

## Release Notes

### Illustra Pro Compact and Micro Domes

| Product Code  | Model Name                          | Firmware            |
|---------------|-------------------------------------|---------------------|
| IPS02CFOCWST  | Illustra Pro2 2MP Compact           | SS005.01.09.05.0008 |
| IPS03CFOCWST  | Illustra Pro2 3MP Compact           | SS005.01.09.05.0008 |
| IPS02HFANWST2 | Illustra Pro2 2MP Indoor Micro Dome | SS005.01.09.05.0008 |

#### Product Data

Visit the IP Cameras section of our web site, [www.illustracameras.com](http://www.illustracameras.com), to download datasheets and other documentation in PDF format.

November 2021

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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

### What's New

#### Firmware SS005.01.09.05.0008

- Corrected lens configuration in some cameras.

### Previous Firmware Version

#### Firmware SS005.01.09.04.0003

- Introduces the Encrypted SD Card Storage feature.
- Introduces the Certificate Signing Request (CSR) feature.
- ONVIF profile FPS fix.
- SD card enhancements
- Cyber security enhancements
- Bug fixes

**Note:** After a camera is upgraded to SS005.01.09.04.0002 the camera cannot be downgraded – user will get an 'Operation failed' error message.

#### Firmware SS005.01.07.00.0094

- New stream tables for 2MP Compact dome & 2MP & 3MP Micro camera. Please reference stream table appendix.
- Periodic Events – User can set up Events to trigger periodically rather than on alarm triggers (if upgrading a camera factory reset is require to initiate function).

#### Firmware SS005.01.06.06.0065

1. Enhancements in camera security, password rules changes  
For Standard Security the password must meet the following requirements:
  - **Password change is mandatory after first boot.**
  - New Password should be a minimum of five characters long.
  - **New Password cannot be admin.**
2. For Enhanced Security the password must meet the following requirements:  
Be a minimum of eight characters long.  
**Have at least one character from each of the following character groups:**
  - Upper-case letters – ABCDEFGHIJKLMNOPQRSTUVWXYZ
  - Lower-case letters - abcdefghijklmnopqrstuvwxyz
  - Numeric characters – 0123456789
  - Special characters - @ % + \ / ' ! # \$ ^ ? : , ( ) { } [ ] ~ - \_ `
  - The password cannot contain the username (case sensitive).
3. Cyber security enhancements.
4. iAPI3 support for Relative Move (RelativeMove).

### Firmware SS005.01.06.05.0026

- Edge Motion Analytics Offline Network Optimization: a mechanism for a client to obtain status for a historic or ongoing analytic event upon opening a new subscription, for example after a network outage.
- Added resolution of 640x480 for Stream, 2 & 3 on 2MP & 3MP fixed cameras (factory reset required to pick up the fix).
- Time zone fix for GMT -6 Mexico City (factory reset required to pick up the fix).
- HTTP Digest no longer disables video over HTTP when selected.
- Smart Vue Mode – SD card access now granted.

### Firmware SS005.01.06.02.0065

1. Add the following new camera model to the line.

| Product Code  | Model Name                          | Description   |
|---------------|-------------------------------------|---|
| IPS02HFANWST2 | Illustra Pro2 2MP Indoor Micro Dome | Illustra Pro 2MP Micro, 2.8MM, indoor, non-vandal, white, SDN, TWDR |

### Firmware SS005.01.06.01.0049

1. Support for SmartVue Cloud services.
2. Added H625, H265+ Intellizip for Edge Recording.

### Firmware SS005.01.05.01.0771

New Security Feature:

1. HOST ID: The camera GUI prompts the admin user to create a Host ID after the following:
  - The user logs in to the camera GUI for the first time if the camera is running Firmware SS005.01.05.01.0771 and above.
  - The user logs in to the camera GUI of a camera running Firmware SS005.01.05.01.0771 and above after resetting the camera.
  - The user logs in to the camera GUI after upgrading from an earlier released firmware to Firmware SS005.01.05.01.0771 and above.

This Host ID must consist of 6 character (letters and/or numbers: A-Z, a-z, 1-9) and be unique to the end user/camera.

For security reasons the Host ID is not stored on the camera. The Host ID must be presented to Illustra Technical Support when remote access to the operating system is required.

2. It's no longer necessary to restart an Intellizip stream after the image is rotated in order to correct Intellizip built in ROI position.

**Firmware SS005.01.04.00.0037**

Introducing the new 2MP and 3MP Pro Compact camera models:

| Product Code | Model Name               | Description  |
|--------------|--------------------------|--|
| IPS02CFOCWST | Illustra Pro 2MP Compact | Illustra Pro 2MP Compact Dome, 2.8mm, outdoor, vandal, clear, white, SDN, TWDR |
| IPS03CFOCWST | Illustra Pro 3MP Compact | Illustra Pro 3MP Compact Dome, 2.8mm, outdoor, vandal, clear, white, SDN, TWDR |

## Features

### Key Features

- High resolution, up to 3 megapixel images, Multiple IP streams of H.264, H.264IntelliZip, H.265, H.265IntelliZip and MJPEG video
- Integration with VideoEdge NVR, VideoEdge Hybrid, victor Unified Client, ExacqVision recorders and Clients
- Integration with Illustra Connect v 3.2 and above
- Illustra API v3.4
- ONVIF 2.4 profile S compliant
- Power over Ethernet (PoE)
- Motion Detection and Blur Detection support on camera
- Wide Dynamic Range, TWDR and TWDR3x model specific
- Auto & Manual White Balance Modes
- Eventing with RTP meta-data streaming
- Support for up to five Regions of Interest
- Support for up to nine Privacy Zones
- Enhanced Security
- Support for FTP, SNMP, SMTP, CIFS, 8021.x and Firewall filtering
- SD card event buffering (requires micro-SD or SD-HC card)
- Offline recording to SD card
- SD card event download
- TrickleStor integration with VENVR
- Outstanding color reproduction
- No dependencies on 3rd Party Utilities for Camera Setup (No QuickTime and Java requirements)
- Expanded Browser Support: IE, Chrome, Firefox, Safari
- UPnP Discovery
- Easy to install
- Sleek and compact design
- Corridor Mode
- CloudVue integration

## **Firmware Upgrade**

You can upgrade the Illustra Pro compact camera through the camera web GUI or by using Illustra Connect.

### **Upgrade Camera Firmware through the Web GUI**

**NOTE:**

All camera settings are maintained after you upgrade the camera firmware.

It is recommended to clear your browser cache after a firmware upgrade.

#### **Procedure: Upgrade Camera Firmware through 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 **System** menu and identify the **Camera Upgrade** section.
4. Select **Browse**. The Choose file dialog displays.
5. Navigate to the location where the firmware file has been saved. Select the firmware file then select the **Open** button.
6. Select **Upload**. The file transfer begins and a progress bar displays.

### **Upgrade Camera Firmware through Illustra Connect**

**NOTE:**

All camera settings are maintained after you upgrade the camera firmware.

#### **Procedure: Update Camera Firmware through 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.

## Features

### Accessing the Illustra Pro Series Camera Web User Interface for the first time

1. Select a supported browser and navigate to the camera IP address.
2. When you select the camera, the sign in page is displayed.
3. Select your preferred language from the drop-down menu. The default language is English.
4. Enter the default username and password when prompted - Username: admin, Password: admin.
5. Click **Log in**. The camera Web User Interface is displayed. The first time that you access the camera, or after a factory reset, you are prompted to **Define a Host ID** and **Select a Security Type**.

**Define a Host ID:** The admin user must enter a 6 character code for the Host ID that includes both letters and/or numbers. This unique password is used to access the operating system files. The HostID is not stored on the camera for security reasons and must be presented to Illustra Technical Support when remote access to the operating system is required.

**Select a Security Type:** Standard Security or Enhanced Security. If you are keeping Standard Security, default admin password change is **enforced**.

6. Optional - If you select the Enhanced Security option, you are required and instructed to change the username and create a complex password.

**See below for further information on Security configuration.**

## Enhanced Security

The Enhanced Security feature intends to advance the security of the Illustra cameras by enforcing security best practices and adding features to allow the installer and end-users to customize the camera's security to meet their controls.

## Security Modes Summary

### Standard Security

1. Default admin password change is enforced.
2. Changes to communication protocols is available to all users with appropriate privileges.
3. Passwords complexity is set to require minimum of any 5 characters (admin cannot be used).
4. Authentication Method is set to basic by default.

### Enhanced Security

1. Unsecure Protocols are disabled by default until enabled by a user.
2. Discovery Protocols are disabled by default until enabled by a user.
3. Changes in the protocols will only be available to a user with administrative privileges and require that user to re-enter their password.
4. Default admin username & password change is enforced.
5. Usernames for all accounts must meet the Username Password Complexity Requirements, which are de- tailed below.
6. Passwords for all accounts must meet the Password Complexity Requirements, which are detailed below.
7. AUTHENTICATION OF VIDEO STREAM ,INCLUDING DISABLING VIDEO OVER HTTPS
8. Authentication Method is set to HTTPS Digest by default (HTTP disabled).

**Note:** When applying Enhanced security all these changes will be done automatically, but if changing from Enhanced to Standard the settings will not be changed automatically – to reset to standard profileuser will need to do changes manually or factory reset camera and select standard Security when prompted.

## Username and Password Complexity Requirements

Username Complexity for Enhanced Security Mode:

- a. Minimum characters: 5

Password Complexity for Enhanced Security Mode:

- a. Minimum characters: 8
- b. Have least one character from each of the following character groups:
  - i. upper case letters    ABCDEFGHIJKLMNOPQRSTUVWXYZ
  - ii. lower case letters    abcdefghijklmnopqrstuvwxyz
  - iii. numeric characters    0123456789
  - iv. Special characters    @ % + \ / ' ! # \$ ^ ? : , ( ) { } [ ] ~ - \_ `
- c. The password cannot contain the username (case sensitive).

Default admin/admin & Automatic prompt for username and password change at first login

The admin/admin user is hardcoded until security mode is selected on first login.

### For Standard Security

**Password change is mandatory after first login.**

New Password should be a minimum of five characters long.

**New Password cannot be admin.**

### For Enhanced Security

When selected, a pop up is visible requiring you to change your username and password.

- **A username & password change is mandatory** – Note: If the user sets a new username and password – admin/admin is automatically replaced.
- Certain criteria apply to both the username and password (See Username and Password complexity).

### NOTE:

When Enhanced Security is enabled the user is prompted to change the username and password from the default admin/admin. If not all rules are applied then the change request is denied and credentials remain as admin/admin. Failure to comply by rules, intermittently may result in camera log in being unavailable for a few minutes to allow camera to restore default functionality.

### How to restore admin/admin:

1. Restore factory default camera.



## Changes in Enhanced security profile

When changing security to 'enhanced', the camera performs the following changes:

- Admin/admin password automatically replaced by new Enhanced username/password.
- Change from basic to Digest HTTPs authentication.
- Enables RTSP authentication.
- Disables all ONVIF capabilities.
- Disables UPnP Discovery protocol.
- Disables Exacq Audio Ports.

Note: When applying Enhanced security all these changes will be done automatically, but if changing from Enhanced to Standard the settings will not be changed automatically – to reset to standard profile user will need to do changes manually or factory reset camera and select standard Security when prompted.

## Edge Analytics with Enhanced security

When a user requires VENVR Edge analytics or is Integrating with ExacqVision Server, while the camera is in Enhanced Security Mode the user shall be required to manually enable "Video over HTTP" in GUI: Setup/ Security/Remote Access, or Manage the Video over HTTP setting Via GUI Setup/Security Status page.

This allows for VENVR Edge support or Motion and DIO alarms integration on the ExacqVision Server when the camera is on Enhanced Security mode.

## RTSP Authentication

We now require video stream authentication. When the camera gets factory defaulted then RTSP authentication will be enabled.

We don't recommend disabling RTSP authentication, but if required it can be managed via Security Tab in camera GUI.

## Multicast

Multicast streaming is a one-to-many relationship between a camera and the clients receiving the stream. With a multicast stream, the server streams to a multicast IP address on the network, and clients receive the stream by subscribing to the IP address.

User can configure the Multicast via camera GUI or iAPI, on VideoEdge Camera configuration.

The feature was released specifically to integrate with VideoEdge 5.1 Failover.

## VENVR TrickleStor Integration / Offline Record Settings

When you configure the Offline Record Settings feature and once it detects a loss of connection with the recorder, it sends the video stream to the SD card within the unit. This satisfies the loss of video and continues recording. Once the recorder is back online the camera initiates sending recorded video from the SD card to the recorder. The maximum time recording during the outage depends on the SD card and the recorded stream you selected. If the SD reaches full capacity, it deletes video from earliest recording to latest recording. This feature integrates with the VE NVR 5.0 and above. At present this feature is limited to only support Codec: H264 and H264+ Intellizip.

**Note:** TrickleStor integration is not supported under HTTPS connection, please use "both" or HTTP only when integrating with this feature.

## Stream Tables

**Pro Compact Dome 2MP camera stream table – Normal Mode.**

|                 |  | Normal Mode |              |          |       |         |
|-----------------|--|-------------|--------------|----------|-------|---------|
|                 |  | Resolution  | Description  | Max FPS  |       |         |
|                 |  |             |              | TWDR Off | TWDR  | TWDR 3x |
| <b>Stream 1</b> | H264,  | 1920 x 1080 | (1080)p 16:9 | 60       | 30    | 20      |
|                 | H264 IntelliZip,   | 1664 x 936  | (HD+) 16:9   | 60       | 30    | 20      |
|                 | H265,<br>H265 IntelliZip,<br>MJPEG                               | 1280 x 720  | (720p) 16:9  | 60       | 30    | 20      |
| <b>Stream 2</b> | H264,<br>H264 IntelliZip,<br>H265,<br>H265 IntelliZip,<br>MJPEG, | 1280 x 720  | (720p) 16:9  | 30 *1    | 30 *1 | 20      |
|                 |  | 1024 x 576  | (PAL+) 16:9  | 30 *1    | 30 *1 | 20      |
|                 |  | 960 x 544   | 16:9         | 30 *1    | 30 *1 | 20      |
|                 |  | 816 x 464   | 16:9         | 30 *1    | 30 *1 | 20      |
|                 |  | 640 x 480   | 16:9         | 30 *1    | 30 *1 | 20      |
|                 |  | 640 x 360   | (nHD) 16:9   | 30 *1    | 30 *1 | 20      |
| 480 x 272       | 16:9   | 30 *1       | 30 *1        | 20       |       |         |
| <b>Stream 3</b> | MJPEG  | 640 x 480   | 640 VGA 4:3  | 15       | 15    | 15      |
|                 |  | 640 x 360   | nHD 16:9     | 15       | 15    | 15      |
|                 |  | 480 x 272   | 16:9         | 15       | 15    | 15      |

**Note\*1:** Stream 2 is restricted to 15 FPS when Stream 1 is greater than 30FPS.

**Note:** A maximum of 5 concurrent streams are supported by the camera. This includes shared streams.

**Pro Compact Dome 2MP camera stream table – Corridor Mode.**

|                 |  | Corridor Mode |              |          |       |         |
|-----------------|--|---------------|--------------|----------|-------|---------|
|                 |  | Resolution    | Description  | Max FPS  |       |         |
|                 |  |               |              | TWDR Off | TWDR  | TWDR 3x |
| <b>Stream 1</b> | H264,  | 1920 x 1080   | (1080)p 16:9 | 30       | 30    | 20      |
|                 | H264 IntelliZip,   | 1664 x 936    | (HD+) 16:9   | 30       | 30    | 20      |
|                 | H265,<br>H265 IntelliZip,<br>MJPEG                               | 1280 x 720    | (720p) 16:9  | 30       | 30    | 20      |
| <b>Stream 2</b> | H264,<br>H264 IntelliZip,<br>H265,<br>H265 IntelliZip,<br>MJPEG, | 1280 x 720    | (720p) 16:9  | 30 *1    | 30 *1 | 20      |
|                 |  | 1024 x 576    | (PAL+) 16:9  | 30 *1    | 30 *1 | 20      |
|                 |  | 960 x 544     | 16:9         | 30 *1    | 30 *1 | 20      |
|                 |  | 816 x 464     | 16:9         | 30 *1    | 30 *1 | 20      |
|                 |  | 640 x 480     | 16:9         | 30 *1    | 30 *1 | 20      |
|                 |  | 640 x 360     | (nHD) 16:9   | 30 *1    | 30 *1 | 20      |
| 480 x 272       | 16:9   | 30 *1         | 30 *1        | 20       |       |         |
| <b>Stream 3</b> | MJPEG  | 640 x 480     | 640 VGA 4:3  | 15       | 15    | 15      |
|                 |  | 640 x 360     | nHD 9:16     | 15       | 15    | 15      |
|                 |  | 480 x 272     | 9:16         | 15       | 15    | 15      |

**Note\*1:** Stream 2 is restricted to 15 FPS when Stream 1 is greater than 30FPS.

**Note:** A maximum of 5 concurrent streams are supported by the camera. This includes shared streams.

**Pro Compact Dome 3MP camera stream table – Normal Mode.**

|                 |  | Normal Mode |                    |          |       |         |
|-----------------|--|-------------|--------------------|----------|-------|---------|
|                 |  | Resolution  | Description        | Max FPS  |       |         |
|                 |  |             |                    | TWDR Off | TWDR  | TWDR 3x |
| <b>Stream 1</b> | H264,<br>H264 IntelliZip,<br>H265,<br>H265 IntelliZip,<br>MJPEG  | 2048 x 1536 | (QXGA) 4:3 (1080p) | 30       | 30    | 20      |
|                 |  | 1920 x 1080 | 16:9               | 60       | 30    | 20      |
|                 |  | 1664 x 936  | (HD+) 16:9         | 60       | 30    | 20      |
|                 |  | 1280 x 720  | (720p) 16:9        | 60       | 30    | 20      |
| <b>Stream 2</b> | H264,<br>H264 IntelliZip,<br>H265,<br>H265 IntelliZip,<br>MJPEG, | 1280 x 720  | (720p) 16:9        | 30 *1    | 30 *1 | 20      |
|                 |  | 1024 x 576  | (PAL+) 16:9        | 30 *1    | 30 *1 | 20      |
|                 |  | 640 x 480   | 640 VGA 4:3        | 30 *1    | 30 *1 | 20      |
|                 |  | 640 x 360   | (nHD) 16:9         | 30 *1    | 30 *1 | 20      |
|                 |  | 480 x 360   | 480 4:3            | 30 *1    | 30 *1 | 20      |
| 384 x 288       | 4:3  |             |                    |          |       |         |
| <b>Stream 3</b> | MJPEG  | 640 x 480   | 640 VGA 4:3        | 15       | 15    | 15      |
|                 |  | 480 x 360   | nHD 16:9           | 15       | 15    | 15      |
|                 |  | 480 x 360   | 480 4:3            | 15       | 15    | 15      |
|                 |  | 384 x 288   | 4:3                | 15       | 15    | 15      |

**Note\*1:** Stream 2 is restricted to 15 FPS when Stream 1 is greater than 30FPS.

**Note:** A maximum of 5 concurrent streams are supported by the camera. This includes shared streams.

**Pro Compact Dome 3MP camera stream table – Corridor Mode.**

|                 |  | Corridor Mode |              |          |       |         |
|-----------------|--|---------------|--------------|----------|-------|---------|
|                 |  | Resolution    | Description  | Max FPS  |       |         |
|                 |  |               |              | TWDR Off | TWDR  | TWDR 3x |
| <b>Stream 1</b> | H264,<br>H264 IntelliZip,<br>H265,<br>H265 IntelliZip,<br>MJPEG  | 2048 x 1536   | (QXGA) 4:3   | 30       | 30    | 20      |
|                 |  | 1920 x 1080   | (1080p) 9:16 | 30       | 30    | 20      |
|                 |  | 1664 x 936    | (HD+) 9:16   | 30       | 30    | 20      |
|                 |  | 1280 x 720    | (720p) 9:16  | 30       | 30    | 20      |
| <b>Stream 2</b> | H264,<br>H264 IntelliZip,<br>H265,<br>H265 IntelliZip,<br>MJPEG, | 1280 x 720    | (720p) 16:9  | 30 *1    | 30 *1 | 20      |
|                 |  | 800 x 600     | (SVGA) 4:3   | 30 *1    | 30 *1 | 20      |
|                 |  | 640 x 840     | (VGA) 4:3    | 30 *1    | 30 *1 | 20      |
|                 |  | 480 x 360     | 4:3          | 30 *1    | 30 *1 | 20      |
|                 |  | 384 x 288     | 4:3          | 30 *1    | 30 *1 | 20      |
| <b>Stream 3</b> | MJPEG  | 640 x 480     | 640 VGA 4:3  | 15       | 15    | 15      |
|                 |  | 640 x 360     | nHD 9:16     | 15       | 15    | 15      |
|                 |  | 480 x 272     | 480 3:4      | 15       | 15    | 15      |
|                 |  | 384 x 288     | 3:4          | 15       | 15    | 15      |

**Note\*1:** Stream 2 is restricted to 15 FPS when Stream 1 is greater than 30FPS.

**Note:** A maximum of 5 concurrent streams are supported by the camera. This includes shared streams.

**Pro Micro Dome 2MP camera stream table – Normal Mode.**

|           |  | Normal Mode |              |  |       |         |
|-----------|--|-------------|--------------|--|-------|---------|
|           |  | Resolution  | Description  | Max FPS  |       |         |
|           |  |             |              | TWDR Off   | TWDR  | TWDR 3x |
| Stream 1  | H264,<br>H264 IntelliZip,<br>H265,<br>H265 IntelliZip,<br>MJPEG  | 1920 x 1080 | (1080)p 16:9 | 60   | 30    | -       |
|           |  | 1664 x 936  | (HD+) 16:9   | 60   | 30    | -       |
|           |  | 1280 x 720  | (720p) 16:9  | 60   | 30    | -       |
| Stream 2  | H264,<br>H264 IntelliZip,<br>H265,<br>H265 IntelliZip,<br>MJPEG, | 1280 x 720  | (720p) 16:9  | 30 *1<br>30 *1<br>30 *1<br>30 *1<br>30 *1<br>30 *1 | 30 *1 | -       |
|           |  | 1024 x 576  | (PAL+) 16:9  |  | 30 *1 | -       |
|           |  | 960 x 544   | 16:9         |  | 30 *1 | -       |
|           |  | 816 x 464   | 16:9         |  | 30 *1 | -       |
|           |  | 640 x 480   | 16:9         |  | 30 *1 | -       |
|           |  | 640 x 360   | (nHD) 16:9   |  | 30 *1 | -       |
| 480 x 272 | 16:9   | 30 *1       | -            |  |       |         |
| Stream 3  | MJPEG  | 640 x 480   | 640 VGA 4:3  | 15   | 15    | -       |
|           |  | 640 x 360   | nHD 16:9     | 15   | 15    | -       |
|           |  | 480 x 272   | 16:9         | 15   | 15    | -       |

**Note\*1:** Stream 2 is restricted to 15 FPS when Stream 1 is greater than 30FPS.

**Note:** A maximum of 5 concurrent streams are supported by the camera. This includes shared streams.

**Pro Micro Dome 2MP camera stream table – Corridor Mode.**

|           |  | Corridor Mode |              |  |       |         |
|-----------|--|---------------|--------------|--|-------|---------|
|           |  | Resolution    | Description  | Max FPS  |       |         |
|           |  |               |              | TWDR Off   | TWDR  | TWDR 3x |
| Stream 1  | H264,<br>H264 IntelliZip,<br>H265,<br>H265 IntelliZip,<br>MJPEG  | 1920 x 1080   | (1080)p 9:16 | 30   | 30    | -       |
|           |  | 1664 x 936    | (HD+) 9:16   | 30   | 30    | -       |
|           |  | 1280 x 720    | (720p) 9:16  | 30   | 30    | -       |
| Stream 2  | H264,<br>H264 IntelliZip,<br>H265,<br>H265 IntelliZip,<br>MJPEG, | 1280 x 720    | (720p) 16:9  | 30 *1<br>30 *1<br>30 *1<br>30 *1<br>30 *1<br>30 *1 | 30 *1 | -       |
|           |  | 1024 x 576    | (PAL+) 16:9  |  | 30 *1 | -       |
|           |  | 960 x 544     | 9:16         |  | 30 *1 | -       |
|           |  | 816 x 464     | 9:16         |  | 30 *1 | -       |
|           |  | 640 x 480     | 640 VGA 9:16 |  | 30 *1 | -       |
|           |  | 640 x 360     | (nHD) 9:16   |  | 30 *1 | -       |
| 480 x 272 | 9:16   | 30 *1         | -            |  |       |         |
| Stream 3  | MJPEG  | 640 x 480     | 640 VGA 3:4  | 15   | 15    | -       |
|           |  | 640 x 360     | nHD 9:16     | 15   | 15    | -       |
|           |  | 480 x 272     | 9:16         | 15   | 15    | -       |

**Note\*1:** Stream 2 is restricted to 15 FPS when Stream 1 is greater than 30FPS.

**Note:** A maximum of 5 concurrent streams are supported by the camera. This includes shared streams.

## Known Limitations and Issues

| Description  | Suggested Work-Around  |
|--|--|
| The Frequency setting in Exposure can limit FPS to 50FPS if the frame rate is set to 60 and 25 FPS if the frame rate is set to 30 when the frequency is set to 50Hz.   | If FPS needs to be set above 50FPS, Frequency should be set to 60Hz.   |
| CIFS sometimes shows 'Operation Failed' dialog despite all setup on the camera being correct.  | If this occurs please ensure there is sufficient free space on your machine. Also clear out your temporary folders.  |
| Changing Exposure settings on the camera can sometimes affect frame rate, lowering it well below what is set on the camera.  | If frame rate is a priority, it is advised that Maximum Exposure is set to at least '1/60' to reach 60FPS or to '1/30' to reach 30FPS.   |
| Formatting or unmounting a SD Card is sometimes met with a 'Device is Busy' modal.   | This usually means the camera is currently recording a clip to the SD Card. It is advised to wait for a period of time when no clips are being recorded or turn off recording on the camera. |
| Privacy Zones can sometimes move position and resize slightly when stream resolutions are changed.   | It is advised to setup your stream configurations prior to setting up Privacy Zones.   |
| Clip Record (TrickleStor Integration) is not supported when the Stream's codec is set to H265, H265 IntelliZip or MJPEG.   | Ensure your record stream's codec is either H264 or H264 IntelliZip to allow for the Clip Record feature to work.  |
| Video playing through camera GUI may not be live - browser cache issue.  | Refresh page or clear cache.   |
| If streaming to VLC and the camera undergoes a considerable time change either through factory defaulting of the unit, or manual/NTP change, the VLC video goes grey. This is a VLC application Bug – the issue does not occur on other applications or server integrations. | Restart the VLC stream or configure times prior to starting a VLC stream.  |
| Noise banding in TWDR with high Exposure Offset.   | Will be addressed in a future release.   |
| Exposure Offset setting of -2 may lockup in extreme conditions.  | The issue is specific to -2 and specific light conditions, we recommend to use the other available option in Exposure offset.  |

| Description  | Suggested Work-Around   |
|--|---|
| <p>When configuring Event Actions via GUI – the iAPI3 configuration may not reflect the correct configuration for these settings.</p>  | <p>Will be addressed in a future release.</p>   |
| <p>When the user logs out and selects the back arrow on the browser they are brought back into the GUI without being required to log in. Live video is displayed but if the user attempts to navigate to another page within the GUI an authentication pop up is visible. Logging in through this pop up causes issues with time and date.</p>   | <p>When the user manually logs off and then back in there are no issues.</p>                              |
| <p>Under certain lights (Mercury and Sodium outdoor lighting) the user may observe that the picture does not have the correct colors.</p>  | <p>The user can change the White Balance setting from the default 'Auto WB Normal' to 'Auto WB Wide'.</p> |
| <p>When Enhanced Security is enabled the user is prompted to change the username and password from the default admin/admin. If not all rules are applied then the change request is denied and credentials remain as admin/admin. Failure to comply by rules, intermittently may result in camera log in being unavailable for a few minutes to allow camera to restore default functionality.</p> | <p>Ensure that all username and password rules are followed.</p>  |
| <p>At first boot or after a factory reset the camera will sync time zone, date and time with PC used on First Login.</p> <p>However, the camera may select a generic time zone which will not have DST time changes associated to it or, during Daylight saving time, the time zone may be offset if using a workstation on UTC time zone (windows).</p>   | <p>Please check the time zone is assigned correctly at initial boot or after a factory default.</p>       |

| Description   | Suggested Work-Around   |
|---|---|
| <p>ROI should not be used on H264+ and H265+ as it may interfere with coded compression.</p>  | <p>If ROI is required then another codec option should be selected.</p>   |
| <p>When disabling UPnP, note that the camera will still be accessible on some machines as discovery results may have been cached.</p>                           | <p>UPnP will be fully disabled when Enhanced Security is enabled, cached results will also be blocked.</p>  |
| <p>Firewall address filtering settings on backup and restore fail to recover.</p>   | <p>To prevent camera isolation, the 'OFF' option under address filtering is selected after a camera restore, as opposed to the 'Deny' option being restored.</p> <p>All information within the 'Deny' table remains saved after the restore, and can then be selected and altered as desired.</p> |
| <p>Under Admin Login – when managing other user’s accounts – current password is meant for the admin user password and not for the account being managed.</p>   |   |
| <p>In Security status - Changing the value of Authentication will cause a service restart which will result in GUI being inaccessible for about 10 seconds.</p> | <p>Wait 10 seconds for service to restart and GUI working again.</p>  |

| Description   | Suggested Work-Around   |
|---|---|
| <p>Stream 1 will automatically reconfigure stream 2 to 15 FPS if stream 1 is updated to 31 FPS or above.</p>  | <p>GUI will provide a warning of this change but changes via IAPI or ONVIF will change stream 2 without warning.</p>  |
| <p>H265 Framerate is being reported incorrectly in logs.</p>  | <p>Divide the reported framerate by 3 to get the actual framerate of the video.</p>   |
| <p>Changing Video Settings when a clip is recording may produce a corrupt MP4 due to the interruption.</p>  | <p>Setup your stream settings before you enable recording.</p>  |
| <p>Security → Firewall → Address Filtering → Deny option selected.</p> <p>When restoring a camera backup which has the 'Deny' option selected, the Address Filtering tab will have 'Off' selected instead, after the restore is complete.</p> <p>When selecting the 'Deny' option, all IP/MAC addresses that were previously entered remain saved and will be displayed within the table when the 'Deny' option is re-selected.</p> | <p>Re-select the 'Deny' option for Address Filtering - All previously entered details, prior to the creation of the backup, will have been saved and will be displayed as expected.</p> |
| <p>Changing the enabled status of a feature in Basic Firewall can take up to 5 seconds to save. If the page is refreshed before the status change can be fully implemented, the incorrect status may be displayed on the GUI.</p>   | <p>When enabling or disabling Basic Firewall features, wait for 5 seconds after changing the value.</p>   |



| Description   | Suggested Work-Around  |
|---|--|
| <p>In Event Recording, if the Pre and Post Record buffer are set to 0, the camera will save snapshots rather than video clips to SD Card.</p> <p>Snapshots will only be used on SNMP events and will not be available for FTP, CIF or GUI Event page viewing.</p> | <p>Change the Pre or Post buffer so the total buffer is more than 1 second.</p>                        |
| <p>ONVIF: Analytics, Relay and Alarm I/O events are not supported via ONVIF.</p>  | <p>If these are required use the GUI or a recorder which supports the cameras API.</p>                 |
| <p>ONVIF: Picture Settings are not supported via ONVIF.</p>   | <p>If these are required use the GUI or a recorder which supports the cameras API.</p>                 |
| <p>ONVIF: Time Zone cannot be changed via ONVIF.</p>  | <p>Use the camera GUI to change the time zone.</p>   |
| <p>If camera goes into night mode (black and white) mode when the scene is still bright this could be due to camera light sensor (placed on lens ring), it may be partially covered.</p>  | <p>Ensure light sensor on camera is not restricted and is correctly exposed to the scene lighting.</p> |
| <p>Camera cannot be accessed using UPnP when set to HTTPS mode.</p>   | <p>Ensure camera is set to HTTP when using UPnP.</p>   |
| <p>Camera does not stream when added to Exacq using the onvif protocol.</p>   | <p>Add camera to Exacq as Illustra3.</p>   |

| Description  | Suggested Work-Around   |
|--|---|
| If Privacy Zones have been configured on a camera, using mechanical zoom will cause the position of Privacy Zones to be altered.   | <ol style="list-style-type: none"> <li>1. If Privacy Zones are required for a camera, these should be configured after the zoom position has been set.</li> <li>2. If zoom is required to be used on Privacy-Zone-enabled cameras, only digital zoom should be used. PTZ control should not be enabled and mechanical zoom should not be deployed.</li> </ol> |
| VENVR Edge support or Motion and DIO alarms integration on ExacqVision Server is not supported when camera is on Enhanced Security mode.   | Enable video over HTTP on camera (Setup>Security>Remote Access) when Enhanced Security mode is enabled.   |
| When TWDR is enabled, stream configuration restrictions apply.   | Ensure that stream is configured correctly before enabling TWDR. See stream tables for supported configurations.  |
| Exposure method position will not change when Mirror or Flip orientation is applied.   | Re-configure Exposure Method after Mirror or Flip orientation is applied.   |
| Corridor mode does not support OSD.  | N/A   |
| GUI, ONVIF and IAPI3 stream configuration combination may not always reflect the camera limitation, but the camera will automatically adjust to its limitation (check stream table for details). | N/A   |
| If using H264/H265 Intellizip – ROI does not move when rotating the image or changing orientation.   | Restart the video stream so rotation changes can be picked up by the Intellizip process.  |

| Description  | Suggested Work-Around  |
|--|--|
| Corridor mode resolutions still display and need applied on the GUI, IAPI and ONVIF as a 16:9 or 4:3 aspect ratio rather than the corridor mode 9:16 or 3:4. | N/A  |
| When in corridor mode video can appear stretched when played in Onvif Device Manager.  | N/A  |
| Firewall settings can be lost during an upgrade.   | Re-configure the firewall settings after upgrading the camera. |
| Login page may not fully load when the user logs in using the HTTPS method through the Chrome browser.   | Refresh the browser  |
| The sharpness value increases by 1 when set to a value within the range of 26-49.  | N/A  |
| The camera can occasionally lose its personality details after a reset.<br><br>Workaround – Reset the camera   | Workaround – Reset the camera                                  |
| TrickleStor Integration with VideoEdge does not work under HTTPS mode.   | Use “both” or HTTP only setting on camera                      |
| User may be unable to set motion detection fault action after a camera reset. This is due to an empty faultmgr.db file.                                      | Reset the camera again   |
| Motion Fault Action may reset to blank after a firmware upgrade.   | Re-select motion fault action.                                 |

| Description  | Suggested Work-Around  |
|--|--|
| <p>When selecting Enhanced Security - the admin user is required to conform to new username &amp; password rules. The new rules will not be applied to already created user profiles - all new profiles will require to apply to these rules</p> | <p>If required change user and operator passwords manually</p> |
| <p>Clip Recording: Clips can sometimes be longer or shorter than the expected duration due to the gap between IFrames. This issue will be more prominent in Intellizip codecs.</p>   | <p>N/A - This is a side effect of the stream settings.</p>     |
| <p>If Chrome Browser cache is cleared while the user has an active GUI session open, a credential pop up is visible and repeatedly refreshes and as a result the user is unable to input credentials.</p>  | <p>Close and reopen Chrome browser or tab</p>                  |
| <p>In the occurrence of an internal memory leak, rather than the camera becoming unresponsive, the camera reboots itself and restores full functions.</p>  | <p>The camera now reboots when it runs out of memory.</p>      |
| <p>Setting the framerate to 1FPS when the stream is using the H265 Intellizip codec may cause issues with bitrate.</p>   | <p>Raise the framerate and reboot the camera.</p>              |
| <p>There may be errors visible in the logs relating to 'setAbsolutePosition'. 'PTZFI Command Failed'.</p>  | <p>These are false errors and can be ignored.</p>              |
| <p>When starting/changing a stream all three video streams restart their exposure settings, meaning the image darkens slightly before brightening up again. This lasts just a few seconds.</p>   | <p>N/A</p>   |

| Description  | Suggested Work-Around   |
|--|---|
| Camera GUI can lockup occasionally when using HTTPS.   | If using HTTPS stop the video on the GUI to prevent lock-up.  |
| Backup/Restore: When the restoration changes the HTTP/HTTPS policy the camera may not be restored correctly.   | Set the correct HTTP/HTTPS policy before restoring the file or reboot the camera after the restore.   |
| Configuration changes made through ONVIF may not be implemented through to the actual playing stream of the camera.  | To ensure any configuration changes made through ONVIF are also applied to the actual stream, these changes should also be applied through camera GUI.  |
| Pro Micro only: Image can appear dark when TWDR is on and there are no Bright Areas in the Image.  | <p>Try either or both of the following two:</p> <ol style="list-style-type: none"> <li>1. Try a different Exposure Method than the default which is center weighted (Web GUI Picture Basic Tab). Preferably try putting the weighting window on a darker part of the image.</li> <li>2. Raise the Exposure Offset to a higher value than currently set at.</li> </ol> |
| Pro Micro only: With default settings the image can often appear dark; especially in the shadow regions. This can be more noticeable when compared to other cameras like the 2MP Compact.  | <p>Try either or both of the following two:</p> <ol style="list-style-type: none"> <li>1. Try a different Exposure Method than the default which is center weighted (Web GUI Picture Basic Tab). Preferably try putting the weighting window on a darker part of the image.</li> <li>2. Raise the Exposure Offset to a higher value than currently set at.</li> </ol> |
| Pro Micro only: In Manual AE mode the 1/30th Shutter option is not working. (Web GUI Picture Basic Tab) You can select the option but the shutter will remain at 1/60th. This can make the camera appear darker than other cameras set at 1/30th and reduce low light performance. | Currently no work around. Potential fix identified but needs FW modification.   |
| Pro Micro only: When turning Manual AE on, the picture intermittently goes into forced B&W; even in very bright scenes.  | When selecting Manual AE on the web GUI "Picture Basic" tab also select Forced Color as the Day/Night mode on the "Picture Additional" tab. Until fixed this should be done each time Manual AE is turned on.   |
| Pro Micro only: - Image is dull and soft in bright lighting when Manual AE is turned ON and setup in low light.  | Setup Manual AE in the lighting environment it is going to be used in for proper image quality. This goes both ways...if to be used in low light; setup Manual AE in low light. If to be used in bright light...setup Manual AE in bright light.  |

| Description  | Suggested Work-Around  |
|--|--|
| Pro Micro only: Green image distortion when direct lighting is at a specific angle and visible in the top edge of the field of view.         | Currently no work around. Very small, tight window where this can happen so not that easy to recreate. Only suggestion at this time is to slightly reposition the camera's pan or tilt if experiencing this until anomaly is gone. |
| Applicable to all cameras: Failed upgrade  | Reboot camera and re-try the upgrade.  |
| Camera GUI can lockup occasionally when using HTTPS.   | If using HTTPS stop the video on the GUI to prevent lock-up.   |
| Applicable to all models:<br>Backup/Restore:<br>When the restoration changes the HTTP/HTTPS policy the camera may not be restored correctly. | Set the correct HTTP/HTTPS policy before restoring the file or reboot the camera after the restore.  |
| CIFS event action not working  | None   |
| If record to SD is enabled, streaming via ONVIF may fail   | Disable record to SD before streaming  |

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