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Notice for Internet Access

The customer should be responsible for the risks of accessing the camera to the Internet, including but not limited to possible cyber-attack, hacking attack, virus infection and etc. This company is not responsible for the product failures and information disclosure caused thereby, but will provide timely technical support for the cameras.

Announcement

To ensure the safety of device on internet, it is strongly recommended that you set a strong password composed of at least 2 kinds of the following, numbers, upper-case letters, lower-case letters or specific symbols with length of 8 to 16 characters.

Please modify the password periodically such as once every 3 months. If the device is used in highly risky environment, suggest modifying the password monthly or weekly.

Please keep your username and password safe.

EPD (Environmental Product Declaration)

Please follow the local laws and regulations about handling device packing materials, depleted batteries and waste devices, and support recycling actions.

Target Audience

Administrators and Operators of Video Surveillance Products

About

This manual is written to help user operation, and the screenshots and diagrams herein are for illustration and explanation purpose only, which may differ somehow with actual products. Therefore, please be subject to actual products.

Related Documents

Quick Start Guide, User Manual for vStation Pro, User Manual for NVR

Convention

lcon	Convention
()	Notes and attention: necessary supplement for operation
BOLD	Menu, e.g. Drag to Zoom
>	Connector between menus of different levels, e.g. Settings > Camera

User Manual	for AIBOX
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1. Product Brief

AIBOX is an intelligent algorithm box with powerful computing performance that is developed by this company independently. It can access to multiple front-ends simultaneously and perform various analyses on the video streams thereof, realizing basic functions of human and vehicle recognition. In actual applications, it can realize specific intelligent functions through different scenario configurations, e.g.: helmet detection, high parking and etc. Therefore, it is widely used in governments, sub districts, communities, places of interests, office buildings and supermarkets.

ONote: The common functions of AIBOX can be referred to in <u>Appendix B: Function List</u>.



Picture 1-1 Front view of AIBOX

2. Instructions

Please finish installation and wiring of AIBOX according to the *Quick Start Guide*. Afterwards, refer to the following flow chart to realize intelligent surveillance.

Attention: The customer should be responsible for the risks of accessing the device to the Internet, including but not limited to possible cyber-attack, hacking attack, virus infection and etc. This company is not responsible for the product failures and information disclosure caused thereby, but will provide timely technical support.

The following is the flow chart to realize AIBOX intelligent surveillance, for your reference only.



Picture 2-1 Flow chart

Notes for flow chart:

- > Startup: AIBOX configurations for normal use and vStation Pro installation.
- Stream Management: AIBOX adds, deletes and edits front-end devices.
- > Intelligent Configuration: Configurations for AIBOX to access to vStation Pro.
- > Intelligent Analysis: Configure areas of face/vehicle recognition on the images of front-end devices.
- > Intelligent View: View intelligent info of the front-end devices.
- > Intelligent Retrieval: Search intelligent capturing info of the front-end devices.

3. Start Up

3.1 Activate Device

When the device is first used, user should activate it and set the login password for normal use.

There are 2 methods to activate: though IPCSearch or through browser.

- Activate through IPCSearch
 - a) Get IPCSearch from our website and install it according to the prompts.
 - b) After finishing installation, open IPCsearch and the system will search the devices in LAN and display the list as shown below.
 - c) Select the camera to be activated, right click and select "Activate". On the popup interface, configure admin user password and email for claiming password. Click "Activate".

9	IPCS	earch 3.0											- 🗆 ×
	Sear	ch BroadSet	Modify Params	Login Passv	ord Reset	Batch Processing						😡 Language 🤜	r 💡 Help 👻
١	No.	IP	Alias	Device model		Mask	Gateway	MAC	Version	Serial Number	Runtime	Active State	
1		192.168.1.103	AIBOX	AIBOX-16		255.255.255.0	192.168.1.254	00-14-10-2D-0A-82	8.1.4.1.509	Y2120A29NL	190hr.23min.13s	ec. Activated	
В	atch	Processing											×
	٩.,	Reboot	Factory Rese	t Upgra	de	Password Mod	lification	Load Config	Reset Blac	k/White IP Lis	t Activate	e Debug Mo	de 🕨
	F	Please select dev	ice(s) to be pro	cessed							-		
		10000 001001 001	100(0) to bo pro-										
	0	Device model	AIBOX-16		-	Refresh	version info						
		IP	Alias		Devi	ce model		Operation Status		MAC		Version	Run
		4											•
		Select all											7
		emame.	admin					Em	nail:				
		son ano.											
	N	ew Password:						PV	VD Confirm:				
												Ant	ivata
												Act	Ivale

Picture 3-1 IPCSearch



- Device type and alias are subject to the search result.
- When there are more than one non-activated devices, select the devices and click "Batch processing". On the popup interface, set admin user's password and the email address to claim password. Click "Activate" and wait for rebooting.

Activate through browser

a) Open browser on PC, enter device IP address and press "Enter". The default IP of LAN1 is 192.168.1.100, and that of LAN2 is 172.26.1.100;

Note: If the device and the PC are in different network segments, add an IP address to PC in the same network segment as the device. The following operations are for your reference only.

 Run "Start Menu" of PC, and go to Control Panel > Network and Internet > View network status and tasks > Local Connection > Properties to pop up the following window;

Wireless Network Connection Properties	23					
Networking Sharing						
Connect using:						
Intel(R) Dual Band Wireless-AC 8260						
Configure						
This connection uses the following items:						
Client for Microsoft Networks						
🗹 📮 QoS Packet Scheduler						
File and Printer Sharing for Microsoft Networks						
Internet Protocol Version 6 (TCP/IPv6)						
Internet Protocol Version 4 (TCP/IPv4)	Internet Protocol Version 4 (TCP/IPv4)					
🗹 🛶 Link-Layer Topology Discovery Mapper I/O Driver						
🗹 🛶 Link-Layer Topology Discovery Responder						
Install Uninstall Properties						
Description						
Transmission Control Protocol/Internet Protocol. The default						
wide area network protocol that provides communication						
across diverse interconnected networks.						
ОК Са	ncel					

Picture 3-2 Local Connection Properties

2) Double-click "Internet Protocol Version 4 (TCP/IPv4)" to pop up the following window;

User Manual for AIBOX

Internet Protocol Version 4 (TCP/IPv4)	Properti	es	l	? X
General				
You can get IP settings assigned autor this capability. Otherwise, you need to for the appropriate IP settings.	atically i ask your	f your r netwo	network s rk admini	upports strator
Obtain an IP address automatical	у			
• Use the following IP address:				
IP address:		•		
Subnet mask:				
Default gateway:				
Obtain DNS server address autom	atically			
• Use the following DNS server add	esses:-			
Preferred DNS server:				
Alternate DNS server:				
Validate settings upon exit			Adva	nced
		OK		Cancel

Picture 3-3 Internet Protocol Version 4 (TCP/IPv4) properties

 Click "Advanced". On the popup window of "Advanced TCP/IP Settings", click "Add" and enter IP address and subnet mask as shown below. Click "Add" to add the IP address to PC in the same network segment as the device;

Advanced TCP/IP Settings	8	23
IP addresses		
IP address Subnet mask		
Add Edit Ren	nove	
TCP/IP Address	<u> </u>	
IP address: 192 . 168 . 1 . 200		
Subnet mask: 255 . 255 . 255 . 0		
Add Cancel		
	_	
Interface metric:		
ОК	Ca	ncel

Picture 3-4 Advanced TCP/IP settings

b) Input device IP address in browser and enter the web client as shown below:

Log	in
	I admin Weak Strong Please choose a password with 8- 16 characters, Your password must also contain two or more combinations of upper and lowercase letters,numbers,and symbols. I When admin's password gets lost, find it back through this email. Make sure this email address is safe and valid. Active

Picture 3-5 Activate through browser

c) Configure admin user password and email for claiming password. Click "Activate".



- To ensure the safety of device on internet, it is strongly recommended that you set a strong password composed of at least 2 kinds of the following, numbers, upper-case letters, lower-case letters or specific symbols with length of 8 to 16 characters.
- Please modify the password periodically such as once every 3 months. If the device is used in highly risky environment, suggest modifying the password monthly or weekly.
- Please keep your username and password safe.

3.2 Login

After activating the device, it will reboot. After reboot, enter device IP address in the browser to enter the login interface of web client. Enter username "admin" and the set password to enter the client.

Log In							
	admin Log In						



- Note: If user enters a wrong username or password for 6 times, the device IP will be locked up for 10 minutes, during which user cannot login to this device. If user forgets the password, reset the password.
 - 1) Open IPCSearch and select the device whose password needs to be reset. Click "Password Reset" and a window will pop up, as shown below:

Password Res	et ×
Serial No.:	76377BE503FF950CA835BE884292DD90DA9F9A0CDA13A26FCAB8A26D07234 Copy
Mail:	r******e@kedacom.com
Please visit t https://ucq.l Fill in the ser password re:	he following website: kedacom.com/restorepwden.isp ial number and email, to complete the set operation
Command:	
Customer Se	rvice:globalsupport@kedacom.com
	OK Cancel

Picture 3-7 Password Reset

2) Click the password reset link or scan the QR code in the above picture with a mobile device and fill in the "Serial Number" and "Email" address in the following picture. Click "Get Security Code";

Restore Passwork	rd
Serial Number	76377BE503FF950CA835BE884292DD90DA9 F9A0CDA13A26FCAB8A26D0723418E
Email	
Verification Code	AQGH
	Get Security Code

Picture 3-8 Password Reset

1	1
I	1

 Login to the email address to get a security code and fill in "Command" blank in Picture 3-7 and click "OK". Please remember the new password on the popup window and click "OK". The device will reboot.

3.3 Main Interface



Picture 3-9 Main interface of web client

- Basic functions
 - Live: preview live video of and adjust parameters of front-end devices;
 - Playback and Download: search, playback and download video records or images by time or conditions;
 - Settings: configure device functions and system parameters.
- Buttons
 - E→ Logout is current user safely.
 - Other states and the state of the device.
 - open or download vClient Pro.
 - view system status. If there is red number at the top right corner, there is system alarm info and user can view.
 - It is the icon to view log list. It supports filters if necessary.

3.4 Initial Setting of AIBOX

3.4.1 Modify Network Parameters

There are 2 LANs on AIBOX supporting access to two different network segments. User can modify LAN parameters according to the network segment at site. It supports modifying through web client or IPCSearch.

ONote: There are different default IP addresses of the two LANs. The default address of LAN 1 is 192.168.1.100/24 and that of LAN 2 is 172.26.1.100/24.

Modify network parameters through IPCSearch

After activating the device, user can quickly modify basic network parameters through IPCSearch, including IP address, subnet mask, gateway and etc.

- Open IPCSearch and the system will search the devices in LAN automatically and display the results on the list;
- Select a device to be configured, click "Modify Params" or right click the mouse. Modify
 parameters and fill the password set during activation.

Device:	AIBOX
MAC:	00-14-10-2D-0A-82
Model:	AIBOX-16
Device Address	
O Auto-obtain devic	e address(Open DHCP).
• Custom device ad	Idress(Close DHCP).
IP Address:	192 . 168 . 1 . 103
Subnet Mask:	255 . 255 . 255 . 0
Gateway:	192 . 168 . 1 . 254
Modify VMS Registr	ration Address
Enable LDS	
• IP Address	255 . 255 . 255 . 255
Domain	
Port:	0
Usemame:	admin
Password:	

Picture 3-10 Modify Parameter

3) Click "OK" and in the popup window click "OK". Wait for rebooting.

IPCSearch		x
<u> </u>	Operation succeeded, rebooting now	
	ОК	

Picture 3-11 Reboot device

Modify network parameters through web client

Log into AIBOX web client, go to **Settings > Network > IP and Port > Ethernet**, and configure parameters such as IP address, subnet mask, default gateway and etc.

Working Mode	Multi-Address	~	
NIC	LAN1	~	
NIC Speed	Self-adaptive	~	
IPv4 Properties			
IPv4 Mode	Static	~	
IPv4 Address	192.168.1.103		
IPv4 Subnet Mask	255.255.255.0		
Default IPv4 Gateway	192.168.1.254		
Obtain IPv4 DNS server			
address automatically			
Preferred IPv4 DNS Server	0.0.0.0		
Alternate IPv4 DNS Server	0.0.0.0		
Other			
Default Route	LAN1	~	
	Save		

Picture 3-12 Ethernet

■ Working Mode: Multi-address.

Note: Multi-address means the parameters of different NICs are independent and they can work simultaneously. User can configure that of LAN1 and LAN2 respectively.

■ NIC: Select corresponding LAN port according to actual requests.

Note: Under multi-address mode, select different LAN ports and configure IPv4 parameters respectively.

- NIC Speed: Select NIC speed by requirements, options including self-adaptive, forcible 100M and forcible 1000M. The default is self-adaptive.
- IPv4 Properties
 - IPv4 Mode: Select the way to obtain IP address by requirement. When selecting "DHCP", the device will obtain IP address automatically; when selecting "Static", user shall configure IP address, subnet mask and default gateway manually;
 - Obtain IPv4 DNS Server Address Automatically: Select this option if necessary. If selected, the camera will obtain the configuration parameters of DNS server from the gateway automatically; otherwise, user should configure DNS server parameters manually.

After finishing, click "Save".

Default Route: Select default route according to actual request and the valid route is subject to the selected LAN port.

After finishing, click "Save".

3.4.2 Initialization of Storage Card

ONote: When using the device for the first time, please initialize the TF card.

Log into AIBOX web client, go to **Settings > Storage > Basic**, select storage card and click "Initialize" to format the card.

Refresh	Add	Initializ	Edit	Attribute	Uninstall		
	Capacity	Status	Attribute	Туре	Remaining	Partition	Disk Group
65	117.75GB	Normal	R/W	SD Card	57.78GB	Query	1 🕶

Disk Group 1 Total: 117GB

Remaining Capacity: 57GB Remaining Capacity: 57GB

Save

HDD Total: 117GB

Picture 3-13 Storage management

3.5 Install vStation Pro

vStation Pro is a new Windows-Desk management software for AIBOX, which has powerful functions, simple and easy-to-use.

ONote: Please consult the CS personnel of this company for downloading vStation Pro.

The installation and configuration steps of vStation Pro are as follows:

1) Download vStation Pro installation file support and complete according to the prompts;





Note: After finishing, by default vSttion Pro server
 Saver
 and client
 are also installed.
 According to actual requests at site, install vStation server and client on different PCs.



2)

and configure port;

VStation Pro	o Server					—	×
Operating Status	Port		Language	e	Import/Ex	xport	
			_				
vStat	ion Port	6000	(10	025-65535)			
HTTF	Port	46789	(1-	-65535)			
нттғ	PS Port:	3789	(1-	-65535)			
						OK	

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3) Run vStation Pro client enter server IP address, port, username and password.

O vStation Pro	8 ×
IP 127. 0 . 0 . 1 s ecoo	
Rease enter a username.	
Please enter a password.	
Remember Me	
Log In	

Picture 3-15 Log into client

ONote: The IP is the PC IP running the server. If the server and the client are on the same PC, fill the default IP 127.0.0.1. The port is the server port configured on server port interface. Username and password are those set during installing vStation Pro server.

4. Stream Management

Log into AIBOX web client, and go to **Settings > Channel > Channel** to add, delete and edit channels so as to manage front-end devices.

4.1 Add Channel

ONote: The supported number of channels to be added depends on AIBOX model, usually 4-channel or 16-channel.

User can add channels by searching or custom adding.

4.1.1 Search

Search the non-added front-end devices in the same network segment.

Operation steps are as follows:

- 1) Go to Settings > Channel > Channel > Search;
- Select IP version, optionally select "Search Range" and enter IP address range, and click "Search" to display the expected devices, as shown below;

(i)_{Note:}

 Click "More" above the list to show "Search Range". Currently, only IPv4 version supports IP address search. When selecting "Show All", it will search all the devices in current LAN and show their IP, model and etc.

IP Version	IPv4	~	Search	Add Bate	h Activation	Edit IP		
Search	Range		-	Show All				Hide <<
	No.	Add	IP	Model	Protocol	Port	Channels	Activated
	1	+	192.168.1.108	NVR2821-04	ONVIF	80	0	Activated
	2	+	192.168.1.171	1821-864	ONVIF	80	0	Activated
	3	+	192.168.1.19	1	ONVIF	80	0	Activated
	4	+	192.168.1.181	NVR2881-16		0	0	Activated
	5	+	10.72.3.40	NVR2881-16		0	0	Activated
	6	+	192.168.1.211	KDM201-D02		0	0	Activated
	7	+	192.168.1.213	KDM201-D02		0	0	Activated
	8	+	192.168.1.210	KDM201-D02		0	0	Activated
	9	+	192.168.1.212	KDM201-D02	-	0	0	Activated
	10	+	192.168.1.67	IPC425-E12		0	0	Not Supported
	11	+	192.168.1.174			0	0	Activated
	12	+	192.168.1.168			0	0	Not Supported
	13	+	172.22.7.76	KDM D01E		0	0	Not Supported
	14	+	192.168.1.202	2901H-G2		0	0	Not Supported
	15	+	192.168.1.169	KDM201-C04		0	0	Not Supported

Currently, it supports searching ONVIF devices only.

Picture 4-1 Search and add device

3) Select devices to be added (single-choice or multiple-choice) and click "Add". On the popup window, select protocol type and fill authorized username and password. Click "OK" to finish.

ONote: When adding single device, user can click the icon + behind the device on the list to add device.

4.1.2 Custom Add

User can add specific front-end device by IP address or stream address.

According to the selected protocol type when adding IP channel, there are ONVIF protocol device, RTSP protocol device and SIP protocol device. Usually, the majority is ONVIF protocol.

ONote: Usually, the suggested option is ONVIF protocol.

- Add devices of ONVIF or RTSP protocol
 - a) Go to Settings > Channel > Channel > IP Channel;
 - b) Click "Add" to pop up the window of "Add IP Channel";
 - c) Select "ONVIF" or "RTSP" as protocol type;

• Note: Select ONVIF or RTSP protocol respectively and fill the corresponding parameters according to actual conditions, as shown below. If adding RTSP protocol device, please contact camera manufacturer to obtain its URL, and "TCP Keep-alive Heartbeat" is selected by default.

Add IP Channel		
Protocol Type	RTSP 🗸	
IP Channel ID	Auto 🗸	
Transmission	Auto 🗸	
Main Stream URL		
Secondary Stream URL		
Authorized Username		
Password		
TCP Keepalive Heartbeat		
	OK Cance	ł
	Add IP Channel Protocol Type IP Channel ID Transmission Main Stream URL Secondary Stream URL Authorized Username Password TCP Keepalive Heartbeat	Add IP Channel Protocol Type RTSP IP Channel ID Auto Transmission Auto Main Stream URL Secondary Stream URL Authorized Username Password TCP Keepalive Heartbeat

Picture 4-2 Add ONVIF (left) and RTSP (right) device

- d) After finishing, click "OK" to add.
- Add devices of SIP protocol
 - a) Go to Settings > Channel > Channel > IP Channel;
 - b) Click "Add" to pop up the window of "Add IP Channel";
 - c) Select "SIP" as protocol type, and select "TCP" or "UDP" as transmission protocol by request, and fill relative parameters according to actual conditions;

User Manual for AIBOX					
Add IP Channel					
Protocol Type	SIP	~			
IP Channel ID	Auto	~			
Transmission	UDP	~			
TCP Connection Mode	Active	~			
Number of Remote Channels	1				
Channel Coding Capability	1				
Channel Alarm Input Capability	1				
		ОК	Cancel		

Picture 4-3 Add SIP protocol device

d) Click "OK" to pop up the window of "SIP Device Information", as shown below;

SIP Device Information						
	SIP ID of Local	3100000001180000000				
	ID of PU	3100000001120000001				
	Remote CHN1-Encoding CHN1	3100000001320000001				
	Alarm Input1	3100000001340000001				
	Transmission	UDP				

Cor	ncol	
Locution of the second	IL.E	

Picture 4-4 SIP device information

e) Go to **Settings > Network > Downward Protocol > SIP**, and record service port, heartbeat interval and number of timeouts, as shown below;

SIP ID of Local	3100000001180000000			
Service Port	5511]		
Heartbeat Interval	30	(1~3600)s		
Number of Timeouts	3	(1~64)		
	Save			



 f) Go to the platform access interface of the front-end client, select platform and enable, fill the SIP ID in last step into platform ID, and finish relative parameters. • Attention: After adding IP channel successfully, the IP channel list will show the status and IP address of all channels. If the status shows "authentication failed", user should obtain the correct password from front-end and re-edit to trigger re-connection of device; as for the channel added by SIP protocol, its initial status is "Not Registered" and the relative info can be viewed after the front-end device is registered successfully.

4.2 Delete Channel

As there is maximum limit of accessed front-end channels, usually it's recommended that idle or invalid channels should be deleted so as to avoid waste of channel resources.

Steps are as follows:

- 1) Go to Settings > Channel > Channel > IP Channel;
- 2) Select the channel(s) to be deleted on the channel list;
- 3) Click "Delete" to finish.

ONote: After deleting channel devices, the channel names remain.

4.3 Edit Channel

If the network parameters of the front-end channel change, it's unnecessary to add the front-end channel again, but edit the front-end channel info only.

Operation steps are as follows:

- 1) Go to Settings > Channel > Channel > IP Channel;
- 2) Select the channel(s) to be edited on the channel list;
- 3) Click the icon *behind* corresponding channel to pop up the window of "Edit IP Channel";

4) Edit IP address, port, transmission and other info on the window, and then click "OK".

ONote: For channels added through SIP, click "Edit" only to view channel info, but unable to edit.

Edit IP Channel			Edit IP Channel			
Protocol Type	ONVIF 🗸		Protocol Type	RTSP	~	
IP Channel ID	D1 🗸					
IPAddress	192.168.1.52	IP Channel ID		D4		
Port	80		Transmission	UDP	~	
Transmission	Auto 🗸		Main Stream URL	rtsp://10.75.13.	1:5544/realtime	
Mode	Single-Source Multiple-Char 🗸		Secondary Stream URL			
Remote Channel	1		Authorized Username	admin		
Authorized Username	admin		Addioneou o contanto			
Password	•••••		Password	•••••		
	ОК	Cancel			OK	Cancel

Picture 4-6 Edit IP channel

5. Analysis

Analysis is to configure the intelligent detection area of front-end channel, in which the device supports face and vehicle recognition.

Operation steps are as follows:

- 1) Log into AIBOX web client, and go to Settings > Analysis > Area;
- 2) Select front-end channel;
- 3) Click "Start Drawing", move the mouse to a starting point and left-click to drag the mouse to another point, and repeat drawing to finish configuring intelligent detection area. After finishing, click "Stop Drawing";

ONote:

- Each front-end device supports maximum 6 intelligent detection areas.
- If the intelligent detection area is not configured, the whole area is the intelligent analysis area by default.
- To re-configure the area, click "Clear All".



Picture 5-1 Intelligent analysis

4) Click "Save" to save intelligent detection area setting.

6. Intelligent Setting

This chapter introduces operations on client of vStation Pro.

6.1 AIBOX Accesses to vStation Pro

ONote: vStation Pro supports access to only one AIBOX by default. To access multiple sets, please contact the CS personnel of this company.

Log into the client of vStation Pro, go to **Settings > Device**, and add AIBOX through search or manual add.

O vStatio	on Pro	🔠 Settings	× 🖵 Live	🗄 Playback	+			8 E ×	₹ - ₽ ×
O== Device	Group	User	Local Settings	En O	୍ହ ≈	나나 N+1 Hot Backup			
You can s	earch, add, a	and delete devices h	ere.						
IP/U	RL/Device S	Serial No. Device N	ame Con	nection Port Device Typ	e Usern:	ame Connect	tion Status		Reconnect
Auto S	Search	Add	Delete Device						Refresh

Picture 6-1 Device

6.1.1 Search

Detailed operation steps are as follows:

 Go to "Device" interface, and click "Auto Search" at bottom left corner (only search devices in the same LAN) to enter the following interface;

🗿 vStati	on Pro	B Settings	× ₽ı	ive	Playback	+			₩ ••	∧ ₹		5 ×
0==		2	%	() ()		<i>(</i> 23	ի					
Device	Group	User	Local S	ettings Langu	age E-Map		N+1 Hot Backup					
Please se	elect the target de	evice and click										
PI 🗌		Device N	łame	Device Type	Subnet Mas		Default Gateway	Software Version	Serial Number	Enabled		
192	2.168.1.108	Network	Video Recorder	NVR2821-04009E	3/8HI 255.255.255		192.168.1.254	8.1.2.1.591	3456789012	Yes		
192	2.168.1.181			NVR2881-16064E	3/32HI 255.255.255			8.1.4.1.496	0180YA0UXW	Yes		
192	2.168.1.103	ABOX		AIBOX-16	255.255.255		192.168.1.254	8.1.4.1.509	Y2120A29NL	Yes		
Se	arch	Add									Bac	

Picture 6-2 Search to add

2) Select the AIBOX on the list to be added, and click "Add". On the popup window, fill username, password and port, and click "OK";

ONote:

- If vStation Pro does not enable access to multiple AIBOXes, when there is one accessed, it will prompt "AIBOX number has reached the upper limit.
- If vStation Pro has enabled access to multiple AIBOXes, select "Use the same username and password" to add devices by the same username, password and port;
- The default port number is 80.

Osername and Password										
		P:192.168.1.103 Devic		AIBOX						
	2	admin								
	Ô	•••••								
	¥	80		HTTP 🔻						
	Use the same username and password									
			¢	ж	C	ancel				

Picture 6-3 Add username and password

3) The added AIBOX can be viewed from the list. If the connection status shows "Connected", it means the device has connected successfully. Click "Reconnect" to reconnect the device.

• Note: Username and password are those to log into AIBOX web client. Please refer to chapter 10 Web Client Functions (Go to Settings > System > User Safety > User Information).

test]		
•••••			
Low High	•		
A password can be 8-16 bits long and can consist of digits, letters (upper/lower case), and special characters. A password cannot consist of only digits/letters/special characters.			
Viewer			
	test Low High A password can be 8-16 bits long and can consist of digits, letters (upper/lower case), and special characters. A password cannot consist of only digits/letters/special characters.	test Low High A password can be 8-16 bits long and can consist of digits, letters (upper/lower case), and special characters. A password cannot consist of only digits/letters/special characters.	test Low High A password can be 8-16 bits long and can consist of digits, letters (upper/lower case), and special characters. A password cannot consist of only digits/letters/special characters.

Picture 6-4 Create test user on AIBOX web client

🖸 vs	tation Pro	88 :	Settings	×፵u	ve	В	Playback	+			፼ (•	२ ₹	-	8	×
0::		7	2	*	\odot	E	0	ک	悼							
Device	e Group	Us	ier L	.ocal S	ettings I	Language	Е-Мар		N+1 Hot Backup							
You o	an search, add,	and delete	devices her													
	IP/URL/Device	Serial No.	Device Nan	ne	Connection	1 Port	Device Type	Usernar	me	Connection Status			Rec	onnect		
	192.168.1.10	33	192.168.1.1	03	80		AIBOX	admin		Connected						
A	uto Search		dd	Delete Dev										Refn	esh	

Picture 6-5 Add username

6.1.2 Add

Detailed operation steps are as follows:

- 1) On the "Device" interface, click "Add" at bottom left corner to pop up the window of "Add Device";
- 2) On the popup window, add AIBOX device through IP address or URL address;
 - > IP address: Enter IP address, device name, username and password manually.
 - > URL address: Enter URL address, device name, username and password manually.

O Add Device		×	6	Add Device			×
Device Type	AIBOX			Device Type	AIBOX		
IP				O IP			
Device Name				Device Name			
Username				Username			
Password				Password			
Port	443	HTTPS ₹					
	ок	Cancel			ок	Cance	I

Picture 6-6 Add device manually

Note: Username and password are those to log into AIBOX web client. Please refer to chapter <u>10</u>
 <u>Web Client Functions</u> (Go to Settings > System > User Safety > User Information).

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Create User				
Username	test			
Password	•••••			
	Low	High		
	A password can be and can consist of d (upper/lower case), characters. A passw consist of only digits characters.	8-16 bits long igits, letters and special vord cannot /letters/special		
Confirm Password				
User Level	Viewer	~		
			OK	Cancel

Picture 6-7 Create test user on AIBOX web client

vStation Pro	88 Settings 🛛 🗙 🖣	₽Live 🗄	Playback	+		٨	▼ -	8×		
Device Group	User Local	Image Image Settings Language	⊘ { Е-Мар .	A N+1 Hot Backup						
You can search, add, and delete devices here.										
IP/URL/Device Serie	al No. Device Name	Connection Port	Device Type	Username	Connection Status	R	econnect			
192.168.1.103	192.168.1.103	80 🔺	AIBOX	admin	Connected					
Auto Search	Add Delete	Device					Refr	sh		

Picture 6-8 Add username

 The added AIBOX can be viewed from the list. If the connection status shows "Connected", it means the device has connected successfully.

6.2 Intelligent Server Setting

Intelligent server setting means configuring listening IP, which enables AIBOX to push pictures to vStation Pro server.

Operation steps are as follows:

- 1) Go to Settings > AI > IP vStation Pro Server;
- 2) Select AIBOX from the device list;

Settin	gs × 🗜 Live 🗄 Playba	ack +	₩ ⊞ Զ ₹ – ₽ ×
Device Group User	🔆 🚫 En (Local Settings Language E-l	② 〔② 計 Map À N+1 Hot Backup	
E Device List	\mathfrak{F} Settings $\beta_{\mathfrak{s}}$ Arming	IP vStation Pro Server	
Keyword Q			
🖽 192.168.1.103 🔒	Settings Search	ch Delete	
	No. IP	Port	
	1 10.72.3.29	46789	
	2 192.168.1.37	46789	
	3 10.185.11.32	46789	
		Add	
	Server Listening Port: HTTP	46789	

Picture 6-9 IP vStation Pro server

3) Enter IP address and server HTTP(HTTPS) listening port and click "Add". It will prompt "Operation succeeded" when added successfully, as shown below.

<u> র্ন্ট</u> Settings	$P_{\rm H}$ Arming	IP	vStation Pro Server						
Server IP 🔒	127.0.0.1		_						
Settings	Search	Delete							
No. IP	F	Port							
1 10.72.3.29	4	46789							
2 192.168.1.37	. 4	46789							
3 10.185.11.32	! 4	46789							
4 192.168.1.10	13 4	46789							
IP:		Add]						
Server Listening Port: HTTP HTTPS									

Picture 6-10 IP vStation Pro server

ONote: The IP address is that of the PC which runs vStation Pro server. Configured IP cannot be re-configured, otherwise it will prompt "The IP address already exists." The port number is the HTTP(S) service port configured during vStation Pro server port setting.

User Manual for AIBOX

🔯 vStatio	n Pro	Server					—	×
Operating Status		Port		Lang	uage	Import/E	xport	
	vStatio	n Port	6000		(1025-6553	5)		
	HTTP	Port	46789		(1-65535)			
	HTTPS	Port:	3789		(1-65535)			
							OK	(
							OK	



6.3 Scenario

Go to **Settings > AI > Settings**, and configure intelligent functions supported by AIBOX under different scenarios.

(i)_{Note:}

- The supported scenarios of different versions of AIBOXes are different.
- Scenarios can be configured either on vStation Pro client or on the web client of AIBOX.

6.3.1 Scenario Application

Operation steps are as follows:

- 1) Select AIBOX from device list;
- 2) Select scenario according to actual request and apply.

回当 一 久 淡 ② 師 ② Device Group User Local Settings Language E-Map A N+1 Hot Backup	
E Device List ♀ Settings ♀ Arming IP vStation Pro Server	
Keyword Q Delay for Alarm Clearance 6 (3-3006) Save	
🖾 192.168.1.103 🙆 Minimum pixel value for face recognition 60 Stave	
Al Box Scenario You can select a scenario and apply it to target Al Boxes.	
Scenario Description	
o default_scene_5	
default_scene_6	
O default_scene_7	
default_scene_8	
custom_scone_t	
custom_scene_2 yanhuo	
Custom_scene_3	
You can copy the scenario settings of the AP box in operation to other AP Boxes through the export and import operations. For reconfiguration purposes, the export and import can also be performed on the same AP box.	perations

Picture 6-12 Scenario selection

(i)_{Note:}

 Scenario names started with "default" are system default scenarios, and their functions can be viewed from the description.

- Scenario names started with "custom" are customized scenarios of users, and their importing can be referred in chapter <u>6.3.2 Scenario Import/Export</u>.
- Scenario settings take effect upon rebooting the device.

• Attention: User should edit device resolution according to the selected scenario, i.e. go to the web client of the device and edit its resolution.

e.g.: If the scenario only supports 8-channel 1080P analysis, user should log into the web client of the device, and go to Camera > Video > Video Encoding to edit resolution as 1920*1080.

		🗜 Live 📙 Playba	ack and Download	💥 Setti	ings
←	Camera	Video Encoding ROI P	rivacy Mask		
	Picture	Channel		~	
	Video	Multi-Stream		~	Parameter value changes take effect only after encoders are rebooted.
î.¢	Audio	Stream Time]
Ŗ		Stream type			
曽		Resolution		~	
æ		Bitrate Type		~	
\$		Video Quality		~	
Å		Video Frame Rate			Fps
\square		Bitrate Upper Limit			Kbps
~•		Compression		~	
\		Encoding Level		~	
Я£		Max Key Frame Interval			
Ŧ		Smart Encoding	Enabled	~	Parameter value changes take effect only after encoders are rebooted.
		Stream Smoothing Factor			0 (The higher factor, the lower image clarity.)
2~1/			Save		

Picture 6-13 Edit resolution

6.3.2 Scenario Import/Export

- Scenario Export: On "Settings" interface, select system default or user custom scenario, and click "Export" to export the scenario and save it locally in the format of ".ini".
- Scenario Import: User can open the exported scenario file, update parameters as custom scenario and save. Click "Import" and select the updated ".ini" file. After importing, it will display on the scenario list started with "custom".

6.4 Personnel/Vehicle Import

It supports face comparison, personnel attribute, vehicle attribute alarm and other intelligent functions. It requires personnel and vehicle archives on the AIBOX.

Operation steps are as follows:

1) Go to Archive > Personnel, and select the AIBOX;



Picture 6-14 Personnel and group

2) Click to create group;

ONote: Before importing personnel, it usually requires creation of new group to facilitate personnel management. If there is already one, skip this step.

🗿 Manag	e Group				×
Personnel	Personnel group name				
Group	reisonnei group name		_	_	_
			Create	Delete	Refresh
Person	nel Group				
VIP					
🔲 ТОР					
TOP1					
test					

Picture 6-15 Manage group

3) Click to add personnel, and fill information about personnel and vehicle according to actual conditions, as shown below;

Import Perso	nnel		>	< 0	Import Pe	ersonnel					×
	One by One	Batch				One by One			Batch		
Name Gender Date of Birth Identity Type Identity ID Pepartment Group Department Position Phone Address Collect License Plate	Personnel name Male Female Other Other for of-of-2008 Identity Card Select Add Existing	Max re Max si	solution: 1920'1080 re: 256 KB	Addre	ss late		Click +	+		mport	Clear
		OK									

Picture 6-16 Add personnel and vehicle (Left: single import, Right: batch import)



- Export personnel info through and save as file. For repeated use of data, user can import personnell archive in batch.
- Vehicle info cannot be added independently, but should be added by binding with personnel.
- After adding personnel and vehicle info, user can search all added personnel info in AIBOX.

🗿 vs	tation Pro	E Settings	모 Live	Hayback	& Archive	× +		፼™≳₹	
192.16	8.1.103								
🗄 Pe	rsonnel								
Search	Туре: 💿 н	Keyword 🔿 Picture Ci							
	Name	lder	tity ID	Department		Personnel Group All		Search	
്	-1 %	& G 🖬 🖨 🗐	: = = T. C						
	No. \$	Name 🌲	Identity ID 🌲	Personnel Group 🌲	Face 1 🜲	Characteristics Ex	tracted 🜲	License Plate 1 🜲	License Plate
			KD1001	VIP					
			KD1002	VIP					
•			KD1003						
			KD1004	тор					
								< 1 > Page	e 1 /1 .

Picture 6-17 Search personnel info

6.5 Arming

Arming is to configure arming duration and face comparison of the front-end channels.

- 1) Go to **Settings > AI > Arming**;
- 2) Select AIBOX from the device list and select the front-end channel already added to AIBOX and enable;

ONote: Above the channel list displays "Your device is using: 1 intelligent channel(s) for Vehicle Parking, Remaining: 15 for Face Detection, or 15 for Vehicle Parking." The scenario mainly depends on the scenario setting of the AIBOX. If there are only 16 channels of face detection channels, when one channel has enabled arming, the remaining will be 15 channels. Please refer to chapter 6.3 Scenario for AIBOX scenario setting.

Station Pro	🔡 Settings 🛛 🗙 🗜 Live	Playback	& Archive		₩ ⊡ ^ ▼ - 8 ×
O== E	User Local Settings	En O Language E-Map			
E Device List	衍 Settings	P _ Arming	IP vStation Pro Se	rver	
Keyword					
E⊒ 192.168.1.103	Channel:	D1 123	₹		
	Arm				
	Stranger Alarms Use	Sound Alert 1			
	Duration	Personnel Group			
	<u>Î</u> Delete All				
	0 2 Mon	4 6	8 10 12 1	4 16 18 20 22	24
	0 2 Tues	4 6	8 10 12 1	4 16 18 20 22	24
	0_2	4 6	8 10 19 1	4 16 18 20 22	24₹
	Save				

Picture 6-18 Enable arming

- 3) Configure arming durations according to actual requests;
 - Click the long blue bar, enter time nodes, and click "Save" to finish; click "Delete" to delete the a) duration;

	0		2		4		6	8	10	12	14	16	18	20	22	24
Fri								×								
		00		00		24		00	10	12	14	16	18	20	22	24
Sat		~~														
			Delet	te			Save)	10	12	14	16	18	20	22	24
Sun	-			i.									- ' -			

Picture 6-19 Select time nodes for duration

Click the icon behind the bar to pop up copy window; b)



Select the dates requiring copies of durations, and click "Copy"; C)



Picture 6-21 Copy dates

d) Click "Save".

ONote: Click "Delete All" to pop up the following window. Click "OK" to delete all durations.



Picture 6-22 Delete durations

- 4) Click "Personnel Group" and select personnel groups for comparison;
 - a) Select personnel groups for comparison and set the similarity threshold by dragging the slide bar or entering the value directly, whose range is 0 ~ 100;

ONote: Please refer to chapter 6.4 Personnel/Vehicle Import for creation of personnel group.

b) Select comparison mode. If selecting "High", set time for removing duplicate target alarms. Configure link alarm output and select sound alert, as shown below.

O vStation	n Pro	< 🗄 Setting	is x	昰 Live	E F	layback	26 Arc	thive	+ >		函	⊡	₹ —	æ	×
O== Device	Group	Q User	Local	Settings	En Language	© E-Мар	୍ଷ ₹	N+1 Hot Backup							
⊟ Device Lis	st		🚱 Settings		<u> </u>	ing		vStation Pro S	Server						
Keyword															
			Channel:												
			Arm												
			Stranger	Alarms Use	Sound Alert 1										
			Durat	ion	Personnel Gro	up									
			Personn	el Group	Similarity Thres	hold	Trigger Alarm				Link Alarm Output	Sound A	ert		
			VIP			- 85	• High ()	Low 🗹 Removi Genera	e Duplicate Target Alarm ed Within	s 5 s		Sound	Alert 1		
			🔽 ТОР			- 84	🔿 High 💿	Low					Alert 1		
			✓ TOP1			- 84	• High ()	Low 🛃 Remov Genera	e Duplicate Target Alarm led Within	s 5 s		Sound	Alert 1		
			test												
			Save												

Picture 6-23 Personnel group

ONote:

- Comparison mode (high or low) is for each personnel group.
- When selecting "Yes" for link alarm output, once an alarm is triggered, the AIBOX will be linked to the "Blacklist/Whitelist" interface of the AIBOX to trigger linkage mode. (Log into the web client of AIBOX and go to Settings > Event > Basic Intelligent Feature > Blacklist/Whitelist)

ration Linkage Action			
Regular Linkage	Recording	Snapshot	PTZ D1 🗸
Sound Alert	🔲 D1	D1	Preset
Mail	D2	D2	
Report Center	D3	D3	Tour
Report to Cloud Service	D4	D4	
Send to HDMI			
Send to VGA			

Picture 6-24 Blacklist/Whitelist

- When selecting "Sound Alert", once an alarm is triggered, vStation Pro will send alert sound, i.e. from local PC.
- 5) Click "Save" to finish.

7. Intelligent View

Operations in this chapter should be performed on vStation Pro client.

On "Live" interface, move the mouse to an idle window, click the icon et the top left corner to pop up a window and select the following intelligent information by request.

OAttention: Before intelligent view, user should finish intelligent configurations first; otherwise the intelligent information will be unavailable. Please refer to chapter <u>6 Intelligent Setting</u> for details.

Face Detection Captures	Non-Helmeted Bike-Rider Detection
Figure Detection Captures	Vehicle Detection Captures
Face Detection Alarms	Vehicle Detection Panorama Captures
	Vehicle Detection Logs
Face Detection Alarm Captures (Channel)	Vahiala License Blate and Bergen Captures
Face Detection Alarm Conturse (Croup)	Vehicle License Plate and Person Captures
Face Detection Alarm Captures (Group)	Vehicle Entries and Exits
Face Detection Alarm Archived Dictures	
Face Detection Alarm-Archived Pictures	Vehicle & Person Verification
Face Alarm	
	Search Motor Vehicle Real-Time Captures
Search Face Real-Time Captures	Search Non-Motor Vehicle Real-Time Captures

Picture 7-1 Intelligent information

7.1 Face Detection and Alarm Captures

7.1.1 Face Detection Captures

Face detection captures are the real-time snapshots of human faces captured by front-end device. If the face is in the personnel archive, the snapshot will show the name of the person.

The snapshot shows information of capture time, gender of the person and etc. Double-click the face photo to enter picture typing-in interface and import the person to the personnel archive quickly.



Picture 7-2 Face detection captures

7.1.2 Figure Detection Captures

Figure detection captures are the snapshots of human figures captured by front-end device.

The snapshot shows information of capture time, capture channel and etc.

EFigure Detection Captures	×

Picture 7-3 Figure detection captures

7.1.3 Face Detection Alarm

Face detection alarm shows the captured face by front-end device. Click "Playback" to playback the capture video. If the person is in the personnel archive, click "Details" to show the detailed information of the person.



Picture 7-4 Face detection alarm

7.1.4 Face Detection Alarm Captures (Channel)

Face detection alarm captures are the captured face snapshots by the front-end device, and the yellow represent VIPs, the orange targets and the blue strangers. If the captured face is target, the snapshot will show the name of the person. Double-click to view the detailed information of the person.

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Picture 7-5 Face detection alarm captures

7.1.5 Face Detection Alarm- Archived Pictures

It shows the captured faces by front-end device. If the person is in the personnel archive, it displays the archived picture of the person. If the person is not in the personnel archive, it displays the snapshot of the person and the name is "Stranger".



Picture 7-6 Face detection alarm- archived pictures

7.1.6 Search Real-time Captures

It shows the real-time snapshots of person, motor vehicle and non-motor vehicle captured by front-end device. The recent snapshot displays the details of latest snapshot, and the parameters differ according to the natures of the snapshots such as person, motor vehicle and non-motor vehicle.

ESearch Face Real-Time Captures	

Picture 7-7 Real-time captures

ONote: Click the vehicle or the person to show the detailed information of the vehicle or person.

7.2 Vehicle Detection and Alarm Captures

7.2.1 Vehicle Detection Captures

It shows real-time pictures of the vehicle captured by front-end device, including capture channel and capture time.

EVehicle Detection Captures	×

Picture 7-8 Real-time vehicle information

7.2.2 Vehicle Detection Panorama Captures

It shows the panorama picture of vehicle captured by front-end device, including capture channel and time.



Picture 7-9 Vehicle detection panorama captures

7.2.3 Vehicle Detection Logs

It shows vehicle information captured by front-end device, including capture time, entrance/exit and license plate number. Select an item and the right will show the snapshot of the vehicle.



Picture 7-10 Vehicle detection logs

8. Face/Vehicle Capture

Operations in this chapter should be performed on vStation Pro client.

Face/Vehicle capture is to search the live archives of and search the AI events of all human faces, personnel and vehicles captured by all front-end channels of AIBOX.

8.1 Live Archive Search

Live archive search is to search the snapshots of human faces, personnel and vehicles, including searching by keyword and searching by picture. The searched snapshots can be imported to personnel archive directly.

This chapter mainly introduces the operation steps of searching by keyword and by picture.

8.1.1 Search by Keyword

It is to search snapshots by personnel or vehicle attributes.

Operation steps are as follows:

- 1) Select the AIBOX from the device list;
- 2) Select "Search by Keyword";
- 3) According to search requests, select the live archive from the dropdown list, including face, personnel, motor vehicle and non-motor vehicle;
- 4) According to search device requests, select channel from the dropdown list (the default is "All");

ONote: The dropdown list shows all front-end channels of the AIBOX.

- 5) Configure start time and end time;
- 6) Click "More" to pop up more filters. According to actual searching conditions, the filters for face, personnel, motor-vehicle and non-motor vehicle are different;



Picture 8-1 Filters

7) Click "Search" and the result will display on the list, as shown below.

ONote: means to display the search result by list, and means to display the search

result by diagram.



Picture 8-2 Search result by keyword

8.1.2 Search by Picture

It is to compare the local face picture with the face snapshot and search by their similarity.

Operation steps are as follows:

- 1) Select the AIBOX from the device list;
- 2) Select "Search by Picture";
- 3) Click 🖿 to select local picture;
- 4) According to search device requests, select channel from the dropdown list (the default is "All"), and configure similarity threshold, duration and order mode;

ONote: The capture type is "Face" by default.

- 5) Select a device from the device list;
- 6) Click "Search" and the result will display on the list, as shown below.

🗿 vStation Pro 🛛 🤇 🖳 Li	ve 🗄 Playback	& Archive	× +	⊠ ⊡
E Device List	+	Search by Keyword	Search by Picture	
Keyword 0	a Q			
ABOX	Capture Type			
	Face			
	Channel:			
	Start Time:			
	02-13-2023 00:00:00			
	End Time:			
	02-23-2023 23:59:59			
	Similarity Threshold:			
	84	(1-100)		
	Order:			
	 Descending Ascending 			
	Search	Export ① The source pict		< > Page 0 /0.

Picture 8-3 Search by picture

8.2 AI Event Search

Al event search mainly compares face snapshots with the pictures in or out of the personnel archive and display the comparison result. User can preview the pictures, playback the videos and etc.

This chapter mainly introduces the search steps. Operation steps are as follows:

- 1) Select the AIBOX from the device list;
- 2) Configure start time and end time;
- 3) The default log category is "Face Detection";
- 4) Select personnel group;
- 5) Click local to select comparison mode (Target, Stranger, default "All"), and select channel ID;
- 6) Enter name and identity ID if necessary;
- 7) Click "**Search**" to display the search result. The list displays personal info such as name, gender and identity ID under specific comparison mode.



Picture 8-4 AI event search

9. Storage

AIBOX supports storage of all front-end channels' data. Currently, the methods include TF card, accessing to NVR and accessing to VIID.

9.1 TF Card Storage

ONote: TF card is a kind of flash memory card, and user can buy one if necessary (suggested memory: TF card over 128G)

9.1.1 Data Storage

After installing TF card according to quick start guide for AIBOX, user should firstly initialize the TF card, and then contact professional personnel of this company to change AIBOX storage mode into TF card mode. In this way, AIBOX will save the linkage snapshots and recordings of all front-end channels to the TF card.

9.1.2 Data View

> Linkage data: including all linkage snapshots and linkage recordings of all channels.

Log into the web client of AIBOX, and go to "**Playback and Download**". Click $rac{log}{}$ on the tool bar to open the download interface, and download recordings or snapshots of different channels to local PC.

Channel List	File Tyree		Record data	~				
D1 123	The type							
D2 IPCamera	Recording Type	-	All	•				
D3 04	Start Time		01-01-2023T00:00:00		End Time		23-02-2023T23:59:59	
D4	C Select All	No.	CHN	Start Time	End Time	Fragment Type	Download Progress	
	0	1	D1	2023-02-20 00:29:52	2023-02-20 01:09:38			
		2	D1	2023-02-20 01:09:39	2023-02-20 01:49:25			
		3	D1	2023-02-20 01:49:25	2023-02-20 02:29:11			
	0	4	D1	2023-02-20 02:29:11	2023-02-20 03:08:57			
	0	5	D1	2023-02-20 03:08:57	2023-02-20 03:48:43			
	0	6	D1	2023-02-20 03:48:44	2023-02-20 04:28:30			
	0	7	D1	2023-02-20 04:28:30	2023-02-20 05:08:16			
	_			0000 00 00 00 00 00	0000 00 00 00 00 0000			

Picture 9-1 Linkage data

Intelligent data: Data that AIBOX recognizes faces or vehicles of all front-end channels and captures intelligently.

Log into vStation Pro client, go to "Face/Vehicle Capture", and search intelligent snapshots by request. Please refer to chapter <u>8.1 Live Archive Search</u> for details.

🔘 vStation Pro 🛛 🕻 & Arct	hive 🔤	Face/Vehicle × 🕅 🗛	ce/Vehicle arm	🛱 Al Alarm	+	>		⊠ ⊡	ዶ	₹ -	- 8	×
E Device List	Capture Type		🗜 Search by	Keyword	문 Search b	y Picture						
Keyword Q	Face											
EI 192.168.1.103	Channel:			Channel Name			Captured On				Previe	
ABOX												
	Start Time											
	12-01-20	22 00:00:00										
	End Time											
	世 02-23-20	23 23:59:59										
		More										
	5	Search							> Pag	e 0		

Picture 9-2 Intelligent data

9.2 NVR Storage

When the data size is too big, usually TF card cannot satisfy user request. Therefore, it's suggested that user access to NVR and upload front-end data to NVR to solve data storage issue.

This chapter mainly introduces configurations to save AIBOX front-end data to NVR.

• Note: There are many models of NVRs of this company, and this chapter will take NVR2881-16032B (intelligent NVR) as example to illustrate, also as a reference for other models.

9.2.1 Access to NVR

To access to NVR, user should log into NVR client and AIBOX client to perform relative configurations.

Configuration steps are as follows:

 Add channel: Log into NVR web client, go to Settings > Channel > Channel, add channel and select RTSP mode. Both the main and secondary stream addresses are AIBOX stream address, and authorized username and password are those of the AIBOX;

ONote:

- Rule for main stream address is "rtsp://IP/realtime?chnid=N;vid=0;aid=0", and that for secondary stream address is "rtsp://IP/realtime?chnid=N;vid=1;aid=1". The IP is AIBOX IP address, N being the channel of N+1 of AIBOX (e.g. n=0, channel 1 of AIBOX), vid=0 and aid=0 being the main stream, and vid=1 and aid=1 being the secondary stream.
- Usually AIBOX only applies main stream address.

		E Live	e 🗄 Pi	ayback ar	id Download 🗙 Setting	s		0	👤 admin 🕜 Help	E+ Log Out	0 0	J B
÷	Channel	IP Channe	H Search									
Q		Refre	ish 🗌	Search	Add IP Channel			Remaining Rec	eive Bandwidth: 78 Mbps			
71	Basic		CHIN ID	Edit	Protocol Type	RTSP	~	Model	Remote Channel			
-			D1	Ø	IP Channel ID	Auto	~	IPC2852-FL	1			
<u>a</u> t l			D2		Transmission	Auto	~	255Series	1			
					Main Stream Address	rtsp://10.75.13.1.5	544/realtime	- 64				
Ð					Secondary Stream Address	rtsp://10.75.13.1:5	544/realtime	- 64				
Ξ					Authorized Username	admin		- 64				
a					Password			- 64				
ö.					TCP Keepalive Heartbeat			- 64				
35												
						_	OK Car	icel				

Picture 9-3 Add channel

 AIBOX configures VIID upload: Log into AIBOX web client, go to Settings > Network > Upward Protocol > VIID to enable VIID and fill the parameters. Please refer to the following picture for the filling of some parameters while the remaining applies the default;

		🗜 Live 🚦 Playback and Download 💥 Sett	ings
←	Network	SIP ONVIF VIID COI Pigeon PDNS	
	IP and Port	VIID VIID 1 VI	
	Upward Protocol	Enable 🗸	
Ţ	Downward Protocol	Device ID 8320000000000000000	
Þ.	Other Protocol	VIID IP 0.0.0.0	
Ħ		VIID Port 51515	(1~65535)
		Visit With HTTP V	
ß		Username admin	
A		Password ·····	
		Heartbeat Interval 60	(30~300)
Ô		Installation Address	
×		Administrative Division	
Ē		Department	
(A)		Synchronization Interval 60	Minute(1-1440)
-		Save	

Picture 9-4 VIID configuration

Parameter	Note	Parameter	Note	
Device ID	Enter a 20-bit ID such as "83200000000000000000000"	VIID Port	51515	
VIID IP	NVR IP address	Username/Password	NVR username and password	

AIBOX configures channel upload: Log into AIBOX web client, go to Settings > Intelligence > VIID to select the channel to upload to NVR and select "Upload to VIID";

ONote: To upload multiple front-end channels to NVR, user should select channel respectively and select "Upload to VIID" one by one.

	📭 Live 📲 Pla	ayback and Download 💥 Settings
Intelligence	VIID	
VID	Channel Upload	D1-123 V
	Upload To Do Not Synchroniz Mobile Networks Save	✓VID 1 te on
	Picture 9-5	VIID

 AIBOX channel configures VIID ID: Log into the web client of AIBOX, go to Settings > Network > Upward Protocol > SIP, and click "Edit" behind video channels to configure VIID upload ID of each channel;

ONote: The ID of video channel 1 should be the same as the device ID filled in step 2, and other channels select auto overlapping, as shown below.

		📭 Live 📱 Play	/back and Download ⋟	Settings			🎯 👤 admin 🧿 Help 🕞 Log Out	0 _ 12 ^{_0}
~	Network	Username						*
	IP and Port	Password						
		Renewal Time	3600	s (30~999999)				
ζφ	Downward Protocol	Heartbeat Interval	30	anal ID				
₽ 1	Other Protocol	Number of Timeouts	6	initien ib				
Ē		Administrative Division	Video Channel	0	D1-123 ¥	Main Stream 🗸		
æ		Device Owner						
÷		Guard Area						
		Installation Address						
		Video Channels	1					
÷		Alarm Channels	0					
%		Standard Order	Auto ID Over	lay	ОК	Cancel		
÷		SIP->SIP Extension (2014))->SIP Extension (2016)					
(A)		Edit Standard Order						
		Extension>>						
			Save					

Picture 9-6 Edit video channel ID

 NVR channel configures VIID ID: Log into NVR web client, go to Settings > Network > Upward Protocol > SIP, and click "Edit" behind video channels to configure VIID upload ID of each channel;

ONote:

The video channel ID on NVR should be the same as that on AIBOX. If there is former video channel on the NVR already, user only needs to fill the video channel ID as that on the AIBOX manually. The video channel 21 ID is 8340000000000000000000, the same as the video channel 6 ID on AIBOX.

 It's unnecessary to keep the same order of video channels on the AIBOX as that on the NVR, only keep their ID the same.

9.2.2 Data View

After accessing to NVR, log into NVR client and go to **Settings > Channel > IP Channel** to view the video channels of the AIBOX accessed through RTSP protocol, as shown in picture 9-7. Go to "Live" interface to view the real-time images of all channels, as shown in picture 9-8.

On NVR client, front-end channels accessed by video channels can trigger linked capturing or linked recording.

IP Chann	el Search								
Refr	esh	Search	Add	Advanced>>	Delete			Remaining Rece	ive Bandwidth: 78 Mbps
	CHN ID	Edit	Channel Name	Status	IP	Protocol	Port	Model	Remote Channel
	D1	Ø	Thai	Going online	192.168.1.52	RTSP	554		1
	D2	Ø	2	Online	192.168.1.81	RTSP	554		1



Picture 9-7 Channel list

Picture 9-8 Live view

9.3 VIID Storage

VIID is a big data management and analysis platform. It supports big data storage and efficient search, and supports integration of information resources and data of faces, personnel and vehicles.

Log into AIBOX client, go to **Settings > Network > Upward Protocol >VIID**, fill parameters of accessing to VIID platform to finish platform registration.

User	Manual	for AIBOX
000.	manaa	1017 (1007)

VIID	VIID 1 🗸	
Enable		
Device ID	83200000000000000000	
VIID IP	192.168.1.103	
VIID Port	51515	(1~65535)
Visit With	HTTP ~	
Username	admin	
Password		
Heartbeat Interval	60	(30~300)
Installation Address]
Administrative Division]
Department]
Synchronization Interval	60	Minute(1-1440)
	Save	

Picture 9-11 Access to VIID

After AIBOX accessing to VIID, it will upload the intelligent snapshots of all front-end channels to VIID platform, and then retrieve and analyze the snapshots through the platform.

ONote: AIBOX can only upload intelligent snapshots to VIID. To store other video data, please apply other storage methods.

10.Web Functions

This chapter introduces the basic functions of AIBOX web client.

10.1 Live View

Click "Live" to enter the preview interface.



Picture 10-1 Live interface

10.1.1 Channel List

User can view added front-end devices. Double-click the selected channel to view the video of the channel on the live view window.

lcon	Function	lcon	Function
	Channel list	¢	Quick setting interface
	Channel group	▶,■	View/Pause
\bigcirc	Hide/Show channel list/group		Edit current channel name

Icons on channel list

Channel status

lcon	Status	lcon	Status
0	Online	Ø,	Viewing
0	Offline/Unregistered	¢.	Video recording or alarming
2	Alarming		Viewing or video recording
9	Video recording		Viewing or alarming or video recording

10.1.2 Live View Window

Aspect Ratio

lcon	Function
4:3	means the live view window displays image in standard screen ratio 4:3
16:9	means the live view window displays image in wide screen ratio of 16:9
>=<	makes the image window adaptive to your PC resolution

Stream Selection

ONote: The stream information of different channels is different in live view window. Please be subject to actual interface.

Menu	Function
Main-Low delay	Display HD image. It has low delay in decoding live images. Configure
	in Settings > Camera > Video > Video Encoding.
Main-Low	Display HD image. It costs less resource in decoding live images.
consumption	Configure in Settings > Camera > Video > Video Encoding.
Secondary-Low delay	Display SD image. It has low delay in decoding live images. Configure
Secondary-Low delay	in Settings > Camera > Video > Video Encoding.
Secondary-Low	Display SD image. It costs less resource in decoding live images.
consumption	Configure in Settings > Camera > Video > Video Encoding.
Third-I ow delay	Display third-stream image. It has low delay in decoding live images.
Third-Low delay	Configure in Settings > Camera > Video > Video Encoding.
Third-Low	Display third-stream image. It costs less resource in decoding live
consumption	images. Configure in Settings > Camera > Video > Video Encoding.

Note: Go to Settings > Camera > Video > Video Encoding to select "Triple", and then it will show the option of third stream.

10.1.3 Viewing Toolbar

User can control the play window through the toolbar. Functions of icons on the toolbar are as follows.

lcon	Function
	Full screen, click this button to display in full screen. Press Esc to exit full screen.
•	Select screen layout.
←′→	Switch pages, click to switch to previous/next page.
×	Stop, click this button to stop live view.
Ô	Local snapshot, click to capture current image. The save path of snapshot can be configured in the client.
Ĩ	Local recording, click to start video recording and click again to stop video recording.
1	Volume, local audio decoding volume. Click the icon 🍈 and drag the slide bar
	to adjust volume. The value for mute is 0.

¢	PTZ, click the icon to enable zooming. Left click and drag toward lower right to draw
	an area. The PTZ lens will rotate toward this position and this area will cover the
	whole screen; left click and drag toward upper left to draw an area to recover the
	image; double-click a point in the image to center this point.

10.1.4 PTZ Control

Click the icon on the right to show PTZ control panel; click again to hide.

ONote: When viewing different front-end channels, the options on the PTZ control panel are different. Please be subject to actual interface.

10.1.4.1 PTZ control Panel

Click PTZ Control to show the PTZ control panel.



Picture 10-2 PTZ Control

lcon	Function
* ▲ ◄	The 8 direction buttons control the pan and tilt rotation of the PTZ. Click them to
< +> >>	adjust the direction of image;
b V 4	Click 🔊 and the camera will patrol in pan; click again to stop.
	Step length adjustment button, the step length means the rotation speed of the
	image on each click of the direction button. Drag the slide bar to adjust. The larger
	the step length is, the faster the image will rotate.
	Zoom in/Zoom out buttons, to adjust the camera's field of view. Field of view is the
* +++	surveillance scope of the camera. The larger the field of view is, the broader the
	scope will be.
⊕	Focus near/Focus far/Auto focus buttons, to adjust the sharpness of focused object.
0 0 A	Aperture +/Aperture -/Auto iris buttons, to adjust the size of aperture.
	Light on/off button, click 💌 to enable IR light detection. When the light condition
• / 🧖	turns dark, enable the IR light for lighting. Click $\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \$
	light condition turns dark, the fill light will not be on.
	*Enable/Disable wiper. Click 🖤 to enable wiper to clean the glass dome and click
11 118	to disable. The wiper will stop automatically after 10 brushes. Click it to enable it
	again if necessary.

10.1.4.2 Preset

Click Preset to show the following interface:

Preset				•
Preset1		믭		
P Preset1				
Preset3				
Preset4				
Preset5				
Preset6				
Preset7				-
Picture 1	0-3 6	Droc	ot	

Bet: Select a position and adjust lens direction and field of view to the requirements. Then

select a preset from the list and click 💾 to save the preset.

Load: Click to load a preset and the camera will rotate to the preset and display the image according to the set parameters.

Delete: Click III to delete a preset.

10.1.4.3 Image Adjustment

Click Image Adjustment to show the following interface. Drag the slide bars to adjust the brightness, contrast, saturation and sharpness of live image, or configure the values behind the slide bars.

Image Adju	istment	4
Brightness	50	
Contrast	50	
Saturation	50	
Sharpness	50	
	Image Mode	•

Picture 10-4 Image adjustment

- Brightness: Adjust current image brightness by actual request. The higher the value is, the brighter the image will be.
- Contrast: Adjust current image contrast by actual request. The higher the value is, the clearer contrast between the dark and the bright part of the image there will be.
- Saturation: Adjust current image saturation by actual request. The higher the value is, the fresher the image will be.
- Sharpness: Adjust current image sharpness by actual request. The higher the value is, the more distinct the objects on the image will look.
- Image Mode: Load pre-set image modes according to actual request.



Picture 10-5 Tour path

10.2 Playback and Download

Click "Playback and Download" to enter the interface and perform operations to video recordings on the SD card such as searching, viewing, downloading and clipping. The interface of "Playback and Download" is like the following.

	🗜 Live 📙 Playback and Download 💥 Settings	۲	👤 admin	(?) Help	► Log Out		£2 ⁸⁰
≡ Search Q					III Date		\otimes
O D1 123					≪l 4 Feb -	2023 -	► H+
O D2 IPCamera					Sun Mon Tu	e Wed Thu	Fri Sat
O D3 04						1 2	3 4
O D4					5 6 7	8 9	10 11
					12 13 14	15 16	17 18
					19 20 21	22 23	24 25
					26 27 28	1 2	3 4
					5 6 7	8 9	
				23			
Show All Channels			.↓ +	* * *			

Picture 10-6 Playback and download

10.2.1 Search and Playback

There are two methods to playback and download video recordings, by time and by criteria. Operation steps are as follows:

- Search by time
- 1) Click \equiv on the left;
- 2) Select a channel from the list;

ONote: By default, the channel list display channels with front-end device only. To view videos on the deleted devices, select "Show All Channels" at the bottom.

- Select a date with a blue triangle from the calendar, and the window will display the video on the timeline with highlight; click the "Play" button to playback the video;
- During the playback, user can clip, accelerate and download the video recording though buttons on the toolbar.
- > Search by criteria
 - Event Search

User can search and playback the video recordings in certain period of time by event type. Operation steps are as follows:

- a) Click ^(Q) to enter the interface of "Search Criteria". Select "Event" from the dropdown list and select event type;
- b) Select event type from the dropdown list, including motion detection, alarm input and intelligent feature;
- c) Select a channel(s) from the channel list, single or multiple;
- ONote: By default, the channel list display channels with front-end device only. To view videos on the deleted devices, select "Show All Channels" at the bottom.
 - d) Set the "Start Time" and "End Time" of search duration. Click "Search" and the related videos will display on the list;
 - Select the video to be played and click the "Play" button to playback the video. During the playback, user can clip, accelerate and download the video recording though buttons on the toolbar;
- Locked Record Search

User can lock the video during playback so as to protect important videos and prevent them from being overwritten or removed. Please refer to the table of toolbar buttons for detailed operations.

For the locked videos, user can search by setting start time and end time, and perform operations such as playback and unlocking. Operation steps are as follows:

- a) Click ^(Q) to enter the interface of "Search Criteria". Select "Locked Record" from the dropdown list;
- b) Select a channel(s) from the channel list, single or multiple;
- ONote: By default, the channel list display channels with front-end device only. To view videos on the deleted devices, select "Show All Channels" at the bottom.
 - c) Configure start time and end time, and click "Search" to display the related videos on the list;

 Select the video to be played and click the "Play" button to playback the video. During the playback, user can clip, accelerate and download the video recording though buttons on the toolbar;

Note: Select the video to be unlocked from the result list, and click "Unlock" to unlock the video.

Tag Search

During playing back, user can set tags on the video for remembering key points of the video. Please refer to the table of toolbar buttons for detailed operations.

For videos added with tags, user can search them by tag keyword or time, and perform other operations such as playing back, editing tag name and deleting tags. Operation steps are as follows:

- a) Click ${}^{ ext{Cl}}$ to enter the interface of "Search Criteria". Select "Tag" from the dropdown list;
- b) Select a channel(s) from the channel list, single or multiple;

ONote: By default, the channel list display channels with front-end device only. To view videos on the deleted devices, select "Show All Channels" at the bottom.

- c) Configure start time and end time, and click "Search" to display the related videos on the list;
- Select the video to be played and click the "Play" button to playback the video. During the playback, user can clip, accelerate and download the video recording though buttons on the toolbar;

Note: Select video tag from the result list, and click "Edit" to edit tag name and click "Delete"
 to delete the tag.

10.2.2 Toolbar

Toolbar buttons on the playback interface are explained in the following table:

lcon	Function
	Stop, click it to stop playing the video.
M	Previous event, click to play the video of previous event and user can click continuously. Only event playback and locked record playback support this function.
	Next event, click to play the video of next event and user can click continuously. Only event playback and locked record playback support this function.
◀	Skip backward, click it and the video will skip backward by 30s, support continuous clicks.
	Skip forward, click it and the video will skip forward by 30s, support continuous clicks.
•	Decelerating playback, click it to decelerate the playback speed, one click to

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	decelerate by one time. It supports deceleration speed by 1/2x, 1/4x, 1/8x
	and 1/16x. When it comes to 1/16x, click to recover to normal speed.
	Accelerating playback, click it to accelerate the playback speed, each click to
••	accelerate by one time. It supports acceleration speed by 2x, 4x, 8x, 16x,
	32x and 64x. When it comes to 64x, click to recover to normal speed.
	Play/Pause, click it to playback the video and click again to pause.
6	Snapshot, click the icon to capture current playback image. The save path
	for playback snapshots is the same as the default path of the browser.
	Recording the playback video, click this icon to start recording of current
×	video and click again to stop. The save path for recorded playback videos is
	the same as the default path of the browser.
	Lock, click the icon to start locking video, and when the time progress bar
	reaches a proper position (by playing or by manual dragging), click again to
A	stop locking. Click "OK" on the popup window to lock the video in the
	duration, and the locked video will not be overwritten. By default, it locks all
	current playing channels. User can click "Advanced" to select channels to be
	locked.
Ð	Tag, click the icon and set tag name on the popup window, and click "OK" to
لما	add tag.
()	Volume, drag the slide bar to adjust volume.
. 1 .	Download, click the icon to pop up the download interface. Please refer to
1.	chapter <u>10.2.3 Download</u> for details.
	Scale up/Scale down, adjust the scale base on the timeline. Click the icons
4- b . b 4	to scale up or scale down the timeline. The scale bases on the timeline
1 - / - 4	include 5 min/10 min/30 min/1 hour/2 hrs. Scaling up or down the timeline
	will not affect the playback time of current video.

10.2.3 Download

During video playback, user can click the download button 🗄 to pop up the following interface.

• Attention: After clicking "Download", if there is no tray software (tray.exe) installed, it will prompt "Unable to download, please confirm if tray.exe has been installed and started". Click "Install and start" to install the tray software according to the prompts.

Download							
Channel List D1 123 D2 IPCamera D3 04	File Type Recording Type Start Time	Record data All 24-02-2023T00:00	♥ ♥ 0:00	End Ti	me	24-02-2023T23-59-59	
□ D4	Select All No	. CHN	Start Time	End Time	Fragment Type	Download Progress	
							•
							*
Show All Channels					Search	Download CI	ose

Picture 10-7 Download

Download steps are as follows:

- 1) Select channel(s) to download, i.e. the channel list on the left;
- Select file type (record or picture), and recording type (motion detection, alarm input or intelligent feature);
- 3) Configure start time and end time;
- 4) Click "Search" to display data list, and select partial or all data to download;
- 5) When the download progress shows "Downloaded", the download is successful. After downloading, the data save path shows under the data list. User can find the downloaded video or pictures according to the path.

10.3 Settings

The settings include local, channel, camera and etc. This manual mainly introduces intelligent management and intelligent analysis.



Picture 10-8 Settings

10.3.1 Intelligence

Go to **Settings > Intelligence** to configure VIID big data, i.e. upload snapshots captured by front-end devices to specific VIID platform.

Channel	D1-123	~
Upload		
Common Picture		
Upload To	✓VIID 1	
Do Not Synchroniz	ze on	
Mobile Networks		
Save		

Picture 10-9 Intelligence

> Upload to: Select VIID by request, i.e. upload snapshots to the VIID.

Note: Before selecting specific VIID, go to Settings > Network > Upward Protocol > VIID to confirm the VIID has been enabled.

VIID	VIID 1	Pagistration Failed
VIID	VIIDT	Registration Falled
Enable		
Device ID	32000000000000000000	
VIID IP	100.100.80.254	
VIID Port	8081	(1~65535)
Visit With	HTTP 🗸	
Username	admin	
Password		
Heartbeat Interval	60	(30~300)
Installation Address		
Administrative Division		
Department		
Synchronization Interval	60	Minute(1-1440)
	Save 🥝 Saved	
	Picture 10-10 VIID	

> Do Not Synchronize on Mobile Networks: This device does not support currently.

10.3.2 Intelligent Analysis

ONote: The analysis interfaces of different custom scenarios of the AIBOX are different. Please be subject to the actual interface. This chapter introduces the factory default one.

10.3.2.1 Area Setting

Go to **Settings > Analysis > Area** to configure intelligent detection area for the front-end device. Please refer to chapter <u>5 Analysis</u> for details.

10.3.2.2 Scenario Setting

Go to **Settings > Analysis > Scenario** to select applicable scenario for AIBOX according to actual request. Meanwhile, it supports import and export of different scenarios. Please refer to chapter <u>6.3 Scenario</u> for details.

Scenario		
Al Box Sc	enario	
You can s	elect a scenario and apply it to t	arget Al Boxes.
	Scenario	Description
0	default_scene_1	8 channels capturing of people, motor vehicles, and non-motor vehicles face compare analysis of person/vehicle attributes
0	default_scene_2	
0	default_scene_3	
0	default_scene_4	
0	default_scene_5	
0	default_scene_6	
0	default_scene_7	
0	default_scene_8	
0	custom_scene_1	
0	custom_scene_2	yanhuo
۲	custom_scene_3	
Apr	ply	
You can o	copy the scenario settings of the	AI Box in operation to other AI Boxes through the export and import operations. For reconfiguration purposes, the export and import operations can also be performed on the same AI Box.
Exp	ort Import	
- CAP	mpon	

Picture 10-11 Scenario setting

11.Custom Scenario

This chapter introduces the applications of AIBOX under scenarios of helmet detection and high mounted AI parking. The custom functions of AIBOX under different scenarios are different. Please be subject to actual device.

11.1 Helmet Detection

Helmet detection means the AIBOX calculates the helmet wearing of non-motor vehicle drivers on non-motor vehicle lane.

ONote: it supports detection of single or multiple channels.

Operation steps are as follows:

 Scenario setting: Go to vStation Pro client that has accessed AIBOX and set the AIBOX scenario as "default_scene_8". Please refer to chapter <u>6.3.1 Scenario Application</u>.

💿 vStation Pro 🛛 🕻 🖁 Settin	igs × ♀ Live 🗄 Playback	& Archive + →] ⊡ ♀ ₹ − ₽ ×
Device Group User	Local Settings Language E-Map	 役< 井 Al N+1 Hot Backup 	
E Device List	登 Settings 名 Arming	IP vStation Pro Server	
	Delay for Alarm Clearance	(3-300s) Save	
🖽 192.168.1.103 🍵	Minimum pixel value for face recognition 60	Save	
i AIBOX	Al Box Scenario You can select a scenario and apply it to target Al Boxes.		
	Scenario	Description	
	default_scene_5		
	default_scene_6		
	default_scene_7		
	default_scene_8	4 channels of 4K or 1080P high accuracy analysis; helmet detection, quantity counting, and etc.	
	Custom_scene_1		
	Custom_scene_2	yanhuo	
	custom_scene_3		
	Apply You can copy the scenario settings of the AI Box in operat can also be performed on the same AI Box. Export Import	ion to other AI Boxes through the export and import operations. For reconfiguration purpos	es, the export and import operations

Picture 11-1 Scenario setting

 Access to NVR: Save the intelligent snapshots captured by AIBOX to NVR and analyze captures through NVR. Please refer to chapter <u>9.2.1 Access to NVR</u> for details.

ONote: NVR should install nginx service according to the helmet detection scenario. Please contact professional personnel of this company to install the service.

3) Statistics: Log into vStation Pro client and go to Live interface. Move the mouse to an idle window and

click click content of the select "Statistics on Helmeted Bike-Riders". Fill the correct device IP address and port, and click "Search".

UNote: Device IP and port are those of the NVR in step 2.

Basic Application	
Intelligent Application	
Face/Figure Detection	
Vehicle Detection	
Alarm Linkage Application	
Access Control Application	
Statistics Application	Visitor Traffic Statistics
Other Application	Vehicle Traffic Statistics
	Traffic Warning
	Statistics on Helmeted Bike-Riders

Picture 11-2 Statistics on helmeted bike-riders

11.2 High Mounted Al Parking

High mounted AI parking is custom function of this company, i.e. count the vehicle data in the parking areas of the front-end device through AIBOX. To realize this function, user should perform AIBOX environment setting, firmware upgrade and scenario setting according to this chapter.

11.2.1 AIBOX Environment Setting

AIBOX environment setting includes parking area setting and parameters configuration, protocol parameters configuration and etc.

11.2.1.1 Parking Area Setting and Parameter Setting

Step 1: Area drawing



1) Log into the web client of AIBOX, and go to Settings > Analysis > Area;

Picture 11-3 Area setting

 Click "Start Drawing" behind detection area, move the mouse to a starting point on the image, click and drag to another point to form a line, and repeat the operation to form an intelligent analysis area. After drawing, click "Stop Drawing" to finish; • Note: The detection area is a quadrilateral covering the vehicle parking area and the ambient 1-2 lanes of the same direction; meanwhile, try to reduce the interference of vehicles on the opposite lanes as much as possible, as shown below.



Picture 11-4 Drawing area (1)

3) Click "Start Drawing" behind parking detection, and draw the parking detection area along the actual parking area;

• Note: Drawing method: draw two lines along the white parking lines on the image from top to bottom (the line inside can be drawn close to the pedestrian way), and then draw multiple horizontal lines along the horizontal white lines.



Picture 11-5 Drawing area (2)

4) Click "Save" to finish area drawing.

Step 2: Parameter setting

1) Configure vehicle posture, vehicle distance and etc.;

(i)_{Note:}

- Vehicle posture: it means vehicle head or tail that is captured by the camera; vehicle distance: it means the distance between the camera and the first vehicle to be recognized (close position when the distance in within 30m, remote position when it's over 30m).
- For remote position, suggest setting 3 parking spots.

- Configure parameters according to actual conditions.
- Configure parking spot mapping according to the actual conditions; click "Add" and select actual parking spot ID and virtual parking spot ID on the popup window; click "OK";
- After finishing, the right of the main interface will show the binding relationship of the parking spots;
- 4) If there's any fault in setting, select the item to be deleted and click "Delete";
- 5) Click "Save" to finish.

11.2.1.2 Protocol Parameter Setting

OAttention: AIBOX protocol parameters can be set in the machine room and then deploy the device to the front-end.

Step 1: VAM parameter setting

 Log into VAM web, and go to Settings > Network > Downward Protocol > SIP to view the SIP ID of local and service port;

ONote: SIP ID and service port will be used when configuring AIBOX parameters.

SIP VIID		
SIP ID of Local	310000000118000000	
Service Port	5511	
Heartbeat Interval	30	(1~3600)s
Number of Timeouts	3	(1~64)
	Save	

Picture 11-6 SIP

2) Go to Settings > Channel > Channel, and click "Add" to pop up the IP channel window;

IP Channe	P Channel Search								
Refre	esh	Search	Add	Advanced>>	Delete			Remaining Recei	ve Bandwidth: 80 Mbps
	CHN ID	Edit	Channel Name	Status	IP	Protocol	Port	Model	Remote Channel
	D1	Ø	123	Offline	192.168.1.52	ONVIF	80	IPC2852-Fi	1
	D2	Ø	IPCamera	Offline	192.168.1.18	ONVIF	80	IPC2856-Di	1
	D3	Ø	04	Not Registered		SIP	0		1
	D4	Ø		Offline	10.75.13.1	RTSP	5544		1
	D5			Not Registered		SIP	0		1

Picture 11-7 Custom add

 On the popup window, select "SIP" as protocol type, "TCP" as transmission protocol, and configure number of remote channels, channel coding capability and channel alarm input capability according to actual requests;

Add IP Channel			
Protocol Type	SIP	~	
IP Channel ID	Auto	~	
Transmission	TCP	~]
TCP Connection Mode	Passive	~]
Number of Remote Channels	1]
Channel Coding Capability	1		
Channel Alarm Input Capability	1		
		ОК	Cancel

Picture 11-8 Add IP channel

4) Click "OK" to pop up the window of SIP device info.

SIP Device Information					
	SIP ID of Local	3100000001180000000			
	ID of PU	310000000112000003			
	Remote CHN1-Encoding CHN1	310000000132000003			
	Alarm Input1	310000000134000003			
	Transmission	TCP			
	TCP Connection Mode	Passive			

Cancel

Picture 11-9 SIP device info

ONote: Save the information that will be used during AIBOX parameter setting.

Step 2: AIBOX parameter setting

1) Log into AIBOX web client, and go to **Settings > Network > Upward Protocol > SIP**;

Register with Platform	Platform 1	~				
Enable						
Local Port	5060		(1024~65535)			
Device ID	000000000000000000000000000000000000000					
Device Name	AIBOX					
Platform ID	000000000000000000000000000000000000000]			
Platform IP	0.0.0.0					
Platform Port	5511					
Jsername						
Password						
Renewal Time	3600		s (30~999999)			
Heartbeat Interval	30		s (10~1000) (1~10)			
Number of Timeouts	6					
Administrative Division						
Device Owner						
Guard Area						
nstallation Address						
Video Channels	1		Edit	(1~48)		
Alarm Channels	0		Edit	(0~34)		
Standard Order						
SIP->SIP Extension (201 Edit Standard Order	4)->SIP Extension (2016)					
Extension>>						
	Save					

Picture 11-10 SIP

2) Select "Enable" and fill the parameters;

Parameter	Note
Device ID	Fill "ID of PU" on VAM SIP interface (as picture 11-9 shows)
Platform ID	Fill "SIP ID of Local" on VAM SIP interface (as picture 11-9 shows), or go to VAM web client to view in Settings > Network > Downward Protocol > SIP

Platform Port	Log into VAM web client, and go to Settings > Network > Downward Protocol > SIP to view service port, by default 5511		
Username/Password	Fill the username and password of VAM web		
Video Channels/Alarm Channels	Keep the same as those of VAM SIP device information		
Edit (Video Channels)	Click "Edit" to pop up a window. Fill VAM SIP device information "Remote channel 1-encoding channel 1" in "Video Channel 1". If there are more, fill by sequence thereof and bind with the channels.		
Edit (Alarm Channels)	Click "Edit" to pop up a window. Fill VAM SIP device information "Alarm Input 1" in "Alarm Channel 1". If there are more, fill by sequence thereof and bind with the channels.		
Other parameters	Remain		
Edit Video Channel ID			

East Haco onam					
Video Channel1	0	D1-123	•	Main Stream	~

Auto ID Overlay		ОК	Cancel
	Picture 11-11 Edit video cha	nnel ID	
Edit Alarm Channel ID			
Auto ID Overlay		ОК	Cancel

Picture 11-12 Edit alarm channel ID

3) Click "Save" to validate setting.

11.2.2 AIBOX Firmware Upgrade

To upgrade AIBOX firmware, please contact personnel of this company for the latest upgrade packet.

Upgrade steps are as follows:

- 1) Log into AIBOX web client, and go to Settings > Maintenance > Device Maintenance;
- 2) Click "Browse" behind upgrade;
- 3) Select local ".pkg" upgrade packet;
- 4) Await device upgrading.

ONote: During the upgrading, please do not disconnect the network or reboot the device.

11.2.3 AIBOX High Mounted AI Parking

High mounted AI parking is a custom scenario, and this company will provide scenario file according to the actual conditions.

Log into vStation Pro client, go to **Settings > AI > Settings** to import the scenario file of this company and finish the scenario setting of high mounted AI parking. Please refer to chapter <u>6.3.2</u> <u>Scenario Import/Export</u> for details.

11.2.4 Data Statistics

After finishing AIBOX environment setting, firmware upgrade and scenario setting, log into AIBOX web client, and go to **Settings > Analysis > Intelligent Search** to view parking data statistics.