

Intelligent Micro Center Server

Deployment Manual



ZHEJIANG DAHUA VISION TECHNOLOGY CO., LTD. V1.0.0



Foreword

This manual introduces the deployment of the server (hereinafter referred to as "the Server"). Read carefully before using the device, and keep the manual safe for future reference.

Safety Instructions

The following signal words might appear in the manual.

Signal Words	Meaning
Anger	Indicates a high potential hazard which, if not avoided, will result in death or serious injury.
	Indicates a medium or low potential hazard which, if not avoided, could result in slight or moderate injury.
	Indicates a potential risk which, if not avoided, could result in property damage, data loss, reductions in performance, or unpredictable results.
© <u>∽∿</u> TIPS	Provides methods to help you solve a problem or save time.
	Provides additional information as a supplement to the text.

Revision History

Version	Revision Content	Release Time
V1.0.0	First release.	February 2023

Privacy Protection Notice

As the device user or data controller, you might collect the personal data of others such as their face, fingerprints, and car plate number. You need to be in compliance with your local privacy protection laws and regulations to protect the legitimate rights and interests of other people by implementing measures which include but are not limited: Providing clear and visible identification to inform people of the existence of the surveillance area and provide required contact information.

About the Manual

- The manual is for reference only. Slight differences might be found between the manual and the product.
- We are not liable for losses incurred due to operating the product in ways that are not in compliance with the manual.
- The manual will be updated according to the latest laws and regulations of related jurisdictions. For detailed information, see the paper user's manual, use our CD-ROM, scan the QR code or visit our official website. The manual is for reference only. Slight differences might be found between the electronic version and the paper version.
- All designs and software are subject to change without prior written notice. Product updates might result in some differences appearing between the actual product and the manual. Please contact customer service for the latest program and supplementary documentation.



- There might be errors in the print or deviations in the description of the functions, operations and technical data. If there is any doubt or dispute, we reserve the right of final explanation.
- Upgrade the reader software or try other mainstream reader software if the manual (in PDF format) cannot be opened.
- All trademarks, registered trademarks and company names in the manual are properties of their respective owners.
- Please visit our website, contact the supplier or customer service if any problems occur while using the device.
- If there is any uncertainty or controversy, we reserve the right of final explanation.



Important Safeguards and Warnings

This section introduces content covering the proper handling of the device, hazard prevention, and prevention of property damage. Read carefully before using the device, and comply with the guidelines when using it.

Transportation Requirements



Transport the server under allowed humidity and temperature conditions.

Storage Requirements



Store the server under allowed humidity and temperature conditions.

Installation Requirements

- Strictly comply with the local electrical safety code and standards. Make sure the ambient voltage is stable and meets the power supply requirements of the server.
- Do not expose the battery to environments with extremely low air pressure, or extremely high or low temperatures. Also, it is strictly prohibited for the battery to be exposed to extremely hot environments (such as direct sunlight or fire), and to cut or put mechanical pressure on the battery. This is to avoid the risk of fire and explosion.
- Use the standard power adapter. We will assume no responsibility for any problems caused by the use of a nonstandard power adapter.



- Do not place the device in a place exposed to sunlight or near heat sources.
- Keep the device away from dampness, dust, and soot.
- Put the device in a well-ventilated place, and do not block its ventilation.
- Install the switch horizontally on a stable surface to prevent it from falling.
- The device is a class I electrical appliance. Make sure that the power supply of the device is connected to a power socket with protective earthing.
- Use power cords that conform to your local requirements, and are rated specifications.
- Before connecting the power supply, make sure the input voltage matches the server power requirement.
- When installing the device, make sure that the power plug and appliance coupler can be easily reached to cut off power.
- Install the server in an area that only professionals can access.
- Extra protection is necessary for the device casing to reduce the transient voltage to the defined range.
- Install the device near a power socket for emergency disconnect.
- It is prohibited for non-professionals and unauthorized personnel to open the device casing.



Operation Requirements

- This is a class A product. In a domestic environment this may cause radio interference in which case you may be required to take adequate measures.
- The device is heavy and needs to be carried by several persons together to avoid personal injuries.

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- Make sure that the power supply is correct before use.
- Operate the device within the rated range of power input and output.
- Use the device under allowed humidity and temperature conditions.
- Do not drip or splash liquid onto the device, make sure that there is no object filled with liquid on the device to prevent liquid from flowing into it.
- Do not disassemble the device without professional instruction.
- Your configurations will be lost after performing a factory reset. Please be advised.
- Do not restart, shut down or disconnect the power to the device during an update.
- Make sure the update file is correct because an incorrect file can result in a device error occurring.
- The system cannot upgrade different types of AI modules at the same time.
- Do not frequently turn on/off the device. Otherwise, the product life might be shortened.
- Back up important data on a regular basis when using the device.
- Operating temperature: 10 °C to 35 °C (50 °F to 95 °F).

Maintenance Requirements

- Make sure you use the same model when replacing the battery to avoid fire or explosion. Dispose the battery strictly following the instructions.
- Power off the device before maintenance.

A

- Al module does not support hot plug. If you need to install or replace the Al module, unplug the device power cord first. Otherwise, it will lead to file damage on the Al module.
- The device casing provides protection for internal components. Use a screwdriver to loosen the screws before detaching the casing. Make sure to put the casing back on and secure it in its original place before powering on and using the device.
- Clean the ventilation pipe regularly to avoid obstructions.
- It is prohibited for non-professionals and unauthorized personnel to open the device casing.
- The appliance coupler is a disconnection device. Keep it at a convenient angle when using it. Before repairing or performing maintenance on the device, first disconnect the appliance coupler.



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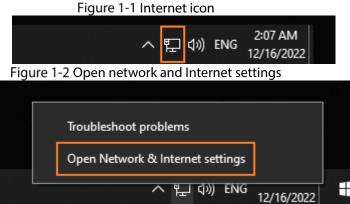


1 Initialization

For baseline server, you need to insert the permanent dongle to the USB port of the server and change the IP address with your laptop.

 \square

- Modification of the network configuration is based on the configuration that the network cable is connected to the first port of the left. If the device on site connects only 1 network cable, we recommend connect the first port of the left.
- If you want to reinstalling the system, you can skip this chapter, and for more information see"4 Reinstalling Server".
- <u>Step 1</u> Insert the permanent dongle to USB port of server.
- <u>Step 2</u> Connect the power supply and start up the server. Connect the laptop to the Ethernet port with network cable. We recommend you connect the network cable to the first port of the left side.
- <u>Step 3</u> Open the laptop, and then click the internet icon on the low right corner. Click **Open Network** & Internet settings".



<u>Step 4</u> On the **Open Network & Internet settings** page, click **Properties** of the online network connection.

Figure 1-3 View network status

Status		
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Advanced network settin Change adapter options View network adapters and cha Network and Sharing Center For the networks you connect to Network troubleshooter	gs nge convection settings, , decide what you want to share. ms,	

<u>Step 5</u> On the **Open Network & Internet Settings** page, click **Edit**.



Figure	1-4	Edit
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+ Settings

make this connection a metered	nd want more control over data usage. I network. Some apps might work when you're connected to this network
Set as metered connection	
Off Off	
If you set a data limit. Windows for you to help you stay under y	will set the metered connection setting our limit.
Set a data limit to help control o	lata usage on this network
IP settings	
IP assignment:	Manual
IPv4 address:	1004.805
IPv4 subnet prefix length:	18
IPv4 gateway:	TOTAL CONTRACT
Edit	
Properties	
Link speed (Receive/Transmit):	1000/1000 (Mbps)
Link-local IPv6 address:	A Direction of the second second second
IPv4 address:	21422
IPv4 DNS servers:	10.1.5.80 10.1.5.81
Manufacturer:	Intel
Description:	Intel(R) Ethernet Connection (2) 1219- LM
Driver version:	1.7.878.05

Step 6 In the pop-up window that appears, enable IPv4, and then change the IP address, Subnet prefix length and Gateway to 192.168.1.101, 24 and 192.168.1.1 respectively. Click Save. Figure 1-5 Edit IP settings

3	-
Edit IP settings	
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IPv4	
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IP address	- C
192.168.1.10 1	×
Subnet prefix length	
24	
Gateway 192.168.1.1	
Preferred DNS	
Alternate DNS	
IPv6	
3	
Save	Cancel

- Step 7 Open the Chrome browser, enter the active IP address of the server (http://192.168.1.113 obtained in <u>Step 5</u>) in the address bar, and then press the Enter.
- Step 8 Read the Software License Agreement and select I have read and agree to all the terms, and then click **Next**.



Figure 1-6 Initialization

Disclaimer	B Pleasent Settings
SOFTWARE LICENSE ACRESSENT	
Last addition Jun 16, 2021	
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I have read and agree to all the terms	

<u>Step 9</u> Configure and confirm the password, and then enter your email address, after that click **Complete**.

	Figure 1-7 Set password	
📑 Disclaime	· (Password Settings
Username	: admin	
Password	Password must be 8 to 32 characters, including at least two of the	Intensity : Medium
	lowing categories: numbers, uppercase letters, lowercase letters a special characters (Characters like " " ; : & cannot be included in).	
Confirm Password	Enter the password again.	\odot
Email Address	Used to reset the password.	
	Complete	

<u>Step 10</u> Enter username and password, and then click **Login**. Figure 1-8 Log in to the page







Step 11 On home page, select System Config > Network Config > TCP/IP, and then click corresponding to the active NIC card.

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IP 109/P	# NIC 2	Standard NIC	No	192.158.1.112	2121212	NUMBER OF STREET, ST	10M/100M/1000M self-adaptive	g
Port	# NC3	Standard NIC	No	192.158.1.110	40,00,004	MACRIMITAL	10M/100M/1000M self-adaptive	E
• Port	@ NC4	Standard NIC	No	192.168.1.929	21212121	101000000	10M/100M/1000M self-asaptive	53
System Update on	DHCP Sta	tic						
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<u>Step 12</u> Configure the IP address, subnet mask and gateway according to your actual needs, and then click **OK**.

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d RodeFvi	= NIC-4	Mode	DHCP 💽 Static	0	1/100M/1000MI self-adaptive	E.
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(agal into						
	Default Card					
	MC.					

<u>Step 13</u> Change the default NIC card to the active NIC card, of which the IP address has been edited before (If there are multiple active NIC cards, you can select any of the online NIC cards), and then click **OK**. Enter the login password and then click **OK** to save TCP/IP the configuration.



Figure 1-12 Password verification



Step 14 After completing the NIC configuration, open the Chrome browser, and then enter the IP address (http:// server IP) in the address bar to enter Intelligent Micro Center.



Step 15 Enter the username and password to log in to the Intelligent Micro Center webpage, and then click System Config.



Figure 1-14 System config

Step 16 Select System Config > Version. If the Intelligent Algorithm License displays Normal, it means the authorization has taken effect. For follow up operations, see "2 Service Status Verification".



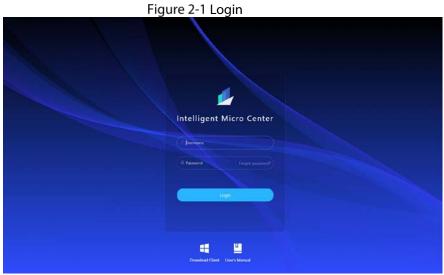
Figure 1-15 Authorization verification

🛃 Intelligent Micr	o Center 🎰 System Config	
🔁 Time	Version	
Account.	2	
Network Config *	Intelligent Algorithm license	
C License Config		
(8) Easic	Device Type IVS-MC8000-E	
CA Certificate	System Version	
🕈 System Update a	1.081.0000000.0.8, 5uild Cate/2022-12-02 17:54:07	
Log	Security Exercise Version V2.3	
⊕ Legal Info	@Copyright 2022. all rights reserved.	



2 Service Status Verification

<u>Step 1</u> Open the Chrome, and then enter http:// *server IP* in the address bar, and then press Enter. Enter the admin and its responding password to log in.

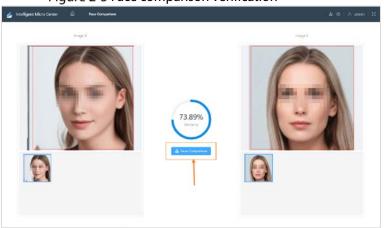


<u>Step 2</u> On home page, click **Face Comparison**.

Figure 2-2 Face comparison

<u>Step 3</u> On Face Comparison page, upload 2 face images and then click Face Comparison, if the similarity results are displayed, it means that the server is working normally. Figure 2-3 Face comparison verification

Service Confi

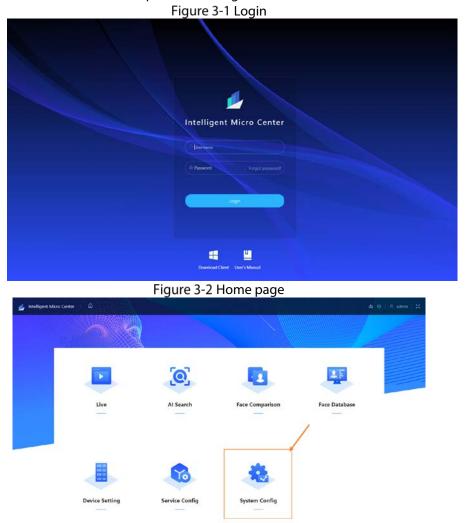




3 (Optional) Program Update Guide

Intelligent Micro Center supports two update methods: web update and background update. You need to prepare the installation package before update. the file name varies with version and release date.

<u>Step 1</u> Open the Chrome browser. Enter the http://Server IP in the address bar and then press Enter. Enter the username and password to login.



<u>Step 2</u> Select **Systme Config > System update and installation > Update**, and then click **Select** to select the update file you need.



Figure 3-3 Select update file

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& Account	
Network Config Import Update File Select Databa	
@ License Config	
@ Exic	
CA CA Certificate	
1 System Update an.	
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O Version	
윤 Legai Info	

Step 3 Click Upload.

Figure 3-4 Upload update package

🧾 Intelligent Micro Ce	nter 🇀 System Config	
🔁 Time	Update System Installation	
& Account		
🛛 Network Config 👻	Import Update File: General_JVS-MC8000-E-TU1_Eng_Base-MI Select Upload	
License Config	- Andrewson -	
8 Sasic		
A CA Certificate		
System Update an		
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D Version		
Legal Info		

<u>Step 4</u> Enter the password, and then click **OK**. Click **OK** in the pop-up window to confirm update. When the process is 100%, the system will upload update file. The system will update automatically.

Figure 3-5 Confirm password

Time Update System Installation Please enter password. X & Account Import Opdate, File: General,VS MC2000 E Tut. Plasmord X © Locense Coding Import Opdate, File: General,VS MC2000 E Tut. Plasmord X	🕍 Intelligent Micro Ce	nter 🛆 System Config	₫ 0 A admin 🛠
Ener Logarinte Logari	Time Account Fetersork Config Fetersork Config Feter Econfig Resir CA Centificate f system Update an. Log O Verson	Update System Installation Please enter password.	



Figure 3-6 Confirm update

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Figure 3-7 Upload update file

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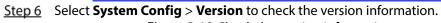
Figure 3-8 System update

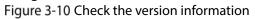
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Litaria Confg		
Inc		
CA Certificate		
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Version	Reduces couldate or program. Then an event log and of Web or provide all	
Legal left:		

<u>Step 5</u> After update, the system will restart and enter the login page automatically. Enter the username and password to login.









Time	Version	
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Network Config . *	1 - O Norral	
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CA Contificants	System Wraten	
System Update an		
Log	Society Baseline Version VQ3	
Legal Info	@Copyrg/# 2022. #Ingots renewed.	



4 Reinstalling Server

4.1 Before Deployment

Before deployment, you need to connect the server to the switch. If the device only connects 1 data cable, we recommend you connect the network cable to the first network port of the left. Meanwhile, prepare the devices needed and download packages from GDP.

4.1.1 Preparing Installation Package

Before deployment, you need to download the following packages from GDP.

- CentOS7.4 system one-click deployment mirror package CentOS-7-aarch64-Minimal-1708-Custom-v10-Base-221219.iso.
 GDP material No.: see the Release Notes.
 System disk: 1 USB flash drive (16 GB or above, 32 GB recommended).
- Basic Package
 File name:
 General IVS-Centos-7

- - GDP material No: see the Release Notes.
- Micro center program package File name: General_IVS-MC8000-E-TU1_Eng_Base-MD5-****_V1.***.**************.**.*.*.R.******.tar.gz GDP material No.: see the Release Notes.

 \square

Installation package name varies according to version and release date.

4.1.2 Configuration Requirements

Table 4-1 Configuration requirements

Parameter	Description
Operating System	CentOS 7.4
Kernel Version	4.18.0-147.8.1.el7.aarch64
CPU	FT-D2000
Intelligent Analysis Card	AIX3200

4.2 Installing CentOS System

Prepare a USB flash drive to install the CentOS system to the server.

4.2.1 Preparing the USB Flash Drive

Prerequisites

- Prepare 1 USB flash drive (8 GB or larger size, 16 GB recommended).
- Prepare 1 computer or laptop and the UltraISO tool has been installed in advanced.
- Prepare Centos7.4 system mirroring package.



If the server has installed CentOS 7.4 system, you can skip this chapter.

Procedure



- <u>Step 1</u> Double-click to open UltralSO tool.
- <u>Step 2</u> Select **File** > **Open**, select the CentOS 7.4 installation package, and then click **Open**. Figure 4-1 Open file

		Figure	e 4- i Ope	en file				
🌍 VItraISO (Trial Versio	n)							_0
File Actions Bootable Too	ols Options He	lp						
New	► 51	1 3	i) 🕜 🕞	Total Size: 0KB	0	% of CD 650	MB (- 650MB)	
👌 Open	Ctrl+0	• 🖬 🔞 🌣						
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🕭 Open CD/DVD	nné	e		5	ize Type	Da	ste/Time	LBA
🚽 Save	Ctrl+S							
🕼 Save As								
Simulated Save								
Create Checksums								
Verify Checksums								
Open Project File	Ctrl+Alt+0							
Save Project File As	Ctrl+Alt+S							
Import IML								
Compile IML to ISO								
Properties								
Exit								
Ch. TX14								

<u>Step 3</u> Select **Bootable** > **Write Disk Image**. Figure 4-2 Write disk image (1)

	Bootable Tools Opt	ions Help				
🗋 🖻 • 🚳	🎲 Make Floppy Image		Total Size: 888MB	19% of	DVD 4.7GB (- 3587MB)	
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E data	🌏 Write Disk Image.		14 KB	Folder	2022-08-31 09:44	61
🗄 🦲 EFI	Patront Post Sent	or from Floppy/HDD drive	5.155 KB	Folder	2022-08-31 09:44	22
🗄 🦲 images	Extract Boot File		45,610 KB	Folder	2022-04-19 11:54	65
- 🛅 isolinux	Extract Doot File	Tron CD/DVD		Folder	2022-08-31 09:44	67
LiveOS	🏠 Load Boot File		571,464 KB	Folder	2022-04-19 11:54	25
Package			278,429 KB	Folder	2022-04-19 11:54	26
- in repodata	Clear Boot Inform	ation	1,947 KB	Folder	2022-04-19 11:54	68
- <u>(</u> BOOT)			5,418 KB	Folder	2022-08-31 09:44	60
	✓ Generate Bootinfo	table	35	discinfo File	2017-09-08 00:25	433281
	🕙 Make Multi-Boot C	D/DVD	303	treeinfo File	2017-09-08 00:33	433282
		🖬 boot.catalog	2,048	catalog File	2022-08-31 09:44	112
		🖬 EULA	215	File	2020-03-10 16:06	5403
		🖬 GPL	18 KB	File	2020-03-10 16:06	5404
		BPI	1,690	File	2020-03-10 16:07	430570
		BPI	1,065	File	2020-03-10 16:07	430571
Local:		♪ ▷ × □ २ २ Flename If grub.cfg	Path: [C:\Users\dahua\Docume	n ks\MyISOFiles Size Type 4 KB cfgFile		s/Time 2:05:10 15:3

<u>Step 4</u> Configure **Disk Drive** and **Write Method**, and then click **Format**.

Formatting will clear all the data in HDD. Be careful.

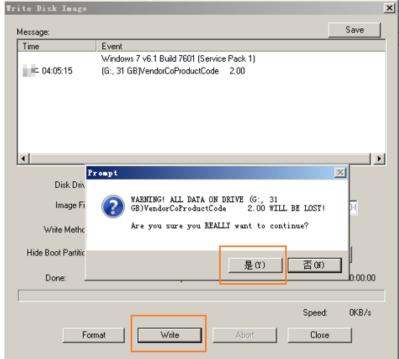


Figure 4-3 Write disk image (2)

lessage:		Save
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1		
L[
Disk Drive:	(G:, 31 GBIVendorCoProductCode 2.00 ▼ Ver	nify
	[G:, 31 GB)VendorCoProductCode 2.00 VendorCoProductCode D:\wlz\MC8000_Yijianbushu\CentOS-7-aarch64-Minimal-1708-C	
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	D:\xlz\MC8000_Yijianbushu\CentOS-7-aarch64-Minimal-1708-C	
Image File:	D:\xlz\MC8000_Yijianbushu\CentOS-7-aarch64-Minimal-1708-C	ustom-v10-l
Image File: Write Method: Hide Boot Partition:	D:\xlz\MC8000_Yijianbushu\CentOS-7-aarch64-Minimal-1708-C USB-HDD+ None Xpress	ustom-v10-l
Image File: Write Method:	D:\xlz\MC8000_Yijianbushu\CentOS-7-aarch64-Minimal-1708-C	ustom-v10-l
Image File: Write Method: Hide Boot Partition:	D: \xl2\MC8000_Yijianbushu\CentOS-7-aarch64-Minimal-1708-C USB-HDD+ None Xpress 0% Elapsed: 00:00:00 Rema	ustom-v10-l Boot
Image File: Write Method: Hide Boot Partition:	D:\xlz\MC8000_Yijianbushu\CentOS-7-aarch64-Minimal-1708-C USB-HDD+ None Xpress	ustom-v10-l Boot

Step 5 Click Write.

Figure 4-4 Write (1)



<u>Step 6</u> In the pop-up window, click **OK**.

The system starts writing data, and the progress bar is displayed.





Figure 4-5 Writing (2)

	te Disk Image					
04:08:02 Preparing data 04:08:02 Write Method: USB-HDD+ 04:08:02 C/H/S: 3824/255/53 04:08:02 Boot Sector: Unknown 04:08:02 Boot Sector: Unknown 04:08:02 Write Method: USB disk created from ISO image may not boot properly! 04:08:02 Preparing media 04:08:02 Number of blocks in ISO image is 1880400 04:08:02 Number of blocks in ISO image is 1880400 04:08:02 Start Writing Disk Drive: [G:, 31 GB]/vendorCoProductCode 2.00 Vilte Method: USB-HDD+ Write Method: USB-HDD+ Hide Boot Partition: None Done: 0.90% Elapsed: 00:00:03 Remain: 00:005:3	fessage:					Save
04:08:02 Write Method: USB-HDD+ 04:08:02 C/H/S: 3824/255/63 04:08:02 Boot Sector: Unknown 04:08:02 WARNINGI USB disk created from ISO image may not boot properly! 04:08:02 Preparing media 04:08:02 Number of blocks in ISO image is 1880400 04:08:02 Start Writing 04:08:02 Start Writing Vinte Method: USB-HDD+ Disk Drive: [G:: 31 GB]/vendorCoProductCode 2:00 Vinte Method: USB-HDD+ Hide Boot Partition: None Done: 0.90% Elapsed: 00:00:03 Remain: 00:005:3	Time	Event				[
04:08:02 C/H/S: 3824/255/63 04:08:02 Boot Sector: Unknown 04:08:02 WARNING! USB disk created from ISO image may not boot properly! 04:08:02 WARNING! USB disk created from ISO image may not boot properly! 04:08:02 Preparing media 04:08:02 Number of blocks in ISO image is 1880400 04:08:02 Start Writing 04:08:02 Start Writing Disk Drive: [G:, 31 GB]/endorCoProductCode 2.00 ✓ Disk Drive: [G:, 31 GB]/endorCoProductCode 2.00 ✓ Virite Method: USB-HDD+ ✓ Hide Boot Paritition: None ✓ Done: 0.90% Elapsed: 00:00:03 Remain: 00:05:3	04:08:02	Preparing da	ata			
04:08:02 Boot Sector: Unknown 04:08:02 WARNING! USB disk created from ISO image may not boot properly! 04:08:02 Preparing media 04:08:02 Number of blocks in ISO image is 1880400 04:08:02 Start Writing Disk Drive: [G:, 31 GB]/endorCoProductCode 2.00 ▼ Disk Drive: [G:, 31 GB]/endorCoProductCode 2.00 ▼ Write Method: USB-HDD+ ▼ Hide Boot Partition: None × Done: 0.90% Elapsed: 00:00:03 Remain: 00:05:3	04:08:02	Write Metho	d: USB-HDD+			
04:08:02 WARNINGI USB disk created from ISD image may not boot properly! 04:08:02 Preparing media 04:08:02 Number of blocks in ISD image is 1880400 04:08:02 Start Writing Disk Drive: [G:, 31 GB]/endorCoProductCode 2:00 Image File: D:\startWriting Write Method: USB-HDD+ Hide Boot Partition: None Done: 0.90% Elapsed: 00:00:03 Remain: 00:05:3	04:08:02	C/H/S: 382	4/255/63			
04:08:02 Preparing media 04:08:02 Number of blocks in ISD image is 1880400 04:08:02 Start Writing Disk Drive: [G:, 31 GB]/VendorCoProductCode 2:00 Image File: D:\klz\MC8000_Yijanbushu\Cent0S:7-aarch64-Minimal-1708-Custom-v10-I Write Method: USB-HDD+ Hide Boot Partition: None Done: 0.90% Elapsed: 00:00:03 Remain: 00:05:3	04:08:02	Boot Sector	Unknown			
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O4:08:02 Start Writing Disk Drive: [G:, 31 GB]VendorCoProductCode 2.00 Verify Image File: D:\xlz\MC8000_Yijanbushu\Cent0S-7-aarch64-Minimal-1708-Custom-v10-I Write Method: USB-HDD+ Hide Boot Partition: None None None Elapsed: 00:00:03 Remain: 00:05:3	04:08:02					
Disk Drive: [G:, 31 GB]/VendorCoProductCode 2.00 Image File: Verify Image File: D:\xlz\MC8000_Yijianbushu\Cent0S-7-aarch64-Minimal-1708-Custom-v104 Write Method: USB-HDD+ Image File: Xpress Boot Hide Boot Partition: None Xpress Boot 00:00:03 Remain: 00:05:3	04:08:02	Number of b	locks in ISO image	is 1880400		
Image File: D-txtz/MC8000_Yijanbushu/Cent0S-7-aarch64-Minimal-1708-Custom-v10- Write Method: USB-HDD+ V Hide Boot Partition: None V Xpress Boot Done: 0.90% Elapsed: 00:00:03 Remain: 00:05:3	04:08:02	Start Writing)			1
Image File: D-txtz/MC8000_Yijanbushu/Cent0S-7-aarch64-Minimal-1708-Custom-v10- Write Method: USB-HDD+ V Hide Boot Partition: None V Xpress Boot Done: 0.90% Elapsed: 00:00:03 Remain: 00:05:3	•					
Write Method: USB-HDD+ V Hide Boot Partition: None V Done: 0.90% Elapsed: 00:00:03 Remain: 00:05:3						
Hide Boot Partition: None	Image File	D:\xlz\MC80	00_Yijianbushu\Ce	entOS-7-aarch64-	Minimal-1708-Custon	n-v10-l
Done: 0.90% Elapsed: 00:00:03 Remain: 00:05:3	Write Method	USB-HDD+	T			
	Hide Boot Partition	None	Ψ.		Xpress Boot	
Speed: 2.82MB	Done:	0.90%	Elapsed:	00:00:03	Remain:	00:05:30
					Speed:	2.82MB/s
Format Write Abort Close	Er	rmat	Write 1	Abort	Ciose	1

<u>Step 7</u> After you successfully burn the USB flash drive, click **Close**. Figure 4-6 Burn successfully

Trite Disk Image		×
Message:		Save
Time	Event	^
04:08:02	Preparing media	
04:08:02	Number of blocks in ISO image is 1880400	
04:08:02	Start Writing	
04:10:53	Finished Writing	
04:10:53	Start Verifying	
04:11:40	Verify successful	
04:11:40	Synchronizing Cache	
04:11:43	Burn successful!	-
•		
	(G:, 31 GB/VendorCoProductCode 2.00 Verify D:\xlz\MC8000_Yijanbushu/\CentOS-7-aarch64-Minimal-1708-Custo	
Write Method:	USB-HDD+	
Hide Boot Partition:	None Xpress Bo	ot
Done: 10	0.00% Elapsed: 00:00:47 Remain:	00:00:00
I	Speed:	20.00MB/s
For	nat Write Abort Close	

<u>Step 8</u> Enter the USB flash drive root directory, and then click it to enter the data directory.



Figure 4-7 Root directory

animoa	(0.)			
CENTOS	(G:)			
] [воо	T]			
	-			
📗 data	1			
] EFI				
] imag	es			
칠 isol	inux			
] Ki ck	Start			
] Live	0S			
] mtd				
] Pack	ages			
] repo	data			
📄 . di s	cinfo			
📄. tre	einfo			
📄 boot	.catalog			
📄 EVLA				
GPL GPL				
RPM-	GPG-KEY-CentOS-7			
RPM-	GPG-KEY-CentOS-7-aar	rch64		

Step 9 Click **DHI-IVS-MC8000-E** to enter the directory. Figure 4-8 Data

- CENTOS (G:) - data	1		× □ -
	·		
Name	Date modified	Туре	2
DHI-IVS-MC8000-E-TV1	2022/12/7 19:10	File	

<u>Step 10</u> Click **Atlas** to enter the directory.

Figure 4-9 DHI-IVS-MC8000-E-TU1

				. 🗆 🗵
CENTOS (G:) + data + DHI-IVS-MC8000-E-TU1 +	▼ 5			2
. •			= -	0
Name	Date modified	Туре	Size	
\mu AIX-AIC	2022/12/7 19:10	File		
Anole	2022/12/7 19:10	File		
🍌 Atlas				

<u>Step 11</u> Save the basic package, driver package, patch package, and installation package to F:\data\Atlas.



ENTOS (G:) + data + DHI-IVS-MC8000-E-TU1		• 🔛		
			8=	- 🔲 🤇
ame 🔺	Date modified	Туре	Size	
deploy. conf	2022/12/15 11:07	CONF	1 KB	
🚳 deploy. sh	2022/12/15 11:07	Shell Script	5 KB	
🚾 General_I	2022/12/17 0:56	WinRAR	1, 534, 14	
🚾 General_I - Base	2022/12/17 0:57	WinRAR	446,493 KB	
🚾 General_I 🛛 🗰 🖬 🖉 🛄 🛄 Base	2022/12/17 1:08	WinRAR	2, 100, 28	
💼 web. txt	2022/12/15 11:07	Txt	1 KB	

Figure 4-10 Save installation packages

4.2.2 Selecting USB Flash Drive

Connect the display and keyboard to the Server, and then insert USB drive to boot up. <u>Step 1</u> When the logo is displayed, press Delete to enter **BIOS Setup Utility** page. Figure 4-11 Logo



<u>Step 2</u> Enter the **Exit** page, and then select the USB flash drive you insert before. Press Enter to boot installation system.



		Help Message
Save and Exit Load Setup Defaul Shutdown System Reboot System	5	Pressing Enter key to load the selected boot item.
Boot Override		
CentIS (SATI) 6: 57: S1280/TD5521 S174 2: 51400/MW S1280/TD5521 S128	55-200197 00-282100 1er 3-0 40600 30000	
Help		nge Value 19 Setup Defaults ect+Sub-Menn 100 Save 8 Exit

Figure 4-12 Select the USB flash drive

Operations might differ depending on different servers.

4.2.3 Selecting Operating System

 \square

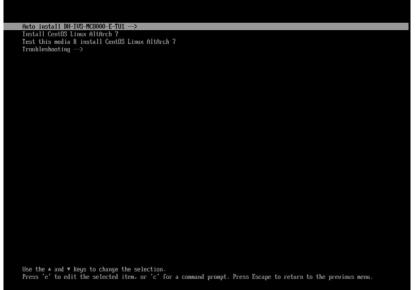
<u>Step 1</u> Select **Auto install CentOS Linux AltArch 7 Base** and then press Enter to select product type. Figure 4-13 Auto installation.

<pre>Ruto install CentfiS Linux Altfirch 7 Base →></pre>		
Press 'e' to edit the selected item, or 'c' for a command prompt.	Auto install CentOS	Linux AltArch 7 Base>
Press 'e' to edit the selected item, or 'c' for a command prompt.		
Press 'e' to edit the selected item, or 'c' for a command prompt.		
Press 'e' to edit the selected item, or 'c' for a command prompt.		
Press 'e' to edit the selected item, or 'c' for a command prompt.		
Press 'e' to edit the selected item, or 'c' for a command prompt.		
Press 'e' to edit the selected item, or 'c' for a command prompt.		
Press 'e' to edit the selected item, or 'c' for a command prompt.		
Press 'e' to edit the selected item, or 'c' for a command prompt.		
Press 'e' to edit the selected item, or 'c' for a command prompt.		
Press 'e' to edit the selected item, or 'c' for a command prompt.		
Press 'e' to edit the selected item, or 'c' for a command prompt.		
Press 'e' to edit the selected item, or 'c' for a command prompt.		
Press 'e' to edit the selected item, or 'c' for a command prompt.		
Press 'e' to edit the selected item, or 'c' for a command prompt.		
Press 'e' to edit the selected item, or 'c' for a command prompt.		
Press 'e' to edit the selected item, or 'c' for a command prompt.		
Press 'e' to edit the selected item, or 'c' for a command prompt.		
Press 'e' to edit the selected item, or 'c' for a command prompt.		
Press 'e' to edit the selected item, or 'c' for a command prompt.		
Press 'e' to edit the selected item, or 'c' for a command prompt.		
Press 'e' to edit the selected item, or 'c' for a command prompt.		
Press 'e' to edit the selected item, or 'c' for a command prompt.	Use the 🔺 and 🔻 key	s to change the selection.
	Press 'e' to edit t	he selected item, or 'c' for a command prompt.
The selected entry will be started automatically in 59s.	The selected entry will	i de started automatically in 555.

<u>Step 2</u> Select **Auto install DHI-IVS-MC8000-E-TU1**, and then press Enter to select installation type.



Figure 4-14 Select product model



<u>Step 3</u> Select **Install CentOS Linux AltArch 7 Base -E**, and then press Enter to install. Figure 4-15 Select install type

Install CentOS Linux AltArch 7
Install CentOS Linux AltArch 7 Base -E Install CentOS Linux AltArch 7 Base Anole
Install CentUS Linux Hithrch 7 Base AIX-AIC
Use the \blacktriangle and \blacksquare keys to change the selection.
Press 'e' to edit the selected item, or 'c' for a command prompt. Press Escape to return to the previous menu.
reases a contraction services of a reasoning prompt reasoning to reach to the provide ment.
 <u>ъ</u>

The installation process takes about 70 minutes and the system will automatically restart twice.

4.2.4 Installation Process Checking

Check whether the system has been installed.

- <u>Step 1</u> Use Xshell to remotely log in to the server.
- <u>Step 2</u> Run **cat /successfully.log** command to check the output. If **ALL install is complete!** appears, it means the installation has been completed.



Figure 4-16 Installation process check [root@rabbitmq1 admin]# [root@rabbitmq1 admin]# [root@rabbitmq1 admin]# cat /successfully.log 2022120308 : ALL install is complete! [root@rabbitmq1 admin]# [root@rabbitmq1 admin]#

After installation, see "1 Initialization" for follow up operations.



5 Applying for Encryption

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- For baseline server, you need to insert the permanent dongle to the USB port.
- MC8000 supports two encryption methods: hardware-based encryption and software-based encryption.

5.1 Software-based Encryption

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<u>Step 1</u> Open the Chrome browser, enter the real IP address of the server (http://192.168.1.108), and then press the Enter. Enter the username and password, and then click **Login**.



<u>Step 2</u> Select **System Config** > **License Config**, and then select **Soft Encryption** as the license encryption type. Click **Export** to export device information files to local computer.

💋 Intelligent Mero Center 🏠 System Coeffig	
tomes Comp the port License File the set toesse tecryston type too fraction toporn License toporn License toporn License	
D Vesion @ logal.hdu	

The format of the file is xxxxx_server.dat, and the actual format depending on actual files. Step 3 Apply for software-based encryption on Dahua portal.

1) In the portal menu navigation bar, enter 加密 (encryption), select 根据导出设备信息 包申请软 License 或加密狗 License (中心智能设备) (apply for a software license or dongle license (central intelligence device) based on the exported device information package).



Figure 5-3 Figure 5-2 Search for encryption

哀单搜索	>
加密 encryption 搜索	
▶ 业务导航/研发中心/开发验证/产品加密接权	^
安全芯片授权(先进技术研究院专用)	
▶ 业务导航/研发中心/开发验证/产品加密援权/嵌入式设备	
根据导出的设备信息包申请License 根据设备S/N号申请License	
为整机料号申请License配置(嵌入式设备)_研发项目经理使用	
▶ 业务导航/研发中心/开发验证/产品加密接权/通用类设备	=
根据导出设备信息包申请软License或加密狗License(通用设备)	
为整机料号申请License配置(通用类设备)_研发项目经理使用 apply for a softw	are licen
▶ 业务导航/研发中心/开发验证/产品加密授权/中心智能类设备intelligence devi	e (central
home intelligence devi 为中心智能云授权全申请License on the exported	
为整机料号申请License配置(中心智能类设备)_研发项目经理使用 information pack	
根据导出设备信息包申请软License或加密询License(中心智能设备)	
▶ 业务导航/研发中心/开发验证/产品加密接权/全球生产与维修支撑系统	
为工厂配置工单 为维修站点申请账号	

2) Click 新增 (**add**) to add a software-based encryption application. Figure 5-4 Add application

		inguic b i	, .aa ap	pheadon			
🔓 新 増 🛛 🖄 🧌	き改 🙁 删除	1. 导出					
				4444 1	1=14-12		
单据编号				制单人	请选择		•
审核状态	请选择				查询	清除条件	

3) Enter the application information.

If you apply for permanent encryption, enter the project name, business opportunity No., and corresponding technical support in the reason field, and then attach the contract. Figure 5-5 Enter the software-based information application

	成思想的License提权(提权使用的同++ 的设备研磨License提权(但可考试权限) 完中请License(元订单所称项目)					
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HE09						
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and and a set				BA		
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ENG AN				All calls		
	26863c1665bc98c73a74a7625315ac			Contract of Local Contract		
	101 18 10496			NORD 27-1-0284	の智能振怒編CH IVS MC8000 E TU1	
				INTER ON-DIS-MOR		
ADDE DU	NS MC8000 E-TU1			Long Linear Control MCB		
HEREFLYTH IT						
NAMES .	-			10×0+5		
AND REAL PROPERTY.				#P/0#9		
Laborer SALES			8	BLORES GPUTO E E274	1.0000	N B
CRUATS				8:194 GRU(40:00)#	1.99999	52 DA
			-	choxactions/4	6	5
100101-1-12			Ŷ			
854 8559 8269						
854 94299 94299 04999000 17 17 18 18 18 18 18 18 18 18 18 18 18 18 18	eritte 200月日本の社員 Robel Analyses (Cake 2007) (Creater F.1	War-3200", "mansbert", "1") 3," Globa Fiel	irleval":("als5920"))	'model" "No 5520", 'nember	1997) 1997	
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854 86.09 86.198 66.198 10.198	enizozz/元年紀enizitii Robal-Analyse', ("aki/2000")("model", " RATD (2)	 Ucence型/設計報告表 	۸ الطار الطار	8044 2018/05 2028/09 2028/09 2028/04		
B 54 BLOG BASE BLOG	enizozz/元年紀enizitii Robal-Analyse', ("aki/2000")("model", " RATD (2)	 Ucence型/設計報告表 	۸ ۸ ۸ ۱۹۹۹	#346 2015 1920年15 1920 1920 1920 1920 1920 1920 1920 1920		
854 86.09 86.198 66.198 10.198	enizozz/元年紀enizitii Robal-Analyse', ("aki/2000")("model", " RATD (2)	 Ucence型/設計報告表 	۸ ۸ الله ۱۹۹۹ کی ۱۹۹۹ کی	8044 2018/05 2028/09 2028/09 2028/04		



	Table 5-1 Parameter description
Parameter	Description
Туре	 Select the application type. Supports dongle and software license. For hardware-based encryption, select 加密狗 (dongle). For software-based encryption, select 软 License (software License).
Material No.	Click the text box, and then enter the material No. of the server.
Algorithm Database Usage Days	Select 永久有效 (permanently effective).
Algorithm Database Config	Select face recognition(5), Face attributes recognition(19), face detection(4), video quality diagnostics(2079) and video metadata(21) and vehicle big data(23).
Description of reason for application	Enter the application reason.

Server Name and Model	Material No.
Domestic Dahua Micro Center Intelligent ServerDHI-IVS-MC8000-E- TU1	1.0.01.18.10729
Domestic Dahua Micro Center Intelligent Server DHI-IVS-MC8000-2E- TU1	1.0.01.18.10730
4) Click Save on the upper Left Corner, and then click Submit .	

- Click **Save** on the upper Left Corner, and then click **Submit**. After the process is approved, you will receive an email from the portal. Click the link in the email to download the software-based encryption certificate. Click a zip file named after the application date.
- <u>Step 4</u> Go back to **Micro Intelligent Center** page, and then click **License Config** on the **System Config** page. Select **Hard Encryption** as the license encryption type. Click **Upload** to import software-based encryption license to the system.

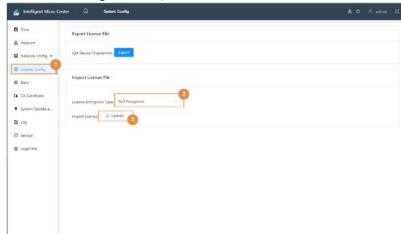


Figure 5-6 Upload soft license.

<u>Step 5</u> After importing license, wait for 5 minutes, and then view version. If the **Intelligent Algorithm License** displays **Normal**, the authorization has taken effect. For follow up operations, see"2 Service Status Verification".



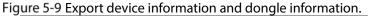
Fig	jure 5-7 Authorization verif	ication
🛃 Intelligent Micro C	anter 🖸 Synteen Condig	& 0 A string 12
They Annum An	Version Definition Adjustition Earnel	

5.2 Hardware-based Encryption

- <u>Step 1</u> Insert the dongle to the USB port
- <u>Step 2</u> Open the Chrome browser, enter the real IP address of the server (http://192.168.1.108), and then press the Enter. Enter the username and password, and then click **Login**. Figure 5-8 Login

Intelligent Micro Center
Logs
Downland Clerk User's Manual

<u>Step 3</u> Select System Config > License Config, and then set License Encryption Type as Hard Encryption. Click Export to export device information and dongle information to local computer.



🏄 Intelligent Micro Ce	nter 🙆 System Config	
C Ine	Siport License File	
💩 Account	Set Deske Fregerprints	
O Dizvec Config	Import License File	
(& CA Cetificate † System Update a D Log	Lawne Encycles Type Frank Skyption	
⊙ Winten ⊕ Legal Inte		



\square

The name of device information file is "xxxxx_server.dat" and the name of the dongle information file is "xxxxx_dog.dat".

- <u>Step 4</u> Apply for software-based encryption on Dahua portal.
 - 1) In the portal menu navigation bar, enter 加密 (encryption), select 根据导出设备信息 包申请软 License 或加密狗 License (中心智能设备) (apply for a software license or dongle license (central intelligence device) based on the exported device information package).

菜单搜索	
加密	數案
▶ 业务导航/研发中心/开发验证/产品加密授权	
安全芯片授权(先进技术研究院专用) 互联网设备授权	A
▶ 业务导航/研发中心/开发验证/产品加密授权/嵌入式设备	1.11.11.11
根据设备S/N号申请License	1.16.674
为整机料号申请License配置(嵌入式设备)_研发项目经理使用	1.00
▶ 业务导航/研发中心/开发验证/产品加密授权/通用类设备	
根据导出设备信息包申请软License或加密狗License(通用设备)	1.11.11.1
为整机料号申请License配置(通用类设备)_研发项目经理使用	
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▶ 业务导航/研发中心/开发验证/产品加密授权/全球生产与维修支撑系统	5
为工厂配置工单 为维修站点申请账号	
▶ 业务导航/研发中心/开发验证/产品加密授权/安全芯片授权(先进技术	研究院专用)

Figure 5-10 Search for encryption

2) Click 新增 (add) to add a software-based encryption application. Figure 5-11 Add application

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3) Enter the application information.

Ш

If you apply for permanent encryption, enter the project name, business opportunity No., and corresponding technical support in the reason field, and then attach the contract.



最新生 多力正式订单申请Lkensel投权(需要真写明机器成订单号)				
○ 申请的试出用的License接权(提及使用时用<= 180天)				
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Figure 5-12 Enter the application information

Table 5-3 Parameter description

Parameter	Description
Type of application	 Select the application type. Supports dongle and software license. For hardware-based encryption, select 加密狗 (dongle). For software-based encryption, select 软 License (software License).
Material No.	Click the text box, and then enter the material No. of the server.
Algorithm Database Usage Days	Select 永久有效 (permanently effective)
Algorithm Database Config	Select face recognition(5), Face attributes recognition(19), face detection(4), video quality diagnostics(2079) and video metadata(21) and vehicle big data(23)
Description of reason for application	Enter the application reason.

Table 5-4 Server material No.

Server Name and Model	Material No.
Domestic DahuaMicro Center Intelligent ServerDHI-IVS-MC8000-E- TU1	1.0.01.18.10729
Domestic Dahua Micro Center Intelligent Server DHI-IVS-MC8000-2E- TU1	1.0.01.18.10730

4) Click **Save** on the upper left corner, and then click **Submit**.

After the process is approved, you will receive an email from the portal. Click the link in the email to download the software-based encryption certificate, which is a zip file named after the application date.



<u>Step 5</u> Go back to **Micro Intelligent Center** page, and then click **Licnese Config** on the **System Config** page. Configure **License Encryption Type** as **Hard Encryption**. Click **Upload** to import hardware-based encryption license to the system. Figure 5-13 Upload hard license.

<u>Step 6</u> After importing license, wait for 5 minutes, and then view version. If the Intelligent Algorithm License displays Normal, the authorization has taken effect. For follow up operations, see"2 Service Status Verification".



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Appendix 1 Cybersecurity Recommendations

Cybersecurity is more than just a buzzword: it's something that pertains to every device that is connected to the internet. IP video surveillance is not immune to cyber risks, but taking basic steps toward protecting and strengthening networks and networked appliances will make them less susceptible to attacks. Below are some tips and recommendations from Dahua on how to create a more secured security system.

Mandatory actions to be taken for basic device network security:

1. Use Strong Passwords

Please refer to the following suggestions to set passwords.

- The length should not be less than 8 characters.
- Include at least two types of characters; character types include upper and lower case letters, numbers and symbols.
- Do not contain the account name or the account name in reverse order.
- Do not use continuous characters, such as 123, abc, etc.
- Do not use overlapped characters, such as 111, aaa, etc.

2. Update Firmware and Client Software in Time

- According to the standard procedure in Tech-industry, we recommend to keep your device (such as NVR, DVR, IP camera, etc.) firmware up-to-date to ensure the system is equipped with the latest security patches and fixes. When the device is connected to the public network, it is recommended to enable the "auto-check for updates" function to obtain timely information of firmware updates released by the manufacturer.
- We suggest that you download and use the latest version of client software.

"Nice to have" recommendations to improve your device network security:

1. Physical Protection

We suggest that you perform physical protection to device, especially storage devices. For example, place the device in a special computer room and cabinet, and implement well-done access control permission and key management to prevent unauthorized personnel from carrying out physical contacts such as damaging hardware, unauthorized connection of removable device (such as USB flash disk, serial port), etc.

2. Change Passwords Regularly

We suggest that you change passwords regularly to reduce the risk of being guessed or cracked.

3. Set and Update Passwords Reset Information Timely

The device supports password reset function. Please set up related information for password reset in time, including the end user's mailbox and password protection questions. If the information changes, please modify it in time. When setting password protection questions, it is suggested not to use those that can be easily guessed.

4. Enable Account Lock

The account lock feature is enabled by default, and we recommend you to keep it on to guarantee the account security. If an attacker attempts to log in with the wrong password several times, the corresponding account and the source IP address will be locked.

5. Change Default HTTP and Other Service Ports

We suggest you to change default HTTP and other service ports into any set of numbers between



1024–65535, reducing the risk of outsiders being able to guess which ports you are using.

6. Enable HTTPS

We suggest you to enable HTTPS, so that you visit Web service through a secure communication channel.

7. MAC Address Binding

We recommend you to bind the IP and MAC address of the gateway to the device, thus reducing the risk of ARP spoofing.

8. Assign Accounts and Privileges Reasonably

According to business and management requirements, reasonably add users and assign a minimum set of permissions to them.

9. Disable Unnecessary Services and Choose Secure Modes

If not needed, it is recommended to turn off some services such as SNMP, SMTP, UPnP, etc., to reduce risks.

If necessary, it is highly recommended that you use safe modes, including but not limited to the following services:

- SNMP: Choose SNMP v3, and set up strong encryption passwords and authentication passwords.
- SMTP: Choose TLS to access mailbox server.
- FTP: Choose SFTP, and set up strong passwords.
- AP hotspot: Choose WPA2-PSK encryption mode, and set up strong passwords.

10. Audio and Video Encrypted Transmission

If your audio and video data contents are very important or sensitive, we recommend that you use encrypted transmission function, to reduce the risk of audio and video data being stolen during transmission.

Reminder: encrypted transmission will cause some loss in transmission efficiency.

11. Secure Auditing

- Check online users: we suggest that you check online users regularly to see if the device is logged in without authorization.
- Check device log: By viewing the logs, you can know the IP addresses that were used to log in to your devices and their key operations.

12. Network Log

Due to the limited storage capacity of the device, the stored log is limited. If you need to save the log for a long time, it is recommended that you enable the network log function to ensure that the critical logs are synchronized to the network log server for tracing.

13. Construct a Safe Network Environment

In order to better ensure the safety of device and reduce potential cyber risks, we recommend:

- Disable the port mapping function of the router to avoid direct access to the intranet devices from external network.
- The network should be partitioned and isolated according to the actual network needs. If there are no communication requirements between two sub networks, it is suggested to use VLAN, network GAP and other technologies to partition the network, so as to achieve the network isolation effect.
- Establish the 802.1x access authentication system to reduce the risk of unauthorized access to private networks.



• Enable IP/MAC address filtering function to limit the range of hosts allowed to access the device.

More information

Please visit Dahua official website security emergency response center for security announcements and the latest security recommendations.

ENABLING A SAFER SOCIETY AND SMARTER LIVING