KVM over IP

IPK300 (Dongle)
User Manual

Contents

1．Product Overview

IPK300 is a IP-based KVM control units with enterprise level security which allow 1 local and 4 remote operators to monitor and access multiple servers from a single console at the same time(the first administrator can control, rest of administrators can view only). A single IPK300 can control a server in BIOS level. When it connects with KVM it can control multiple servers.

1.1 Features

- Easy-to-use switching by browser-based UI interface, hotkeys and pushbuttons
- Support server with VGA port with USB keyboard and mouse
- Multiplatform support (Windows, Linux, Unix, Mac, Solaris (Sun), Redhat, Ubuntu
- Supports a graphical interface for intuitive and convenient human-computer interaction
- Support mouse synchronization mode-automatically synchronizes the local and remote mouse movements

Remote Console
- Adaptive 10 / 100 / 1000 Mbps network
- WEB browser-based remote management
- BIOS-level access
- Video quality and video tolerance can be adjusted to optimize data transfer speed, data transfer speed is up to 30 FPS
- Full screen or scalable video display
- Support AES / DES / 3DES encryption
- Support audit function-allows the administrator to audit the device through the system log and operation log
- Configurable user and group permissions for server access and control
- Support firmware upgrade

1.2 Structure
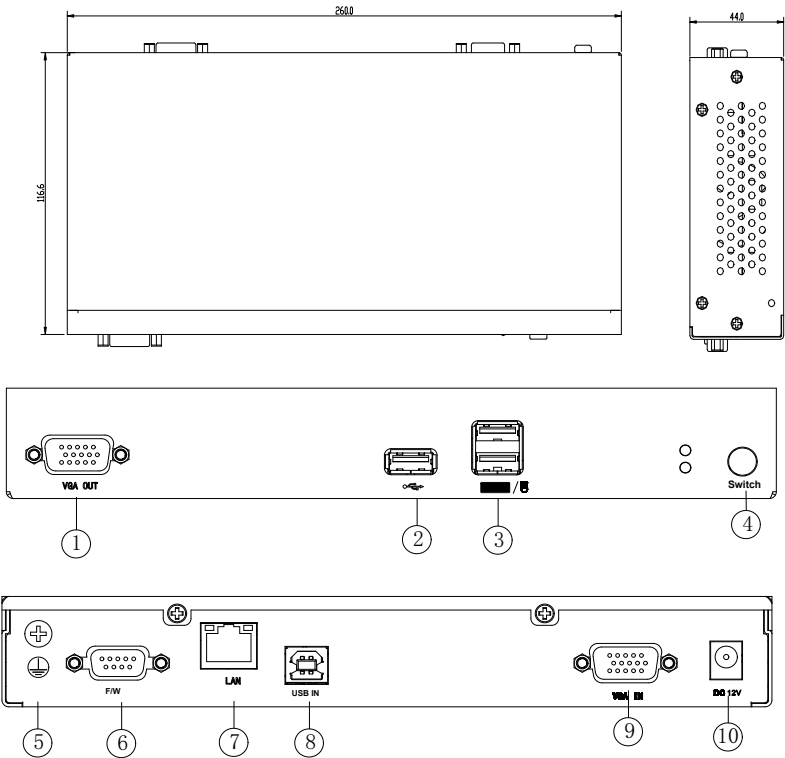
No.	Explanation	Note
1	VGA OUT port	Connect Monitor
2	USB Port	USB2.0 devices（U disk）etc.
3	Double deck USB Port	Connect keyboard/mouse
4	Switch	Remote Keyboard and Mouse Control LED turns Green：remote keyboard and Mouse can work
5	GND	GND
6	F/W	Upgrade port
7	LAN port	Connect the network
8	USB IN port	Connect Server
9	VGA IN port	Connect Server
10	DC12V socket	Connect power adapter

2．Installation
2.1 Rack Mounting
Please turn off connected servers and other devices before installation.
Find a position for KVM, screw it on the 19"rack mounting.
Please notice the length of cables, make sure proper distances among
server,switch,monitor,keyboard and mouse.
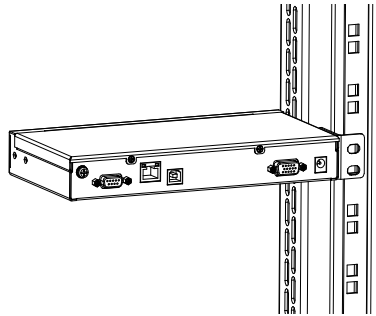
2.2 Device Connection Diagram
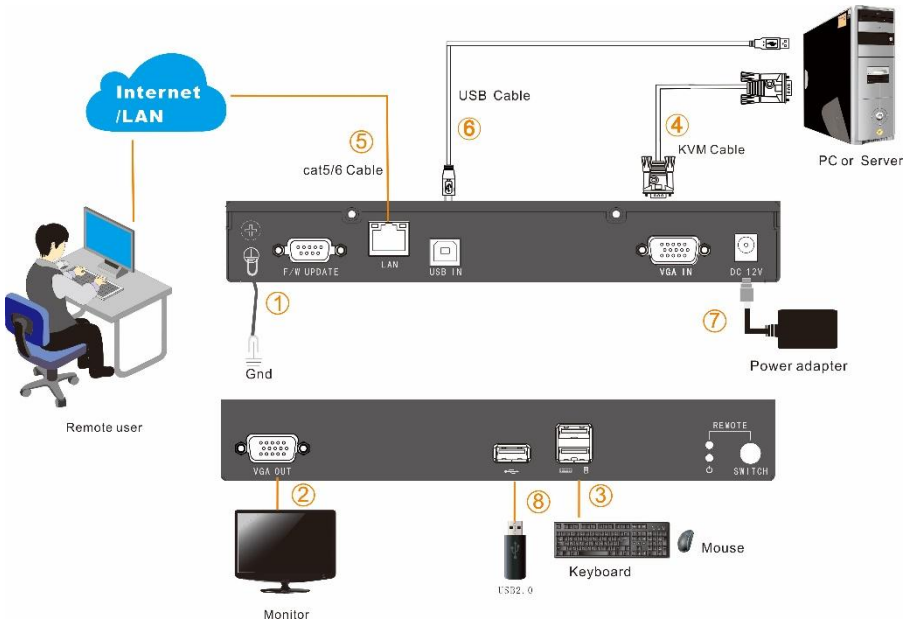
Note: if external USB2.0 device⑧ need to be connected, a USB cable ⑥ needed to connect the server

3. Opening the KVM

The KVM after power on, UI window appears for you to input user name and password.
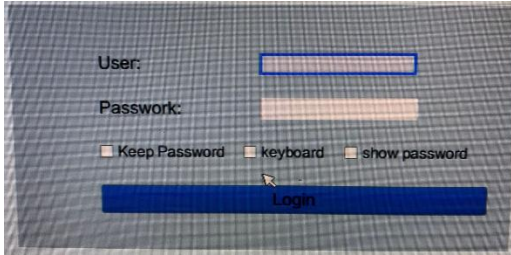
User Name	admin
Pass Word	admin

If want to set other IP address, please enter Local，please enter Local【System Setting】-> 【Network Setting】

Network Settings   System Settings > Network Settings

Network Settings

IP Address :

192.168.1.167

Subnet Mask :

255.255.255.0

Gateway :

192.168.1.1

MAC :

00:4a:b5:3c:6f:58

DCSG Settings

DCSG IP

192.168.1.100

DCSG Port

5500

comfirm

★~Please remember the IP address for remote control~★

3.1. Remote Control

Install and open IE browser, click top-right settings→【Internet Options】
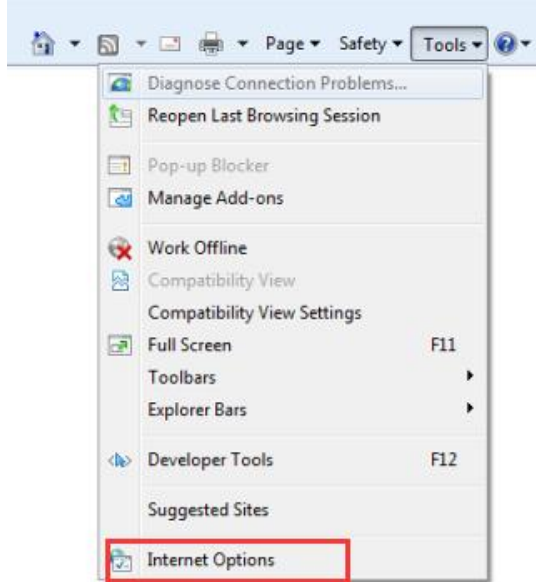
Click 【Security】 → 【Custom Level】
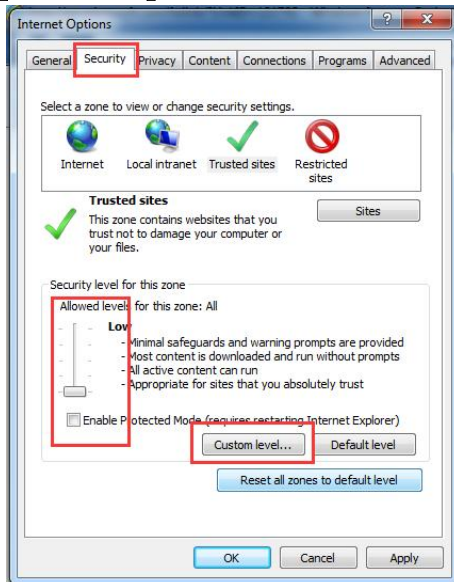
Find 【ActiveX controls and plugins】, choose 【Enable】
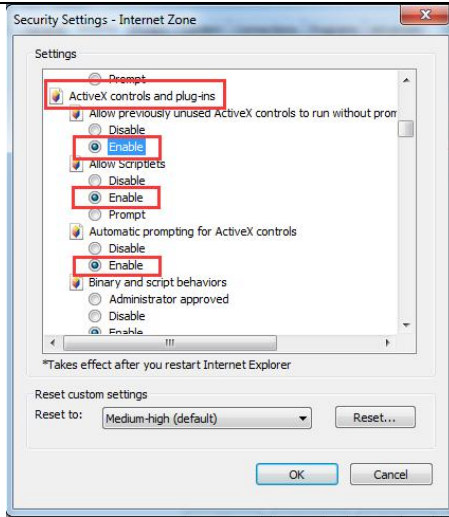
Click【Advanced】, find 【Allow software to run or install even if the signature is invalid】 and select it.
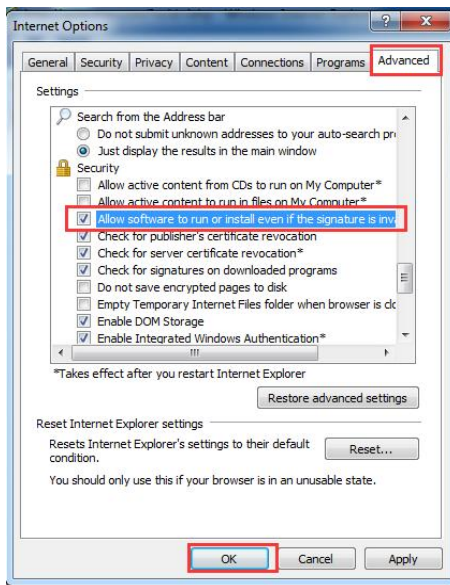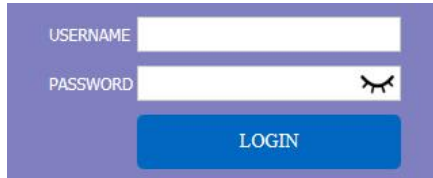
3.2 Default login information

Default Items	Default Value

User Name	admin
Pass Word	admin
IP Address	192.168.1.167
Notice: For security, please change the password after the first login. Differentiating between capital and lowercase letters.	

When all the device connected, open the IE browser
　　　http:// 192.168.1.167

Default User Name：admin
Default Password：admin
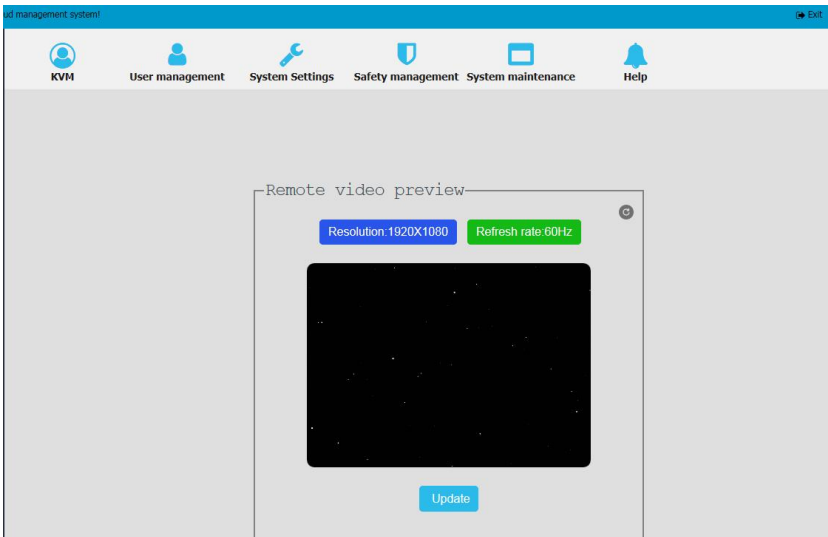
3.3 Remote WEB interface settings
Install and open IE browser, click top-right settings→【Internet Options】
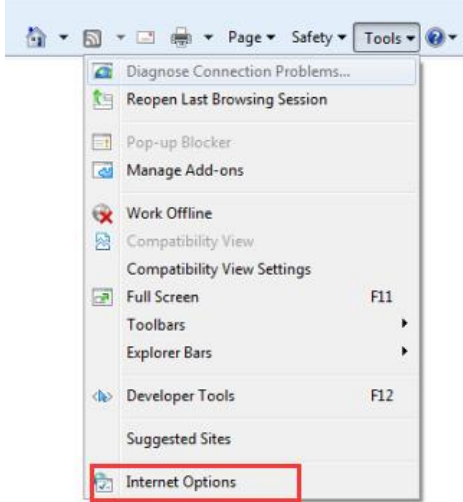
Click【Security】→【Custom Level】
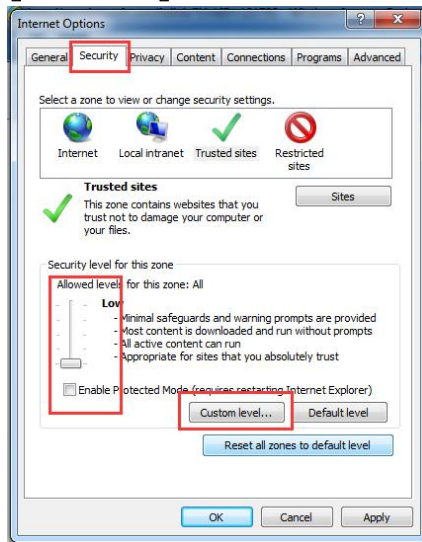
【ActiveX controls and plugins】
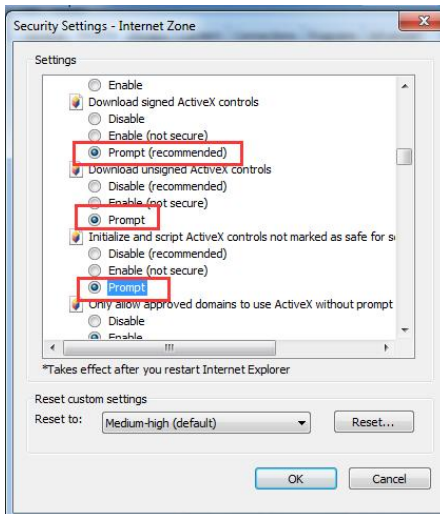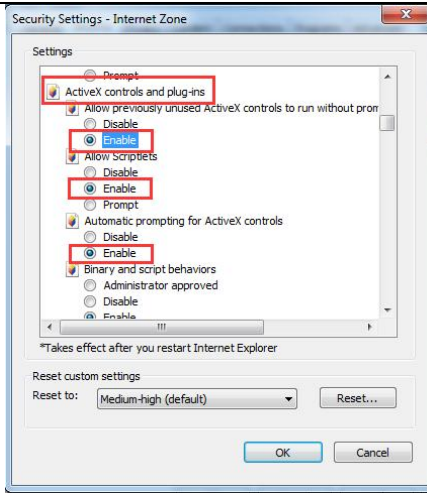
Click【Advanced】, find 【Allow software to run or install even if the signature is

invalid】and select it.
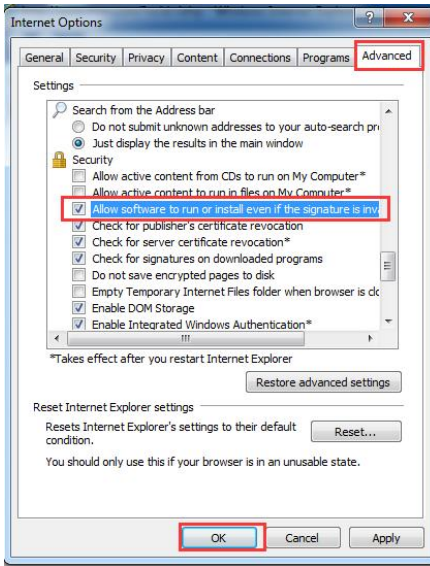
Open the browser, input"192.168.1.167"and press Enter
It's the first time to use Plug-in, the system need to download the plug-in and load the
runtime.When the settings above is don, you can access to the targeted server which
 connected on the KVM.
During the accessing, if the below interface pop-up, please click "Yes" .

4. Remote Control

Support 4 users to browse the video at the same time, but only the first login user can operate
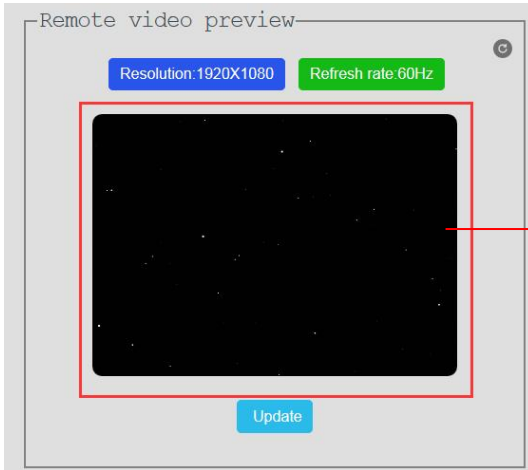
Click here, you can use KVM to control the remote server

Video Control Interface Menu

【Hide or Show Toolbar】
【Setting Option】
【Send Ctrl+Alt+Del】
【Mouse Synchronization】
【Single Mouse】
【Adaptive Window】
【Source Video params】
【Full Screen】

1）Hide or Show Toolbar

When the video window starts, the toolbar is always displayed by default.
Click the icon, the toolbar will automatically hide. When the mouse move out (into) from the toolbar, it hides shows).

2）Setting Options

2.1 Keyboard & Mouse Options

When user has the authority (chart 2-1)
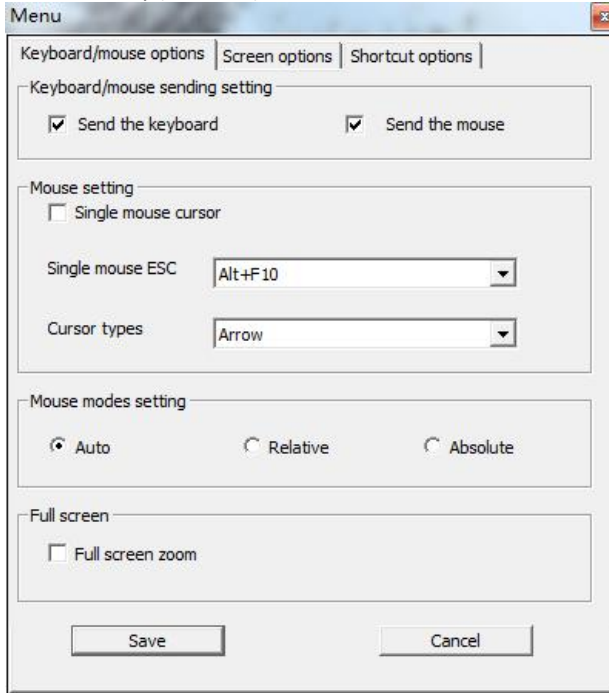
Chart 2-1

➢   Keyboard/mouse sending setting
   ■   Send the keyboard: keyboard data can be sent to the target server through the video window so that it can control the target server's keyboard.
   ■   Send the mouse: mouse data can be sent to the target server through the video window so that it can control the target server's mouse.
➢   Mouse Setting
   ■   Single mouse cursor: when single mouse chosen, target server's mouse will show and remote user's mouse will hide
   ■   Single mouse ESC: press the keyboard "Alt + F10" exit the single mouse mode.
   ■   Cursor types: it can set remote user's mouse cursor type in double mouse mode
➢   Mouse Mode Setting:
   ■   Relative mode: Relative mode is compatible with almost all the operating systems, the factory default mode is relative mode.
   ■   Absolute mode: The absolute mode is not compatible with LINUX operating system.

➢   Full Screen Setting
■   Full Screen Zoom: If the "Full Screen Zoom" is disabled, the video will be
displayed in the remote full screen; If the "Full Screen Zoom" is enabled and the
target server's resolution is different from the remote user computer's
resolution (the resolution of the general target server is less than the resolution
of the remote user computer), the video plug-in will display the screen in the
middle of the screen according to the resolution of the target server.

When users only have authority to view, remote users can only view the video window and
cannot control it, as shown in Chart 2-2.
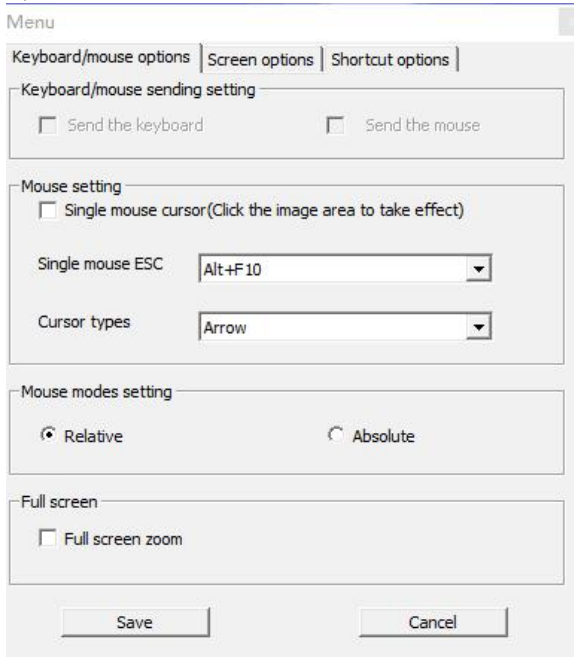
Chart 2-2

2.2   Display option

Display option dialogue shows screen parameters and screen information, as shown in 2-3

➢   Frame Parameter

■   Automatic calibration: The video window will automatically adjust the screen parameters of the target server to the default best effect.

■   Contrast, brightness, hue and saturation: if "automatic calibration" is disabled, users can customized screen parameters of target server.

➢   Frame information

■   Resolution: it shows the resolution of the target server. When the target server's platform is win10, it shows the resolution of video

■   IP address: KVM switch's IP address

■   Refresh Rate: video refresh rate

■   Port number: video port number

■   Manual calibration resolution: when the resolution of the target server is not consistent with the resolution of the video window, it can manually calibrate the resolution after calibration

■   Target server resolution: resolution selection of manual calibration

■   Target server's picture zooming: Under the win10 system, if the resolution is not the best resolution, the win10 system will zoom the video screen, and the video window cannot automatically identify whether the video source picture is zooming or not, then the user need to select the option by its own.
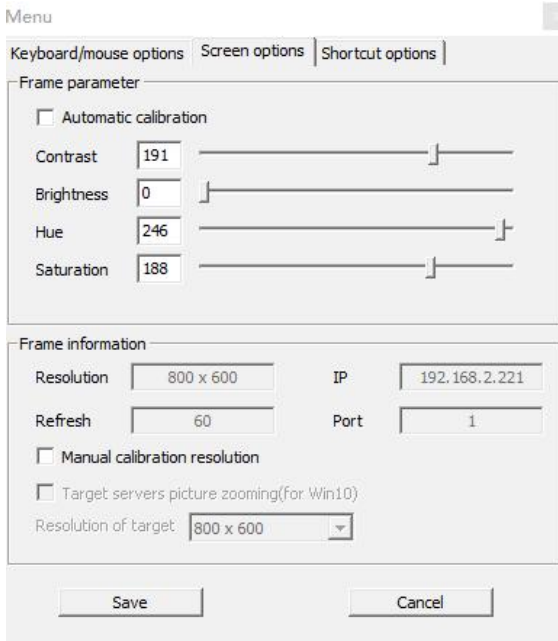
Chart 2-3

2.3 Keyboard Shortcuts

Support 11 keyboard shortcuts, each with a maximum of 6 keys.

It can save shortcut keys and can be directly used when logging in next time. Shown as chart 2-4
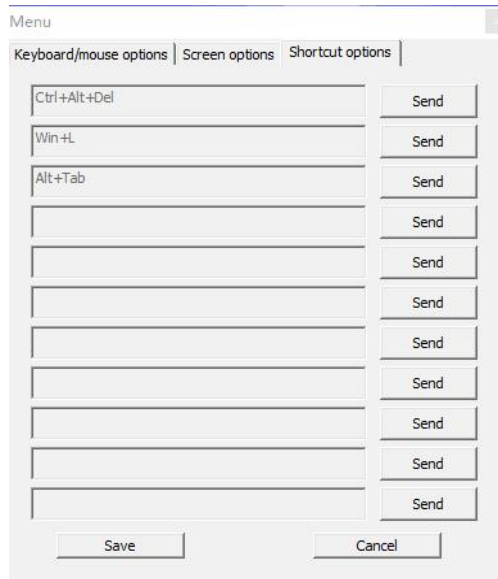
Chart 2-4

Click blank input box, virtual keyboards appears, and then key clicked on the virtual keyboard will be displayed in the input box.

3）**Send** ------send Ctrl+Alt+Del

Keyboard Macro: click this button, the target server will receive shortcut key.

2   Send Ctrl+Alt+Del

Bring up the task manager of target server (Windows operating system)

4）Mouse Synchronization

In double mouse mode, click this button to automatically collate the current mouse, and synchronize the external mouse and internal mouse to the origin of the left corner of the video window.

5）Single mouse

In the video window, it will hide the remote user's mouse, and only show the target server's mouse.

6) Source video params
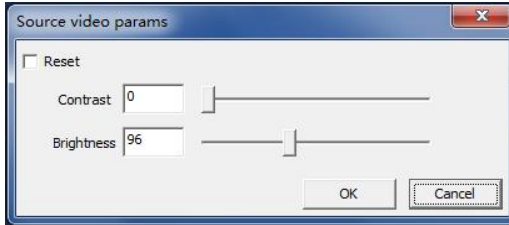
7) Optimum size

The initial size of the video window is 1024x768, when click this button, the video window will adjust the size of the window according to the resolution of the target server.

8）Full Screen

The video window enter full screen mode

5. IP Menu Option

5.1User management

    User management mainly set up for user& user group adding, delete and modifying, user name password modification, user group permissions and so on. If the user do not have user management authority, the user can not access to user management interface. The user in this section is who have the user management authority.
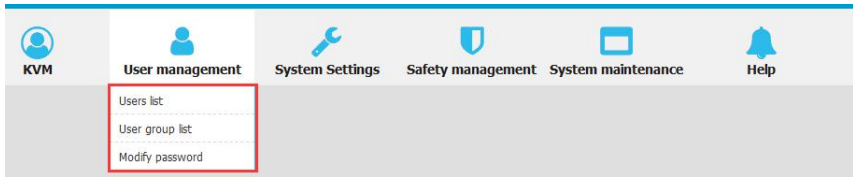
User list
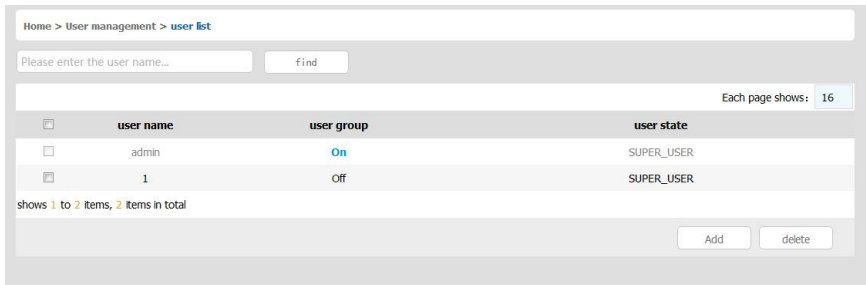
User list interface: list all registered users, you can see more by page turning

- ■ User name or full user name search
    Input user name, it shows related users which make it convenient when you have a large number of users

■   Add user

Click【add】 button, the window below appears:

Home > User management > **Add user**

Add user

username *

Please enter the user name

Set password *

Please enter password

Confirm password: *

Please confirm the password

User groups *

SUPER_USER   ▼

comfirm   cancel

In this window, "*" is required content

1) User name: user name can contains only low case letter, number and "_"
2) Enter password：without strong password protection, the password can only compose of 1-16 letters, numbers or special characters(-@.$! _)；with strong password protection, the password should be filled in according to the rules of strong password protection. More details please check"security management—＞security setting—＞strong password"

3) User group：Select the corresponding user group

■   Delete user

Select the user you want to delete, click   **【delete】,**

	user name	user group	user state
☐	admin	**On**	SUPER_USER
☑	1	Off	SUPER_USER

Each page shows: 16

shows 1 to 2 items, 2 items in total

Add   delete

Note：admin can not be deleted，other users can be deleted, even if they are online.

■   Edit user

Click【1234**】, edit user window pop up**
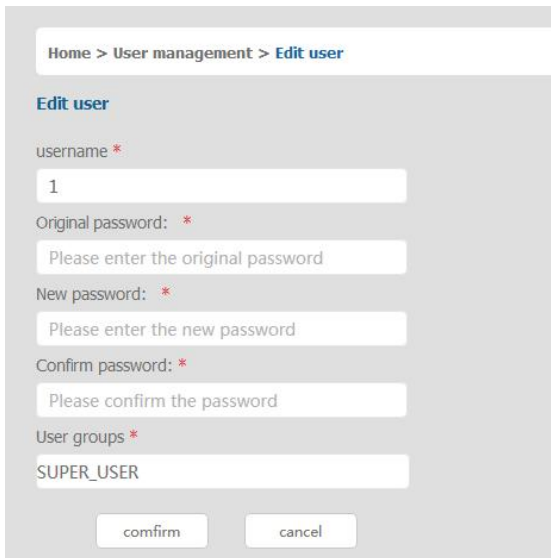
	user name	user group	user state
☐	admin	**On**	SUPER_USER
☐	1	Off	SUPER_USER

Each page shows： 16

shows 1 to 2 items, 2 items in total

Add   delete

Home > User management > **Edit user**

Edit user

username *

1

Original password: *

Please enter the original password

New password: *

Please enter the new password

Confirm password: *

Please confirm the password

User groups *

SUPER_USER

comfirm   cancel

User group list

	group id	user group name
☐	0	SUPER_USER
☐	1	1

Home > User management > user group list

Please enter the user group name...   find

Each page shows: 16

shows 1 to 2 items, 2 items in total

Add   delete

User group list interface：list all registered users, you can see more by page turning

- ■ User group name search
   Input user group name, it shows related user groups which make it convenient when you have a large number of users
- ■ Add user group
   Click【add】 button, the window below appears

Home > User management > add usergroup

add usergroup

usergroup name：*

permission   + closed   - release

☐ port access   ☐ user management   ☐ system Settings   ☐ safety management   ☐ system

port authority   + closed   - release

port number	port name	port access	virtual media
1	port_000	decline	decline

confirm   cancel

1) User group name: it contains only low case letter, number and "_"
2) Authority：mainly refers to management authority and operation authority, click show more, authority menu appears(shown in picture above), click show less, authority menu disappears
   ◇ Port Access: Authority to access KVM, and control target server
   ◇ User Management: user management authority
   ◇ Device Setting:KVM device management authority
   ◇ Security Management: security management authority
   ◇ System Maintenance: system maintenance authority
3) Port authority：set up access and operating authority for each port
   ■ Delete user group

Select the user group you want to delete, click 【**delete**】

	group id	user group name
☐	0	SUPER_USER
☑	1	1

Each page shows: 16

shows 1 to 2 items, 2 items in total

Add   delete

Note：SUPER_USER is system allocated which can not be deleted

■   Edit user group

Click 【**user group number**】 **edit user group window pop up ; for specific operation, please check "add user group"**

Change password

The passwords which is using for logged user

Home > User management > **Modify password**

Modify password

original password: *

Please enter the original password

new password *

Please enter the new password

Confirm password *

Please enter your new password again

comfirm   cancel

1）Old passwords: the passwords you are using
2）New passwords: without strong password protection, the password can only compose of 1-16 letters, numbers or special characters(-@.$! _)；with strong password protection, the password should be filled in according to the rules of strong password protection. More details please check"security management— ＞ security setting— ＞ strong password"

5.2 System Setting
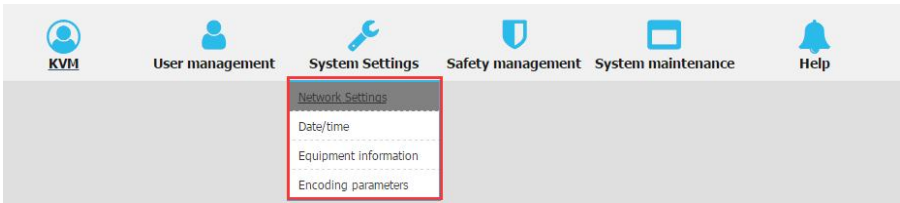
Network Setting

ＩＰｖ4 address setting:

　　✧ ＩＰ address: preset IP address

　　✧ Subnet mask: Generally, it should be consistent with other devices in the network.

　　✧ Default gateway: Generally, it should be consistent with other devices in the network.

　　✧ MAC address：physical address

Date-Time

System time setting:
- **Customized time: manual setting**
- **Synchronize with the NTP server: the system automatically updates the time according to the time server**
- **Time zone setting: choose time zone**

Devices setting

■ Local port disconnects: Exit the current access channel
■ Device name: change device name

Encoding parameters

Home > System Settings > Encoding parameters

Encoding parameters

Encoding parameters

Video formats: PAL

Stream type: Main stream

Frame rate: 25

IP ratio: 25

Rate limit: 6MBPS ▾

confirm   cancel

5.3 Security management

Security settings

Home > safety management > Security Settings

Security Settings

logon restrictions

Restrict single sign-on. ☐

Enable password expiration ☐ 50 (1~365day)

Cancellation free user ☐ 36 (1 ~ 60 minutes)

Strong password

Enable password strength rules ☑

At least one lowercase letter. ☐   At least one capital letter. ☐

At least one numeric character. ☐   At least one special character. ☐

User password history depth. 3   Minimum/maximum password length. 1 - 16

Login lock

Disable lock ◉

Account lock ○ Attempts 60

Timed lock ○ Attempts 60 Locking time 2 (1-1440 minutes)

Encryption scheme

Local information encryption mode. No encryption ▾

Encryption mode is applied to KVM and virtual media. ☐

Local device reset mode. Enable Local Fact ▾

confirm   cancel

■ **Login restriction: user name login restriction**

✧ Single sign on restriction: if one user name is logged in, it can no longer log in with this user name, if it is selected, you can log in with the user name

✧ Enable passwords expiration: current password use days, ranges from 1-365 days, if it is selected, the default is 50 days

✧ Free user log off: If user do not have operations after logging in a set time, the user will be logged off automatically

■ **Login lockout**

✧ Lockout forbidden: when it is selected, lockout will be canceled

✧ Account lockout: account setting for login attempts failed

✧ Time lockout：when account logging attempts over the setting times, the time for   lockout

■ **Strong password**

✧ Enable password strength rules：when it is selected, the original password will be forced to be tighten

✧ Password history depth: new password can not be the same as the latest 3(default) password, this number can be changed, it ranges from 1-10

✧ Strong passwords is at least 1 bit and maximum is 16 bits

■ **Encryption scheme**

| No encryption |
| DES |
| AES128 |
| AES256 |

✧ Local information encryption scheme: three encryption schemes and one unencryption scheme

✧ Encryption scheme is applied to KVM ans virtual media: applied when it is selected

✧ Local device reset mode: push button reset mode

Audit log

| maintype: all ▾ | subtypes all ▾ | date selection: 2018-04-27 00:00:00 to 2018-04-27 14:50:25 | search |

Each page shows：16

number	date	main type	subtypes	instructions
1	2018-04-27 08:04:49	view	get config.	The user 'admin' 'get config.' on the host IP is '192.168.2.109'
2	2018-04-27 08:04:49	view	get config.	The user 'admin' 'get config.' on the host IP is '192.168.2.109'
3	2018-04-27 08:04:49	view	get config.	The user 'admin' 'get config.' on the host IP is '192.168.2.109'
4	2018-04-27 08:04:50	view	get config.	The user 'admin' 'get config.' on the host IP is '192.168.2.109'
5	2018-04-27 08:04:50	view	get config.	The user 'admin' 'get config.' on the host IP is '192.168.2.109'
6	2018-04-27 08:04:51	view	get config.	The user 'admin' 'get config.' on the host IP is '192.168.2.109'
7	2018-04-27 08:04:51	view	get config.	The user 'admin' 'get config.' on the host IP is '192.168.2.109'
8	2018-04-27 08:04:52	view	get config.	The user 'admin' 'get config.' on the host IP is '192.168.2.109'
9	2018-04-27 08:04:52	view	get config.	The user 'admin' 'get config.' on the host IP is '192.168.2.109'
10	2018-04-27 08:04:52	view	get config.	The user 'admin' 'get config.' on the host IP is '192.168.2.109'

5.4 System Maintenance
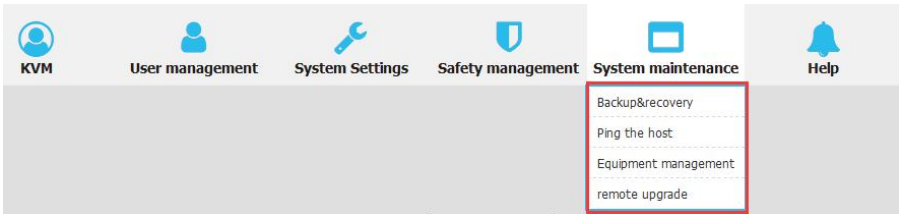
Provide system maintenance tools such as test tools, data backup and restart.

Backup and restore
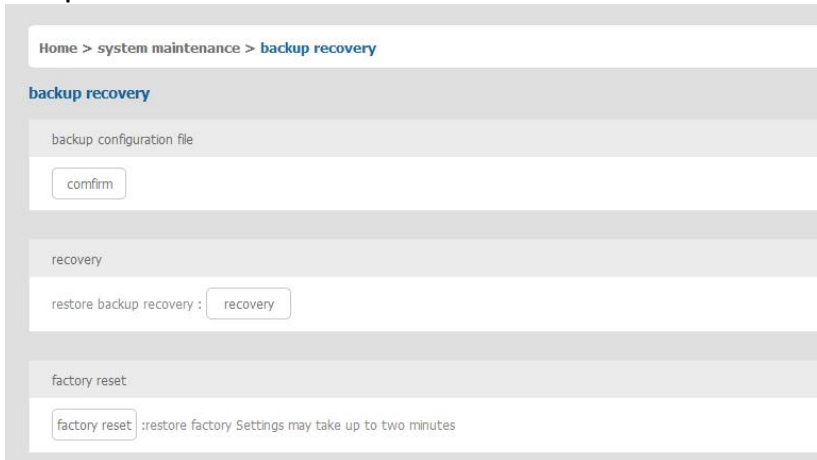
- ■ **Backup**
- ✧ Backup: backup current   system settings
- ■ **Restore**
- ✧ Restore: restore the last backup of system
- ■ **Restore factory settings**
- ✧ Restore factory settings: restore everything to factory condition

Ping Host

Home > System maintenance > **Ping the host**

Ping the host

IP address

Ping

result

■ **Test network connection state to target server**

Input IP address and click"ping"button , if network is smooth, result returns to"ip is active"; if not, it returns to"no response from IP"(IP is tested target server's IP)

Device management

Home > System maintenance > **equipment management**

equipment management

closing device

shutdown mode :   closing device

Remote upgrade

Provide users with better upgrade experience and continuous technical support.

Home > System maintenance > **remote upgrade**

remote upgrade

upload file

browse   unselected file   upgrade

Upgrade method：
Click "browse" and select upgrade file, upload the file to the device, then click "upgrade" to finish upgrade

6.Appendix

6.1 Technical Specification

Model			IPK300
User	Local		1
	Remote		1
Computer Connection			1
Connector	Console	Keyboard	USB
		Mouse	USB
		Screen	VGA
	Network		1*1000Mbps
	USB2.0		1* USB TYPE B 1* USB TYPE A
Resolution			Local：1920 x1080 @60Hz Remote：1920 x1080 @60Hz
Remote	Remote Control		KVM control (ActiveX)
	Management		Web

	Security	DES encrypted
Power Input		DC12V
Power Consumption		5W
Temperature		0— 50 ℃
Storage Temperature		-20—60 ℃
Humidity		0—80% RH, Non-condensing
Net Weight		1.1Kg
Measurement (W x D x H)		260mm× 116.6mm×44mm
Packing (W x D x H)		330mm× 255 mm× 95 mm