

DIGIPRO4U Four Channel USB Video Capture Device

Model: QDU470

Installation / User Manual



Digimerge Technologies Inc.

IMPORTANT SAFEGUARDS AND WARNINGS

THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS: THIS DEVICE MAY NOT CAUSE HARMFULL INTERFERENCE, AND THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDERSIRED OPERATION.

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at one's own expense.

CAUTION: CHANGES OR MODIFICATIONS NOT EXPRESSLY APPROVED BY THE PARTY RESPONSIBLE FOR COM PLIANCE COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.

Important Safety Instructions

1) Read & Retain Instructions

All the safety and operating instructions should be read before the appliance is operated. The safety and operating instructions should be retained for future reference.

2) Heed Warnings

All warnings on the product and in the operating instructions should be adhered to.

3) Follow Instructions

All operating and use instructions should be followed.

4) Cleaning

Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning the unit. (Exception: A product that is meant for uninterrupted service and that for some specific reason, such as the possibility of the loss of an authorization code for a CATV converter, is not intended to be unplugged by the user for cleaning or any other purpose, may exclude the reference to unplugging the product in the cleaning description otherwise required in 5).

5) Attachments

Do not use attachments not recommended by the product manufacturer as they may cause hazards.

6) Water and Moisture

Do not use this product near water, for example near a bath tub, wash bowl, kitchen sink, or laundry tube in a wet basement or near a swimming pool and the like.

7) Accessories

Do not place this product on an unstable cart, stand, tripod, bracket or table.

The product may fall, causing serious injury to a child or adult, and serious damage to the product. Use only with a cart, stand, tripod, bracket or table recommended by the manufacturer, or sold with the product. Any mounting of the product should follow the manufacturer's instructions, and should use a mounting accessory recommended by the manufacturer.

8) Handling

A product and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the product and cart combination to overturn.

9) Ventilation

Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the product and to protect it from overheating and these openings must not be blocked or covered.

Placing the product on a bed, sofa, rug or other similar surface, should never block the openings. This product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.

10) Overloading

Do not overload wall outlets, extension cords, or integral convenience receptacles as this can result in a risk of fire or electric shock.

11) Object and Liquid Entry

Never push objects of any kind into this product through openings as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquid of any kind on the receiver.

12) Servicing

Do not attempt to service this product yourself as opening or removing covers may expose you to dangerous volt-age or other hazards. Refer all servicing to qualified service personnel.

13) Heat

The product should be situated away from heat sources such as radiators, heat registers, stoves, or other products (including amplifiers) that produce heat.

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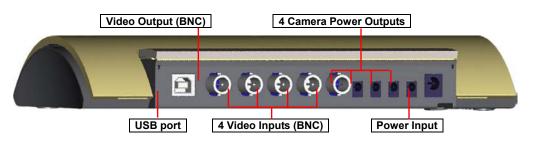
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SECTION 1 - PRODUCT INFORMATION

The QDU470 is a professional 4-channel video capture USB device. By connecting this unit to an available USB port on a capable PC, the computer becomes a fully functional Digital Video Recording Device. This unit features M-PEG 4 compression at 30fps, PTZ support, motion detect recording, and remote LAN/WAN viewing.

1. Input/Output Specifications

- **USB port**: 1 port. Connected to the USB port of the computer.
- + Video Output (BNC): 1 channel. Connect to a local spot monitor.
- *To change channel displayed on spot monitor, press the 'CHANNEL' button on the front of the unit.
- Video Input (BNC): 4 cameras (CAMERA 1 ~ 4).
- + Camera Power Output: 4 cameras (DC+12V OUT 1~4).
- Power Input: Connect with power adapter. (DC+12V)



- Sensor Input: 4 terminals (S1~S4)
- Relay Output: 2 terminals (COM1/OUT1, COM2/OUT2)

2. Recommended PC Specification

- CPU: P-3 800MHz or higher (Recommended: P-4 1.7GHz or higher)
- RAM: more than 128MB (Recommended: 256MB or higher)
- VGA: 32MB or higher version
- (Recommended: RIVA TNT 2, GeForce2 MX 100/200, GeForce2 MX 400, ATI XPERT 2000 Pro, ATI RADEON 7200)
- HDD: 3Gbyte or higher version (*Recommended:* 40Gbyte or higher)
- OS: Windows 98SE, ME, 2000, XP (Recommended: Windows 2000, XP)

[NOTE]: Set the 'Hardware Acceleration' in the video card options to 'Non-used', if using an out-dated VGA card. The screen can be distorted if enabled. This is set in >Control Panel>Display>Settings>Advanced

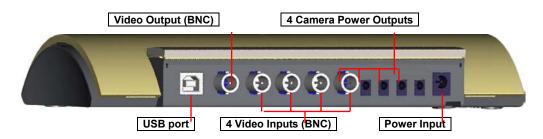
3. Package Contents

- QDU470 system
- USB cable
- Power adaptor
- Install CD
- User's Guide

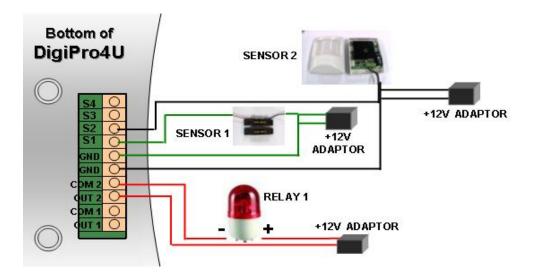
SECTION 2 - INSTALLATION INSTRUCTIONS

1. QDU470 Hardware Installations

NOTE: DO NOT CONNECT THE USB CABLE TO THE PC UNTIL THE CONNECTIONS SHOWN BELOW HAVE BEEN MADE AND THE DRIVER SOFTWARE CD HAS BEEN INSERTED INTO THE DRIVE. SEE SECTION 2 BELOW FOR DRIVER INSTALLATION INSTRUCTIONS.



- 1. Connect the cameras to the unit via the 4 BNC Video Input terminals.
- 2. If desired, connect sensors and relays to the I/O terminals at the bottom of the unit.



- 3. Connect the supplied power adapter to the unit.
- 4. When ready to proceed with the software installation, connect the USB cable between the DVR and the PC.

2. QDU470 Device driver installation

[NOTE]: To install the USB device driver correctly, connect the unit to the PC as shown on the previous pages. At least one camera should be connected during this stage. The screenshots shown below are taken from Windows XP and may vary slightly depending the Operating System

1) When you boot your computer after you have connected the DigiPro4U to the PC, the following message dialog (titled as "Welcome to the Found New Hardware Wizard") appears automatically. Click the 'Next' button.



2) Ensure that the driver CD is in the drive and select 'Search Removable Media'. Click 'Next' to continue.

nd Nev	w Hardware Wizard
Please	e choose your search and installation options.
¢	Search for the best driver in these locations.
	Use the check boxes below to limit or expand the default search, which includes local paths and removable media. The best driver found will be installed.
	Search removable media (floppy, CD-ROM)
	Include this location in the search:
	C:\ Browse
С	Don't search. I will choose the driver to install.
	 Choose this option to select the device driver from a list. Windows does not guarantee t the driver you choose will be the best match for your hardware.
	< Back Next > Cancel

3) Windows will search the CDROM for the driver. When the driver is located the below screen will be shown. Click the 'Continue Anyway' button to proceed.



4) The driver software for DigiPro4U is installing. Please wait.



5) Windows has finished installing the driver for DigiPro4U. Click "Finish" button.

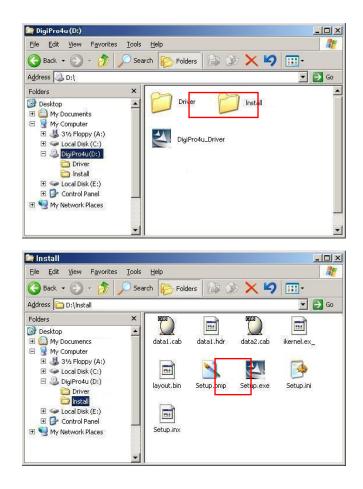
Found New Hardware Wizard	
	Completing the Found New Hardware Wizard The wizard has finished installing the software for: Digimerge DigiPro4U
	Click Finish to close the wizard.
	< <u>Back</u> Finish Cancel

Now you have successfully installed the device driver for the DigiPro4U system.

3. QDU470 software installations (Server, Client, Search)

NOTE: You will need the product's serial number to complete the installation of the software. The serial number may be found on the CD-ROM.

1. Begin the software installation by double-clicking the "Setup.exe" icon located in the 'INSTALL' directory on the provided CD.



- 2. Follow the on-screen directions to complete the installation of the software. You may be prompted to install DirectX version 8.1 if your current version is lower. If prompted to reboot your computer at the end of the install, please do so before attempting to launch the software.
- 3. The default installation directory is C:\Program Files\DigiPro4U. When install is complete the following icons will be displayed on the desktop:



Section 3 – The Local Server Interface

1. Main Application Window

When entering the Server Program, the main interface screen will open as shown below. There are several view modes for efficient monitoring such as single screen, quad screen, and auto switching modes. Pan/Tilt/Zoom Controls are available from this window for any connected PTZ cameras.

Open the QDU470 Server program by double-clicking the QDU470 Server icon (



2. Interface Functions

Minimize button

Date/Time/HDD Viewer



Click to minimize the screen to the taskbar.

• Date and Time Status Display (Current)

is shown if in overwrite mode.

• HDD Storage Status (% Used)

The Recycle HDD icon

Setup button



Click here to enter the Setup Mode.

Search button



Click this button to shutdown the main server application.

You can search recordings by camera number, date, time and event.

Click here to enter the Search mode.

- Shutdown button
- Client Connection Status

Status Client Connection Status

/ Log Viewer 1 CLIENTS 17:14:23 Registered 17:14:13 Start 17:14:13 Shutdown 17:14:12 Unregistered 17:14:09 StopBRec 17:14:08 StopBRec 17:14:07 StartBRec Displays the Client connection status.
 By double-clicking the mouse here, you can see the clients connected.
 And, you can disconnect the clients using the administrator password.

Client 1 Client 2	IP Address	200, 100, 30, 61
	User ID	admin
	Status	Connected
		Disconnect

- Log View clicking the 'LOG' tab, opens the window below.
- : Shows event logs. You can see the details by double-clicking mouse on the viewer.

d B-REC for d B-REC for d B-REC for schedule re	channel 1 channel 3		
d B-REC for schedule re	channel 3		
schedule re			
	cordina		
			_
configuration	n changed	by local us	er
configuration	n changed	by local us	er
configuration	n changed	by local us	er
configuration	n changed	by local us	er
configuration	n changed	by local us	er
B-REC for c	hannel 4		
B-REC for c	hannel 3		-
5 550 /			Þ
	n configuratio n configuratio n configuratio d B-REC for c	n configuration changed n configuration changed	

The operation information of start/end system, connection/disconnection, changing system configuration, start/stop recording, etc. is recorded with time stamp.

Pan/Tilt/Zoom Control buttons



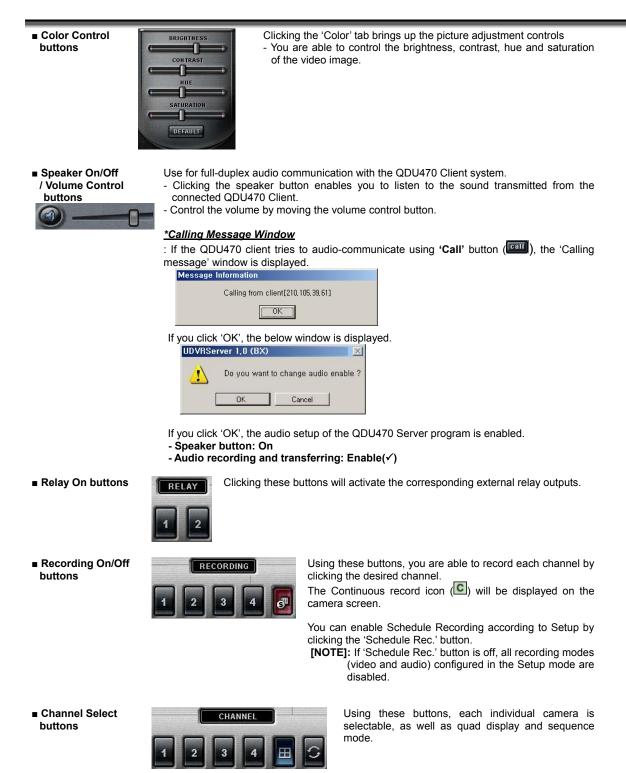
If you click 'PTZ' tab, the Pan/Tilt/Zoom control buttons appear. - The following controls are available:

Camera Selection to control Pan/Tilt/Zoom/Focus

- Tilt up/down (▲/▼)
- Pan left/right (◄/►)
- Zoom in/out (+/-)
- Focus in/out (+/-)
- Auxiliary (1,2,3)

(Refer to 'Appendix VI-1. Pan/Tilt/Zoom Camera Installation'.)

QDU470 User's Guide



Full Screen Mode

Click the right mouse button on the screen to change to full screen mode To convert back to the regular screen, click the right mouse button again.

SECTION 4 – SYSTEM SETUP

This section will illustrate the configuration options offered by the DIGIPRO Server's Setup dialog. These options include changing passwords, scheduling recordings, programming motion detection, and much more.

1. Entering the Setup Mode:



Click the Setup button () from the main application window to enter the setup mode. You will be asked to enter your Username and Password before proceeding to Setup mode. The defaults for these are:

Username: admin

Password: master

2. Main System Options

Camera On/Off	- System
Camera 1 Camera 2 Camera 3 Camera 4	Auto switching interval 2 (1sec~30sec) Display character on screen ⊽ Enable Fonts HDD Overwrite ○ On ○ Off Record drive C:₩ ▼
oduct number 10030-****-****	PTZ Port number COM1
Camera association Camera 1	Camera 2 Camera 3 Camera 4
huvanteu	Network Information
	Filtering IP Address (200, 100, 30, 61
Backup	11 11001000 200,100,00,01

- Camera On/Off: Enable / Disable each camera. (4cameras)
- Product Number: The Product Number is the unique number given to each QDU470 Server product.
 - If you use the Internet with Dynamic IP address or Private IP address (IP Sharer), the QDU470 Client and Search can connect to the unit using the Product Number.
- System
 - Auto switching interval: Setup the interval time for the auto switching. All cameras will be displayed sequentially with this interval time.
 - · Display character on screen: Displays the information associated with each camera on screen. (see below)

*OSD (On Screen Display) menu:

- Camera location: camera name set in <u>Camera setup panel</u>
- Record mode set: Continuous record(C), Motion record(M), Sensor record(S), Event record(E)
- Motion: Detect (🕅)
- Sensor: Detect (
- Audio set: Enable (🖳)

- **Recording**: in recording (**R**)

- HDD Overwrite: Enable the HDD to overwrite when full.
 - **On**: When the selected record drive is full, the DVR will begin overwriting the drive from the beginning. - **Off**: When the selected record drive is full, the DVR will stop recording.
- On: when the selected record drive is full, the DVR will stop re
 Record drive: Setup the drive used for recording.
- PTZ Port number: Select the COM Port that the PTZ camera will be connected to.
 - (Refer to 'Appendix VI-1. Pan/Tilt/Zoom Camera Installation'.)

• Audio recording and transferring

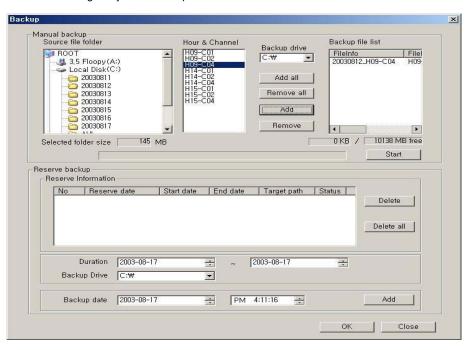
- Audio Enable: Use for full-duplex audio communication with the QDU470 Client system. If enabled, you can transfer the Server's audio signal (using a Microphone connected to the sound card of this computer) to the computer running the QDU470 Client. This audio may also be recorded at the server.
- Camera association: Select one camera that recorded audio will be associated with. The audio signal will be recorded with video signal of the selected camera. (*Audio is recordable only on 1 channel.) The Audio icon () will be displayed on the screen of the selected camera. In search mode, a white line at timetable indicates an audio file is recorded.

NOTES]

- 1. Audio recording depends on the video recording of the associated camera at the QDU470 Server setup. Namely, the audio is only recorded when video is being recorded for the associated camera.
- 2. For full-duplex audio communication with the QDU470 Client system, a microphone has to be connected to sound card of computer and the 'Microphone In' Volume Control setup of windows must be muted.

Advanced

• **Backup**: Selected recordings may be backed up to another drive or folder.



- Manual backup: You can backup a recorded file of specific duration manually.
 - Select the Source file folder: Shows the size of selected folder.
 - Select the Hour and Channel: Shows the hour and channel with a recorded data.
 - Select the Backup Drive: Select the backup drive in which the selected file will be saved.
 - Backup file list: Shows the information (file info, source path) of backup file.
 * Shows the total size of selected backup files and the free size of selected drive.
- Reserve backup: You can set the backup-schedule in advance.
 - Delete all: Deletes all scheduled backups from the list.
 - Delete: You can delete scheduled backup file copying by highlighting the number of the backup in the list and then clicking the Delete button.
 - Duration: Select the start and end duration dates that contain the recording that you wish to backup.
 - Backup Drive: You can change the folder to which backup video is recorded on your hard-drive.
 - Backup date: Select **the precise time** that you want the backup file copying to occur. Press 'Add' button to register in Backup list.

• Auto check USB device: If enabled, the system will check automatically whether the USB device is connected or not. If the USB cable or power cable is not connected, the below message window will appear.



Then, after clicking 'Shutdown' and connecting the USB cable or power cable correctly, you should start the QDU470 server system again.

- Advanced => Network Information: Displays the following information.
- IP Address: Shows the IP address of Server is appointed from the computer.
 - (Static IP address / Dynamic IP address / PPPoE IP address)

The QDU470 Client and Search can connect to the QDU470 Server remotely using 'Server IP' or 'Product number'.

*If you use the Internet with Dynamic IP address, you should connect by using Product number, because Dynamic IP address is changed continuously.

• Network video port number: You can change the port number by clicking this button.

Input the new network video port number and click 'OK'.

The new port-numbers will be applied by re-starting Server program.

Change network video port 🔀		
Input the network video port number, The new port number will be applyed by re-start UDVRServer. 2000 (2000 ~ 65000)	UDVRServer 1.0 (BX) Changed network port r video port : 2000 audio port : 2001 PTZ camera port : 2002 RemoteSearch port : 202	2
Cancel	<u>OK</u>	

If you input the video port number to '2000', Port Numbers for Video and Audio and P/T/Z camera and Remote Search of QDU470 Server will be each fixed to 2000 and 2001 and 2002 and 2003 automatically.

[NOTES]:

- 1. The video port number (2000) must be entered in the server registration section of the Client/Search.
- 2. In case that a Firewall is installed, these Ports must be opened to permit Remote Search/Client connection via external network.

• Filtering: Setup the network filtering. You can appoint IP address that will be denied connection. Also, within the IP address range, you can appoint specific IP addresses to accept.

210.120.12	210.120.12.10 210.120.12.20
Add Delete	Add Delete

- Denied IP address: Input the IP address that will be denied.

- Accepted IP address in denied: Input the IP address that you wish to be exempted from the denied IP range.

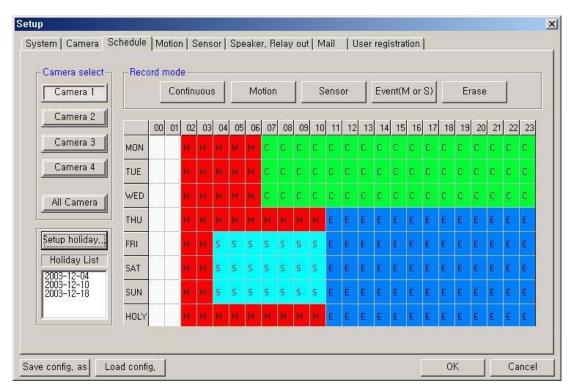
You can control the network connection to the QDU470 Server efficiently by filtering IP address.

3. Camera Setup Options

Camera 1	Camera location PTZ Camera PTZ Camera ID	CH 1 None
Carnera 2	Record video quality Record maximum possible frames	Low J Very high
Camera 3	Pre-recording duration	Record all frames when event occurs 0 sec (max 5sec)
Camera 4	Popup window when event occ	Enable

- **Camera Select**: Select a camera to setup.
- For each camera
 - Camera location: Describe the location where the selected camera is installed. This name will be displayed on screen when viewing this camera.
 - **PTZ Camera**: If using a camera, select the type of PTZ camera connected to this channel. Click the scroll button to bring up a list of PTZ cameras that are currently available.
 - PTZ Camera ID: Enter the switching ID of the PTZ camera connected to this channel. (Refer to 'Appendix VI-1. Pan/Tilt/Zoom Camera Installation'.)
- Configuration
 - Record video quality: Setup the record video quality of selected camera.
 - Record maximum possible frames: Setup the record maximum frame rate of selected camera. (1~30 fps)
 - Record all frames when event occurs: If checked, it records all frames of video of selected camera when event occurs at selected camera.
 - Prerecording duration: Enter the pre-recording duration (time) of selected camera when event occurs at selected camera. (max 5 sec.)
 - Popup window when event occurs: If checked, in case of the QDU470 Server window is minimized in execution, popup window when event occurs at selected camera.
 - Same configuration for all cameras: If checked, the configuration (video quality, record frame rate, etc.) of all cameras will be set the same as this camera.

4. Schedule Recording Options



- Camera select: Select a camera to setup a Recording Schedule. If you click 'All Camera', the Recording Schedule is applied to all cameras.
- Record mode: Appoint the time by dragging on the timetable and click a record mode. Then, the selected record mode is assigned at the appointed time.
 - Continuous: Record continuously the monitoring video. (C)
 - Motion: Record when motion occurs in the appointed motion-detection region. (M),
 - Sensor: Record when the associated external sensor input is activated. (S)
 - Event (M or S): Record when an alarm event (motion detection or sensor input) occurs. (E)
 - Erase: Not record but only monitoring.

Recording mark (R) is displayed on screen of each camera when it is recording.

• Setup holiday: On selected holidays no recording will take place unless manually initiated. You can specify the holiday as desired. Select the date and click 'Add'. Then, the date lists in the holiday list. To remove the date, select the date at the holiday list and click 'Remove'.

	ndar						Holiday List	
4	S	epte	mber	200	13	•	2003-09-03	
Sun	Mon	Tue	Wed	Thu	Fri	Sat	2003-09-21 2003-09-22	
31	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	1	2	3	4		
5	6	7	8	9	10	11	2	
\sim	Toda	ay: S	9/3/0	3				
		-						
							1	

5. Motion Detection Setup

		Sensitivity 50 Low High
Camera 1		Min, detect area 26 100 100 1 Motion event duration 60sec
Camera 2		Region select Test start Select all Draw Clear all Erase
Camera 3	Camera recording association Camera 1 Camera 2	Camera 3 Camera 4
Camera 4	Output association Speaker out Mail out	Relay1 out Relay2 out

- Camera select: Select a camera to setup.
- For each camera:
 - Region Viewer: On this viewer, you can set the region and test. The active region is shown with a red grid.
 - Sensitivity: Setup the sensitivity of brightness in the motion-detection region.
 - Min. detect area: Setup the rate (sensitivity) of motion detection in the motion-detection region. The larger the number, the lower the sensitivity. Conversely, the smaller the size(number) is, the higher the sensitivity.
 - Motion event duration: Setup the recording duration when motion occurs. (1~60 sec)
 - Region select: Select all: The region is all selected.
 - Draw: Click 'Draw' and draw the grid by mouse-dragging on the viewer as desired.
 - Clear all: All regions are cleared.
 - **Erase**: Clear specific regions of the grid by mouse-dragging on the viewer as desired.
 - Test start: Start the test of the motion-detection on the viewer.
 - Test stop: Stop the test.

The Motion Detect symbol (X) is displayed on screen when motion occurs in the selected regions.

- **Camera recording association:** Select cameras to be associated and recorded together when motion occurs at this camera. [NOTE]: This association will not affect cameras configured to record upon Sensor input.
- Output association: Select the output condition(s) that will occur when motion occurs at this camera.
 - Speaker out: If selected, speaker will be operated according to 'Speaker, Relay out' setup when motion occurs at this camera.
 - Mail out: If selected, the capture-mail will be sent according to 'Mail' setup when motion occurs at this camera.
 - Relay out (1,2): If selected, the relay will be operated according to 'Speaker, Relay out' setup when motion occurs at this camera.

6. Sensor Input/Output Options

Sensor select	For each sensor Sensor Enable
Sensor 1	Normally Closed 🗖
	Description SENSOR 1
Sensor 2	Sensor Type SENSOR TYPE 1
	Sensor event duration 10 1sec - J 60sec
	Camera recording association
Sensor 3	Camera 1 Camera 2 Camera 3 Camera 4
	Output association
Sensor 4	Speaker out Mail out Relay1 out Relay2 out

- Sensor select: Select the sensor input to configure.
- For each sensor:
 - Sensor Enable: If checked, this sensor is enabled.
 - Normally Closed: Choose this option if using a Normally Closed sensor rather than Normally Open.
 - Description: Describe the location where this sensor is installed.
 - Sensor Type: Describe the type of sensor used.
 - Sensor event duration: Set the record duration that will occur when this input is triggered. (1~60 sec)
- Camera recording association: Select cameras to be associated and recorded together when this sensor input is activated.
- Output association: Select the output condition(s) that will occur when this input is activated.
 - Speaker out: If selected, the speaker will be activated according to the 'Speaker, Relay out' setup when this input is triggered.
 - Mail out: If selected, the capture-mail will be sent according to 'Mail' setup when this sensor is triggered.
 - Relay out (1,2): If selected, the relay will be active according to the 'Speaker, Relay out' setup when this sensor input is activated.

Speaker out Spea	ker out 🦵 Enable	
W	ave file chimes, wav Play	
Workir	ng time From 0:00:00 ~ To 23:59:59	
Alarm d	uration 10 1sec 60sec	
Dela	ay time O Osec 10sec	
Relay out	For each relay out Relay out IV Enable	
	Description RELAY 1 Working time From 0:00:00 ~ To 23:59:59	
Relay2 out	Relay duration 10 1sec 60sec Delay time 5 0sec 10sec	

7. Speaker and Relay Output Setup

- Speaker out:
 - Speaker out Enable: If checked, the speaker output is enabled.
 - Wave file: Setup the wave file for speaker output. (Use 'Play' to hear the file in advance.)
 - Working time: Schedule the time frame during which the speaker will be able to activate.
 - Alarm duration: Set the duration that the output will sound when an alarm occurs. (1~60 sec)
 - Delay time: Set a desired delay time. The speaker will sound after this delay time expires. (1~10 sec)

• Relay out (1,2):

- Relay out Enable: If checked, the relay output is enabled.
- **Description**: A description of the relay or function may be entered in this location.
- Working time: Schedule the time frame during which the relay will be able to activate.
- Relay duration: Set the duration that the relay will activate when an alarm occurs. (1~60 sec)
- Delay time: Set a desired delay time. The relay will activate after this delay time expires. (1~10 sec)

8. Mail Setup

Captured images can be sent to specified recipients via e-mail when event upon alarm conditions.

Mail 🔽 Enable	Send test mail	user@	yahoo,com		
Name	UDVRServer 1,0				
Mail address	UDVRServer@woojucom.c			Delete	
SMTP Server	mail, kornet, net				
Working time Fron	n 0:00:00 ~ To 23:59:	59			
	ween two consecutive mails				
	60mi	n			
Delay for capturing in	nage after alarm		@	Add	
5 Osec -	60se				
9					

- Mail Information:
 - Mail Enable: Check to enable the e-mail function.
 - Sender information: Enter the name, mail address, and SMTP Server of the sender. *SMTP (Simple Mail Transfer Protocol) Server: (If not known, this may be obtained from the Internet Service Provider).
 - Working time: Schedule the time frame during while the e-mail function will be able to activate.
 - Minimum interval between two consecutive mails: Sets the minimum interval between two consecutive e-mails. (1~60 min)
 - Delay for capturing image after alarm: Sets the delay time for capturing an image after an event occurs. (0~60 sec)
- Recipients Information: Enter the mail address of a recipient and click 'Add'. It will then be added to the list.
- Send test mail: Use this option to send a test message to the recipient.

9. User registration Setup

D D C		Level		Add	
		Power user User		Modify	
				Delete	
Ad	ministrator passv Confirm passv				
	Commin passy	Before search			
		I Before stop sc			
		🔽 Before shutdov	wn		

• User List: Displays users registered to use this system. You can add, modify, or delete user's using this menu. The registered ID/password is used when accessing the system remotely from the Client or Search program. A user must be set up in the area in order to gain remote access. Clicking 'ADD' or 'MODIFY' brings up the window below.

User ID OK Defaul	ID: Enter user's ID to use. word: Enter the password irm password: Enter again the password. I: Select the user authority level. It Passwords: Administrator – ID: power, PW: master Power User – ID: power. PW: 1111 User – ID: digimerge, PW: 1111
-------------------	---

• Administrator password: Change the administrator password by clicking 'Change'.

Password Autho	ority Levels >				* X: impos	sibility, O: poss	ibility
		Server		Se	arch	Clien	t
Level	Advanced System Setup	User Registration Setup	Search / Stop Schedule Rec. / Shutdown	Remote Search	Download	Connection	Remote Setup
User	NO	NO	NO	YES	YES	YES	NO
Power User	NO	NO	YES	YES	YES	YES	NO
Administrator	YES	YES	YES	YES	YES	YES	YES

SECTION 5 – USING THE SEARCH APPLICATION

The Search Mode is divided into two modes - Local Search and Remote Search.

The Local Search mode retrieves video stored locally on the machine running the Server program. The **Remote Search mode** enables searching of the recorded data on the QDU470 Server system via Network/Internet.

Starting the Search program:





arch icon (Solar) on the desktop or clicking the Search button



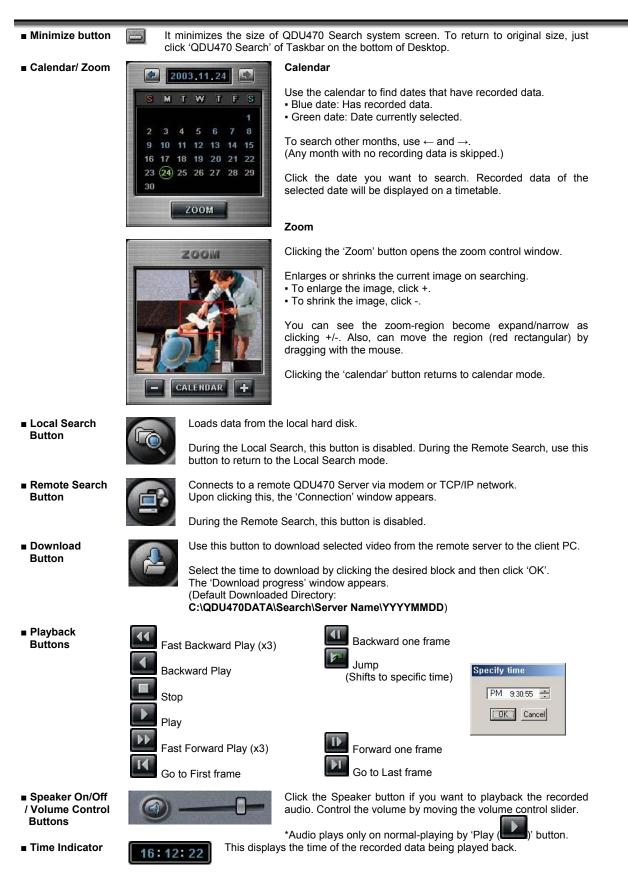
from the QDU470 Server main screen or QDU470 Client main screen.

1. Introduction to the Main Search Window

In Search Mode, recorded data can be searched by date, specific camera, and time. This mode also enables capturing of the video image by clicking the Capture button.



2. Search Interface Functions



QDU470 User's Guide

■ Channel Select Buttons	CH 1Individual channels may be displayed full screen via these buttons.CH 2*On playing, you can't change the channel.CH 3CH 4
■ Quad View Button	User can see the screen by 4-channel quad mode by clicking this button. *By double-clicking on the screen, 1-channel display mode and quad mode are changed alternately
■ Timetable	06:00 07:00 08:00 09:00 10:00 11:00 12:00 13:00 14:00 Image: Contract of the second information is shown on timetable. Image: Contract of the second information is shown on timetable. Image: Contract of the second information is shown on timetable. Select the specific time to playback by clicking the mouse on the desired segment or by scrolling using the scroll key from left to right. Image: Continuous Recording, Red = Motion Detection, Orange = Sensor, Pink = Pre-recording, White line = Audio Recording)
■ Select button by Event	 Use to see the recorded data by event. A = Display all types of recording. C = Display only Continuous Recording data. M = Display only Motion Detection Recording data. S = Display only Sensor Recording data.
Setup button	Use this button to setup the directory for local search, and the network settings for remote search.
■ Bookmark Button	The Bookmark Dialog box appears by clicking this button. Selected video segments may be saved as bookmarks for quick access at a later time.
■ Store to AVI Button	Use this button to save the recording as an AVI video clip.
■ Panorama Button	Using this button, video will be able to be played back image-by-image.
Capture button	Use the Capture button to save or print individual images.
Shutdown Button	Exit the Search system by clicking this button.

Shutdown Button

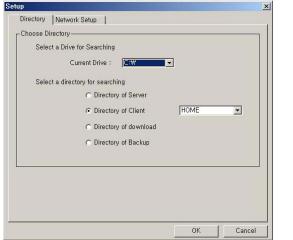
 \mathbf{C}

3. Local Search Procedure

1) Select Directory for local searching

Click the 'Setup' button (

In the Directory section, select the drive and directory for local searching.



- Select a drive for searching: The default will be the drive that the QDU470 software has been installed in.
- Select a directory for searching

2) Select the Date to search

In calendar, select the date you want to search by clicking the day in the window.



The Calendar shows dates that have recorded data.

Blue date: Has recorded data.

Green date: Currently selected date.

To search other month, use \leftarrow and \rightarrow . (Months with no recorded data will be skipped.)

Click the date you want to search. Then, recorded data of the selected date will be displayed on the timetable.

3) Select recording data for playback on timetable

The recorded information of the selected date is shown on a timetable. You can see the recorded information by channel, time and event.

Select a channel for playback and click the point of time on recording bar. (selected time indicator: blue line) * You can move the time zone by scrolling using the scroll key (\leftarrow/\rightarrow).

16:12:22	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	
CH 1					1					
CH 2										
СН 3									ļ.	
CH 4										S
	•									

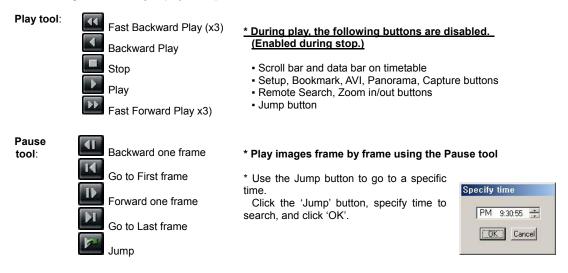
- Time Indicator: Display the real time of recorded data is on playback. (data of present time: blue line)
- Channel Select: Select the channel for playback (by 1-channel mode).
- Quad View: User can see the screen by 4-channel quad mode by clicking 'Quad' button.
- *By double-clicking on the screen, 1-channel display mode and quad mode are changed alternately
- Timetable: Display the recording data of selected date by channel as bar of various color.
 - *The colors of the bar indicate various types of recording:

(Green = Continuous Recording, Red = Motion Detection, Orange = Sensor, Pink = Pre-recording, White line = Audio Recording)

- Select by Event: Use to see the recorded data by event.
 - A = Display all types of recording.
 - C = Display only Continuous Recording data. (Green)
 - **M** = Display only Motion Detection Recording data. (Red)
 - S = Display only Sensor Recording data. (Orange)

4) Playback the selected data recorded

Use the following controls to adjust playback specs and direction.



5) Advanced Functions

• **Zoom**: If you click the 'Zoom' button below calendar, the Zoom control is shown. Use the + and – keys to Zoom in and out.



Audio Play / Volume Control: Click the Audio Play button if you want to playback the recorded audio. Control the volume by
moving the volume control button



Bookmarking

Click the bookmark icon to open the Bookmark Dialog box. Set playback bookmarks using add or delete and go to the desired time within Use this to save favorites for quick access at a later time.



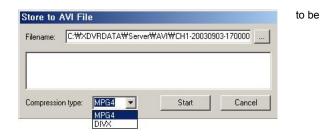
bookmark lists.

window



Here, a file can be converted to an AVI file, which will be able played back on any PC.

• After clicking the 'Store to AVI' button, select the compression type and click 'Start'. Then, the conversion to AVI file will be progressed until user clicks 'Done' or the file is end. • The converted AVI file is saved in the 'AVI' directory. (Default Directory: C:\XDVRDATA\Search\ServerName\AVI)



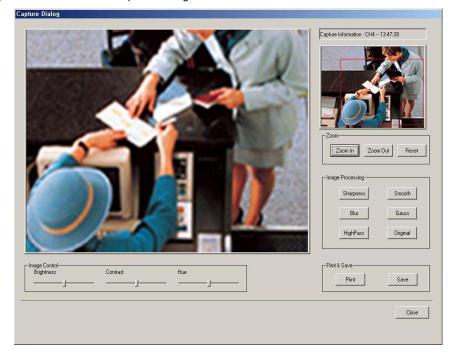
Panorama

Panorama allows reviewing of images frame by frame.

After clicking the 'Panorama' button at the specific part (time) of a channel, set the frame interval and click 'Refresh'. Then, total nine frames will be displayed at the frame intervals set from present frame.



Images are able to be saved or printed using this function.



The following options are available in regards to the captured image:

- Zoom: User can enlarge or shrink the current capture image using Zoom In/Out buttons. You can see the zoomregion become expand/narrow as Zoom In/Out. Also, you can move the region (red rectangular) by dragging using mouse.
- o Image Processing: User can process the current capture image using various image processing buttons.
- Print & Save: User can print out or save to BMP or .JPEG the current capture image (Default Saved Directory on searching 'Server': C:\XDVRDATA\Server\SnapShot)
- o Image Control: User can control Brightness, Contrast, Hue of the current capture image.

SECTION 6 – THE REMOTE CLIENT PROGRAM

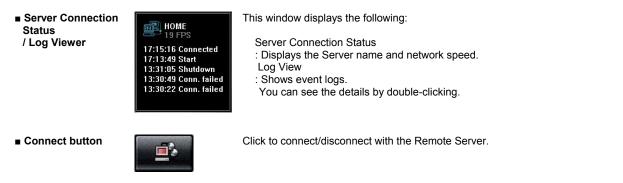
The Client software allows for remote surveillance of the DVR via LAN, Internet, or Dial-up.

1. Client Program Overview

Open the Client program by double-clicking the DVR Client icon (

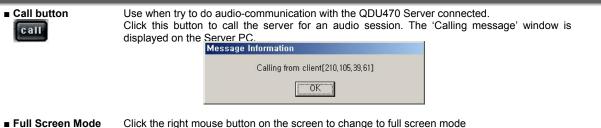


The functions/controls within this window are nearly identical to the Server Window functions. See Section --- for details. The following additions are shown in the Client window.



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To convert back to the regular screen, click the right mouse button again.

2. Connecting to the QDU470 Server

Clicking the 'Connect' button (
 on the main screen of the Client application opens the 'Remote connection' window below.

Gerver Information –	
Server	HOME
IP / Product No,	100, 100, 100, 1
Jser information —	
User ID	admin
Password	*****

- Server Information: Select the server to connect to. This shows the servers registered in Local setup
- User Information: Enter the User ID and Password that is registered in the Local setup information.

Click 'Connect' to log into the remote server.

If the Network Connection is successful between the Client and Server, a 'Connected' message appears and Network connection (server name, network speed) status is shown on the main window.

The 'Connection' button (

3. Client Software Setup Modes

Local Setup Mode

The Local Setup Mode allows configuration changes to be made to the remote PC running the Client software. These settings only affect the PC running the client software and do not affect the server in any way. For the most part these settings have to do with the recording and display of remotely received video. Each of the settings are explained in the below sections.

Entering the Local Setup Mode



Click the 'Setup' button (Click the 'Setup'

Select setup system	X
System	
C Remote	
ССК	

In this dialog, click 'Local' and click 'OK'.

nput the passwo	ird to confirm user	r privileg
Password	****	
		Cance

To enter the Local Setup mode panel, input the client setup login password set in server registration setup panel of Client Setup mode and click 'OK'.

[NOTE] The default password for local setup login of the Client is '1111'.

You can change this password in the 'Server Registration' section of the Client Setup mode.

(1) System Setup

Camera 1	Auto switching interval
Camera 2	Display character on screen IF Enable Fonts Record drive C:₩ Overwrite IF Enable
Camera 3	Audio recording and transport Enable
Camera 4	Speaker out Speaker out IT Enable Wave file chimes, wav Find Play

- Camera On/Off: Enable / Disable each camera. (4cameras)
- System
 - Auto switching interval: Setup the interval time for the auto switching. All cameras will be displayed sequentially with this interval time.
 - Display character on screen: Displays the information associated with each camera on screen. (see below)

*OSD (On Screen Display) menu:

- Camera location: camera name set in Camera setup panel
- Record mode set: Continuous record(), Motion record(), Sensor record(), Event record()
- Motion: Detect (X)
- Sensor: Detect (
- Audio set: Enable ()
- Recording: in recording (R)
- HDD Overwrite: Enable the HDD to overwrite when full.
 - On: When the selected record drive is full, the DVR will begin overwriting the drive from the beginning.
 - Off: When the selected record drive is full, the DVR will stop recording.
- **Record drive**: Setup the drive to be used for recording.

Audio recording and transferring

• Audio Enable: Use for full-duplex audio communication with the QDU470 Server system. If enabled, you can transfer the Server's audio signal (using a Microphone connected to the sound card of this computer) to the computer running the QDU470 Client. This audio may also be recorded at the server.

```
[NOTES]:
```

- Audio recording depends on the video recording of the associated camera at the QDU470 Server setup. Namely, the
 audio is only recorded when video is being recorded for the associated camera.
- For full-duplex audio communication with the QDU470 Client system, a microphone has to be connected to sound card of
 computer and the 'Microphone In' Volume Control setup of windows must be muted.
- Speaker out: If checked, the speaker will activate if an event (motion, sensor output) occurs at the QDU470 Server when the application is minimized.
- Wave file: Setup the wave file for speaker output. ('Play' button enables to hear the file in advance.)

(2) Camera Setup

Pre-recording duration0 sec (max 5sec)	
Popup window when event occurs Enable	
Same configuration for all cameras	
	Same configuration for all cameras

- **Camera Select**: Select a camera to setup.
- For each camera
 - Prerecording duration: Enter the pre-recording duration (time) of the camera when event occurs at selected camera. (max 5sec.)
 - Popup window when event occurs: If an event occurs while the window is minimized, the window will return to its maximized state.
 - Same configuration for all cameras: Use this option to make the selections common to all cameras.

(3) Schedule Record Setup

Camera 1		Con	itinu	JOU	s	E	Eve	nt(N	1 o	r S)			Er	ase	(
Camera 2		00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Camera 3	MON	E	E	Ē	E	E	E	E	E	E	-	_		Ċ	-	_	-					-			
Camera 4	TUE	E	E	E	E	E	E	E	E	E	¢	Ċ	С	С	C	С	с								
All Camera	WED	E	E	E	E	E	E	E	E	E	C	C	С	С	C	С	C		T						
	THU	E	E	E	E	E	E	E	E	E	6	C	c	С	C	С	c								
Setup holiday	FRI	Ē	E	Ē	E	E	E	E	E	E	¢	C	C	С	e	С	C.								
Holiday List	SAT	E	E	£	E	E	E	E	E	E	C	C	С	С	e	С	С								
2003-09-03 2003-09-21	SUN	E	E	E	E	E	E	E	E	E	E.	С	C	С	e	C	С								
2003-09-22	HOLY	E	E.	E	E	E	E.	Ē	E	Ę	E.	E	E	E	E.	Ē	E	E	E	E	E	E	E	E	E

- Camera select: Select a camera to setup Recording Schedule. If you click 'All Camera', the Recording Schedule of all cameras is applied equally to present camera.
- **Record mode**: Appoint the time by dragging on the timetable and click a record mode. Then, the selected record mode is assigned at the appointed time.
 - Continuous: Record continuously the monitoring video. (C)
 - Event (M or S): Record when event (motion detection or sensor output) occurs. (E)
 - Erase: Not record but only monitoring.
 - Recording mark (R) is displayed on screen of each camera when it is in recording actually.

[NOTE] Event (motion, sensor) at the QDU470 Client system occurs according to the events setup on the server PC.

Setup holiday: You can specify the holiday as desired. Select the date and click 'Add'. Then, the date is added to the holiday list. To remove the date, select it and click 'Remove'.

•	S	epte	mber	200	13		2003-09-03
Sun	Mon	Tue	Wed	Thu	Fri	Sat	2003-09-21 2003-09-22
31	1	2	3	4	5	6	Add
7	8	9	10	11	12	13	
14	15	16	17	18	19	20	
21	22	23	24	25	26	27	
28	29	30	1	2	3	4	Remove
5	6	7	8	9	10	11	·
	Tod	ay: !	9/3/0	3			

(4) Server Registration Setup

Register the network information and User ID/Password of QDU470 Server you want to connect to.

0		
- Server Information Server name SHOP OFFICE HOME	IP / Product No, 100,0,0,1 U030	
	Delete	
-		
Local setup login pa Confirm password	ssword Change	
	Before stop schedule recordingBefore shutdown	

If you click 'Add', the 'Server Registration' window appears as follow.

Server Registration	2	 Server Information: Enter the information of DVR Server you want to connect to. Name, Address (IP number or Product Number), Port Number
IP / Product No.	HOME 100.100.100.1 2000	*When the Search tries to connect to the DVR Server, you have only to input the video port number (2000).
User information	admin	• User Information: Enter the User ID is you would like to use when logging into the DVR. This user name must be enabled in the Server setup.
	OK	

[NOTE]

1. If the server is using a Static IP address, enter the 'Static IP address' of QDU470 Server to connect in 'IP/Product No' section.

- 2. In case of the QDU470 Server Network is set with **Dynamic IP address or Private IP address (IP Sharer)**, the user should enter '**Product Number**' of QDU470 Server to connect in '**IP/Product No'** section.
- Local setup login password: Change the client local setup login password by clicking 'Change'. [NOTE] The default password for the local setup login of Client is '1111'.
- Confirm password: Save the changed password by clicking this option.

Remote Setup Mode

* This setup mode is available only to the administrator

After clicking the setup icon, click the 'Remote' option.

🔿 Local	
Remote HOME	•

Select the Server name you want to connect and click 'OK'.

• The 'Remote connection' window will appear.

User ID	admin
Password	*****

Enter the administrator User ID and Password and click 'Connect'.

If the connection is successful, the setup window will appear. Most settings can be changed in this setup window, with the exceptions shown below.

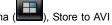
The following options cannot be setup remotely.

- System Setup -> Record drive, advanced section (backup, auto check USB device, network information)
 Camera Setup -> PTZ camera section (camera type, camera switch ID)
- Motion Setup -> Test start/stop buttons
 Mail Setup -> Send Test mail
- User registration -> Confirm password section
- Save Configuration as, Load Configuration buttons (for saving/loading the configuration by CBF format)

4. Remote Search Mode

ا الحصيمودted, in the Remote Search, Remote Search (عالم), Setup (المناف), Bookmark (





buttons are disabled and Local Search & Download buttons are enabled.

(1) Network Setup for remote searching

Click 'Setup' button (), the Setup Dialog box of QDU470 Search appears.

In Network Setup section, it is able to register network information of QDU470 Server to search remotely.

HOME OFFICE	IP Address 100, 100, 100, 1 U030-****	2000	er ID admin user	Add
SHOP	100.0,0,1	4000	power use	Modify
				Delete
Se	rver ID			Add

Register information of server to search remotely in 'Add & Modify' part shown by clicking 'Add' button.

- · Server ID: Name of server to search remotely
- IP / Product No.: IP address or Product no or Dial-up Connection IP address of server to search remotely
- Video Port number: Video Port number of server for remote search (default: 2000)

*When the Search tries to connect to QDU470 Server, you have only to input the video port number (2000).

• User ID: User ID registered in server to search remotely

· Password: Password registered in server to search remotely

By click 'Add', registration is completed.

Able to modify and delete, Maximum 10 Servers can be registered.

(2) Connect to QDU470 Server to search data remotely

Click 'Remote Search' button (

), the Connection

Select the 'server ID' you want to connect and enter the User ID and Password correctly and click 'Connect' button. It connects network between QDU470 Search and Server. Then •

'Remote Search' button will be disabled and the last data recorded in the connected computer appears on calendar and timetable.

* Load registered User ID and Password.

If you check this, the User ID/password registered at the Network setup panel of Search program is loaded automatically whenever one connects.

Connection Connection Server ID HOME Connect IP / Product No. 100.100.100.1 User ID admin Close Password *** 🔽 Load registered User ID and Password

(3) Select Date for local searching

Dialog box for Remote Search appears.

In calendar, select date you want to search by clicking.



Calendar

The Calendar shows dates have recorded data.

- Blue date: Has recorded data.
- Green date: Date selected and on searching.

To search other month, use \leftarrow and \rightarrow . (The month has not a recording data is skipped.)

Click the date you want to search. Then, recorded data of the selected date will be displayed on timetable.

* If you click 'Zoom' button, Zoom control window is shown.

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(4) Select recording data for playback on timetable

The recorded information of selected date is shown on timetable. You can see the recorded information by channel, time and event.

Select a channel for playback and click the point of time on recording bar. (selected time indicator: blue line) * You can move the time zone by scrolling using the scroll key (\leftarrow/\rightarrow).

	CH 1						
a	CH 2						
	CH 3						
	CH 4	i i	1				

Time Indicator: Display the real time of recorded data is on playback. (data of present time: blue line) **Channel Select**: Select the channel for playback (by 1-channel mode).

Quad View: User can see the screen by 4-channel quad mode by clicking 'Quad' button.

*By double-clicking on the screen, 1-channel display mode and quad mode are changed alternately **Timetable**: Display the recording data of selected date by channel as bar of various color.

*The colors of the bar indicate various types of recording:

(Green = Continuous Recording, Red = Motion Detection, Orange = Sensor, Pink = Pre-recording, White line = Audio Recording)

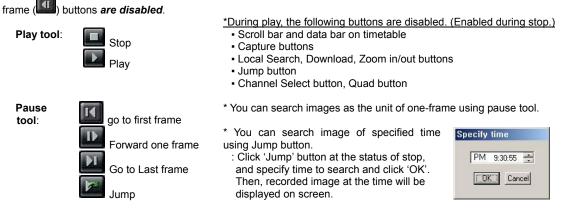
Select by Event: Use to see the recorded data by event.

- A = Display all types of recording.
- C = Display only Continuous Recording data. (Green)
- M = Display only Motion Detection Recording data. (Red)
- S = Display only Sensor Recording data. (Orange)

(5) Playback the selected recorded data

You can search conveniently recorded data using various playback buttons

* In the Remote Search, the fast backward play(¹¹), backward play(¹¹), fast forward play(¹¹) and backward one



How to play the Audio recording data

After selects only one channel being audio data recorded, you make play with play (

(6) Advanced Functions



In the Remote Search, use when try to download the recorded data of day selected. If you click, the 'Setup download' window appears.

000	1 02 03 04 0	5 06 07 08 09	9101112	1314	15	1617	718	1920	21 22
CH 1				SS	S	SS			
CH 2				S		5			
CH 3				S S	S	5 5			
CH 4				SS	3	SS			

Time has a recorded data is specified by red block. Select time to download by clicking and click 'Download' and then the 'Download progress' window appears.

bownioau progress	
Current File:	3/7
)
Total Bytes:	7113436/25479636
	Cancel

(Default Downloaded Directory: C:\QDU470DATA\Search\Server Name\YYYYMMDD)

Di

Disconnection

If you click the 'Local Search' button, the network connection between the QDU470 Search and Server is disconnected and loads the last recorded data from the local hard disk. Then 'Remote Search' button will be enabled

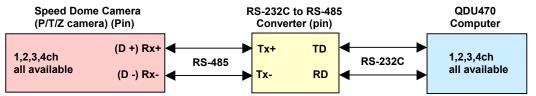
APPENDIX – PTZ Installation

1. Pan/Tilt/Zoom Camera Installation

If you want to use P/T/Z camera with QDU470[™]-BX, you need to connect with **'RS-232C to RS-485 Converter'**. You need to pay for 'RS-232C to RS-485 Converter' extra.

1-1. Concept of system configuration

Camera Model	QDU470 Channel	Connecting p	oin of Camera with converter	Camera Channel
Camera Woder	QD0470 Channel	Camera pin	Converter (pin of RS 485)	(Dome ID Switch)
DYNACOLOR	1,2,3,4ch all available	D+, D-	Tx+, Tx-	1,2,3,4ch all available
ACED-1000 SMART PTZ GC-655N SD-290 DRX-502A&CNB CA 1170	1,2,3,4ch all available	Rx+, Rx-	Тх+, Тх-	1,2,3,4ch all available

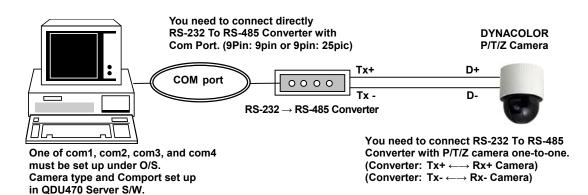


Attention

The number of Camera Channel Dome ID Switch(s/w) need to correspond to the number of a channel of QDU470 when installed.

	Dome ID Switch (Camera Channel)
1	1
2	2
3	3
4	4

1-2. Example of Matching QDU470 with Camera channels



LIMITED WARRANTY

Warranty: Subject to the exclusions and limitations below, Digimerge warrants to the initial end-user purchaser that the product will be free from defects in material and workmanship for a period of one year from the date of purchase. For valid warranty claims made during the warranty period, upon proof of purchase, defective products will, at the election of Digimerge, be repaired or replaced without charge. Any products repaired or replaced within the warranty period, shall be warranted by Digimerge to the initial end-user purchaser for 90 days from the return shipment date, or the remainder of the warranty term, whichever is longer, and if outside of the warranty period then for 90 days from the return shipment date. Products and parts may be replaced with refurbished items, and the products and parts replaced become the property of Digimerge. You are responsible for all shipping costs associated with the return of the defective products for warranty service.

Exclusions and Limitations: Any of the following will void this warranty:

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if the product is subjected to misuse or abuse;

if the product is subjected to electrical short circuits or transients, accident, fire, flood or Acts of God; adjustment, maintenance or repair of the product other than in accordance with Digimerge approved procedures; and use of replacement parts other than those specified by Digimerge.

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Warranty and Non-Warranty Service: Contact the dealer that sold you this product, during the warranty period if applicable, to obtain service. Non-warranty service is subject to Digimerge's then current service terms and prices. If the dealer fails to respond, cannot be reached or fails to provide you with the required service, you may obtain service directly from Digimerge by calling our service department at (866) 344-4674. You must provide Digimerge with the defective product's model number, serial number, date of purchase, sales or invoice number, proof that you were the original end-user purchaser for warranty work, and a brief description of the problem. You must obtain a return authorization number from the service department and must mark the number clearly on the shipping box. You must ship the item prepaid in appropriate packaging to the following address:

Digimerge Technologies Inc., Attention: Repair Department, 300 Alden Rd, Markham, Ontario, Canada, L3R 4C1

Digimerge Technologies Inc. 300 Alden Road Markham Ontario L3R 4C1 www.digimerge.com

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