DVR/NVR OS User Manual

Ver. 2016-11

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Chapter 1. DVR / NVR Operation Setup

1-1 Power ON.

- 1 connect the power
- 0 Once Power cable is connected (found in Rear Side), booting will be enabled. .
- ③ After booting is finished, the live screen and channel indication / clock are shown.
- ④ Menu window pops up by clicking the right button of the mouse or pressing [MENU] button in the remote control as shown below.



[Figure 1-1. Menu]

5 Login window pops up by clicking the login button. Login is available after inputting the password.

ogin	_		_		×
ID	admin	~	1	2	3
Password			4	5	6
rassmola			7	8	9
	OK	Cancel		0	С

[Figure 1-2. Login pop up]

 \times Password is available to change at {Menu} -> {Setup} -> {System} -> {Modify}.

1-2 Storage Setup

Select {Menu} -> {Setup} -> {Storage} and configure HDD.

Image: Second ing Im	Setup			5	1018 - 2				X
1. Private Recording Off Days 2. HDD Overwrite On On 3. Local Storage Management RAID No. Location Serial Temperature Size(F/T) Status(SW/HW) 1 SATA WD-WMC4M0H9TMYL 43°C 496/2000GB Active/Healthy 3 SATA Z3T9T9NY 45°C 496/500GB Online/Healthy			·	*	0200	F h			
2. HDD Overwrite 3. Local Storage Management Recording Backup New RAID No. Location Serial Temperature Size(F/T) Status(SW/HW) 1 SATA WD-WMC4M0H9TMYL 43°C 496/2000GB Arrive/Healthy/ 3 SATA Z3T9T9NY 45°C 496/500GB Online/Healthy/	Time	Camera	IP Camera	Recording	Schedule	Storage	Net	work	System
3. Local Storage Management Recording Backup New RAID No. Location Serial Temperature Size(F/T) Status(SW/HW) 1 SATA WD-WMC4M0H9TMYL 43°C 496/2000GB Areitve/treatility, 3 SATA Z3T9T9NY 45°C 496/500GB Online/Healthy	1. Priva	te Recording		Off	\sim	Days			
RecordingBackupNewRAIDNo.LocationSerialTemperatureSize(F/T)Status(SW/HW)1SATAWD-WMC4M0H9TMYL43°C496/2000GBActive/Healthy3SATAZ3T9T9NY45°C496/500GBOnline/Healthy44	2. HDD	Overwrite		On	\sim				
No.LocationSerialTemperatureSize(F/T)Status(SW/HW)1SATAWD-WMC4M0H9TMYL43°C496/2000GBAreive/Healthy3SATAZ3T9T9NY45°C496/500GBOnline/Healthy4<	3. Loca	l Storage Manage	ement						
1 SATA WD-WMC4M0H9TMYL 43℃ 496/2000GB Active/Healthy 3 SATA Z3T9T9NY 45℃ 496/500GB Online/Healthy 4 Grade Grade Grade Grade Grade 4 Grade Grade Grade Grade Grade 3 SATA Z3T9T9NY 45℃ 496/500GB Online/Healthy 4 Grade Grade Grade Grade Grade Grade 4 Grade Grad Grade Grade	Reco	rding Backu	p Ne	w	RAID				
3 SATA Z3T9T9NY 45°C 496/500GB Online/Healthy	No.	Location	Seri	al	Temperature	Size(F/1)	Status	(SW/HW)
	1	SATA	WD-WMC4M	10H9TMYL	43°C	496/2000	GB		
Reset Save Exit	3	SATA	Z3T9T	9NY	45°C	496/5000	GB		/Healthy
Reset Save Exit									
Reset Save Exit									
Reset Save Exit									
Reset Save Exit									
Reset Save Exit									
						Reset	Save	>	Exit

[Figure 1-3. Storage selection]

1 - 3 Recording Setup Select {Menu} -> {Setup} -> {Recording} -> {Recording}

Setup							X
		- Ör	*	0000			
Time	Camera	IP Camera	Recording	Schedule	Storage	- 📥 - Network	System
Schedu	ile 1 🛛 🔍	Schedule2	Schedule	3 💿 Sch	edule4		
Event	Rec	ording	Alarm	Duration	Log	Push	
Carne	ra	Resolution	Continu Spee	2012 A 1007	Event Speed	Audio	,
CH 0	1	st Stream	On		On	On	



Setup [Recording Resolution]/[Continuous Speed]/[Event Speed]/[Audio].

1-4 Date/Time Setup

- $\label{eq:select} (1) \quad \mbox{Select {Menu} -> {Setup} -> {Time}}.$
- $\label{eq:configure_formula} \ensuremath{\mathbb{C}} \ensuremath{\mathbb{C}}$

Setup					 X
		*	0880		
Time Camera	IP Camera	Recording	Schedule	Storage	 System
Time Sync Da	te & Time	Time Zone	Auto R	eboot	
1. Date & Time		2016/05/13	10:56:23		
2. Date Display Type		yy/mm/dd	~	/	
		Figure 1-5 Da	te/Time Cet		

[Figure 1-5. Date/Time Setup]

1-5 Display Setting and Other Setup

Select and set up {Menu} -> {Miscellaneous} -> {Display Setting}.

Display Setting		×
Camera Title Control Bar	On On	
Button Sound HD Frequency Border Line	On 60hz — 🗸	
Draw Width Color	Off 2Pixel → White →	
Screen Saver Spot Sequence Main Sequence	Off 5 sec 5 sec	
		Exit

[Figure 1-6. Display Setting]

1-6 Search

- ① Search the video records depending on Time list/Event/Multi mode/Channel.
- 2 For more information, check [2-6 Search], [2-7 Playback], [2-8 Log viewer].

1-7 Backup

- ① Backup is available in Monitoring, Search, Log and Playback Mode.
- 2 For more information, check [2-10-5 Backup].

ckup									$\left \right>$
Information									
None	∽ s	Select The	e Dev	ice					
Free Space					0 M				
Total Capacity					0 M				
File Size									
File Format		RMS form	nat		\sim				
Directory Nam	e		_	_			-	-	
1 2	010/03/	'13 10:5:	5.55		2016/	0.07 1	5 10		<u>.</u>
🔲 CH 01	D CH	102		СН 0			СН 0		
🗖 CH 05	🗖 CH	106		CH 0			СН 0		=
🔲 СН 09	🗖 CH			CH 1			CH 1		
🗖 CH 13	CH	14		CH 1			CH 1		•
Backup Proce	SS								

[Figure 1-7. Backup Setup]

1-8 DVR / NVR Info.

Move to {Menu} -> {Miscellaneous} -> {DVR/NVR Info}.

			6	~
NVR Info.				×
CH 25: None	e	CH 26: None		^
CH 27: None	Э	CH 28: None		
CH 29: None	э	CH 30: None		
CH 31: None	e	CH 32: None		
7. HDD Informa	ation (Overwrite: On)			
Total Capac	ity: 2000 GB			_ 2
Free Space:	1695 GB			
Start Date: 2	2016/09/29 09:00:00	(212)		
End Date: 20	016/10/05 10:00:00 (212)		
8. Ethernet Ty	pe: Static			
IP Address:	192.168.100.97			
Client Port:	50100			
Web Port: 8	0			
Auto Port Fo	orwarding: Off			
MAC Addres	ss: 00:0C:28:0B:32:9	2		
	00:0C:28:0B:32:9	3		
	00:0C:28:0B:32:9	4		•
			Exit	
NVR Info.				
				×
	<u>,</u>	CH 26: None		×
CH 25: None CH 27: None		CH 26: None CH 28: None		
CH 25: None CH 27: None	•	CH 28: None		
CH 25: None	÷	CH 28: None CH 30: None		
CH 25: None CH 27: None CH 29: None CH 31: None	÷	CH 28: None CH 30: None CH 32: None		
CH 25: None CH 27: None CH 29: None CH 31: None	e e etion (Overwrite: On)	CH 28: None CH 30: None CH 32: None		
CH 25: None CH 27: None CH 29: None CH 31: None 7. HDD Informa	e e ation (Overwrite: On) ity: 2000 GB	CH 28: None CH 30: None CH 32: None		
CH 25: None CH 27: None CH 29: None CH 31: None 7. HDD Informa Total Capaci Free Space:	e e ation (Overwrite: On) ity: 2000 GB	CH 28: None CH 30: None CH 32: None		
CH 25: None CH 27: None CH 29: None CH 31: None 7. HDD Informa Total Capaci Free Space: Start Date: 2	e e ation (Overwrite: On) ity: 2000 GB 1695 GB	CH 28: None CH 30: None CH 32: None (212)		
CH 25: None CH 27: None CH 29: None CH 31: None 7. HDD Informa Total Capaci Free Space: Start Date: 2	e e atton (Overwrite: On) ity: 2000 GB 1695 GB 2016/09/29 09:00:00 016/10/05 10:00:00 (CH 28: None CH 30: None CH 32: None (212)		
CH 25: None CH 27: None CH 29: None CH 31: None 7. HDD Informa Total Capaci Free Space: Start Date: 20 8. Ethernet Typ	e e atton (Overwrite: On) ity: 2000 GB 1695 GB 2016/09/29 09:00:00 016/10/05 10:00:00 (CH 28: None CH 30: None CH 32: None (212)		
CH 25: None CH 27: None CH 29: None CH 31: None 7. HDD Informa Total Capaci Free Space: Start Date: 2 End Date: 20 8. Ethernet Typ	e e ation (Overwrite: On) ity: 2000 GB 1695 GB 2016/09/29 09:00:00 016/10/05 10:00:00 (pe: Static 192.168.100.97	CH 28: None CH 30: None CH 32: None (212)		
CH 25: None CH 27: None CH 29: None CH 31: None 7. HDD Informa Total Capaci Free Space: Start Date: 2 End Date: 20 8. Ethernet Typ IP Address:	e e ation (Overwrite: On) ity: 2000 GB 1695 GB 2016/09/29 09:00:00 016/10/05 10:00:00 (pe: Static 192.168.100.97 50100	CH 28: None CH 30: None CH 32: None (212)		•
CH 25: None CH 27: None CH 27: None CH 31: None 7. HDD Informa Total Capaci Free Space: Start Date: 20 8. Ethernet Typ IP Address: Client Port: 8	e e ation (Overwrite: On) ity: 2000 GB 1695 GB 2016/09/29 09:00:00 016/10/05 10:00:00 (pe: Static 192.168.100.97 50100	CH 28: None CH 30: None CH 32: None (212)		•
CH 25: None CH 27: None CH 27: None CH 29: None CH 31: None 7. HDD Informa Total Capace Free Space: Start Date: 2 End Date: 20 8. Ethernet Typ IP Address: Client Port: 8 Web Port: 80 Auto Port Fo	e e atton (Overwrite: On) ity: 2000 GB 1695 GB 2016/09/29 09:00:00 016/10/05 10:00:00 (pe: Static 192.168.100.97 50100	CH 28: None CH 30: None CH 32: None (212) 212)		•
CH 25: None CH 27: None CH 27: None CH 29: None CH 31: None 7. HDD Informa Total Capace Free Space: Start Date: 2 End Date: 20 8. Ethernet Typ IP Address: Client Port: 8 Web Port: 80 Auto Port Fo	e e e ation (Overwrite: On) ity: 2000 GB 1695 GB 2016/09/29 09:00:00 016/10/05 10:00:00 (pe: Static 192.168.100.97 50100 0 prwarding: Off	CH 28: None CH 30: None CH 32: None (212) 212)		•
CH 25: None CH 27: None CH 27: None CH 29: None CH 31: None 7. HDD Informa Total Capace Free Space: Start Date: 2 End Date: 20 8. Ethernet Typ IP Address: Client Port: 8 Web Port: 80 Auto Port Fo	e e e ation (Overwrite: On) ity: 2000 GB 1695 GB 2016/09/29 09:00:00 016/10/05 10:00:00 (pe: Static 192.168.100.97 50100 0 prwarding: Off ess: 00:0C:28:0B:32:9	CH 28: None CH 30: None CH 32: None (212) 212) 213		•
CH 25: None CH 27: None CH 27: None CH 29: None CH 31: None 7. HDD Informa Total Capace Free Space: Start Date: 2 End Date: 20 8. Ethernet Typ IP Address: Client Port: 8 Web Port: 80 Auto Port Fo	e e e ation (Overwrite: On) ity: 2000 GB 1695 GB 2016/09/29 09:00:00 016/10/05 10:00:00 (pe: Static 192.168.100.97 50100 0 prwarding: Off ss: 00:0C:28:0B:32:9 00:0C:28:0B:32:9	CH 28: None CH 30: None CH 32: None (212) 212) 213		•

[Figure 1-8. DVR / NVR Info.]

Chapter 2. System Operation

2-1 Real Time Monitoring Mode and Icon

After booting is finished, Recording Status/Channel Title/Connection Status/Time/HDD Status are displayed as shown below.



[Figure 2-1. Recording Status]

※ Recording Event / Recording Mode Icon ※					
	M	Motion Detection Recording			
Recording Event	A	Audio Recording			
	S	Sensor Recording			
Recording	V	Video Recording			
Mode		Audio Recording			

% Recording Event Icons are still displayed despite of the recording stop. Recording Mode Icon distinguish recording status.

% 1HDD BAY model do not support Sensor function.

※ IPCAM do not support Audio Detection function.

X Live Screen Icon X				
0	Video is not connected.			
No Signal	Camera has been disconnected.			

	*	Con	ntrol Bar ※		
ID:1	25 36 🔊	•	2016/05/13 11:01:20	91GB	Play
1	2 3	4	5	6	0
1	Remote ID				
2	Full / 4ch mode / 9ch mode	/ 16cł	n mode / 25ch mode / 36ch	mode	
3	Auto Sequence Mode				
(4)	Digital zoom				
5	Date / Time				
6	HDD status				
7	Playback				

2-2 System Login

2-2-1 User Account and Authorization

System users are divided into local administrators and general users and the local administrator can use all functions.

admin	The local administrator can use all functions: System Power On/Off, Setup, Monitoring, and Playback
user	Up to 15 users are allowed. Each user can access the functions depending on the given authorities. For Authorization Setup, Move to {Menu} {Setup} {System} {4. User Registration}.

※ Functions available for Authorization Setup ※				
ID/PW	Administrator ID/PW setup (admin account ID can't be changed)			
Network live	Network live			
Playback	Playback & Network playback			
Backup	Backup control			
Setup	Setup menu control			
PTZ control	PTZ control			
Network Upgrade	Network Upgrade control			
PW	Using PW or not (Login available without PW by unchecking)			
Use of channel (user)	Authorization By each channel			

2-2-2 Login For security purpose, user must log in first to use {Monitoring Menu}.

ogin					X
ID	admin	~	1	2	3
Password	-		4	5	6
		-	7	8	9
	OK	Cancel		0	С

[Figure 2-2. Login Window]

- ① On the real-time monitoring window, select {Menu} -> {Login}
- 2 Enter the password or select cancel.

2-2-3 Log out

After logging out, the user cannot use {Menu}.

2-3 Monitoring

Powerful monitoring functions as shown below

- 1/4/9/16 Division Mode and Auto Sequence Mode
- Channel Grouping
- 1/4/9/16 Multi spot
- TV mode
- Menu Controlling in Monitoring Mode
- Zoom
- Live Event Indication
- Screen Control by using PTZ.

% Division mode & Multi spot is depending on Max. Ch

2-3-1 Screen Division and Auto Sequence

Our products provide the auto sequence mode as follows.

1/16 – basic mode Auto sequence mode –special mode



[Feature 2-3. 16ch mode]

 ※ In Basic Mode; 1/4/9/16, pres 1 Channel Division Mode (16 Group) 	sing the same mode button leads to screens as shown below.
16 Channel Division Mode (1 Group)	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
 The user can view an image of click any part of the screen to a Max. 16ch Division mode is an another screen to a max. 	•

Sequence is n	ot available in the Basic 16	nterval of the certain time in Basic Division mode. splay Setup} and select the time a		
Camera Title	On	Main Sequence		×
Control Bar Button Sound	On On			annat .
HD Frequency	60hz V	Sequence Duration	5 sec	~
Border Line		Event Duration	5 sec	~
Draw	Off	Event Release	None	~
Width	2Pixel 💛	Event Sequence	On	\sim
Color Screen Saver	White 🗸	Auto Sequence Order		
Spot Sequence	5 sec	No.	Channel	
Main Sequence	5 sec		CH 01	
		2	CH 02	
		3	CH 03	
		4	CH 04	
		Exit	Reset	Exit
② Pressing Remo mode.	ote Controller (SEQUENCE)	Button or Mouse Arrow Bu		Auto Sequence Play
(3) Basic mode – <i>J</i>	Auto sequence in 1 CH mod	le		

2-3-2 Spot

Spot is to output a channel that is set with a certain function and Spot has an independent monitor and output. The priority for Spot is Manual Spot > Event Spot > Sequence Spot.

Manual Spot

The user can designate a spot channel manually.

Misc. Control						X
Audio	Relay	Spot				
 Single 	🔵 Quad 🛛 🌑	9 Split 🛛 🔵 16 :	Split			
Sequence	e					
CH 01	CH 02	CH 03	CH 04	CH 05	CH 06	
🔘 CH 07	🔵 CH 08	🔵 СН 09	CH 10	• CH 11	CH 12	
🔘 CH 13	CH 14	CH 15	CH 16	CH 17	CH 18	
🔘 CH 19	🔵 CH 20	CH 21	🔵 CH 22	🔘 CH 23	CH 24	
🔵 CH 25	CH 26	🔵 CH 27	CH 28	🔘 CH 29	CH 30	
🔵 CH 31	🔵 CH 32					
					Exit	

[Figure 2-4. Manual Spot]

Move to {Menu} \rightarrow {Miscellaneous} \rightarrow {Misc. Control} \rightarrow {Spot} and configure on the 1/4/9/16 mode.

2 Event Spot

Event Spot is to show a channel quickly that is set with the event function in case events (Sensor, Motion and Audio) occur. The event check interval is one second. If events are detected in many channels, it shows a channel with the last event. Move to {Menu} -> {Setup} -> {Recording} -> {Alarm} -> {Spot}.

	Camera	IP Camera	Recordin	ng Sche	3 ()	Storage	Network	Sys	ter
) Schedule1	● So	chedule2	🔵 Schedi	ule3 🔵) Schedu	ıle4			
Event	Reco	ding A	larm	Durati	on	Log	Pu	sh	
Camera	Buzzer	PTZ Preset	Email	Relay	Spot	Popup	Callback	FTP	
CH 01	Off	Off	Off	Off	Off	Off	Off	Off	•
CH 02	Off	Off	Off	Off	Off	Off	Off	Off	1
CH 03	Off		Off		Off		Off		-
CH 04	Off	Off	Off	Off	Off	Off	Off	Off	
CH 05	Off	Off		Off			Off	Off	
CH 06	Off	Off	Off	Off	Off	Off	Off	Off	
CH 07	Off	Off		Off				Off	
CH 08	Off	Off	Off	Off	Off	Off	Off	Off	+
					Bo	set	Save	Exi	•

[Figure 2-5. Event spot]

③ Sequence Spot

The user can select more than one channel in Manual Spot and have a sequential image through Spot. Move to {Menu} -> {Miscellaneous} -> {Control} -> {Spot} -> {Sequence}.

Misc	. Control						\times
	Audio	Relay	Spot				
¢	Single	Quad 9) Split 🛛 🔵 16 :	Split			
(Sequence	9					
	CH 01	CH 02	CH 03	CH 04	CH 05	CH 06	
	CH 07	🔵 CH 08	🔵 СН 09	CH 10	• CH 11	CH 12	
	CH 13	CH 14	CH 15	CH 16	CH 17	CH 18	
	CH 19	🔘 CH 20	🔘 CH 21	🔵 CH 22	🔘 CH 23	CH 24	
	D CH 25	🔵 CH 26	🔵 CH 27	🔵 CH 28	🔵 CH 29	CH 30	
	CH 31	🔵 CH 32					
						Exit	

[Figure 2-6. Sequence Spot]

2-3-3 Menu in Monitoring Mode

The user can control all functions available in Monitoring Mode in {Menu}.

- ① Press the Menu or right-click mouse button. The {Menu} will then appear.
- 2 Select the desired item by using the arrow keys or mouse.
- $\ensuremath{\textcircled{}}$ $\ensuremath{\textcircled{}}$ Press the ESC button or right-click mouse button to end the menu.

2-3-4 Zoom

Zoom is to zoom in or out the 1 channel division image in the real time monitoring mode.



- Move to {Menu} -> {Zoom} or press the zoom icon from the control bar in the real time monitoring mode.
- ② After selecting a channel, it becomes the 1 channel mode and the zoom control screen shows at bottom-right.



[Figure 2-8. Zoom control screen]

- ③ In case of the mouse, move the pointer to an area to be zoomed in the zoom control screen and double-click on it.
- ④ Then, it zooms in 3 levels; Normal, x4, x16. Those 3 levels can be controlled by the wheel of the mouse. The user also can left-click and drag the yellow box to move the focused image in higher than the x4 mode.
- In case of the remote controller and front panel, it is available to move to 3 levels by using
 [SEQUENCE] button in the remote controller. The yellow box can be moved by the arrow keys

2-3-5 Screen Control by using PTZ

This enables the user the real-time monitoring by using PTZ camera. The PTZ camera must be connected to the system. Select {Menu} -> {Setup} -> {Camera} -> {PTZ}.

① Configure Protocol / ID / Baud Rate / Duration / Tour.

Setup Time Cam	era IP Came	ra Recording	Schedule	Storage	Network	X System
Camera	PTZ	Event Source	ce Rela	У		
Camera	Protocol	Camera ID	Baud Rate	Duration	Tour	
CH 01	None	1	9600	5 sec	Off	
CH 02	None	2	9600	5 sec	Off	
CH 03	None	3	9600	5 sec	Off	=
CH 04	None	4	9600	5 sec	Off	
CH 05	None	5	9600	5 sec	Off	
CH 06	None	6	9600	5 sec	Off	
CH 07	None	7	9600	5 sec	Off	
CH 08	None	8	9600	5 sec	Off	-
			R	eset S	Save	Exit
			RTZ Setupl	eset S	ave	EXIt

[Figure 2-9. PTZ Setup]

- % Baud rate can be selected at 2400/4800/9600/19200/38400.
- \times Duration can be selected at 5/10/15/20/5-60(User setting) seconds.
- $\,\%\,$ Tour consists of Tour 1/ Tour 2 and each tour can be set with 8 Preset.
- ****** PTZ supporting IPCAM sets the protocol as IP camera automatically.



× For supported protocols, refer to APPENDIX.

2 To control PTZ camera, select {PTZ Control} in Menu or press {PTZ} in the remote controller.



[Figure 2-10. PTZ control]



In the PTZ mode, there are two function (Full and Mini). Speed can be different depending on the camera manufacturers. Tour has [Tour1] and [Tour2]. Home Position Time is 1/5/10/User setting (1-60)minutes.

Ú	Preset? Using horizontal/vertical/Zoom/Focus/Iris movement of PTZ Camera, zoom or focus or Iris a certain spot of the image by designating the coordinates and move to the designated coordinates quickly.
Ú	Home Position Time? If there are no controlling signals to PTZ camera after a certain time, it goes automatically to the Preset No.1 position as Preset No. 1 is designated as Home Position

2-4 System Information and Screen Setup Change

2-4-1 System information

[Menu] \rightarrow [Miscellaneous] \rightarrow [DVR/NVR info]

% Check the Figure [1-8] DVR / NVR info

2-4-2 Display setting

!\

Camera Title On/Off, Control Bar On/Off, Button Sound On/Off, Border Line Draw/Width/Color, Sequence Duration 1-10seconds. After selecting Display Setting, it becomes the 1 channel mode and a menu pops up as shown below.

Camera Title			
	On		
Control Bar	On		
Button Sound	On		
HD Frequency	60hz	\sim	
Border Line			
Draw	Off		
Width	2Pixel	\sim	
Color	White	\sim	
Screen Saver	Off		
Spot Sequence	5 sec		
Main Sequence	5 sec		

[Figure 2-12. Display Setting Window]

2-4-3 Screen Saver

Monitor connected with DVR can be shut down to protect monitor. {Menu} -> {Miscellaneous} -> {Display Setting} -> {Screen Saver}

Name	Description
Enable	on/off setting
Duration	Screen Save duration setting
Starting	Screen Save starting setting, 0 to 24
Waiting time	Screen Save activating term when there is no input

Enable	Off	
Application		
Duration	24	Time(hour)
Starting	0	Hour
∀aiting Time	5	Min

[Figure 2-13. Display Setting Window]

2-5 Control

In the real-time monitoring, move to {Menu} -> {Miscellaneous} -> {Misc. Control}.

MISC. CONTOI		*	Misc. Control	
Audio Relay	Spot		Audio Relay Spot	
Mute			Release	
CH 01 CH 02 CH 07 CH 08	CH 03 CH 04 CH 09 CH 10	CH 05 CH 06 CH 11 CH 12	🗖 Relay01 🔲 Relay02 🔲 Relay03 🔲 Relay04	
CH 13 CH 14 CH 19 CH 20	CH 15 CH 16 CH 21 CH 22	CH 17 CH 18 CH 23 CH 24		
CH 25 CH 26 CH 31 CH 32	• CH 27 • CH 28	• CH 29 • CH 30		
		Exit		Exit
-				

[Figure 2-14. Audio]



- ① Move to the Audio tab and select the channel to be activated or Mute.
- 2 Move to the Relay tab and select.
- 3 Spot function [2-3-2 spot]

2-6 Search

- 2-6-1 Search mode
- Move to {Menu} -> {Search} in the real-time monitoring mode.

2-6-2 Calendar search



[Figure 2-16. Search Menu Window]

- ① Select [Menu] \rightarrow [Search] \rightarrow [Calendar Search]
- 2 Calendar Search allows the users search and playback by [Time]/[Multi-Channel]/[Event].

Sea	irch									×
ſ		<	A	pril 20	16	>				
h	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Time Index		
							2	Event	All	\sim
	3	4	5	6	7	8	9	Multi Mode	Multi Channal	\sim
	10	11	12			15	16		Multi Channel	×.
	17	18	19	20	21	22	23	Channel	CH 01	\sim
н	24	25	26	27	28	29	30			
Ľ										
										Hour
	0 1	1 2	3 4	1 5	6 7	8	9 10	11 12 13 14 15 16	17 18 19 20	21 22 23
		СН	0						45	Min
	С	H 01	1							1
	С	H 02	1							
		H 03	1							
11	С	H 04			_					
H										
			- 1							
L			4							
								Playback	Backup	Exit

[Figure 2-17. Calendar Search Window]

(1) Time Index

Every time when the user changes the time, a new folder (Index) is created and files saved in the folder before the time change can be found at {Menu} -> {Calendar Search} -> {Time Index}. Selecting a file at {Menu} -> {Calendar Search} -> {Time Index} leads to a selection window popup and the user can select a file in different folders (before time change).

<u>la</u>	X Searching by using the file lists is only available on multi-channel mode.
Current time	The recorded file by time of the current system
Old time	The recorded file before time change

(2) Event

Event is to search the data by the events. Select [All/Motion/Sensor/Audio].

(3) Multi mode

Multi-Channel: The user can playback the video contents of the certain channels recorded in specific time simultaneously.

Multi-Time : The user can playback the video contents of the certain channels recorded in different time zone simultaneously. Entering into the search mode during the Multi-Time playback leads to the Multi-Time Search.

Multi-Date : The user can playback the video contents of the certain channels recorded

in different dates simultaneously. Entering into the search mode during the Multi-Time playback leads to the Multi-Time Search.

(4) Channel

User can select the specific channel when selecting Multi-Time/Multi-date in Multi-mode.

2-6-3 Time Search

User can search the specific date and time records.



[Figure 2-18. Time Search Window]

2-6-4 Go To The Last

The user can search and playback the last (ahead of 5 minutes) recorded data by Multi-Channel Mode.

2-6-5 Go To The First

The user can search and playback the first recorded data in HDD by Multi-Channel Mode.

2-6-6 Go to The Last Played Time

The user can playback from the last played time.

2 - 7 Playback



[Figure 2-19. Playback Screen]

 $\,\%\,$ There are five routes to play the recorded image.

- Playback in the Calendar Search Select (Playback) in (Menu) > (Search) -
- Select {Playback} in {Menu} → {Search} → {Calendar Search} → {Search}. Playback in the Go To The Last
- Select {Menu} \rightarrow {Search} \rightarrow {Go to The Last}.
- Playback in the Go To The First Select {Menu} → {Search} → {Go To the First}.
- Playback in the Last Played Time
- Select {Menu} \rightarrow {Search} \rightarrow {The Last Played Time}.
- ➢ Playback in the Log View After selecting {Menu} → {Miscellaneous} → {Log Viewer}, select or double-click the time line listed to play.

X Our products provide a variety of the playback as follows.

- Smart Search
- Calendar Search
- Multi-Time
- Multi-Day
- Panorama Play
- Event Play
- Zoom Play

2-7-1 Playback and Playback Speed Control

1 In the Playback mode, the user can playback video contents by using buttons as shown below.

- 2 After the data is played to the end, the data of the next time zone will be automatically searched and played (this function is possible only in the Multi-channel Playback mode; both backward playback and forward playback are possible).
- Pessing buttons, the user can adjust the playback speed by(x1) / (x2) / (x4) / (x8) / (x 3 16) / (x 32) / (x 300).

25 🔝	Ð,		×1	K		I		LIVE
[Figure 2-20, Playback Status and Control Window]								

	Description of the Search Buttons					
Button	Name	Features				
	Channel Mode Change	Switch the channel mode.				
Q	Zoom Mode	Switch to the Zoom mode.				
	Forward Play / Fast Forward	Press one time - Playback forward (x 1)				
		Press two times - Fast forward (\times 2)				
		Press three times - Fast forward (x 4)				
		Press four times - Fast forward (\times 8)				
		Press five times - Fast forward (x 16)				
		Press six times - Fast forward (x 32)				
		Press seven times - Fast forward (× 300) Pressing one more time in x300 leads to x1 back.				
	Forward Frame by Frame	Playback frame-by-frame Pause				
	Pause	Pause				
	Reverse Frame by Frame	Reverse playback frame by frame Pause				
	Reverse Play / Fast Reverse	Press one time - Playback reverse (x 1)				
		Press two times - Fast reverse (x 2)				
		Press three times - Fast reverse (x 4)				
		Press four times - Fast reverse (\times 8)				
		Press five times - Fast reverse (x 16)				
		Press six times - Fast reverse (x 32)				
		Press seven times - Fast reverse (× 300) Pressing one more time in x300 leads to x1 back.				
LIVE	Live button	Exit out of Playback Mode.				
	×1	Status bar indicating information of the hourly recorded image data and the speed				

[Figure 2-20. Playback Status and Control Window]

Selecting the right-mouse button or menu button in the Playback Mode pops up the {Playback Menu} as shown below.

Menu	
Smart Search	P
Panorama Playba	ck∙
Calendar Search	5.455
Multi Time	•
Multi Day	Þ
Event Playback	•
Audio Control	•
Backup	. Þ.
Zoom	•
[Figure 2-21. Playback M	/lenul

2-7-2 Smart Search

1

This function is used to search an image with the object movement at a specific zone quickly. Searching by each channel and a detail control are available.

Туре	Content
Sensitivity	5 levels; Lowest / Low / Middle / High / Highest
Minimum	Mosaic pixel control available between 1-10
Quick Search	In the NTSC mode, search 30 frames once. In the PAL mode, search 25 frames once.
Detail Search	Search all frames.

- ① Move to the Smart Search and select the desired channel.
- 2 After shifting to the 1 channel mode, select areas to be smart searched.



[Feature 2-22. Smart Search Area Designation]

- ③ The 14 * 15 pixel mosaic mode appears. In the beginning, all pixels are selected. Designate an area by left-click and drag the pixel mosaic pointer (deep yellow). Designate another area by repeating the same way.
- ④ Right-click brings up the menu as shown below. Configure each category and press the Playback button to start searching.

It detects motions in non-designated blocks.

Menu			
Sensitivity Minimum ✓ Quick Search Detail Search Playback Exit	<mark>Lowest</mark> Low Medium High Highest	Wait for smart sear	ch Cancel
		otion Detection Window]	

- (5) It may take time during the searching. Start the playback after

2-7-3 Calendar Search

Move to {Menu} -> {Search} -> {Calendar Search} and then a searching window pops up. Check [Figure 2-21. Playback menu]

2-7-4 Multi Time

The user can playback the video recorded image of the certain channel recorded in different time zones simultaneously. The arrangement of the searching result is the past to recent format. Check [Figure 2-21. Playback Menu]

2-7-5 Multi Day

The user can playback the video recorded image of the certain channel recorded in different dates simultaneously. The arrangement of the searching result is the past to recent format. Check [Figure 2-21. Playback menu]

2-7-6 Panorama playback

Panorama Play is to play recorded images of the certain channel frame by frame. Panorama Play can be viewed at 16 frame / 9 frame / 4 frame / 1 frame.

Check [Figure 2-21. Playback menu]



[Figure 2-24. Panorama playback]

2-7-7 Audio

Audio is to select the use of mute function in the recorded data. Check [Figure 2-21. Playback menu]

2-7-8 Event

Event is to search and play events [All/Motion/Sensor/Audio]. Check [Figure 2-21. Playback menu]

2-7-9 Backup

The user can save the backup image data and capture the image into [USB/External Device].

Backup	Save the recorded data into [External Device].
Snapshot	Capture and save the current displaying screen.
Charly [Linuma 2]	

Check [Figure 2-21. Playback menu]

2-7-1 0 Screen Mode

Screen division is available in the Playback mode as same in the Monitoring Mode. Select the screen division mode by using the mouse or arrow keys in the front panel and remote controller.

E E E 25 👀 🗨		1	×1		LIVE			
[Figure 2-25. Control bar]								

2-8 Log Viewer

DVR/NVR records all Log information over the system operation including Power on/off, System Setup and Network Access. Move to {Menu} -> {Miscellaneous} -> {Log Viewer} to see the logs.

	<	Ap	oril 20	16	>		All	Fail	Net	Rec Event N	lormal
Sun	Mon	Tue	Wed	Thu	Fri	Sat	Time	Event		Information	
						2	14:49:46	Playback	End	[Local]admin	
3	4	5	6		8	9	14:49:16	Playback	Start	[Local]admin	
10	11	12	13	14	15	16	14:49:16	Playback	End	[Local]admin	
17	18	19	20	21	22	23	14:48:38	Playback	Start	[Local] admin	
24	25	26	27	28	29	30	14:48:36	Playback	End	[Local] admin	
							14:48:23	Playback	Start	[Local]admin	
							14:48:23	Playback	End	[Local] admin	
etai	led Inf	orma	tion				14:48:18	Playback	Start	[Local]admin	
Pag	e	1	/ 10				14:48:18	Playback	End	[Local]admin	
201	6/04/1	18 14		8			14:48:04	Playback	Start	[Local]admin	
	back I						14:47:53	Playback	End	[Local] admin	
	6/04/1		:43:34				14:47:51	Playback	Start	[Local]admin	
							14:47:51	Playback	End	[Local]admin	
							14:47:05	Playback	Start	[Local]admin	
							14:46:56	Setup Ou	t	[Local]admin	
							14:46:56	Recording	g Setup Cha	a admin	

[Figure 2-26. Log Viewer]

2-8-1 Log Type

General	Logs related to power ON/OFF, file copy/backup failure, setup start/end, playback, and other basic system operations
Recording Event	Logs related to the recording including motion detection and sensor detection, Audio detection
Network	Logs related to network operations including network login, network logout, and network live
Fail	Logs related to system operation failures including signal loss and network connection failure
All	Logs related to all system operations

2-8-2 System Log Viewer

- In the real-time monitoring mode, {Menu} {Miscellaneous} {Log Viewer}, then, Log List Window pops up.
- ② On the activated calendar window, select the desired date (year/month/day) by using the arrow keys and the Select button.
- 3 The user can check the time and the log type by using the arrow keys in the log list.
- ④ Use the Up/Down button to check the logs by time and type on each page.
- (5) The user can shift the focus to a certain time zone to play the certain time (playback will start from the time point when logs are saved)
- 6 Click the right-mouse button or select {Menu} button in the remote controller and select {Hour} to move the desired log time zone.

Time Changed Log Data View

The stored data folder is created each time the user changes the time. A blue triangular icon is displayed at a date in the calendar window that time changes are made. Otherwise, a red triangular icon is displayed at an unchanged date. To view the log details, select the desired date with a red icon. Selecting a date with the blue icon causes the changed date list window to appear.

2-9 Recording

ព្រ

2-9-1 Recording Type

It supports various recording types as shown below.

Recording Type	Description
Continuous	The Continuous recording will be initiated based on the general frame rate.
Motion	When motion is detected, the recording will be initiated based on the event frame value.
Sensor	When input signal from an external sensor is generated, the recording will be initiated based on the event frame value.
Audio	When audio is detected, the recording will be initiated based on the event frame value.

2-9-2 Recording Setup

Move to {Menu} -> {Setup} -> {Recording} -> {Recording}.

2-9-3 Recording Status View

1) Recording Status by Color

	Recording Event / Recording Mode Icon					
	Μ	Motion Detection Recording				
Recording Event	Α	Audio Recording				
	S	Sensor Recording				
Recording	V	Video Recording				
Mode		Audio Recording				

2-1 0 Backup.

In order to backup the data, make sure to check that external storage devices (CD, DVD or HDD) supports USB 2.0 interface is connected. The user can back up data in the real-time monitoring, search, log, or the playback mode.



X In case of using USB with NTFS file system, 'Hardware safety removal' is necessary from Windows. If not, USB memory can be damaged.

After the backup, USB can be removed from DVR/NVR.



[Figure 2-27. Backup Menu]

2-1 0-1 Backup in the Real-Time Monitoring Mode

- In the real-time monitoring mode, select {Menu} -> {Backup} -> {Backup}. The backup menus will then appear.
- (2) The automatic backup time is set to 5 minutes before the Copy (Backup) button is pressed, and the end time, to the time the Copy (Backup) button is pressed.
- 3 All channels containing data at the time of backup are backed up automatically. Depending on the divided screen mode, however, only those channels that can be viewed may be selected.
- ④ For the remaining backup procedures, see [2-10-5 Common Backup Procedure].

Information None	Select T			
None	Select T			
		he Device		
Free Space		0	M	
Total Capacity	y [0	М	
File Size		32 (N	
File Format	RMS for	rmat	\checkmark	
Directory Nam	ne			
Time Index				
	2016/05/13 10:	53:39 ~ 201	6/05/13 10:58:3	9
📃 All Channe	1			
📃 CH 01	🗖 CH 02	🗖 CH 03	🗖 CH 04	
🗖 CH 05	🗖 CH 06	🗖 CH 07	🗖 CH 08	Ξ
🗖 CH 09	🗖 CH 10	🗖 CH 11	🗖 CH 12	
🗖 CH 13	🗖 CH 14	🗖 CH 15	🗖 CH 16	-
Backup Proce	iss			
			Start Ex	vit

[Figure 2-28. Backup in the Real-Time Monitoring Mode]

2-1 0-2 Backup in Search Mode



[Figure 2-29. Backup in Search Mode]

- $(1) Select \{Menu\} \rightarrow \{Search\} \rightarrow \{Calendar Search\}.$
- ② The automatic backup start time is set to the year/month/date/hour/minute set in the search mode, and the end time, to the last minute/second of the data existing at the selected time.
- $\ensuremath{\textcircled{3}}$ All channels with existing data at the time of backup are backed up automatically.
- ④ For the remaining backup procedures, see [2-10-5 Common Backup Procedure].

2-1 0-3 Backup in Log Mode

1	<	Ap	oril 20	16	>	•	All	Fail	Net	Rec Event	Normal	
Sun	Mon	Tue	Wed	Thu	Fri	Sat	Time	Event	_	Information		
						2	14:49:46	Playback	End	[Local]adm	ni n 📄	
3	4	5	6	7	8	9	14:49:16	Playback	Start	[Local]adm	in	
10	11	12	13	14	15	16	14:49:16	Playback End		[Local]adm	in	
17	18	19	20	21	22	23	14:48:38	Playback Start		[Local]adm	in	
24	25	26	27	28	29	30	14:48:36	Playback	End	[Local]adm	in	
							14:48:23	Playback	Start	[Local]adm	lin	
							14:48:23	Playback	End	[Local]adm	lin	
etai	led Inf	orma	tion				14:48:18	Playback	Start	[Local]adm	lin	
Page		1	/ 10				14:48:18	Playback	End	[Local]adm	lin	
2010	6/04/	18 14		6			14:48:04	Playback	Start	[Local]adm	lin	
	back cal]ad						14:47:53	Playback End Playback Start Playback End		[Local]admin [Local]admin [Local]admin		
	5/04/		:43:34				14:47:51					
							14:47:51					
							14:47:05	Playback	Start	[Local]adm	lin	
							14:46:56	Setup Out		[Local]adm	lin	
							14:46:56	Recording	Setup Cha	. admin		

[Figure 2-30. Backup in Log Mode]

- Select a date in {Menu} -> {Miscellaneous} -> {Log Viewer} and select a log related to the data to be backed up.
- 2 Click the right-mouse button or select {MENU} button in the front panel.
- 3 The automatic backup time is set to 5 minutes before the selected log is generated, and the end time, to the time the selected log is generated.
- 4 All channels with existing data at the time of backup are backed up automatically. If a log has been generated for a specific channel, however, then only that channel is selected.
- 5 For the remaining backup procedures, see [3-10-5 Common Backup Procedure].

2-1 0-4 Backup in Playback Mode

Menu	
Smart Search	Þ
Panorama Playba	ck ·
Calendar Search	
Multi Time	•
Multi Day	•
Event Playback	•
Audio Control	•
Backup	. . .
Zoom	•

[Figure 2-31. Backup in Playback Mode]

- 1) In the Playback mode, select {Menu} -> {Backup}. Any playback in progress at this time will stop.
- (2) The automatic backup time is set to 5 minutes before the Copy (Backup) button is pressed, and the end time, to the time the Copy (Backup) button is pressed.
- 3 All channels containing data at the time of backup are backed up automatically. Depending on the divided screen mode, however, only those channels that can be viewed may be selected.
- ④ For the remaining backup procedures, see [2-10-5 Common Backup Procedure].

2-1 0-5 Common Backup Procedure

Information				
None	✓ Select 1	he Device		
Free Space			M	
Total Capacity			м	
File Size				
File Format	RMS fo	rmat	\sim	
Directory Nam	e			
Time Index	2016/05/13 10	:53:39 ~ 2011	6/05/13 10:58:39	
		:53:39 ~ 2011	6/05/13 10:58:39	
1 2		:53:39 ~ 2011 □ CH 03	6/05/13 10:58:39 □ CH 04	
1 2				-
1 2 All Channel	CH 02	СН 03	CH 04	
1 2 All Channel CH 01 CH 05	□ CH 02 □ CH 06	□ CH 03 □ CH 07	□ CH 04 □ CH 08	
1 2 All Channel CH 01 CH 05 CH 09	CH 02 CH 06 CH 10 CH 14	□ CH 03 □ CH 07 □ CH 11	□ CH 04 □ CH 08 □ CH 12	

[Figure 2-32. Backup Window]

① [Figure 2-33] shows the initial backup window menus.

② A list of the devices that can be selected is outputted with simple information of the currently selected devices

③ Selecting a device by pressing the Select button causes the free space and total capacity for the selected device to be displayed.

④ Selecting a device causes the directory name based on the initial values for the time and channel to be displayed and the size of the file to be backed up to be calculated.

(5) The directory is named as same with the backup time. The first 12 digits are determined by the year/month/day/hour/minute/second for From, and the 12 digits in the middle, by the year/month/day/hour/minute/second for To. The last 2 digits are determined by the number of folders in the selected device.

6 Selecting a device enables selecting the backup time as well.

To change the start and end time, press the Select button after choosing the start and end time.
 Change year/month/day/hour/minute/second by using arrow keys.

⑧ Changing the backup time causes the name of the directory to be backed up to be changed as well.

(9) Select [Yes/No/Cancel] after pressing Start button.

※ In case of AVI file, select [Yes] to back up the data or [No] to stop the backup. Otherwise, press the [Cancel] button to return to the device selection mode on the backup window.

2-1 1 Setup Backup

The Setup Backup is to back all setup values of the current menu up. This function enables the user to copy the setups and apply them into other devices.



[Figure 2-33. Setup backup]

- ① For the Setup Backup, a device for backup must be connected.
- ② Move to {Menu} -> {Backup} -> {Setup Backup} and a window shown below appears. The setup is copied by the name shown below.

Device Information	X
Device USB or HDD Device SATA Device 1 SanDCruzer_Force	
[Figure 2-34. Setup Upgrade]	
Saved as the name below	
H6E04_V1.3.003_20160414_172843.bin	
1 2 3 4	
Model / Version / Date / Time	

- $(\texttt{3} Move to \{Menu\} \rightarrow \{Setup\} \rightarrow \{System\} \rightarrow \{Upgrade\} \rightarrow \{Setup\} after insert the backup device.$
- ④ With this way, the user can upgrade a new device with the current setup values in easy way.

2-1 2 Log Backup

This is to back logs up including General/ Recording Event / Network / Fail. Move to {Menu} -> {Backup} -> {Log backup} and start the backup process after selection of the events.

Log Backup	×
Information	
Device 1	USB or HDD Device SATA SanDCruzer_Force
Free Space	6270 M
Total Capacity	7987 M
File Size	9646 Byte
Directory Name	20160418_20160418_09_LOG
All Event Fail Fail Backup Process	Net 📃 Rec Event 📃 Normal
	Start Exit
[FIQ	gure 2-35. Log Backup]
Log files are created at a	
565645348945_2010030)3.log

2-1 3 Capture

Log file is the text file.

The Capture function lets the user create a JPG file in the real-time monitoring, playback, search, or log mode and back up the image data.



[Figure 2-36. Capture]

To back up the currently displayed image, select {Menu} -> {Backup} -> {Capture} in real-time monitoring, Playback and Log mode.

2-1 4 QR Code(Network information)

QR Code is the function to connect the DVR /NVR scanning the QR code image. The user can connect the devices through the application named 'Smart Eyes Pro.'



Chapter 3. Setup

3 - 1 Time

% Function Description

- 1. Time Synchronization
- 1) Synchronization with the NTP server

The time is synchronized once every hour with the NTP Server.

A. Automatic Setup

The nearest server from the user's zone will be selected for connection. If the connection fails, the next nearest server will be chosen.

B. User Setting

The user sets the URL or IP for the NTP server. If connection is not established, a message will be sent to the user, and the related log, saved.

If synchronization with the NTP server fails, synchronization with RTC will be established.

2. Daylight Saving Time (DST) Setup

Regardless of whether NTP server or DST server is referred to, DST is automatically processed according to the time.

3. Time Setup by User

The user can set the time directly.

For the NTP client setup, the user can read the time but not change it.

Move to {Menu} -> {Setup} -> {Time} to set up time functions.

Setup					~				×
			€ ₽	0281					
Time	Camera	IP Camera	Recording	Schedu	lle	Storage	e Net	twork	System
Time S	ync D	ate & Time	Time Zone	AL	ito Ret	poot			
1. Time S	Sync		NTP	_	\sim				
2. NTP									
Server	Туре		NTP						
Server	URL		Auto						
3. Update	e No./day		2 Time		\sim				
					Re	eset	Save		Exit

[Figure 3-1. Time Menu]

3 - 1 - 1 Time Sync

Select Time Sever	/ Sever Type .	Sever URL.

Off	The time server is not used.
NTP	NTP is used to set the time for the time DVR/NVR



{NTP} setup is available when {Time Sync} is set as NTP. Server URL is [Auto] when the server type is [NTP]. The user can enter the IP, URL when the server type is [PC]

3 - 1 - 2 Date and Time (1)Date and Time

Setup							X
		- Ö	₩ .	0230			
Time	Camera	IP Camera	Recording	Schedule	Storage	Network	System
Time S	ync Da	te & Time	Time Zone	Auto R	eboot		
1. Date 8	k Time		2016/05/13	11:16:09			
2. Date D)isplay Type		yy/mm/dd	~			
					Reset	Save	Exit
[Figure 3-2. Date and Time]							
<u> </u>							
Only available when Time Server is off.							

The system date and time format is Year/Month/Day/Hour/Minute/Second.

- 1 By using the arrow keys and the Select button, move the focus onto the desired field; Year/Month/Day/Hour/Minute/Second and press the Select button.
- Select a field you want to change by using the arrow buttons and press the Select button. 2

(2)Time Display Format

Select Time Display Format among [Day/Month/Year] / [Month/Day/Year] / [Year/Month/Day].

3 - 1 - 3 Standard Time Zone

Setup		\times
Time Camera IP Camera	Recording Schedule Storage Network System	1
Time Sync Date & Time	Time Zone Auto Reboot	
1. Time Zone	(GMT+09:00) Seoul	
2. Daylight Saving Time	Off ~	
Start Time	March 2nd week Sun 02:00:00	
End Time	November 1st week Sun 02:00:00	
	Reset Save Exit	

[Figure 3-3. Standard Time Zone]

(3)Standard Time Zone

- Select {Standard Time Zone}. 1
- 2 On the selection window, select the standard time zone you want to set.

(4)DST

- By using the arrow keys and the Select button, select {Summer Time}. 1
- ② On the selection window, select On/Off by using the arrow keys and the Select button.

(5)Start Time

- 1 By using the arrow keys and the Select button, select {Start Time}.
- On the selection window, set up Start Time by using the arrow keys and the Select button. (2)

(6)End Time

- By using the arrow keys and the Select button, select {End Time}. (1)
- ② On the selection window, set up End Time by using the arrow keys and the Select button.



× For a weekly setting in the {Start Time} and {End Time} fields, set Day to [week]. X After the Daylight Saving Time is selected, the existing data will be displayed

3 - 1 - 4 Auto Reboot

Auto Reboot is for system stability, rebooting itself regularly.

Setup							X
Time	Camera	IP Camera		Schedule	Storage	Network	System
	Camera	ir Camera	necording	Schedule	Storage	NELWOIK	System
Time Sy	/nc Da	te & Time	Time Zone	Auto R	eboot		
1. Auto R	eboot		Off				
Time(ho	our)		00:00	\sim			
Repeat			Every Day	\sim			
				_			
					Reset	Save	Exit

[Figure 3-4. Auto Reboot Menu]

3 - 2 Camera

Setup					×
Time Cam	Pera IP Camera	Recording	Schedule	Storage N	etwork System
Camera	PTZ	Event Source	Relay	/	
Camera	Connect	Name	PZ Mask	Туре	Adjust
CH 01	Off	CH 01		Auto	10/10
CH 02	Off	CH 02		Auto	10/10
CH 03	On	CH 03	0	Auto	10/10
CH 04	Off	CH 04		Auto	10/10
CH 05	Off	CH 05		Auto	10/10
CH 06	Off	CH 06		Auto	10/10
CH 07	Off	CH 07		Auto	10/10
CH 08	Off	CH 08		Auto	10/10 🔍
			Re	eset Sa	ve Exit

[Figure 3-5. Camera Menu]

% The channels which are connected with IPCAM in DVR/NVR are not available with the following features. [PZ Mask, Type, Adjust]

3 - 2 - 1 Camera

① Connection

Used to set whether to connect or disconnect each camera channel.



 \times When the camera channel is set to disconnected, the video contents will not be displayed even if the camera is actually connected.

2 Title

Name each camera. Max. 10 letters, 20 numbers are available.

③ Privacy

The feature that the monitors can't see the specific parts of the real-time monitoring channel. Privacy setting available once selecting the privacy tab of each channel. And the screen is converted to 1ch mode accordingly.

Max.4 privacy parts are available.

****** The channels which are connected with IPCAM in DVR/NVR are not available with this feature.



[Figure 3-6. Privacy Menu]

4 Туре

Set the camera type. There are different camera types depending on the models. Please note that IPCAM & EX-SDI 1HDD Bay models do not support the camera type setting.

				×
era IP Camer	a Recording	Schedule	Storage	Network System
PTZ	Event Sourc	e Rela	y	
Connect	Name	PZ Mask	Туре	Adjust
Off	CH 01		Auto	Auto
Off	CH 02		Auto	4MP 3MP
On	CH 03		Auto	3MP(1920×1536)
Off	CH 04		Auto	T-1080
Off	CH 05		Auto	A-1080 C-1080
Off	CH 06		Auto	T-720
Off	CH 07		Auto	A-720 C-720
Off	CH 08		Auto	960H
			leset	Save Exit
	PTZ PTZ Connect Off Off Off Off Off Off Off Off Off Of	PTZ Event Source Connect Name Off CH 01 Off CH 02 On CH 03 Off CH 04 Off CH 05 Off CH 05 Off CH 06 Off CH 08	IP Camera Recording Schedule PTZ Event Source Relation Connect Name PZ Mask Off CH 01 0 Off CH 02 0 Off CH 03 0 Off CH 04 0 Off CH 05 0 Off CH 06 0 Off CH 07 0 Off CH 08 0	IP Camera Recording Schedule Storage PTZ Event Source Relay Connect Name PZ Mask Type Off CH 01 0 Auto Off CH 02 0 Auto Off CH 03 0 Auto Off CH 04 0 Auto Off CH 05 0 Auto Off CH 06 0 Auto Off CH 08 0 Auto

[Figure 3-7. Camera Type Menu]

- **%** The channels which are connected with IPCAM in DVR/NVR and EX-SDI 1HDD Bay models are not available with this feature.
- Adjust (IPCAM) (5)

Adjust Brightness/Contrast/Color/Saturation/Sharpen/Camera.
	X
CH 03	\sim
Exit	
	CH 03

***** The channels which are connected with IPCAM in DVR/NVR are not available with this feature.

3 - 2 - 2 PTZ

Setup the protocol and baud rate of the PTZ Camera.

Setup										X
Time	Car	nera	IP Camer	ra Recordin		1234 chedule	Storage	Netv	work	System
Ca	nera		PTZ	Event Sou	ırce	Rela	y			
Ca	mera	Prot	tocol	Camera ID	В	aud Rate	Durati	on	Tour	
С	H 01	No	one	1		9600	5 se		Off	
С	H 02	No	one	2		9600	5 se	C	Off	
С	H 03	No	one	3		9600	5 se		Off	
С	H 04	No	one	4		9600	5 se	C	Off	
С	H 05	No	one	5		9600	5 se		Off	
C	H 06	No	one	6		9600	5 se	C	Off	
С	H 07	No	one	7		9600	5 se	C	Off	
C	H 08	No	one	8		9600	5 se		Off	
						R	eset	Save	I	Exit

[Figure 3-9. PTZ Menu]

*** IPCAM supporting PTZ is set to Protocol as IP Camera automatically.**

3 - 2 - 3 PTZ Coax(UTC) Control

OSD setup change is available with the connected camera.

etup					-	>
() Time	Camera R		iedule	Storage	Networ	k System
Camera	PTZ	POS Event	Source	Relay		
Camera	Protocol	Camera ID	Baud R	ate Du	ration	Tour
CH 01	COAX_PTZ	None	MIK	AMI		Off
CH 02	None	A.D.		ORIENTAL		Off
CH 03		COHU DONGYANG				Off
CH 04	None	DYNACOLO		PHILIPS	•	Off
CH 05		ERNITEC		OLINE		Off
CH 06	None	EYE VIEW FINE SYSTE		ATRON		Off
CH 07		GE		NGJIN	Þ	Off
CH 08	None	GSP	> VIC			Off
		HITRON HONEY WELI		ION_HI_TE KO	CHI	
		JANEX) CO	AX_PTZ	PE	LCO_D
-		LG LILIN	; co	AX_OSD		LAR

[Figure 3-10. COAX_PTZ Setup]



[Figure 3-11 OSD OPEN]

Select [Menu] \rightarrow [Setup] \rightarrow [Camera] \rightarrow [PTZ]. Change the Protocol [COAX_PTZ] \rightarrow [PELCO_D] and select [Menu] \rightarrow [PTZ control] OSD menu setup is available with PTZ control menu.

※ IPCAM do not support this feature.

3 - 2 - 4 Event Source

Select {Menu} → {Setup} → {Camera} → {Event Source}.

Setup					X
Time C	amera IP Came	ra Recording Sched	ule Storage	Network	System
Camera	PTZ	Event Source	Relay		
Channel	Motion Area	Motion Sensitivity	Sound Sensitivity	Sense Type	
CH 01	210	Highest		NO	
CH 02	210	Highest		NO	
CH 03	210	Highest		NO	
CH 04	210	Highest		NO	
CH 05	210	Highest		NO	
CH 06	210	Highest		NO	
CH 07	210	Highest		NO	
CH 08	210	Highest		NO	
			Reset	Save	Exit
		0.40 E			

[Figure 3-12. Event Source Menu]



[Figure 3-13. Motion Area Setup]

- ① Select Motion Area of each channel.
- ② It becomes the 1 channel division mode and rectangular boxes appear where motions occur. Drag the yellow pixel cursor by using the mouse or the front button/remote controller and select pixels where motion detection doesn't applied. The selected area turns black.
- ③ Click the right button of the mouse to finish.
- (2) Motion Sensitivity: Lowest/Low/Middle/High/Highest.
- (3) Sound Sensitivity: Lowest/Low/Middle/High/Highest
- (4) Sensor Type: Select the sensor type. (NO/NC)

3 - 2 - 5 Relay

Setup								
		L,		*	1284		1	
Time	Came	era	IP Camera	Recording	Schedul	e Storag	je Network	System
Came	ra		PTZ	Event Source	:	Relay		
Chan	nel	Rela	ау Туре					
Relay	01		NO					
Relay	02		NO					
Relay	03		NO					
Relay	04		NO					
						Reset	Save	Exit

[Figure 3-14. Relay Type Setup]

Select the relay type. (NO/NC)

3 - 3 IP Camera

3 - 3 - 1 IP Camera Setup

IP Camera can be registered to NVR. The user can check the information of IP Camera channel, Model Name, IP, Port and Protocol.

% This feature is available in NVR/DVR except EX-SDI DVR.

Setup				X
Time Can		Recording Schedule		etwork System
Register	Stream	Common		
IP Camera	Model Name	IP	Port	Protocol
CH 01	FW7502-KVF	10.34.47.2	80	ONVIF
CH 02				-
CH 03				
CH 04				-
CH 05				-
CH 06				-
CH 07				-
CH 08				
			DHCP IPC List	Search
				Exit

[Figure 3-15. IP Camera Setup]

① Click [Search] button.

	IP	Port	Model Name	MAC Address
001	10.34.46.5	80	SK-NU30	8C:E7:48:EB:22:03
002	10.34.46.2	80	FW1174-FC-P	00:30:6F:85:5B:D5
003	10.34.46.8	80	FW1179-FC1N	00:30:6F:84:D4:EE
004	10.34.46.4	80	FW1174-FC-P	00:30:6F:85:5B:D1
005				
006				
007				
800 🔟				
009				
010				
011				
012				
013				
014				
015				
016				

[Figure 3-16. IP Camera Search]



Search					×
	IP	Port	Model Name	MAC Addres	
001	10.34.46.4	80	SK-NM30	8C:E7:48:FB:A8	3:3D
002		Register	×		
003		Channel	CH 18 🗸 🗸		
004					
005		IP	10.34.46.4		
006		Port	80		
007		ID/PW List	Empty 🗸 🗸		
008		ID			
009		PW			=
010		PW			
011			RTSP-TCP		
012		Protocol	onvif 🗸 🗸		
013			1		
014		R	legister Exit		
015				_	
016					-
			Refres	n Register	Exit

[Figure 3-17. IP Camera Registration]

- $\ensuremath{(3)}$ $\ensuremath{($ Register] button after selecting the camera among the searched IP cameras.
- ④ Select ID/PW, Port and Protocol of IP camera and click [Register] then finish the registration
- In case of registration with POE, it'll take about 1-3 minutes after connecting the IP camera.

And [Figure 3-18. IP Camera Link up using POE] is displayed on the screen.



[Figure 3-18. IP Camera Link up using POE]

- 6 After finishing IP Camera Link up, the registration popup appears on the screen.
- Finish the IP Camera registration by clicking the registration button after selecting ID/PW, Port and Protocol of IP camera.

3 - 3 - 2 IP Camera Stream Setup

Se	tup				×
	Time Carr	nera IP Camera Reco	rding Schedule Stor	age Network	System
ſ	Register	Stream Cor	mmon		
	IP Camera	1st Stream	2nd Stream	3rd Stream	
	CH 01	1920x1080, 15fps	704×480, 10fps	320x240, 5fps	
	CH 02				
	CH 03				
	CH 04				
	CH 05				
	CH 06				
	CH 07				
	CH 08				
L					
					Exit

[Figure 3-19. IP Camera Stream Setup]

① Select the stream of the channel

Setup	_				5	×
		tream		X		
		1st Stream				
Time Cam	era IP	Resolution	1920×1080	\sim	e Network S	system
Register	Strea	Bit Rate	4096			
IP Camera	15	Frame Rate	15	\sim	3rd Stream	
CH 01	1920×	2nd Stream			320x240, 5fps	
CH 02		Resolution	704×480			
CH 03		Bit Rate	1024	=		=
CH 04		Frame Rate	10			
CH 05		Frame hate	10			
CH 06		3rd Stream				- 11
CH 07		Resolution	320×240			
CH 08	_	Bit Rate	512			
		Frame Rate	15	\sim		
			Change Exit			
					E	xit
6	15		Camera Strea		angol	

[Figure 3-20. IP Camera Stream Change]

2 Click [Change] button after setting [Resolution, Bit Rate, Frame Rate]

3 - 3 - 3 IP Camera Search Protocol Setup

Setup	24 - 1914			×
Time Camera IP Camera	Recording Sched	ule Storage	Network	System
Register Stream	Common			
1. Search Protocol	ONVIF	-		
2. POE Camera Plug & Play	Off			
ID				
PW				
	RTSP-TCP			
Protocol	ONVIF	\sim		
		Reset	Save	Exit

[Figure 3-21. IP Camera Search Protocol Setup, Plug & Play Setup]

IP Camera Search Protocol Setup, Plug & Play Setup feature.

Plug & Play is only available with POE supporting models.

Input the information of IPC ID/PW/Protocol to NVR. Then POE Camera Plug & Play feature is available.

3 - 3 - 4 IP Camera Information

 $[Menu] \rightarrow [Setup] \rightarrow [IP \ Camera] \rightarrow [Register] \rightarrow Select the camera and camera information.$



[Figure 3-22. IP Camera Information]

The user can check the IP Camera information connected to NVR.

3 - 4 Recording

The Main setup is to configure the environment of record and system and major functions. In the real-time monitoring, move to $\{Menu\} \rightarrow \{Setup\} \rightarrow \{Recording\}$

Setup			·····		×
Time Can	nera IP Camera	Recording Sche	dule Storage	Network	System
O Schedule1	Schedule2	Schedule3	Schedule4		
Event	Recording	Alarm Durati	on Log		
Camera	Resolution	Continuous Speed	Event Speed	Audio	
CH 01	1st Stream	On	On	Off	
CH 02	1st Stream	On	On	Off	
CH 03	1st Stream	On	On		=
CH 04	1st Stream	On	On	Off	
CH 05	1st Stream	On	On		
CH 06	1st Stream	On	On	Off	
CH 07	1st Stream	On	On		
CH 08	1st Stream	On	On	Off	•
			Reset	Save	Exit

[Figure 3-23. Recording Setup Window]

3 - 4 - 1 Schedule Selection (Schedule1 ~ Schedule4)

Each channel can be scheduled in 4 different schedules. This schedule can be set as the recording schedule and each time can be 4 different schedules.

"Event, Recording, Alarm, Duration, Log" setup is available to schedule 1~4 anytime the user want.

Setup	-						X
		- Ú	**	0200	Fh		
Time	Camera	IP Camera	Recording	Schedule	Storage	Network	System
Schedu	ule1 🔍 So	chedule2	Schedule3	🔵 Sche	dule4		

[Figure 3-24. Schedule Selection Window]

3 - 4 - 2 Event

Setup						×
		ý *				
Time Can	nera IP Carr	iera Recordir	ng Schedule	Storage	Network	System
O Schedule 1	Schedule2	2 💿 Sched	ule3 🔵 Sch	nedule4		
Event	Recording	Alarm	Duration	Log		
Camera	Motion	Sensor	Sound			
CH 01	On	On	-			
CH 02	On	On	-			
CH 03	On	On	-			
CH 04	On	On				
CH 05	On	On	-			
CH 06	On	On	-			
CH 07	On	On				
CH 08	On	On	-	-		
				Reset	Save	Exit

[Figure 3-25. Event Setup Window]

This is to set the events On/Off of Motion / Sensor / Sound.

Recording Type	Description
Motion	When motion is detected, recording will be initiated based on the event frame rate.
Sensor	When input signal from an external sensor is generated, recording will be initiated based on the event frame value.
Sound	When audio is detected, recording will be initiated based on the event frame value.

***** The channels which are connected with IPCAM in DVR/NVR are not available with the sound detection feature.

3 - 4 - 3 Recording

Time Car	hera IP Carnera	Recording	Schedule	Storage	Network	System
Schedule1	Schedule2	Schedule	e3 🛛 🔵 Sch	edule4		
Event	Recording	Alarm	Duration	Log	Push	
Camera	Resolution	Continu Spee		Event Speed	Audio	
CH 01	1st Stream	On		On	On	
CH 02		On		On	On	
CH 03						=
CH 04		On		On	On	
CH 05		On				
CH 06		On		On	On	
CH 07		On				
CH 08		On		On	On	
				Reset	Save	Exit

[Figure 3-26. Recording Setup Window]

Used to set the resolution of the recorded channel.

(7)Frame Rate

If the user configures Continuous recording and Event recording at the same time, the continuous recording follows Continuous Speed frame rate and the event recording follows Event Speed frame rate.

Continuous Recording	Set the recording frame rate for continuous recording regardless of events.
Event Recording	Set the recording frame rate for events.
Sensor	Set the recording frame rate for events once input signal occurs from the external sensor.

3 - 4 - 4 Alarm

yster	Sy	Network	Storage		g Sche	Recordin	IP Camera	Camera	S -
			e4	Schedul	le3 🔵	🔵 Schedu	hedule2 () Sc) Schedule1
	sh	Pus	Log	on 🗌	Duratio	larm	ding A	Recor	Event
	FTP	Callback	Popup	Spot	Relay	Email	PTZ Preset	Buzzer	Camera
	Off	Off	Off	Off	Off	Off	Off	Off	CH 01
	Off	Off	Off	Off	Off	Off	Off	Off	CH 02
				Off	Off				CH 03
	Off	Off	Off	Off	Off	Off	Off	Off	CH 04
					Off				CH 05
	Off	Off	Off	Off	Off	Off	Off	Off	CH 06
				Off	Off				CH 07
	Off	Off	Off	Off	Off	Off		Off	CH 08
ff Eþ		Off Save		Off	Off	Off		Off	CH 08

[Figure 3-27. Recording Alarm Setup Window]

% This function is used to generate alarms through the Buzzer / PTZ Preset / e-mail / Relay / Spot / Popup / Callback / FTP in case of an event.

1

% Popup function is to inform event occurrence to the user through a warning window in the real-time monitoring mode.

3 - 4 - 5 Duration

Setup			2) (A	n. s	an e	X
(t) 🔤	⊒a ,∢	÷ +	0000			
Time Can	nera IP Carr	iera Recording	Schedule	Storage	- 📥 - Network	System
Schedule1	Schedule2	Schedule	3 🛛 🔵 Sche	dule4		
Event	Recording	Alarm	Duration	Log	Push	• 1
Camera	Pre Alarm	Post Alarm				
CH 01	Off	10 sec	ie -			
CH 02	Off					
CH 03						
CH 04	Off					
CH 05						
CH 06	Off					
CH 07	Off					
CH 08	Off		•			
					0	The day
	15:000			Reset	Save	Exit

[Figure 3-28. Duration Setup Window]

Setup Pre-Recording(On / OFF), Post-Recording(5 / 10 / 15 / 20 / 60 / 150 / 300 seconds). Xin Pre-Recording, images of the last 7 seconds before the event occurrence are recorded.

3 - 4 - 6 Log

Setup						X
Time Can	nera IP Cam	era Recording	Schedule	Storage	Network	System
Schedule1	Schedule2	Schedule	3 🕒 Sche	edule4		
Event	Recording	Alarm	Duration	Log	Push	
Camera	Motion	Sensor				
CH 01	On	On				
CH 02	On	On				
CH 03			-			
CH 04	On	On				
CH 05						
CH 06	On	On				
CH 07						
CH 08	On	On				
				Reset	Save	Exit

[Figure 3-29. Log Setup Window]

Setup On / Off for Motion / Sensor / Sound. **%** The channels which are connected with IPCAM in DVR/NVR are not available with this feature.

3 - 4 - 7 Push

Setup	5					×
	-		0880			
Time Car	mera IP Cam	era Recording	Schedule	Storage		System
	6					
Schedule1	Schedule2	Schedul	e3 🛛 🔘 Sche	dule4		
Event	Recording	Alarm	Duration	Log	Push	
Camera	Motion	Sensor				
CH 01	Off	Off	-			
CH 02	Off	Off				
CH 03			=			
CH 04	Off	Off				
CH 05						
CH 06	Off	Off				
CH 07						
CH 08	Off	Off				
8					0	Frain
				Reset	Save	Exit

[Figure 3-30. Push Setup Window]

Setup On / Off for Motion / Sensor / Sound. **%** The channels which are connected with IPCAM in DVR/NVR are not available with this feature.

3 - 5 Schedule

Provide 4 different recording mode configurations. Each schedule mode can be set one week/24 hours and the recording follows the setting automatically. Select **[Menu]** \rightarrow **[Setup]** \rightarrow **[Schedule]** in the real-time monitoring menu.

Visit Visit <th< th=""><th>System</th></th<>	System
• Schedule1 • Schedule2 • Schedule3 • Schedule3	
Hour 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 Sun 1	22 23
Sun 1	22 23
Mon 1	
Tue 1	1 1
Wed 1	1 1
Thu 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1
	1 1
Fri 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1
	1 1
Sat 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1
Hol 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1
Holiday Reset Save	Exit

[Figure 3-31. Schedule Window]

3 - 5 - 1 Schedule Setup

Select one schedule among Schedule1, Schedule2, Schedule3 and Schedule4.

- (1) Selection Tip
 - ① Select the day and time to be set by using the arrow keys.
 - ② Select after moving the cursor onto Time(0-23) or Day(Sun. Holiday) then the user can configure the whole line at once.
 - ③ Using the mouse can be easier.

(2)Holiday Registration

Setup																								×
Time)		L' ame	-		<mark>ا</mark> P Ca	(é amer	ra	Red	cord	! ling		12 che	34		Sto	orag	e	 	etw	ork		Sys	stern
O Sch	nedu	le 1	۲	Sch	edu	le2	۲	Sch	edul	e3														
Hour	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Sun	1		1	1	1			1	1	1			1			1		1			1		1	1
Mon	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Tue	1							1							1	1		1					1	1
Wed	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Thu	1		1	1				1	1	1					1	1		1				1	1	1
Fri	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Sat	1		1			1		1		1	1	1		1		1		1			1	1	1	1
Hol	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
										[H	lolid	ау		R	eset			Sa	ve			Exit	

	<	٨	pril 20	16	>		No.	Date		<	A	pril 201	6	>		No.	Date	
Sun	Mon	Tue	Wed	Thu	Fri	Sat			Sun	Mon	Tue	Wed	Thu	Fri	Sat	001	Every Year April 18	
						2									2			
									3						9			
	11			14		16			10	11			14		16			
	18			Year A					17	18					23			
24	25		3rd M	onday	of Api	1			24	25					30			
																		l s

[Figure 3-32. Holiday Registration Window]

This feature is used to enable the user to set the holidays and schedule independently.

Move to {Schedule} -> {Holiday}.

0.0	X If the date for the holiday and day of the week are the same in the {Schedule} menu, the
0	holiday setup will have priority over the date setup.
	X Designated holidays are marked with a green tag.

- ② On the Holiday Registration Window, select the date by using the arrow keys and the Select button and press the Select button.
- ③ After setting the holiday, move to {Save} at the bottom of the menu. Afterward, press the Select button.

3 - 6 Storage

Select [Menu]->[Setup]->[Storage] in the real-time monitoring menu.

etup									
Time	Camera	IP Carnera	Recording	Schedu]	Storage	1	etwork	System
	te Recording	Off		\sim	- Days				
2. HDD	Overwrite		On		\sim				
3. Loca	i Storage Manage	ement							
Reco	rding Backu	ID Ne	w	RAID					
No.	Location	Ser	ial	Temperatu	ле	Size(F	/T)	Statu	s(SW/HW)
1	SATA	WD-WMC4N	10H9TMYL	43°C		496/200	00GB		
3	SATA	Z3T91	'9NY	45℃		496/500GB			e/Healthy
	Reset Save Exit								

[Figure 3-33. Storage Device Window]

In the Storage menu, To apply the new setting, save the new setting after changing the setting. **Reset**: Initialize the menu to the basic setting.

3 - 6 - 3 Max. Recording Days

This is to limit the recording days. None/1day/7days/30days/User setting(1-99) selection is available.

3 - 6 - 4 HDD Overwrite

Select On/Off for HDD Overwrite.

On	If there is no more hard disk space left, the existing files will be overwritten by starting with the oldest.
Off	If there is no more hard disk space left, the further recording will not be executed.

3 - 6 - 5 Local Storage Management (1)Local Storage Management Function

Local Storage refers to the internal hard disk and storages connected to the system via USB. Local Storage is classified and managed as {Recording}, {Backup}, {New} and functions are described below.

① Recording

The Recording storage is managed in Direct. The Recording storage stores data on the hard disk in the real time. Two commands can be executed. Depending on the SW/HW status, however, some commands cannot be executed.

New	Returns the status of the selected storage device to New; if this command is executed, the selected storage device will be moved to the {New} storage device manager.
1	※ Physical states supporting the execution of the commands above includes Healthy and Warning. In fault state, however, no command can be executed.

② Backup

Setup									×
)		### !	020]	F h		<u>.</u>	
Time	Camera	IP Camera	Recordin	g Schedu	lle	Storage	Net	twork	System
1. Priva	1. Private Recording				\sim	Days			
2. HDD	Overwrite		On		\sim				
3. Loca	al Storage Manage	ement							
Reco	ording Backu	p Ne	w	RAID					
No.	Location	Seri	ial	Model		Size		Devid	се Туре
4	USB	4C53010282	0119116	SanDCruzei	_F	7 GB		Direct	Access
-									
					_				
						Reset	Save	Э	Exit

[Figure 3-34. Backup Storage Device Window]

The backup storage is managed in Backup. Backup storages are only used to back up the data.



Depending on the storage type, the storage is used only for (Recording) or (Backup) purposes.

3 New

Setup								X
			**	0000			<u>.</u>	
Time	Carnera	IP Camera	Recording	Schedul	e Stora	ge Net	work	System
1. Priv	1. Private Recording				∨ Days			
2. HDD	Overwrite		On		\sim			
3. Loca	al Storage Manage	ement						
Reco	ording Backu	ip Ne	w	RAID				
No.	No. Location Ser		ial	Model		Recording-Format Backup-Format Device Type		
2	SATA	XQKPPOBU2	GZD39KD	RAID 1	50	00 GB	Direct /	Access
-								
					Reset	Save	9	Exit

[Figure 3-35. New Storage Device Window]

All storages, initially detected are managed in {New}. All initially detected storages are displayed as New and can be changed into Recording storage or Backup Storage.

Recording-Format	Changes the selected storage into a dedicated recording storage.
Backup-Format	Changes the selected storage into a backup storage.

Caution

In **{New}**, At least, one storage shall be selected as a dedicated storage. Otherwise, the data cannot be stored in the real time.

④ RAID : User can use RAID thru the e-sata storage only.

(1)Composition of the local storage device

Ú	※ There are three software status types.			
Active	Connected to storage or backup device; currently saving the data.			
Online	Only connected to storage or backup device.			
Offline	Not connected to storage or backup device.			

3-7 Network

Select [Menu] → [Setup] → [Network]



3 - 7 - 1 Ethernet 1 (Client Port)

This is for the feature to do monitoring thru VMS, Web, Smartphone app.

It sets DHCP as default. DHCP can make the DVR/NVR to have the IP address from the router automatically. DHCP setting is recommended.

If user wants to use the IP address by manually, then unchecked DHCP and input the IP address user want.

Setup		. 8			-		X
Time	Camera	IP Camera	Recording	Schedule	Storage	e Network	x System
Ethernet1	Ethernet2	DDNS	Email	Bandwidth	Callback	FTP	RTSP
2. Sut 3. Def DNS 1. Prin 2. Sec Port 1. Clie 2. Wet	Address onet Mask ault Gateway nary DNS condary DNS ent Port b Server Port o Port Forwar	ding	192.168. 255.255. 192.168. 8.8.8.8 8.8.4.4 50100 80 Off	255.0			
E					Reset	Save	Exit

[Figure 3-37. Ethernet 1]

- ① [Menu] \rightarrow [Setup] \rightarrow [Network] \rightarrow [Ethernet1]
- ② Set the details then save. [IP address, Subnet Mask, Default Gateway, Primary DNS, Secondary DNS, Client Port, Web Server Port, Auto Port Forwarding]
- ③ Client port is for user's connection and it sets '50100' as default. It can be changed by user's situation like firewall or network status.
- ④ Web port is for user's web monitoring of DVR/NVR. It sets '80' as default.
- (5) We recommend to use the Client port and Web ports with '50100' and '80'.
- 6 'Auto Port Forwarding': If user set it as 'On', it is no necessary to do Port forwarding at router. If the router is not supporting Port forwarding feature, user should connect to the router menu then do Port forwarding with Client and Web port.

3 - 7 - 2 Ethernet2 (IP Camera port)

Setu		nora por	,					×
			1	* *	0280	F h		
	Time	Camera	IP Camera	Recording	Schedule	storage	Network	System
E	thernet1	Ethernet2	DDNS	Email E	Bandwidth	Callback	FTP	RTSP
C	DHCP S	erver Enable						
	1. IP Ad	ldress		10.34.46	.202			
	2. Subn	et Mask		255.255.	255.0			
	3. Defai	ult Gateway		10.34.46	.1			
						Reset	Save	Exit
						n et 01		

[Figure 3-38. Ethernet 2]

- ① [Menu] \rightarrow [Setup] \rightarrow [Network] \rightarrow [Ethernet2]
- 2 Set the details then save. [IP address, Subnet Mask, Default Gateway]

% This feature is available in NVR & DVR except EX-SDI DVR.

3 - 7 - 3 DDNS



[Figure 3-39. DDNS setting]

DDNS(Dynamic Domain Name System): the Dynamic Domain Name System (DDNS) service updates IP addresses of the host name in the real time and allocates fixed domain names to systems linked to dynamic IP addresses to allow users to use the same DNS name regardless of the change of in the IP address. It provides dynamic DNS to ensure URL access in the dynamic IP environment. User can monitor the remote place thru internet with web server functions which is equipped in DVR.

DDNS helps the user who doesn't know the IP address to connect DVR/NVR by using Domain Name.

- ① Select On/Off of DDNS or a domain name to use by using arrow keys and the selection button.
- ② In case of DDNS On, enter the host name and save it then, the registration procedure of the host name proceeds automatically. You can enter the host name with 2-20 letters.
- 3 The host name to enter must not be pre-registered in DDNS sever. Otherwise it won't work.
- ④ The basic host name is the MAC address of appertaining DVR.
- (5) In case the host name have entered starts with "000c28", none of MAC address will work excepting for appertaining DVR's.
- 6 In case of DynDNS On, enter the host name, user name registered in DynDNS and password then, save them.

	X Access to DynDDNS sever(http://www.dyndns.org) and apply for the user account then,
0	register the domain name to use and enter URL.
	% For more information, please access to the site.

3 - 7 - 4 E-mail

Setup	X
Time Camera	Recording Schedule Storage Network System
Ethernet1 Ethernet2 DDNS	Email Bandwidth Callback FTP RTSP
1. Email Enable	Off
2. Relay SMTP	Gmail
SMTP Port	587
Sender Email	@gmail.com ₌
Sender Password	
Receiver Email 1	
Receiver Email 2	
🗖 Receiver Email 3	
🗖 Receiver Email 4	
Receiver Email for Error	
	Reset Save Exit

[Figure 3-40. E-mail]

This is to set automatic E-mail transmission service when an event occurs.

- [Menu] → [Setup] → [Network] → [E-Mail]
 To use the e-mail function, {E-mail} in {Mer
- ② To use the e-mail function, {E-mail} in {Menu} → {Setup} → {System} → {9. Alarm} or {E-mail} in {Menu} → {Setup} → {Action} → {Alarm} need to be configured.

Setup						×	Setup	>>	×
<u> </u>	Camera	Recording S	Genedule	Storage	Network	System	Time Camera Recording Schedule	Storage Network System	1
• Schedule	1 ● Sch	edule?	Schedule3	Sche	dule4		1, DVR Name 000c28066	429	1
e ocnedule		couler e	ocneduico		Julie 1		2. ID For Remote Controller 1		
Event R	Recording	Alarm Du	ration	Log			3. ID For Key Controller 1		
Camera	Buzzer	PTZ Pres.	Email	Relay	Spot	Descus	4. Users Modify	Add Delete	
						Popup	5. Upgrade Firmware	Setup	
CH 01	Off	Off	On	Off	On	Off	6. Factory Setup Reset		
CH 02	Off	Off	Off	Off	Off	Off	7. Console/POS Port Console	\sim	
CH 03	Off	Off	Off	Off	Off	Off	8. Error Alarm Action Email	Off	
CH 04	Off	Off	Off	Off	On	Off	9. Error Alarm Duration Latch	Buzzer	
CH 05	Off	Off	Off	Off	Off	Off	10, Menu Time Out Off		
CH 06	Off	Off	Off	Off	Off	Off		Relay01	
CH 07	Off	Off	Off	Off	Off	Off	11. Language English	💛 Popup Window	
CH 08	Off	Off	Off	Off	Off	Off			
● 1 ~ 8	● 9 ~ 16		R	eset	Save	Exit	F	Reset Save Exit]

- ③ Relay SMTP is set on 'Gmail' as default, but when 'Default' (in menu tab) is selected
- ④ Receiver Email can be set up to 5 users (emails).
- (5) Email Interval settings are as follows [5 sec / 1 min / 3 min / 5 min /10 min].

3 - 7 - 5 Bandwidth



[Figure 3-41. Bandwidth]

- (1) [Menu] \rightarrow [Setup] \rightarrow [Network] \rightarrow [Bandwidth]
- (2) This sets up the limit of the bandwidth to be used when bringing the live image, adjust resolution/quality and transmitting the data by using the network.
- In case of smartphone app monitoring, you can control the network resolution here to save the data cost.

Picture Resolution	CIF/2CIF/D1/960H/720P/1080P
Picture Quality	Adjust quality of the image, as the value increases, the compression rate gets higher and image quality gets low. However the transmission rate gets higher.
Bandwidth Limitation	Set the network bandwidth between 56 Kbps ~ 8 Mbps. The network transmission speed gets faster when value gets higher. Select Off if you don't want to limit the network bandwidth.
Transmission Code	JPEG / H.264
IPC Stream Bypass	NVR/DVR pass the stream of IPCAM to the network without filtering.

% For 8/16 CH DVR/NVR, recording resolution for the DVR/NVR is same with the max network image resolution.

Example) if user sets 720p as recording resolution, network image resolution will be 720p even if you sent 1080p for Picture Resolution on Bandwidth.

% IPC Stream bypass features is available with the channel connected to IPCAM.

3-7-6 CALLBACK



[Figure 3-42. Callback]

Callback to be sent to the PC with event details when event occurs.

- ① [Menu] \rightarrow [Setup] \rightarrow [Network] \rightarrow [Callback]
- 2 Tick Callback Service Enable
- ③ Input the details then save after setting 'On' for Use Router IP.
- ④ There is special software to be installed into the PC to use Callback. Please ask it to your supplier if you want to PC software to use Callback.

-		_		_		
3	-	7	-	7	F	TΡ

Setup			×
Time Camera	Recording Schedule Storage	e Network	System
Ethernet1 Ethernet2 DDNS FTP1 FTP Server Enable 1. Server IP Address 2. Port 3. User ID 4. User Password 5. FTP Directory	Email Bandwidth Callback	FTP	RTSP
	Reset	Save	E×it

[Figure 3-43. FTP setting]

This to be sent JPG image to FTP server when the event occurs.

```
(1) \quad [Menu] \rightarrow [Setup] \rightarrow [Network] \rightarrow [FTP]
```

② Select FTP1 or FTP2 then tick FTP Server Enable.

Server IP Address	FTP IP address
Port	FTP Port
User ID	FTP ID
User Password	FTP Password
FTP Directory	FTP location to save JPG image file JPG
TEST	Test button to make sure FTP server works or not

After setting FTP here, then go to [Menu] \rightarrow [Setup] \rightarrow [Recording] \rightarrow [Alarm] then thru on for FTP. After that, user can receive the JPG image file at FTP Directory.

3 - 7 - 8 RTSP

S	etup								X
				## <mark>+</mark>	0880				
	Time	Camera	IP Camera	Recording	g Schedul	e Storage	e Netw	ork Syst	tem
	Ethernet1	Ethernet2	DDNS	Email	Bandwidth	Callback	FTP	RTSP	
	RTSP S	ervice Enable	;						
	1. RTSF	Port		8554	_	CH 01 ~	- CH 16		
				8555		CH 17 ~	- CH 32		
			ex) rtsp://19	2.168.100.	97:8554/live	_01			
			rtsp://19	2.168.100.	97:8555/live	_17			
						Reset	Save	Exit	

[그림 3-44. RTSP 설정창]

Tick RTSP Service Enable then set RTSP port. Please refer to the example shown on the menu. This RTSP address makes user to see the camera.

ex) rtsp://192.168.100.97:8554/live_01 rtsp://192.168.100.97:8555/live_17

3-8 System [Menu] \rightarrow [Setup] \rightarrow [System]

Setup								X
			*	0880				
Time	Camera	IP Camera	Recording	Schedule	Stora	ige Net	work	System
1. DVR Nar 2. ID For R	me emote Contro	ller	000c280b329)2				
3. Key Cor	ntroller		Setup	_				
4. Users				Modify Add Delete				
5. Upgrade	•		Firmware	Setu	q	Logo	ĺ	
6. Factory	Setup		Reset					
7. Error Al	arm Action		Off					
8. Error Al	arm Duration		Latch	\ \	/			
9. Menu Ti	me Out		5 min	· · · · · · · · · · · · · · · · · · ·	/			
10. Langua	age		English	\ \	/			
11. Video I	Loss Event De	elay Time	1 sec					
					Reset	Save	;	Exit

[Figure 3-45. System]

DVR / NVR name	DVR/NVR name (Default: Mac address)		
ID for remote controller	ID to be controlled by Remote controller		
Key controller	ID to be controlled by Keyboard controller		
Users	Users authorities, modification, add and delete		
Upgrade	Upgrade, setup change, Logo change		
Factory Setup	Go back to default setting except Network setting		
Error Alarm Action	Alarm setting for many types of system failure		
Error Alarm Duration	Set for Alarm duration		
Menu Time Out	Time setting from menu to live display		
Language	System OSD Language setting		
Video Loss Event Delay Time	It keeps 'Video Loos' during the setting period, then Video Loss		
VIGEO LOSS EVENT Delay Time	event comes out		
BNC out type	HD, SD resolution selection		

3-8-1 DVR / NVR name

Default setting is Mac address. (support max 20 letters in English)

3-8-2 ID For Remote Controller

This to be set when user have many DVR/NVRs with one remote controller



(1) [Menu] \rightarrow [Setup] \rightarrow [System] \rightarrow [ID for Remote Controller]

0	 X To configure Remote Controller ID (Example: ID setting as 3) 1) Press {ID} button on the remote controller. 2) Press the {0} key and {3} key. 3) Press {ID} button again. 4) Remote Controller ID is set as 3.
---	---

3 - 8 - 3 Key Controller

- ① This is to use the keyboard controller
- 2 $\$ ID can be input from 1 to 255. .

3-8-4 Users

X User's Authorization X				
ID/PW Admin can change the User's ID/PW ID/PW support max 31 letters and numbers				
Network Live Network Live				
Playback (Download)	Local Playback Network playback/download			
Local Backup	Local backup			
Setup	Changing settings			
PTZ Control	PTZ Control			
Network Upgrade	Network upgrade control			
Password Password enable/disable				
Channel Enable(user)	Authorization for each channels			



Up to 14 users can be registered.

			X				
ID	admin	_					
Password	* * * * *	i.					
Network	Live						
🗖 Playback	(Download						
🗖 Local Bad	ckup						
🗖 Setup	Setup						
D PTZ Cont	rol						
Network	Upgrade						
🔲 Password	Password						
Channel Ena	able						
🗖 СН 01	🗖 CH 02	🗖 CH 03	🗖 СН 04 📄				
🗖 CH 05	🗖 CH 06	🗖 CH 07	□ CH 08 =				
🗖 СН 09	🗖 CH 10	🗖 CH 11	🗖 CH 12				
CH 13	□ CH 14	□ CH 15	🗆 СН 16 📮				
		Modify	Cancel				

[Figure 3-46. Users → Modify]

3-8-5 Upgrade

To upgrade by external storage devices supports USB2.0.

% Firmware which will be upgraded should be located to the highest(root) location from the external devices supports USB 2.0



(1) Firmware Upgrade method

- Insert (input) USB 2.0 device into the DVR/NVR then select [Menu]→[Setup]→[System]→[Upgrade-> firmware] then you will see the menu below.
- 2 Find the correct firmware then do double click to upgrade





- ③ Read the information and select {Yes} to start the upgrade gradually. Select {No} to return to the **{System}** mode
- ④ After the upgrade is completed, the system reboots.
- S Move to {Menu} → {Miscellaneous} → {DVR Information} → {3. Software Version} to check the version.

(2) Setup Upgrade

Ì

5. Upgrade	Firmware	Setup	Logo	

- ① Select **[Setup]** and the upgrade file list stored in the selected device and simple version info of the selected file are then displayed.
- ② Select a file and then the upgrade starts immediately.



Select a file and then the upgrade starts immediately. All setting values of the current menu will be changed to the upgrade setting values.

(3) Logo Upgrade

5. Upgrade	Firmware	Setup	Logo

X This to be changed to booting logo.

% Image format: JPG format, booting logo image size [720 x 480]

3-8-6 Factory Setup

Cautior

 $[Menu] \rightarrow [Setup] \rightarrow [System] \rightarrow [Factory Setup]$

Select Yes or No

Take a note that all settings will be to default except network setting.

3-8-7 Error Alarm Action

- ① [Menu] \rightarrow [Setup] \rightarrow [System] \rightarrow [Error Alarm Action]
- 2 This is to set the alarm which is serious for system operation

Setup	at an		<i></i>		X
🕓 💳 ゼ	*	0200			
Time Camera IP Camera	Recording	Schedule	Storage	Network	System
 DVR Name ID For Remote Controller Key Controller Users Upgrade Factory Setup Error Alarm Action 	000c280b3292 1 Setup Modify Firmware Reset Off	Add Setup	Lo Alarm Actio	elete ogo	
8. Error Alarm Duration 9. Menu Time Out 10. Language 11. Video Loss Event Delay Time	Latch 5 min English 1 sec	~ ~ ~ ~	Alarm List	 Buzzer Email Relay0 Popup Push 	Window
			Reset	Save	• Exit

[Figure 3-48. Alarm Action]

etup					F	
	- ÷	*	0280	F h		
Time Camera	IP Camera	Recording	Schedule	Storage	Network	Syster
1. DVR Name		000c280b329	92]
2. ID For Remote Contro	oller	1				
3. Key Controller		Setup				
4. Users		Modify	Add	Del	lete	
5. Upgrade		Firmware	Setup	Lo	go	
6. Factory Setup		Reset				
7. Error Alarm Action		Off		Alarm Action	۱۰	
8. Error Alarm Duration		Latch	~	Alarm List	✓ Video Lo ✓ HDD Full	
9. Menu Time Out		5 min	~		 HDD Not 	t Detect
10. Language		English	~		 ✓ Fan Fail ✓ Storage 	
11. Video Loss Event De	elay Time	1 sec	~		 Storage 	Warning
				Reset	Save	Exit

[Figure 3-49. Alarm List]

9	Warning Video Loss HDD Full HDD Not Detect Fan Failed Storage Failure Storage Warning OK	※ Pop up Window from Alarm Action Warning massage comes out when alarm detected.	
---	---	---	--

3-8-8 Error Alarm Duration

This is to set duration not only for alarm but also, recording.

3-8-9 Menu Time Out

If no input is made in the System Setup menu from the front buttons, remote controller and mouse, the system automatically shifts to the real-time monitoring mode.

3-8-10 Language

System OSD (On Screen Display) selection.

3-8-1 1 Video Loss Event Delay Time

This is to set the time for 'Video Loss' when the camera is disconnected.

3-8-1 2 BNC output type

This is to select the type of the spot. There are three types to use the BNC as Spot. HD Spot + SD Spot, HD Spot + SD Main, HD Main + SD Spot

3-8-1 3 System Operation

This is to reduce the channels so that user can use the highest resolution cameras. There are three types operation as below.

1> IPC 32CH

2> 5MP IPC 24CH

3> 4K IPC 16CH

After selection, DVR/NVR will reboots.

% It is available in 32CH NVR & 16CH DVR only.

Chapter 4. DVR / NVR Web Service

[DVR/NVR Web Service] through the Ethernet/Port setup and web server composition. The main purpose of DVR/NVR WEB SERVICE is for easy setup for users to control DVR/NVR setup and live view by WEB easily.

4-1 DVR / NVR Web Service

4 - 1 - 1 Web service connection

If the user is using the firmware 15.x.xxx, it means that DVR WEB SERVICE is available. Check the URL and Web port that DVR/NVR IP or DDNS is set. Input the confirmed 'IP or <u>URL:Port</u>' on the web browser then enter the page.

http://192.168.100.95/cgi-bin/login.cgi	0-0

[Figure 4-1. Browser Address Input]

Then, user can see the log-in menu as follows. Input ID/PW for the DVR/NVR. Click the [Login] button.

ID	User ID	
Password	User Password	Login

[Figure 4-2. Login Window]

	X This web service has been developed only for the Internet Explorer and Chrome. We can't guarantee the other web browser.
	Recommended web browser:
!	More than Internet Explorer 10 More than Chrome 42.0 More than Safari 5.1.7
	If the web browser is lower version, some features are not able to be controlled. In case of [PC Web Viewer Connection], it can be available with Internet Explorer.

4 - 1 - 2 Web Service Feature

After log-in, [PC Web Viewer/Information/QR Code/JPEG Viewer/Calculator/Setup] features are available.

** The main screen composition is as follows.

TOVR Web Service			[admin] User I	ogin C
PC Web viewer	PC Web viewer			6
R QR Code (Netw		(5)	6	
JPEG Viewer	Client Port: 50100	& Connect	P Login with administrator	
Calculator	Please use the do	wnload link according to user s	ystem environment.	
Setup		PC Web Viewer Download		
		0		
~	2			
	<u></u>			-
le Logout				

[Figure 4-3. Web Service Main Window]

- ① Go to main menu
- ② ID for the user log-in
- ③ Refreshing
- ④ Setup/Information/QR code/JPEG viewer/Calculator selection
- (5) PC web viewer connection (Real-Time monitoring and playback)
- 6 Login with administrator
- ⑦ PC web viewer download.
- 8 Log out

** Currently connected DVR / NVR information check is available.

DVR Web Service			[admin] User Login	
PC Web viewer				h
Information	Information			
g QR Code (Netw	1. ID: 1			~
JPEG Viewer	2. Name: 000c280b3292			
Calculator	3. Software Version: V1.7.028			
Setup	4. Hardware Version: 1.0 (UHD NVR)			
Time G Camera	5. Video Mode: NTSC, FHD			
IP Camera 💻	CH 01: 10.34.47.2(10fps)	CH 02: None		
 Recording Event 	CH 03: None	CH 04: None		
Recording	CH 05: None	CH 06: None		
 Alarm Duration 	CH 07: None	CH 08: None		
Log Push	CH 09: None	CH 10: None		
Schedule	CH 11: None	CH 12: None		
Storage Network	CH 13: None	CH 14: None		
System 📽	CH 15: None	CH 16: None		
~	CH 17: 10.34.46.3(16fps)	CH 18: None		~
☞ Logout			[admin] User Login	C
TOVR Web Service			[admin] User Login	6
			[admin] User Login	•
DVR Web Service		CH 32: None	[admin] User Login	
DVR Web Service	Information	CH 32: None	[admin] User Login	
DVR Web Service PC Web viewer Information QR Code (Netw	e Information CH 31: None	CH 32: None	[admin] User Login	
DVR Web Service PC Web viewer Information QR Code (Netw JPEG Viewer	Information CH 31: None 6. HDD Information (Overwrite: On)	CH 32: None	[admin] User Login	
DVR Web Service PC Web viewer Information QR Code (Netw JPEG Viewer Calculator Setup Time G	CH 31: None 6. HDD Information (Overwrite: On) Total Capacity: 2500 GB		[admin] User Login	
DVR Web Service PC Web viewer Information QR Code (Netw JPEG Viewer Calculator Setup Time G	CH 31: None 6. HDD Information (Overwrite: On) Total Capacity: 2500 GB Free Space: 992 GB		[admin] User Login	
DVR Web Service	CH 31: None CH 31: None 6. HDD Information (Overwrite: On) Total Capacity: 2500 GB Free Space: 992 GB Start Date: 2016/10/05 16:00:00 (214)		[admin] User Login	
DVR Web Service PC Web viewer Information QR Code (Netw JPEG Viewer Calculator Setup Time	CH 31: None CH 31: None 6. HDD Information (Overwrite: On) Total Capacity: 2500 GB Free Space: 992 GB Start Date: 2016/10/05 16:00:00 (214) End Date: 2016/10/05 17:00:00 (215)		[admin] User Login	
DVR Web Service PC Web viewer Information QR Code (Netw JPEG Viewer Calculator Setup Time Camera IP Camera Recording © Event	CH 31: None 6. HDD Information (Overwrite: On) Total Capacity: 2500 GB Free Space: 992 GB Start Date: 2016/10/05 16:00:00 (214) End Date: 2016/10/05 17:00:00 (215) 7. Ethernet Type: Static		[admin]UserLogin	
DVR Web Service PC Web viewer Information QR Code (Netw JPEG Viewer Calculator Setup Time Camera IP Camera IP Camera Recording Event Recording Alarm Duration Log	CH 31: None CH 31: None 6. HDD Information (Overwrite: On) Total Capacity: 2500 GB Free Space: 992 GB Start Date: 2016/10/05 16:00:00 (214) End Date: 2016/10/05 17:00:00 (215) 7. Ethernet Type: Static IP Address: 192.168.100.97		[admin]UserLogin	
DVR Web Service PC Web viewer Information QR Code (Netw JPEG Viewer Calculator Setup Time Camera IP Camera Recording © Event Recording @ Alarm Duration	Information CH 31: None 6. HDD Information (Overwrite: On) Total Capacity: 2500 GB Free Space: 992 GB Start Date: 2016/10/05 16:00:00 (214) End Date: 2016/10/05 17:00:00 (215) 7. Ethernet Type: Static IP Address: 192.168.100.97 Client Port: 50100 Web Port: 80		[admin] User Login	
	CH 31: None CH 31: None 6. HDD Information (Overwrite: On) Total Capacity: 2500 GB Free Space: 992 GB Start Date: 2016/10/05 16:00:00 (214) End Date: 2016/10/05 17:00:00 (215) 7. Ethernet Type: Static IP Address: 192.168.100.97 Client Port: 50100		[admin]UserLogin	
DVR Web Service PC Web viewer Information QR Code (Netw JPEG Viewer Calculator Setup Time Camera Recording © Event Recording © Event © Recording © Log © Push Schedule	Information CH 31: None 6. HDD Information (Overwrite: On) Total Capacity: 2500 GB Free Space: 992 GB Start Date: 2016/10/05 16:00:00 (214) End Date: 2016/10/05 17:00:00 (215) 7. Ethernet Type: Static IP Address: 192.168.100.97 Client Port: 50100 Web Port: 80 Auto Port Forwarding: Off		[admin]UserLogin	
DVR Web Service PC Web viewer Information QR Code (Netw JPEG Viewer Calculator Setup Time G Setup Setup Time G Setup Setup Time G Setup Setup	e Information CH 31: None 6. HDD Information (Overwrite: On) Total Capacity: 2500 GB Free Space: 992 GB Start Date: 2016/10/05 16:00:00 (214) End Date: 2016/10/05 17:00:00 (215) 7. Ethernet Type: Static IP Address: 192.168.100.97 Client Port: 50100 Web Port: 80 Auto Port Forwarding: Off MAC Address: 00:0C:28:0B:32:92		[admin] User Login	



** Connection available through the mobile app using the QR code.



[Figure 4-5. QR Code Information Window]

** Real time video can be shown in seconds via JPEG image.



[Figure 4-6. JPEG Viewer]

** Depending on the recording setup, storable date and time can be calculated compared to disk capacity.

JPEG Viewer		Quality	Resolution	(Frame/Sec)	Hour a Day (Hours)	
Calculator	CH 01	Highest	CIF	30	24	^
Contraction of the second s	CH 02	Highest	CIF	30	24	
Setup	СН 03	Highest	CIF	30	24	
Time G	CH 04	Highest	CIF	30	24	
Camera IP Camera	CH 05	Highest	CIF	30	24	
Recording	CH 06	Highest	CIF	30	24	
 Schedule III Storage III 	CH 07	Highest	CIF	30	24	
 Network System 	CH 08	Highest	CIF	30	24	
- 1	HD	D Capacity	(GB)	Count		•

[Figure 4-7. Calculator]

** Recording setup is available by each channel.

Inform	'eb viewer mation ode (Netw	-	Recording					
	Viewer		• Schedule1	O Schedule2	O Schedule3	O Schedule4		
Setup			Camera	Resolution	Continuous Speed	Event Speed	Audio	
 Time Came 		•	CH 01	1st Stream	On	On	On	
IP Ca Reco		-	CH 02	1st Stream	On	On	On	
[©] Eve			CH 03	1st Stream	On	On	On	
Record Ala	cording		CH 04	1st Stream	On	On	On	
🤨 Dui	ration		CH 05	1st Stream	On	On	On	
Log Pus	-		CH 06	1st Stream	On	On	On	
Sche	aleres 5		CH 07	1st Stream	On	On	On	
StoraNetwo	3-	•	CH 08	1st Stream	On	On	On	
Syste	em 🔹	đ	СН 09	1st Stream	On	On	On	~

[Figure 4-8. Setup Recording Page]

A/P/P/E/N/D/I/X

Recommended PTZ Camera Protocol

d PTZ (Camera Protocol		
NO	Vendor	Model	Protocol
1	A.D.	ULTRA_7 / 8	SENSORMATIC
2	CHOU	COHU3925	COHU
3	DONGYANG	DONGYANG	DRX-500
4	DYNACOLOR	DSCP	DSCP
5	ERNITEC	ERNA	ERNA
6	EYE VIEW	EYE VIEW	EYE VIEW
7	FINE SYSTEM	CRR-1600i/s	CRR-1600i/s
8	GE	GE	GE_KARATEL
9	GSP	GSP	CYBERSCAN_1
10	HITRON	FASTRAX2	FASTRAX2
11	HONEYWELL	SCANDOME2	HSDN-251
12	I-TECH	PTC-400C	PTC-400C
13	JANEX	JANEX	PELCO_D_JANEX
14	LG	LG	LG_MULTIX,
14	20	20	LG_OLD
15	LILIN	LILIN	LILIN
16	MIKAMI	MIKAMI	MIKAMI
17	ORIENTAL	ORX-1000	ORX-1000
18	PANASONIC	WVCS854	WVCS854
19	PELCO	PELCO	PELCO – D
			PELCO - P
20	PHILIPS	PHILIPS	PHILIPS
21	PROLINE	PROLINE	PROLINE_UK
22	RIFATRON	RIFATRON-1	RIFATRON
23	SAMSUNG	SAMSUNG	SPD-1600
			SCC641
24	SUNJIN	SUNJIN	SUNJIN
25	VICON	VICON	VICON
26	VISION_HI_TECH	VISION_HI_TECH	VISION_HI_TECH
27	YOKO	YOKO	YOKO
28	COAX_PTZ	COAX_PTZ	PELCO_D
29	COAX_OSD	COAX_OSD	COAX_OSD

- End -