IPSAN Series Network Storage System Quick Guide

Contents

1	Introduction	…1
2	Hardware Installation	····2
	2.1 Tool Reference	····2
	2.2 Environment Requirements ······	2
	2.3 Installation Steps	3
	2.4 Connect Cables And Perform Verification	5
3	Software Configuration	9
	3.1 Basic Concepts	9
	3.2 Configuration Workflow	10
	3.3 Device Login via Management Network Port	10
	3.4 Set the IP address of the service port	14
	3.5 Create a RAID group	15
	3.6 Create a RAID LUN	17
	3.7 Create logical resources	18
	3.8 Create a target and add an initiator	19
	3.9 Assign SAN resources	22
	3.10 Configure the initiator (with Windows client as an example)	22
	3.11 View disks assigned (with Windows XP as an example)	26
4	(Optional) Video Management Server Configuration Description	27
	4.1 Product Introduction	27
	4.2 Basic Concepts	28
	4.3 Configuration Workflow	28
	4.4 Log in to the VMS GUI ······	28
	4.5 Set the IP address	29
	4.6 Create and Format RAIDs	30
	4.7 Primary/Replica Switch	31
	4.8 Add IPC and Recording Schedule (Primary)	32
	4.9 Recording Status and Playback (Primary)	33

5 Appendix Disk Installation and Removal for the 60 Slots Products	34
Installing a Disk ·····	34
Removing a Disk	37
Disclaimer and Safety Warnings	40

1 Introduction

IPSAN Series storage hosts include nine types of products: single controller with 12 disk slots, single control with 16 disk slots, single control with 24 disk slots, single control with 36 disk slots, single control with 48 disk slots, single control with 60 disk slots, dual control with 24 disk slots, dual control with 48 disk slots, and dual control with 60 disk slots.

The storage product supports six types of DEUs: single control DEUs with 24 disk slots, single control DEUs with 48 disk slots, single control DEUs with 60 disk slots, dual control DEUs with 24 disk slots, dual control DEUs with 48 disk slots, and dual control DEUs with 60 disk slots.

For details about the supported DEUs, see the table below.

SCU disk slots	DEU disk slots						
12 disk slots(single control)	24 disk slots(single control)						
16 disk slots(single control)							
24 disk slots(single control)							
36 disk slots(single control)							
48 disk slots(single control)	24 disk slots and 48 disk slots(both single control)						
60 disk slots(single control)	60 disk slots(single control)						
24 disk slots(dual control)	24 disk slots(dual control)						
48 disk slots(dual control)	48 disk slots(dual control)						
60 disk slots(dual control)	60 disk slots(dual control)						

Table 1-1	Different	products	support	different DEUs
-----------	-----------	----------	---------	----------------



NOTE!

- This manual takes the single control with 24 disk slots for example. For more details, see the Online Help which is released with the software. Method to check the Online Help: click **Help** button on the GUI.
- The following illustrations are only for your reference. The actual product and the latest version shall prevail in the actual situation.

2 Hardware Installation

2.1 Tool Reference



2.2 Environment Requirements

Temperature	Requirement
Operating	0°C~40°C
temperature	Recommended: 10°C~35°C
	Excluding battery modules: -20°C~+60°C
Storage	Including battery modules: -15°C~+40°C (storage within
temperature	1 month)
	10°C~35°C (storage over 1 month)
Humidity	Requirement
Operating humidity	20% to 80% (non-condensing)
Storage humidity	10% to 90% (non-condensing)



NOTE!

Corrosive gases and dust can cause damage to hard disks. For detailed requirements about the equipment room environment, please refer to Checking the Installation Environments section in Online Help shipped with the product.

2.3 Installation Steps

[Installing the guide rail on the cabinet](Optional) Place the guide rail between the front and rear mounting holes of the cabinet, align the screw holes with holes on the cabinet, and tighten the thumb screws.



[Installing the expansion module]

6

Face silkscreen of the expansion board forward, hold the middle of the expansion board, slowly insert the expansion board, and tighten the captive screws.



Slowly push the main cabinet along the guide rail until the suspension loop is onto the front mounting hole, and use screws to secure the suspension loop to the front mounting bar.



[Installing the battery module]

Determine the direction of the battery case, insert the battery case slowly along the guide rail, until the lock spring piece is buckled.



[Installing a disk]

Hold the middle of the disk, but do not hold the handle bar. Slowly push the disk into the slot, until a clatter sound is heard, indicating that the disk is installed in position.



[Installing the front panels]

6

Install the front panels of the storage controller and DEU, as shown in the following figure (DEU is used as an example).





CAUTION!

• When installing a device, ensure that the device and the mark line on the square hole strip on the cabinet are properly aligned in 1U. Otherwise, you are not allowed to install the rack-mounting ear screws.



Figure 2-1 Correct installation

• Besides, the depth of the equipment cabinet is generally greater than 0.8m, and it shall be selected according to different equipment.



WARNING!

- If the rack-mounting ear screws are forcibly installed without the aligning procedure, a gap exists between the device and the tray and the device is hanging over the square hole strip. Consequently, the device is unstable, thereby affecting stability of the hard disks. If the hard disks are running for a long time in such situation, many problems, such as a high read-and-write error rate and a high damage rate, will arise.
- Incorrect installation manner:







Figure 2



Figure 3

Figure 4

Figure 1: The tray is installed half-U downward. Figure 2: The rack-mounting ear is not aligned properly. Figure 3: The device is not aligned in one U and is hanging over the rack-mounting ear after the screws are installed.

Figure 4: A gap exists between the device and the tray.

2.4 Connect Cables And Perform Verification

1 Cable Connection

- (1) Connect cables for the storage controller and DEU, as shown in the following figure.
- (2) Power on the storage controller and DEU.

(3) Switch on the storage controller.

Single controller:



Double controller:





2 Check

- (1) Check the rear panel LED of the storage controller and DEU.
- > Management port LED: green on and yellow on
- > Service port LED: Green or yellow on
- > Alarm LED: off; Other LEDs: green
- (2) Check the front panel LED of the storage controller and DEU(the illustration is omitted).
- > Normally, the front panel LED is green.

Single controller:



Power LED



Double controller:





3 Software Configuration

3.1 Basic Concepts

Basic Concept	Description
Console	Indicates the Graphical User Port (GUI) used in configuration and management.
Server	Indicates IPSAN series in the console.
Management workstation	Indicates the PC where the console is installed.
VMS	VMS(Video Management Server)
RAID Group	Indicates a logical entity consists of multiple physical hard disks. In addition, the logical entity possesses RAID level features. RAID indicates redundant array of independent disks. The logical entity is used to form the RAID of a specified level and provide physical resources for RAID Logical Unit Numbers (LUNs).
RAID LUN	Compared with a LUN, a RAID LUN indicates a smaller logical entity created in a RAID group. After a RAID LUN is created in a RAID group, the RAID LUN directly inherits the RAID level of the RAID group.

Logical resource	Indicates a logical entity that is created on a RAID LUN for direct access from a client.
	A client can access a logical resource after it is created on basis of a RAID LUN and assigned to a target.
Initiator	Indicates an entity that initiates an Internet Small Computer System Port (iSCSI) request.
Target	Indicates an entity that responds to an iSCSI request. An initiator can initiate a request to a target only after it is associated with the target.
Management network port	Configures and administrates devices, 1000 Mbit/s.
Service port	Transfers data, 1000 Mbit/s.

3.2 Configuration Workflow

To complete most basic configurations, perform the following operations on the storage software GUI:

- 1. Log in to the device through the management network port.
- 2. Set the IP address of the service port.
- 3. Create a RAID group.
- 4. Create a RAID LUN.
- 5. Create logical resources.
- 6. Create a target and add an initiator.
- 7. Assign Storage Area Network (SAN) resources.
- 8. Configure the initiator (with Windows client as an example).
- 9. View disks assigned (with Windows XP as an example).

3.3 Device Login via Management Network Port

- 1. Add the device's IP address to the Java exception site list on the management workstation.
 - (1) Open Control Panel on the management workstation, select Large icons or Small icons from the View by drop-down list, and then click Java.



(2) In the Java Control Panel dialog box, select Security and click Edit Site list.



(3) Click Add.

If no VMS is installed, enter http://IP;

If VMS is installed, enter http://IP:8083;

If the IP address is IPV6, enter http://[IPV6].



(4) Click OK.

- 2. Open your browser, enter the device's IP in the address bar to download the storage console.
 - (1) If no VMS is installed, enter http://IPin the address bar.

(2) If VMS is installed, enter http://IP:8083 in the address bar. You will be directed to the VMS platform if you enter http://IP.

← ⊕ Ø http://192.168.0.1.8083/
P ~ ≧ → Ø 192.168.0.1 ×

No required Java Runtime Environment found on this machine. Please click <u>here</u> to download and install JRE 8.0 for Windows and the application. If you do hava installed Java8 Runtime Environment or the latest one, Please click <u>continue</u>

(3) If the IP address is IPV6, enter http://[IPV6] in the address bar.

÷	0	🥭 ht	tp://[2	2013:	192:1	68:0::1]	1			Q	- B -)	6	[201	3:192	168:	:1]	×			
					-			 									 -	 		

No required Java Runtime Environment found on this machine. Please click <u>here</u> to download and install JRE 8.0 for Windows and the application. If you do hava installed Java8 Runtime Environment or the latest one, Please click <u>continue</u>

 Click Continue, a safety warning window pops up, select the "I accept the risk..." check box and click Run.

Security Warning	g 💽
Do you	want to run this application?
	Name: Storage Console
<u>_</u>	Publisher: UNENOWN
	Location: http://192.168.0.1
Running t	his application may be a security risk
Risk: This pers it i sour	application will run with unrestricted access which may put your computer and onal information at risk. The information provided is unreliable or unknown so s recommended not to run this application unless you are familiar with its ce
More	Information
Select the	box below, then click Run to start the application
🗹 I acce	pt the risk and want to run this application. Run Cancel

If be reminded that the Java version is out of date, click **Run** again to download the console.



4. Enter the default username and password (admin/123456) to log in to the console.

🕼 Storage Console	
File View Tools Refresh Help	
Device Host Monitor	
▲ 📰 Storage Controller	
🙀 Add Controller	
Controller address: 192.168.0.1	
User name: admin	
Password: •••••	
Forget password please contact technical	
support to get temporary password to login	
OK Cancei	

Figure 3-1 Login via Management Network Port



3.4 Set the IP address of the service port

- 1. Choose Server Maintenance > Configure Network.
- 2. Change the IP address of the service port.



NOTE!

- The default IP addresses of the service ports are empty.
- If expansion boards are inserted, the corresponding default IP addresses are empty too.



🖀 Network conf	iguration				×
-Management port	s setting				
🔽 Allow logins	from servic	e ports			
 ∟_Network informs	ation				
Name IP	address	Network mask	MTU	Speed	Link st
eth0 192	. 168. 0. 103	255.255.255.0	1500	Unknown	Disconnect
eth1 192	. 168. 1. 103	255.255.255.0	1500	1000Mbps	Connect
eth2 10.	Batnark	anfimration	1500	Yn Yn	Disconnect
	Hetroix	contiguration			Disconnect
slot1_GE2_10.				- In In	Disconnect
slot1_GE4 10.	Name:	eth1		n	Disconnect
	IP address	: 100.1.1.91			
	Network ma	sk: 255.255.255.0)		
	MTU:	1500 💌			
		,			
	,				
Configure Ac	Γ	OK	Cancel		
-DNS information	ι				
	-				
DNS address					
Confirmed L	المترقيق الدد				
	Ngg Detefe				
,				_	
					OK
				L	

3. Click OK.

3.5 Create a RAID group

- 1. Choose RAID Group Resources > Local RAID Group > Create.
- 2. Create a RAID group.
- 3. Check whether the number of disks under "Physical Resources" is consistent with the actual number.

Recommend number of disks:

11 (RAID5) + 1 (hot standby) + 11 (RAID5) + 1 (hot standby)

11 (RAID5) + 12 (RAID5) + 1 (hot standby)

7 (RAID5) + 8 (RAID5) +1 (hot standby)

Figure 3-3 Create a RAID Group

RAID group name:	RG-001					
	Valid chara	ters are '	*a-z A-Z O-	9 :". I	ength: 1	- 31.
MALD group level:	KALD5 - at	least 3 da	ita disks	<u> </u>		
)isk type:						
		_				
Capability estimation (GB):	1396					
laximum number of disks in a RAID Gr	oup: 12 💌					
EUs:	Name	Adapter	Chan	nel No.	ID	Disks
DEV details	☑ DEV-0:0:	0 0	0		0	5
		_				
isks:	Name		Type	Secto	r Size	Capacity (GB
Disk details	Disk-0:0	0:0:1	SATA	512		698.638
	Disk-0:0):0:2	SATA	512		698.638
elected number:3	☑ Disk=0:0	0:0:7	SATA	512		698.638
	□ Disk-0:0	0:0:13	SATA	512		931.513
	•					
	Select all	. Deselec	tall			

4. (Optional) Click **Next**.Confirm the information of the RAID LUN.

Figure 3-4 The information of the RAID LUN

e "a-z A-Z O-9 :". Length: 1 - 31.

5. Click Finish.

3.6 Create a RAID LUN

If no RAID LUN has been created when you start to create a RAID Group, follow these steps to create one.

- 1. Choose RAID LUN Resources > Local RAID LUNs > Create.
- 2. Enter the name. Select the corresponding RAID group. Size of RAID LUN is displayed automatically.

Figure 3-5 Create a RAID LUN

SCO-LUN- Valid cha 64K	0001 aracters are "a-z A-Z O	-9 - ·" Iongth: 1 - 31	
Valid cha	aracters are ″a-z A-Z O	-9 - · " Length: 1 - 31	
64K		D Deligent. 1 St.	
	•		
Enable	•		
Enable	•		
speed: High	•		
Yes	•		
1, 395. 25	0 GB 🔻		
	, <u> </u>		
Type	Capacity (GB)	Free Cenerity(GB)	10000
RAID5	1, 395. 250	1, 395. 250	0xd0861b63-0xbf.
	e: Enable speed: High Yes 1, 395.25 ap to create RAI: Type RAID5	a: Enable speed: High Yes 1, 395.250 GB ap to create RAID LUN resource (only sel Type Capacity (GB) RAID5 1, 395.250	a: Enable speed: High Tes 1,395.250 Type Capacity (GB) RAID5 1,395.250 1,395.250 1,395.250 1,395.250 Capacity (CB) Capacity (CB) Capac

3. Click OK.

3.7 Create logical resources

- 1. Choose Logical Resources > SAN Resources > Create.
- 2. Set the SAN resource name and size, and select its RAID LUN.

Figure 3-6 Create the SAN Resource

Treate SAN Reso	urce				×
Create one or more S	AN resources.				
SAN resource name:	SCO-SAN-0001				
RAID type:	Valid character	sare″a-zA-Z(sktype: A	0-9:". Length: 11 💌	1 - 31.	
SAN resource size:	IOO GH SAN resource mi 10 MB.).	3 ▼ To nimum is 64 MB()	tal free space: 1,385 Marning:The space for	5.186GB the virtual info	rmation is
SAN resource number:	1 In	itial number: 1	U:	se default initial	number
Select the RAIDs to	create SAN resou	urce(most 64):			
RAID name	Туре	Disk type	Free Capacity(GB)	Used Size(GB)	(WID)
SCO-LUN-0001	RAID5	SATA	1, 385. 186	All -	OxdaO
Select all De	select all				
				ОК	Cancel

3. Click OK.

3.8 Create a target and add an initiator

- 1. Choose Target Manager > ISCSI Target > Create.
- 2. Deselect Auto Allocated, and customize the name. Select the IP address of the target, then click **Next**.

Figure 3-7 Create a target

Auto allocated					
larget name:	target123				
	Valid characters are	English letters	s, numerals, ".", ato lowercese. Th	"-", ":", the l	etters are case of the name is 2
		be converted in	ato iowercase. In	te maximum renger	t of the name is 2.
nitial LUN:	0 💌				
.dd IP Addresses:	192.168.0.102 192.168.0.102 192.168.1.102 192.168.41.102 192.168.41.102 192.168.41.102 192.168.0.102 192.168.102 10.1.3.1 10.1.5.1				

3. Click Add to add an initiator.

Figure 3-8 Add an initiator

🗂 Create target			×
Add initiators			
Add initiators associated with the	specified target.		
-			
Initiator name	Access right	CHAP authentica	Associated
☐ initiator-123	W/Read-write	No	No
Select all Deselect all			Add Modify Delete
	Prev	Next>	Finish Cancel

4. Set the name of the initiator, then click **OK**.

Figure 3-9 Set the name of the initiator

∰ Add initiato	r X
Add initiator as:	sociated with specified target
Initiator name:	123
	Valid characters are English letters, numerals, ".", "-", ":", " $_$ ", "@", the letters are case insensitive and will be converted into lowercase. The maximum length of the name is 223.
Access right:	W/Read-write
Using CHAP au	thentication
User name:	
	Valid characters are "a-z A-Z O-9 :", and the maximum length is 128.
Password:	
	Valid characters are "a-z A-Z O-9 :", and the range of length is between 12 and 16.
Confirm password	:
	Valid characters are "a-z A-Z O-9 :", and the range of length is between 12 and 16.
	OK Cancel

5. Confirm the result, then click **Finish**.

Figure 3-10 Confirm

dd initiators	specified target		
	-7		
Initiator name	Access right	CHAP authentica	Associated
initiator-123	W/Read-write	No	No
123	W/Read-write	No	No
elect all Deselect all			Add Modify Delet

3.9 Assign SAN resources

1. Choose Target Manager > ISCSI Target > target123 > SAN Resources > Assign.

Figure 3-11 Assign



2. Select resources to be assigned to a target. Click OK.

Figure 3-12 Assign a resource

📄 Assign				×
Select the resourc	es to assign.			
News	Turne	Cine (CB)		Andered
Name	туре	Size (GB)	UUID	Assigned
SC0-SAN	Logical res	100.000	0x63ab3d	No
Select all Dese	lect all		Show all not assig	gned resources
			ОК	Cancel

3.10 Configure the initiator (with Windows client as an example)

1. Choose Configuration > Change..., enter the initiator name, and then click OK.

Figure 3-13 Change the Initiator Name

	Discovery	Favorite Targets	Volumes and Devices	RADIUS	Configuration
onfigu ne initia	ration settin ator.	gs here are global a	and will affect any future	e connectio	ons made with
ny exis ie initia	sting connec ator otherwi	tions may continue se tries to reconnec	to work, but can fail if t t to a target.	he system	restarts or
'hen co articula	onnecting to ar connectio	a <mark>target, advanced</mark> n.	d connection features a	llow specifi	c control of a
itiator	Name:				
11111					
o modi	fy the initiat	or name, dick Chan	ge.		Change
.51 Inn	tiator Nam	e			
he iSC	SI initiator n	ame is used to uniqu	uely identify a system to	SCSI sto	rage devices on
e netv	work. The d	efault name is base	d on the standard iscs	naming so	have and seen
e cuct	em's full ma	chine name	u on ule standaru isest		neme and uses
ne syst	tem's full ma	chine name.			neme and uses
ew init	iator name:	chine name.			neme and uses
ne syst ew init hitiator	tem's full ma iator name: r-123	chine name.			neme and uses
ne syst ew init nitiator Jse cau	tem's full ma iator name: r-123 ution in char	chine name. Iging the name as y	our currently connected	i targets m	ay not be
ne syst lew init nitiator Jse cau vailable	tem's full ma iator name: r-123 ution in char e after syste	chine name. nging the name as y em restart.)	our currently connected	i targets m	ay not be
he syst lew init initiator Use cau vailable	tem's full ma iator name: r-123 ution in char e after syste	chine name. nging the name as y em restart.)	our currently connected	l targets m	ay not be
he syst lew init nitiator Jse cau vailable	tem's full ma iator name: r-123 ution in char e after syste	chine name. nging the name as y em restart.)	our currently connected	d targets m	ay not be
ne syst ew init nitiator Jse cau vailable Use D	tem's full ma iator name: 123 ution in char e after syste efault	chine name. Iging the name as y em restart.)	our currently connected	l targets m OK	ay not be
e syst ew init nitiator Jse cau vailable Use D	tem's full ma iator name: -123 ution in char e after syste efault	chine name. nging the name as y em restart.)	our currently connected	l targets m OK	ay not be Cancel
e syst ew init nitiator Jse cau vailable Use D	tem's full ma iator name: r-123 ution in char e after syste efault	chine name. nging the name as y em restart.)	our currently connected	i targets m OK	ay not be
e syst ew init itiator Ise cau vailable	tem's full ma iator name: 123 ution in char e after syste efault	chine name. Iging the name as y em restart.)	our currently connected	l targets m OK	ay not be
e syst ew initi nitiator Ise cau railable	tem's full ma iator name: -123 ution in char e after syste efault	chine name. nging the name as y em restart.)	our currently connected	l targets m	ay not be



NOTE!

- The **New initiator name** configured on the windows client must be the same as that configured on the storage.
- 2. Select Targets, enter the IP address, then click Quick Connect....

Figure 3-14 Quick Connect to the Target

rgets	Discovery	Favorite Targets	Volumes and Devices	RADIUS	Configuration
uick C	Connect				
Fo disc DNS na	over and log ame of the ta	on to a target usin arget and then click	ig a basic connection, t Quick Connect.	ype the IP	address or
「arget	: 100,	.1.1.91		Q	uick Connect
iscove	ered targets			-	Defrech
					Refresh
Name				Status	
Fo con click Co	nect using a onnect.	dvanced options, se	elect a target and then	_	Connect
To con lick Co To com hen d	nect using a nnect. ipletely disco	dvanced options, se onnect a target, sele ct.	elect a target and then ect the target and		Connect Disconnect
Fo con click Co Fo com then cl For tar select t	nect using a onnect. Ipletely disco ick Disconner get properti the target ar	dvanced options, se onnect a target, select. es, including configu nd dick Properties.	elect a target and then act the target and uration of sessions,		Connect Disconnect Properties
Fo con dick Co Fo com hen d For tar elect f For cor he tar	nect using a onnect. Ipletely disco ick Disconnec get properti the target ar nfiguration o get and ther	dvanced options, se onnect a target, sele ct. es, including configu nd click Properties. f devices associated n click Devices.	elect a target and then ect the target and uration of sessions, d with a target, select		Connect Disconnect Properties Devices
o con dick Cc o com hen d for tar for tar for cor he tar	nect using an onnect. Ipletely disco ick Disconner get propertia the target an ofiguration o get and ther	dvanced options, se onnect a target, sele ct. es, including configu nd dick Properties. f devices associated n dick Devices.	elect a target and then ect the target and uration of sessions, d with a target, select		Connect Disconnect Properties Devices

3. Click Done.

Figure 3-15 Finish Quick Connect

Quick Connect

Targets that are available for connection at the IP address or DNS name that you provided are listed below. If multiple targets are available, you need to connect to each target individually.

×

Connections made here will be added to the list of Favorite Targets and an attempt to restore them will be made every time this computer restarts.

ogress report ogin Succeeded.	ogress report ogin Succeeded.	Name	Status
ogress report ogin Succeeded.	ogress report ogin Succeeded.	arget123	Connected
gin Succeeded.	gin Succeeded.		
		jress report	
		gress report gin Succeeded.	

4. You can see that the target is connected.

Figure 3-16 Check the Status

iSCSI Initiator Properties

iscovered targets		
		Refresh
Name	Status	
target123	Connected	
To connect using advanced options, select a ta	rget and then	2000 C C C C C C C C C C C C C C C C C C
lick Connect.	gerand dien	Connect
aler connect.		
To completely disconnect a target, select the t	arget and r	Viecennect
hen dick Disconnect.	-	Isconnect
or target properties, including configuration o	f sessions,	operties
elect the target and click Properties.	Pr	operues
For configuration of devices associated with a	target, select)evices
		/cvices
he target and then click Devices.		
he target and then click Devices.		
he target and then click Devices.		
ne target and then click Devices.		
te target and then click Devices.		
ne target and then click Devices,		
ne target and then click Devices,		
he target and then click Devices.		
the target and then click Devices.		

×

3.11 View disks assigned (with Windows XP as an example)

- 1. Right-click My Computer.
- 2. Choose Computer Management.
- 3. Check the added disk space.

		1. 1	-		1.			
System Tools	Volume	Simple	Basic N	File System NTES	Healthy (System Boot P	ane File Active Crash Dump Prin	Actions	
> (E) Task Scheduler	- (Disk 0 partition 2)	Simple	Basic		Healthy (Recovery Partiti	on)	Disk Management	8
> 🛃 Event Viewer	- (Disk 0 partition 3)	Simple	Basic		Healthy (Recovery Partiti	on)	More Actions	
> 就 Shared Folders	- New Volume (G:)	Simple	Basic N	NTFS	Healthy (Primary Partitio	n)		
> 🌆 Local Users and Groups	- 软件 (E:)	Simple	Basic N	NTFS	Healthy (Logical Drive)			
> 🔊 Performance	一文档(F:)	Simple	Basic N	NTFS	Healthy (Logical Drive)			
📇 Device Manager	— 糸統 (D:)	Simple	Basic N	NTFS	Healthy (Primary Partitio	n)		
🗸 📇 Storage								
📅 Disk Management								
Services and Applications								
							1	
							1	
						,		
	<					>		
	<					> ^		
	< The desired and the desired	系统 (D:)			软件 (E)	文档(E)		
	Disk 1 Basic 931.51 GB	系统 (D:) 311.00 GB N	UTFS		软件 (E.) 311.00 GB NTFS	× 文档 (F:) 309.50 GB NTFS		
	C Disk 1 Basic 931.51 GB Online	系统 (D:) 311.00 GB N Healthy (Pri	ITFS imary Pa	artition)	软件 (E:) 311.00 GB NTFS Healthy (Logical Drive)	文档 (F:) 309.50 GB NTFS Healthy (Logical Drive)		
	< Disk 1 Basic 931.51 GB Online	系统 (D:) 311.00 GB N Healthy (Pri	ITFS imary Pa	artition)	软件 (E) 311.00 GB NTFS Healthy (Logical Drive)	× 文档 (F:) 309.50 GB NTFS Healthy (Logical Drive)		
	C Disk 1 Basic 931.51 GB Online	系统 (D:) 311.00 GB N Healthy (Pri	NTFS imary Pa	artition)	软件 (E) 311.00 GB NTFS Healthy (Logical Drive)	文档 (F:) 309.50 GB NTFS Healthy (Logical Drive)		
	C Disk 1 Basic 931.51 GB Online Basic	系统 (D:) 311.00 GB N Healthy (Pri	JTFS imary Pa	artition)	软件 (E) 311.00 GB NTFS Healthy (Logical Drive)	文档 (F-) 309.50 GB NTFS Healthy (Logical Drive)		
	C Disk 1 Basic S31.51 GB Online Disk 2 Basic 100.00 GB	系统 (D:) 311.00 GB N Healthy (Pri New Volun 100.00 GB N	NTFS imary Pa ne (G:) NTFS	artition)	较件 (E) 311.00 GB NTFS Healthy (Logical Drive)	× 文性 (F2) 309.50 GB NTFS Healthy (Logical Drive)		
	 Disk 1 Basic 931.51 GB Online Disk 2 Basic Doulou GB Online 	系统 (D:) 311.00 GB N Healthy (Pri New Volun 100.00 GB N Healthy (Pri	ITFS imary Pa ne (G:) ITFS imary Pa	artition)	\$XFF (E:) 311.00 GB NTFS Healthy (Logical Drive)	文档 (F3 309.50 GB NTFS Healthy (Logical Drive)		
	C Disk 1 Basic 931.51 GB Online Disk 2 Basic 100.00 GB Online	系统 (D:) 311.00 GB N Healthy (Pri New Volun 100.00 GB N Healthy (Pri	ITFS imary Pa ne (G:) ITFS imary Pa	artition)	软件 (E) 31.00 GB NTFS Healthy (Logical Drive)	> XE (rp) 3005.06 GB NTFS Healthy (Logical Drive)		
	Disk 1 Basic 931.51 GB Online Disk 2 Basic 100.00 GB Online Control	系统 (D-) 311.00 GB N Healthy (Pri New Volum 100.00 GB N Healthy (Pri	ITFS imary Pa ne (G:) ITFS imary Pa	artition)	软件 (E) 311.00 GB NTFS Healthy (Logical Drive)	> XHS (F2) 309.50 GB NTFS Healthy (Logical Drive)		
	 Disk 1 Basic Basic Basic 100.00 GB Online Disk 2 Basic 100.00 GB Online Dep Geb <	系统 (D:) 311.00 GB N Healthy (Pri New Volum 100.00 GB N Healthy (Pri	ITFS imary Pa ne (G:) ITFS imary Pa	artition)	软件 (E) 311.00 (B NTES Healthy (Logical Drive) Healthy (Logical Drive)	> XHE (rP) 3005.00 GB NTFS Healthy (Logical Drive)		
	C Disk 1 Basic 931.51 GB Online Basic 100.00 GB Online SCD-ROM 0 DVD (H4)	系统 (D:) 311.00 GB N Healthy (Pri New Volum 100.00 GB N Healthy (Pri	NTFS imary Pa ne (G:) NTFS imary Pa	artition)	较件 (E) 31.00 GB NTS Healthy (Logical Drive)	> XH (r.) 309.50 GB NTFS Healthy (Logical Drive)		
	 Disk 1 Basic Basic Basic Online Disk 2 Basic 1000 GB Online Co-ROM 0 DVD (H) No Media 	系统 (D:) 311.00 GB N Healthy (Pri New Volum 100.00 GB N Healthy (Pri	NTFS imary Pa ne (G:) NTFS imary Pa	artition)	\$yf+ (c) 311.00 GB NTFS Healthy (Logical Drive)	> XEI (rp) 300.50 GB NTFS Healthy (Logical Drive)		

Figure 3-17 Check the added disk space

4 (Optional) Video Management Server Configuration Description

4.1 Product Introduction

The Video Management Serve is a smart integrated surveillance platform with video input, storage, transfer and device management functions designed specifically for digital surveillance applications. The Unicorn has adopted audio/video compression and decompression, embedded system, storage, network, and smart technologies and it is suitable for security surveillance scenarios such as residential areas, buildings, campus, hotels, and shopping malls etc.



NOTE!

- SCU (Storage Control Unit)
- This manual takes the single control with 24 disk slots for example. For more details, see the Online Help which is released with the software. Method to check the Online Help: click **Help** button on the GUI.
- The following illustrations are only for your reference. The latest version shall prevail in the actual situation.

4.2 Basic Concepts

Basic Concept	Description
Management workstation	Indicates the PC where the console is installed.
Management network port	Configures and administrates devices, 1000 Mbit/s.
Service port	Transfers data, 1000Mbit/s.

4.3 Configuration Workflow

To complete most basic configurations, perform the following operations on the

software GUI:

- 1. Log in to the device through the management network port.
- 2. Set the IP address.
- 3. Create and Format RAIDs.
- 4. Primary/Replica Switch.
- 5. Add IPC and Recording Schedule (Primary).
- 6. Recording Status and Playback (Primary).

4.4 Log in to the VMS GUI

- 1. Enter http://192.168.0.1 in the browser address bar of the management workstation.
- 2. By default, the user name is admin, the password is 123456, and log in.(only for first login and should be changed to a strong one with at least nine characters including uppercase and lowercase letters, digits and special characters of at least three.)



NOTE!

- Compatible browser versions: Edge 79 or higher, Chrome 60 or higher, Firefox 60 or higher.
- The website http://IP:8083/ is used to download professional storage management CS client. The website http://IP:80 is a simple web management client.

4.5 Set the IP address

- 1. Choose System > Network >TCP/IP > Network.
- 2. Click **Operation** to change the IP address of the service port.

Figure 4-1 Change IP Address

+ A	dd IP address	Main NIC: eth0		•			
NIC	IP Address	Subnet Mask	MTU	Rate	Connection Status	MAC Address	Operation
eth0	192.168.0.1	255.255.255.0	1500	1000M Full-Duplex	Connected	48:ea:63:4b:d7:0d	2
eth1	0.0.0.0	255.255.0.0	1500	1000M Full-Duplex	Connected	48:ea:63:4b:d7:0e	2 🗓
eth2	0.0.0.0	255.255.255.0	1500	Auto-Negotiation	Disconnected	48:ea:63:4b:d7:0f	2 🗓
eth3	0.0.0.0	255.255.255.0	1500	Auto-Negotiation	Disconnected	48:ea:63:4b:d7:10	2 🗓
eth4	0.0.0.0	255.255.255.0	1500	Auto-Negotiation	Disconnected	48:ea:63:4b:d7:11	2 🖻

 \times

Edit

* NIC:

eth0

Set IP Address		
* IP Address:	192.168.1.109	
* Subnet Mask :	255.255.255.0	
Gateway:	192.168.1.1	
* MTU:	1500	
	2.Click OK	
	ок	Cancel

4.6 Create and Format RAIDs

- 1. Choose System > Disk > RAID Manage > Physical Disk. Check whether the number of disks under "DEU" is consistent with the actual number.
- 2. Click Manual Create to Create RAIDs.

Recommend number of disks:

11 (RAID5) + 1 (hot standby) + 11 (RAID5) + 1 (hot standby)
11 (RAID5) + 12 (RAID5) + 1 (hot standby)
7 (RAID5) + 8 (RAID5) +1 (hot standby)

Figure 4-2 Create RAID Create Raid SC0-LUN-0001 * Name : 1.Choose RAID type RAID5 - at least 3 data disks * Type : RAID0 * Capacity(Estimated) : RAID1 - 2 data disks 2.Choose disks Disk List : RAID5 - at least 3 data disks Capacity(GB) RAID10 - even data disks at least 4 Disk No. ≑ \Leftrightarrow RAID6 - at least 4 data disks ÷ Disk-0:0:0:3 3726.02 JBOD Disk-0:0:0:4 59G2KCK2F68D SALA 3726.02 Disk-0:0:0:5 5946KAQ9F68D SATA 3726.02 Ξ Disk-0:0:0:6 SATA 3726.02 791DKCGIF68D Disk-0:0:0:7 68H9K8W1F68D SATA 3726.02 Disk-0:0:0:8 59G5KB25F68D SATA 3726.02 Disk-0:0:0:9 791YKC4LF68D SATA 3726.02 SATA Disk-0:0:10 69U9KFA8F68D 3726.02 3.Click OK Cancel

3. Format RAID. Choose System > Disk > RAID Manage > RAID.

Figure 4-3 Format RAID

@ For	mat Virtua	al Read Only	Read/Write	Delete		
	rmat Name 韋	Status 🜲	Type 🜲	Total(GB) 🛔		
	C0-LUN-0001	Not Formatted	RAID 5	1861		
Message			×			
4	Data will be erased and unrecoverable after the RAID is formatted. Continue?					
	3.Click	OK Cance	I			

4. Check formatting results.

Figure 4-4 Ensure The Status Is Normal

Name 🌲	Status 🌲	Туре 🌲
SC0-LUN-0001	Normal	RAID 5

4.7 Primary/Replica Switch

- 1. Choose System > Primary/Replica Switch.
- 2. If this server as Replica mode, enter Primary IP address, Click Save.
- 3. If this server as Primary mode, switch Primary, Click Save.

Figur	e 4-5 Primary/Replica S	witch			
Pri	mary/Replica Switch	۲	Prima	ry O	Replica
He Co	ot Standby onfig				
			Enable	Hot Stan	dby
	Save				
Click Figur	OK to restart. e 4-6 Confirm Restart				
Me	ssage			×	c .
0	Switching primary/r changing the prima address will clear da server to restart. Co	replica ry ser ata an ntinu	a serve ver's Il d caus e?	r or p se the	
			ок	Cancel	

4.8 Add IPC and Recording Schedule (Primary)

Make sure RAID has been added and formatted successfully before you start configuring a recording schedule.

The following steps take ONVIF as an example. You may add the IPC with other protocols.

1. Choose Basic > Device > Encoding Device, click +Addipc11.

Figure 4-7 Add Device

Add Device					×
Protocol :	ONVIF	\sim	Device Type :	IPC v	
*Device Name :	ipc11		PTZ:	Auto 🗸	
*Organization	root		*IP/Domain Na	192.167.1.11	
*Username :	admin		*Port :	80	
Password :	•••••		Remarks :		

2. Choose Basic > Recording Schedule, click +Add, select ipc11_V_1, click OK. Figure 4-8 Add Recording Schedule

Add Recording Schedule			
Channel	*Time Templa	All-day	~
Please enter keywords.		Details 24/7	
	*Stream :	Main	\checkmark
	*Disk Group :	Normal Storage(primary/replica server HE	$\mathbf{\vee}$
		Enable Recording Schedule	
	Remarks :		
			h
		OK Canc	el

4.9 Recording Status and Playback (Primary)

1. Choose Statistics > Server > Recording.

Figure 4-9 Check Recording Status



2. Choose Video Service > Playback > Center, select ipc11_V_1, click Search.

Figure 4-10 Playback



5 Appendix Disk Installation and Removal for the 60 Slots Products

For the 60 slots products, the installation and removal of the disk are slightly different from other slots. Here is a separate introduction.

Do not touch the Printed Circuit Board (PCB) of the disk.

Verify that the handle and screws on both sides of the disk case are secure.

Installing a Disk

The steps to install the disk are as follows:

1. Unplug the disk subrack. Turn the screw (counter clockwise, please refer to the blue mark in the figure below). When the screws are loose, pull out the disk subrack with both hands at the same time (like pulling a drawer).



NOTE!

- The disk subrack cannot be completely unplugged. You only need to extract it to the appropriate position to install the disk.
- No. 0-3 slot of each disk subrack must be full before using other slots to install the disk.



2. Put the disk into the disk subrack (hold the middle position on both sides of the disk), and put the rotating shaft on the disk into the disk support (as shown in the corresponding position of the blue area in the figure below).



3. If the frame is not fully loaded with hard disks, make sure each subrack is installed with at least 4 hard disks; the hard disks are awalys installed from the outermost row toward inside and in the order as shown below (from slot 0 to slot 3). As shown in the figure below, No. 0-3 slot of each disk subrack must be full before using other slots to install the disk.



4. After putting the disk into the slot one by one, press the handle to install the disk in place (following the blue arrow radian in the figure below).



5. After all the disks are installed, push the disk subrack back into place to let the handle bar fit the panel. Turn the screws on the panel clockwise (as shown in the figure below), and lock the screws of the disk insert frame.



Removing a Disk

The steps to remove the disk are as follows:

1. Turn the screw of the disk subrack (counter clockwise, please refer to the blue mark below). After the screws are loose, pull out the disk insert frame (like pulling a drawer) with both hands at the same time.



2. Hook out the disk pull ring. Find the location of the disk to be pulled out, and use your fingers to hook out the pull ring on the disk (see the blue part in the figure below).



3. Pull the pull ring with your finger, pull out the disk (along the blue arc direction shown in the figure below), and take out the disk by holding the middle position on both sides of the disk.



4. Disk subrack reset. Make sure that the disk insert frame is pushed back in place, the handle bar is connected with the panel, turn the screws on the panel (clockwise, as shown in the figure below), and lock the screws.



Disclaimer and Safety Warnings

Copyright Statement

©2012-2024 Zhejiang Uniview Technologies Co., Ltd. All rights reserved.

No part of this manual may be copied, reproduced, translated or distributed in any form or by any means without prior consent in writing from Zhejiang Uniview Technologies Co., Ltd (referred to as Uniview or us hereafter).

The product described in this manual may contain proprietary software owned by Uniview and its possible licensors. Unless permitted by Uniview and its licensors, no one is allowed to copy, distribute, modify, abstract, decompile, disassemble, decrypt, reverse engineer, rent, transfer, or sublicense the software in any form or by any means.

Trademark Acknowledgements



are trademarks or registered trademarks of Uniview.

TM The terms HDMI, HDMI High-Definition Multimedia Interface, HDMI Trade dress and the HDMI Logos are trademarks or registered trademarks of HDMI Licensing Administrator, Inc.

All other trademarks, products, services and companies in this manual or the product described in this manual are the property of their respective owners.

Export Compliance Statement

Uniview complies with applicable export control laws and regulations worldwide, including that of the People's Republic of China and the United States, and abides by relevant regulations relating to the export, re-export and transfer of hardware, software and technology. Regarding the product described in this manual, Uniview asks you to fully understand and strictly abide by the applicable export laws and regulations worldwide.

EU Authorised Representative

UNV Technology EUROPE B.V. Room 2945,3rdFloor,Randstad 21-05 G,1314BD,Almere,Netherlands.

Privacy Protection Reminder

Uniview complies with appropriate privacy protection laws and is committed to protecting user privacy. You may want to read our full privacy policy at our website and get to know the ways we process your personal information. Please be aware, using the product described in this manual may involve the collection of personal information such as face, fingerprint, license plate number, email, phone number, GPS. Please abide by your local laws and regulations while using the product.

About This Manual

- This manual is intended for multiple product models, and the photos, illustrations, descriptions, etc, in this manual may be different from the actual appearances, functions, features, etc, of the product.
- This manual is intended for multiple software versions, and the illustrations and descriptions in this manual may be different from the actual GUI and functions of the software.
- Despite our best efforts, technical or typographical errors may exist in this manual. Uniview cannot be held responsible for any such errors and reserves the right to change the manual without prior notice.
- Users are fully responsible for the damages and losses that arise due to improper operation.
- Uniview reserves the right to change any information in this manual without any prior notice or indication. Due to such reasons as product version upgrade or regulatory requirement of relevant regions, this manual will be periodically updated.

Disclaimer of Liability

- To the extent allowed by applicable law, in no event will Uniview be liable for any special, incidental, indirect, consequential damages, nor for any loss of profits, data, and documents.
- The product described in this manual is provided on an "as is" basis. Unless required by applicable law, this manual is
 only for informational purpose, and all statements, information, and recommendations in this manual are presented
 without warranty of any kind, expressed or implied, including, but not limited to, merchantability, satisfaction with
 quality, fitness for a particular purpose, and noninfringement.
- Users must assume total responsibility and all risks for connecting the product to the Internet, including, but not
 limited to, network attack, hacking, and virus. Uniview strongly recommends that users take all necessary measures to
 enhance the protection of network, device, data and personal information. Uniview disclaims any liability related
 thereto but will readily provide necessary security related support.
- To the extent not prohibited by applicable law, in no event will Uniview and its employees, licensors, subsidiary, affiliates be liable for results arising out of using or inability to use the product or service, including, not limited to, loss of profits and any other commercial damages or losses, loss of data, procurement of substitute goods or services; property damage, personal injury, business interruption, loss of business information, or any special, direct, indirect,

incidental, consequential, pecuniary, coverage, exemplary, subsidiary losses, however caused and on any theory of liability, whether in contract, strict liability or tort (including negligence or otherwise) in any way out of the use of the product, even if Uniview has been advised of the possibility of such damages (other than as may be required by applicable law in cases involving personal injury, incidental or subsidiary damage).

To the extent allowed by applicable law, in no event shall Uniview's total liability to you for all damages for the
product described in this manual (other than as may be required by applicable law in cases involving personal injury)
exceed the amount of money that you have paid for the product.

Network Security

Please take all necessary measures to enhance network security for your device.

The following are necessary measures for the network security of your device:

- Change default password and set strong password: You are strongly recommended to change the default password after your first login and set a strong password that includes at least 9 characters including uppercase letter, lowercase letter, digit and special character.
- Keep firmware up to date: It is recommended that your device is always upgraded to the latest version for the latest functions and better security. Visit Uniview's official website or contact your local dealer for the latest firmware.

The following are recommendations for enhancing network security of your device:

- Change password regularly: Change your device password on a regular basis and keep the password safe. Make sure only the authorized user can log in to the device.
- Enable HTTPS/SSL: Use SSL certificate to encrypt HTTP communications and ensure data security.
- Enable IP address filtering: Allow access only from the specified IP addresses.
- Minimum port mapping: Configure your router or firewall to open a minimum set of ports to the WAN and keep only
 the necessary port mappings. Never set the device as the DMZ host or configure a full cone NAT.
- Disable the automatic login and save password features: If multiple users have access to your computer, it is recommended that you disable these features to prevent unauthorized access.
- Choose username and password discretely: Avoid using the username and password of your social media, bank, email account, etc, as the username and password of your device, in case your social media, bank and email account information is leaked.
- Restrict user permissions: If more than one user needs access to your system, make sure each user is granted only the
 necessary permissions.
- Disable UPnP: When UPnP is enabled, the router will automatically map internal ports, and the system will automatically forward port data, which results in the risks of data leakage. Therefore, it is recommended to disable UPnP if HTTP and TCP port mapping have been enabled manually on your router.
- SNMP: Disable SNMP if you do not use it. If you do use it, then SNMPv3 is recommended.
- Multicast: Multicast is intended to transmit video to multiple devices. If you do not use this function, it is
 recommended you disable multicast on your network.
- Check logs: Check your device logs regularly to detect unauthorized access or abnormal operations.
- Physical protection: Keep the device in a locked room or cabinet to prevent unauthorized physical access.
- Isolate video surveillance network: Isolating your video surveillance network with other service networks helps prevent unauthorized access to devices in your security system from other service networks.

Learn More

You may also obtain security information under Security Response Center at Uniview's official website.

Safety Warnings

The device must be installed, serviced and maintained by a trained professional with necessary safety knowledge and skills. Before you start using the device, please read through this guide carefully and make sure all applicable requirements are met to avoid danger and loss of property.

Storage, Transportation, and Use

- Store or use the device in a proper environment that meets environmental requirements, including and not limited to, temperature, humidity, dust, corrosive gases, electromagnetic radiation, etc.
- Make sure the device is securely installed or placed on a flat surface to prevent falling.
- Unless otherwise specified, do not stack devices.
- Ensure good ventilation in the operating environment. Do not cover the vents on the device. Allow adequate space for ventilation.
- Protect the device from liquid of any kind.
- Make sure the power supply provides a stable voltage that meets the power requirements of the device. Make sure the
 power supply's output power exceeds the total maximum power of all the connected devices.
- Verify that the device is properly installed before connecting it to power.
- Do not remove the seal from the device body without consulting Uniview first. Do not attempt to service the product yourself. Contact a trained professional for maintenance.
- Take proper waterproof measures in accordance with requirements before using the device outdoors.
- This equipment is not suitable for use in locations where children are likely to be present.
- Always disconnect the device from power before attempting to move the device.



CAUTION!SHOCK HAZARD!

Power Requirements

- Installation and use of the device must be in strict accordance with your local electrical safety regulations.
- Use the battery properly. Improper use of the battery may cause risks of fire and explosion. Replace only with an
 identical battery. Dispose the used battery according to your local regulations or the battery manufacturer's
 instructions. Never dispose of the battery in fire.
- Use the recommended cordset (power cord) in accordance with the specified ratings.
- Only use the power adapter supplied with your device.
- Use a mains socket outlet with a protective earthing (grounding) connection.
- Ground your device properly if the device is intended to be grounded by a skilled person.
- If the equipment is not used for a long time, disconnect the equipment from outlet.

Battery Use Caution

- When battery is used, avoid:
- > Extremely high or low temperature and air pressure during use, storage and transportation.
- Battery replacement.
- Use the battery properly. Improper use of the battery such as the following may cause risks of fire, explosion or leakage of flammable liquid or gas.
 - Replace battery with an incorrect type;
 - > Dispose of a battery into fire or a hot oven, or mechanically crushing or cutting of a battery;
- Dispose of the used battery according to your local regulations or the battery manufacturer's instructions.
- Avertissement de l'utilisation de la batterie
- Lorsque utiliser la batterie, évitez:
- > Température et pression d'air extrêmement élevées ou basses pendant l'utilisation, le stockage et le transport.
- Remplacement de la batterie.
- Utilisez la batterie correctement. Mauvaise utilisation de la batterie comme cellesmentionnées ici, peut entraîner des risques d'incendie, d'explosion ou de fuite liquide de gaz inflammables.
 - Remplacer la batterie par un type incorrect;
- > Disposer d'une batterie dans le feu ou un four chaud, écraser mécaniquement ou couper la batterie;
- Disposer la batterie utilisée conformément à vos règlements locaux ou aux instructions du fabricant de la batterie.

Personal safety warnings:

- Chemical Burn Hazard. This product contains a coin cell battery. Do NOT ingest the battery. It can cause severe internal burns and lead to death.
- > Keep new and used batteries away from children.
- > If the battery compartment does not close securely, stop using the product and keep it away from children.
- If you think batteries might have been swallowed or placed inside any part of the body, seek immediate medical attention.

• Avertissements de sécurité personnelle:

- Risque de brûlure chimique. Ce produit contient une batterie de cellules. N'ingérer pas la batterie. Si la batterie de cellule est avalée, elle peut causer de graves brûlures internes en seulement 2 heures et peut entraîner la mort.
- > Gardez les batteries nouvelles ou utilisées à l'écart des enfants.
- Si le compartiment de la batterie ne se ferme pas en toute sécurité, cessez d'utiliser le produit et gardez-le à l'écart des enfants.
- Si vous pensez que des piles ont pu être avalées ou placées à l'intérieur d'une partie du corps, consultez immédiatement un médecin.

Regulatory Compliance

FCC Statements

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Compliance Information Statement refer to:

http://en.uniview.com/Support/Download_Center/Product_Installation/Declaration/

Caution: The user is cautioned that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

LVD/EMC Directive



This product complies with the European Low Voltage Directive 2014/35/EU and EMC Directive 2014/30/EU.

WEEE Directive-2012/19/EU



The product this manual refers to is covered by the Waste Electrical & Electronic Equipment (WEEE) Directive and must be disposed of in a responsible manner.

Battery Directive-2013/56/EC



Battery in the product complies with the European Battery Directive 2013/56/EC. For proper recycling, return the battery to your supplier or to a designated collection point.

Better Security, Better World



www.uniview.com

 \bowtie

globalsupport@uniview.com