



American Dynamics

From Tyco Security Products

Release Notes

Illustra 825 Fisheye Camera



Firmware Version	Product Data
1.0.0 (1.0.0.B5860AC344)	Visit the IP Cameras section of our web site – www.americandynamics.net – to download datasheets and other documentation in PDF format.

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Note

In case of discrepancy, the information in this document supersedes the information in any document referenced herein.

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What's in This Release

Introduction

This document contains a summary of the key features and known limitations of Illustra 825 Fisheye Camera (i825 Fisheye) firmware release 1.0.0.

For detailed information on Illustra 825 Fisheye, including guidance on installation and operation, refer to the 8200-1301-01 Configuration and User Guide on the DVD or to the Help file on the Illustra 825 Fisheye Camera GUI.

Overview

The Illustra 825 fisheye is a 360° single sensor camera which provides a unique user application as compared to fixed cameras and PTZ cameras. It has remotely programmable control and operates across an IP network or a LAN. The video from the camera is compressed and sent across the network using IP transport mechanisms. ePTZ camera control from IP-connected clients will be passed to the dome control electronics, allowing complete functionality. The IP camera can operate as a standalone camera on a network however it is intended to be integrated into sophisticated security solutions.

A built-in web server will provide web pages for configuration and will stream the camera video using a selectable set of protocols with a standardized transport stream using Internet Explorer version 8 and higher.

It offers full HD resolution video streams using H.264 or MJPEG codecs at up to 15fps.

The i825 Fisheye is compatible with American Dynamics Video Edge NVR, and VideoEdge Hybrid integrating using Illustra API v3.0 (iAPI v3.0). This creates an integrated environment that allows you to access and control video remotely over a network, whether your surveillance system is small or large. The combined user interfaces allows for camera configuration and operation via American Dynamics victor Unified Client including direct access to the camera for advanced settings, direct web connect to the Network Video Recorder, and access via browser to the camera where needed for configuration. The Illustra 825 Fisheye can also integrate with other network video recording systems using iAPI v3.0.

The i825 Fisheye is a Network Video Transmitter (NVT) compliant with ONVIF 2.4 Profile S standards and can interface with network video clients supporting ONVIF.

The i825 Fisheye is available in the following configurations:

i825 Fisheye Model Description	Product Codes
Illustra 825 Fisheye 5MP, indoor, white, vandal	ADCi825-F311
Illustra 825 Fisheye 5MP, indoor, white, non-vandal	ADCi825-F312

Firmware Upgrade

The Illustra 825 Fisheye Camera can be upgraded via the camera web GUI or by using Illustra Connect Tool.

Upgrade Camera Firmware via the Web GUI

Note:

All existing camera settings are maintained when the firmware is upgraded.

Procedure: Upgrade Camera Firmware via the Web GUI

1. Using Internet Explorer connect to the camera via the IP Address and login to the Web GUI.
2. Select **Setup** from the web banner to access the setup menus.
3. Select **Maintenance** from the menu.
4. Select **Camera Upgrade** from the Maintenance menu. The Camera Upgrade tab displays.
5. Select **Browse**. The Choose file dialog will be displayed.
6. Navigate to the location where the firmware file has been saved. Select the firmware file then select the **Open** button.
7. Select **Upload**. The file transfer will begin and a progress bar will be displayed.

Upgrade Camera Firmware via Illustra Connect

Note:

All existing camera settings are maintained when the firmware is upgraded.

Procedure: Update Camera Firmware via Illustra Connect

1. Install and launch the Illustra Connect software utility
2. From the displayed list of cameras; right-click on the camera requiring the software upgrade.
3. Select **Upgrade Firmware**. The Firmware Upload window will display.
4. Select **Choose File** and browse to the firmware upgrade file.
5. Select **Upgrade** to start the upgrade.

Key Features

- High resolution, 5 megapixel, imager
- Fisheye lens with FOV of 180°
- Ceiling mount option, with 360° rotation pan, tilt and zoom distortion corrections
- Wall mount option, with 180° horizontal pan, vertical tilt and zoom distortion corrections
- Four individually PTZ controlled distortion corrected sub-views
- Multiple IP streams of H.264 and MJPEG video which are user selectable as
 - 3MP 1936x1936 @14 fps Uncorrected Fisheye Stream
 - AND up to 1080p @15 fps 360° ceiling mode corrected Panoramic stream
 - OR up to 1080p @15 fps 180° wall mode corrected Panoramic stream
 - OR up to 4 960x540 @ 12 fps PTZ controllable corrected sub-view Active Images
- Integration with American Dynamics VideoEdge NVR, VideoEdge Hybrid, victor Unified Client
- Integration with Illustra Connect v 1.1.0.1259
- Illustra API v3.0
- ONVIF 2.4 profile S compliant
- PoE powered
- Easy to install
- Outstanding color reproduction
- Sleek and compact design
- Motion Detection support on camera
- Wide Dynamic Range
- Auto & Manual White Balance Modes
- Eventing with RTP meta-data streaming
- Up to four Privacy Zones support
- Frame noise reduction
- SD card event buffering(requires micro-SD or SD-HC card)

Specific Feature Information

MicroSD Card

A MicroSD card pre-formatted with FAT32 to a maximum size of 32GB is supported

Video Streaming

Illustra 825 Fisheye supports H.264 and MJPEG codec with resolution of up to 1936x1936 and 15ips.

- *Codec's supported:*
H.264 (High Profile) or MJPEG
- *Resolutions supported:*
Fisheye: 1936x1936
Panoramic Views: 1920x1080, 1600x900, 1280x720, 1024x576, 960x540, 800x450, 640x360, 480x270 or 320x180

Active Images: 960x540, 800x450, 640x360, 480x270, 320x180

- *MJPEG Quality:*
1 to 100
- *H.264 VBR Quality:*
5 pre-defined quality presets for VBR: Highest, High, Medium, Low and Lowest
Available through the Web GUI or iAPI.
- *H.264 CBR target bit rate:*
16kbs to 10000kpbs
- *Frame rate:*
Up to 15 ips

MJPEG usage consideration

MJPEG video does not use any temporal compression but only use spatial compression making its bandwidth requirements much greater than H264.

The following Quality settings are recommended to optimize bandwidth utilization when using MJPEG spatial compression at high resolution:

Resolution	FPS	Recommended Maximum Quality
1936x1936	14	60
1920x1080	15	70
1920x1080	7	80
1600x900	15	75
1600x900	7	85
1280x720	15	80
1280x720	7	90
960x540	12	70

Multicast

Illustra 825 Fisheye supports RTSP multicasting of video as per RFC2326 and continuous multicasting of RTP data via ONVIF media service configuration and StartMulticastStreaming and StopMulticastStreaming.

PTZ

PTZ operations may be performed manually or as part of a configured pattern, preset or scan on any configured Active Image stream. Each active image can have PTZ operations configured independently.

Note: only one PTZ feature can run on this camera at the one time

Motion Detection

The Illustra 825 Fisheye can perform motion detection on one of the available image sources. The Region of Interest is defined through the Web GUI along with the sensitivity. Upon triggering of motion detection, the camera will raise a Motion Start Event in the Current Events

tabs under Support. The camera can also be configured to perform actions when a motion detection event is triggered.

Privacy Zones

The Illustra 825 Fisheye can be configured with up to four privacy zones. The privacy zones are defined on the Fisheye view using a drawing tool available through the Web GUI. When defined, these zones will be covered in all warped and dewarped streams.

American Dynamics VideoEdge NVR/VideoEdge Hybrid Integration

Illustra 825 Fisheye integrates with the following versions of American Dynamics VideoEdge NVR and the VideoEdge Hybrid.

- American Dynamics VideoEdge NVR/ VideoEdge Hybrid version 4.4 with camera Handler 4.4.0.18034 Refer to the American Dynamics VideoEdge Camera Handler Release Notes for integration information with upcoming releases.

Illustra API

Illustra 825 Fisheye supports Illustra API v3.0. Complete API documentation and specific details of i825 Fisheye implementation is available to American Dynamics partners.

ONVIF 2.4 Profile S Conformance

Illustra 825 Fisheye is conformant with ONVIF 2.4 Profile S and has been tested with ONVIF Device Test Tool version 13.06.

ONVIF Authentication

Illustra 825 Fisheye supports WS-UsernameToken for ONVIF authentication.

This authentication protocol requires that both communicating devices have synchronized their clocks within a 5 minutes tolerance window. The administrator needs to ensure that the camera time is configured prior to enabling ONVIF authentication.

ONVIF authentication is automatically disabled if the built-in “admin” user has the default “admin” password. To enable ONVIF authentication, the administrator must change the password of the built-in “admin” user.

ONVIF authentication can also be disabled via the Web GUI:

1. Select Advanced Settings from the Networking menu.
2. Select the Remote Access tab.
3. Deselect the ONVIF Discovery Mode check box to disable the feature.

Mounting Options

The Illustra 825 Fisheye is intended to be mounted in either ceiling or wall mount configuration. At camera configuration the mounting orientation of the camera is set through the Web GUI. When configured to Ceiling mode, a 360° Dewarped Panoramic stream is available while in Wall mode, 180° Dewarped Panoramic stream is available. In Ceiling mode, PTZ operation is

available on the full 360° view while in Wall mode this is constrained to the 180° Field of view. PTZ operation is only available on Active Images. Following a change in Camera Mounting orientation camera will reset:

- Any Presets, Patterns, Sequences or Scans Scheduled Tasks that have been configured will be removed.
- Configured streams will be reset. Stream 1 will be reset to Fisheye and Stream 2 will reset to Wall Panorama or Ceiling Panorama (depending on the mounting option selected).

Auto White Balance (AWB)

The camera will support three modes in the Automatic White Balance tab. The three modes will be selectable using a select box

1. Auto Normal: balances the red, green and blue gains automatically
2. Auto Wide: Balances the red, green and blue gain over a wider color temperature range.
3. Manual Mode: Allows the user to manually configure the image's red and blue gains

Picture Settings

- On reboot the camera will return to the last "Save Picture Settings"
- On power reset the camera will return to the last "Save Picture Settings"
- If "Save Picture Settings" has never been used, the saved settings are equivalent to Defaults.
- It is recommended to "Save Picture Settings" at the end of commissioning so that these settings are preserved in case of a power cut.

Picture settings can be saved via the Web GUI:

1. Select Picture Settings from the Video menu.
2. Select the Picture Settings tab.
3. Select Save to save and retain the current picture settings.

Power Cycling

When performing a power cycle the power cable should be left unconnected for 20 seconds prior to re-connection. If the cable is connected too soon a failed boot may occur.

Patterns

The camera has a 15 minutes pattern timeout. Pattern recording will be cancelled after this time. When the camera is recording a pattern, there will be limited functionality (e.g. no PTZ actions can be launched).

Time Zones

Time zones listed without cities are generic – these time zones have daylight saving disabled.

Web GUI

Web GUI Video Streaming

The Web GUI requires the installation of Apple Quicktime to stream video. Quicktime 7.7. or above is recommended. Java (version 7 or above) is also required for motion detection configuration features

Remote Shell Access

Illustra 825 Fisheye has remote shell access capability using the SSH protocol. This is disabled by default.

Shell access should only be used by American Dynamics Support Engineers for advanced investigation. The engineer needs to SSH to the camera using the “service” user and the camera specific password for the “service” user. The engineer can then gain root privileges by using the “su –” command in combination with the camera specific password for the “root” user.

On Screen Display

Time and camera name are available and configurable utilizing the Web GUI. These OSD will only apply to Fisheye and Active Stream

Known Limitations and Issues

PRODUCT	
Description	Suggested Work-Around
In Wall mount options -if factory defaulting and retaining PTZ Preset Pattern and Sequences, camera Mount will be changed from wall to ceiling – this will invalidate the retained Presets Patterns and Sequences making them unusable.	<p>If on wall mount avoid Selecting retain Preset pattern and sequences</p> <p>If already selected and execute Reset again without preserving Preset pattern and sequences</p>
ONVIF integration: When configuring the i825 Fisheye settings from an ONVIF client any changes made will not be reflected in the i825 Fisheye web GUI.	Only the ONVIF client should be used for changing and querying i825 Fisheye settings. The i825 web GUI should not be used in this configuration.
Camera will only support a single Fisheye or Panorama stream or dual stream on Active Image streams. With the camera GUI live view actively streaming and trying to enable meta data (secondary/dual stream) on the NVR will cause the NVR stream to stop. This is due to trying to open a 3rd video stream which the camera does not support.	<p>User should configure the camera on the NVR for stream 1 & 2 before logging into the camera GUI.</p> <p>User should not access/modify live video stream 1 or 2 on the camera GUI while the camera is configured on the NVR.</p>
Backup files are camera specific and therefore should not be installed on different cameras.	None
Editing date or time will stop any running PTZ features (scan and pattern).	After editing date or time execute PTZ feature again.
User will notice a pink tint to the Ceiling Panorama image when changing between live streams in the GUI – this is an AWB adjustment and will only last a few seconds.	None
When set to Wall mount - Default Scan limits show -300 and 300 on page when first accessed but these are -30 and 30 – these will show when page is refreshed.	Refresh page to show correct values
Wall Mode Scan - Left Scan limit can be set to be lowered than Right Scan Limit. This configuration will cause scan only to run once and the stop.	Configure scans with left scan limit to be higher than right
IE cache intermittent issue - changing image mount under motion detection tab does not always update stream in java applet.	Save new stream selection and navigate away from the page and return to page to see correct stream.

PRODUCT	
Description	Suggested Work-Around
IP Filtering table is not cleared with a Factory Default.	Manually clear the table
After discovery with Illustra Connect, if the list is refreshed the Product name will show extra entry added to the actual name. This is just cosmetic.	Clear list or restart Illustra connect
The i825 Fisheye may accept the firmware upgrade from the i625 PTZ, this will only reboot the camera – changes should not be applied to current firmware.	Only use model specific firmware
i825 Fisheye FTP may result in 1 second less than buffer set – example pre and post buffer of 5 seconds create a clip of 9 seconds.	None
Picture setting - profile restore button will only display during the active session. Once logged out the restore button is no longer available 'Restore' picture settings is not available after a reboot.	None
Live View buttons are not localized for all languages.	None
Privacy zones - When drawing a privacy zone if you touch the border of the image, you lose control of the resize.	Do not allow the zone to extend further than the draw area.
ONVIF XML metadata message does not have the <tt:Event> envelope.	None
Fisheye image will not stream at 1fps and CBR=16 or CBR=10000.	Stream Fisheye stream at higher FPS
Auto white balance changes are not localized.	N/A
When setting manual Red and Blue at specific low end (1-5) or 100 manual values, auto white balance may not set correctly when selected.	Manually set Higher red and blue values prior to choosing auto settings
The i825 Firewall IP filter will not reload once camera is rebooted , even if GUI will give the impression this is active.	Reconfigure IP Filtering again

Technical Tips

PRODUCT	
Description	Suggested Work-Around
The camera should be configured accordingly prior to being added to a recorder. If Factory defaulting the camera it is recommended to remove it from the Recorder and reconfigure settings prior to adding back to recorder.	
Logs & Boot log Filter by name will not work if previous result returned 0 values (lines set to 0).	When using the filter ensure that the lines field has the number of maximum lines you want to see (figure must be greater than 0)
Date and Time can't be synchronized with an NTP server on an Windows XP machine.	N/A
Camera will only support a single Fisheye or Panorama stream or a max of 2 Active Image streams. With the camera GUI live view actively streaming and trying to enable meta data (secondary/dual stream) on the NVR will cause the NVR stream to stop. This is due to trying to open a 3rd video stream which the camera does not support.	<p>User should configure the camera on the NVR for stream 1 & 2 before logging into the camera GUI.</p> <p>User should not access/modify live video stream 1 or 2 on the camera GUI while the camera is configured on the NVR.</p>
With the camera GUI live view actively streaming (or codec sharing) a Stream on NVR, if the user changes the (codec sharing) stream configuration on NVR, this will not update the stream configuration on the camera GUI. This is due to the camera remembering the old rtsp session parameters and therefore the camera live video may fail to stream if you start and stop video. The camera will not automatically be updated with the new stream parameters from NVR.	User can refresh the camera web page or log out of the camera GUI and log back in again.

Contact Information

If you have any questions regarding these release notes, please contact American Dynamics Technical Services at:

Toll Free: 800-507-6268, Option 2

International: 561-912-6259, Option 2

Alternative Number: 800-392-2873

Fax: 450-444-2029

Hours: 08:00 – 20:00 EST

Email: adtechservices@tycoint.com

Website: www.americandynamics.net

In Europe, Middle East and Africa, contact Technical Support at:

Toll Free: +800 CALLTYCO or +800-2255 8926

Direct: +31 475 352 722

Hours: 08:00 – 18:00 CET

Email: tsp.emea.video.support@tycoint.com

Website: www.tycosecurityproductsemea.com

Website: www.calltyco.com

Local Direct dial numbers:

UK 08701 238 787

Bahrain 800 04127

France 0800 90 79 72

Greece 00800 31 229 453

Spain 900 99 39 61

Russia 810 800 20 521 031

Germany 0800 1806 757

Turkey 00800 31 923 007

Italy 0800 874 091

United Arab Emirates 800 0310 7123

Belgium 0800 76 452

Israel 03 345 6868

Ireland 021 480 1122

In Latin America and Caribbean, contact Technical Support at:

Southern Latin America

Contact: Cesar Cristal
Phone: +54-11-4711-8711
Cell: +54911-6452-7573
Email: cristal@tycoint.com

Brazil

Contact: Mauro Altino
Phone: +55-11-3443-7232
Cell: +55-11-8998-9770
Email: maltino@tycoint.com

Northern Latin America & Caribbean

Contact: Hildebrando Duran
Phone: +57-1638-6278
Cell: +57-317668-9590
Email: hiduran@tycoint.com

Mexico

Contact: Marco Antonio Salguero
Phone: +52-55-5488-8092
Cell: +52-55-1473-4946
Email: msalguero@tycoint.com

In Asia Pacific, contact Technical Support at:

Toll Free: +800 CALLTYCO or +800-2255 8926

Direct: +86 21 60 23 0650

China Only Hotline: 400 671 1528

India Only Hotline: 1 800 1082 008

Hours: 08:00 – 17:00 CST

Email: apac.support@tycoint.com

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