STD3K DVR OS & HW User Manual

Ver. 2023-02

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Chapter 1. DVR / NVR Operation Setup

1-1 Power ON.

- $\textcircled{1} \quad \text{connect the power} \\$
- 2 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.

_	_			>
admin	~	1	2	3
		4	5	6
		7	8	9
OK	Cancel	4	0	С
		admin 🗸 OK Cancel	4	4 5 7 8

[Figure 1-2. Login pop up]

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

1-2 Storage Setup

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

Setup				50.45	1.000		22		×
		- 100	*	0200		Fh			
Time	Camera	IP Camera	Recording	s Schedule	e	Storage	- Ne	etwork	System
1. Priva	ate Recording		Off	,	~ D	ays			
	Overwrite		On		\sim				
	I Storage Manage								
Reco	rding Backu	p Ne	W I	RAID			_		
No.	Location	Ser	ial	Temperatur	re	Size(F/1	Г)	Status	(SW/HW)
1	SATA	WD-WMC4N	10H9TMYL	43℃		496/2000	GB		/Healthy
3	SATA	Z3T9T	'9NY	45°C		496/500	GB		/Healthy
							0		The state of the s
					К	leset	Sav	ve	Exit

[Figure 1-3. Storage selection]

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

Setup							X
		Q	*	0000	li i i i		
Time	Camera	IP Camera	Recording	Schedule	Storage	- <u> </u>	System
Schedu	ile1 🔵 Sc	hedule2	Schedule:	3 🛛 🔵 Sch	edule4		
Event	Recor	ding	Alarm	Duration	Log	Push	
Carne	era Re	esolution	Continua Speed	Accession in the second se	Event Speed	Audio	
CH 0	11 1s	t Stream	On		On	On	



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

1-4 Date/Time Setup

- 2 Configure [Time Sever]/[Date and Time]/[Standard Time Zone]/[Auto Reboot].

Setup							X
			₩	0239			
Time	Camera	IP Camera	Recording	Schedule	Storage	Network	System
Time Sy	ync Dat	e & Time	Time Zone	Auto R	eboot		
1. Date &	Time		2016/05/13	10:56:23			
2. Date D	isplay Type		yy/mm/dd	~			
		[F	igure 1-5. Da	ate/Time Set	up]		

5

1-5 Display Setting and Other Setup

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

Display Setting			X
Camera Title	On		
Control Bar	On		
Button Sound	On		
HD Frequency	60hz N		
Border Line			
Draw	Off		
Width	2Pixel		
Color	White		
Screen Saver	Off		
Spot Sequence	5 sec		
Main Sequence	5 sec		
l			
		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				>
Information				
None	Select T	he Device		
Free Space		0	М	
Total Capacity	y		м	
File Size				
File Format	RMS for	mat	\sim	
Directory Nam	ne	_		
Time Index	2016/05/13 10:	53:39 ~ 2010	6/05/13 10:58:3	9
		53:39 ~ 2011	6/05/13 10:58:3	9
1		53:39 ~ 2011 □ CH 03	6/05/13 10:58:3 □ CH 04	9
1	I			9
1 All Channe	I	CH 03	CH 04	
1 All Channe CH 01 CH 05	CH 02	□ CH 03 □ CH 07	□ CH 04 □ CH 08	
1 All Channe CH 01 CH 05 CH 09	CH 02 CH 02 CH 06 CH 10 CH 14	CH 03 CH 07 CH 11	□ CH 04 □ CH 08 □ CH 12	
1 All Channe CH 01 CH 05 CH 09 CH 13	CH 02 CH 02 CH 06 CH 10 CH 14	CH 03 CH 07 CH 11	□ CH 04 □ CH 08 □ CH 12	

[Figure 1-7. Backup Setup]

1-8 DVR / NVR Info. Move to {Menu} -> {Miscellaneous} -> {DVR/NVR Info}.

NVR Info.			X
CH 25: None	CH 26: None		
CH 27: None	CH 28: None		
CH 29: None	CH 30: None		
CH 31: None	CH 32: None		
7. HDD Information (Overwrite:			ш
Total Capacity: 2000 GB			
Free Space: 1695 GB			
Start Date: 2016/09/29 09:00	:00 (212)		
End Date: 2016/10/05 10:00:	00 (212)		
8. Ethernet Type: Static			
IP Address: 192.168.100.97			
Client Port: 50100			Ξ
Web Port: 80			
Auto Port Forwarding: Off			
MAC Address: 00:0C:28:0B:3	32:92		
00:0C:28:0B:3	32:93		
00:0C:28:0B:5	32:94		
		Exit	
NVR Info.			X
CH 25: None	CH 26: None		
CH 27: None	CH 28: None		
CH 27: None CH 29: None	CH 28: None CH 30: None		
CH 29: None	CH 30: None CH 32: None		
CH 29: None CH 31: None	CH 30: None CH 32: None		
CH 29: None CH 31: None 7. HDD Information (Overwrite:	CH 30: None CH 32: None		
CH 29: None CH 31: None 7. HDD Information (Overwrite: Total Capacity: 2000 GB	CH 30: None CH 32: None On)		
CH 29: None CH 31: None 7. HDD Information (Overwrite: Total Capacity: 2000 GB Free Space: 1695 GB	CH 30: None CH 32: None On) 0:00 (212)		
CH 29: None CH 31: None 7. HDD Information (Overwrite: Total Capacity: 2000 GB Free Space: 1695 GB Start Date: 2016/09/29 09:00	CH 30: None CH 32: None On) 0:00 (212)		
CH 29: None CH 31: None 7. HDD Information (Overwrite: Total Capacity: 2000 GB Free Space: 1695 GB Start Date: 2016/09/29 09:00 End Date: 2016/10/05 10:00:	CH 30: None CH 32: None On) 0:00 (212)		
CH 29: None CH 31: None 7. HDD Information (Overwrite: Total Capacity: 2000 GB Free Space: 1695 GB Start Date: 2016/09/29 09:00 End Date: 2016/10/05 10:00: 8. Ethernet Type: Static	CH 30: None CH 32: None On) 0:00 (212)		
CH 29: None CH 31: None 7. HDD Information (Overwrite: Total Capacity: 2000 GB Free Space: 1695 GB Start Date: 2016/09/29 09:00 End Date: 2016/10/05 10:00: 8. Ethernet Type: Static IP Address: 192.168.100.97	CH 30: None CH 32: None On) 0:00 (212)		
CH 29: None CH 31: None 7. HDD Information (Overwrite: Total Capacity: 2000 GB Free Space: 1695 GB Start Date: 2016/09/29 09:00 End Date: 2016/10/05 10:00: 8. Ethernet Type: Static IP Address: 192.168.100.97 Client Port: 50100	CH 30: None CH 32: None On) 0:00 (212)		
CH 29: None CH 31: None 7. HDD Information (Overwrite: Total Capacity: 2000 GB Free Space: 1695 GB Start Date: 2016/09/29 09:00 End Date: 2016/10/05 10:00: 8. Ethernet Type: Static IP Address: 192.168.100.97 Client Port: 50100 Web Port: 80	CH 30: None CH 32: None On) 0:00 (212) 00 (212)		
CH 29: None CH 31: None 7. HDD Information (Overwrite: Total Capacity: 2000 GB Free Space: 1695 GB Start Date: 2016/09/29 09:00 End Date: 2016/10/05 10:00: 8. Ethernet Type: Static IP Address: 192.168.100.97 Client Port: 50100 Web Port: 80 Auto Port Forwarding: Off	CH 30: None CH 32: None On) 0:00 (212) 00 (212) 00 (212)		
CH 29: None CH 31: None 7. HDD Information (Overwrite: Total Capacity: 2000 GB Free Space: 1695 GB Start Date: 2016/09/29 09:00 End Date: 2016/10/05 10:00: 8. 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:3	CH 30: None CH 32: None On) 0:00 (212) 00 (212) 00 (212)		

[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	Α	Audio Recording			
	S	Sensor Recording			
Recording	V	Video Recording			
Mode	A	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.

	※ Live Screen Icon ※
b —	Video is not connected.
No Signal	Camera has been disconnected.

K Control Bar K									
ID:1	25 36 🕗	Ð	2016/05/13 11:01:20	91GB	Play				
1	2 3	4	5	6	\overline{O}				
1	Remote ID								
2	Full / 4ch mode / 9ch mode	Full / 4ch mode / 9ch mode / 16ch mode / 25ch mode / 36ch mode							
3	Auto Sequence Mode								
4	Digital zoom								
5	Date / Time								
6	HDD status								
7	Playback								

2-2 System Login

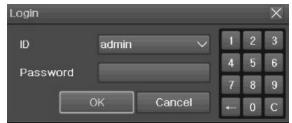
2-2-1 User Account and Authorization System users are divided into local administrators and general users and the local administrator can use all functions.

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}.



[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

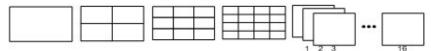
- 1 / 4 / 9 / 16 Division Mode and Auto Sequence Mode
- Channel Grouping
- 1/4/9/16 Multi spot
- TV mode
- Menu Controlling in Monitoring Mode
- Zoom
- Live Event Indication
- Screen Control by using PTZ.

% 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]

1 Channel Division Mode (16 Group)		2 3	•••	•
	1	2	3	4
16 Channel Division Mode	5	6	7	8
(1 Group)	9	10	11	12
	13	14	15	16

※ Max. 16ch Division mode is available

	e is to rotate im	ages at an interva ne Basic 16 Divisi		tain time in Basic &	& Special Divisi	ion mode. Au
•				select the time as	follows (1 ~ 10	sec)
Camera Title	On On			Main Sequence		×
Control Bar Button Sound	On			Sequence Duration	5 sec 🗸 🗸	- Hereneo
HD Frequency Border Line	60hz	×		Event Duration	5 sec 🗸 🗸	
Draw	Off			Event Release	None 🗸 🗸	·
Width	2Pixel			Event Sequence	On 🗸	4
Color	White	v		Auto Sequence Order		
Screen Saver Spot Sequence	Off 5 sec			No.	Channel	
Main Sequence	5 sec			1	CH 01	
				2	CH 02	
				3	CH 03	
				4	CH 04	_
			Exit		Reset	Exit
		E		2		
	ote Controller {S	SEQUENCE} 🖳	Button or	Mouse Arrow Butt	on initiate the A	Auto Sequen
mode.						
ID-1			0010/	AE/10 11.01.00	0100	Dist
ID:1		5 30 2 3	2016/	05/13 11:01:20	91GB	Play
3 Basic mode –	Auto sequence	in 1 CH mode				
	16					

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						\times
Audio	Relay	Spot				
 Single 	🔵 Quad 🛛 🌑	9 Split 🌑 16	Split			
Sequen	се					
• CH 01	CH 02	CH 03	CH 04	CH 05	CH 06	
CH 07	🔵 CH 08	🔵 CH 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}.

Setup									X
	Camera	IP Camera	Recordin	g Sche		Storage	Network	Sys	tem
Schedule1 Schedule2 Schedule3 Schedule4									
Event	Recor	ding /	Alarm	Durati	on	Log	Pu	sh	
Camera	Buzzer	PTZ Preset	Email	Relay	Spot	Popup	Callback	FTP	
CH 01	Off	Off	Off	Off	Off	Off			
CH 02	Off	Off	Off	Off	Off	Off	Off	Off	
CH 03									=
CH 04	Off	Off	Off	Off	Off	Off	Off	Off	
CH 05					Off				
CH 06	Off	Off	Off	Off	Off	Off	Off	Off	
CH 07					Off				
CH 08	Off	Off	Off	Off	Off	Off	Off	Off	
					Re	set	Save	Exit	

[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}.

Mis	c. Control						\times
	Audio	Relay	Spot				
	Single	Quad 9	Split 🔵 16 S	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	
	🔵 CH 25	CH 26	🔵 CH 27	🔵 CH 28	CH 29	🔵 CH 30	
	CH 31	CH 32					
L							<u> </u>
						Exit	
	 CH 01 CH 07 CH 13 CH 19 CH 25 	 CH 02 CH 08 CH 14 CH 20 CH 26 	 CH 09 CH 15 CH 21 	 CH 10 CH 16 CH 22 	 CH 11 CH 17 CH 23 	 CH 12 CH 18 CH 24 CH 30 	

[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.
- $\ensuremath{(3)}$ $\ensuremath{\mbox{ Press the ESC button or right-click mouse button to end the menu.}$

2-3-4 Zoom

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



- ① 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.
- (5) 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.

etup						
Time Carr	iera IP Came	ra Recording	Schedule	Storage	Network	System
Camera	PTZ	Event Source	ce Relay	v		
Camera	Protocol	Camera ID	Baud Rate	Duration	Tou	r
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

[Figure 2-9. PTZ Setup]

% Baud rate can be selected at 2400/4800/9600/19200/38400.

!\

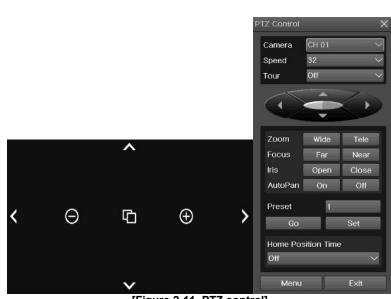
- % Duration can be selected at 5/10/15/20/5-60(User setting) seconds.
- $\,\,$ Tour consists of Tour 1/ Tour 2 and each tour can be set with 8 Preset.
- ****** PTZ supporting IPCAM sets the protocol as IP camera automatically.

※ 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]



[Figure 2-11. 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.

Q	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.
Ø	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 🗸 🗸	
Border Line		
Draw	Off	
Width	2Pixel 🗸	
Color	White 💛	
Screen Saver	Off	
Spot Sequence	5 sec	
Main Sequence	5 sec	

[Figure 2-12. Display Setting Window]

2-5 Control

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

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

[Figure 2-14. Audio]

[Figure 2-15. Relay]

- 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

Calendar Search								
Go To The Time								
Go To The Last								
Go To The First								
Go To The Last Play Time								

[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].

Search									$\overline{\times}$
	<	A	pril 20	16	>				
Sun	Mon	Tue	Wed	Thu	Fri	Sat	Time Index		
							Event	All	\sim
3 10	4 11	5 12	6 13	7	8 15	9 16	Multi Mode	Multi Channel	\sim
17	18	19	20	21	22	23	Channel		
24	25	26	27	28	29	30			
-	_	_	_		-				Hour
0	2	3 4	5	6 7	8	9 10	11 12 13 14 15 16	17 18 19 20	21 22 23
	CH	0		0 1		5 10		45	Min
	H 01	Ť		_		_			
	H 02	1		_	1				
	H 03 H 04					_			
							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).

Ø	st 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

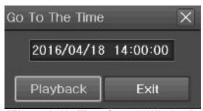
in different dates simultaneously. Entering into the search mode during the Multi-Time playback leads to the Multi-Time Search.

(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

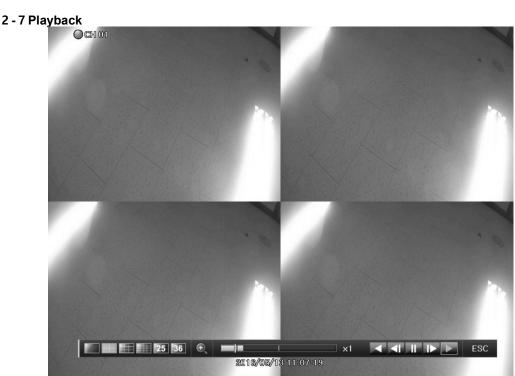
The user can search and playback the last (ahead of 5 minutes) recorded data by Multi-Channel Mode.

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.



[Figure 2-19. Playback Screen]

- ※ There are five routes to play the recorded image.
 - Playback in the Calendar Search
 - Select **{Playback} in {Menu} → {Search} → {Calendar Search} → {Search}**. Playback in the Go To The Last
 - Select {Menu} → {Search} → {Go to The Last}.
 Playback in the Go To The First
 - Select {Menu} \rightarrow {Search} \rightarrow {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.

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

- 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
 16) / (x32) / (x300).

 $\times 1$

LIVE

25 36

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 $(\times 1)$				
		Press two times - Fast forward (x 2)				
		Press three times - Fast forward (×4)				
		Press four times - Fast forward (x 8)				
		Press five times - Fast forward (x 16)				
		Press six times - Fast forward (x 32)				
		Press seven times - Fast forward (x 300) Pressing one more time in x300 leads to x1 back.				
	Forward Frame by Frame	Playback frame-by-frame Pause				
H	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 (× 4)				
		Press four times - Fast reverse (x 8)				
		Press five times - Fast reverse (x 16)				
		Press six times - Fast reverse (x 32)				
		Press seven times - Fast reverse (x 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	·
Panorama Playbad	×۲
Calendar Search	
Multi Time	٠
Multi Day	•
Event Playback	•
Audio Control	•
Backup	•
Zoom	•
[Figure 2-21. Playback Me	enu]

2-7-2 Calendar Search

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

2-7-3 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]

2-7-4 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]

2-7-5 Audio

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

2-7-6 Event

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

2-7-7 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.					

Check [Figure 2-21. Playback menu]

2-7-8 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.

25 36	•		_ ×1	LIVE
		[Figure 2-25. Control ba	ar]	

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.

1	<	Ap	oril 20	16	>		All	Fail	Net	Rec Event No	rmal
Sun	Mon	Tue	Wed	Thu	Fri	Sat	Time	Event		Information	
						2	14:49:46	Playback	End	[Local] admin) I
	4		6		8	9	14:49:16	Playback	Start	[Local]admin	
10	11	12	13	14		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	
Detai	led Inf	orma	tion				14:48:18	Playback	Start	[Local] admin	
Pag		1	/ 10				14:48:18	Playback	End	[Local]admin	
201	6/04/1	8 14		6			14:48:04	Playback	Start	[Local] admin	
	back cal]ad						14:47:53	Playback	End	[Local] admin	
			:43:34	1			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 Ch	na 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

Q

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	n 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 ※					
	M	Motion Detection Recording			
Recording Event	Α	Audio Recording			
	S	Sensor Recording			
Recording		Video Recording			
Mode	•	Audio Recording			

2-10 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].

ackup	_	_	_	×
Information				
None	Select TI	he Device		
Free Space		0	M	
Total Capacity	,	0	M	
File Size		32 N		
File Format	RMS for	mat	\sim	
Directory Nam	ie 👘	_		
All Channe	2016/05/13 10: I	2011	6/05/13 10:58	
CH 01	CH 02	🗖 CH 03	🗖 CH 04	
 СН 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	\$\$			
			Start	Exit

[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]

- $(1) Select {Menu} -> {Search} -> {Calendar Search}.$
- 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.
- 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	<	A	oril 20	16	>		All	Fail	Net	Rec Event	lormal
Sun	Mon	Tue	Wed	Thu	Fri	Sat	Time	Event		Information	
						2	14:49:46	Playback I	End	[Local]admin	
	4	5	6		8	9	14:49:16	Playback S	Start	[Local]admin	
10	11	12	13	14	15	16	14:49:16	Playback I	End	[Local]admin	
17	18	19	20	21	22	23	14:48:38	Playback S	Start	[Local]admin	
24	25	26	27	28	29	30	14:48:36	Playback I	End	[Local]admin	
							14:48:23	Playback S	Start	[Local]admin	
							14:48:23	Playback I	End	[Local]admin	
)etai	led Inf	orma	tion				14:48:18	Playback S	Start	[Local]admin	
Pag	a	1	/ 10				14:48:18	Playback I	End	[Local]admin	
201	6/04/1	18 14	:49:46	6			14:48:04	Playback S	Start	[Local]admin	
	back cal]ad						14:47:53	Playback I	End	[Local]admin	
			:43:34	1			14:47:51	Playback S	Start	[Local] admin	
							14:47:51	Playback I	End	[Local]admin	
							14:47:05	Playback S	Start	[Local]admin	
							14:46:56	Setup Out		[Local]admin	
							14:46:56	Recording	Setup Cha	a admin	

[Figure 2-30. Backup in Log Mode]

- ① 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.
- 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	
Panorama Playback	
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

3ackup	_	_	_	X
Information				
None	✓ Select T	he Device		
Free Space		01	M	
Total Capacity	/	10	N	
File Size		32 N		
File Format	RMS for	mat 🔨	~	
Directory Nam	1e			
	2016/05/13 10:	53:39 ~ 2016	i/05/13 10:58:3	39
All Channe			-	
☐ CH 01 ☐ CH 05	□ CH 02 □ CH 06	□ CH 03 □ CH 07	□ CH 04 □ CH 08	
	CH 10	CH 11	CH 12	
CH 13	— — CH 14	_ □ СН 15	— □ CH 16	-
Backup Proce	:55			
· · · · · · · · · · · · · · · · · · ·			Start E:	×it

[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.

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

X 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.





- 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	\times
	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	

- ③ Move to {Menu} -> {Setup} -> {System} -> {Upgrade} -> {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.

	JSB or HDD Device	
Device 1 🛛 🗸 S	SATA	
5	SanDCruzer_Force	
Free Space	6270 M	
Total Capacity	7987 M	
File Size	9646 Byte	
Directory Name	20160418_20160418_09_LOG	
All Event		
🗆 Fail 🔲 Ne	et 🔲 Rec Event 🔲 Normal	
Backup Process		
	Start Exit	

2-1 3 Capture 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.

565645348945_20100303.log Log file is the text file.



[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 'CCTV SMART VIEWER'.



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				×
Time Camera IP Ca	mera Recording :	Schedule Storage	l Network	System
Time Sync Date & Tim	ne Time Zone	Auto Reboot		
1. Time Sync	NTP	\sim		
2. NTP				
Server Type	NTP	\sim		
Server URL	Auto			
3. Update No./day	2 Time	\sim		
		Reset	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							×	
			₽	0230		į		
Time	Camera	IP Camera	Recording	Schedule	Storage	Network	System	
Time Sy	ync Dai	te & Time	Time Zone	Auto R	eboot			
1. Date &	Time		2016/05/13	11:16:09				
2. Date D	isplay Type		yy/mm/dd	\sim				
-					Reset	Save	Exit	
		[Fig	ure 3-2. D	ate and Ti	me]			
1	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.
- ② Select a field you want to change by using the arrow buttons and press the Select button.

(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	×
Time Camera IP Camera	Recording Schedule Storage Network System
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

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

(4)DST

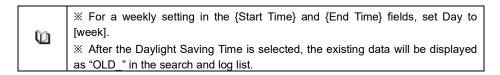
- ① By using the arrow keys and the Select button, select {Summer Time}.
- ② On the selection window, select On/Off by using the arrow keys and the Select button.

(5)Start Time

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

(6)End Time

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



3 - 1 - 4 Auto Reboot

Auto Reboot is for system stability, rebooting itself regularly.

Se	tup							X
	Time	Carr	IP Camera	Recording	1234 Schedul		e Network	System
ľ	Time Sy		e & Time	Time Zone		o Reboot	e notrioin	o yotem
	1. Auto R Time(ha Repeat	our)		Off 00:00 Every Day				
						Reset	Save	Exit

[Figure 3-4. Auto Reboot Menu]

3 - 2 Camera

Se	etup						
	Time Can	nera IP Carne	ra Recording	Schedule	Storage N	letwork	System
Ē	Camera	PTZ	Event Sour	ce Rela	У		
	Camera	Connect	Name	PZ Mask	Туре	Adjust	
	CH 01	Off	CH 01		Auto		
	CH 02	Off	CH 02		Auto		
	CH 03	On	CH 03	0	Auto	10/10	
	CH 04	Off	CH 04		Auto		
	CH 05	Off	CH 05		Auto		
	CH 06	Off	CH 06		Auto		
a.	CH 07	Off	CH 07		Auto		
	CH 08	Off	CH 08		Auto		
				R	eset Sa	ave	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.



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

2 Title

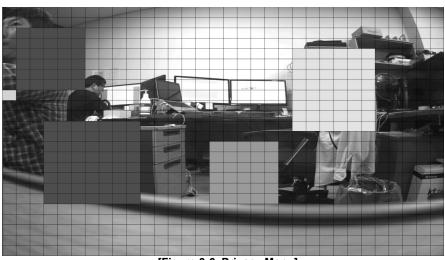
Name each camera. Max. 10 letters, 20 numbers are available.

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 Type

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.

Setup					X					
	- ÷	*	0000							
Time Carr	nera IP Camera	a Recording	Schedule	Storage	Network System					
Camera	PTZ	Event Sourc	e Rela	у						
Camera	Connect	Name	PZ Mask	Туре	Adjust					
CH 01	Off	CH 01		Auto	Auto					
CH 02	Off	CH 02		Auto	4MP 3MP					
CH 03	On	CH 03		Auto	3MP(1920x1536)					
CH 04	Off	CH 04		Auto	T-1080					
CH 05	Off	CH 05		Auto	A-1080 C-1080					
CH 06	Off	CH 06		Auto	T-720					
CH 07	Off	CH 07		Auto	A-720 C-720					
CH 08	Off	CH 08		Auto	960H					
			B	eset S	ave Exit					
[Figure 3-7 Camera Type Menu]										

- [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.
- (5) Adjust (IPCAM)

Adjust Brightness/Contrast/Color/Saturation/Sharpen/Camera.

[Figure 3-8. Camera Adjust Menu]

****** 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)					×					
C		⊒ ,	÷ .	1234							
Ti	ime Carr	nera IP Came	ra Recording	Schedule	Storage Ne	etwork System					
	Camera	PTZ	Event Source	ce Relay	/						
	Camera	Protocol	Camera ID	Baud Rate	Duration	Tour					
	CH 01	None		9600	5 sec	Off 🔶					
	CH 02	None	2	9600	5 sec	Off					
	CH 03	None		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		9600	5 sec	Off					
	CH 08	None	8	9600	5 sec	Off 🗸					
				Re	eset Sav	ve Exit					
	Eigure 2.0. DTZ Meguil										

[Figure 3-9. PTZ Menu]

 $\,\,$ <code>IPCAM</code> supporting <code>PTZ</code> is set to <code>Protocol</code> as <code>IP</code> Camera automatically.

3 - 2 - 3 PTZ Coax(UTC) Control

OSD setup change is available with the connected camera.

Setup					×
O Time	Camera Re		edule Stor	age Netw	ork System
Camera	PTZ P	OS Event S	Source Rel	ay	
Camera	Protocol	Camera ID	Baud Rate	Duration	Tour
CH 01 CH 02 CH 03 CH 04 CH 05 CH 06 CH 06 CH 07 CH 08	COAX_PTZ None None None None None None None	None A.D. COHU DONGYANG DYNACOLOF ERNITEC EYE VIEW FINE SYSTEM GE GSP HITRON HONEYWELL	 PROLIN RIFATRO M SAMSUI SUNGJII VICON VISION_ 	DNIC + E + DN + NG +	Off Off Off Off Off Off Off Off
		HONEY WELL JANEX LG LILIN	. → YOKO → COAX_F → COAX_C		ELCO_D

[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.

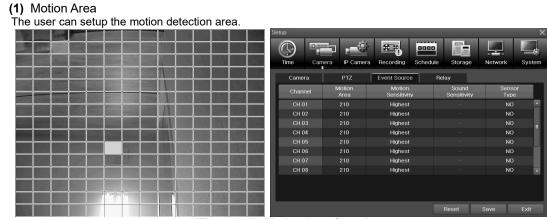
※ IPCAM do not support this feature.

3 - 2 - 4 Event Source

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

Setup												\times
		7	0	4				Ē.		<u>.</u>		
Time	Can	nera	IP Camer	a Re	cording	Sched	ule	Storage		Network	System	1
Came	ra		PTZ	Eve	ent Sourc	e	Rela	У				
Chan	nel		lotion Area		Motior Sensiti∨i			Sound Sensitivity	,	Sens Typ		
СН ()1		210		Highes	t				NC		
СН ()2		210		Highes	t				NC		
CH ()3		210		Highes	t				NO		
СН ()4		210		Highes	t				NC	Ē	
СН ()5		210		Highes	t				NC		
СН ()6		210		Highes	t				NC		
CH ()7		210		Highes	t				NC		
СН ()8		210		Highes	t				NC		
							R	eset	S	ave	Exit	

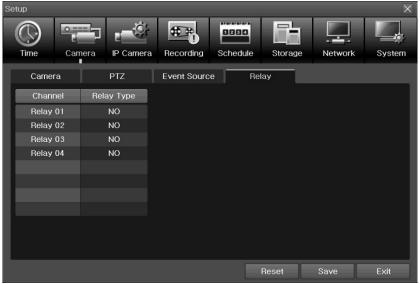
[Figure 3-12. Event Source Menu]



[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



[Figure 3-14. Relay Type Setup]

Select the relay type. (NO/NC)

3 - 3 IP Camera

3 - 3 - 1 IP Camera Setup1

With NOVATEK DVR, IP Camera channels can be switched to BNC channels. For using IP camera, it needs to be set in the Setup menu as below.

Setup				×
Time Camera Recor	ding Schedule	Storage	Network	System
 Upgrade Factory Setup Error Alarm Action Error Alarm Duration Menu Time Out Language Video Loss Event Delay Time System Codec Dual Password for Playback Hide Video when Logging Out 	Firmware Reset Buzzer Latch 5 min English 1 sec H.265 Off	Setup ~ ~ ~ ~	Logo	=
13. Using IP Camera	None			
		Reset	Save	Exit

Menu > Setup > System > 13. Using IP Camera

Setup						X
	h #23		880			
Time Cam	Jsing IP Came	ra		-	× work	System
 Upgrade Factory Setup Error Alarm Action Error Alarm Duratic Menu Time Out Language Video Loss Event I System Codec Dual Password fc Hide Video when	All Chan CH 01 CH 05 CH 09 CH 13 IP Camera	nel CH 02 CH 06 CH 10 CH 14	CH 03 CH 07 CH 11 CH 15 CH 15 esolution : 21 OK	CH 04 CH 08 CH 12 CH 16 CH 16	4	
				Reset	Save	Exit

When you click the 'Using IP Camera', there are check box per each channels. Please check the box of channel you want to switch and click OK button.

3 - 3 - 2 IP Camera Setup2

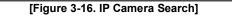
IP Camera can be registered to NVR. The user can check the information of IP Camera channel, Model Name, IP, Port and Protocol.

Time Cam	era IP Camera R	ecording Schedule	Storage N	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]

Search	_	_			×
	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					•
			Refresh	Register Exit	

① Click [Search] button.



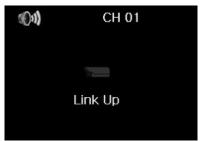
2 Check the camera search list [Figure 3-16. IP Camera Search]

All	IP	Port	Model Name	MAC Address
001	10.34.46.4	80	SK-NM30	8C:E7:48:FB:A8:3D
002		Register	×	
		Channel	CH 18 🗸 🗸	
		IP	10.34.46.4	
		Port	80	
		ID/P₩ List	Empty 🗸	
		ID		
		PW		
			RTSP-TCP	
		Protocol	onvif 🗸 🗸	
		P	egister Exit	

[Figure 3-17. IP Camera Registration]

- ③ Click [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
- (5) 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.
- O Finish the IP Camera registration by clicking the registration button after selecting ID/PW, Port and Protocol of IP camera.

3 - 3 - 3 IP Camera Stream Setup

Setup				\times
				÷.
Time Carr	nera IP Camera Reco	rding Schedule Stor	age Network Sy	/stem
Register	Stream Cor	nmon		
IP Camera	1st Stream	2nd Stream	3rd Stream	
CH 01	1920×1080, 15fps	704x480, 10fps	320x240, 5fps	
CH 02				
CH 03				=
CH 04				
CH 05				
CH 06				
CH 07				
CH 08				
			E>	kit

[Figure 3-19. IP Camera Stream Setup]

① Select the stream of the channel

Setup						1		×
\bigcirc	0 ====		Stream		×			
			1st Stream] !	<u> </u>	
Time	Camera	IP	Resolution	1920×1080	\sim	e N	etwork	System
Registe	er	Strea	Bit Rate	4096				
IP Cam	era	1s	Frame Rate	15	\sim	3r	d Stream	
CH 0	1 1!	920×	2nd Stream			320	x240, 5fps	s 🔺
CH 03	2		Resolution	704×480	$\overline{}$			
CH 0	3				- 1			=
CH 04	4		Bit Rate	1024				
CH 0	5		Frame Rate	10	\sim			
CH 0	6		3rd Stream					
CH 0	7		The second is	(W222925 W201025	_			
CH 0	8		Resolution	320×240	\sim			
			Bit Rate	512				
			Frame Rate	15	\sim			
			Cha	ange Exit				
								Exit

[Figure 3-20. IP Camera Stream Change]

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

3 - 3 - 4 IP Camera Search Protocol Setup

Setup							×
			£	0800		<u>.</u>	
Time	Carne	ra IP Camera	Recording	Schedule	Storage	Network	System
Re	gister	Stream	Common				
1. Sea	arch Protoco	bl	ONVIF				
2. PO	E Camera Pl	ug & Play	Off				
	D						
1	×₩						
			C RTSP-TCP				
i	Protocol		ONVIE	\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 - 5 IP Camera Information

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

IP Camera Information	×
 1st Stream RTSP URL: rtsp://10.34.47.2:554/cam0_0 Settings: 1920x1080, 8192kbps, 15fps, GOP 30, H.264 Streaming: 1920x1080, 576kbps, 10fps 2 2nd Stream RTSP URL: rtsp://10.34.47.2:554/cam0_1 Settings: 704x480, 2048kbps, 10fps, GOP 15, H.264 Streaming: 704x480, 352kbps, 9fps 3 3rd Stream RTSP URL: rtsp://10.34.47.2:554/cam0_2 Settings: 320x240, 0kbps, 5fps, GOP 0, JPG Streaming: 320x240, 384kbps, 5fps 4. HTTP URL: http://192.168.100.97:65401 5. MAC Address: 00:30:6F:01:07:17 6. Audio: On, PTZ: Off, RTSP-TCP: Off	
	Exit

[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 Carnera	Recording Sche		Network	System
Schedule1	Schedule2	Schedule3	Schedule4		
Event	Recording	Alarm Duratio	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
		ŝ.	*	0250		į	
Time	Camera	IP Camera	Recording	Schedule	Storage	Network	System
Schedu	ile1 🔵 So	chedule2	Schedule3	🔵 Sche	dule4		

[Figure 3-24. Schedule Selection Window]

3 - 4 - 2 Event

Setup						X
Time Can	nera IP Carr	era Recordir	g Schedule	e Storage	Network	System
• Schedule1	Schedule2	2 💿 Schedu	ule3 🔵 Sc	hedule4		
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

Setup				-96	X
Time Car	nera IP Carnera	Recording Sche		Network Sy	vstern
Schedule1	Schedule2	Schedule3	Schedule4		
Event	Recording	Alarm Durati	on Log	Push	
Camera	Resolution	Continuous Speed	Event Speed	Audio	
CH 01	1st Stream	On	On	On	
CH 02		On	On		
CH 03					=
CH 04		On	On	On	
CH 05					
CH 06		On	On	On	
CH 07					
CH 08		On	On	On	
			Reset	Save Ex	(it

[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

Setup									X
	Camera	IP Carnera	Recordin	ig Sche		Storage	Network	Sys	a € stern
Schedule1	🔵 Sc	hedule2	- Schedu	ıle3 🌘	Schedu	ıle4			
Event	Recor	ding /	Narm	Durati	on	Log	Pu	sh	
Camera	Buzzer	PTZ Preset	Email	Relay	Spot	Popup	Callback	FTP	
CH 01	Off	Off	Off	Off	Off	Off			
CH 02	Off	Off	Off	Off	Off	Off	Off	Off	
CH 03									
CH 04	Off		Off	Off	Off	Off	Off	Off	
CH 05									
CH 06	Off		Off	Off	Off	Off	Off	Off	
CH 07					Off				
CH 08	Off		Off	Off	Off	Off	Off	Off	
					Re	set	Save	Exit	

[Figure 3-27. Recording Alarm Setup Window]

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

 \mathbf{I}

X 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)			×
		**	0000			
Time Can	nera IP Cam	era Recording	Schedule	Storage	Network	System
Schedule1	Schedule2	Schedule	3 🔵 Sche	edule4		
Event	Recording	Alarm	Duration	Log	Push	
Camera	Pre Alarm	Post Alarm				
CH 01	Off	10 sec				
CH 02	Off					
CH 03						
CH 04	Off					
CH 05						
CH 06	Off					
CH 07						
CH 08	Off					
				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
			0000			
Time Can	nera IP Carr	nera Recording	Schedule	Storage	Network	System
Schedule1	Schedule2	2 🔵 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					
				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	<i>62</i>	<i>12</i>	945 · · · ·	18 26		×
Time Car	nera IP Car	era Recordin	g Schedule	Storage	Network	System
Schedule1	Schedule2	2 🔘 Schedu	ile3 🔵 Sche	edule4		
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				
				Reset	Save	Exit

[Figure 3-30. Push Setup Window]

Setup On / Off for Motion / Sensor / Sound.

 $\ensuremath{\mathbbmu}$ 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.

S	etup																								>	<
	\bigcirc)	0	1	7			0																		
	Time		с	ت ame	era		∟ P Ca	amer	a	Red	cord	ling	S	che	dule		Sto	rag) e					System		
Í	Sch	edu	le 1	•	Sch	edu		٠	Sch	edul	e3	•														
	Hour				3	4	5	6			9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
	Sun																									
	Mon	1		1	1		1			1	1		1			1			1		1			1		
	Tue				1																					
	Wed	1		1	1			1		1	1		1			1		1	1			1		1		
	Thu																									
	Fri	1		1	1			1		1	1		1			1			1			1		1	1	
	Sat																									
	Hol	1			1			1			1		1			1			1			1		1	1	
												H	olid				Reset				Save			E×it		

[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	_																							×	
								0000						Eta -				,							
Time		С	ame	era		- Ca	mer	a	Red	Recording Schedule						Storage						System			
© Sc	hedu	ile1	•	Sch	edu	le2	۲	Sch	edul	e3		Sche	edul												
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																								
Mon	1		1	1				1	1									1	1			1			
Tue																									
Wed	1		1	1				1	1	1									1		1	1			
Thu																									
Fri	1		1	1				1	1	1	1	1			1			1	1			1			
Sat																									
Hol	1		1	1															1			1			
										[Н	olid	ay		R	eset			Sa	ve			Exit		

day F	tegistra	ation								×		iliday F	tegistra								
	۲.	А	pril 20	16	>		N).	Date		I		۲	А	pril 201		>		No.	Date	
Sun	Mon	Tue	Wed	Thu	Fri	Sat						Sun	Mon	Tue	Wed	Thu	Fri	Sat	001	Every Year April 18	; E
																		2			
																		9			
																		16			
	18				April 18								18		20			23			
	25		Brd Mi	onday	of Apr	il .							25					30			
																					5

[Figure 3-32. Holiday Registration Window]

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

① Move to {Schedule} -> {Holiday}.

	X If the date for the holiday and day of the week are the same in the {Schedule} menu, the
W	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.

Setup									X	
C.	e Camera	L IP Camera	Recording	g Schedu		Storage		etwork	System	
	ouniora	in connord		g conouc		•			oyotom	
1. Priv	vate Recording		Off		\sim	Days				
2. HDI) Overwrite		On		\sim					
3. Loc	al Storage Manag	ement								
Rec	ording Backu	ip Ne	w	RAID						
No.	Location	Ser	ial	Temperat	ure	Size(F/	/T)	Statu	s(SW/HW)	
1	SATA	WD-WMC4N	10H9TMYL	43℃	43°C		496/2000GB		e/Healthy	
3	SATA	Z3T91	[9NY	45℃	45°C 496/		500GB Onli			
						Reset	Sav	/e	Exit	

[Figure 3-33. Storage Device Window]

0	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.

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.
Q	X 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								X
Time	Camera	IP Camera	Recording	Schedu		Storage	Network	System
2. HDD	ate Recording Overwrite al Storage Manage	ment	Off On	-	\geq	Days		
Reco	rding Backu	p Ne	w	RAID				
No.	Location	Seri	al	Model		Size	Devi	се Туре
4	USB	4C53010282	0119116	SanDCruze	r_F	7 GB	Direc	t Access
								_
_								
						Reset	Save	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

Image Image <th< th=""><th>Setup</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></th<>	Setup							
1. Private Recording Off Days 2. HDD Overwrite On 3. Local Storage Management RAID Recording Backup New RAID Recording-Format No. Location Serial Model	Time		P Camera	Becording	0880	Storage	Network	System
Recording Backup New RAID No. Location Serial Model Backup-Format	1. Privat	e Recording		Off				o) otom
No. Location Serial Model Recording-Format Device Type	3. Local	Storage Manage	ement					
No. Location Serial Model Backup-Format Device Type	Record	ding Backu	ip Ne	w	RAID			
2 SATA XQKPPOBU2GZD39KD RAID 1 500 GB Direct Access	No.	Location	Ser	ial	Model			е Туре
	2	SATA	XQKPPOBU2	GZD39KD	RAID 1	500 GB	Direct	Access
Reset Save Exit						Reset	Save	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.

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

Q	※ 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]

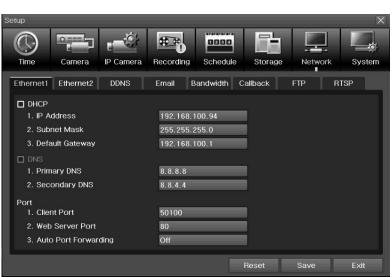


3 - 7 - 1 Ethernet 1 (Client Port)

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.



[Figure 3-37. Ethernet 1]

- ① [Menu] → [Setup] → [Network] → [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 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.

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

3 - 7 - 3 E-mail

Setup		×
Time Carnera	Recording Schedule S	storage Network System
Ethernet1 Ethernet2 DDNS	Email Bandwidth Callba	ack 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		
	Res	

[Figure 3-40. E-mail]

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

- ① [Menu] → [Setup] → [Network] → [E-Mail]
- 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.

Time	Camera	Recording \$	Chedule	Storage	Network	System	C Time	Camera	Recording	Schedule	Storage	Network	Sys
Schedule	l Sche	edule2	Schedule3	Sche	dule4		1. DVB N			000c28066	429		
					aaloi			Remote Co		1			
Event	Recording	Alarm Du	ration	Log				Key Control	ler	1			
Camera	Buzzer	PTZ Pres,	Email	Relay	Spot	Рорир	4. Users			Modify	Add		lete
CH 01	Off	Off	On	Off	On	Off	5. Upgra			Firmware Reset	Setup	_	
CH 02	Off	Off	Off	Off	Off	Off	6. Factor						
CH 03	Off	Off	Off	Off	Off	Off		ole/POS Por		Console	,		
CH 04	Off	Off	Off	Off	On	Off		Alarm Action		Email		Off	
CH 05	Off	Off	Off	Off	Off	Off	9. Error /	Alarm Duratic	n -	Latch	\sim	Buzzer	
CH 06	Off	Off	Off	Off	Off	Off	10. Ment	u Time Out		Off	\sim	 Email Relav01 	
CH 07	Off	Off	Off	Off	Off	Off	11. Lang	luage		English	\sim	Popup V	Vindow
CH 08	Off	Off	Off	Off	Off	Off						, apap ,	

- $(\ensuremath{\mathfrak{I}})$ 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 - 4 Bandwidth

Setup						×
Time Carnera	IP Camera	Recording	Schedule	Storage	Network	System
Ethernet1 Ethernet2	DDNS			allback	FTP	RTSP
 Picture Setting Picture Resolution Picture Quality Bandwidth Limitation Transmission Codec IPC Stream Bypass 		CIF Medium Unlimited H.264 Off	~			
				Reset	Save	Exit

[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.
- X 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.

 $\ensuremath{\mathbbmm}$ IPC Stream bypass features is available with the channel connected to IPCAM.

3 - 7 - 5 RTSP



[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.



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

Setup					
	₩	0000		į	
Time Camera IP Camera	Recording	Schedule	Storage	Network	System
1. DVR Name 2. ID For Remote Controller	000c280b329;	2			
3. Key Controller	Setup				
4. Users	Modify	Add	Del	ete	
5. Upgrade	Firmware	Setup	Lo	go	
6. Factory Setup	Reset				
7. Error Alarm Action	Off				
8. Error Alarm Duration	Latch	\sim			
9. Menu Time Out	5 min	\sim			
10. Language	English	\sim			
11. Video Loss Event Delay Time	1 sec	\sim			
			Reset	Save	Exit

[Figure 3-45. System]

ID for remote controller	ID to be controlled by Remote 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 event comes out
BNC out type	HD, SD resolution selection

3-8-1 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	* * * * *	ŧ	
□ Network	: Live		
🗖 Playbac	k (Download		
🗖 Local Ba	ackup		
🔲 Setup			
D PTZ Cor	ntrol		
Network	Upgrade		
🔲 Passwo	rd		
Channel En	lable		
🗖 CH 01	🗖 CH 02	🗖 СН 03	🗖 СН 04 🔄
🗖 CH 05	🗖 CH 06	🗖 CH 07	🗖 CH 08 🔳
🗖 СН 09	🗖 CH 10	🗖 CH 11	🗖 СН 12 🚽
CH 13	🗖 CH 14	🗖 CH 15	🗆 СН 16 💽
		Modify	Cancel

[Figure 3-46. Users → Modify]

3-8-2 Upgrade To upgrade by external storage devices supports USB2.0.

supports USB 2.0



Caution

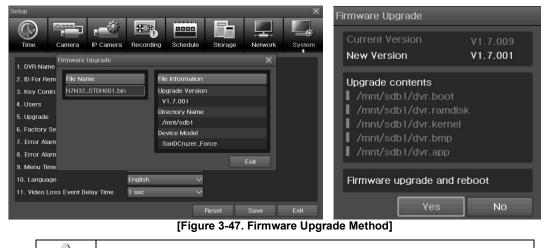
(1) Firmware Upgrade method

 After copying the upgrade file, be advised to get rid of the USB device with safety removal mode from PC.
 If the USB device is disconnected from the USB port while the upgrade file

is being copied, the DVR system may not automatically detect the file.

Removing USB during the upgrade in progress may cause damage on the system. The system starts over when the upgrade is completed.

- 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



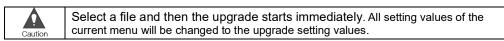
* After 3 ~15 Seconds, you can see the Firmware upgrade process menu.

- 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



- 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.



(3)

(3) Logo U <u>pgrade</u>		
5. Upgrade		Firmware Setup
st This to be changed to booting logo.		
※ Image format: JPG format, booting I	ogo image size	
3 - 8 - 3 Factory Setup [Menu] → [Setup] → [System] → [Factory Select Yes or No	^y Setup]	
Caution Take a note that all settin	ngs will be to default e	xcept network setting.
3 - 8 - 4 Error Alarm Action		
① [Menu] → [Setup] → [System] →		-
 This is to set the alarm which is set 	erious for system opera	ation
Setup	8 D.	×
Time Camera IP Camera	Recording Schedule	Storage Network System
1. DVR Name	000c280b3292	
2. ID For Remote Controller	1	
3. Key Controller	Setup	i II
4. Users	Modify Add	
5. Upgrade	Firmware Setu	p Logo
6. Factory Setup	Reset	
7. Error Alarm Action	Off	Alarm Action • Off
8. Error Alarm Duration	Latch ~	, Alarm List → Buzzer Email
9. Menu Time Out	5 min 🗸 🗸	Relay01 Popup Window
10. Language	English 🗸 🗸	Push

[Figure 3-48. Alarm Action]

 \sim

Reset

Save

Exit

1 sec

11. Video Loss Event Delay Time



3-8-5 Error Alarm Duration

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

3-8-6 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.

3-8-7 Language

System OSD (On Screen Display) selection.

3-8-8 Video Loss Event Delay Time

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

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/lagin.cgi



[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.

PC Web viewer	PC Web viewer			
QR Code (Netw		(5)	6	
JPEG Viewer	Client Port: 50100	& Connect	JP Login with administrator	
Calculator	Please use the	download link according to user	system environment.	
§ Setup		PC Web Viewer Download	The second s	
		7		

[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

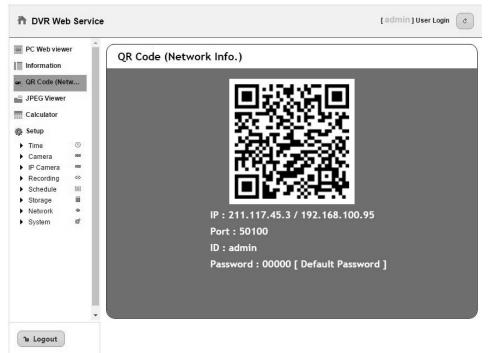
- ⑦ PC web viewer download.
- 8 Log out

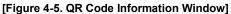
** Currently connected DVR / NVR information check is available.

DVR Web Service			[admin] User Login	c
PC Web viewer				1
Information	Information			
🗠 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		1
 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	CH 13: None	CH 14: None		
Network •				
 Network System 	CH 15: None	CH 16: None		
	CH 15: None CH 17: 10.34.46.3(16fps)	CH 16: None CH 18: None	[admin] User Login	•
System Logout DVR Web Service	CH 17: 10.34.46.3(16fps)		[admin] User Login	•
System Logout DVR Web Service	CH 17: 10.34.46.3(16fps)		[admin] User Login	•
System Logout Logout DVR Web Servic PC Web viewer Information	CH 17: 10.34.46.3(16fps)		[admin] User Login	•
System Logout Logout Cub viewer PC Web viewer information a, QR Code (Netw	CH 17: 10.34.46.3(16fps)	CH 18: None	[admin] User Login	•
System Logout Logout Cube viewer PC Web viewer Information G QR Code (Netw JPEG Viewer	CH 17: 10.34.46.3(16fps) e Information CH 31: None	CH 18: None	[admin] User Login	•
System Logout Logout DVR Web Service PC Web viewer Information G, QR Code (Netw JPEG Viewer Calculator Setup	CH 17: 10.34.46.3(16fps) e Information CH 31: None 6. HDD Information (Overwrite: On)	CH 18: None	[admin] User Login	~
System Logout Logout DVR Web Service PC Web viewer Information G, QR Code (Netw JPEG Viewer Calculator	CH 17: 10.34.46.3(16fps) e Information CH 31: None 6. HDD Information (Overwrite: On) Total Capacity: 2500 GB	CH 18: None CH 32: None	[admin] User Login	~ ~
 System System Logout DVR Web Servic PC Web viewer Information or, QR Code (Netw JPEG Viewer Calculator Setup Time Camera IP Camera 	CH 17: 10.34.46.3(16fps) e Information CH 31: None 6. HDD Information (Overwrite: On) Total Capacity: 2500 GB Free Space: 992 GB	CH 18: None CH 32: None 214)	[admin] User Login	~
 System System Logout DVR Web Servic: PC Web viewer Information or, QR Code (Netw JPEG Viewer Calculator Setup Time Camera 	CH 17: 10.34.46.3(16fps) 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 (CH 18: None CH 32: None 214)	[admin] User Login	•
System System Logout Logout DVR Web Service PC Web viewer PC Web viewer Solution G, QR Code (Netw JPEG Viewer Calculator Setup Time Calculator Setup Time Calculator Recording Event Recording Setup	CH 17: 10.34.46.3(16fps) 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 (End Date: 2016/10/05 17:00:00 (2	CH 18: None CH 32: None 214)	[admin]UserLogin	
System Logout Logout Logout DVR Web Servic PC Web viewer Information G, QR Code (Netw JPEG Viewer Calculator Setup Time Ecanera LOGOURE Recording Event Recording Event Recording Event Recording Duration	e Information CH 17: 10.34.46.3(16fps) 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 (2 End Date: 2016/10/05 17:00:00 (2 7. Ethernet Type: Static	CH 18: None CH 32: None 214)	[admin] User Login	~
System Logout Logout Logout DVR Web Servic PC Web viewer Information G QR Code (Netw JPEG Viewer Calculator Setup Time Calculator Recording Log Log	CH 17: 10.34.46.3(16fps) 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 (2 End Date: 2016/10/05 17:00:00 (2 7. Ethernet Type: Static IP Address: 192.168.100.97	CH 18: None CH 32: None 214)	[admin] User Login	~
 System System Logout DVR Web Servic. PC Web viewer Information GR Code (Netw JPEG Viewer Calculator Setup Time Calculator Setup Schedule 	CH 17: 10.34.46.3(16fps) 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 (2 C. Ethernet Type: Static IP Address: 192.168.100.97 Client Port: 50100	CH 18: None CH 32: None 214)	[admin]UserLogin	
 System System Logout DVR Web Service PC Web viewer Information GR Code (Netw JPEG Viewer Calculator Setup Time Cacamera IP Camera Recording Alarm Duration Log Push 	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 (2 End Date: 2016/10/05 17:00:00 (2 7. Ethernet Type: Static IP Address: 192.168.100.97 Client Port: 50100 Web Port: 80	CH 18: None CH 32: None 214)	[admin]UserLogin	C
 System System Logout DVR Web Servic PC Web viewer Information QR Code (Netw JPEG Viewer Calculator Setup Time Calculator Setup Time Calculator Setup Time Calculator Setup Setup Schedule Storage 	e Information CH 17: 10.34.46.3(16fps) 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 (2 Find Date: 2016/10/05 16:00:00 (2 7. Ethernet Type: Static IP Address: 192.168.100.97 Client Port: 50100 Web Port: 80 Auto Port Forwarding: Off	CH 18: None CH 32: None 214)	[admin] User Login	

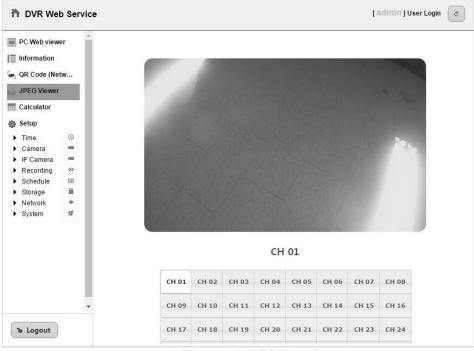
[Figure 4-4. DVR / NVR Information Window]

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





** 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.

PC Web viewer		_			Recording
QR Code (Netw	Channel	Recording Quality	Recording Resolution	Frame Rate (Frame/Sec)	Hour a Day (Hours)
JPEG Viewer	CH 01	Highest	CIF	30	24
Calculator	CH 02	Highest	CIF	30	24
Setup	CH 03	Highest	CIF	30	24
Time 🕓 Camera 📟	CH 04	Highest	CIF	30	24
IP Camera 📟	CH 05	Highest	CIF	30	24
Recording @ Schedule III	CH 06	Highest	CIF	30	24
Storage 🔳	CH 07	Highest	CIF	30	24
Network System	CH 08	Highest	CIF	30	24
	HC	DD Capacity	(GB) Calculate ণ Re	Count	

[Figure 4-7. Calculator]

** Recording setup is available by each channel.

PC Web viewer	Recording					
QR Code (Netw JPEG Viewer Calculator	• Schedule1	O Schedule2	O Schedule3	O Schedule4		
Setup	Camera	Resolution	Continuous Speed	Event Speed	Audio	
Time 🕒 Camera 📟	CH 01	1st Stream	On	On	On	~
IP Camera Recording	CH 02	1st Stream	On	On	On	
[∞] Event	CH 03	1st Stream	On	On	On	
 Recording Alarm 	CH 04	1st Stream	On	On	On	
Duration	CH 05	1st Stream	On	On	On	
© Log © Push	CH 06	1st Stream	On	On	On	
Schedule	CH 07	1st Stream	On	On	On	
Storage Network	CH 08	1st Stream	On	On	On	
System 📽	CH 09	1st Stream	On	On	On	~
Ta Logout	CH 09	1st Stream	Un	· · · · ·		ave

[Figure 4-8. Setup Recording Page]

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

Recommended PTZ Camera Protocol

NO	Vendor	Model	Protocol
1	HONEYWELL	SCANDOME2	HSDN-251
2	LG	LG	LG_MULTIX,
2	LG	LG	LG_OLD
3	PANASONIC	WVCS854	WVCS854
4	PELCO	PELCO	PELCO – D
4	FELCO	FELCO	PELCO - P
5	SAMSUNG	SAMSUNG	SPD-1600
5	TECHWIN	SAMSONG	SCC641
6	HITRON	FASTRAX2	FASTRAX2
7	COAX	COAX_OSD	UTP/Coaxitron OSD
		COAX_PTZ	UTP/Coaxitron PTZ

Chapter 5. Summary

5-1 STD3K 4.0 series main features



[Image 5-1-1. HX20-504KRS4]



Model Name		NX22-516KRS4	NX20-508KRS4	HX20-504KRS4	
Front image					
Rear image					
	Input	16 BNC	8 BNC	4 BNC	
Video	Input Resolution	4K(8MP), 5MP, 4MP, 3MP, 2MP, 960H	4K(8MP), 5MP, 4MP, 3MP, 2MP, 960H		
	Output	1 HDMI, 1 VGA, 1 BNC	1 HDMI, 1 VGA, 1 BNC		
	Output Resolution	UHD, QHD, FHD, SXGA, XGA			
Recording	Speed	2MP : 30fps/ch 3MP, 4MP : 15fps/ch 5MP : 10fps/ch 4K(8MP) : 8fps/ch	2MP : 30fps/ch 3MP, 4MP : 15fps/ch 5MP : 10fps/ch 4K(8MP) : 8fps/ch		
	Compression	H.265, H.264			
	Resolution	4K(8MP), 5MP, 4MP, 3MP, 2MP, 960H	4K(8MP), 5MP, 4MP, 3MP, 2MP, 960H		

[Image 5-1-2. NX20-508KRS4/NX22-516KRS4]

Playback	Speed	2MP : 208 fps 3MP : 146 fps 4MP : 117 fps 5MP : 86 fps 4K : 52 fps	2MP : 208 fps 3MP : 146 fps 4MP : 117 fps 5MP : 86 fps 4K : 52 fps	2MP : 104 fps 3MP : 73 fps 4MP : 58 fps 5MP : 43 fps 4K : 26 fps	
	Resolution	4K(8MP), 5MP, 4MP, 3MP, 2MP, 960H	4K(8MP), 5MP, 4MP, 3MP, 2MP, 960H		
Audio	Input	4 RCA + 12 D-SUB	8 RCA	4 RCA	
	Output		1 HDMI, 1 RCA		
Interface	Sensor In / Out	16 / 1 - NC / NO	8 / 1 - NC / NO	4 / 1 - NC / NO	
	USB	1 USB 2.0, 1 USB 3.0(Rear)	2 x USB 2.0		
	PTZ / Keyboard	RS485 - Terminal Block			
	ATM / POS		Ethernet POS		
	Interface	Ethernet 10/100/1G Ethernet 10/10			
	Compression		H.264, H.265		
Network	Speed	8fps (4K), 10fps (5MP), 30fps (2MP)	8fps (4K), 10fps (5MP), 30fps (2MP)		
	Resolution	Normal 2MP, REC Video Bypass Max. 4K	Normal 2MP, REC Video Bypass Max. 4k		
	OS	OS Embedded Linux (Built-in Flash Memor			
System	Pre / Post- Alarm	5sec / 5sec~5min			
	Recording Mode	Continuous, Event, Schedule			
	Data Search	Calendar, Multi Day / Time, Event, Go to Time			
	Backup Interface	USB, Network			
	Backup Type	Video(RMS, AVI), Capture(JPEG), Log List, Setup Data			
	Alarm Action	Buzzer, PTZ Preset, E-mail , SPOT, Relay, Event Popup, Push			
	User	15 Users (Admin, User1 ~ User14)			
	Netwrok Viewer	NETUS-Pro(CMS), Web Viewer, Mac Viewer, NETUS-Eyes(iOS, Android)			