	0	201											
0	tpw 192.168.1.90	0				Selec		output t				ot Bound		
						00100	C H DIVII	output	.ypc			or bound		
0	errotest 192.168.1.54	0			4		Stop c	out put						
9	nvr-1 192.168.1.5	0	3			lame: TP-I	IPC	camera						
	UART_Fx Addr_1						eview th	e PTZ wa	11					
Ċ	fedf Seq Number:3	Ø				lame: PTZ _. D: 1668655		2				ot Bound		
						Cance		Con	firm					
			(\mathbb{D})	(\mathbb{A})		Ô		1080P	2	\oplus	٢	K M K M	\otimes	Ø
			play P	pause	stop		record	clarity {်	audio	preset	ptz i			er web
			Unbind	Specs	L) Save		UART	کی Setting	Lock	Reset	₽ Help			

Figure 4

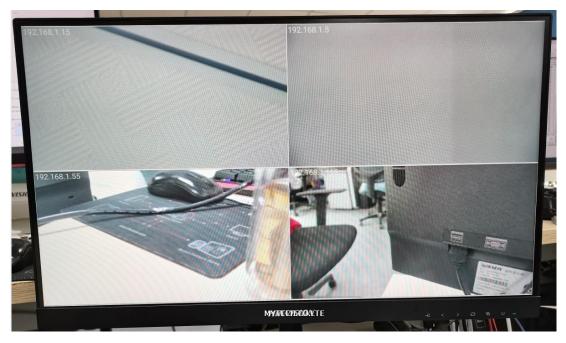


Figure 5

3.1.4.5 [UART] (Serial port) Click the [UART] button to expand the serial port editing interface on the left. You can select serial port protocols Pelco-D, Pelco-P, Visca, enter address code, enter RTSP connection and other operations, as shown in Figure 6

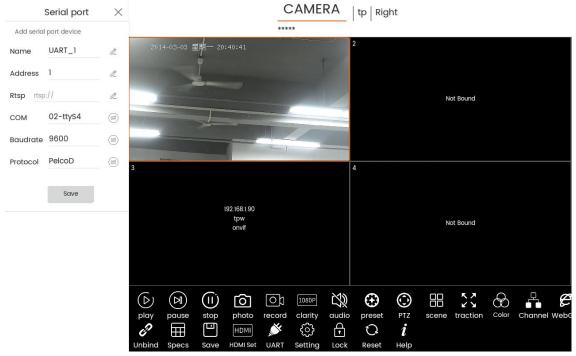


Figure 6

3.1.4.6 [Setting] Jumps to the setting interface. The specific functions of the setting interface will be described separately, as shown in Figure 7

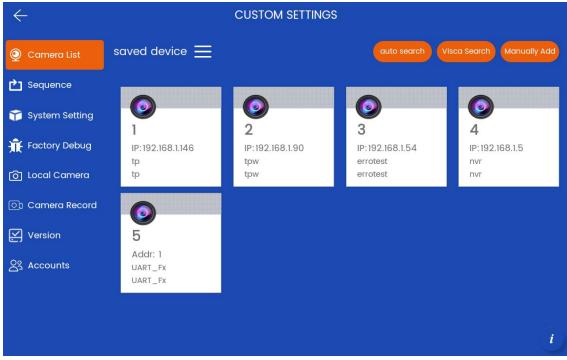


Figure 7

3.1.4.7 [Reset] Restore the data saved on the current TV wall once;

3.1.4.8 [Lock] The program enters the screen protection state, and can only be operated after long press and unlock, but HDMI screen projection will not be affected;

3.1.4.9 [Help] displays help prompts or jumps to the help interface;

3.1.5 TV wall window control

First, the user needs to bind and select the window to see the window related operation buttons, as shown in Figure 3, which means that the window with No. 1 in the upper left corner has been bound and selected;

3.1.5.1 [Play] Play the video screen of the selected window. The camera needs to support RTSP protocol;

3.1.5.2 [Pause] Pause the playback, the screen will be paused and will not be closed;

3.1.5.3 [Stop] Stop playing and the screen will be closed;

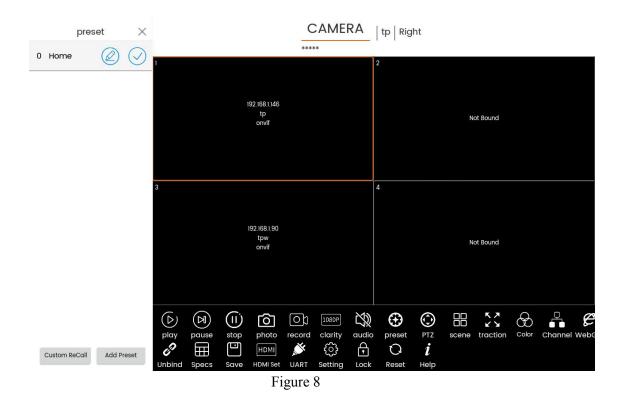
3.1.5.4 [Photo] Take a picture of the current window screen and save it locally. The window video can only be taken when it is playing or paused;

3.1.5.5 [record] Record the current window screen and save it locally. The window video needs to be in play status can be recorded;

3.1.5.6 [clarity] (Resolution) Switch the current window screen to play the code stream, main code stream (HD), sub code stream (SD);

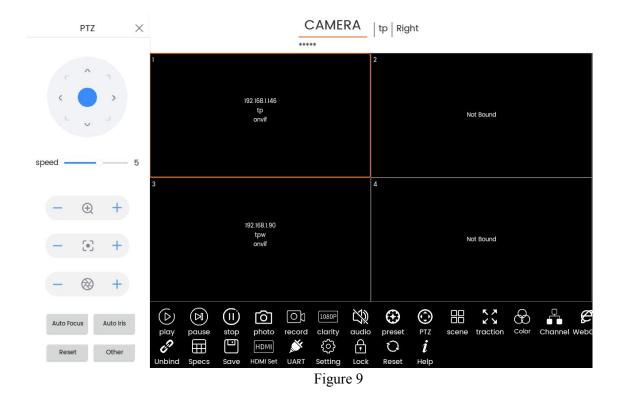
3.1.5.7 [Audio] To turn on or off the video sound in the current window, the keyboard hardware must support audio input. The RTSP video source contains audio formats (ACC, MP3);

3.1.5.8 [Preset] Edit the device preset information of the current window, and support adding, deleting, and calling operations, as shown in Figure 8;



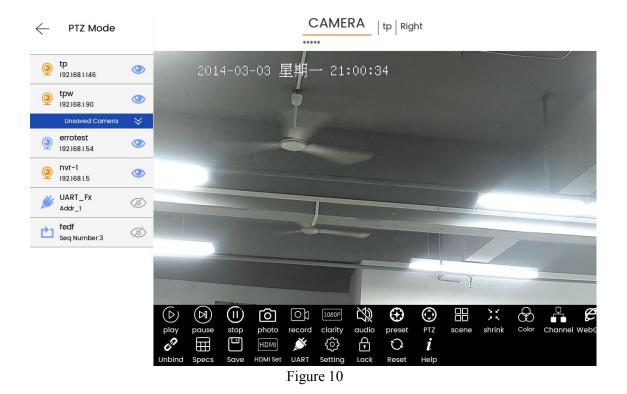
3.1.5.9 [PTZ] Control the current window device through PTZ protocol, including

direction, zoom, focus, aperture, exposure, scanning, cruise, etc., as shown in Figure 9;

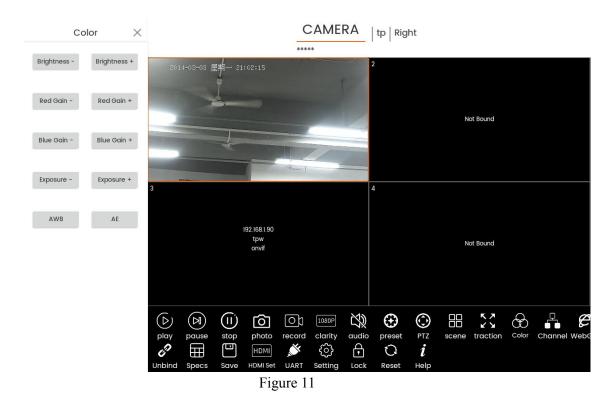


3.1.5.10 [Scene] Edit the current window device scenario information, and support adding, deleting, calling, etc;

3.1.5.11 [traction] (Full screen) The current window plays full screen (the whole TV wall), and supports full screen and restoration, as shown in Figure 10;



3.1.5.12 [Color] controls the image parameters of the current window device, and supports brightness, gain, exposure and other operations, as shown in Figure 11;



3.1.5.13 [Channel] Obtain and switch the current window device channel. Only multi-channel IPC or NVR devices are supported,Only the onvif protocol is supported. After switching channels, click Save to bind the channel to the window one-to-one. If you want to permanently save, you need to save the TV wall information, as shown in Figure 12;

Channel	\times	wall name	temp_0		Wall specifications	a 2 X 2 ℤ		
Edit channel information	on		Camera Name: nvr-) Operation:	***** Preset: ***	** Key Input: *****		
alias nvrc0	æ	1			2			
0 nvrc0	\bigcirc		192.168.1.19 nvr onvif		192.1681.19 nvr onvif			
1 nvrc1	\bigcirc		Channel 0 nvrc0		Channel 1 nvrc1			
3 nvrc2	\bigcirc							
				\otimes	4			
			192.168.119 nvr onvit Channel 3 nvrc2			Not Bound		
Save Rese	t	b pause play pause pause pause pause pause pause pause	Image: stop photo record stop photo record Image: stop Image: stop Image: stop Edit Add Save		preset PTZ		annel Weba	

Figure 12

3.1.5.14 [WebGUI] Enter the device WEB management platform, that is, the IP address. The default port is 80, as shown in Figures 13 and 14;

<	网页 Camera Name:TP-IPC IP:192.168.1.146 user:admin password:admin
TP-LINK IPC	
	欢迎使用
	用户名 A admin
	密码 请输入任意字符登录
	登录

Figure 13



Figure 14



3.1.5.15 [AI Model] AI model loading. This function is still in the trial stage, as shown in Figure 15;

Figure 15

$3.2 \smallsetminus$ TV wall module

The [TV Wall] function module is mainly used to edit the TV wall. On the basis of [PTZ Mode], the functions of adding, saving, editing and switching the TV wall are added. The [HDMI Setting] item also adds the ability to select different TV walls for screen projection. Other operations are the same as those of [PTZ Mode], as shown in Figure 16;

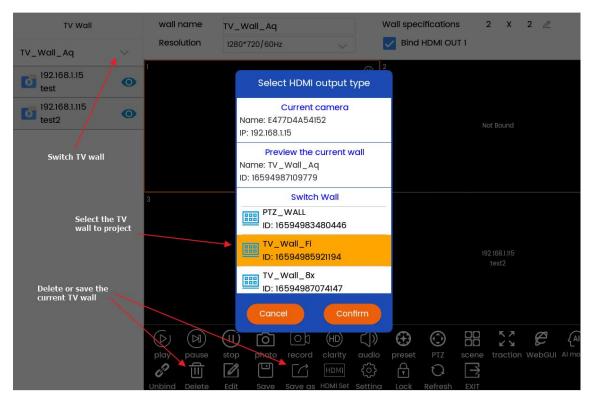


Figure 16

3.3、Setting module

The [Setting] function module includes [Camera List], [Sequence], [System Setting], [Factory Debug], [Local Camera], [Camera Record], [Version], [Accountt], as shown in Figure 17;

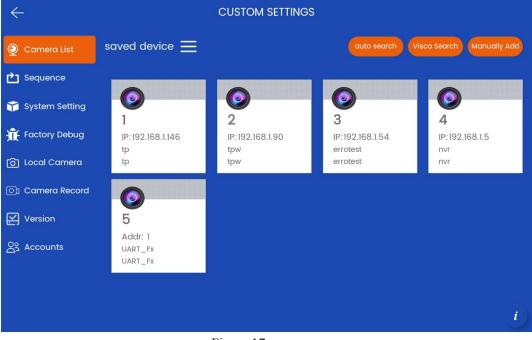


Figure 17

3.3.1 [Camera List] This interface is mainly used to display and edit devices. Users can find and add devices by clicking [Auto Search], as shown in Figure 18;

\leftarrow		C	USTOM SE	TTINGS		
🧕 Camera List	saved device 🗮					
Sequence		+	Searche	ed 🗙		
🎁 System Setting		01	192.168.1.25		3	4
🗎 Factory Debug	IP:192.168.1.146 tp	11	192.168.1.90	Added	IP:192.168.1.54 errotest	IP:192.168.1.5 nvr
ලි Local Camera ලා Camera Record	tp	21	MODEL		errotest	nvr
Version	5	31	IPCAM 192.168.1.13			
29 Accounts	Addr: 1 UART_Fx	Sel	ect All	Reverse		
	UART_Fx					
						<u></u>

Figure 18

3.3.2 [Sequence] View and edit sequence resources, as shown in Figures 19 and 20;

\leftarrow	CUSTOM SETTINGS	
🧕 Camera List		Add
🔁 Sequence	0 fectf Number of Devices:3 Seq time:30	Z ×
🎁 System Setting		
🙀 Factory Debug		
👩 Local Camera		
ා Camera Record		
Version		
Accounts		
		i

Figure 19

		CUSTOM SETTINGS			
 Camera List Sequence System Setting Factory Debug Local Camera Camera Record Version Accounts 	C 0 fe Nu	Nametestseq Time(s)30errotestIP:192168.1.54	•	Add	
		ADD RESOURCES			
					i

Figure 20

3.3.3 [System Setting] system equipment module, users can configure the system, as shown in Figure 21;

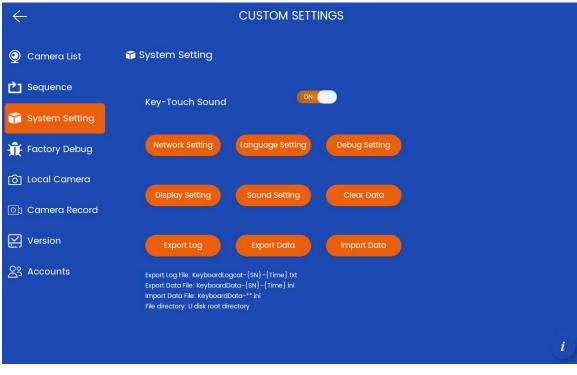


Figure 21

3.3.4 [Factory Debug] Factory debugging mode, the user can test whether the functions of the keyboard hardware are normal (for example, it is correct to enter the numerical key value), as shown in Figure 22;

¢		CUSTOM SETTINGS									
0	Camera List	Test keyboard									
亡	Sequence	10:30:17 receive: cmd= 物理按键 Key:14 Name:KEY_14 HEX:ff010e00000f 10:30:17 receive: cmd= 物理按键 Key:0 Name:NULL HEX:ff0100000001									
Ŷ	System Setting	10:30:19 receive: cmd= 握杆方向 右 Key:70 Name:JOYSTICK_RIGHT_1 HEX:ff0202010005 10:30:19 receive: cmd= 握杆方向 右 Key:71 Name:JOYSTICK_RIGHT_2 HEX:ff0202020006 10:30:19 receive: cmd= 握杆方向 右 Key:72 Name:JOYSTICK_RIGHT_3 HEX:ff0202030007									
Ŵ	Factory Debug	10:30:19 receive: cmd= 掘杆方向 右 Key:73 Name:JOYSTICK_RIGHT_4 HEX:ff0202040008 10:30:19 receive: cmd= 掘杆方向 右 Key:72 Name:JOYSTICK_RIGHT_3 HEX:ff0202030007 10:30:19 receive: cmd= 掘杆方向 右 Key:71 Name:JOYSTICK_RIGHT_2 HEX:ff0202020006									
Ô	Local Camera	10:30:19									
0)	Camera Record	10:30:22 receive: cmd= 物理按键 Key:10 Name:KEY_10 HEX:ff010a00000b 10:30:22 receive: cmd= 物理按键 Key:0 Name:NULL HEX:ff0100000001 10:30:22 receive: cmd= 物理按键 Key:11 Name:KEY_11 HEX:ff010b00000c									
¥	Version	10:30:23 receive: cmd= 物理按键 Key:0 Name:NULL HEX:ff0100000001									
ద్రి	Accounts	ENABLE BUZZER SOUND CLEAR TEXT BUZZER UDPATE MCU									
			i								

Figure 22

3.3.5 [Local camera] Local camera module, the user can preview the local USB camera screen successfully accessed, as shown in Figure 23;

\leftarrow	CUSTOM SETTINGS	
🧕 Camera List	Local Camera	
C Sequence		
🎁 System Setting		
🟦 Factory Debug		
ලි Local Camera		
ා Camera Record		
Version		
Accounts		
	Note, please connect and put the USB camera or HDMI-IN first	
	START STOP PHOTO CONTROL	i

Figure 23

3.3.6 [Camera record] Camera video recording module, where users can play recorded videos and take photos, and can collect, delete and import them, as shown in Figure 24;

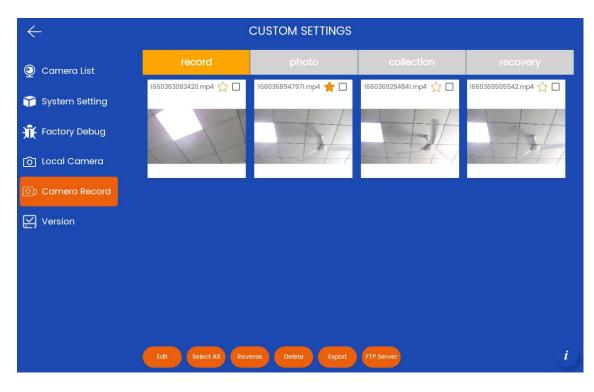


Figure 24

3.3.7 [Version] The user can upgrade the application version by clicking [APP UPDATE]. First, the user needs to put the APK file in the root directory of the U disk and connect it to the USB port of the device, as shown in Figure 25;

\leftarrow	CUSTOM SETTINGS	
🧕 Camera List	Version	
Sequence	Software Info: 1.2.3	
🐨 System Setting	Hardware Info: tulip_p1-eng 6.0.1 MOB30J 20221025 test-keys	
ලි Local Camera	Serial Number: 24307901c41014020690	
ତ୍ରୀ Camera Record		
Version		
ြို့ Accounts		
	Ĩ	

Figure 25

3.3.8 [Account] User information management, logout or change password,

	as shown in Figure 2	6;		
\leftarrow		CUSTOM SETTINGS		
 Camera List Sequence System Setting 	User info	admin Number of Devices:5		Admin
Factory Debug		Modify Password	>	
ි Local Camera බා Camera Record		logout		
Version				
ුදු Accounts				
				i
		Figure 26		

3.4、Al Platform

The [AI Platform] function module supports two types of algorithm models, including [OpenCV] and [Paddle]. This function is still in the testing stage. See Figure 27 for details.

Al Platform Management						
openCV face download	cat download					
Paddle Gace download	human download	car download	bicycle download	animal download	OCR download	ASR download
		Intel	ligent Analysis Repoi			

Figure 27

3.5、EXIT

The user can click [EXIT] on the main interface to exit the application.