INSTALLATION/OPERATION

DIGITAL VIDEO RECORDER (MPEG4 - 4/8/16 CHANNEL)





The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance(servicing) instructions in the literature accompanying the appliance.

- WARNING: To prevent a risk of fire of electric shock, do not expose this product to rain or moisture.
- This installation should be made by a qualified service person and should conform to all local codes.
- This is a Class A product. In a domestic environment this product may cause radio

interference in which case the user may be required to take adequate measures.

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1. FOR THE SAFETY OF CUSTOMERS

SAFETY PRECAUTIONS

- 1. Do not modify the three-prong grounding type power plug in any way.
- 2. Operate this unit only from the type of power source indicated on the label.
- 3. Do not block or cover ventilation openings on the Unit.
- 4. Do not place this unit near a radiator or heating vent.
- 5. Do not push objects of any kind through cabinet openings. This may result in fire or electrical shock.
- 6. Before adding attachments always ask a service technician to perform routine safety tests to determine that equipment is in safe operating condition. Ground potential tests should be part of the routine safety check made by the service technician.
- 7. Do not place the unit on an unstable cart, stand, or shelf where it may fall and injure personnel or damage equipment.
- 8. Route power cords so that they cannot be walked upon or tripped over. Do not allow anything to rest on the power cord.
- 9. Do not install the unit in wet areas, or where it may be exposed to rain or water. Do not spill liquid of any kind on the unit.
- 10. Unplug the power cord from the unit before cleaning case. Use only a damp cloth. Do not use alcohol, spirits, or ammonia to clean the device.

DO NOT ATTEMPT TO CLEAN THE INTERIOR OF THIS UNIT- THIS ACTION MUST BE PERFORMED BY THE SERVICE TECHNICIAN AS REQUIRED DURING NORMAL MAINTENANCE.

- 11. Refer all servicing to qualified service personnel. REMOVAL OF TOP COVER BY UNAUTHORIZED PERSONNEL MAY EXPOSE THE USER TO DANGEROUS VOLTAGES OR OTHER HAZARDS.
- 12. Unplug the unit immediately and notify the service technician.
 - A. If liquid has been spilled into the device or the device has been exposed to rain or water.
 - B. If the unit has been dropped or the casing damaged.
 - C. If fuses continue to blow.
 - D. If the power cord is damaged or frayed.
 - E. If a distinct change from normal operation is apparent.

When replacement parts are required, be sure that the service technician uses components specified by the manufacturer which have the same characteristics as the original parts. UNAUTHORIZED SUBSTITUTIONS MAY RESULT IN FIRE, ELECTRICAL SHOCK OR OTHER HAZARDS.

Upon completion of any service or repairs, ask the technician to perform safety checks to determine that the equipment is in safe operating condition.

WARNING: SERIOUS SHOCK HAZARDS EXIST WITHIN THE COVERS OF THIS DEVICE. DO NOT OPEN THE COVERS UNDER ANY CIRCUMSTANCES, THERE ARE NO USER SERVICEABLE COMPONENTS INSIDE

2. DESCRIPTION OF PARTS AND FUNCTION

2-1 COMPOSITION OF UNIT



If you have received a product "without HDD", the accessories to fit HDD will be supplied 1) Stand for HDD installation 2) fixing screws will be supplied.

Accessories are subject to change without notice.

Use the designated HDD

Please use the designated HDD. Otherwise, recording may not operate correctly.

Maker	HDD Capacity
Western Digital	80GB, 160GB, 250GB, 320GB

2-2 FEATURES

• Convenience

- User-friendly UI(Text Based User Interface)
- Easy-to-use menu composition
- Easy-to-use recorded data search (Time, Date, Motion, Alarm)

• Stability

- Auto restart after power interruption
 - DB structure offers data stabilization and best storage utilization

• Expandability

-Various remote multi DVR's can be controlled by Web browser (PC Client System)

• Technology

- -Embedded LINUX OS
- -Totally maximum recording rate 100 fps (Pal) 120 fps (NTSC)
- -High-resolution & high-quality MPEG-4 algorithm
- -Using Water marking & scrambling technologies,
- -Strong protection recorded data
- -MPEG-4 : $1 \sim 2$ Kbytes per image with resolution 360x240

• Functionality

- Variable recording function (normal, alarm, motion, schedule)
- Full channel real-time monitoring
- Live monitoring, recording, playback, backup, remote access at the same time
- Multi channel playback
- Variable events notification to e-mail, buzzer or PC Client system

2-3 DESCRIPTION OF PARTS AND FUNCTION

2-3-1 Front Panel



(1) LED

- REC : Recording status (When recording is on, the red LED flashes)
- PWR : System Power On/Off (When power is on, the green LED is lit)

(2) USB 2.0 PORT

- USB2.0 connector

(3) POWER BUTTON

- System Power On/Off

(4) NUMERIC & CHARACTER

- Input for numeric & character

(5) MENU

- Displays on the menu on the screen

(6) SEARCH

- Entering search mode directly

(7) PLAY ()

- Playback of the recorded data
- If pressed again in play mode, fast-forward will be executed

(8) REWIEND ()◀

- Playback on the reverse

(9) PAUSE (

- To freeze picture on playback mode and live mode.

(10) STOP / EJECT (

- To stop playback and go back to live mode.

(11) REC (•)

- To start & stop manual recording of relevant camera in a full screen live mode.

(12) VOL (▲ ▼)

- To adjust volume up and down.

(13) AUDIO (8/16CH Only)

- when user selects "audio" key, available audio will be switched.

(14) ARROW KEY

- Curser shifting on the menu
- Shows the divided screen

(15) SELECT

- Menu selection



(1) Video Input (BNC)

- 16/8/4 Camera input (1.0 v p-p, 75 Ω) depending on the model

(2) Video Out (BNC / S-VIDEO / VGA)

- Composite Output through BNC / S-VIDEO / VGA

(3) Line Audio Input

- 4 Audio Input through line (1x Audio on 4way)

(4) Audio Output

- 1 Audio Output

(5) RS232

- 1 Serial Communication

(6) Network Port (RJ-45)

- Available to monitor live screen and recorded data on the HDD through Internet or LAN

(7) DIP switch (NTSC/PAL Video Selection)

-Selectable either NTSC or PAL

(08) RS422 / 485

- 1 Serial Communication for Pan / Tilt Camera (Future Development)

(09) Alarm/Sensor

- Alarm / 4 Sensor input / 1 output port

(10) AC Power

- AC 110~240 V (Free Voltage)

ATTENTION

When the video format is changed (NTSC/PAL), the system should be re-booted

The video format should be selected before booting

Default Passwords

"*0000000*" i.e. 8x Zero's. Password is required if you need to down-power or stop recording, prompt will be displayed asking for password.

Stop Recording	
Password	
1	,
ОК	Cancel

Web Client

User ID "*admin*" (not case sensitive). Admin ID cannot be changed this is full administrator ID. Password "*0000000*" i.e. 8x Zero's

Login	
ID	admin
Password	******
ок	Cancel

2-3-3 System Connection Diagram



2-3-4. Remote Controller



1.Power :
2. Rec : Start & Stop Recording
3. \sim :Key for figure and character
4. PTZ: Controlling PTZ camera
(future development)
5. OSD : Operating OSD ON/OFF
6. SEQ : Key for SEQ operation
7. LOG : Direct access Log list
8. INFO: Direct access system Info.
9. ID : Reserved.
10. MUTE : Audio Mute
11. AUDIO : Available audio switching
when user select this key
12. MENU : Entering system menu
13. SEARCH : Entering search
14. ARROW & SPLIT : Key moving
left, right, up and down. Also, Screen
split display shows
15. VOL"+,-" : Up, down volume
16. CH "+,-" : Up, down channel(s)
17. : Play(or fast forward)
18. : Reverse play
19 II : Pause
20. Stopping playback

2-3-5. OSD Description



3. MENU-





3-2 Main Menu

<u>NOTE</u>

Before using, be sure to setup the unit properly.

Below menu shows when you press the menu button on the front when the system is on.

MAIN MENU

DISPLAY SET RECORDING SET SYSTEM SET NETWORK SET EVENT NOTIFICATION

Please use UP (\checkmark) or DOWN(\checkmark) on the front Panel to move to next menu. To move to the submenu, use the "SELECT" button.

Display Set

DISPLAY SET

MONITOR ADJUSTMENT (4CH Only) CAMERA COVERT CAMERA NAME OSD ON/OFF SET DISPLAY SEQUENCE(8/16CH Only) EVENT CLEAR

Monitor Adjustment- (4CH Only)

This controls the verticality and horizontality of live picture. With the background screen shown, use Left (), Right(), Up(\blacktriangle), Down(∇) button for setting the location.

Camera Covert

This allows the camera to be hidden, which means, camera is not available/shown in live monitoring (just blue screen), the camera will still be recording (if recording is "on" condition).

Camera Name

Camera title can be displayed on the screen.

OSD On/Off

OSD on/off: Selecting whether the OSD is displayed.

Set Display Sequence

SET DISPLAY SEQUENCE

FULL DISPLAY SEQUENCE QUAD DISPLAY SEQUENCE START FULL DISPLAY SEQUENCE START QUAD DISPLAY SEQUENCE

Sequence dwell time can be selected among 5,10,15,30,45,60 sec. When you select " Start Full or Quad Display Sequence", monitor switch will be started (Or, user can select " SEQ" button on the remote controller)

Event Clear

This is for erasing OSD characters related with events.

Recording Set

In our system, all recorded data can be saved in the format of watermark or scrambling when user select "watermark :On" (Default On)So, After downloading the saved data you want to check , user can confirm it whether it has been changed by someone using PC software provided.

RECORDING SET

GLOBAL PARAMETER NORMAL RECORDING ALARM RECORDING MOTION RECORDING SCHEDULE RECORDING RECORDING PRIORITY

Global Parameter

All the setup values for Audio/ Repeat/ Watermark / Resolution will be applied globally to all channels.

Normal Recording

It executes the continuous recording according to the designated set-up value.

Alarm recording

It executes the recording when sensor is taken.

Motion recording

It executes the recording when motion is captured.

Schedule recording

It executes the recording as per the programmed time table.

Recording priority

It specifies the priority among 4 kinds of recording methods.

<u>NOTE</u>

"Instant playback" (direct playback via , not search mode) is available. The file is created on the unit of 500Mbyte

Recording Parameter

RECORDING PARAMETER

AUDIO : ON/OFF REPEAT RECORDING : ON/ OFF WATERMARK : ON /OFF RECORDING RESOLUTION SAVE AND EXIT

Audio Recording (4CH)

4CH : On/Off. When audio is "on", the audio will be input globally.

RECORDING PARAMETER AUDIO 1 RECORDING: OFF~CH16 AUDIO 2 RECORDING: OFF~CH16 AUDIO 3 RECORDING: OFF~CH16 AUDIO 4 RECORDING: OFF~CH16 REPEAT RECORDING OFF WATERMARK OFF RECORDING RESOLUTION SAVE AND EXIT

Audio Recording (8/16CH)

8/16CH: 4 Audio are available. User can match 4 audios to each video channels.

Repeat recording

This sets the recording mode when the HDD capacity is exceeding. Selectable between "On" (overwrite) / "Off" (stop).

Watermark

This can select either Watermark On or OFF. This menu is for protecting video data from forging when exported to the digital media for backup.

Recording Resolution

Unit supports $360x288 / 720x288 \mod (PAL)$ or $360x240 / 720x240 \mod NTSC$. The default is $360x288 \mod (\leftarrow, \rightarrow)$ buttons are used for changing the resolution.

<u>NOTE</u>

- 1. The resolution is applied to all channels. (Individual set-up is not possible)
- When you are in the "recording" mode, the menu, "Global parameter" and 4 recording mode (normal, alarm, motion, schedule)" can not be changed. If you want to change these settings you must stop recording first.

Normal Recording

NOR	MAL RECORDING	(4channel Only)
CH1	FRAME RATE	: 25FPS
CH2	FRAME RATE	: 25FPS
CH3	FRAME RATE	: 25FPS
CH4	FRAME RATE	: 25FPS
CH1	RECORDING QUA	ALITY : HIGH
CH2	RECORDING QUA	ALITY : HIGH
CH3	RECORDING OUA	ALITY : HIGH
CH4	RECORDING OU	ALITY : HIGH
SAVE	E AND EXIT	

Frame Rate (fps) :4channel

The above shows available frame rate each channel. In 360x288 mode, $0\sim25$ fps is available each channel (4 channel totally 100 fps) and 720x 288 is $1\sim12/13$ fps each (4 channel total 50 fps, available max. frame rate for each channel is 25 fps- for exam, Ch.1 25 fps, Ch2. 25 fps, Ch3. 0 fps, Ch4 0 fps. ~) Frame rate will be changed pushing the " \leftarrow , \rightarrow " button

	1 (0/1(0)10, 1)	
PAGE	: 1 (8/16CH Only)	
CH1	FRAME RATE	: 6FPS
CH2	FRAME RATE	: 6FPS
CH3	FRAME RATE	: 6FPS
CH4	FRAME RATE	: 6FPS
CH1	RECORDING QUA	LITY : HIGH
CH2	RECORDING QUA	LITY : HIGH
CH3	RECORDING QUA	LITY : HIGH
CH4	RECORDING QUA	LITY : HIGH
SAVE A	AND EXIT	

Frame Rate (fps) :8/16 channel

The above shows available frame rate each channel. In 360x288 mode, 6 fps is available each channel (16/8 channel totally 100fps) and 720x 288 is 3 fps each (16/8 channel totally 50fps). Individual frame rate control is available as per 4channel.

Frame rate will be changed pushing the " \leftarrow , \rightarrow " button

Recording Quality

Selectable from High, Mid, Low.

Save and Exit

All the set-up value will be stored and move to higher menu.

Alarm Recording

Either one is taken from 4 sensors, the recording will be activated as per set-up value.

ALARM RECORDING (4channel Only) CH1 FRAME RATE : 25FPS CH2 FRAME RATE : 25FPS CH3 FRAME RATE : 25FPS CH4 FRAME RATE : 25FPS CH1 RECORDING QUALITY : HIGH CH2 RECORDING QUALITY : HIGH CH3 RECORDING QUALITY : HIGH CH4 RECORDING QUALITY : HIGH POST ALARM DURATION : 5sec SAVE AND EXIT

Frame Rate (fps) :4channel

The above shows available frame rate each channel. In 360x288 mode, $0\sim25$ fps is available each channel (4 channel totally 100 fps) and 720x 288 is $1\sim12/13$ fps each (4 channel totally 50 fps, available max. frame rate each channel is 25 fps- for exam, Ch.1 25 fps, Ch2. 25 fps, Ch3. 0 fps, Ch4 0 fps. ~) Frame rate will be changed pushing the " \leftarrow , \rightarrow " button

ALAK	M RECORDING (8/16	channel Only)	
PAGE	: 1 (8/16CH Only)		
CH1	FRAME RATE	: 6FPS	
CH2	FRAME RATE	: 6FPS	
CH3	FRAME RATE	: 6FPS	
CH4	FRAME RATE	: 6FPS	
CH1	RECORDING QUA	ALITY : HIGH	
CH2	RECORDING QUA	ALITY : HIGH	
CH3	RECORDING QUA	ALITY : HIGH	
CH4	RECORDING QUA	ALITY : HIGH	
POST	ALARM DURATION	: 5sec	
SAVE	AND EXIT		

Frame Rate (fps) :8/16 channel

The above shows available frame rate each channel. In 360x288 mode, 6 fps is available each channel (16/8 channel totally 100fps) and 720x 288 is 3 fps each (16/8 channel totally 50fps). Individual frame rate control is available as per 4channel.

Frame rate will be changed pushing the " \leftarrow , \rightarrow " button

Recording Quality

Selectable from High, Mid, Low.

Post Alarm Duration

After alarm activates, this sets how long the recording continues. The value is from 5/30/60/90/120/150/180/210/240 sec.

Save and Exit

All the set-up value will be stored and move to higher menu.

Motion Recording

MOT	ION RECORDING (4channel Only)
CH1	FRAME RATE	: 25FPS
CH2	FRAME RATE	: 25FPS
CH3	FRAME RATE	: 25FPS
CH4	FRAME RATE	: 25FPS
CH1	RECORDING QUA	LITY : HIGH
CH2	RECORDING QUA	LITY : HIGH
CH3	RECORDING QUA	LITY : HIGH
CH4	RECORDING QUA	LITY : HIGH
SETU	JP MOTION	
SAVE	E AND EXIT	

Frame Rate (fps) :4channel

The above shows available frame rate each channel. In 360x288 mode, $0\sim25$ fps is available each channel (4 channel totally 100 fps) and 720x 288 is $1\sim12/13$ fps each (4 channel totally 50 fps, available max. frame rate each channel is 25 fps- for exam, Ch.1 25 fps, Ch2. 25 fps, Ch3. 0 fps, Ch4 0 fps. ~) Frame rate will be changed pushing the " \leftarrow , \rightarrow " button

```
MOTION RECORDING (8/16channel Only)
PAGE : 1 (8/16CH Only)
CH1
       FRAME RATE
                         : 6FPS
CH2
       FRAME RATE
                         : 6FPS
CH3
       FRAME RATE
                         : 6FPS
CH4
       FRAME RATE
                         : 6FPS
CH1
       RECORDING QUALITY : HIGH
       RECORDING QUALITY : HIGH
CH2
CH3
       RECORDING QUALITY : HIGH
       RECORDING QUALITY : HIGH
CH4
SETUP MOTION
SAVE AND EXIT
```

Frame Rate (fps) :8/16 channel

The above shows available frame rate each channel. In 360x288 mode, 6 fps is available each channel (16/8 channel totally 100fps) and 720x 288 is 3 fps each (16/8 channel totally 50fps). Individual frame rate control is available as per 4channel.

Frame rate will be changed pushing the " \leftarrow , \rightarrow " button

Recording Quality

Selectable from High, Mid, Low.

Setup Motion

SETU	P MOT	ION	
PAGE	: 1 (8/1	6CH Only)	
POST	MOT	ION : 30 SEC	
SET	CH1	MOTION AREA	
SET	CH2	MOTIION AREA	
SET	CH3	MOTION AREA	
SET	CH4	MOTION AREA	
CH1	MOTI	ON SENSITIVITY:	HIGH
CH2	MOTI	ON SENSITIVITY:	HIGH
CH3	MOTI	ON SENSITIVITY:	HIGH
CH4	MOTI	ON SENSITIVITY:	HIGH
SAVE	AND E	XIT	

Post Motion

This sets the how long the recording lasts after motion is taken. The value is among $30 \sim 240$ sec.

Set CH. Motion Area

The following will be displayed when user selects the menu.

	1	2		
	3	4		

The detection area is divided 8x6 cells. Default is all-cells activated. 1,2,3,4 cells (white color background) is disabled area. "SEL" button is required for selecting some area.

Motion Sensitivity

It consists of High, Mid, Low.

<u>NOTE</u>

When you record the camera image with the motion-recording mode, the data file will be saved depending on the motion sensitivity. So, higher caution is required to apply the sensitivity to the actual recording.

Schedule Recording

SCHEDULERECORDING (4channel Only)CH1FRAME RATE: 25FPSCH2FRAME RATE: 25FPSCH3FRAME RATE: 25FPSCH4FRAME RATE: 25FPSCH1RECORDING QUALITY : HIGHCH2RECORDING QUALITY : HIGHCH3RECORDING QUALITY : HIGHCH4RECORDING QUALITY : HIGHCH4RECORDING QUALITY : HIGHCH4RECORDING QUALITY : HIGHCH4RECORDING QUALITY : HIGHSETUP SCHEDULESAVE AND EXIT

Frame Rate (fps) :4channel

The above shows available frame rate each channel. In 360x288 mode, $0\sim25$ fps is available each channel (4 channel totally 100 fps) and 720x 288 is $1\sim12/13$ fps each (4 channel totally 50 fps, available max. frame rate each channel is 25 fps- for exam, Ch.1 25 fps, Ch2. 25 fps, Ch3. 0 fps, Ch4 0 fps. \sim) Frame rate will be changed pushing the " \leftarrow , \rightarrow " button.

SCHEDULE RECORDIN	NG (8/16channel	Only)	
PAGE 1			
CH1 FRAME RATE	: 25FPS		
CH2 FRAME RATE	: 25FPS		
CH3 FRAME RATE	: 25FPS		
CH4 FRAME RATE	: 25FPS		
CH1 RECORDING QUA	ALITY : HIGH		
CH2 RECORDING QUA	ALITY : HIGH		
CH3 RECORDING QUA	ALITY : HIGH		
CH4 RECORDING QUA	ALITY : HIGH		
SETUP SCHEDULE			
SAVE AND EXIT			

Frame Rate (fps) :8/16 channel

The above shows available frame rate each channel. In 360x288 mode, 6 fps is available each channel (16/8 channel totally 100fps) and 720x 288 is 3 fps each (16/8 channel totally 50fps). Individual frame rate control is available as per 4channel.

Frame rate will be changed pushing the " \leftarrow , \rightarrow " button

Recording Quality

Selectable from High, Mid, Low.

Setup Schedule

SCHEDULE SETUP 0 4 8 12 16 20 MON TUE WED THU FRI SAT SUN SAVE AND EXIT

"SEL" button is used for selecting relevant time and day. Arrow Key will be used for movement.

<u>NOTE</u>

To change the items regarding recording (resolution, mode, frame rate, etc), you must stop recording first.

Recording Priority

RECORDING PRIORITY 1ST PRIORITY: NORMAL 2ND PRIORITY: MOTION 3RD PRIORITY: SCHED 4TH PRIORITY: ALARM SAVE AND EXIT

This sets the priority from the 4 recording methods. If Normal is 1st priority, the recording is carried out as per normal recording' setup value.

System Set

SYSTEM SET

BASIC DISK FORMAT PASSWORD CHANGE PROGRAM UPDATE CLIENT ACCOUNT SENSOR

Basic

BASIC

LANGUAGE : ENGLISH INITIALIZATION DATE FORMAT : mm-dd- yyyy DATE/TIME : 11-18-2004 03:50:31 INFORMATION SAVE AND EXIT

Language

English, Italian, and French (4 way only). The default is English.

English, Italian, French and Hungarian (8/16 way). The default is English.

Initialization

All the menu value will be returned to the factory default. To initialize the system, you must stop recording first.

Date Format

Can select among the formats, mm-dd-yyyy / dd-mm-yyyy, yyyy-mm-dd. If date format needs to be changed, you must stop recording first.

<u>NOTE</u>

PLAYBACK FOLLOWING TIME CHANGE

The DVR uses the time and date to index video on the hard disk drive so you can find it later. Changing the time can cause the DVR to work incorrectly when you try to play back video. If you set the time 1 hour ahead, this is not a problem. But, if you set the time 1 hour back, there will be more than one recording of the same time.

Such as during the October Daylight Saving Time changeover, if you try to search for video between 1 a.m and 2 a.m, the recorder may not operate properly because there will be two hours of recorded video during this time period. To view video during this overlapping time period, you must start playback before 1 a.m, then recorder will play both hours between 1 a.m and 2 a.m.

You cannot do a backward search through the overlapping time. But, you can do forward search.

Disk Format

DISK FORMAT

INTERNAL HDD : YES EXTERNAL DEVICE // HDD : NOT FOUND EXECUTE FORMAT

Password is required for Disk to be formatted (default password is "00000000" 8x Zero's, which is the same if you need to turn "recording off" see page 12). You must stop recording and playback first to format the HDD.

Client Account

CLIENT ACCOUNT

ADD NEW ACCOUNT DELETE ACCOUNT SAVE AND EXIT

CLIENT LIST

To access as a Client on the network you first must register "Add New Account". User ID & Password has to be registered at the system first to connect with a 'user level'. But, administrator can access without registering. Default Settings USER ID "*admin*" Password"*00000000*"

Program Update

The latest firmware version can be upgraded through USB 2.0 Port using a Memory Stick. When

memory stick connects USB port; will be shown on the right corner of monitor. Then, enter "menu"-> "System Set"-> "Program Update". If there is a new file that already installed the system will recognize "new program", "New program found" will be displayed on the screen. Then, press "Select" button/Key. Processing percentage will be displayed.

NOTE.

1. If the system doesn't recognize "new program", "New program not found" will be displayed.

2. USB compatibility has been tested successfully, Lexar Jumpdrive 128/256MB, Sandisk Mini Cruzer 128MB & Cruzer Micro 256MB.

3. For system stability please turn off 1) recording 2) playback 3) network connection during upgrading.

4. After updating program, please reboot the Unit.

Sensor

SENSOR	
SENSOR 1 INPUT SENSOR 2 INPUT SENSOR 3 INPUT SENSOR 4 INPUT ALARM OUT SAVE AND EXIT	: N.C : N.O : NONE : NONE : ON

Sensor Input is selectable N.C, N.O, None.

3. Network Set

NETWORK SET USE DYNAMIC IP: NO IP ADDRESS :000.000.000 GATEWAY :000.000.000 NETMASK :000.000.000 DNS SERVER :000.000.000 DVR PORT 2000 WEBSERVER PORT 80 SAVE AND EXIT

To enter Network Set menu, system will ask for password (default is "00000000" 8x Zero's).

When user is using a fixed IP, each address is required to be filled out as per network environment.

In fixed IP environment is being used, no need to change DVR & Web Server Port.

As per DVR & Web server port, please refer Appendix 4.

If unit is set up for "Dynamic IP", the following will be shown.

NETWORK SET

USE DYNAMIC IP: YES XDSL USER ID : XDSL PASSWORD : DDNS USER ID : DDND PASSWORD: REGISTERED DOMAIN: SAVE AND EXIT

For Dynamic IP, either XDSL or Cable. In XDSL environment, the input for XDSL user ID/ $\,$

XDSL password is required. In cable environment, Mac address is required to be filled out irrespective of ID and password.

DDNS Server is needed when clients connects the DVR, which is on Dynamic IP, since clients doesn't know of IP of system DVR. (Please register your ID & domain at <u>www.dyndns.org</u>, in which you can use DDNS server free of charge). (See Appendix 4)

Event Notification

EVENT NOTIFICATION

► E-MAIL REGISTRATION E-MAIL REPORT NOTIFICATION OUT SAVE AND EXIT

E-MAIL REGISTRATION

► USER1 USER2 USER3 SENDER MAIL ID SENDER DOMAIN SEND TEST MAIL SAVE AND EXIT

At E-Mail registration menu, sent up the e-mail addresses to receive several "Event Notification ". To register a e-mail address, 1) input the address 2) push "Save and Exit" 3) " Send test mail".

NOTE

1. Sender mail ID & domain should be input. If not, e-mail doesn't work. If you input Quantum4 as mail ID & Norbain.co.uk as domain, sender's information will be "Quantum4@norbain.co.uk.

I.e. e-mail will come from "Quantum4@norbain.co.uk

2. IP & Gateway in the system should be set up first.

E-MAIL Report is available from Daily/ Weekly/ Immediately. Daily report will be done 00(H):00(M) "Midnight" each day and weekly report will be done 00(H):00(M) "Midnight" on Sunday.

Notification Out

```
NOTIFICATION OUT
```

► E-MAIL BEEP ALARM-OUT

When event happens, each output is operated as per setup value. Events such as "Video Loss/ Alarm/ Motion/Power Loss" will be sent to E-Mail address or Beep or Alarm according to setup value.

4. Search

SEARCH

DATE/TIME SEARCH CALENDAR SEARCH BACKUP LOG

Date / Time Search

If you select date/time search, the following will be shown.

DATE/TIME SEARCH

```
EVENT : ALL
HDD : INTERNAL
DATE : 11-12-2004 13:10:50
PLAY
```

the $(\blacktriangle), (\blacktriangledown)$ buttons for selecting the clauses. When you select the specific time/date, and then select "Play", which execute the playback.

Calendar Search

Following screen shows when "Calendar search" is selected.

C	ALENI	DAR SI	EARC	СН			
Y	EAR :2	2005					
IV.	IONTH	1:12					
SUN	MON	N TUE	WE.	D TH	U FR	I SAT	
	1	2	[3]	4	5	6	
7	8	9	10	11	12	13	
14	15	16	17	18	19	20	
21	22	23	24	25	26	27	
28	29	30					

This shows where the recorded data is located at sight. Using " \rightarrow , \leftarrow "buttons, are available to move to specific time/date. To enter sub-menu (Time), please use "SEL" button. Day (11, eleven) will be changed 'up and down ()' key.

Buttons "Search" will make a following display.

	SEAR	CH R	ESU	LT				
D H	ATE OUR	11-12 0	2-200 4	4 8 ▲	12	16	20	
C C	H1 H2							
C C	H3 H4	-						

The hour, which has data, will be shown in white bar, the hour, which you want to play, is selected with "SEL" button, then the following sub-menu will be shown.

SEA	RCH	RESU	JLT			
DATE	E/HOU	JR 1	1-12-2	204/07		
MIN	0	12	24	36	48	
CH1						
CH2						
CH3						
CH4						

The area, which has data, will be shown in white and using "SEL", user can start the playback.

Back Up

1. INTERNAL

BACKUP

BACKUPDEVICE: CD/DVD-R DEVICE FORMAT FILE FORMAT: EXCLUSIVE/AVI FROM: 12-07-2004 12:46:30 TO :12-07-2004 12:47:30 CHANNEL : 1 CALCULATING BACKUP SIZE TRANSFER FREE/TOTAL SPACE 49M/245M REQUIRED SPACE 60M:

Backup Device

Internal CD-R or DVD-R is available.

> Note:

1. Manufacturer guarantee

1) CD-R drive: LG GCE 8527B(CD-R Disk: Imation or Melody brand, 52x Max)

2) DVD-R drive: LG GSA-4167B (DVD-R disk: Imation or Melody brand, 8x Max)

2. When DVR system try to read disk or drive, "READING OPTICAL MEDIA" message will be shown and no key buttons works.
Device Format

Format for CD/DVD-R is not needed. When use CD/DVD-RW, format should be done first.

File Format

Exclusive or AVI file is available. AVI file is played with window media player (Codec required) and exclusive file will be played with our own player. Player is downloaded automatically together with video data.

From/ To

You can set up the time, which is required to be backed up to the internal CD/DVD-R Drive.

Channel

When you select exclusive, all channels can be downloaded at the same time. But, if you select AVI only one channel can be selected.

Transfer

Downloading the backup data to internal disk. Percentage during downloading will be shown.

> Note:

Network should be disconnected during downloading to internal DVD/CD-R disk. If network is connected, connection will be terminated during "making backup file"

2. EXTERNAL

When a Memory stick is connected to the USB port, the icon will be shown at the bottom of Monitor. Also, the following menu will be shown.

BACKUP

BACKUP DEVICE: CD WR /FLASH DEVICE FORMAT FILE FORMAT: EXCLUSIVE/AVI FROM: 12-07-2004 12:46:30 TO :12-07-2004 12:47:30 CHANNEL : 1 CALCULATING BACKUP SIZE TRANSFER FREE/TOTAL SPACE 49M/245M REQUIRED SPACE 60M:

Backup Device

USB memory stick (thumbs drive) or internal CD RW is available.

Device Format

To back up the data, please delete existing files on the stick first.

File Format

Exclusive or AVI file is available. AVI file is played with window media player (codec required) and exclusive file will be played with our own player. Player is downloaded automatically together with video data.

From/ To

You can set up the time, which is required to be backed up to the memory stick.

Channel

When you select exclusive, all channels can be downloaded at the same time. But, if you select AVI only one channel can be selected.

Transfer

Downloading the backup data to stick. Percentage during downloading will be shown.

* USB compatibility has been tested successfully for these recommended USB devices.
Lexar JumpDrive 128/256MB
SanDisk Mini Cruzer 128MB, SanDisk Cruzer Micro 256MB
DVD/RW Plextor PX-716UFL
CD/RW Freecom Classic CD-RW 52x24x52
Lite-On CD/RW (LTR-52327SX)
Western Digital Essential 80GB USB2.0 7200RPM (Manu codeWDXUL800BBNU) they do this in various HDD sizes unfortunately we have not tested them all.

NOTE

For system stability, we highly recommend that the recording is turned off during downloading the data to USB device.

Procedure for saving data onto a USB device.

- 1. Stop recording. Press "Record" enter Password (0000000) Default
- 2. Insert USB device. Wait until USB symbol appears on screen
- 3. Press "Search" button
- 4. Go to "Backup" Press "Enter"
- 5. Select "File Format" Press "Enter" change to "Exclusive"
- 6. Select Start & Stop times (Press "Enter" to change, use camera buttons) Press "enter"
- 7. Enter channel numbers (cameras 1,2,3 or 4) Select "Save & Exit"
- 8. Select "Calculate Backup size"
- 9. Select "Transfer" after file download
- 10. Exit "Search" mode
- 11. Press "Record" button

"Exclusive" allows all cameras to be selected and recorded. "AVI" allows single camera only to be selected and recorded.

PC Playback

- 1. Insert USB device
- 2. Go to "My Computer"
- 3. Double Click USB drive letter
- 4. Folders & Files on device: *Download*, *BK_Play*, *Index*, *Kerberos*, *KW Client*
- 5. Double Click "*BK_Play*"
- 6. Player opens, click "play" button

5. CLIENT PROGRAM

5-1. Network Connection

Minimum PC specification (4, 8/16CH)

CPU: 4CH- Pentium III 750MHz over, 8/16CH- Pentium 1.7GHz over. Graphic Memory: 4CH- 32M over, 8/16CH – 64M over.

IP Insertion

Connection will be done by just writing DVR IP address on the Internet Explorer window. If domain is kept to reach DVR by DDNS server, it is allowed to write domain name directly.

Downloading ActiveX Control

When DVR connects network, the window to download active X control will be displayed then login Box will be displayed.

If downloading does not begin "Active X control" may not be enabled. (See Appendix 3)

Log In

Login	
ID	
Password	******
ОК	Cancel

Live Monitoring

Channel Button



When Log- In window appears, input the ID & Password. Then, click "OK", which starts the live monitoring. If ID & PW is input wrong, the Login box appears repeatedly. If it login fails or clicking "Cancel", the programs ends.

Client program is optimized on the resolution, 1024 x 768.

This shows how many channels are activating on the live monitoring or playback. When selecting the relevant channel, it will show a full, single image only and the camera button will go green.



Channel Division



Multi-channel division will be done during the monitoring or playback. As seen in picture, 1,4,8,9,16 division is supported.



Termination of Live monitoring



Live monitoring will be terminated when user pushes "Live Off" button. Live monitoring will be re-started when user pushes "Live On" button.

System & Local



System means the DVR.

Local means Remote PC as client

Recording & Playback



Step backward / Backward / Play / Pause / Recording /
Stop / Step forward in left order.
One more click during playback makes speed
double. Pause is temporary stop. If user wants to play the
video forward during reverse, push the stop key and
then push fast forward button.

System & Local recording

1) System recording



To start the recording on the DVR via client PC, press the recording button, when the system icon is on green. Shadow bottom is shown as seen in blue circle. Please check system is on the recording mode.

* Admin only can control 'recording on/off' on the system via network.

SYSTEM LOCAL	
Stop Recording	J
Password	l .
ОК	Cancel
SYSTEM LOCAL	

NOTE :

To off 'recording', push the red recording button again. Then, shadow bottom will disappears and system will ask for the password. To stop recording of system, please input password. And, check if the system is out of recording mode.

2) Local recording





To save the live video onto client PC HDD, press the recording button when the local icon is on green. Shadow bottom is shown as seen in blue circle. Then, recording data is saving on the client HDD.

* Both admin and user can do local recording.To off the recording, press recording button again. Then, shadow bottom will disappears.

Local playback





When "Local" button is activated (**LOCAL**), it will operate.

When you push the Play (),

the window left is shown.

On clicking the "OK" button then set the start & end time. Please check either 'Download' or 'Live

Backup'.

Download is transmitting recorded data from system HDD to Client PC .

Live Backup is saving the live image on the client PC.

On clicking the "OK" button, the available list will be displayed.

		ОК
O Download	O Live Backup	
		Cancel

				\frown
Start Time	7/21/2005	▼ 4:43:33 PM	÷	OK
End Time	9/27/2005	• 11:31:33 AM	•	Cancel

4	2005	7	23	10:45:29 - 10:45:46
5	2005	7	16	15:07:16 - 15:07:21
6	2005	7	23	10:26:57 - 10:28:57
7	2005	7	31	10:30:05 - 10:31:57
8	2005	8	2	01:42:00 - 01:42:05
9	2005	8	2	01:42:00 - 01:42:57
10	2005	8	24	19:39:50 - 19:39:53
11	2005	8	24	19:42:30 - 19:45:08
12	2005	8	25	17:47:27 - 17:49:52
13	2005	8	26	10:46:20 - 10:52:20
14	2005	9	6	17:26:39 - 17:27:16
15	2005	9	6	17:26:39 - 17:26:43
16	2005	9	8	15:08:21 - 15:08:23
17	2005	9	22	13:31:36 - 13:38:24
18	2005	9	27	11:11:02 - 11:31:33
Star	t Time		Selected Time	End Time
11:11:02			11:11:02	11:31:33
				\frown

Select the required time and push 'start' button.



Then, local playback will be done as above.

Remote playback

SYSTEM LOCAL

SYSTEM	LOCAL	

This works when system button is in (**SYSTEM**) green.

When youpush the Play button(),

Start Time	8/ 4/2005	▼ 2:15:04 PM	÷ OK
End Time	9/28/2005	▼ 2:09:28 PM	Cancel

the window left is shown. After input "start" and "end" time, push "OK" button.

1/1	2005	9	28	13:51:35 - 14:09:28
	2005	9	28	13:43:15 - 13:51:24
109 170	2005	9	28	12:49:15 - 13:17:58 13:17:58 - 13:42:15
168	2005	9	28	12:33:23 - 12:49:15
167	2005	9	28	12:03:24 - 12:19:00
166	2005	9	28	12:03:03 - 12:03:07
165	2005	9	28	10:51:23 - 10:53:44
l64	2005	9	28	10:45:04 - 10:50:45
163	2005	9	28	10:44:15 - 10:44:29
162	2005	9	28	10:42:39 - 10:43:25
l61	2005	9	28	10:41:37 - 10:42:25
160	2005	9	28	09:44:07 - 10:04:52
159	2005	9	28	09:17:37 - 09:44:07

Then, list will be shown above.

150	2005	0	20	00.40.50 00.17.27
150	2005	9	20	08:48:30 - 09:17:37
109	2005	9	28	09:17:37 - 09:44:07
160	2005	9	28	09:44:07 - 10:04:52
161	2005	9	28	10:41:37 - 10:42:25
162	2005	9	28	10:42:39 - 10:43:25
163	2005	9	28	10:44:15 - 10:44:29
164	2005	9	28	10:45:04 - 10:50:45
165	2005	9	28	10:51:23 - 10:53:44
166	2005	9	28	12:03:03 - 12:03:07
167	2005	9	28	12:03:24 - 12:19:00
168	2005	9	28	12:33:23 - 12:49:15
169	2005	9	28	12:49:15 - 13:17:58
170	2005	9	28	13:17:58 - 13:43:15
171	2005	9	28	13:43:15 - 13:51:24
172	2005	9	28	13:51:35 - 14:09:28
Start	t Time		Selected Time	End Time
13:5	1:35		13:51:35	14:09:28
				\frown
			8	Start Cance

Select the required time and push 'start' button.



Then, remote playback will be done as above.

Setup



Remote setup



Display Se	Display Set Recording		System	Set Ev	ent Set
		Camera C	efinition ——		
	Name	Covert		Name	Covert
Camera O1	CH1		Camera 09	CH9	
Camera O2	CH2		Camera 10	CH10	
Camera 03	СНЗ		Camera 11	CH11	
Camera O4	CH4		Camera 12	CH12	
Camera O5	CH5		Camera 13	CH13	
Camera O6	CH6 CH7		Camera 14	CH14	
Camera 07		CH7		Camera 15	CH15
Camera O8	СН8		Camera 16	CH16	
		Camera	Sequence		
	Seque	ence Interval		sec	
	Sequ	uence Mode		cameras	



Setup menu is composed of 1) Remote Setup2) Local Setup 3) Firmware Upgrade menu.

Note:

When the main system is entered "menu OSD", remote setup doesn't work. "OSD updating failure" message will be displayed. This is only available when logged on as Administrator

When you select 'Remote Setup' menu,

User enters 'Display Set' menu, in which user can input 'Camera name' as per setting up at the DVR. To save changed values, you should press button "Save & Exit".

When user selects 'Recording Set' menu, this has 3 sub-menu's.

Basic Configuration. : you can configure (1)
 Audio Recording (2) Repeat Recording (3)
 Watermark Embedding (4) Recording Resolution
 as per setting up at the DVR.

2) Recording Group : this has 4 sub-menu , (1)Normal (2) Alarm (3) Motion (4) Schedule as per setting up at the DVR

3) Recording Priority : User can select the recording priority.

Display S	et	Recording Set	5	ystem Set	Event Set		
		Account		P/T/Z Camera Mo	del —	Schedule	Backup
	ID		Add	DVR CH No.	-	Stored	Condition -
User 1	Password	·	Set	Manufacture	-	9/28/2005 💌	🗖 Alarm
	Confirm		Del	P/T/Z Model	Ŧ	9/28/2005 💌	D Motion
	ID		Add	ID		Start Time	End Time –
User 2	Password	·	Set	Sensor In		9/28/2005 💌	9/28/2005
	Confirm	(Del	Sensor 1 None	•	3:14:52 PM 🔆	3:14:52 PM
	ID		Add	Sensor 2 None		Target	Table
User 3	Password	í	Set	Sensor 3 None	•	×	SET
	Confirm		Del	Sensor 4 None	•	Cam	era —
	ID		Add	Alarm Out —			2
User 4	Password		Set	Buzzer	-		
	Confirm		Del	Alarm 1 Off	_	7	8
	ID		Add	Alarm 2	-	9	
User 5	Password		Set	Alarm 3	-		14
	Confirm		Del	Alarm 4	-	15	1 6

From 'System Set' menu, PTZ Camera & Schedule Backup menu are unavailable for 4 8,16channel (Future development). Others are the same as local system configuration.

	Condor I	100		_		
		nformat	ion —			
ID	DVR					
Domain	DVR					
	——Notific	ation Ou	t			
	E	eep	E-m	nail	Ala	rm
Alarm	No	•	No	•	No	•
Motion	No	-	No	•	No	-
Parameter		Ψ.		Ŧ		4
Video Loss	No	•	No	•	No	-
Power Loss	No	•	No	•	No	•
Operation		×		Y]	Ŧ
	ID Domain Alarm Alarm Motion Parameter Video Loss Power Loss Operation	Domain DVR DVR Notific. Alarm Notific. Alarm Notion Noti	ID DVR Domain DVR Notification Ou Alarm No Parameter Video Loss No Operation V	Domain DVR Notification Out	ID DVR Domain DVR Notification Dut Beep Alarm No Motion No Parameter Image: Colspan="2">No Video Loss No Power Loss No Operation Image: Colspan="2">Image: Colspan="2" Image: Colspan="2"	Domain DVR Notification Out Beep E-mail Ala Alarm No No No No Parameter Video Loss No No Power Loss No Vo No Vo Power Loss No Vo

From 'Event Set' menu this has 1) E-Mail registration 2) E-Mail report 3) Notification out. The menu is same as local menu tree.

Local setup





The detail left will be shown when you click the 'Local Setup' menu. 1) Draw Mode: User can select between YUV format using Direct X or RGB. 2)Date Format: Select the time/ date format. 3)Save Format: Select the saving file format from JPEG or BMP. 4) OSD: (1) CH1, CH2, ... (2) Size : Actual video size. NTSC - 720x240, 360x240, PAL-720x288, 360x288 (3)Speed: Playback Speed (4)Rate : Frame number per sec. (5)Mode: Live(Live monitoring) / R-Play(Remote play) / L-Play(Local play)

49/86

Firmware Upgrade



UPGRADE	
New progr	ram found!
Upgrade	Cancel

UP	GRADE FIRMWARE			
	RAMDISK	2072000 /	2850454	72 %
Firmware data transferring				

When user selects 'Firmware Upgrade' menu, if higher version exits in C:\KWClient\Upgrade folder, 'New Program Found!' message will be shown

If version is not higher in C:\KWClient\Upgrade folder,

'New Program Not Found' message will be displayed.

When 'New Program found' message is displayed, please push 'Upgrade' button. When user press's 'Cancel' button, 'Firmware Upgrade Fail' message is shown.

Note : For system stability, please "stop" the system from Recording.

UPGRADE FIRMWARE				
RAMDISK	2850454 / 2850454	100 %		
Wait !!! Firmware upgrading				

When firmware Upgrade is done successfully, 'Firmware Upgrade success!' message will be displayed.



The local system should be re-booted.

Download, Image Save, Two-Way audio, Stop, Connect

Download



This is for transmitting the recorded data on HDD to client PC.



When 'download' button is pushed,

Start Time	8/ 4/2005	▼ 2:15:04 PM	•	ОК
End Time	9/28/2005	▼ 3:28:00 PM	•	Cancel

User select 'Start time' and 'End time' to download and push 'OK' button.

15:03:15			15:03:16	15:28:00
Start Time		1	Selected Time	End Time
175	2005	9	28	15:03:15 - 15:28:00
174	2005	9	28	14:36:18 - 15:03:15
173	2005	9	28	14:09:28 - 14:36:18
172	2005	9	28	13:51:35 - 14:09:28
171	2005	9	28	13:43:15 - 13:51:24
170	2005	9	28	13:17:58 - 13:43:15
169	2005	9	28	12:49:15 - 13:17:58
168	2005	9	28	12:33:23 - 12:49:15
167	2005	9	28	12:03:24 - 12:19:00
166	2005	9	28	12:03:03 - 12:03:07
165	2005	9	28	10:51:23 - 10:53:44
164	2005	9	28	10:45:04 - 10:50:45
163	2005	9	28	10:44:15 - 10:44:29
162	2005	9	28	10:42:39 - 10:43:25
62	2005	9	28	10:41:37 - 10:42:25

Select the number (time) from list for 'Start Time'.

Download -	End Time	_			
1	2005	9	28	15:03:15	15:28:00
Star	t Time	9	Selected Time		End Time
15:0	3:16		15:27:59		15:28:00
					[
				End	Cancel

Select the number (time) from list for 'End Time'.



Processing bar will be shown above please wait till downloading is finished.

SYSTEM	LOCI				HIIH
		Ш	10	E	

When downloading is finished,

push 'Local' button, which turns to green (**LOCALE**) colour.

Then, push play() button.

Select 'Start Time' & 'End Time' and check () 'Download'.

O Download		O Live Backup	Advanced
End Time	2004-11-17	✔ 오후 8:36:36 숮	Cancel
Start Time	2003-11-18	3 • 오후 8:36:36 •	ОК



Then, the download list left will be shown. Select the number (time) which you want to play.



Local Play (from downloaded files) will be done like above.

Image Save



This is for saving format. Either JPEG or BMP. The file will be stored C:\KWClient\Save.

Stop



This is for stopping Downloading.

Connect

Re-connecting when access has failed

Pan/Tile, Zoom/Focus, OSD



1) Pan / Tilt

Using arrow key, controls the Pan/Tilt (Not supported at present)

- 2) Zoom / Focus
 - Using arrow key, controls Zoom, Focus (Not supported at present)
- 3) OSD

Whether OSD is displayed during live / playback

Log / Event / Info / Status

Log Event Info Status The relevant information like Log, Event, Info, Status will be shown as below.

Log Event Info Status	
System Message	
Log Event Info Status	

Event Clear



The relevant OSD turns to green colour when DVR has an event like Alarm, Motion, Video-loss.



Reset for event button (event clear)

Timer



This shows the client PC timer when monitoring is working.

4:37:54 On the other hand, it shows the time the recording data belongs to during

playback. The timer format is according to date format specified on the "local Setup".





Q & A

- 1.
- Q: The message "Can't display the page" is shown and failed to connect to DVR, when IP address or domain name is entered on the Internet explorer window.
- A: 1) DVR is not working or 2) a problem on the network connection. Please check the DVR is working properly also check the connection both DVR and PC.

2.

- Q: Can't download the ActiveX Control.
- A: This happens if "Windows XP Service Pack 2" is installed on the PC. Either remove "service pack 2" on the PC Menu, "program add & removal" on the control panel. Or, refer to Appendix 3 (See page 65)

3.

- Q: The client program is terminated with the message "Unsupported OS version!"
- A: The client program only works with Windows XP or 2000. Doesn't support Win.98, 98SE, ME.
- 4.
- Q: Login box keeps appearing.
- A: It appears repeatedly when Client ID & Password is input wrong. Please check the exact ID & Password set on the DVR.

5

- Q: Can't change "Draw mode" on the menu, Local setup.
- A: This is not possible during live monitoring and playback. User must stop the live monitoring or playback. Then, you can change the "Draw mode".

6.

- Q: Where is the saved file located?
- A: This is stored "C:\KWClient\Saved". The file can be played with Image viewer.

- 7.
- Q: There is no response after pushing the OSD button.
- A: OSD is showing several statuses during playback. If the detail items are not specified on the "Local Setup", there is no response even if pushing the OSD button during playback. Try it after selecting required OSD menu on the Local Set-up.

8.

- Q : I can't see the back up file made from a DVR on the monitor.
- A : Please check whether you have a Codec S/W or not. If you don't have, you have to install it in your PC.

9.

- Q : When I downloaded the image as AVI on to my memory stick, it plays back ok, but no date & time
 - A : Date & time is not supported when using AVI mode (window media player Codec required) this is only supported when back up is carried out using Exclusive mode.

10.

- Q: I can see the display web layout on the monitor but no video pictures.
- A1 : Please check your PC specification needs to be Minimum Pentium III 750MHz and Graphic Memory 32M.
- A2 : Please, go to control panel -> Internet options -> security -> select Customer Level.

Go to ActiveX controls and plug-ins -> Automatic prompting for ActiveX Controls => Disable" Go to Download unsigned ActiveX controls => Prompt"

Go to Miscellaneous -> Allow script-initiated windows without size or position constraints" => Enable" (see Appendix 3)

Appendix 1.

1. HDD INSTALLATION

1) Components

The attached components are as follows,

0.8" Round Screw : 4

0.6" Round Screw : 2

Left Complementary Device : 1

40 Pin Connector Cable : 1

HDD Power Connector Cable : 1

2) Inner Configuration

The inner configuration of DVR is as follows,



0.8" Round Screw 0.6" Round Screw Left Complementary Device for fixing the HDD HDD 40 Pin Connector HDD Power Connector KERBEROS Main Board HDD Power Cable

2. HDD Install Processing

Assemble the HDD with the Left Complementary Device using 0.8" Round Screw Fix the Left Complementary Device with 0.6" Round Screw to Main Body Fix the Right Part of HDD with 0.8" Round Screw to Main Body Assemble the HDD Cable and HDD Power Cable each others

Appendix 2

SENSOR INSTALLATION

1. Components

- 1) External Sensor : 1 (You should prepare one set)
- 2) DVR System : 1

2. Inner Circuit for Sensor Input

The inner circuit of Mpeg 4 DVR is as follows,



PC817 : Photo Coupler The Specification of PC817

Ι	Parameter			Unit
	Forward current	IF	50	mA
Innut	*1Peak forward current	I FM	1	А
Input	Reverse voltage	V R	6	V
	Power dissipation	Р	70	mW
	Collector-emitter voltage	V CEO	35	V
Output	Emitter-collector voltage	V ECO	6	V
	Collector current	IC	50	mA
	Collector power dissipation	P C	150	mW
Total p	P tot	200	mW	
*2Isc	V iso	5 000	V rms	
Operat	T opr	-30 to + 100	°C	
Storag	ge temperature	T stg	-55 to + 125	°C
*3Solde	ring temperature	T sol	260	°C

Absolute Maximum Ratings

*1 Pulse width<=100 s, Duty ratio : 0.001 *2 40 to 60% RH, AC for 1 minute

*3 For 10 seconds

Electro-optical Characteristics

	Parameter		Symbol	Conditions	MIN.	TYP.	MAX.	Unit
	Forward voltage		V F	IF = 20mA	-	1.2	1.4	V
Input	Peak forward voltage		V FM	IFM = 0.5A	-	-	3.0	V
mput	Reverse cu	rrent	IR	V R = 4V	-	-	10	μΑ
	Terminal capacitance		Ct	V = 0, f = 1 kHz	-	30	250	pF
Output	Collector dark current		ICEO	V CE = 20V	-	-	10 -7	А
	*4Current transfer ratio		CTR	IF = 5mA, V CE = 5V	50	-	600	%
	Collector-emitter saturation voltage		V CE(sat)	IF = 20mA, I C = 1mA	-	0.1	0.2	v
Turnel	Isolation resistance		R ISO	DC500V, 40 to 60% RH	5 x 1010	1011	-	Ω
charac-	Floating ca	pacitance	Cf	V = 0, f = 1MHz	-	0.6	1.0	pF
teristics	Cut-off frequency		fc	V CE = 5V, I C = 2mA, R L = 100 W, - 3dB	-	80	-	kHz
	Response	Rise time	tr	V CE = 2V, I C =	-	4	18	μs
	time	Fall time	tf	2mA, R L = 100 Ω	-	3	18	μs

3. SENSOR Install Processing

Please refer the below block diagram.



Appendix 3

INSTALLING VISTA WEB CLIENT ON WINDOWS XP SERVICE PACK 2.

1) Security Setup

Internet Options	
General Security Privacy Content Connections Programs Advanced	
Select a Web content zone to specify its security settings.	
Internet Local intranet Trusted sites	
This zone contains all Web sites you Area Sites	
Security level for this zone	Tools-> Internet Options-> Security -> Select "Customer Level"
Custom settings. - To change the settings, click Custom Level. - To use the recommended settings, click Default Level.	
Custom Level Default Level	
OK Cancel Apply	
Security Settings	
Settings:	
Enable Enable Allow script-initiated windows without size or position constr Disable Enable Enable Allow Web pages to use restricted protocols for active cont	
Disable Enable Prompt Display mixed content Disable	Select "Allow script-initiated windows without Size or position constraints"-> Enable.
Enable Prompt Don't prompt for client certificate selection when no certificate	
Reset custom settings Reset to: Medium Reset	
OK Cancel	



Security Settings	? 🗙
Settings:	
ActiveX controls and plug-ins Automatic prompting for ActiveX controls Disable Enable Administrator approved Disable Enable Download signed ActiveX controls Disable Enable Disable Enable Disable Disable Disable Disable Disable Disable Disable Disable Disable Disable Disable Disable Disable Disable Disable Disable Disable Disab	
	>
Reset custom settings Reset to: Medium Reset to: Medium	set
ок с	ancel

Select " Download unsigned Active X controls"-> Prompt

Select "Automatic Prompting for Active X controls"-> Disable

2) Connection





Select "Install Active X Control "

Internet	: Explorer - Security Warning
The pu softwa	blisher could not be verified. Are you sure you want to install this re?
Nai	me: kwclient.cab
Publist	ner: Unknown Publisher
	Install Don't Install
8	This file does not have a valid digital signature that verifies its publisher. You should only install software from publishers you trust. <u>How can I decide what software to install?</u>

Select "Install" and then 'Log-In' box will be shown.

Appendix 4

DYNAMIC IP (Supporting DDNS Server)

1. Visit <u>http://www.dyndns.com/services/dns/</u> to get the DDNS user ID & PW as well as domain name.

🔕 ΟνηΓ	DNS	- Company de la		User.	Pass:	Login
	DynDNS: Ke	ep Connected		L	<u>_ost Password? - Sign Up No</u>	<u>w</u>
	About	Services	Account	Support N	lews	
ervices	DNS Sor	vices				
NS Services	DNS Ser	VICES				
Secondary DNS Recursive DNS Dynamic DNS Static DNS TLD DNS	Custom DM Security Executive I Dynamic D	Veral DIVS services to fit all <u>VS</u> - Our flagship DNS man: DNS - Add reliability to you <u>DNS</u> - Disure DNS resolution <u>INS</u> - The free dynamic DNS	needs. agement tool for your own ir own nameservers on for your DNS queries & (DDNS) service	domain		
	tio DNG	for DNO and in fac	those with static IP addre	sses		
omain Registration	TLD DNS	DNS for operators of ccTL)e and aTLDe			
oomain Registration Aail Services	• <u>TLD DNS</u> -	DNS for operators of ccTLE)s and gTLDs			
oomain Registration Aail Services letwork Monitoring	• <u>TLD DNS</u> -	DNS for operators of ccTLC	Ds and gTLDs Custom DNS	Secondary DNS	Dynamic DNS	Static DNS
Iomain Registration Mail Services Ietwork Monitoring Veb Redirection	• <u>TLD DNS</u> - Works	DNS for operators of ccTLI	Custom DNS Custom DNS The Yes	Secondary DNS Yes	Dynamic DNS	Static DNS No
Iomain Registration Mail Services Ietwork Monitoring Veb Redirection Account Upgrades	TLD DNS	with your own domain na	Custom DNS Custom DNS me Yes ates Yes	Secondary DNS Yes N/A	Dynamic DNS No Yes	Static DNS No Yes
Iomain Registration Aail Services Ietwork Monitoring Veb Redirection Account Upgrades Pricing	• TLD DNS - Works S Req	with your own domain na Supports Dynamic IP Upda juires your own namesem	Custom DNS Custom DNS me Yes ates Yes vers No	Secondary DNS Yes N/A Yes	Dynamic DNS No Yes No	Static DNS No Yes No
Iomain Registration Aail Services Ietwork Monitoring Veb Redirection kccount Upgrades Pricing	• <u>TLD DNS</u> - Works S Req	with your own domain na Supports Dynamic IP Upda Juires your own namesen	Custom DNS Custom DNS me Yes ates Yes vers No uent Optional	Secondary DNS Yes N/A Yes Optional	Dynamic DNS No Yes No Not Available	Static DNS No Yes No Not Available

2. Click "Dynamic DNS" menu.

3. Select "How To" menu.

Bak Image: Construction Bak Image: Construction Image: Co	Edit View Favorites	Tools Help					
Interviewww.dyndra.com/services/drs/dyndrs/ Image: Solution 2 and 2	Back 🔹 🌍 🗉 🗙	💈 🏠 🔎 Search	🔆 Favorites 🚱 🌔	a- 🎍 🖬 - 🗖	. 🗄 🚜		
Image: Services Luser: Pass: Control Service Luser: Pass: Control Service Custom DNS Services Dynamic DNS Service allows you to alias a dynamic IP address to a static hostname in any of the many domains we offer, allowing your computer to be more easily accessed from various locations on the Internet. We provide this service, for up to five (5) hostnames, free to the Internet community. Dynamic DNS Features Available Domains Facursive of the Internet community. PAW-TO Static DNS TLD DNS Add Dynamic DNS - mailing all your friends every time it changes. Just tell them to visit yourname dyndns org instead! Mail Services More Info: Network Monitoring • Essures - a basic overview of the features offered by this service. Network Monitoring • Essures - a laisting of domains available in this service. Naviable Domains • Essures - a laistic overview of the features offered by this service. Naviable Domains • Essures - a laistic overview of the features offered by this service. Naviable Domains • Listop - Static DNS - Manage Existing Hosts Mail Services • Listop - Static DNS - Static DNS - Manage Existing Hosts Network Monitoring • Listop - Static overview of the features offered by this service. • Available Domains - a listing of domains available in this service • Availab	ress 🗃 http://www.dyndns.	com/services/dns/dyndns/					Go Links *
About Services Account Support News DNS Services Dynamic DNS SM Dynamic DNS service allows you to alias a dynamic IP address to a static hostname in any of the many domains we offer, allowing your computer to be more easily accessed from various locations on the Internet. We provide this service, for up to five (5) hostnames, free to the Internet community. Dynamic DNS The free Dynamic DNS service is ideal for a home website, file server, or just to keep a pointer back to your home PC so you can access those important documents while you're at work. Using one of the available third-party update clients you can keep your hostname always pointing to your IP address, or e-mailing all your' fiends every time it changes. Just tell them to visit yourame dyndhs.org instead! More Info: Add Dynamic DNS - Manage Existing Hosts Mail Services Add Dynamic DNS - Manage Existing Hosts More Info: Eastures - a basic overview of the features offered by this service Account Upgrades Features - a basic overview of the features offered by this service Available Domains - a listing of domains available in this service Available Domains - a listing of domains available in this service	🎯 Dynl	ONS			User:	Pass:	Login
Services Dynamic DNS SM Custom DNS Secondary DNS Recursive DNS Dynamic DNS Features Available Domains FAQS Available Domains FAQS Number DNS TLD DNS The free Dynamic DNS service allows you to alias a dynamic IP address to a static hostname in any of the <u>many domains</u> we offer, allowing your computer to be more easily accessed from various locations on the Internet. We provide this service, for up to five (5) hostnames, free to the Internet community. Dynamic DNS Features Available Domains FAQS Available Domains FAQS TLD DNS The Dynamic DNS service is ideal for a home website, file server, or just to keep a pointer back to your home PC so you can access those important documents while you're at work. Using one of the available third-party <u>update clients</u> you can keep your hostname always pointing to your IP address, no matter how often your SP changes it. No more fumbling to find that piece of paper where you wrote down your IP address, or e-mailing all your friends every time it changes. Just tell them to visit yourname.dyndns.org instead! Mail Services Add Dynamic DNS - Manage Existing Hosts Mail Services Esatures - a basic overview of the features offered by this service Available Domains - a listing of domains available in this service Available Domains - a listing of domains available in this service Available Domains - a listing of domains available in this service Veb Redirection Account Upgrades How-To - steps up get up and running with this service How-To - steps up get up and running with this service How-To - steps up get up and running with this service		About	Services	Account	Support	Lost Password? - News	Sign Up Now
DNS Services Custom DNS Secondary DNS Recursive DNS Dynamic DNS Features Available Domains FAQS How-To Static DNS TLD DNS Domain Registration Mail Services Network Monitoring Web Redirection Account Upgrades Pricing	Services	Dunomio	DNCSM				
Custom DNS Secondary DNS Secondary DNS The free Dynamic DNS service allows you to alias a dynamic IP address to a static hostname in any of the many domains we offer, allowing your computer to be more easily accessed from various locations on the Internet. We provide this service, for up to five (5) Dynamic DNS Features Available Domains FAQS How-To Static DNS Static DNS The Dynamic DNS service is ideal for a home website, file server, or just to keep a pointer back to your home PC so you can access those important documents while you're at work. Using one of the available third-party update clients you can keep your hostname always pointing to your IP address, no matter how often your SP changes it. No more fumbling to find that piece of paper where you wrote down your IP address, or e-mailing all your friends every time it changes. Just tell them to visit yourname dyndns.org instead! Domain Registration Add Dynamic DNS - Manage Existing Hosts Mail Services Eatures - a basic overview of the features offered by this service Available Domains - a listing of domains available in this service Available Domains - a listing of domains available in this service Network Monitoring How-To - steps on get up and running with this service Veb Redirection Advailable Domains - a listing of domains available in this service Available Domains - a listing of domains available in this service How-To - steps on get up and running with this service	DNS Services	Dynamic	DNS				
TLD DNS Add Dynamic DNS - Manage Existing Hosts Domain Registration Mail Services Mail Services More Info: Network Monitoring • Features - a basic overview of the features offered by this service Account Upgrades • Available Domains - a listing of domains available in this service Pricing • How-To - steps on get up and running with this service	Custom DNS Secondary DNS Recursive DNS Dynamic DNS Features Available Domains FAQs How-To Static DNS	The free Dynamic allowing your com hostnames, free t The Dynamic DNS those important d always pointing to wrote down your l	DNS service allows you puter to be more easily to the Internet community S service is ideal for a ho couments while you're a your IP address, no ma P address, or e-mailing.	to alias a dynamic IP a accessed from various y. ome website, file server, t work. Using one of the atter how often your ISP all your friends every tin	address to a static hos locations on the Interne- or just to keep a point e available third-party <u>u</u> changes it. No more f he it changes. Just tell	tname in any of the <u>n</u> at We provide this se er back to your home <u>odate clients</u> you can <u>umbling to find that pi</u> them to visit yournan	nany domains we offer, invice, for up to five (5) PC so you can access i keep your hostname iece of paper where you ne.dyndns.org instead!
Domain Registration Mail Services More Info: Network Monitoring Web Redirection Account Upgrades Pricing Pricing	TLD DNS			Add Dynamic DNS	- Manage Existing Ho	sts	
Mail Services More Info: Network Monitoring • Features - a basic overview of the features offered by this service • Available Domains - a listing of domains available in this service • Available Domains - a listing of domains available in this service • How-To - steps o get up and running with this service • How-To - steps o get up and running with this service	Domain Registration						
Network Monitoring • Features - a basic overview of the features offered by this service Account Upgrades • Available Domains - a listing of domains available in this service Pricing • How-To - steps o get up and running with this service	Mail Services	More Info:					
Web Redirection Account Upgrades Pricing How-To - steps o get up and running with this service	Network Monitoring	• Fosturos -	a basic overview of the f	actures offered by this a	anico		
Account Upgrades • How-To - steps o get up and running with this service	Web Redirection	Available E	omains - a listing of don	nains available in this s	ervice		
Pricing • How-To - steps o get up and running with this service	Account Upgrades		contly asked questions	1			
	Pricing	• <u>How-To</u> - s	teps b get up and runni	ng with this service			
	Search DynDNS						
	Search DynDNS						

4. Select "account" menu.

ynDNS Dynamic DNS	How To - Microsoft	Internet Explorer					
Edit View Favorites	Tools Help						
Back 🔹 🕥 - 🔀	💈 🏠 🔎 Search	🛧 Favorites 🚱 🧯	🧟 • 🎍 🖬 • 📒	🗄 🦓			
ss 🙆 http://www.dyndns.	com/services/dns/dyndns/h	nowto.html				V 🔁 Go	Links » 🧯
🎯 Dynl	DNS			User:	Pass:	-	Login
					Lost Password?	- Sign Up Now	
	About	Services	Account	Support	News		
Services	Dumanaia	DNO SM LLaw					
DNS Services	Dynamic	DN3° HOW	-10				
Custom DNS							
Secondary DNS	First you will need	an <u>account</u> . If you alrea	ady nave an account, ple	ease use the same acco	ount to create addit	ional hostnames	
Recursive DNS	To second a third based		_				
Dynamic DNS	To create the host	, use the <u>Add Host Forn</u>	<u>n</u> .				
Features							
Available Domains	 The hostna 	me you want to use. Typ	pe the first part of the na	ime in the input box, an	d select the secon	d part of the nam	ne from the
FAQs	drop-down	list. This allows you to h	lave anything.dyndns.or	g, anytningelse.nomeun	ix.com, etc.		1.5.1
How-To	Ine IP add	ress of the new host. In	e system auto-detects t	the IP of the computer y	ou are accessing t	ne form from. Ch	IECK IT TO
Static DNS	make sure	that it is the same as th	ie IP address you want f	the hostname to point to	o, or change it to th	e right IP.	
TLD DNS	The rest of the field	da an this form are surely	sined heless, as they als	e ennen in the "Edit" fe			
Domain Registration	The rest of the field	as on this form are expla	ained below, as they als	o appear in the Edit to	irm.		
Mail Services	If you wish to edit	an existing host, select	that host from the list in	the Dynamic DNS sec	tion. You will need	to be logged in t	o edit vour
Vetwork Monitoring	hosts. Within this	editing form, you can:					,,
Neb Redirection							
Account Upgrades	Check the	IP in Database/DNS - t	his is the IP that your h	ostname currently point	s to.		
	Opdate you	Ir nostname to a New IF	address, either the on	e auto-detected by our	system, or an IP ac	ddress of your cr	noosing.
Pricing	(ivote: this accessing	the form from)	ess that is currently in o	ur database, it is the IP	address that our s	ystem nas detec	cted you are
Search DynDNS	 If you want 	anything-here.yourhost.	dyndns.org to work (ie.	to make things like www	v.yourhost.dyndns.	org work), check	c the
	Enable Wi	Idcard box.		-		-	
	 If you wish 	to use a <u>mail exchange</u>	r, put its hostname in th	e Mail Exchanger field	L		
Canada	10.1						

- Mark "I have read and agree to the Acceptable Use Policy above"
 Input "Username" & "Password".
- (For exam. Username: example, PW: quantumdvr)

DynDNS	Current User: eddydwr (LogOut)							
1	About Services Account Support Developers News							
y Account	Create Account							
y Services ccount Settings illing	Please complete the form below to create your account. You will receive an e-mail containing instructions to activate your account. If you do not follow these directions within 48 hours, you will need to recreate your account.							
	It is strongly recommended that you visit this page securely. You are not currently visiting this page securely.							
	Acceptable Use Policy							
	Policy Last Modified: May 4, 2004							
	1. ACKNOWLEDGMENT AND ACCEPTANCE OF TERMS OF SERVICE							
	All services provided by Dynamic Network Services, Inc. ("DynDNS") are provided to you (the "Nember") under the Terms and Conditions							
	operating rules and policies set forth by DynDNS. The AUP comprises							
	I have read and agree to the Acceptable Use Policy above: 💌							
	Username							
	Usemame example							
	Your username will be used to login to your account and make changes.							

Check account registration is done successfully.
7. Select "Add Host Form" to create the domain name.



8.

- 1) Input "Hostname". Hostname is the same one as "username" (for exam: example)
- 2) You should select "dyndns.org" from the drop down menu, which is limited on our system.
- 3) Current dynamic IP will be shown below
- 4) After checking 1)~3), select "Add Host"
- 5) After registering hostname, check the ping status (ping -t example.dyndns.org)

🛎 DynDNS.org Dynamic DN	IS Add Host - Micros	oft Internet Explorer			X
파일(上) 편집(上) 보기(♥)	즐겨찾기(<u>A</u>) 도구(<u>1</u>)	노움딸(번)			
주소(D) 🔊 http://www.dundr		s/hosts/dundos/add.html			⊘이동 연결 » 😭 •
DynDNS.o	rg	,,,		Current User: e	ddydvr (LogOut)
	A	bout Services	Account Support Develo	opers News	
My Account My Services	New Dynam	ic DNS SM Host			
Account Upgrades MailHop Outbound SLA		Hostname:	example	dyndns.org	
My Zones Add Zone Services		IP Address:	220.76.93.153		
My Hosts Add Host Services	En	able Wildcard:			
Dynamic DNS Static DNS WebHop	Mail Ex	changer (optional):	[🗖 Backup MX?	
MyWebHop Network Monitoring Account Settings Billing				Add Host	Reset Form
		Copyright © 1999-20 Privacy Policy Accepta	05 Dynamic Network Services, Inc. able Use Policy Trademark Notices		
*) 완료			adadadadada	이 이 이 이 이 이 이 이 이 이 이 이 이 이 이 이 이 이 이	

9.

To connect DVR system, the followings-XDSL ID & PW / DDNS ID & PW/ Registered Domainhave to be input on the "Network set" menu.

NETWORK SET

USE DYNAMIC IP: YES XDSL USER ID : XDSL PASSWORD : DDNS USER ID : DDNS PASSWORD : REGISTERED DOMAIN: SAVE AND EXIT

Appendix 5

SETUP FOR DVR PORT/ WEB SERVER PORT USING IP SHARING ROUTER

NETWORK SET

USE DYNAMIC IP: NO IP ADDRESS :000.000.000 GATEWAY :000.000.000 NETMASK :000.000.000 DNS SERVER :000.000.000 DVR PORT 2000 WEBSERVER PORT 2001 SAVE AND EXIT

1) To use IP sharing Router, "Use Dynamic IP" should be set to " No" first.

- DVR Port: Port number to connect network client program on remote PC. When it needs to be changed, number which is not overlapped should be input (2001~65535)
- Web Server Port: Port number to download network client program to remote PC. When it needs to be changed, number which is not overlapped should be input (2001~65535)

2) Setup "virtual server" on IP sharing Router

It is for setting virtual server to forward IP, which is allotted to DVR.

For exam.)

- DVR 1 IP: 192.168.0.11, DVR Port: 2500, Web Server Port: 2501
- DVR 2 IP: 192.168.0.12, DVR Port: 2600, Web Server Port: 2601

If two sets of DVR are configured above, the virtual server on IP sharing router is as follows.

(1) PC Server Name: DVR1-1 (192.168.0.11)

Protocol: TCP, Internal Port: 2500, External Port: 2500

PC Server Name: DVR1-2 (192.168.0.11)

Protocol: TCP, Internal Port: 2501, External Port: 2501

(2) PC Server Name: DVR2-1 (192.168.0.12)

Protocol: TCP, Internal Port: 2600, External Port: 2600

PC Server Name: DVR2-2 (192.168.0.12)

Protocol: TCP, Internal Port: 2601, External Port: 2601

* For more detail, please refer to relevant IP sharing manual.

(3) 'DDNS' Setup on IP sharing router

DDNS configuration is no needed in case of fixed IP.

(4) Address and port number input on the Internet explorer window.

Please input the following format, <u>http://address:web server port</u>. If the system is on the dynamic IP environments and the address configured (3) is abc.dyndns.org and the same address and port is designated like (2),

To connect DVR1, http://abc.dyndns.org:2501, to connect DVR2, http://abc.dyndns.org:2601.

Appendix 6

MAKING PARTITION ON EXTERNAL USB HDD

To back up to USB HDD, the USB HDD should be formatted first on PC. We are supporting FAT32 file system of which maximum size is 30GB at one partition. Please refer to the following procedure to make a partition and format on PC.

1. Select Control panel-> administrative Tools.



2. Select "Computer Management"



3. Select "Disk Management".



4. Click right mouse button and select "New Partition".

🚽 Computer Management									
B File Action View Window H	lelp								
_ ← → 🖻 🗊 😫 🕅 🗃	1								
Computer Management (Local)	Volume	Layout	Type	File System	Status	Capacity	Free Space	% Free	Eault To
🗄 🐔 System Tools		Partition	Basic		Healthy (Unknown Partition)	27.44 GB	27.44 GB	100 %	No
🕀 🔝 Event Viewer		Partition	Basic		Healthy (Unknown Partition)	510 MB	510 MB	100 %	No
Shared Folders	💷 (C:)	Partition	Basic	NTFS	Healthy (System)	27.95 GB	22.51 GB	80 %	No
Performance Logs and Alerts	USB DRIVER (E:)	Partition	Basic	CDFS	Healthy	81 MB	0 MB	0%	No
🛄 Device Manager									
E 🎒 Storage									
Kemovable Storage Disk Defragmenter									
💥 Disk Management									
Services and Applications									
	Blick 0								
	Basic	(C:)							
	55.88 GB Online	27.95 GB	NTFS Svel		27.4 Hea	14 GB Ithy (Unknow	vo Partition)		
		moderly (Inca		arriadony		
	CDisk 1		/////			7//////////////////////////////////////			777777
	37.25 GB	37.25 GB	Net	w Partition					
	Online	Unallocate	Due		- <u>[////////////////////////////////////</u>				//////
	ACD-ROM C		Pro	percies					
	DVD 01 MD	USB DRI	Hel	p					
	I OT MD	TRT MR CD	F'S						

5. Follow "New Partition Wizard" procedure as below.



6.

H wot	elp								
e 📓	l								
d)	Volume	Layout	Type File System	Status	Ca	pacity	Free Space	% Free	Fa
	New Par	rtition Wizard						100 %	No
ps d Alerts	erts Select Partition Type There are three types of partitions: primary, extended, and logical.								
		 Primary partiti Primary partiti Extended par Logical drive Description A primary partition Windows and ot create up to four partition. 	tition n is a volume you creater ner operating system primary partitions or	eate using free space or s can start from a primar three primary partitions a	n a basic disk y partition. Yo and an extend	bu can Jed			
	б В О			< Back	Next >	Car	ncel		
	Disk 1 Basic 37.25 GB Online	37.25 GB Unallocate	ed						

7. Maximum is 30GB at FAT32 file format.

Ve	lume Layout Type	File System	Status	Capacity	Free Space	% Free	[
	New Partition Wizard					100 %	1
	Specify Partition Size Choose a partition size tha		100 % 80 % 0 %	 			
	Maxium disk space in meg Minimum disk space in MB Partition size in MB:	abytes (MB): ::	38147 8 30000				
B 55			< Back Next >		Cancel		
B 3 0	PDisk 1 ssic .25 GB 37.25 GB Inline Unallocated						

8.

٧o	lume	Layout	Туре	File System	Status	;		Capacity	Free Space	% Fr
	New Partition	n Wizard								100 %
	Assign Driv For easie	ve Letter er access, y	or Path you can) assign a drive	e letter o	r drive path to y	our part	ition.		100 % 80 % 0 %
	⊙ Assig ○ Mour ○ Do n	in the follov nt in the foll ot assign a	ving driv owing er drive let	e letter: mpty NTFS fo ter or drive pa	lder: th	D Browse				
W B 5 0						< Back	Next >		Cancel	
Ba 37	PDisk 1 asic 7.25 GB	37.25 GB								

9.

HQ.										
	Vo	ume	Layout	Туре	File System	Status		Capacity	Free Space	% Free
		New Partition Format Par	n Wizard tition							100 % 100 % 80 %
ts										
		Choose	whether yo o not forma	u want t t this pa	o format this p rtition	artition, and if so, wh	hat settings y	you want to	use.	
		💽 Fo	ormat this p	artition v	vith the followi	ng settings:				
			File system	1:	FA	Т 32				
			Allocation	unit size	: De	fault	~			
			Volume lat	oel:	Ne	w Volume				
			Perform	n a quicl	k format	\smile				
	_		Enable	file and	folder compre	ession				
	€ B									
	5					< Back	Next >		ancel	
	Ba 37 Or	P Disk 1 Isic 1.25 GB Illine	(37.25 GB Upallocati	//// ed ///						

10. At this stage, New Partition has been made.

Volume	Layout Typ	e File System Status	Capacity	Free Space	% Free
📕 New Partitio	n Wizard				100 %
		Completing the New Parti Wizard	tion	rd	100 % 80 % 0 %
	J	You selected the following settings: Partition type: Primary partition Disk selected: Disk 1 Partition size: 30000 MB Drive letter or path: D: File system: FAT32 Allocation unit size: Default Volume label: New Volume Durick format: Yes			
Kana and a second secon		To close this wizard, click Finish.			
51		< Back Finish		ancel	
Basic 37,25 GB	37.25 GB				

11. Check New partition was created correctly. (Format will be executed automatically)

File Action View Window H	lelp									
-> 🗈 📧 😫 🕼 📽 📓	1									
Computer Management (Local)	Volume	Layout	Туре	File System	Status	Capacity	Free Space	% Free	Fault Tolerance	Overhead
🍒 System Tools	8	Partition	Basic		Healthy (Unknown Partition)	27.44 GB	27.44 GB	100 %	No	0%
🕀 🗓 Event Viewer		Partition	Basic		Healthy (Unknown Partition)	510 MB	510 MB	100 %	No	0%
🕀 💫 Shared Folders	🗩 (C:)	Partition	Basic	NTFS	Healthy (System)	27.95 GB	22.51 GB	80 %	No	0%
E Local Users and Groups	Rew VOLUME	Partition	Basic	FAT32	Healthy	29.28 GB	29.28 GB	100 %	No	0%
Performance Logs and Alerts	BUSB DRIVER (E:)	Partition	Basic	CDFS	Healthy	81 MB	0 MB	0%	No	0%
Device Manager										
ing Storage										
Dick Defragmenter										
Disk Derragmenter										
Services and Applications										
	🗇 Disk 0									
	Basic	(C:)								
	55.88 GB	27.95 GB	1 S .		27.	44 GB			5	510 MB
	Online	Heatiny (System,	,	Inea	aitny (Unknoi	Wh Particion			tealtny (Unkn
	🗇 Disk 1									
	Basic	NEW VOI	.UME ((D:)						
	37.25 GB	29.29 GB	FAT32				7.96 GB	. /		
	Onine	Healthy					Unallocate			
							-			

12. Check New Partition was created correctly

	NEW VOLUME (D:)							
	NEW VOLUME (D:) Pro	operties	? 🛛					
torage	General AutoPlay Too	bls Hardware Sharing						
		OLUME						
	Type: Local Di File system: FAT32	sk						
	Used space:	16,384 bytes	16.0 KB					
	Free space:	31,438,045,184 bytes	29.2 GB					
	Capacity:	31,438,061,568 bytes	29.2 GB					
		Drive D	Disk Cleanup					
		OK Cancel	Apply					

Appendix 7

SPECIFICATION

		Model		G	Quantum DVR Series	•			
۷ic	Camera	input (NTS	SC / PAL)	Quantum4-DVD	Quantum8-DVD	Quantum16-DVD			
leo		Output		1 BNC, 1S-Video	1 BNC, 15	S-Video, VGA			
A		Audio inpu	ıt	1RCA	4	RCA			
oipr		Output			1 RCA				
Ś	Sensor in (N/	/C, N/O) /A	larm out		4 In / 1 Out				
	Opera	ting syste	m	Embedded Linux					
ワ		Speed		120fps	240fps	480fps			
spla	Re	solution (p	ixel)	720*480, 260*20(NTSC)/ 720*288, 360*288(PAL)					
ay	Split screen			1,4 sequence	1,4,6,8 sequence	1,4,6,8,16 sequence			
	C	Compressio	on		MPEG4				
	Re	solution (p	ixel)	720*480, 260*2	20(NTSC)/ 720*288, 3	360*288(PAL)			
	P	icture qual	lity	3 STE	PS, (Low, Medium, I	High)			
7		Mode		Normal	. Motion. Alarm. Sec	uence			
lec	Priority			Alarm→ Motion→ Sequence→ Normal					
ordi		Total	NTSC/PAL	60fps(720*240), 120fps(360*288) / 50fps(720	*288), 100fps(360*288)			
ling			NTSC	30fps(360*240)	15fps(360*240)	7.5fps(360*240)			
-	Speed	Each		15fps(720*240)	7.5fps(720*240)	3.75fps(720*240)			
		channel	PAL	25fps(360*288)	12.5fps(360*288)	6.25fps(360*288)			
				12.5fps(720*288)	6.25fps(720*288)	3.125fps(720*288)			
	Water m	arking & so	crambling	Propriety Algorithm					
		Display		1, 4	1,4,8	1,4,8,16			
υ	S	Search moo	de]	Date, Time, Calendar				
layt		Speed		Normal.Rew.FF. (Recorded speed *2, *4, *16) Frame to Frame, Pause					
bac		Device			Internal HDD				
~	HC	DD Sizes (0	GB)	80,160 & 250	160,2	50 & 500			
	Still ima	age capture	e & save	JPEG compression	n or AVI Format & US	SB (memory stick)			
	Ne	twork inter	face		Ethernet				
z		Protocol		TCP/IP, SMT	P, HTTP, DHCP, PPP	OE (ADSL)			
letv	Seria	l communi	cation	No	RS-232 1eac	h, RS-485 1each			
Vor		Application	n	Window	vs 2000 / XP (Client s	system)			
~	V	Veb brows	er	Internet Explore	er ≥ 5.0. (DVR's cont	rol or viewing)			
	Event transport			When eve	ent occur, set to sen	d E-mail			
Ва		Interface			USB 2.0				
ckup	Ва	ack-up dev	ice	External USB HDD, int	ernal DVD-RW, Netw stick	vork Backup, Memory			

			Each control/channel					
	Motion detection		Sensitiv	vity: 3step for each channel				
Con			Area: Individually programmable motion detection area for each camera.					
tro	Alarn	n hold time		5 ~ 240 seconds				
	Ev	vent log	256 event (alarm, mot	ion, video & power loss & record On/Off)				
	Remo	te controller	IR	remote controller (32)				
	Pan/	Tilt camera	No	RS-485 interface				
		HDD	Two HDD's max.					
	Pow	ver source	100 ~ 240V AC. 50 ~ 60Hz.					
	Power su	pply capability:	60W	250W (AC current ≤ 500mA)				
Q	Operatin	g temperature	5	~ 40°C (41 ~ 104°F)				
he	Relati	ve humidity	Maxim	um 80% Non-condensing				
ſS	Weight	Net	4.0Kg	6.0Kg				
	Weight	Gross (box)	5.0Kg	7.0Kg				
	Dimension	Net	350(w)*250(d)*70(h)	450(w)*370(d)*90(h) mm				
	Dimension	Gross (box)	400(w)*340(d)*170(h)	500(w)*460(d)*190(h) mm				

Design and product specifications subject to change without notice

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