# Cat 5 KVM over IP Console (8 Port/16 Port/ 24 Port/ 32 Port)

# **User Manual**



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# 1. Product Overview

# 1.1 Introduction

The IP-based KVM (IP-KVM) redirects the local keyboard, mouse and video data to a remote management console. The operator can safely manage one or many computers locally at the server site or remotely via a standard internet browser. Securely gain BIOS level access to systems for maintenance, support or failure recovery over the internet.

The IP-KVM console integrates multiple KVM switches in a 1U height console. It can control multiple computers with a set of devices including monitor, keyboard and mouse; saving cost and space by consolidating the hardware to a single device.

The IP-KVM console is fast and easy to install. Simply connect corresponding cables to the correct ports of the KVM and its module without software configuration. Connect multiple computers with compact RJ-45 connectors and CAT5e/6/7 cables, transmitting distance is up to 100M.

### 1.2 Features

#### Hardware

- 17" & 19" TFT LCD monitor, high definition and high resolution
- Rack-mountable in a 1U EIA system rack
- Full size keyboard with integrated number pad
- Trackball eliminates the need for a separate, external mouse

#### Local Console

- Control up to 8 / 16/ 24 / 32 computers
- Support 1 local user and 2 remote users, port share mode allows local and remote users to gain access to a server simultaneously or access different servers
- Easy-to-use switching by browser-based UI interface, hotkeys and pushbuttons
- Support servers with VGA/HDMI/DVI/DP port
- Multiplatform client support (Windows, Linux, Unix, Mac, Solaris (Sun), Redhat, Ubuntu
- Supports a graphical interface for intuitive and convenient human-computer interaction- local resolution is up to 1280 x 1024@60Hz
- Supports mouse synchronization mode-automatically synchronizes the local and remote mouse movements
- Video synchronization with local console EDID information for local console display can be stored in the host module for video resolution optimization

#### 8 Port /16 Port/24 Port/32 Port

- Keyboard and mouse emulation to ensure the normal booting
- Auto scan feature for monitoring user-selected computer
- Hot pluggable add or remove computers without having to power down the switch

#### **Remote Console**

- Adaptive 10 / 100 / 1000 Mbps network
- WEB browser-based Or KVM\_Clients remote management
- BIOS-level access
- Video quality and video tolerance can be adjusted to optimize data transfer speed, up to 30 FPS
- Full screen or scalable video display
- Remote users and local users can control the same server synchronously
- Support AES / DES / 3DES encryption
- Support audit function-allows the administrator to audit the device through the system log and operation log
- Support low-bandwidth real-time transmission, the bandwidth is less than 2M
- Exit Macros support
- Configurable user and group permissions for server access and control
- Supports firmware upgrade

#### 1.3 Appearance Front View

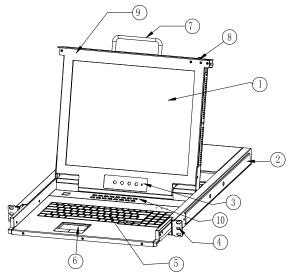
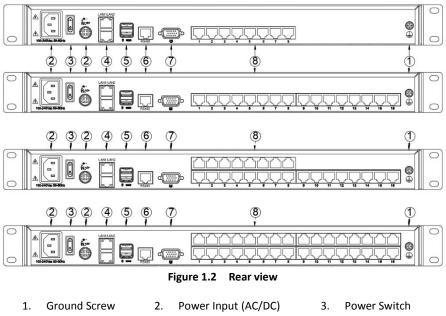


Figure 1.1 Front view

- 1. LED Monitor
- 4. Front Bracket
- 7. Handle
- 10. Switch LED

# **Rear View**

- 2. Rear Bracket Slot
- 5. Keyboard
- 8. Release Catch
- 3. LED OSD Controls
- 6. Touchpad
- 9. Display Panel



- 4. LAN Port
- 5. USB Port
- 6. RS485 Port

- 7. Monitor Port
- 8. PC Connecting Port

- 5 -

# Structure and Size (17" & 19")

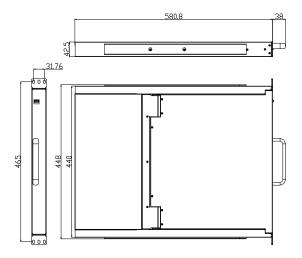


Figure 1.3 17" console size dimensions

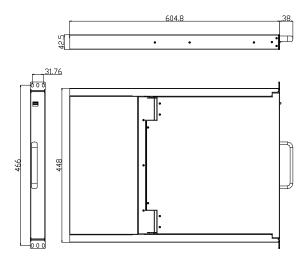


Figure 1.4 19" console size dimensions

# 2. Installation and Start-up

# 2.1 Rack Mounting

A standard rack mounting kit is provided to mount the switch in a depth of 600-850mm (17"), 700-820mm (19") in a standard 19" rack. For other mounting distances, the rear brackets need to be customized accordingly. With one person hold the switch in place, the other person slides the L bracket into the switch's side mounting brackets from the front to the back, then screws the brackets to the rack (see below installation drawing).

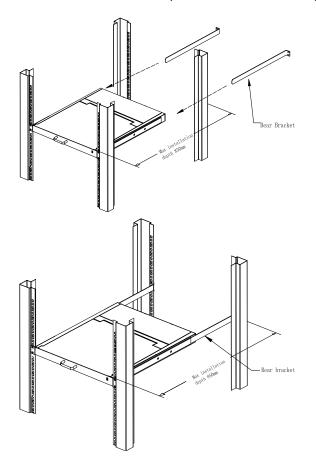


Figure 2.1 Rack Installation Diagram

# 2.2 Install KVM Components

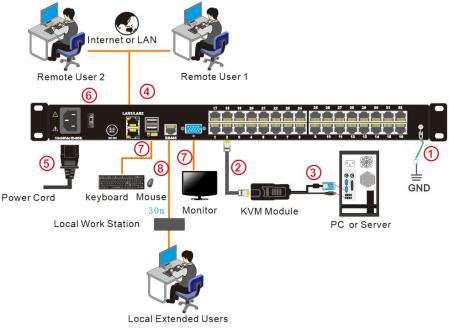


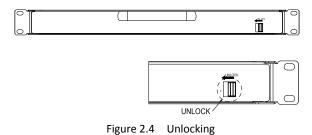
Figure 2.2 Installation diagram

Installation Steps:

- 1. Make sure the KVM console has been connected to the ground.
- 2. Connect the KVM adapter to the PC or Server.
- 3. Connect the KVM adapter to the KVM port with a CAT5 cable.
- 4. You can remote control the KVM switch via IP.
- 5. Using power adapter to connect the KVM into 220V AC power supply.
- 6. Power on the switch
- 7. Connect the external keyboard, mouse and monitor (optional)
- 8. If local station required, please connect KVM to the station with CAT5 cable

# 2.3 Opening the Console

1. Disengage the release catch



Note: The release lock can only do horizontal locking, it doesn't bear any load.

- 2. Pull the KVM console all the way out until it clicks into place.
- 3. Rotate the LED module all the way back to expose the LED screen; the LED module can be rotated up to 108°.

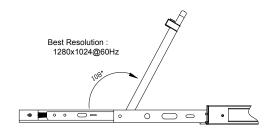


Figure 2.5 Open angle of the console

4. The KVM makes two "beep" sounds after power on, the orange light keeps flashing and an UI window appears for you to input user name and password.

á .	Welcome	the second	
	Password:		A REAL PROPERTY
	Keep Password	Keyboard C	Show Password
		Login	

User Name:	admin
Password:	admin

- 5. LED panel is powered on when the power LED is green.
- 6. Power on the computer or server after power on the KVM.

- Close the LED display panel and the power automatically shut down.
- Push the release catch in the direction of the arrow; push the LED panel all the way in until it automatically locks up.

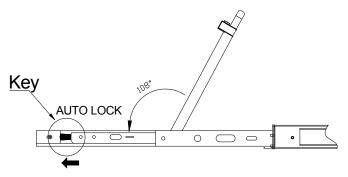


Figure 2.6 Unlocking the console

# 3.1 LED Functions





No.	Components	Function		
	1-16	Switching freely from port 1 to port 16		
	Reset	Press 【1】 and 【2】 at the same time for three seconds resets the keyboard and mouse		
	Scan	Press【7】 and【8】at the same time for three seconds enters the auto scan mode.		
1	Brightness -ִָָּ̈̈́̈́̈́	<ul> <li>Press 【 3 】 for three seconds enters brightness adjusting mode.</li> <li>33 are flashing on the LED tube.</li> <li>Then press 【 5 】, 【 6 】 to adjust.</li> <li>Press 【 3 】 exits or waits for five seconds and it will auto-exit.</li> </ul>		
	Definition <b>O</b>	Press 【 4 】 for three seconds enters definition adjusting mode. 44 are flashing on the LED tube. Then press 【 5 】, 【 6 】 to adjust. Press 【 4 】 exits or waits for five seconds and it will auto-exit		
	Initialize D 🔅	Press 【 6 】 for three seconds will initialize the brightness and definition of each port.		
2	Port Selection Buttons & LEDs	<ul> <li>Indicator LEDs are built into the switches, the online LED light is on the left and the selected LED light is on the right.</li> <li>1. An online LED light (green) indicates that the KVM has connected to its corresponding computer and power on.</li> <li>2. A selected LED light (orange) indicates that the computer attached to its corresponding port is up and running.</li> </ul>		
3	Station ID	Display the current port		



Figure 3.2 32 Port LED front views

No.	Components	Function	
1	0~9 +Enter	Switching from port 1 to port 32 Port 8 : If you want to switch to Port 8, press [8], and the LED light displays . , then press "Enter", you will come to Port 8. Port 32: If you want to switch to Port 32, press [3] and [2], the LED light displays . , and then press "Enter", you will come to Port 32.	
2	- <b>O</b> - (+, -)	Adjust Brightness Press , the LED light blinking with , and the press "+" and "–"to adjust the brightness.	
3	• (+, -)	Adjust Definition Press ❶ , the LED light blinking with □□ , and then press "+" and "-"to adjust the definition.	
4	Station ID	Display the current port	

# 3.2 Operating the Monitor



Figure 3.4 Monitor adjust menu buttons

The LED OSD allows you to set up and configure the LED display.

Buttons	Functions		
MENU SELECT	Brings up the main menu.		
EXIT/AUTO	Exits the current menu and returns to the previous menu or exits the LED OSD. Press AUTO for automatic configuration.		
SL-/SL+	Moves the menu to make corresponding adjustment.		
LED state	Green: Running Red: Power off or access non standard VESA signal Flashing green: Energy saving mode or no signal		

Press AUTO if the screen migrates after power on or under other circumstances, then the screen auto-configures to its best display state.

Note:

- It may not be adjusted to its best state if part of the display mode is not standard VESA mode. if so, return back to OSD menu to RESET, then it will revert back to normal.
- It is recommended to set up the display mode at 1280x1024, refresh rate at 60Hz.

# 3.3 Key Combination Function

If you want to set other hotkeys to pop up the UI interface or key combination switch, set up the via the local console, 【System Settings】 > 【Device info】

Pop up the UI interface	Double click 【L_Ctrl】 Double click 【L_Alt】 Double click 【Scroll Lock 】 Double click 【Caps Lock】
Hot key	<pre>[L_Alt] + [L_Ctrl] [L_Win] + [L_Ctrl] [L_Alt] + [L_Win]</pre>

Hotkey commands are as follows:

Hot key + the corresponding function key

Function	Operating	Function description	
	+Number	Skip ports from 1~16	
Port switch	+ 【↑】/【←】	Skip to previous port	
	+ 【↓】/【→】	Skip to next port	
Drichterson	+ 【+】	Brightness +	
Brightness	+ 【-】	Brightness -	
	+ (>) Definition +		
Definition + 【 < 】 Definition -		Definition -	
Reset Video	+ (R)	Reset the video	
Lock KVM	+ 【L】	Lock KVM and a user login window appears	

# 4. User Interface Operation

login UI control menu

User Name: admin Password: admin

After logging in the device, you can see the connection status of the device port.

			Help	
lome > KVM				
Port Num	Port Name	State	Permission	Group
01-06	Port_006	connect	Control	
01-01	Port_001	close	Control	
01-02	Port_002	close	Control	
01-03	Port_003	close	Control	
01-04	Port_004	close	Control	
01-05	Port_005	close	Control	
01-07	Port_007	close	Control	
01-08	Port_008	close	Control	
01-09	Port_009	close	Control	
01-10	Port_010	close	Control	
01-11	Port_011	close	Control	
01-12	Port_012	close	Control	
01-13	Port_013	close	Control	
01-14	Port_014	close	Control	
01-15	Port_015	close	Control	
01-16	Port_016	close	Control	

In the port list,

- 1. Click the "Connect" to enter the host screen;
- 2. In the host screen, press the [L\_Ctrl] key on the keyboard twice return to the UI interface.

#### 4.1 UI function instruction

No.	Menu	Sub-menu	Function
		User List	User list
1	User	User group list	User group setting
		Modify password	Password setting
		Network Settings	IP address, Subnet Mask setting
	Guatana	Date/time	Date and time setting
	2 System	Equipment information	Device information
		Encoding parameters	Video quality setting
2	Conveiter	Security Settings	Login, password permission setting
3	Security	Audit log	Audit log
		Backup&recovery	Backup, restore, factory reset
4	Maintenance	Ping the host	Test the network connection between PC and KVM
		Equipment management	Upgrade and reboot device

# 4.2User

User management mainly set up for user& user group adding, delete and modifying, user password modification, user group permissions and so on. If the user do not have user management authority, the user cannot access to user management interface. The user in this section is who have the user management authority.

User	anagement
Users I	ist
User gr	roup list
Modify	password

### User List

Home > U	Jser management > <mark>user li</mark>	st	
Please en	ter the user name	find	
			Each page shows: 16
	user name	user state	user group
	admin	On	SUPER_USER
shows 1 to	1 items, 1 items in total		
			Add delete

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:

Licer Name *	
User Name: *	
Password: *	
Confirm password: *	
User Group: *	
SUPER_USER	-

*Note:* In this window, "\*" is required content

- 1. User name: user name can contains only low case letters, number and "\_"
- 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

#### User group list

	Search Group Add Del
Num	User Group Name
0	SUPER_USER
1	1
2	2
3	3
4	4

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

JserGroup Name						
permission						
KVM user	control 📃 s	ystem S	ettings	s 🔄 safe	ty cor	ntrol 📃 Mainte
ort authority						
Numuber	Port Name	port a	iccess	virtua	l med	ia Shortcut
1	Port_001	View	*	Refuse	*	All ports for v 💌
2	Port_002	View	*	Refuse	-	
3	Port_003	View		Refuse	-	
3 4	Port_003 Port_004	View	*	Refuse Refuse	•	
	(1) (1) (1 <del>) (1)</del> (1) (1) (1)					
4	Port_004	View	•	Refuse		
4	Port_004 Port_005	View	*	Refuse Refuse	*	
4 5 6	Port_004 Port_005 Port_006	View View View	*	Refuse Refuse Refuse	*	
4 5 6 7	Port_004 Port_005 Port_006 Port_007	View View View View	*	Refuse Refuse Refuse Refuse	*	

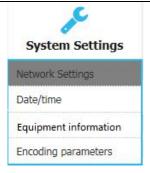
- 1. User group name: it contains only low case letter, number and "\_"
- 2. Authority: mainly refers to management authority and operation authority, click show more, authority menu appears(shown in picture above), click show less, authority menu disappears
  - Port Access: Authority to access KVM, 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

# Modify password

The passwords which is using for logged user

Note: In this window, "\*" is required content

- 1. User name: user name can contains only low case letter, number and "\_"
- 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



#### **Network settings**

Network Settings	System Settings > Network Settings
Network Settings	
IP Address :	
192.168.2.167	
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	
com	nfirm

#### 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
- DCSG IP: the IP address should be the same with the Authentication Server IP address
- DCSG Port: the Port should be the same with the Authentication Server Port.

# Date time

Date Settings System	m Settings > Date Settings
Date Settings	
User setting time	9
Date Settings:	
1970-01-14	
Time Setting:	
13:48:29	
Synchronize with Time server:	the NTP server:
202.120.2.101	
Select time zone:	
West 12 (central Pacific	c) -
comfirm	cancel

# System time setting:

- Customized time: manual setting
- Synchronize with the NTP server: the system automatically updates the time according to the time

#### **Equipment information**

M User	System Security	Maintain	Help	Ф
Home> System Set	tings > Equipment information			
Device name				
IPKVM				
KVM Hot-key				
Double-click the lef	ft Ctrl 👻			
Function Hot-Key				
IAlt + ICtrl + Functio	in key 👻			
Setting Module ED	DIC			
1280X1024	*			
Function key table	2			
1,2,3n	Switch the port			
+	VGA Bright +			
-	VGA Bright -			
>	VGA Gain +			
<	VGA Gain -			
1	Switch Next port			
t	Switch Previous port			
	Switch Next port			
←	Switch Previous port			
L	Logout			
R	Reset VGA			

# Encoding parameters

ncoding param	eter System Settings > Encoding parameters
Video Formats: Stream type:M	
Frame Rate:	25 25
Rate Limit:	6MPBS -
	ОК

#### 4.4 Security

	Security	
Secur	ity Settings	
Audit	log	

#### Security Settings

logon restric	Login lock
Restrict single sign-on.	O Disable lock
password expiration 50 Day	<ul> <li>Account lock try 60</li> </ul>
Cancellation user 36 (1~365minutes)	Timed lock try 60 Locking 2 (1-1440minutes)
Contain lowercase Contain uppercase	Local device reset mode Enable Local Factor *
Enable password	Local info encryption mode No ENCRYPTION *
Contain Number	Encryption mode is applied to KVM and virtual
assword depth 3	
in/max length 1 - 16	

- 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

#### 8 Port /16 Port/24 Port/32 Port

- 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

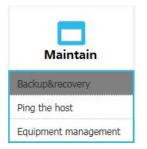
DES AES128

- three encryption
- Local information encryption scheme: AES256
   schemes and one un-encryption scheme
- Encryption scheme is applied to KVM and virtual media: applied when it is selected
- Audit log

Date:	1970-01-14 00:00:00 -	1970-01-14 13:49:28 💌	Maintype:	ALL -	subtypes:	ALL 👻	Search
Num	Date	Event		Instructions			
01-01							
01-02							
01-03							
01-04							
01-05							
01-06							
01-07							
01-08							
01-09							
01-10							
01-11							
01-12							
01-13							
01-14							
01-15							
01-16							

#### 4.5 Maintenance

Provide system maintenance tools such as test tools, data backup and restart



#### Backup & Restore



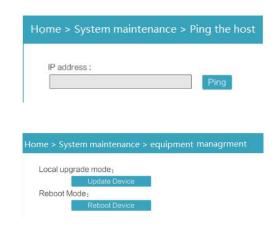
Backup: backup current system settings

**Restore:** restore the last backup of system

Factory reset: Restore to factory state (KVM must be restarted to take effect)

Ping

Update



# 5. Remote Control

.

# 5.1 Configure the Target Server

Before installing and using the IP-KVM Switch, connect and configure the target server first. Refer to below configuration instructions:

- The digital KVM switch supports below two mouse mode:
- Absolute mouse mode
- Relative mouse
- Intelligent mouse mode

Mouse configuration is different for different operating systems; please refer to below detail instructions for mouse configuration.

 Mouse and display configuration on Windows server 2003 and above version, Windows XP and above version

**Operating systems:** Windows server 2003, Windows server 2005, Windows server 2008, Windows server 2012; Windows XP, Windows7, Windows8, Windows10

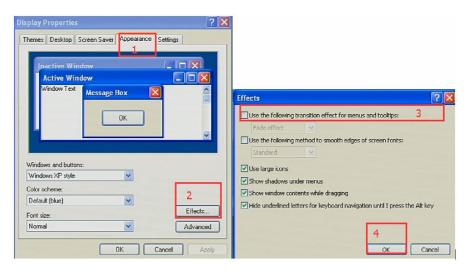
Set Mouse Precision
 Start—>Control Panel—> [Hardware]—>Mouse

ons Pointers	Pointer Options W 1	/heel Hardwa	re
Select Slow	a pointer speed:	- Fast	2
Enh	ance pointer precisio	on	3
diak	omatically move poin og box	ter to the defau	It button in a 4
/isibility		ter to the defau	It button in a 4
小sibility /isibility 分析 口 Disp Short	og box olay pointer trails	Long	It button in a 4
小sibility /isibility 分析 口 Disp Short	og box	Long	It button in a 4

#### 8 Port /16 Port/24 Port/32 Port

Please follow the steps above to finish the setting.

• Set up the display of the target server under Windows XP, Windows 2003, Windows 2008



Start—>Control Panel—> [Hardware]—>Display

Please follow the steps above to finish the setting.

• Configure the mouse under Linux (ubuntu 10) Input "set m 1 1" in the Linux command line terminal and press Enter to finish the mouse setting, as shown below.

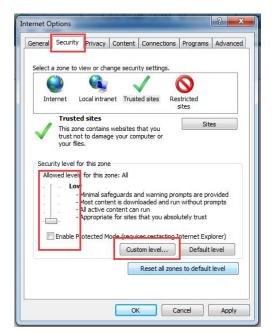


### 5.2 Remote WEB Interface Settings

Install and open IE browser, click top-right settings→ 【Internet Options】

Reopen Last Browsing Session           Pop-up Blocker	
Pop-up Blocker	
Manage Add-ons	
🙀 Work Offline	
Compatibility View	
Compatibility View Settings	
Full Screen	F11
Toolbars	
Explorer Bars	
I Developer Tools	F12
Suggested Sites	

Click  $[Security] \rightarrow [Custom Level]$ 



# 【ActiveX controls and plugins】

	Prempt X controls and plug-				
Acase		ns			
All	ow previously unuse	20102	trols to run	without pron	
0	Disable				
۲	Enable				_
All	ow Scriptlets				
0	Disable				
۲	Endere				
_0	Prompt				
🧳 Au	itomatic prompting f	or ActiveX cor	ntrols		
0	Disable				
	Enable				
J Bir	hary and script beha Administrator appr				
	Disable	oveu			
	Enable		-		-
•	III		1	•	
Takes effe	ct after you restart	Internet Expl	orer		
eset custon	n settings			_	_
		.143	-	Reset	
eset to:	Medium-high (defai	JIC)	10000	Charles of the Contract of the Contract of the	

(	🗇 Enable		-
i (i)	Download signed ActiveX cont	rols	
(	🔘 Disable		
	Enable (not secure)	10.0	
	Prompt (recommended)		
	Download unsigned ActiveX co	ntrols	
(	Disable (recommended)		
	Enable (not secure)		
	Prompt		
	Initialize and script ActiveX cor	ntrols not marked	as safe for si
	Disable (recommended) Enable (not secure)		
	Prompt		
	Univ allow approved domains t	to use ActiveV with	hout prompt
	Disable	to use Actives with	nourprompt
	Enable		-
•	III		E.
*Takes ef	fect after you restart Interne	t Explorer	
	om settings		
leset custo		-	Reset
Reset custo Reset to:	Medium-high (default)		
leset custo	Medium-high (default)		

Click 【Advanced】, find 【Allow software to run or install even if the signature is invalid】 and select it.

	Security	Privacy	Content	Connections	Programs	Advanced
Setting	s ——					
۶ ۹	<ul> <li>Just d</li> <li>Security</li> <li>Allow</li> </ul>	t submit u isplay the active con	nknown ad results in ntent from	ldresses to you the main windo CDs to run on N	w My Compute	
1				n in files on Mv Istall even if the		
	Check	for publis	her's certif	icate revocatio		STITU
	Check	for signa t save end	tures on do crypted pa	e revocation* ownloaded prog ges to disk t Files folder wh		Ш
				Files folder wr	ien browser	is clc
	V Enable	DOM Sta	orage			is clc
•	V Enable	DOM Sta	orage	vs Authenticatio		is dt +
1	C Enable	e DOM Sto e Integrat	ed Window			is dc
1	C Enable	e DOM Sto e Integrat	ed Window	ernet Explorer		-
*Ta	C Enable	e DOM Sto e Integrat after you	orage ed Window III restart Int	ernet Explorer	on*	-
*Ta Reset I Rese cond	Enable Enable kes effect : internet Ex ets Interne ition.	e DOM Sto e Integrat after you plorer set t Explorer	rage ed Window restart Int tings 's settings	ernet Explorer	advanced s	et

# 5.3 Log in

Default Items	Default Value
User name	admin
Password	admin
IP address	192.168.1.167
Notice: For security, please change the	e password after the first login.
Differentiate between capital	and lowercase letters.

After connecting the device, open the web browser: http:// 192.168.1.167

USERNAME	admin	
PASSWORD	•••••	¥
	LOG	IN

User Name: admin Password: admin

After logging in for the first time, a prompt for loading the ActiveX will appear below the browser. Clicking **Allow** will bring up the Download Video Plugin dialog box. Click OK to use the video plugin.

(Q) KVM	User management	System Settings	Safety management	System maintenance	Help
Home > Port :	access > Port list				
				Each	page shows : 16
Number	Port name		State	Port p	ermission
3	Port_003		connect	co	ontrol
1	Port_001		close	co	ontrol
2	Port_002		close	co	ontrol
4	Port_004		close	co	ontrol
5	Port_005		close	co	ontrol
6	Port_006		close	co	ontrol
7	Port_007		close	co	ontrol
7	Port_007		close	c	ontrol

Access status of the KVM ports, three connection status:

- 1. Busy
- 2. Connect
- 3. Close
- "Connect" shows the target KVM is connected to the KVM port; users can access to the target anytime.
- "Close" shows that the KVM is not connected to the KIM adapter or the target server, or the target server is not boot up.
- "Busy" shows that port is access by local or remote users.

# Edit Port Name:

KVM User ma	-	Safety management Syster	n maintenance
lome > Port access > Port I	ist		
			Each page shows : 16
lumber Po	ort name	State	Port permission
3	Port_003 Click to edit the port	name <sub>connect</sub>	control
1 1	Port_001	close	control
2	Port_002	close	control
4 1	Port_004	close	control
5	Port_005	close	control
6	Port_006	close	control
7 F	Port_007	close	control

5.4 Video Control Interface Menu



cancel

- [ 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



comfirm

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

2. Setting Options

#### **Keyboard & Mouse Options**

When user has the authority

eyboard/mouse option <eyboard mouse="" send<="" th=""><th>Screen options Sh</th><th>ortcut options</th></eyboard>	Screen options Sh	ortcut options
🔽 Send the keybo	ard 🔽	Send the mouse
Mouse setting		
Single mouse cu	rsor	
Single mouse ESC	Alt+F10	•
Cursor types	Arrow	•
Mouse modes setting		
Auto	C Relative	C Absolute
Full screen		
Full screen zoom		
Save		Cancel

#### Keyboard/mouse sending setting

- Send 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 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 shortcuts and it changes into double mouse mode
- Cursor types: it can set remote user's mouse cursor type in double mouse mode

### Mouse Mode

• Relative and absolute modes, latest version only support absolute mode

#### Full Screen Setting

Full Screen Zoom: When unselected, the video window will spread the video screen full of the remote computer screen in the full screen state; when selected, if 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 below.

lenu			
eyboard/mouse option	s Screen o	ptions Short	cut options
Keyboard/mouse send	ing setting –		
☐ Send the keybo	ard	E s	iend the mouse
Mouse setting			
Single mouse cur	sor(Click the	e image <mark>are</mark> a to	take effect)
Single mouse ESC			
Single mouse ESC	Alt+F10		<b>•</b>
Cursor types	Arrow		
	Parrow		<u> </u>
Mouse modes setting -			
Relative		C Ab	solute
Full screen			
Full screen zoom			

#### **Display Option**

Display option dialogue shows screen parameters and screen information.

#### Screen 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: When automatic calibration canceled, users can customize 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: KXT III switch's IP address
- Refresh Rate: Video refresh rate
- Port number: Video port number

#### 8 Port /16 Port/24 Port/32 Port

- 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 needs to select the option by its own.

board/mouse o	options Screen option	ons Shortcut op	otions
ame parameter			
Automatic	calibration		
Contrast	191		_ <u>_</u>
Brightness	0		
Hue	246		}
Saturation	188		
rame informatio Resolution	800 x 600	IP	192.168.2.221
Refresh	60	Port	1
Manual cali	bration resolution		
	64 9 9	for Win10)	
Target serv	vers picture zooming(		
	vers picture zooming( arget 800 x 600	-	
		<u></u>	

#### **Keyboard Shortcuts**

Supports 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.

Ctrl+Alt+Del	Send
Win+L	Send
Alt+Tab	Send
	Send

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

~     1     2     3     4     5     6     7     8     9     0     -     =     Badapace     Insert     Home     PgLb     AunLod     /     •       Tab     Q     W     E     R     T     Y     U     I     0     P     []     1     V     Delete     End     PgDn     7     8     9       CapsLock     A     S     D     F     G     H     3     K     L     ;     *     Enter	ttl Win	Alt			<u> </u>			vin Menu Ctrl	^		•	_		Ente
~         1         2         3         4         5         6         7         8         9         0         -         =         Badapace         Insert         Home         PgLb         kum.do         /         *	Shift	Z	x c	l v l	BN	M		Shift			1	2	3	
v 1 2 3 4 5 6 7 8 9 0 ■ Badopace Insert Home PgUp kuntod / Tab Q W E R T Y U I O P [ ] \ Delete End PgOn 7 8 9	apsLock	A S	D	FG	н	K L		Enter			4	5	6	
	Tab Q	W	E R	Т	Y U	I O	P [	] /	Delete	End Pg	Dn 7	8	9	+
	- 1	2	3 4	5 6	7 8	9 0	0 -	Backspace	Insert	Home Pg	Jp iumLoci	1	•	-
x F1 F2 F3 F4 F5 F6 F7 F8 F9 F10 F11 F12	F1	F2	F3 F4	F5	F6 F	7 F8	F9 F10	F11 F12						



#### Send [send Ctrl+Alt+Del]

Keyboard Macro: click this button, the target server will receive shortcut key. Send Ctrl+Alt+Del. Bring up the task manager of target server (Windows operating system)

#### **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.



#### Single mouse

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

# Source video params

Reset					
Contrast	0			 	
Brightness	96	] —	—J—	 	

# Ø

#### **Optimum size**

The initialization 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.



The video window enter full screen mode

# 6. IP Menu Option

#### 6.1 User 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 cannot access to user management interface. The user in this section is who have the user management authority.

			User m	anagemen	t		
			Users list				
			User grou	p <mark>lis</mark> t			
			Modify pa	ssword			
User List				_	_		
	(S) KVM	User management	System Settings	Safety management	System maintenance	Help	
	Home > User	management > user list					
	Please enter t	he user name	find				
						Each page shows:	16
		admin	user state		user group		
		ems, 1 items in total	011		501 2120521		
					Ad	d delete	

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

Note: In this window, "\*" is required content

- 1. User name: user name can contains only low case letter, number and "\_"
- 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】

lease ent	er the user name	find	
			Each page shows: 16
	user name	user state	user group
	admin	On	SUPER_USER
	user1	Off	SUPER_USER
iows 1 to	items, 2 items in total		

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

# Edit user

### Click 【A1】, edit user window pop up

Home > U	ser management > us	er list		
Please ent	er the user name	find		
			Each page shows:	16
	user name	user state	user group	
	admin	Click to edit the user	SUPER_USER	
	user1	Off	SUPER_USER	
shows 1 to	2 items, 2 items in tota			
			Add delete	



#### User group list

Please enter th	ne user group name	find			
				Each page shows:	16
	group id		user group name		
	0		SUPER_USER		
	1		usergroup1		
hows 1 to 2 ite	ems, 2 items in total				

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
-------------	----------------------------------

UTQ10UD H	AR1001 =								
Province and	(e))							in closed	- rele
L. 140	Lancour	LJ . Marce marke	generat.		mga Li sa	foty management	La system		
post aut	warity							a should	Tarter
port			water and a						
member	port issue	port access	South and a	nedus					
	HORE DOLE	Accine (	144.000	~					
2	Purl_002	denine   W	decine	~~]					
				~					
-	Puit_004	decine [14]	decine	[~]					
*	MORT DON	- k (	abor from a	~					
6	PwiL.006	desire w	destro	~					
8	PAR. DOT	- 2 - 1	-2-2-1	*					
0	Purt_008	decline w	decline	~					
	PAR.009	starters [	sharbest.	~					
30	Purt 010	utautive (***	dealine	-					
1.1	POPLOS 1	alking Sectors 1	Anton	1991					
2.4	15mt 012	sheeling 😒	dentine	$\sim$					
12	Poet_015	charline [Set]	dectors	~ I					
2.0	Port 014	04000	duritten.	~					
15	Post_015	decine [9]	decline	(997)					
24	PORT USA	* A-* (D+** )	ches. Hear	~					
17	Port_017	diamona [we]	dactive	1					
2.64	110/E 11184	1 A 14 (Same - And	(Academa)	~					
19	Purl_019	decine [97]	decline	(~)					
		1 A - 1 That - 1		~					
21	Purk_031	destine [w]	destine	~					
22	POST. 1177		in a loss-						
22	Purt_023	decline w	decine	~					
24	PART_112-5	shadow w	shes have	~					
20	Purt_925	dectrie w	destrie	-					
261	POR_026	she have [99]	(destroy)	~ T					
27	Port 027	desfire w	dealfree	-					
24	Post_020	ekselterer 🔤	destions						
254	15/05 020	shesiftra 🛩	destine	4					
30	Port_030	darine [12]	dection	191					
-	Post 0.93	Adda The State	destruc	-					
33	Port_032	and no [97]	dectors	-					
(2 AB		harrad				) All use arrives	the decided		
O AR	protie for you	with the				D ARVINING	te road unity		
C2 .88	porte are con	treat control				AMANDA HU IN C	is read and write		

- 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】

Please enter the	user group name find	
		Each page shows: 16
	group id	user group name
	0	SUPER_USER
☑ 1	1	usergroup1
hows 1 to 2 item	s, 2 items in total	2

Note: SUPER\_USER is system allocated which cannot be deleted

#### Edit user group

Click **[1]** edit user group window pop up; for specific operation, please check "add user group"

Home > User	management > user group list		
Please enter	the user group name	find	
		Each page sh	nows: 16
	group id	user group name	
	0	SUPER_USER	
	1	usergroup1	
shows 1 to 2 it	ems, 2 items in total	Click to edit the user gr	oup
		Add	delete

#### 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"

# 6.2 System Settings

c				
System	Settings			
Network Se	ttings			
Date/time				
Encoding pa	arameters			

#### **Network Setting**

Nic set			
IPv4 address:			
192.168.0.16	3		
Subnet mask:			
255.255.255.0	)		
default gatewa	iy:		
192.168.1.1			
mac address:			
00:4a:b6:68:9	a:31		
DCSG Ip:			
192.168.1.10	)		
DCSG Port :			
5500			

#### 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
- DCSG IP: the IP address should be the same with the Authentication Server IP address
- DCSG Port: the Port should be the same with the Authentication Server Port.

# Date /Time Setting

۲	User setting time	
Set di	ate:	
2019	0-03-08	
Settin	g time:	
10:2	0	
0	Synchronize with the NTP server	
Time	server:	
۲	Time Zone Settings	
Select	t time zone:	
East	8 (Beijing, China)	

# 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

# **Encoding Parameters**

coding par	ameters
Encoding para	imeters
Video formats	: PAL
Stream type:	Main stream
Frame rate:	25
IP ratio:	25
Rate limit:	6MBPS V

# 6.3 Safety Management



#### Security Settings

curity Settings	
ogon restrictions	Login lock
Restrict single sign-on.	Disable lock
Enable password expiration D 50 (1~365day)	Account lock O Attempts 60
Cancellation free user $\Box$ 36 (1 ~ 60 minutes)	Timed lock O Attempts 60 Locking time 2 (1-14
	minutes)
Strong password	
Enable password strength rules	Encryption scheme
At least one lowercase letter.	Local information encryption mode. No encryption
At least one numeric character.	Encryption mode is applied to KVM and virtual media. $\hfill \square$
Jser password history depth. 3 Minimum/maximum password length. 1	Local device reset mode. Enable Local Fact
- 16	

#### 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 cannot 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**

- Local information encryption scheme: three encryption schemes and one un-encryption scheme
- Encryption scheme is applied to KVM as virtual media: applied when it is selected

#### Audit Log

naintype:	ali 🗸	subtypes all	~	date selection:         2019-03-09 00:00:00         to         2019-03-09 10:23:           search	29
				Each page shows:	16
number	date	maintype	subtype	description	
1	2019-03-09 08:00:07	operations	system boot	The user 'admin' 'system boot' on the host IP is '127.0.0.1'	
2	2019-03-09 08:00:11	view	get config.	The user 'admin' 'get config.' on the host IP is '192.168.0.168'	
3	2019-03-09 08:00:11	view	get config.	The user 'admin' 'get config.' on the host IP is '192.168.0.168'	
4	2019-03-09 08:00:11	view	get config.	The user 'admin' 'get config.' on the host IP is '192.168.0.168'	
5	2019-03-09 08:00:12	view	get config.	The user 'admin' 'get config.' on the host IP is '192.168.0.168'	
6	2019-03-09 08:00:12	view	get config.	The user 'admin' 'get config.' on the host IP is '192.168.0.168'	

# 6.4 System Maintenance



Provide system maintenance tools such as test tools, data backup and restart

#### **Backup & Restore**

Home	e > system maintenance > backup recovery
acku	p recovery
back	up configuration file
0	mfirm
reco	very
resto	ore backup recovery : recovery
facto	ory reset
fac	tory reset :restore factory Settings may take up to two minutes

- Backup: Backup current system settings
- Restore: Restore the last backup of system
- Factory Reset: Restore to factory state (KVM must be restarted to take effect)

#### **Ping Host**

ng the host	
IP address	
Ping	
ring	
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).

#### **Equipment Management**

Home > System n	naintenance > equipment man	agement
equipment manag	jement	
Reboot device		
Reboot mode :	Reboot device	

#### **Remote Upgrade**

Provide users with better upgrade experience and continuous technical support

	upload file	emote upgrade	
unload file	upload file	enioce upgraue	
upidau me		upload file	

#### Upgrade Method:

Click [ browse ] and select upgrade file, upload the file to the device, then Click [ upgrade ] to finish upgrade

# 7. Appendix

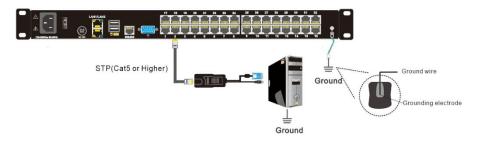
7.1 Specifications (17")

N	lodel	HT5708	HT5716	HT5724	HT5732	
Computer	Direct	8	16	24	32	
Connections	Мах	8	16	24	32	
Port Selection	Keyboard, Mouse	Button, UI, Web				
	Model	SXGA TFT				
	View Area	17 "				
	Optimum Resolution	1280×1024	4@60Hz			
LCD Monitor	Color	16.7 M (Ty	'n)			
	Brightness	250 cd/m <sup>2</sup>	(Тур)			
	Contrast Ratio	1000 : 1				
	Pixel Pitch(mm)	0.264(H) ×	0.264(W)			
Mouse	X/Y Resolution	>1000 poir	nts / inch,(	40 points/r	mm )	
wouse	Scroll Wheel	Supports S	croll Wheel	function		
Keyboard		99 keys (82	2 keyboard -	+ 17 number	pad)	
	Remote Control		rol (ActiveX)			
Remote	Management	Web				
Remote	Security	DES Encrypted				
Resolution		1920×1080@60Hz				
Power Input		100V- 240Vac , 50-60Hz , <1.5A				
Power Consumption		25W	27W	30W	30W	
Operating Temp	erature	0 - 40 °C				
Store Temperate	ure	-20 —60 °C				
Humidity		0~80% RH, non-condensing				
Net Weight		13kg	13kg	13.2kg	13.2kg	
Product Dimens	ion (W × D × H)	448mm × 5	581mm × 42	.5mm		
Package Dimens	ion (W × D × H)	765mm × 6	615mm × 18	5mm		

Γ	Model	HT5908	HT5916	HT5924	HT5932	
Computer	Direct	8	16	24	32	
Connections	Max	8	16	24	32	
Port Selection	Keyboard, Mouse	Button, UI, Web				
	Model	SXGA TFT				
	View Area	19 "				
	Optimum Resolution	1280×1024	4@60Hz			
LCD Monitor	Color	16.7 M				
	Brightness	250 cd/m <sup>2</sup>				
	Contrast Ratio	1000 : 1				
	Pixel Pitch(mm)	0.294(H) ×	0.294(W)			
	X/Y Resolution	>1000 poir	nts / inch, (4	0 points/mn	n)	
Mouse	Scroll Wheel	Supports S	croll Wheel	function		
Keyboard		99 keys (8	2 keyboard +	- 17 number	pad)	
Remote Control		KVM Cont	rol (ActiveX)			
Demote	Management	Web				
Remote	Security	DES Encrypted				
Resolution		1920×1080@60Hz				
Power Input		100V- 240Vac , 50-60Hz , <1.5A				
Power Consum	otion	27W	28W	33W	33W	
Operating Temp	perature	0 - 40 °C				
Store Temperat	ure	-20 —60 °C				
Humidity		0~80% RH, non-condensing				
Net Weight		13.4kg	13.4kg	13.8kg	13.8kg	
Product Dimens	sion (W × D × H)	448mm × 0	605mm × 42	.5mm		
Package Dimens	sion (W $\times$ D $\times$ H)	765mm × 0	615mm × 18	5mm		

#### 7.3 Grounding Requirements

Make sure the KVM and the devices that connected to KVM are all connected to the ground.

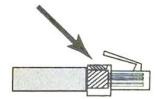


To improve the device safety, please make sure the device is connected to the ground and use the STP cable to connect the device.

The STP cable contains four shielded twisted pair and one ground wire, the ground wire should be welded into the RJ-45 connector.



Grounding the STP shield cable (as shown below) , and make sure the metal RJ45 connector is tight shield.



Connect one end of the RJ-45 connector to the ground RJ-45 connection socket.

