

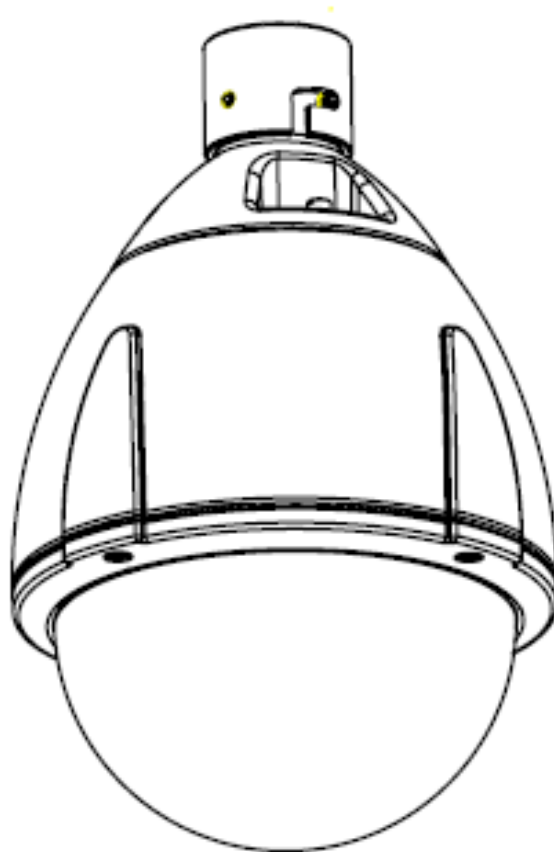
TOSHIBA

Leading Innovation >>>

NETWORK CAMERA

Model: IK-WP41A

User's Manual



For information on our latest products and peripheral devices, refer to the following Website:

■ <http://www.toshibasecurity.com>

If the URL changes, refer to the Toshiba website (<http://www.toshiba.com>).

Table of Contents

Introduction.....	2
FCC (USA)-INFORMATION	2
Important Safeguards	4
Important Safeguards (Cont.).....	6
Notes on Use and Installation	7
Precautions for Use	8
Package Contents.....	9
Physical Description.....	9
Installation	11
Accessing the Network Camera.....	12
Using Web Browsers	12
Using RTSP Players	14
Live Video	15
MENU.....	15
PTZ Control	16
Snapshot.....	18
Resize OFF/ON	18
Close	19
Configuration.....	19
Camera Settings.....	20
Basic Settings	20
Auto Patrol.....	26
Privacy Zone Mask.....	26
Video Codec.....	28
Alarm	30
SD Recording.....	33
FTP Recording.....	35
E-mail	38
Audio	40
Network Settings	41
Basic.....	41
DDNS	42
FTP Server	43
Administrator	44
Password	44
Date/Time	45
FW Update	46
Maintenance.....	46
Event Log.....	47
Specification.....	49
Technology License Notice	51

Introduction

FCC (USA)-INFORMATION

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

USER-INSTALLER CAUTION: Your authority to operate this FCC verified equipment could be voided if you make changes or modifications not expressly approved by the party.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

This Class A digital apparatus complies with Canadian ICES-003.
Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada

Thank you for purchasing the IK-WP41A Network Camera. Before using the camera, read this User's Manual carefully to ensure correct usage. After reading this User's Manual, save it for future reference.

The design, specifications, software, and manual contents are subject to change without prior notice.

Terms and Trademarks

- The term "OS" is used in this manual to indicate operating systems compatible with this product.
 - Windows XP: Microsoft Windows XP operating system
 - Windows Vista: Microsoft Windows Vista Business operating system
 - Windows 7: Microsoft Windows 7 Professional operating system
- The formal name of Windows is Microsoft Windows Operating System.
- Microsoft, Windows and Windows Vista are trademarks or registered trademarks of Microsoft Corporation in the United States and other countries.
- Intel and Intel Core are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries.
- Adobe is a registered trademark and Adobe Reader is a trademark of Adobe Systems Incorporated.
- Other product names appearing in this manual may be trademarks or registered trademarks of their respective holders.

NOTE

- The performance of the network camera may vary depending on the network environment.
- When using multiple network cameras, the appropriate network switch and PC are required.
- This camera does not support MAC-PC.

Important Safeguards

1. Read Instructions

Read all the safety and operating instructions before operating the product.

2. Retain Instructions

Retain the safety instructions and user's manual for future reference.

3. Warnings

Comply with all warnings on the product and in the user's manual.

4. Follow Instructions

Follow all operating and use instructions.

5. Cleaning

Disconnect this camera from the power supply before cleaning.

6. Attachments

Do not use attachments not recommended by the camera manufacturer as they may pose safety risks.

7. Accessories

Do not place this camera on an unstable cart, stand, tripod, bracket or table. The camera may fall, causing serious injury to a person, or serious damage to the product. Use only with stand, tripod, bracket, or table recommended by the manufacturer, or sold with the camera. Any mounting of the product should follow the manufacturer's instructions, and should use a mounting accessory recommended by the manufacturer.

8. Ventilation

This camera should never be placed near or over a radiator or heat register. If this product is placed in a built-in installation, verify that there is proper ventilation so that the camera temperature operates within the recommended temperature range.

9. Power Sources

This camera should be operated only from the type of power source indicated on the information label. If you are not sure of the type of power supply at your location, consult your product dealer.

10. Power-Cord Protection

Power cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them. Pay particular attention to cords at plugs, screws and the point where they exit the product.

11. Installation

Install this camera on a secure part of the ceiling or wall. If installed on an unsecured location, the camera could fall causing injury and damage.

12. Lightning

For additional protection on this camera during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the power supply and cable system. This will prevent damage to the camera due to lightning and power-line surges. If lightning occurs, do not touch the unit or any connected cables in order to avoid electric shock.

13. Overloading

Do not overload the power supply or extension cords as this can result in a risk of fire or electric shock.

14. Object and Liquid Entry

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

15. Servicing

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

16. Damage Requiring Service

Disconnect this camera from the power supply and refer servicing to qualified service personnel under the following conditions.

- a. When the power-supply cord or plug is damaged.
- b. If liquid has been spilled, or objects have fallen into the camera.
- c. If the camera has been submerged in water.
- d. If the camera does not operate normally by following the operating instructions in the user's manual. Adjust only those controls that are covered by the user's manual as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the camera to its normal operation.
- e. If the camera has been dropped or the cabinet has been damaged.
- f. When the camera exhibiting a distinct change in performance which indicates a need for service.
- g. Other trouble.

17. Replacement Parts

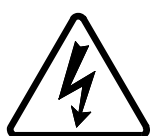
When replacing parts, be sure the service technician uses parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock or other hazards.

18. Safety Check

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

Important Safeguards (Cont.)

CAUTION TO REDUCE THE RISK OF ELECTRIC SHOCK.
DO NOT REMOVE COVER. NO USER SERVICEABLE PARTS INSIDE. REFER
SERVICING TO QUALIFIED SERVICE PERSONNEL.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



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 REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT SUBMARGE THIS CAMERA IN WATER.

FIELD INSTALLATION MARKING:

WORDED: "THIS INSTALLATION SHOULD BE MADE BY A QUALIFIED SERVICE PERSON AND SHOULD CONFORM TO ALL LOCAL CODES."

NOTICE

- The product is intended to be supplied by a Listed Power Unit marked "Class 2" or "L.P.S." (or "Limited Power Source") and rated output 24Vac, 50-60Hz, 2.25A minimum or 48Vdc, 0.6A minimum.
- The product shall be installed by a qualified service person and the installation shall conform to all local codes.
- The product is to be connected to only PoE+ networks without routing to the outside plant.

Notes on Use and Installation

- **Do not aim the camera at the sun**

Never aim the camera at the sun even with the camera power off.

- **Do not shoot intense light**

Intense light such as a spotlight may cause a bloom or smear. A vertical stripe may appear on the screen. However, this is not a malfunction.

- **Treat the camera with care**

Dropping or subjecting the camera to intense vibration may cause it to malfunction.

- **Never touch internal parts**

Do not touch the internal parts of the camera other than the parts specified.

- **Do not submerge in water**

The camera has some protection to water (see IP rating), and can be used indoors or outdoors. If the camera was submerged in water, turn off the power and contact your dealer.

- **Keep the camera installation away from video noise**

If cables are wired near electric lighting wires or a TV set, noise may appear in images. In this event relocate cables or reinstall equipment.

- **Check the ambient temperature and humidity**

Avoid using the camera where the temperature is hotter or colder than the specified operating range. Doing so could affect the internal parts or cause the image quality to deteriorate. Special care is required to use the camera at high temperature and humidity.

- **Should you notice any trouble**

If any trouble occurs while you are using the camera, turn off the power and contact your dealer. If you continue to use the camera when there is something wrong with it, the trouble may get worse and an unpredictable problem may occur.

Precautions for Use

Disclaimer

We disclaim any responsibility and shall be held harmless for any damages or losses incurred by the user in any of the following cases:

1. Fire, earthquake or any other act of God; acts by third parties; misuse by the user, whether intentional or accidental; use under extreme operating conditions.
2. Malfunction or non-function resulting in indirect, additional or consequential damages, including but not limited to loss of expected income and suspension of business activities.
3. Incorrect use not in compliance with instructions in this user's manual.
4. Malfunctions resulting from misconnection to other equipment.
5. Repairs or modifications made by the user or caused to be made by the user and carried out by an unauthorized third party.

Notwithstanding the foregoing, Toshiba's liabilities shall not, in any circumstances, exceed the purchase price of the product.

Copyright and Right of Portrait

There may be a conflict with the Copyright Law and other laws when a customer uses, displays, distributes, or exhibits an image picked up by the camera without permission from the copyright holder. Please also note that transfer of an image or file covered by copyright is restricted to use within the scope permitted by the Copyright Law.

Protection of Personal Information

Images taken by the camera that reveal the likeness of an individual person may be considered personal information. To disclose, exhibit or transmit those images over the internet or otherwise, consent of the person may be required.

Usage Limitation

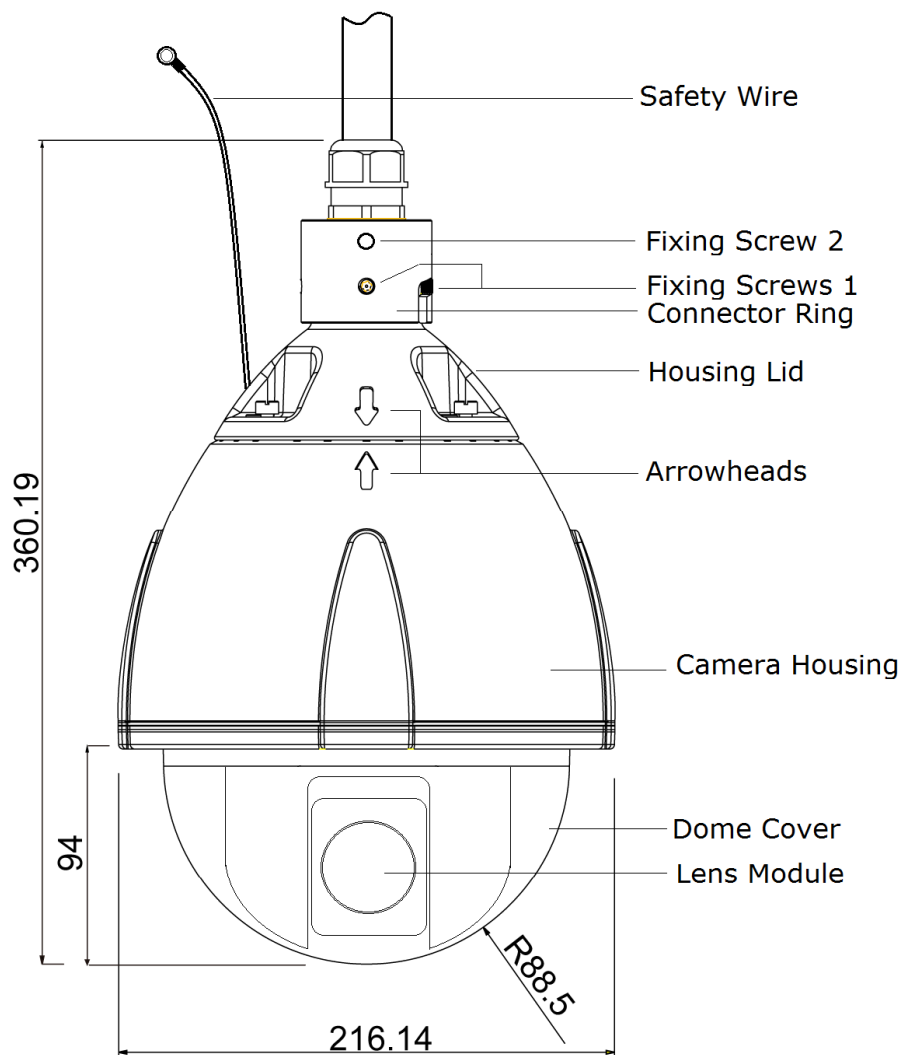
The product is not designed for any "critical applications." "Critical applications" means life support systems, exhaust or smoke extraction applications, medical applications, commercial aviation, mass transit applications, military applications, homeland security applications, nuclear facilities or systems or any other applications where product failure could lead to injury to persons or loss of life or catastrophic property damage.

Accordingly, Toshiba disclaims any and all liability arising out of the use of the product in any critical applications.

Package Contents

IK-WP41A ---- 1
Allen wrench ---- 1
Torx wrench ---- 1
Screw (1/4-20UNC, 12mm) ---- 1
RJ45 Coupler ---- 1
Silica-gel ---- 1
CD-ROM ---- 1
Quick Start guide and Important Safeguards ---- 1
Warranty ---- 1

Physical Description



Unit:mm

Hardware Reset

Occasionally resetting the system can return the camera to normal operation. If the system problems remain after resetting, restore the factory settings and install again.

The IK-WP41A has a reset terminal and default terminal. (See QSG on page 17)

Reset: Using a pointed object, short both terminals of "Reset". Wait for the Network Camera to reboot.

Restore: Using a pointed object, short both terminals of "Default" for about 5 seconds to restart the camera. Note that all settings will be restored to factory default.

NOTE

Restoring the factory defaults will erase any previous settings such as IP address, ID and Password.

Micro SD/SDHC Card and Capacity

This network camera is compliant with Micro SD/SDHC 32GB and other preceding standard

Micro SD cards for local storage.

- There is a limit to the number of rewrites that is possible with the SD memory card.

Replacing

the SD memory card when performing periodic maintenance of the camera is recommended.

- Do not use 512MB and below SD memory cards.
- The Camera system reserves approximately 100MB in SD memory cards. Any images are not recordable on this space.
- Carefully read the User's guide, precautions on use, and any other information supplied with a purchased memory card.
- An SD memory card can be used for repeated storage. The lifespan (number of rewrites possible) of an SD memory card is greatly affected by the capacity of the SD memory card.
- Do not use a memory card containing the data recorded by another device with the camera as this may result in the camera not functioning correctly.
- Do not modify, overwrite the data, or change the folder name of an SD memory card. It may result in the camera not to function correctly.
- If you unmount or remove the SD memory card from camera, you have to turn OFF the power of camera.

Installation

Hardware Installation

Please verify that your product package contains all the accessories listed in the Package Contents listed on page 7. Depending on the user's application, an Ethernet cable may be needed. The Ethernet cable should meet the specs of UTP Category 5e or higher.

Hardware Installation is shown in the Quick Start Guide(QSG). Please refer to page 10 of the QSG.

Network Deployment

In this user's manual, "User" refers to whoever has access to the Network Camera, and "Administrator" refers to the person who can configure the Network Camera and grant user access to the camera.

Network Deployment is shown in the Quick Start Guide(QSG). Please refer to page 19 of the QSG.

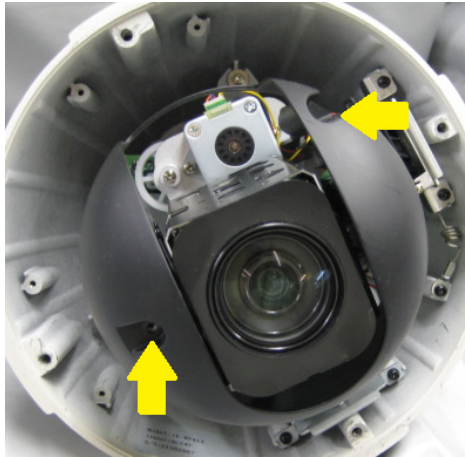
Micro SD/SDHC Card Installation

NOTE:

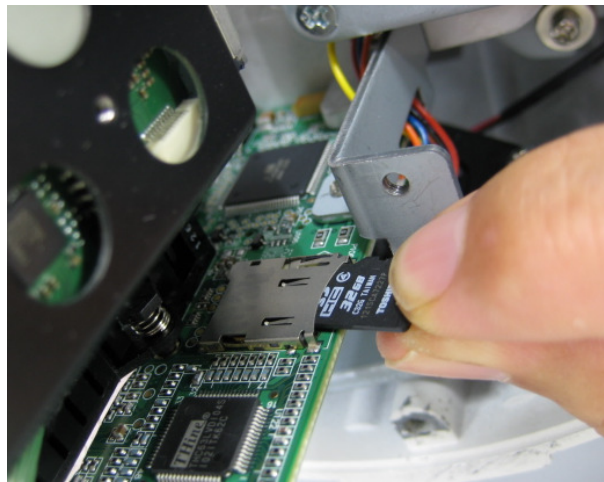
- ✧ Card slot is in the inside of a camera. You should turn off all power before installation.
- ✧ When installing the SD/SDHC card, be careful not to generate static electricity at the time.
- ✧ When installing the SD/SDHC card, don't touch the internal wiring.
- ✧ Check if the silica-gel also needs to be exchanged.
Refer to 10 pages of QSG for details.

1. The dome cover and the internal black cover are removed.(Refer to 10 pages of QSG.)

When you remove the internal black cover, remove the two screws indicated by the arrows.



2. The micro SD/SDHC card is inserted in direction of the following picture.(The contacts face downward.)



Accessing the Network Camera

This chapter explains how to access the Network Camera through web browsers or RTSP players.

Using Web Browsers

Use IP Camera Finder to access the Network Cameras on the LAN. See QSG on 19. If your network environment is not a LAN, follow these steps to access the Network Camera:

1. Launch your web browser (Microsoft® Internet Explorer).
2. Enter the IP address of the Network Camera in the address field. Press **Enter**.
3. The live video will be displayed in your web browser.

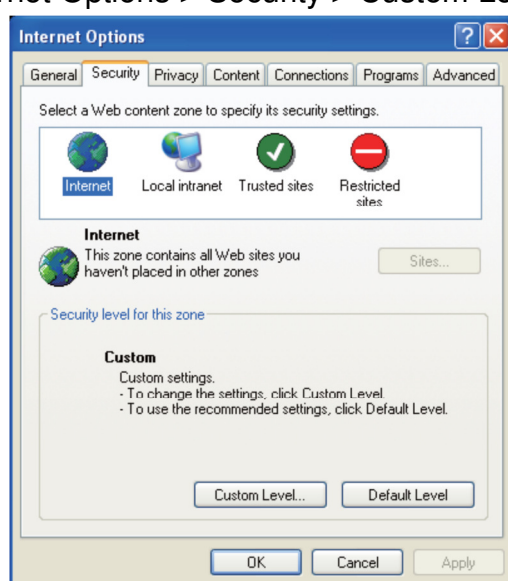
4. If it is the first time installing the network camera, an information bar will pop up as shown below. Follow the instructions to install the required plug-in on your computer.

NOTE:

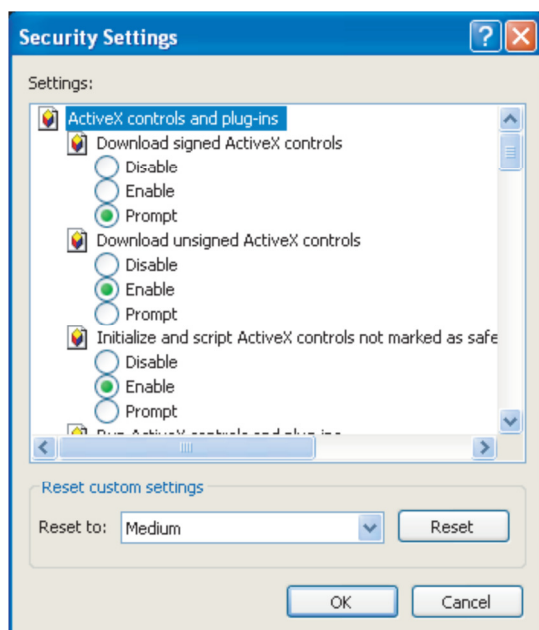
- ✧ The administrator log-in ID and password are set to **"admin"** and to **"1234"** respectively by default.
- ✧ To prevent unauthorized access, it is highly recommended to set a new password for the Network Camera.

► If you see a dialog box indicating that your security settings prohibit running ActiveX® Controls, please enable the ActiveX® Controls for your browser.

1. Choose Tools > Internet Options > Security > Custom Level.



2. Look for Download signed ActiveX® controls; select Enable or Prompt. Click **OK**.

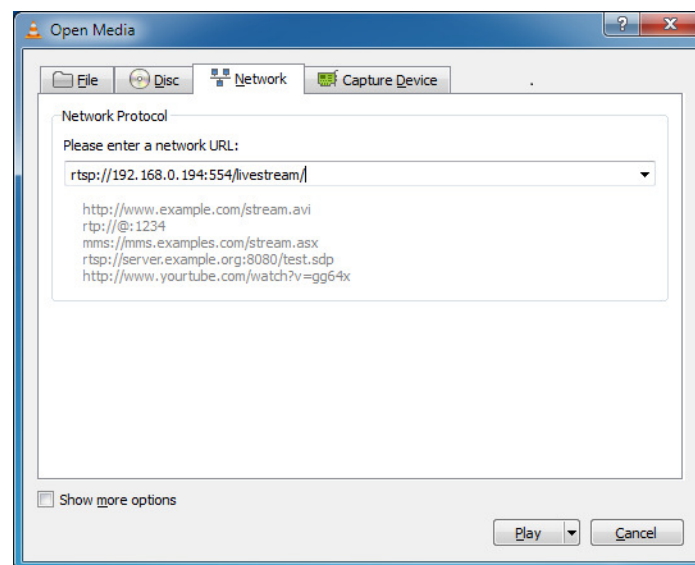


3. Refresh your web browser, then install the Active X® control. Follow the instructions to complete installation.

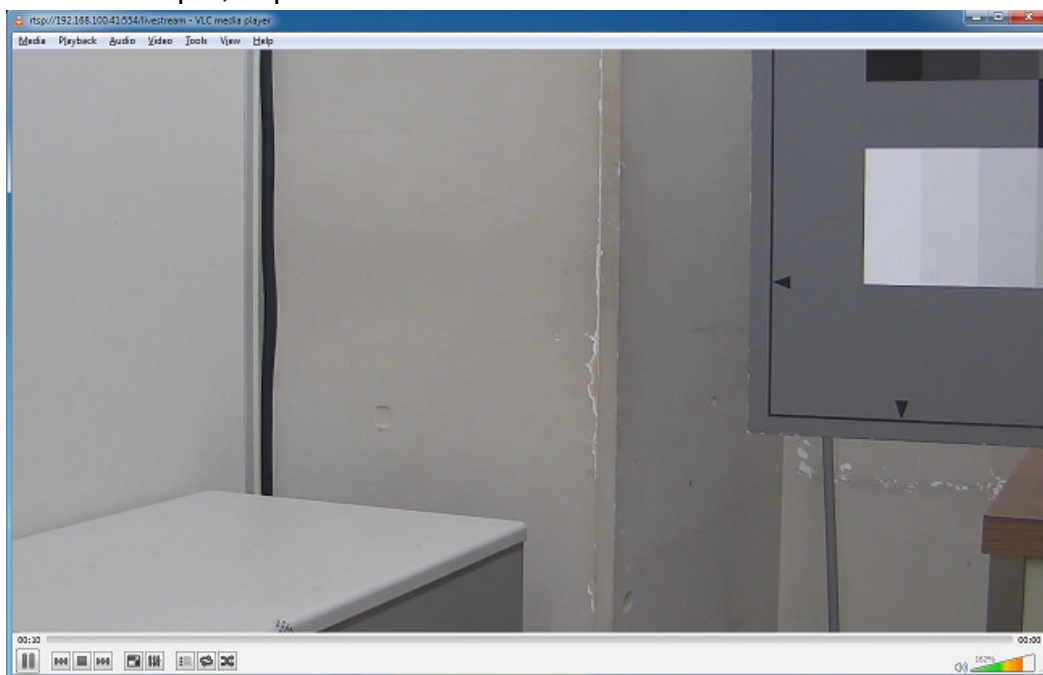
Using RTSP Players

To view the H.264 streaming media using RTSP player, you can use VLC media player. And set the RTSP port to 554.

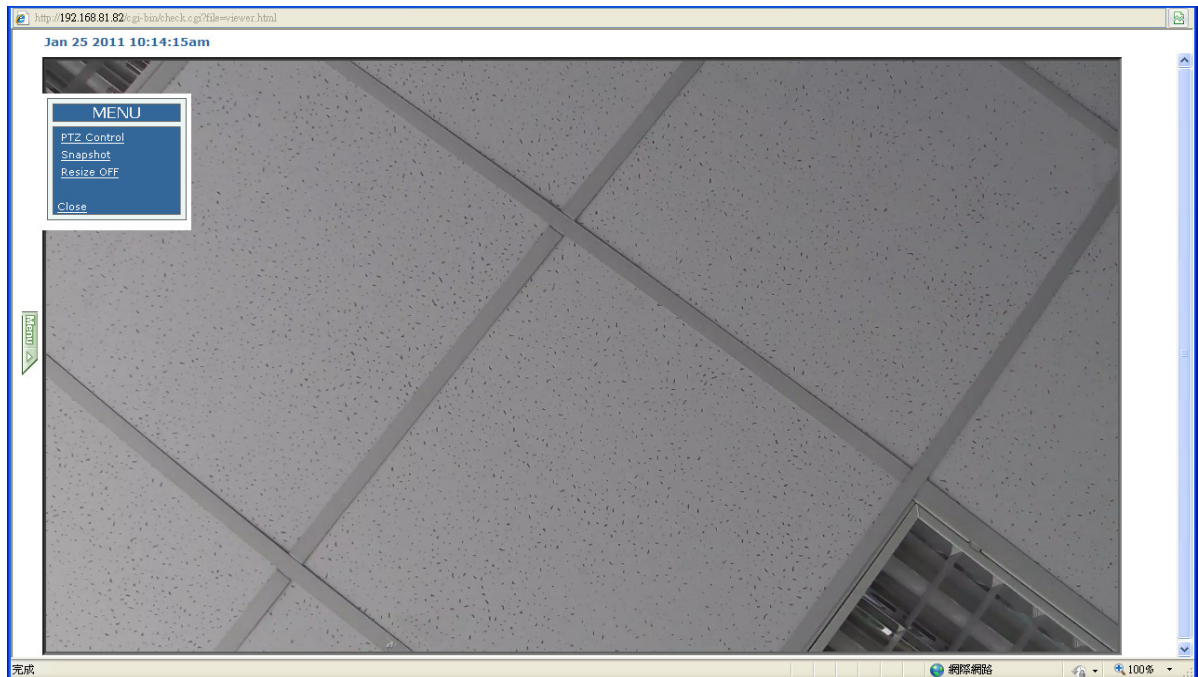
1. Launch the RTSP player (VLC media player).
2. Choose File > Open network URL. A URL dialog box will pop up.



3. The address format is `rtsp://<ip address>:<rtsp port>/<RTSP streaming access name>`. For example, `rtsp://192.168.0.194:554/livestream`

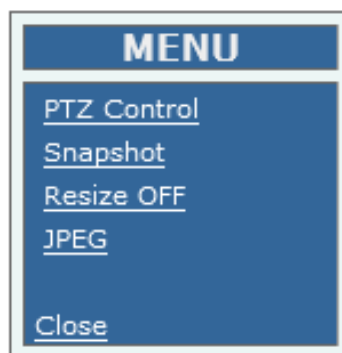


Live Video



A click of the **Menu** button on the left of a screen displays **MENU**.

MENU



PTZ Control, Snapshot, Resize ON/OFF, JPEG, and Close are displayed.

PTZ Control

The screenshot displays a PTZ Control interface with the following sections:

- Pan / Tilt**: Includes buttons for 'Mouse PTZ: ON' and 'Mouse PTZ: OFF'. Directional buttons are arranged in a grid: 'Upper Left', 'Up', 'Upper Right', 'Left', 'Right', 'Lower Left', 'Down', and 'Lower Right'. Speed controls for 'Pan Speed' and 'Tilt Speed' are set to 5 (range 1-63), with a 'Stop' button.
- Zoom / Focus / Iris**: Includes buttons for 'Zoom In', 'Zoom Out', 'Focus Near', 'Focus Far', 'Iris Open', and 'Iris Close'.
- Preset**: Features a numeric keypad (0-9) and a 'C' button, with 'Set' and 'Go to' action buttons.
- Scan**: Includes buttons for 'Auto', 'Frame', and 'Random'.
- Auto Patrol**: Includes buttons for 'Patrol1', 'Patrol2', 'Patrol3', and 'Patrol4'.
- One Push WB**: Includes a 'One Push Trigger' button.
- Other**: Includes buttons for 'Flip' and 'P/T CAL.'.

A 'Close' link is located at the bottom left of the interface.

Pan/Tilt

Mouse PTZ:

Use Mouse PTZ to control the camera PTZ by clicking the screen and sliding the mouse in that direction

Zoom IN/OUT is controlled by the mouse scroll wheel.

Up/Down / Left/Right / Upper Left / Upper Right / Lower Left / Lower Right:

Click these buttons to move the camera in the intended direction. Click and hold to continuously move the camera.

Pan Speed / Tilt Speed:

Adjust the pan and tilt speed. The higher value indicates faster speed.

STOP:

This is the button to stop 'Scan' and 'Auto Patrol'.

Zoom / Focus / Iris

Zoom In / Zoom Out:

Zoom In expands the view and Zoom Out reduces the view. Click and hold to continuously zoom the camera.

Focus Near / Focus Far:

When clicked, focus will be set to manual mode and the lens focus will be adjusted.

If the Pan/Tilt/Zoom button is clicked, it will return to Auto Focus.

NOTE: In a wide angle, the manual focus increments increase.

Iris Open / Iris Close:

When clicked, iris will be set to manual mode and the iris will be adjusted. If the Pan/Tilt/Zoom button is clicked, it will return to Auto Iris.

Preset

Setup method:

1. Move the camera to the desired position.
2. Input the preset position number.
3. Click the 'Set' button.

Move method:

1. Input the preset position number.
2. Click 'Go to' button.

NOTE:

Manual focus cannot be set as preset position.

Scan

To set the scan speed, refer to Camera Settings → Basic → Pan / Tilt → Scan Speed.

Auto :

The camera will pan continuously until a manual pan, tilt, zoom, or Stop operation is performed.

(Zoom) At power-up, the zoom is fully zoomed out. When an auto scan is started directly, the zoom will maintain the last magnification.

(Tilt) At power-up, the tilt is set up by the Configuration. To set the tilt angle, refer to Camera Settings → Basic → Tilt Angle.

Frame:

Operation of zoom and tilt is the same as in Auto Scan. The camera will move in 45-degree increments (called stops) horizontally until a manual pan, tilt, zoom, or Stop operation is performed.

Random:

Operation of zoom and tilt is the same as in Auto Scan. The dome camera will move between random stops until a manual pan, tilt, Zoom, or Stop operation is performed.

Auto Patrol

The Auto Patrol feature will repeat a pattern of up to 128 presets. To set the moving speed, refer to Camera Settings → Basic → Pan / Tilt → Max Speed.

One Push WB

This is a trigger button of 'One Push WB'. To set the 'One Push WB', refer to Camera Settings → Basic → Image → White Balance control.

Other

Flip

The Flip feature allows the pan to rotate 180 degrees when you click this button.

P/T CAL.

This is a calibration of Pan / Tilt mechanism. If the displacement of preset position occurred for any reason, please click this.

Snapshot

The "Snapshot" function is for snapshot capture. Press the "Snapshot" button to take a picture, and it will be saved into specific folder which is created automatically.

This folder location is shown above the snapshot image.

Resize OFF/ON

ON: When the window size of live video is changed, screen size is resized automatically.

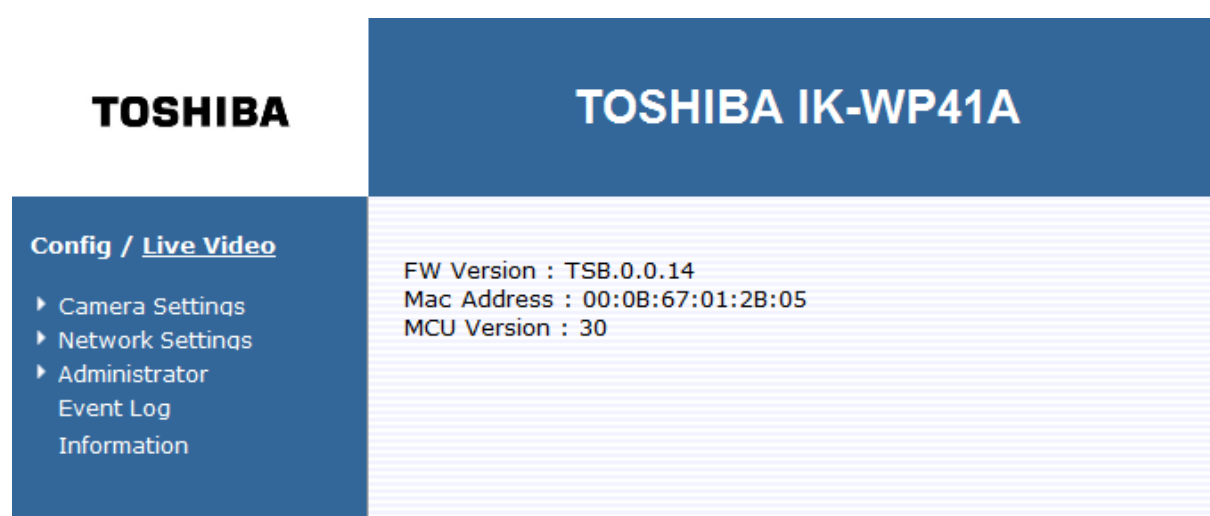
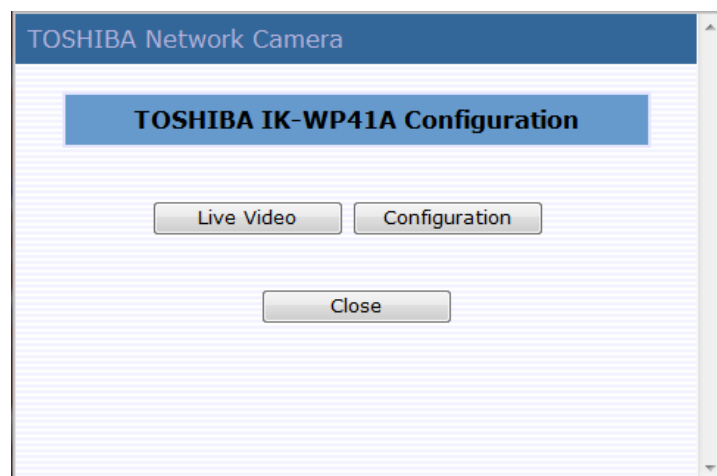
OFF: Screen size is not resized even if window size of live video is changed.

Close

A Menu is closed.

Configuration

This window and Live Video screen open first. If you click **Configuration**, this live video screen will close.



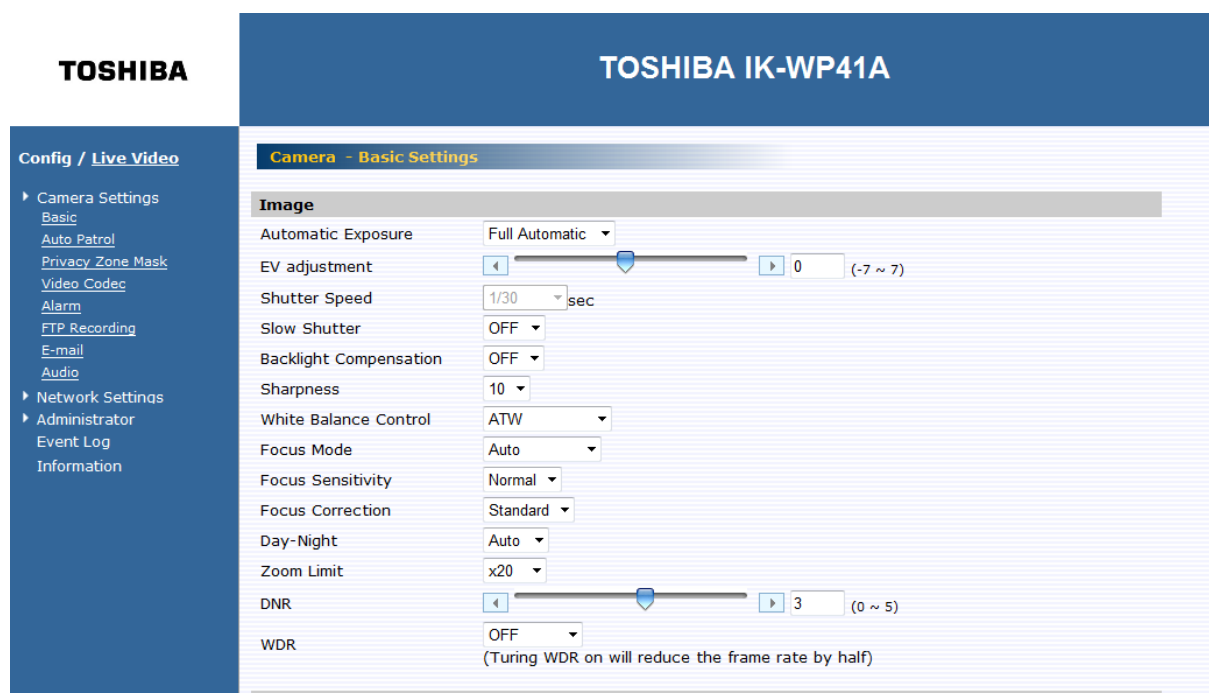
After clicking **Configuration**, this **Information** window will open.

FW Version and Mac Address are shown. (MCU Version is information required for after sales service.)

NOTE: Click the “Save” button to save settings. Or click the “Reset” button to reset the data before changes. And you can click the “Default” button to bring back factory defaults.

Camera Settings

After clicking **Camera Settings**, **Basic**, **Auto Patrol**, **Privacy Zone Mask**, **Video Codec**, **Alarm**, **FTP Recording**, **E-mail**, **Audio** configurations will be displayed.



Basic Settings

Basic items such as color and quality of delivered images of the camera can set.

1. Click **Camera Settings** on the Configuration Menu.
 - A sub menu for Camera Settings will appear.
2. Click **Basic** in the sub menu.
 - The screen of "Camera - Basic Settings" will appear.
3. Configure each setting items.
 - Click the **Save** button to save settings.
 - The settings will not be reflected unless the **Save** button is clicked.

Image

Automatic Exposure Full Automatic ▾

EV adjustment ◀ ▶ 0 (-7 ~ 7)

Shutter Speed 1/30 sec

Slow Shutter OFF ▾

Backlight Compensation OFF ▾

Sharpness 10 ▾

White Balance Control ATW ▾

Focus Mode Auto ▾

Focus Sensitivity Normal ▾

Focus Correction Standard ▾

Day-Night Auto ▾

Zoom Limit x20 ▾

DNR ◀ ▶ 3 (0 ~ 5)

WDR OFF ▾
(Turning WDR on will reduce the frame rate by half)

Power Up

Power Up Default ▾

Tilt-Angle

Scan tilt angle ◀ ▶ 85 (0 ~ 92)

Tilt-Angle mode Outdoor 92 ▾

Pan / Tilt

Auto Flip ☒ ON ☐ OFF

Proportional P/T ☒ ON ☐ OFF

Recover Time OFF ▾

Scan Speed ◀ ▶ 5 (1 ~ 90)

Max Speed ◀ ▶ 430 (30 ~ 430)

Freeze Activity ☐ ON ☒ OFF

Image:

- Automatic Exposure
Automatic Exposure controls the light intensity of picture. Two types of specific application conditions can be selected. You can select “Full Automatic” or “Shutter Priority” by the camera depending on your application environment. When using Full Automatic, the Shutter speed is disabled. When using Shutter priority, EV adjustment and Backlight

Compensation are disabled.

- EV adjustment

EV adjustment is called exposure compensation that tells the camera for a particular scene you want it either brighter (zero to +7) or darker (zero to -7).

Set the value of EV adjustment from -7 to 7, which is available under Full Automatic mode.

- Shutter Speed

Set desired Shutter speed from 1s to 1/10000s, which is available under Shutter Priority mode.

- Slow Shutter

Set Slow Shutter function. Choose 'Auto' or 'Off' (Default).

When set to "Auto," ensures that the slow shutter is set automatically when the brightness drops.

- Backlight Compensation

The Backlight Compensation function is to provide optimal exposure of subjects under back light circumstances.

Set Backlight Compensation function. Choose 'On' or 'Off' (Default).

Backlight Compensation is a function that achieves the brightness of a selected area to an optimum image level. This function is necessary when an auto iris lens tends to close due to an intense light coming from back of object in the area wished to view so that areas desired to see become dark and difficult to see. In this case, set the area so that the portion wished to see enters the selected area.

NOTE:

When the 'Backlight Compensation' is ON, WDR cannot set to enable.

- Sharpness

Increasing the sharpness value enhances the edges and small features. In your camera images, you can set a sharpness value of image from 0 to 15.

- White Balance Control

Set the white balance values to meet the environment condition for best color rendition. There are 5 modes.

➤ **ATW:** It ranges from 2000 °K to 10000 °K. (default)

➤ **Auto:** It ranges from 3000 °K to 7500 °K.

➤ **Indoor:** 3200 °K as the basis.

➤ **Outdoor:** 5800 °K as the basis.

➤ **One Push WB:** Use Trigger button on the PTZ Control interface to

perform this function.

- Focus Mode

There are three modes to choose, the default is 'Auto'.

Manual: Press NEAR and FAR to control focus on the PTZ Control interface.

Auto: The Auto mode automatically adjusts the focus position to the best of the picture in a center. Also, change near/far to Focus Near and Focus Far on the PTZ Control interface. After this change, camera became 'Manual' mode once, and getting back 'Auto' mode if you click PTZ operation.

Zoom Trigger: Under this mode, camera will remain as 'Manual' mode unless it receives zoom in or zoom out signal, and after the designated action it will back to 'Manual' mode.

- Focus Sensitivity

You can set is as Normal (default) or Low.

When the lighting level is low, the Auto Focus function does not take effect. At that time, you can set to 'Low'.

- Focus Correction

Set 'Standard' normally. If you light the IR illuminator and the camera was unfocussed, set to 'IR Light'.

- Day-Night

Set DAY/NIGHT function. Move the cursor to select the AUTO (default), Day, or Night mode.

➤ **AUTO:** The IR Cut filter can be disengaged automatically to increasing sensitivity in low light environments.

NOTE: Although hunting may occur under the conditions of specific brightness, it is not a malfunction.

➤ **Day:** You can force the camera to stay in DAY (COLOR) mode.

➤ **Night:** You can force the camera to stay in BW (NIGHT) mode.

- Zoom Limit

You can choose x20(default, optical), x40(x20 optical + x2 digital), x80(x20 optical + x4 digital), x160(x20 optical + x8 digital), x240(x20 optical + x12 digital).

- DNR

You can configure the noise reduction related setting from 0 to 5 and reduce noise on the screen. '0' means OFF and '5' is the maximum. (Default is 3.)

- WDR(Wide Dynamic Range)

When there are both very bright portion and very dark portion simultaneously in the field of view, you can enable WDR function. It optimizes an image to ensure that dark areas are more visible while retaining details in bright areas.

Images with WDR are produced by combining long-exposure signals with the signals of the high-intensity portions obtained with a short exposure.

NOTE:

‘Backlight Compensation’ will be turned OFF when WDR is enabled.

- **ON:** WDR is ON. A camera is automatically controlled by the optimal image. ‘EV adjustment’ cannot be operated in this mode.
- **Exposure:** WDR is ON. This mode fixes the shutter speed of a long exposure. Configure the shutter speed of a short exposure by setting the ratio with regards to a long exposure with the exposure ratio parameter.
- **Histogram:** This mode uses a histogram to correct blocked-up shadows and blown-out highlights.
- **OFF (default):** WDR is OFF.
- **Auto:** This mode switches WDR ON/OFF automatically in accordance with the intensity difference of the subject.

NOTE:

- ✧ When the wide dynamic range mode is ON, overexposure may be observed in the images of some subjects. This phenomenon is unique to WDR mode, and it is not a malfunction of camera.
- ✧ The frame rate during WDR mode will be half of standard mode.

Power Up:

- Power up
During Power-Up, the camera can be set to start in various modes.
 - **Default:** The dome camera moves to the mechanical reset point.
 - **PARK:** The camera moves to Preset 1 position.
 - **Auto scan:** The camera performs an auto scan operation.
 - **Auto patrol 1~4:** The camera performs an auto patrol 1~4 operation.

Tilt-Angle:

- Scan tilt angle
The tilt angle of the camera for auto scan, random scan and frame scan can be set from 0 to 85 degrees or 92 degrees (0 degree is straight

down).Set the elevation of camera from 0°~92°.

- Tilt-Angle mode

Set up the limit value of camera's tilt angle: Indoor 85° or Outdoor 92°.

Pan / Tilt:

- Auto Flip

Set as 'ON' or 'OFF'. The Auto Flip feature allows the tilt to rotate 180 degrees and reposition itself for continuous viewing of a moving object directly beneath the camera.

- Proportional P/T

Set as 'ON' or 'OFF'. Proportional P/T controls the pan and tilt speeds according to the amount of zoom.

At telephoto settings, the pan and tilt speeds will be slower to keep the image from moving too fast on the screen.

- Recover Time and Actions

Set as 'ON' or 'OFF'. After a programmed number of minutes of inactivity, the camera will move to Park / Random Scan / Frame Scan / Auto Scan / Patrol 1~4 (selectable). Recover Time can be set from 1 to 120 minutes.

- Scan Speed

Speed of Auto Scan/ Frame Scan/Random Scan can be set from 1°~90°/s.

However, this speed is limited by Max Speed setting.

- Max Speed

The maximum speed of Pan/Tilt functions can be set from 30 degrees/sec to 430°/s. The max speed controls global Pan/Tilt speeds. To reduce rotation noise, use a lower speed.

- Freeze Activity

Set as 'ON' or 'OFF'. During frame scan, random scan or auto patrol, camera images will not be shown while the camera moves from the current position to the next position.

Auto Patrol

Camera - Auto Patrol Settings

Automatic Patrol Setting

Patrol : Patrol1 Stop Time : 5 sec

<input type="checkbox"/> 001	<input type="checkbox"/> 002	<input type="checkbox"/> 003	<input type="checkbox"/> 004	<input type="checkbox"/> 005	<input type="checkbox"/> 006	<input type="checkbox"/> 007	<input type="checkbox"/> 008
<input type="checkbox"/> 009	<input type="checkbox"/> 010	<input type="checkbox"/> 011	<input type="checkbox"/> 012	<input type="checkbox"/> 013	<input type="checkbox"/> 014	<input type="checkbox"/> 015	<input type="checkbox"/> 016
<input type="checkbox"/> 017	<input type="checkbox"/> 018	<input type="checkbox"/> 019	<input type="checkbox"/> 020	<input type="checkbox"/> 021	<input type="checkbox"/> 022	<input type="checkbox"/> 023	<input type="checkbox"/> 024
<input type="checkbox"/> 025	<input type="checkbox"/> 026	<input type="checkbox"/> 027	<input type="checkbox"/> 028	<input type="checkbox"/> 029	<input type="checkbox"/> 030	<input type="checkbox"/> 031	<input type="checkbox"/> 032
<input type="checkbox"/> 033	<input type="checkbox"/> 034	<input type="checkbox"/> 035	<input type="checkbox"/> 036	<input type="checkbox"/> 037	<input type="checkbox"/> 038	<input type="checkbox"/> 039	<input type="checkbox"/> 040
<input type="checkbox"/> 041	<input type="checkbox"/> 042	<input type="checkbox"/> 043	<input type="checkbox"/> 044	<input type="checkbox"/> 045	<input type="checkbox"/> 046	<input type="checkbox"/> 047	<input type="checkbox"/> 048
<input type="checkbox"/> 049	<input type="checkbox"/> 050	<input type="checkbox"/> 051	<input type="checkbox"/> 052	<input type="checkbox"/> 053	<input type="checkbox"/> 054	<input type="checkbox"/> 055	<input type="checkbox"/> 056
<input type="checkbox"/> 057	<input type="checkbox"/> 058	<input type="checkbox"/> 059	<input type="checkbox"/> 060	<input type="checkbox"/> 061	<input type="checkbox"/> 062	<input type="checkbox"/> 063	<input type="checkbox"/> 064
<input type="checkbox"/> 065	<input type="checkbox"/> 066	<input type="checkbox"/> 067	<input type="checkbox"/> 068	<input type="checkbox"/> 069	<input type="checkbox"/> 070	<input type="checkbox"/> 071	<input type="checkbox"/> 072
<input type="checkbox"/> 073	<input type="checkbox"/> 074	<input type="checkbox"/> 075	<input type="checkbox"/> 076	<input type="checkbox"/> 077	<input type="checkbox"/> 078	<input type="checkbox"/> 079	<input type="checkbox"/> 080
<input type="checkbox"/> 081	<input type="checkbox"/> 082	<input type="checkbox"/> 083	<input type="checkbox"/> 084	<input type="checkbox"/> 085	<input type="checkbox"/> 086	<input type="checkbox"/> 087	<input type="checkbox"/> 088
<input type="checkbox"/> 089	<input type="checkbox"/> 090	<input type="checkbox"/> 091	<input type="checkbox"/> 092	<input type="checkbox"/> 093	<input type="checkbox"/> 094	<input type="checkbox"/> 095	<input type="checkbox"/> 096
<input type="checkbox"/> 097	<input type="checkbox"/> 098	<input type="checkbox"/> 099	<input type="checkbox"/> 100	<input type="checkbox"/> 101	<input type="checkbox"/> 102	<input type="checkbox"/> 103	<input type="checkbox"/> 104
<input type="checkbox"/> 105	<input type="checkbox"/> 106	<input type="checkbox"/> 107	<input type="checkbox"/> 108	<input type="checkbox"/> 109	<input type="checkbox"/> 110	<input type="checkbox"/> 111	<input type="checkbox"/> 112
<input type="checkbox"/> 113	<input type="checkbox"/> 114	<input type="checkbox"/> 115	<input type="checkbox"/> 116	<input type="checkbox"/> 117	<input type="checkbox"/> 118	<input type="checkbox"/> 119	<input type="checkbox"/> 120
<input type="checkbox"/> 121	<input type="checkbox"/> 122	<input type="checkbox"/> 123	<input type="checkbox"/> 124	<input type="checkbox"/> 125	<input type="checkbox"/> 126	<input type="checkbox"/> 127	<input type="checkbox"/> 128

- Patrol

You can set four groups of preset positions.

Patrol : Patrol1

- Patrol1
- Patrol2
- Patrol3
- Patrol4

- Stop time

Set stop time for auto/ frame /random scan as 3 / 5 / 7 / 15 / 30 / 60s.

Stop Time : 5 sec

- 3
- 5
- 7
- 15
- 30
- 60

- Preset setting

The auto patrol function will continuously scan up to 128 preset positions.

Privacy Zone Mask

This function masks a user defined area that cannot be viewed by the operator. The

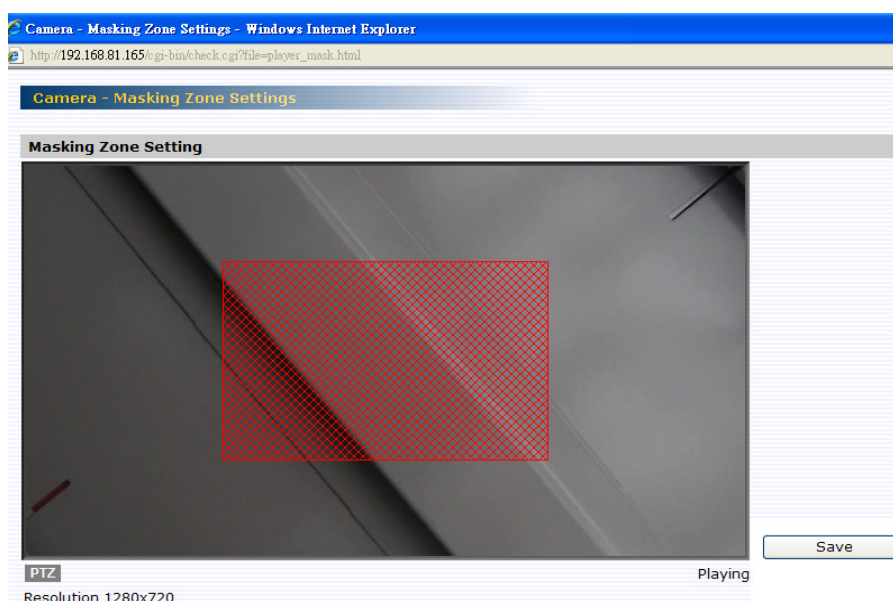
mask adjusts with the pan, tilt and zoom of the camera.

Privacy Zone Masking		
Enable	No.	Masking Zone
<input checked="" type="radio"/> ON <input type="radio"/> OFF	1	<button>Set Masking Zone</button>
<input checked="" type="radio"/> ON <input type="radio"/> OFF	2	<button>Set Masking Zone</button>
<input checked="" type="radio"/> ON <input type="radio"/> OFF	3	<button>Set Masking Zone</button>
<input checked="" type="radio"/> ON <input type="radio"/> OFF	4	<button>Set Masking Zone</button>
<input checked="" type="radio"/> ON <input type="radio"/> OFF	5	<button>Set Masking Zone</button>
<input checked="" type="radio"/> ON <input type="radio"/> OFF	6	<button>Set Masking Zone</button>
<input checked="" type="radio"/> ON <input type="radio"/> OFF	7	<button>Set Masking Zone</button>
<input checked="" type="radio"/> ON <input type="radio"/> OFF	8	<button>Set Masking Zone</button>

Reset Save Default

NOTE:

- ✧ UP to 8 masks can be set on the screen.
- ✧ Masking areas are only rectangles.
- ✧ When using the PTZ function the privacy zone, although the image under a mask can sometimes be seen, it is not malfunction.
- ✧ Although the privacy zone works in digital zoom, a mask setup of very small area cannot be performed.
- ✧ It is recommended to set privacy zone bigger than actual masking area.



- Check the checkbox “ON”, then press the “Set Masking Zone” button.
- Then a “Camera-Privacy Zone Masking Settings” pops out.
- Use mouse to drag a mask rectangle on the screen, click “Save” to save settings.
- You can enable the PTZ function shown below by pressing the “PTZ” button in order to adjust an appropriate position. And in this mode, mouse PTZ is ON.

After adjusted, click ‘X’ on the PTZ function screen and close this window.

Finally, use the mouse to drag a mask zone on the pop-out window, and click “SET” to save the setting.

“T”: Zoom in

“W”: Zoom out

“N”: Focus near

“F”: Focus far

- Go back to the “Privacy Zone Masking” section.



Video Codec

1. Select Video Codec.
2. Configure the options as described in the table below.
3. Click save.

Codec and Resolution

Image H264(1080p) ▾

Default Image H264 ▾

H264

Bit Rate 2M ▾

Bit Rate Control CBR ▾

GOP ◀ ▶ 25 (2 ~ 64)

Multicast Address

Multicast Address 231.0.0.222 (224.0.0.23 ~ 239.255.255.254)

H264 Streaming

Transfer Type ☐ Multicast
☒ Unicast

RTSP Port Number 554 (1~65535)

Video Port Number 5000 (1~65535)

Reset Save Default

Video Codec	H.264	MJPEG
Image	Higher resolution results in larger image sizes. You can set H264(1080P) H264(720P)+MJPEG(720P) H264(480P)+MJPEG(480P) H264(VGA)+MJPEG(VGA) H264(VGA)+MJPEG(QVGA) H264(QVGA)+MJPEG(QVGA) H264(720P)+MJPEG(CIF) H264(720P)+MJPEG(QVGA)	
Default image	Selection of the video codec of the image after the camera powers ON. Reboot after setup.	
H264 Bit rate	Select the desired bit rate including 256k, 512k, 1M, 2M, 4M, 6M and 8M bps.	-
H264 Bit rate control	Select the desired bit rate control including CBR and VBR.	-
H264 GOP	Select the desired GOP length, including 2~64	-
Image Quality	-	Select the desired image quality including Low, Middle and High.

Multicast Address	Specify the multicast address (e.g. of the switch or router)	
H264 Transfer Type	Select "Unicast" or "Multicast". In "Multicast" mode camera supports IGMP.	
H264 RTSP Port Number	Specify the port number you would like to use for RTSP protocol, from 1 to 65530, default is 554.	Specify the port number you would like to use for RTSP protocol, from 1 to 65530, default is 556.
H264 Video Port Number	Specify the port number you would like to use for video streaming, from 1 to 65530, default is 5000	Specify the port number you would like to use for video streaming, from 1 to 65530, default is 5010

NOTE:

- Since this camera uses a HD sensor, an Image not over 480P is displayed vertically.
- Max. Connections of real time:
 - ✧ Up to 3 simultaneous Unicast users at 1080P.
 - ✧ Up to 10 simultaneous Unicast users.

Alarm

There are 6 alarm input terminals and 1 output terminal on the base of the camera and each alarm contain 32 preset actions, when alarm 1-6 is triggered, the camera will immediately move to the preset position.

● Alarm In1 to Alarm In6

Alarm In1

Function ☒ ON ☐ OFF

The following settings are enabled when alarm is not set to 'OFF':

Input Type Normally Open (NO) ▾

Actions OFF ▾

- Input Type: Set the alarm contact type as Normal Open or Normal Close. For alarm input type, the active state is shown on the page 19 in the QSG.
- Actions: Specify the action to be taken when alarm is triggered. No action will be taken (but an alarm is logged).

- The status of the alarm blinks above the live video screen. Double click the status to clear the alarm

NOTE:

The “Input Type” and “Actions” settings are enabled when alarm is not set to “OFF”.

Motion Detection

1) Function

ON: Camera detects motion.

OFF: Camera does not detect motion.

2) Sensitivity

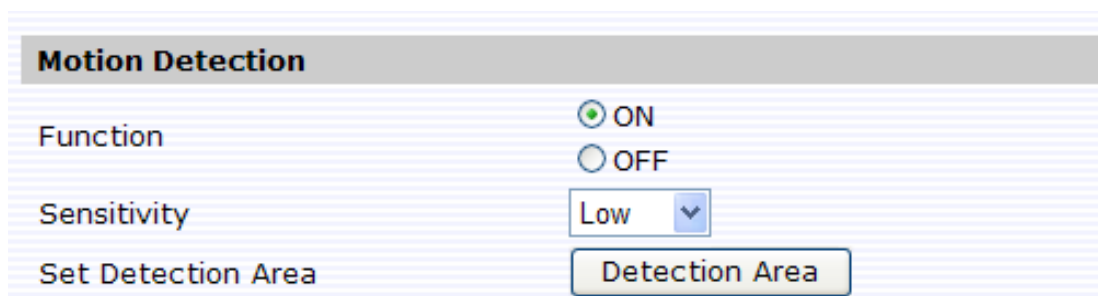
Set "Sensitivity."

HIGH: Motion is activated with slight changes in brightness or motion

MIDDLE: Intermediate between HIGH and LOW.

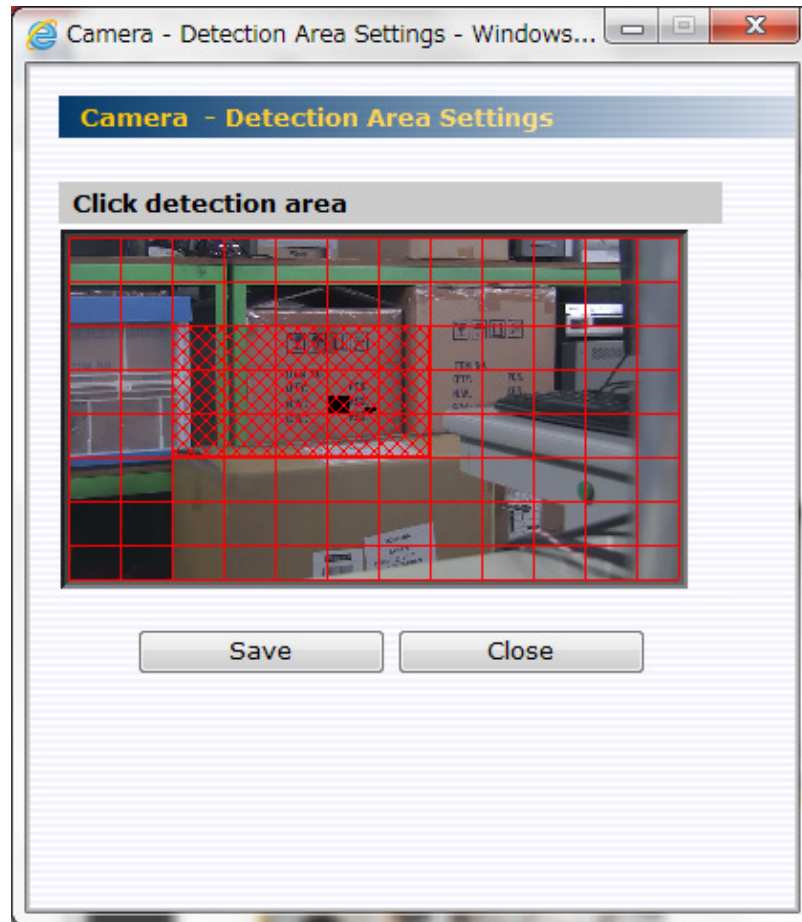
LOW: Motion is activated with larger changes in brightness or motion

3) Set Motion Area: Single click the “Set Motion Area” button then drag the mouse to select “Detection Area”. Finally click “Save” to save your set.



The screenshot shows a settings window titled "Motion Detection". It contains three rows of controls:

- Function:** Two radio buttons, "ON" (which is selected) and "OFF".
- Sensitivity:** A dropdown menu currently showing "Low".
- Set Detection Area:** A button labeled "Detection Area".



NOTE:

- ✧ The status of the alarm blinks above the live video screen. Double click the status to clear the alarm
- ✧ Motion detection doesn't work during PTZ.
- ✧ Even if a scene is changed by PTZ, detection area is not changed automatically. setup the detection area again.

● **Alarm Output**

When the Alarm input is triggered, the camera will send out a signal through the Alarm output. (See the page 19 in the QSG. After alarm is triggered, this switch will short between COM and OPEN.)

You can set Alarm Mode as OFF or Event. If you choose OFF, this function will be closed, And you can set alarm dwell time as 1s, 5s, 10s, 15s, 30s, 60s by the menu of 'Output Delay Time'.

Alarm Output	
Alarm Mode	<input type="radio"/> OFF <input checked="" type="radio"/> Event
Output Delay Time	<div>5</div> <div>seconds</div>

SD Recording

You can save image files in micro SD card. This menu will not show unless you insert the micro SD card.

NOTE: Supported for Class4 of micro SDHC (SD High Capacity) under 32GB.

Recording Condition	
	<input type="radio"/> Schedule Recording <input type="radio"/> Event Recording
Conditions	<input type="checkbox"/> Alarm In (Enabled only when 'Alarm In' is chosen at the Event setting page.) <input type="checkbox"/> Motion Detection (Enabled only when 'Motion Detection' is set to ON at the Event setting page.) <input checked="" type="radio"/> OFF

Cycle Recording	
Cycle Recording	<input type="radio"/> ON <input checked="" type="radio"/> OFF

Schedule Recording Table				
The following settings are valid when 'Scheduled Recording' is set to 'ON':				
Day	Recording Schedule			
	OFF	All Day	Schedule 1	Schedule 2
Monday	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tuesday	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Wednesday	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Thursday	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Friday	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Saturday	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sunday	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Schedule 1	Start: 8	am	- Stop: 5	pm
Schedule 2	Start: 8	am	- Stop: 5	pm
Recording Interval	60 seconds			

Event Recording Setting		
Pre-Recording	3	frames
Post-Recording	10	frames
Recording Interval	10	seconds

1. Recording Condition: You can save image files based on your scheduled recording, or Event Recording settings.

- Scheduled Recording Table:** Determine the recording condition: OFF, All Day, Schedule 1 or Schedule 2 from the recording schedule table for all days from Monday to Sunday.
Recording Interval: Set a time interval for recording images.
- Event Recording Setting:** Images are recorded when Alarm In is detected.
Pre-Recording: Set the number of images to be recorded immediately before motion occurs. Images at the moment when motion occurs are not included.
Post-Recording: Set the number of images to be recorded immediately after motion occurs. Images at the moment when motion occurs are not included.
Recording Interval: Set a time interval for motion recording.

2. Cycle Recording: You can set it as 'OFF' or 'ON'. If set to 'ON', the SD card will automatically overwrite when full.

3. Recorded Files: Click "Delete all" to delete all files. Click "Delete from Event Recording list" to delete the files you have kept on Event Recording. Click "Delete from Scheduled Recording list" to delete the files you have kept on Scheduled Recording.

Recorded Files
Delete all
Delete from Event Recording list...
Delete from Scheduled Recording list...

NOTE:

When events occur frequently, Pre-Recording, Post-Recording, and Recording Interval may be unable to be recorded as setup.

FTP Recording

You can save image files via FTP. Setting your FTP recording condition first, and then identify your FTP sever 1 and 2.

Recording Condition
☒ Schedule Recording
☐ Event Recording
☒ Alarm In
(Enabled only when 'Alarm In' is chosen at the Event setting page.)
☒ Motion Detection
(Enabled only when 'Motion Detection' is set to ON at the Event setting page.)
☐ OFF
The following settings are enabled when FTP Recording Condition is not set to 'OFF':

1. FTP Recording Conditions

You can store your image files based on your scheduled recording, or recording by alarm, or recording by motion.

- Schedule Recording

Schedule Recording Table
The following settings are valid when 'Scheduled Recording' is set to 'ON':

Day	Recording Schedule			
	OFF	All Day	Schedule 1	Schedule 2
Monday	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tuesday	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Wednesday	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Thursday	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Friday	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Saturday	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sunday	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Schedule 1	Start: 8 ▾ am ▾ - Stop: 5 ▾ pm ▾			
Schedule 2	Start: 0 ▾ am ▾ - Stop: 0 ▾ am ▾			
Recording Interval	1 ▾ seconds			
Recording File Name	LV <input type="text"/> yyyymmddHHMMSS***N.JPG			
Server Path	Server 1: <input type="text"/>			
	Server 2: <input type="text"/>			

- Determine the recording condition: OFF, All Day, Schedule 1 or Schedule 2 from the recording schedule table for all days from Monday to Sunday.
- Recording Interval: Set a time interval for recording images.
- Recording File Name: Set the file name where the name is to be stored on the server.
- Server Path: Enter the data path where the data is to be stored on the server.

- Event Recording Setting

a) Recording by Alarm In

Perform "Alarm input setting" first,

Then record in the following sequence:

- Pre-recording: Set the number of images to be recorded before an alarm occurs. Images of the moment when an alarm occurs are not included. You can set Pre-Recording as 0, 3, 5, 10 frames.
- Post-Recording: Set the number of images to be recorded immediately after a motion occurs. Images at the moment when a motion occurs are not included. You can also set Pre-Recording as 0, 3, 5, 10, 20, 60, 120 frames.
- Recording Interval: Set a time interval for motion recording.
- Recording File Name: Set the file name where the name is to be stored on the server.
- Server Path: Enter the data path where the data is to be stored on the server.

b) Recording by Motion

Perform "Motion Detection Setting" first,

All the other settings are same as recording by alarm as above.

Event Recording Setting	
Pre-Recording	10 frames
Post-Recording	10 frames
Recording Interval	1 seconds
Recording File Name	Alarm In : EX <input type="text"/> yyyyymmddHHMMSS***N--A.JPG Motion Detection : MD <input type="text"/> yyyyymmddHHMMSS***N--A.JPG
Server Path	Server 1: <input type="text"/> Server 2: <input type="text"/>

NOTE:

When events occur frequently, Pre-Recording, Post-Recording, and Recording Interval may be unable to be recorded as setup.

2. FTP Server Settings - Server 1 and 2

Please follow your FTP setting to setup FTP server name, Login ID, Password, FTP port number, FTP mode, and FTP connecting method.

- FTP server name: Input a server name or address.
- Login ID: Limited only to users who have authority to access the server.
- Password: Input the registered password associated with Login ID.
- Password (Confirm): Re-enter the password.

- FTP Port Number: set “21” as default.
- FTP Mode:
 PORT mode- This mode is for most FTP applications.
 PASV mode-This mode is for the camera's network environment is behind a firewall.
- FTP Connecting Method:
 Reconnect- The network camera logs in/out for each file transfer.
 Continuous Connection- The network camera is always in connection.

FTP Server Settings - Server 1	
FTP Server Name	<input type="text"/>
Login ID	<input type="text"/>
Password	<input type="password"/>
Password (Confirm)	<input type="password"/>
FTP Port Number	<input type="text" value="21"/>
FTP Mode	<input checked="" type="radio"/> PORT <input type="radio"/> PASV
FTP Connecting Method	<input checked="" type="radio"/> Reconnect <input type="radio"/> Continuous Connection

FTP Server Settings - Server 2	
FTP Server Name	<input type="text"/>
Login ID	<input type="text"/>
Password	<input type="password"/>
Password (Confirm)	<input type="password"/>
FTP Port Number	<input type="text" value="21"/>
FTP Mode	<input checked="" type="radio"/> PORT <input type="radio"/> PASV
FTP Connecting Method	<input checked="" type="radio"/> Reconnect <input type="radio"/> Continuous Connection

3. FTP Server Usage

You can choose to save your image files to either FTP server 1, 2, or automatically switching servers.

FTP Server Usage	
Primary Server	<input checked="" type="radio"/> FTP Server 1 (Default) <input type="radio"/> FTP Server 2
Automatic Server Switch	<input type="radio"/> ON (Automatically switches servers in the event of a communication failure) <input checked="" type="radio"/> OFF (Default)

- Primary Server: Define FTP server 1 or 2 as the primary server for saving image files
- Automatic Server Switch: Select “ON” if the FTP server is to be automatically switched to the secondary server in case the primary server is not available.

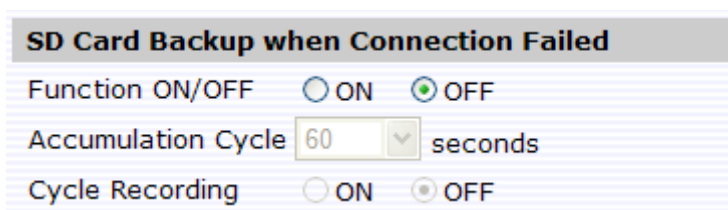
SD Card Back Up when connection failed

The network camera automatically stores images in the SD card when images cannot be recorded in the server due to a network failure, or other trouble. The stored images can be transferred to the FTP server when the network status or other troubles are resolved.

Function ON/OFF: Select ON to active SD card FTP back up function.

Accumulation Cycle: Set a time interval in seconds for recording images to be stored. (Time interval: 1, 2, 3, 5, 10, 30, 60, 120 or 180 seconds)

Cycle Recording: Overwrite when SD card reaches the maximum capacity and start with oldest stored images.



The screenshot shows a settings window titled "SD Card Backup when Connection Failed". It contains three configuration options: "Function ON/OFF" with radio buttons for "ON" and "OFF" (where "OFF" is selected), "Accumulation Cycle" with a dropdown menu set to "60" and the unit "seconds", and "Cycle Recording" with radio buttons for "ON" and "OFF" (where "OFF" is selected).

E-mail

You can receive images by setting your e-mail account.

Authentication Settings:

- Authentication
 1. No Authentication: no restrict rule
 2. POP before SMTP: A protocol that defines an email server and a way to retrieve mail from it. Incoming messages are stored at a POP server until the user logs in and downloads the messages to their computer.
 3. SMTP Auth: Plain, and Login. Simple Mail Transfer Protocol (SMTP) is an Internet standard for e-mail transmission across Internet Protocol (IP) networks.
 - **PLAIN:** PLAIN is the name of a registered SASL authentication mechanism, which is supplied as a parameter to the AUTH command. The PLAIN authentication mechanism is described in RFC 2595. PLAIN is the least secure of all the SASL authentication mechanisms, since the password is sent unencrypted across the network.
 - **LOGIN:** The LOGIN mechanism is supported by Microsoft's Outlook Express, as well as by some other clients.
- E-mail Server (SMTP): Enter your outgoing mail server (SMTP).
- E-mail Server (POP): Enter your incoming mail server (POP).
- E-mail User ID: Input your e-mail account ID number.
- Password: Input your e-mail account password.

- Password (Confirm): Confirm your e-mail password.
 - Administrator E-mail Address: Input your e-mail address.
- Press “save & test e-mail” button to save your setting and to test your e-mail.

Condition Settings of Alarm In / Condition Settings of Motion Detection:

- Setup E-mail condition and style when ‘Alarm In’ or ‘Motion detection’ activated.

E-mail Address list:

The destination of e-mail is set up.

When you always send to an administrator, turn ON.

Add other mail addresses and set up transmitting conditions.

E-mail Address List

Always Sending to Administrator E-mail Address ☐ ON ☒ OFF

Select E-mail addresses:

No.	Mail-to Address	Send Condition	
		Alarm In	Motion Detection
1		<input type="checkbox"/>	<input type="checkbox"/>
2		<input type="checkbox"/>	<input type="checkbox"/>
3		<input type="checkbox"/>	<input type="checkbox"/>
4		<input type="checkbox"/>	<input type="checkbox"/>
5		<input type="checkbox"/>	<input type="checkbox"/>
6		<input type="checkbox"/>	<input type="checkbox"/>
7		<input type="checkbox"/>	<input type="checkbox"/>
8		<input type="checkbox"/>	<input type="checkbox"/>
9		<input type="checkbox"/>	<input type="checkbox"/>
10		<input type="checkbox"/>	<input type="checkbox"/>

Audio

You can setup audio setting. Refer cable connection shown page 17 in QSG.

Camera - Audio Settings

Format

Format

Audio Input

Function ☒ ON ☐ OFF

Audio Input Level

Low
Middle
High

- Format: Support three audio Video Codec formats of PCM, G711-Alaw and G711-Ulaw.
- Audio Input: Set to "ON" when receiving audio from a microphone connected to the camera.
- Audio Input Level: Low / Middle / High selectable.

Network Settings

TOSHIBA

TOSHIBA IK-WP41A

Config / [Live Video](#)

- ▶ Camera Settings
- ▶ Network Settings
 - [Basic](#)
 - [DDNS](#)
- ▶ Administrator
 - Event Log
 - Information

Network - Basic Settings

Basic Settings

Camera Name	<input type="text" value="TOSHIBA IK-WP41A"/>		
DHCP	<input type="radio"/> ON (Automatically obtain IP address) <input checked="" type="radio"/> OFF		
The following settings are enabled when DHCP is set to 'OFF':			
IP Address	<input type="text" value="133.114.74.125"/>		
Subnet Mask	<input type="text" value="255.255.252.0"/>		
Default Gateway	<input type="text" value="133.114.72.1"/>		
Primary DNS	<input type="text" value="133.199.139.43"/>		
Secondary DNS	<input type="text" value="133.199.84.103"/>		
HTTP Port Number	<input type="text" value="80"/>	(Input 80 or a value between 1025 and 65535)	
Host Name	<input type="text"/>		
Domain Name	<input type="text"/>		
UPnP	<input type="radio"/> ON <input checked="" type="radio"/> OFF		
<div>ResetSaveDefault</div>			

Basic

Network - Basic Settings

Basic Settings

Camera Name	<input type="text" value="TOSHIBA IK-WP41A"/>		
DHCP	<input checked="" type="radio"/> ON (Automatically obtain IP address) <input type="radio"/> OFF		
The following settings are enabled when DHCP is set to 'OFF':			
IP Address	<input type="text" value="192.168.81.200"/>		
Subnet Mask	<input type="text" value="255.255.255.0"/>		
Default Gateway	<input type="text" value="192.168.81.254"/>		
Primary DNS	<input type="text" value="168.95.192.1"/>		
Secondary DNS	<input type="text" value="168.95.1.1"/>		
HTTP Port Number	<input type="text" value="80"/>	(Input 80 or a value between 1025 and 65535)	
Host Name	<input type="text"/>		
Domain Name	<input type="text"/>		
UPnP	<input type="radio"/> ON <input checked="" type="radio"/> OFF		

- Camera Name: Enter your camera name. This name is displayed as the camera name of Configuration window and on the frame of Internet explorer of a Live Video window.
- DHCP (Default is 'ON'.):
The IP address is automatically obtained when you select "ON"; otherwise, select "OFF" to setup the static IP address.
- IP Address:
Input your static IP address here when you select DHCP off.
- Subnet Mask:
If the subnet mask is not properly configured, the camera may not be able to communicate with other devices on the network.
- Default Gateway:
Leave blank as default setting. It is not necessary to enter Default Gateway if it is not used. Ask your Network Administrator for Default Gateway information.
- Primary DNS: (same as above)
- Secondary DNS: (same as above)
- HTTP Port Number: We recommend using the default port number. If you need to change the default port, contact your Network Administrator. Options: 1025 to 65535 (80 is the default).
- Enter a host name. Ask your Network Administrator.
- Enter a domain name. Ask your Network Administrator
- UPnP: When set to "ON", the camera can be detected automatically if you use UPnP protocol from the PC.

DDNS

This section explains how to configure the dynamic domain name service (DDNS) for the Network

Camera.

The provider list contains two hosts that provide DDNS service. Please connect to the service provider's web site to review the service charges and sign-up for the service if you want to use DDNS.

ChangeIP.com

<http://www.changeip.com/toshiba/>

No-IP.com

<http://www.no-ip.com/ext/toshiba.php>

- Click "ON" to activate the DDNS function or "OFF" to disable the DDNS function.
- Select a DDNS server: NO IP, CHANGE IP, from the drop-down list of the DDNS

Server.

- Enter a user's id in the "User ID" field.
- Enter a password in the Password field.
- Re-enter a password to confirm it. Finally, click Save to save the settings.

Network - DDNS Settings

DDNS Settings

DDNS ☐ ON ☒ OFF

DDNS Server

Enter the User ID and password of your DDNS account.

User ID

Password

Password (Confirm)

'DDNS' service is provided by a DDNS provider.
MAC address of this camera is '00:0B:67:01:18:37'

FTP Server

This section explains how to configure the FTP server for the network camera.

- Click "ON" to activate the FTP function. follow the following procedures to set up related settings. Or "OFF" to disable the FTP function and skip the following procedures.
- Enter a login ID if you activate the FTP function.
- Enter a password associated with a login ID.
- Re-enter the password to confirm it.
- Determine the number of maximum connections by selecting a number from the drop-down list in the Max Simultaneous Connections field.

Network - FTP Server Settings

FTP Server Settings

FTP Server ☐ ON ☒ OFF

Login ID

Password

Password (Confirm)

Max. Simultaneous Connections

Administrator

Password

Administrator Information:

You can setup User ID and password.

The default setting for administrator ID and password are:

- Admin: ID: admin
- Password: 1234

You can adjust your unique Administrator ID and password at this field.

NOTE:

To prevent unauthorized access, it is highly recommended to set a password for the Network Camera.

User List:

Besides administrator, five Users can access the camera under authorization from administrator by ID and password control. However, Users 1~5 are allowed to review the live video only. Without authorization, any operation will be forbidden.

- The default User 1 login name and password are “guest” and “guest”.

- Enter an ID in the User ID field.
- Enter a password in the Password field.
- Re-enter the password again to confirm.

User Information 1	
User ID	<input type="text" value="guest"/>
Password	<input type="password" value="•••••"/>
Password (Confirm)	<input type="password" value="•••••"/>

Finally, click “Save” to save the settings.

Date/Time

- Date and Time setting
Enter the date and time to set up system time manually.

Manual Setting	
Date:	<input type="text" value="Jan"/> <input type="text" value="4"/> <input type="text" value="20"/> <input type="text" value="1"/> <input type="text" value="2"/>
Time:	<input type="text" value="11"/> : <input type="text" value="45"/> : <input type="text" value="48"/> <input type="text" value="am"/>
<input type="button" value="Reset"/> <input type="button" value="Save"/>	

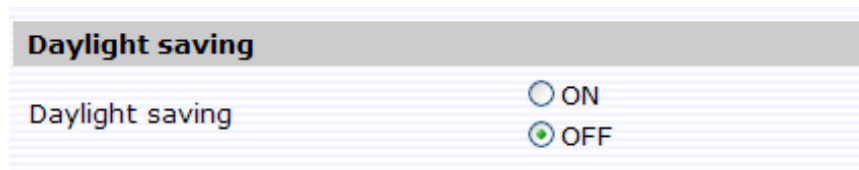
- Time zone
Select the time zone where your camera is located.

Time Zone	
Time Zone	<input type="text" value="GMT -7 Mountain Time (US & Canada)"/>

- NTP Server
Select ON to active the NTP Server function. If “NTP” is selected “ON”, the date and time will be synchronized by the NTP server. And you can choose the Time Adjustment Period. The button “Save & Test” can test the NTP Server operation.

NTP Server	
Function	<input checked="" type="radio"/> ON <input type="radio"/> OFF
NTP Server	<input type="text"/>
Time Adjustment Period	<input type="text" value="On camera boot and at 24-hour intervals"/>
NTP Time Adjustment Test	<input type="button" value="Save & Test"/>

- Daylight saving
Select ON to activate the daylight-saving function if you are in a daylight-saving time (effective for NTP mode only).



FW Update

- You can update system firmware once the update file is available.
- It is the customer's responsibility to update firmware.
- All camera motions will shut down during firmware update.
- Close any other screens on the PC before starting a firmware update.
- Never disconnect power and LAN cable during the firmware update process.
- Rebooting the camera after firmware update may take approx. 3minutes.
- After finish FW update, please reboot Internet explorer® on your PC.



Maintenance

- Import Configuration Settings
This function is designed to upload configuration setting from the client PC to network cameras.

Import Configuration Settings

Imports saved configuration settings from the client computer to the network camera.

Configuration Information File:

Configuration information import takes several minutes.

- **Export Configuration Settings**

This function is designed to export configuration settings to the client PC.

Export Configuration Settings

Exports configuration settings from the network camera to the client computer.

- **Restore Factory Default**

This function is designed to reset all configuration settings into factory default except for IP address, ID/Password and Camera Name.

Restore Factory Default

The camera will reboot to make the changes effective.

- **Reboot Camera**

This function is designed to reboot the camera. Clicking the Reboot button and a display window appears the confirmation message.

Reboot Camera

Event Log

Click Event Log on the setting menu.

Click the buttons to display the desired logbooks or to delete all logs.

- Display all: You can display all logs from the camera.
- Condition Settings (Log filter):
 - a) Display “Most recent” or “Old” logs (input 1 to 8190).
 - b) Display logs with keyword.
 - c) Display logs by Date and Time.

NOTE:

If you click ‘Delete Logs’, all logs will disappear.

Event Log - Browse and delete

Log Browse

```

== Total log messages - 6 ==
- Show all log messages.
[1 ] Jan 25 2011 10:08:05am 2000221 rgst> Success to save. Camera info.
[2 ] Jan 04 2012 11:29:14am 2000713 webm> Success to default. Network info.
[3 ] Jan 04 2012 00:48:23pm 2000229 rgst> Success to save. Network info.
[4 ] Jan 04 2012 03:06:17pm 2000223 rgst> Success to save. Alarm info.
[5 ] Jan 04 2012 03:07:04pm 2000226 rgst> Success to save. Recording info.
[6 ] Jan 04 2012 03:07:05pm 2000227 rgst> Success to save. FTPc info.
== Appeared log messages - 6/6(100%) ==

```

Filter Settings

Display

☐ Display all
 ☒ Set conditions

☐ Display

Most recent

1

 logs (input 1 to 8190)
 ☐ Display logs with keyword

Display Condition Settings

☒

Date:

Jan

1

20

0

8

Time:

0

:

0

:

0

am

After

Save Conditions

Delete Logs

Default

Specification

Camera	Image device	1/2.8 Type CMOS
	Optical zoom	20X
	Focal length	f=4.7mm(wide) to 94.0 mm (tele)
	F-number	F1.6 to 3.5
	Angle of view	H : 55.4°(wide) , 2.9°(tele) at Full HD mode
	Effective number of pixels	1920 x 1080
	Digital zoom	12X (240x with optical zoom)
	Focus mode	Manual,Auto,Zoom Trigger
	Minimum illumination (*1)	0.3 lux / F1.6 : Night mode, Exposure(Full Automatic)
	White balance	Auto, ATW, Indoor, Outdoor, One Push WB
	Electric shutter	1 ~ 1/10,000
	Slow Shutter	Auto, Off
	Exposure control	Full Automatic, Shutter priority
	Backlight Compensation	On/Off
	Day/Night function	Removable IR-Cut filter in Night mode
	Wide dynamic range	ON / Exposure mode / Histogram mode / Auto mode / OFF
Video and Audio	Video Compression	H.264, MJPEG(except 1080P)
	Resolutions	1080P,720P,480P,VGA,QVGA,CIF
	Maxmum Frame Rate	30fps
	Video Streaming	Dual streaming (720P and below : H.264 and MJPEG) Single streaming (1080P : H264)
	SD card	Micro SDHC supported (32GB)
	Audio (*2)	Simplex (mic input)
Alarm	Motion detection	Yes
	Alarm I/O	6 alarm inputs, 1 alarm output
P/T Operation	Pan angle	360 degrees continuous rotation
	Tilt angle	Indoor 85 / Outdoor 92
	Pan speed	0.1-430 degrees/s(auto) , 0.1-120 degree/s(manual),
	Tilt speed	0.1-200 degrees/s(auto) , 0.1-90 degree/s(manual),
	Programmable presets	128 presets
	Auto patrol	4 groups
	Auto flip	On/Off
	Scan	Auto, Frame, Random
	Privacy masking	8 zones
	Freeze activity	On/Off
Network	Ethernet	10base-T/100base-Tx Ethernet connection
	Internet protocol	TCP/IP, UDP, HTTP, SMTP, DNS, DHCP, NTP, DDNS,FTPc,FTPc,ICMP,IGMPv3,RTSP,RTCP, RTP,ARP
	DDNS	NoIP, Change IP
	Time and Date	Manual, NTP, and Daylight saving
	FTP recording	Linked "Schedule" and "Events"
	E-mail	Linked "Events"
	OS	Windows® XP, Windows Vista® Business, Windows® 7 professional
	Brouser	Internet Explorer® Ver. 8 and Ver. 9
General	Power supply	AC24V ± 10 % 50-60 Hz, PoE+(IEEE802.3at)
	Consumption current	2.25A
	Operating temperature (*3)	-30 to 50°C (AC24) pre-heat 3H
		-10 to 50°C (PoE+) pre-heat 1H
	Storage temperature	-30 to 60°C
	Operating humidity	~90%RH
	Dimensions	(DxH) 216.14mm(8.5") X 360.19mm(14.2")
	Weight	3800g (8.14lb)

Regulation	Radiation Standard	FCC Class A, IC Class A
	Safety Standard	UL 60950-1, CSA C22.2 No. 60950-1
	IP Code	IP66

- *Designs and specifications may change without prior notice for better improvement.*
- *Screens, photos, illustrations and other diagrams contained in this user's manual may slightly change from actual ones.*

*1: Varies in accordance with the object, image quality, network environment and performance of the personal computer used.

*2: The sound may not be clear depending on the conditions of the lines.

*3: When the camera is installed and operated in low temperatures below -10°C {14°F}, normal images may not be obtained immediately after startup. In such a case, wait until the camera warms up and start adjustment after turning on the power again.

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