



# Firmware Release Notes

**A1D-500-V6.09.45-AC**

2015/09/25



# Legal Notice

## Disclaimer

- The information contained in this document is intended for general information purposes. ACTi Corporation shall not be liable for errors contained herein or for incidental or consequential damages arising from the furnishing, performance, or use of this document.
- The information contained herein is subject to change without notice.

## Copyright

Copyright ©2003-2015 ACTi Corporation All Rights Reserved.

## Contents

### **1 Firmware Version 4**

---

New Features .....	4
Enhancements .....	7
Issue Solved .....	9
Supported Languages .....	10
Supported Video Management System .....	10
Remark.....	11

### **2 Upgrade 13**

---

Camera Firmware Upgrade Procedure.....	13
New ISP firmware Version .....	15
ISP Firmware Upgrade Procedure.....	15

### **3 Download and Documentation 18**

### **4 Support 18**

---

# Firmware Version

Firmware Version: **A1D-500-V6.09.45-AC**

Release Date: 2015.09.25

## New Features

1. (v6.09.45) Supported new models:
  - E series:  
E213, E215, E223, E413, E415, E416, E418, E616, E617, E618, E621, E815, E816, E817, E822, E925, E925M, E927, E927M, E928, E928M, E929, E929M
  - B series:  
B22, B46, B49, B82, B210, B410, B910
  - I series:  
I27, I47, I73, I910, I912
  - Q series:  
Q12, Q110, Q111, Q113
2. (v6.09.45) Supported ONVIF Profile G for models with local storage.
3. (v6.09.45) Added ACTi DDNS service ("mediacss.com", "smmaas.com", "vmsaas.com"), please login ACTi DDNS (<https://portal.acti.com/>) to manager devices.
4. (v6.09.45) Supported 32 privacy masks (3D masks) for zoom position on I24, I25, I27, I44, I45 and I47.
5. (v6.09.45) Supported 4 privacy masks for each of 17 preset points on zoom box (B2x), zoom bullet (B4x), zoom dome (B6x, B8x), Mini PTZ (B94~B97, B94A~B97A, B910)
6. (v6.09.45) Supported 4 privacy masks on zoom box (E213, E210, E215, E223, B210), zoom bullet (E413, E415, E416, E418, B410), zoom dome (E616~E618, E621, E815~E817, E822)
7. (v6.09.45) Supported "Auto Firmware Upgrade" function, camera can be upgraded firmware from local computer or from ACTi download center through internet service provider.
8. (v6.08.30) Added Ground mode in view option for all fisheye and hemispheric cameras
9. (v6.08.30) Added DIS function on I24, I25, I44 and I45
10. (v6.08.30) Added Defogging function in I series models.

11. (v6.08.30) Supported 32 privacy masks (3D masks) for I9x series models.
12. (v6.08.30) Added Joystick Simulated Mode/Mouse PTZ mode for I9x series models.
13. (v6.08.30) Added GPS position setting by manually
14. (v6.08.30) Supported Sound Detection in event handler for audio-in function is supported models.
15. (v6.08.30) Supported ONVIF multicast metadata configurations
16. (v6.08.30) Supported Audio function for E918M, E919M, E920M, E921M, E922M, E923M.
17. (v6.08.30) Supported new models:
  - E series:
    - E15, E16, E23B, E48, E924, E926
  - B series:
    - B62, B94A, B95A, B96A, B97A
18. (v6.07.24) Added 800 x 600 resolution for all D/E/B/I series models
19. (v6.07.24) Supported new models:
  - E series:
    - E11A, E12A, E13A, E14, E31A, E32A, E33A, E34A, E35, E36, E98, E918, E918M, E919, E919M, E920, E920M, E921, E921M, E922, E922M, E923, E923M
  - B series:
    - B21, B24, B25, B27, B54
  - I series:
    - I51, I71, I24, I25, I44, I45
20. (v6.07.24) Redesign the local storage function to continue recording automatically from stream 1 for all time. The new design can provide the timeline bar, view the snapshot, export the selectable duration, show motion detection and DI events in File Management page.
21. (v6.07.24) Supported Fisheye view, ePTZ and Panorama view modes for I51 and I71. Maximum resolution is 2592 x 1944 for fisheye view and panorama; 1920 x 1080 for ePTZ mode.
22. (v6.07.24) Supported active and passive microphone types and audio in level adjustment for E918~E923
23. (v6.07.24) Supported single video streaming mode
24. (v6.07.24) Added 20 fps for 2048 x1536 resolution on specific 3MP camera models.
25. (v6.07.24) Added 8 fps on specific 1.3MP, 3MP and 5MP camera models.
26. (v6.07.24) Supported 7 fps for 3648 x 2736, 3648 x 2160, 2592 x 1944 and

- 2048 x 1536 resolutions on 10MP camera models.
27. (v6.06.16) ONVIF Profile S compliance
  28. (v6.06.16) Added video resolution 1440x1080 and 1280x960 options for video stream1 on fisheye cameras.
  29. (v6.06.16) Supported IR Exposure Compensation setting for all camera with IR LED. (Default is enabled)
  30. (v6.06.16) Supported Scan function and Return to Auto Scan setting for PTZ/Speed dome camera
  31. (v6.06.16) Browser auto detection for plug-in application (Safari with QuickTime installed, and other browsers with VLC installed)
  32. (v6.06.16) Supported new models
    - D series:
      - D41A, D42A, D61A, D62A, D64A, D65A
    - E series:
      - E41B, E42B, E43B, E44A, E45, E45A, E46A, E47, E61A, E62A, E63A, E64A, E65A, E66A, E67A, E68, E69, E85, E85A
    - B series:
      - B41, B44, B45, B47
  33. (v6.05.23) Supported local storage function with MicroSDXC
  34. (v6.05.23) Supported Microsoft Internet Explorer 11.0
  35. (v6.05.23) Supported 720p with 60 fps High frame rate mode for 1.3MP camera models
  36. (v6.05.23) Supported Saturation, Edge Enhancement and 2D/3D DNR configuration for I series cameras
  37. (v6.05.23) Supported build-in Defogging for I series cameras
  38. (v6.05.23) Supported Image Stabilization, dynamic Privacy Mask and Digital Zoom for I series PTZ/Speed dome cameras
  39. (v6.05.23) Supported IR LED control for camera model with Adaptive IR-LED specification
  40. (v6.05.23) Changed plug-in application from VLC to QuickTime for non-IE browser
  41. (v6.05.23) Supported 10 Megapixel resolution
  42. (v6.05.23) Supported new models
    - D series:
      - D21FA, D21VA, D22FA, D22VA, D71A, D72A, D81A, D82A
    - E series:
      - E21FA, E21VA, E22FA, E22VA, E23A, E24A, E25A, E270, E271, E37, E56, E57, E58, E59, E610, E71A, E72A, E73A, E74A, E75, E76, E77,

E81A, E82A, E83A, E84A, E86A, E88, E89, E97

B series:

B51, B52, B53, B55, B56, B61, B64, B65, B67, B81, B84, B85, B87,  
B94, B95, B96, B97

I series:

I91, I92, I93, I94, I95, I96

- 43. (v6.04.15) Supported local storage function with MicroSDHC
- 44. (v6.04.15) Supported Microsoft Internet Explorer 10.0
- 45. (v6.04.15) Supported different H.264 profile switching. User can configure the H.264 Baseline/ Main/ High profile on camera's Web Configurator.
- 46. (v6.04.15) Supported software dewarping function in ActiveX with different view modes (Fisheye View, Dewarped View, Panorama Wall and Ceiling Mount) for fisheye cameras
- 47. (v6.04.15) Supported new models
  - D series: D21F, D21V, D22F, D22V, D42, D91, D92
  - E series: E21F, E21V, E22F, E22V, E93, E94, E95, E96
- 48. (v6.03.17) Supported new models
  - D series:  
D12, D21, D22, D31, D32, D41, D54, D55, D61, D62, D64, D65, D71, D72, D81, D82
  - E series:  
E21, E22, E23, E24, E25, E34, E41A, E42A, E43A, E44, E45, E46, E61, E62, E63, E64, E65, E66, E67, E71, E72, E73, E74, E81, E82, E83, E84, E85, E86, E91, E92
- 49. (v6.03.17) Added 1280x720 video resolution for 1.3M camera models (e.g. D61, E66 and E25)
- 50. (v6.02.03) Compliant with ONVIF Core Specification v2.2
- 51. (v6.02.03) Supported Anonymous login for live view
- 52. (v6.02.03) Supported WDR function on E series products

## Enhancements

- 1. (v6.09.45) To change the speed of Pan and tilt speed to improve the preset precision for I9x PTZ and Speed Dome with new ISP firmware,
- 2. (v6.09.45) Added the option for 10MP models to change video resolution to 1920x1080 on video stream 1 when the camera enters night time mode.
- 3. (v6.09.45) Added the heater fan control function for I93~I96 and I910 outdoor cameras by URL command

4. (v6.09.45) The valid characters in login name can accept “!” and “^” characters.
5. (v6.09.45) The default digital image stabilization (DIS) setting is changed to disable.
6. (v6.09.45) Added PT speed option on B94(A)~B97(A) and B910 cameras.
7. (v6.09.45) All camera models support mirror and flip functions except the I73 and I53.
8. (v6.09.45) Added Home Preset setting on the zoom only camera without serial port.
9. (v6.08.30) Added alarm response “Save video/audio or snapshot to local storage “ for event recording into local storage
10. (v6.08.30) Added camera calibration, the rotation and tilt angle adjustment for ceiling mount type, and installation angle adjustment for wall mount type in camera options for software dewarp fisheye cameras
11. (v6.08.30) Changed the bitrate default setting from 4Mbps to 6Mbps in video stream 1 for 2MP and higher megapixel cameras.
12. (v6.08.30) Added continue Auto Focus enabled/disabled setting by URL command for I9x series models. (default is enabled)
13. (v6.08.30) Stream Mode selection in Camera Options page is removed due to cameras already support single stream can be added by ONVIF integrations. Fisheye and Hemispheric camera will keep Stream Mode selection.
14. (v6.08.30) Supported move limit in go preset for I9x series models. (Default is -180°~180°in pan and 0~90° in tilt)
15. (v6.08.30) To reduce the PTZ speed in manual mode for I9x series models.
16. (v6.08.30) Supported SMTP/FTP user names that begin with a number
17. (v6.08.30) Motion detection 3 profiles are all enabled by default
18. (v6.08.30) Added Ping-Pong partition management for device reliability
19. (v6.07.24) Added Korean language
20. (v6.07.24) Video jitter improvement
21. (v6.07.24) Troubleshooting page will be disable by default.
22. (v6.07.24) Added RTC realtime clock information to the System Log
23. (v6.06.16) Audio quality improvement
24. (v6.06.16) Maximum Zoom Ratio setting for optical zoom control
25. (v6.06.16) Added “IDLE position” in touring state for PTZ camera
26. (v6.06.16) Faster response of event to snapshot and concurrent snapshot requests
27. (v6.06.16) Supported PT control in Web configuration for camera with RS-485/422 serial port
28. (v6.06.16) Supported Stream 2 profile and change resolution from maximum



- resolution to 1080p or 720p of Stream 1 profile for ONVIF integration
29. (v6.06.16) Added video resolution 3648x2160 for 10MP non-fisheye camera
  30. (v6.05.23) Increased the PTZ preset points up to 256
  31. (v6.05.23) Supported OPTIONS command for keep-alive with RTSP connection
  32. (v6.05.23) Enhanced the image quality with ISP firmware improvement
  33. (v6.04.15) Enhanced the sensitivity of motion detection
  34. (v6.04.15) Reliability enhancement
  35. (v6.04.15) Supported the QVGA(320x240) resolution for video stream 2 only
  36. (v6.04.15) H.264 compatibility enhancement and set proper H.264 level with different video resolution
  37. (v6.03.17) Supported variable GOP in Constant Bit Rate mode with shutter speed changes
  38. (v6.03.17) Improved the audio quality
  39. (v6.03.17) Improved the sensitivity of motion detection
  40. (v6.03.17) Improved video bite rate control on Motion JPEG and H264 Variable Bit Rate mode
  41. (v6.02.03) Increase the maximum Pre-Buffer Time to 10 seconds for upload video in event handler function.

## Issue Solved

1. (v6.09.45) “members.dyndns.org”, “cgi.tzo.com”, “www.justlinux.com” and “www.hn.org” are removed in DDNS supported list
2. (v6.08.30) Pelco-D and Pelco-P protocols are not supported on I24, I25
3. (v6.08.30) Event trigger by “device boots successfully” cannot upload video to FTP server sometimes.
4. (v6.08.30) Bug fixed in local storage file management page.
5. (v6.08.30) Video from stream 2 is abnormal for getting video by encoder?CHANNEL=1&STREAM=2&VIDEO\_H264\_QUALITY=HIGH
6. (v6.07.24) Bug fixed for local storage function
7. (v6.07.24) B8X models are not able to switch day mode automatically
8. (v6.07.24) Compatibility with Avigilon software due to the VMS cannot recognize ONVIF version higher than 2.2
9. (v6.07.24) Camera may skip frame during speed up recording

10. (v6.07.24) The whiteout issue happened when Day/ Night changed
11. (v6.06.16) No video frame when changing shutter speed or day/night
12. (v6.06.16) Touring function is unstable for I series PTZ camera
13. (v6.05.23) Showed Mouse PT direction icon on Zoom only camera
14. (v6.05.23) Snapshot function cannot work by user account level
15. (v6.05.23) Event time calculation issue with Event Handler function
16. (v6.04.15) ONVIF compatibility issue (e.g. PTZ control, video stream 2 capability setting ...etc.)
17. (v6.03.17) Device will not synchronize its time with NTP server automatically when camera is in static IP address.
18. (v6.03.17) Cannot upload snapshot to Local Storage and FTP at same time
19. (v6.03.17) The output snapshot file in Live View is broken when the resolution is 2048x1536 or 1280x720
20. (v6.03.17) IEEE 802.1x may not work normally
21. (v6.03.17) Stability issue with local storage function
22. (v6.03.17) Integration issue with ONVIF function
23. (v6.03.17) The snapshot function will show error message sometimes.
24. (v6.02.03) Fixing Audio noise problem by using "GET\_STREAM" HTTP command.

## Supported Languages

Czech, Dutch, English, French, Hebrew, Hungarian, Italian, Japanese, Korean, Polish, Romanian, Russian, Spanish, Simplified Chinese and Traditional Chinese.

## Supported Video Management System

For supported ACTi VMS list, please refer to

<http://www.acti.com/UnifiedSolution>

For supported Third-party Software Integration list, please refer to

<http://www.acti.com/3rdpartysoftware>

## Remark

1. If the earlier firmware versions do not support this new model, please do not downgrade FW to earlier version, otherwise you need to upgrade new firmware again.
2. Please keep enable "RTP B2 Frame" on camera to prevent compatibility problem with software NVR or standalone NVR.
3. Please check the motion region setting and privacy masking window after changing video resolution.
4. After remove HTTPS certificate files, the WEB UI has to redirect to the login page with HTTP protocol.
5. Please save and reboot the device after remove HTTPS certificate files.
6. Not support Motion detection regions and Privacy mask regions in non-IE browser.
7. Not support MPEG4 CGI, this CGI is replaced with Encoder CGI.
8. When OSG function is activated, the snapshot function will be only available from channel 1.
9. The "Ready for service" and "Service is not available" had been renamed to "Device boots successfully" and "Reboot device" in Event triggered list.
10. H.264 level 5 is for 3M and higher video resolution, level 3 is for VGA and lower and level 4 is for 720p and 1080p.
11. ONVIF function is disabled by default. Please enable the ONVIF in "Network" page from Web Configurator or by the following URL command for ONVIF testing.  
[http://ip:port/cgi-bin/cmd/system?ONVIF\\_STATE=1](http://ip:port/cgi-bin/cmd/system?ONVIF_STATE=1) or  
[http://ip:port/cgi-bin/system?USER=admin&PWD=123456&ONVIF\\_STATE=1](http://ip:port/cgi-bin/system?USER=admin&PWD=123456&ONVIF_STATE=1)  
(USER is camera's root account name, PWD is password.)
12. FPS number of model I92/I94/I96 is 27 fps at 1080p resolution.
13. For High frame rate mode, image sensor output will up to 60FPS at 1280 x 720 resolution if the shutter speed is 1/100 sec or higher in the 50Hz power line frequency environment.
14. For plug-in application in browser, it is recommended to install the browser and then install the plug-in application.
15. QuickTime plug-in application is not available for 5M and above resolution with H.264 Level 5.1.
16. PTZ control panel in web UI can configure up to 32 preset points and 32 preset tour points in a tour group. You can configure the additional preset points up to 256 by using PTZ URL command.

17. When video resolution is 3648x2160, camera might not be able to switch back to day mode.
18. Firmware version V6.07 and future versions had a disparate database structure for local storage function from previous version, therefore please format the local storage again after upgrading to v6.07, otherwise camera will remove the video which is recorded from v6.06.16 and previous versions. Besides, Edge Recorder Client V1.0.02 and earlier software version will be not compatible with camera firmware v6.07.

# Upgrade

To achieve the best possible functionality and video quality of the camera, performing both camera firmware and the ISP firmware upgrade is recommended.

You can use the IP Utility 4.3.08 or later version to upgrade both camera firmware and ISP conveniently and can upgrade multiple cameras at the same time using IP Utility.

## Firmware upgrade notice

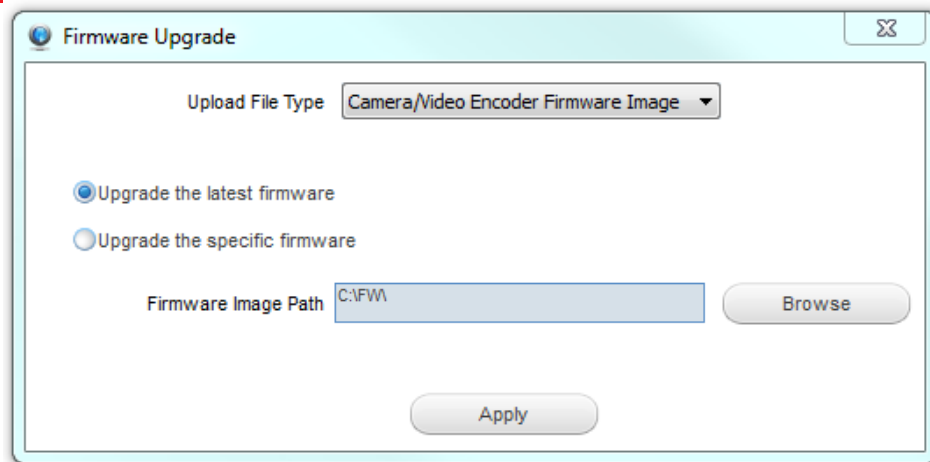
Firmware Version Before Upgrading	Firmware upgrade rule	Upgrade by
6.01.03 or earlier	Please upgrade to v6.01.06 first, then upgrade to v6.04.15 directly	1.Camera Web Configurator via Microsoft Internet Explorer 8.0 or newer
6.04.15 or newer	Please upgrade to v6.09.45 directly	2.IP Utility v4.3

## Camera Firmware Upgrade Procedure

1. Please unzip the image package, it included V6.07.24 camera firmware Image and ISP firmware image for I series camera.
2. Run IP Utility.
3. Please select the camera models you want to upgrade in the model list that IP Utility has found. At this point you can see directly within IP Utility which D/E/B/I models do not have the latest camera firmware yet.
4. Input camera's account, password and HTTP port number value and click "Firmware Upgrade" on Configuration tool bar.

Account  Password  Http Port

The following pop-up window will appear.



5. Please save the downloaded firmware files and keep their filenames unchanged. (It is suggested to place the firmware files in the same folder with IP Utility for easy management)
6. Select “Camera/Video Encoder Firmware Image” and “Upgrade the latest firmware” to have IP Utility automatically decide the firmware file <A1D-500-V6.09.45-AC.upg> from the location you give. Please click “Browse” button to choose the specific “Firmware Image Path” folder location, and click “Apply”.

The device needs 2 minutes for FW upgrading, and it will reboot automatically and show return message “Success” after the image upload completes.

7. Then user can check FW Version in IP Utility or login to camera’s Web Configurator by typing the camera’s IP address to the IE browser’s address bar to check if the new camera’s firmware has been correctly loaded into camera.  
“Setup” → “System” → “System Info”  
If you see the new firmware version there, then everything is correct.

## New ISP firmware Version

I Series		Camera Firmware	ISP			IP Utility
			ISP Firmware	ISP Resource	ISP Hardware	
I91-I96, I910, I912	Version	V6.09.45	<b>V2.01.12</b>	V2.01.12		V4.3.08 and later
	Filename	A1D-500-V6.09.45-AC	ISP-U-0521-V2.01.12.bin			
I24, I25, I27, I44, I45, I47	Version	V6.09.45	<b>V1.02.01</b>	V1.02.01		
	Filename	A1D-500-V6.09.45-AC	ISP-U-0331-V1.02.01.bin			
I51, I71, I73	Version	V6.09.45	<b>V1.03.07</b>	V1.03.07	V1.00.15	
	Filename	A1D-500-V6.09.45-AC	ISP-U-0221-V1.03.07.bin			

For other models, there is no requirement for ISP firmware upgrading.

## ISP Firmware Upgrade Procedure

Some models have ISP firmware can be upgraded. To achieve the best possible functionality and video quality of the camera, ISP firmware should be upgraded.

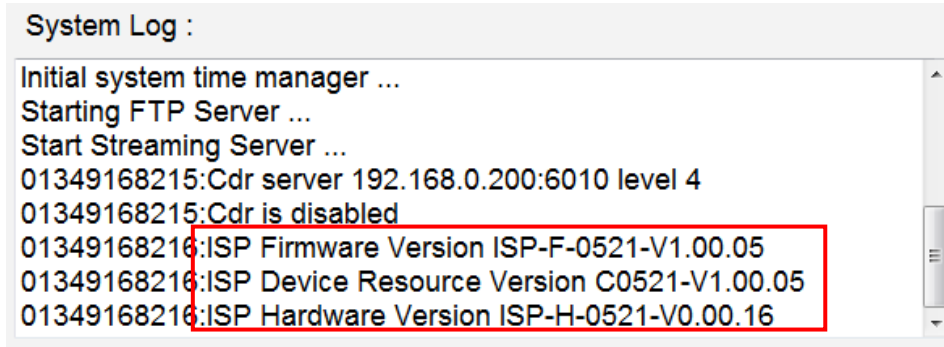
Before you start to upgrade the ISP, please check the camera already upgrade to camera latest version **V6.09.45**

1. First, please make sure whether the camera you are trying to upgrade already has the latest ISP firmware or not. To confirm that, please login to camera's Web Configurator by typing the camera's IP address to the IE browser's address bar and click following buttons then:

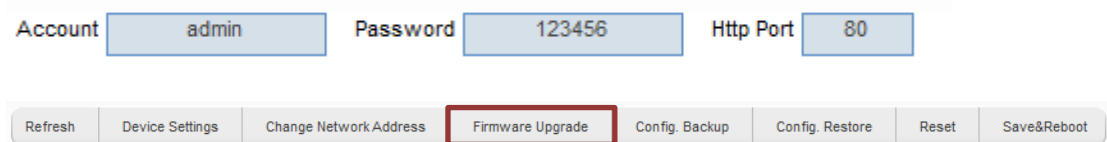
**“Setup” → “System” → “System Info” → “System Log”**

You will see ISP items there – ISP Firmware Version, ISP Device Resource Version and ISP Hardware.

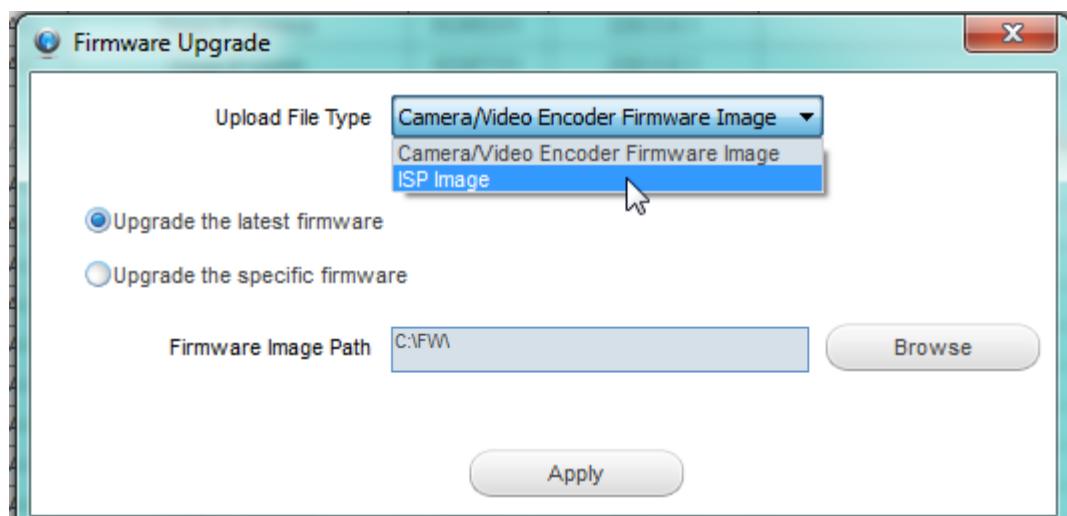
Example: I94



2. Please save the downloaded firmware files and keep their filenames unchanged.(It is suggested to place the firmware files in the same folder with IP Utility for easy management)
3. Run IP Utility v4.3.08 or later version.
4. Please select the camera models you want to upgrade in the model list that IP Utility has found.
5. Input camera's account, password and http port number value and click "Firmware Upgrade" on Configuration tool bar.

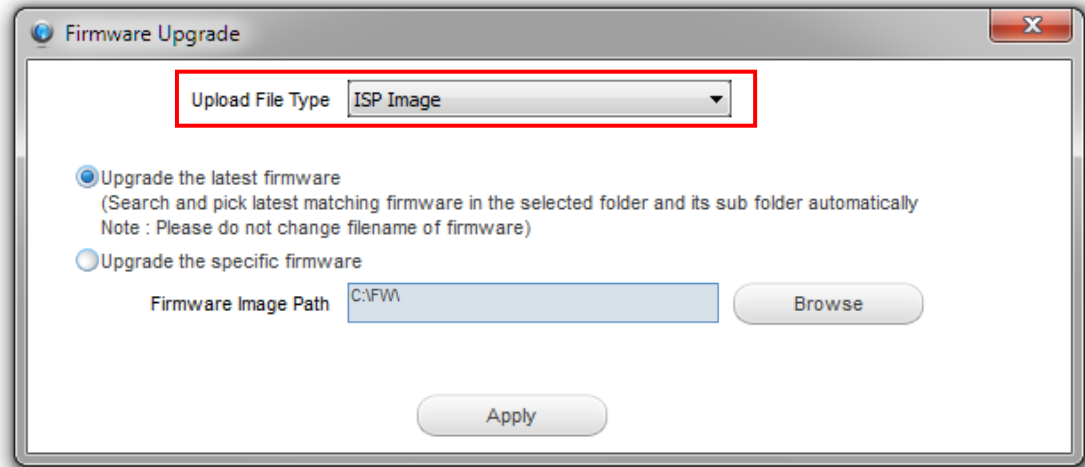


The following pop-up window will appear.





- Please select “Upgrade the latest firmware” to have IP Utility automatically decide the firmware file from the location you give.



The device needs 7 minutes for ISP upgrading, and it will reboot automatically and show return message “Success” after the image upload completes.

- After successful upgrade the ISP firmware, please login to camera’s Web Configurator by typing the camera’s IP address to the IE browser’s address bar to check if the new camera’s ISP firmware has been correctly loaded into camera.

**“Setup” → “System” → “System Info” → “System Log”**

If you see the new ISP Firmware version there, then everything is correct.

## Download and Documentation

V6.09.45 is official released, the Firmware User Manual and Release Notes are available for download on ACTi.

You may also visit ACTi Download Center for updates and documents

<http://www.acti.com/downloadcenter>

## Support

If you have any question or need additional assistance, please feel free to contact our engineers via our **Customer Help Desk** platform <http://www.acti.com/CHD>