

# *2C Stream User Manual*

## *V 2.x*

*WWW.2CSECURITY.COM*



2CStream

**2C SECURITY**

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# 2C SECURITY USER'S MANUAL

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## 1.0 GENERAL INFORMATION

### 1.1 2C Security Hardware Decoder Overview

The 2C Security hardware decoder product line is used primarily in three market areas for visual display and monitoring.

#### *IP Security Camera Monitoring*

- Decode and sequence live video streams from IP security cameras use ONVIF standards or RTSP and HTTP protocols.
- Decode, poll or sequence up to 64 simultaneous 4K, HD or SD video and audio streams.

#### *Sensor Monitoring*

- Monitors 3<sup>rd</sup> Party or 2C Security RF Wireless Sensors & Sensor Gateways via HTTP and HTTPS.

#### *Media and Marketing*

- Stream and Sequence URLs, HTTP or HTTPS.
- 3<sup>rd</sup> Party Signage Creators or You Tube player ability.

### 1.2 2C Stream Software Overview

The 2C Stream software provides the ability to multi task and sequence a wide variety of media and hardware profiles. Including: ONVIF compliant IP cameras, RTSP feeds, popular image or video media files, web pages, you tube videos or wireless sensor data. Open approach design allows unlimited configurations or endless monitoring abilities. The data can be displayed in full screen on a wide variety of LCD, OLED or other type of display monitors.

### 1.3 “3 in 1” Decoder Application Example Use Cases

#### **Retail or Convenient Store Public Display Camera or Sensor Monitoring**

Retail or Convenient stores and banks, for example, can display live video from public or spot view security cameras, as a way of informing patrons that they are being recorded for security purposes. Deter or reduce theft or other negative behavioral situations.

2C Security provides an integrated 3D wireless sensor solution for monitoring. Affordable sensor solutions compared to expensive installed wired systems. Mobile or web notifications for sensors- ( motion § | angle movement ▲ | temperature ° | light ☀ | humidity hu | water p ) Custom sensor triggering for cameras (motion | movement | temperature| humidity | door | window open/close | PIR sensor detection | iOS device entering/exiting location | water detection | sensor stops moving attached to machines or engines) If any of these event triggers happen, 2C can trigger a camera, notification or a smart device to activate.

#### **Medium Sized Business Camera Monitoring**

Businesses such as resorts, casinos, and or large shopping outlet can also

use the 2C Security Decoder to monitor numerous cameras and access doors throughout their properties.

### **Digital Signage & Marketing Announcements**

Display events, menus, announcements, web information, videos, images marketing to employees or customers.

#### **1.3.1 Help Contacts & Help About**

- Contact your local security provider if you purchased from an authorized 2C Security partner.
- Contact 2C Security @ [www.2csecurity.com](http://www.2csecurity.com) or email [support@2csecurity.com](mailto:support@2csecurity.com).
- Go to **Help** in the 2C Stream Software (top right menu item in software).

## **1.4 EULA Acceptance & Warranty Registration**

### ***EULA***

***In order to use the 2C Security Decoder you agree to the terms of the 2C Stream Software license.***

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IF YOU DO NOT AGREE WITH THESE TERMS AND CONDITIONS BELOW, DO NOT ACCEPT THE AGREEMENT AND UNINSTALL OR CANCEL THE INSTALLATION OF THE SOFTWARE ON HARDWARE, CD, FROM DOWNLOAD, ON PC DECODER BOX OR FROM AN APP STORE. IF YOU HAVE PURCHASED THE PRODUCT, IMMEDIATELY RETURN TO YOUR PRODUCT PROVIDER.

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**LIMITED WARRANTY.** Subject to the limitations described below, 2C SECURITY, LLC. warrants as follows: Software: The Software is free of material reproducible programming errors and substantially conforms to the applicable Simple Tips documentation. 2C SECURITY, LLC. makes no warranty, promise, or guarantee, express or implied with respect to the Software, documentation, or related technical support, including warranties of quality or performance for a particular purpose.

STANDARD WARRANTY. 2C SECURITY, LLC will support the 2C STREAM Software 30 days beginning at the original purchase date. Proof of purchase may be required and sent to 2C SECURITY, LLC in order to begin this standard support. The standard support will only consist of electronic or phone support help via our email, web or support phone line. 2C Security, LLC is not obligated to support software applications or hardware items that were not manufactured or sold by 2C SECURITY, LLC. 2C SECURITY, LLC also has the right to waive support at any time for any user of our software.

CONTACT. Should you have any questions concerning this Agreement or the software use policies, or if you desire to contact 2C SECURITY, LLC. for any reason, email 2C SECURITY, LLC. at [www.2csecurity.com](http://www.2csecurity.com)

### **WARRANTY**

Please email us @ [register@2csecurity.com](mailto:register@2csecurity.com)

#### **Provide Email Info Below**

Subject Line: **Warranty**

Name: \_\_\_\_\_

CO Name: \_\_\_\_\_

Reseller Purchased From: \_\_\_\_\_

Date of Purchase: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_

State: \_\_\_\_\_

Zip: \_\_\_\_\_

Email: \_\_\_\_\_

Phone: \_\_\_\_\_

## **1.5 Microsoft Windows Settings**

### ***a. Network & Internet Settings***

2C Security has configured Windows settings based on most commonly requested features and settings. 2C Stream is configured to automatically boot up when powered up. The decoder is also configured to power up 2C Stream after power failure.

#### **\*DISCLAIMER\***

2C Security or its partners are not responsible for security settings needed for the network or internet access via this hardware Decoder. We recommend installing the latest updates or virus updates from Microsoft before setting up on a network within an organizations LAN. Please consult an IT Professional or Network Expert if needed. A wired ethernet connection is recommended for fast and reliable web or camera feeds.

\*Make sure that before boot up any peripherals (keyboard, mouse, USB wireless adapters, Ethernet cable, cable adapters, HDMI, VGA or mini DP port cables) are plugged into the decoder and the decoder is plugged into the same LAN as cameras (if you will be using IP cameras).

### ***b. Dual Monitor and Display Settings***

You can customize Windows to show 2C Stream on two monitors at one time. You can “Clone” a monitor (copies what is on Monitor 1 on Monitor 2 -Dual Monitor Clone) or “Extend the Displays” to show 2C Stream and control 2C Stream on each monitor (-Dual Monitor Control). ***Right click desktop in Windows and choose display settings.***

## 2.0 2C STREAM SOFTWARE

### 2.1 Entering 2C Stream Software



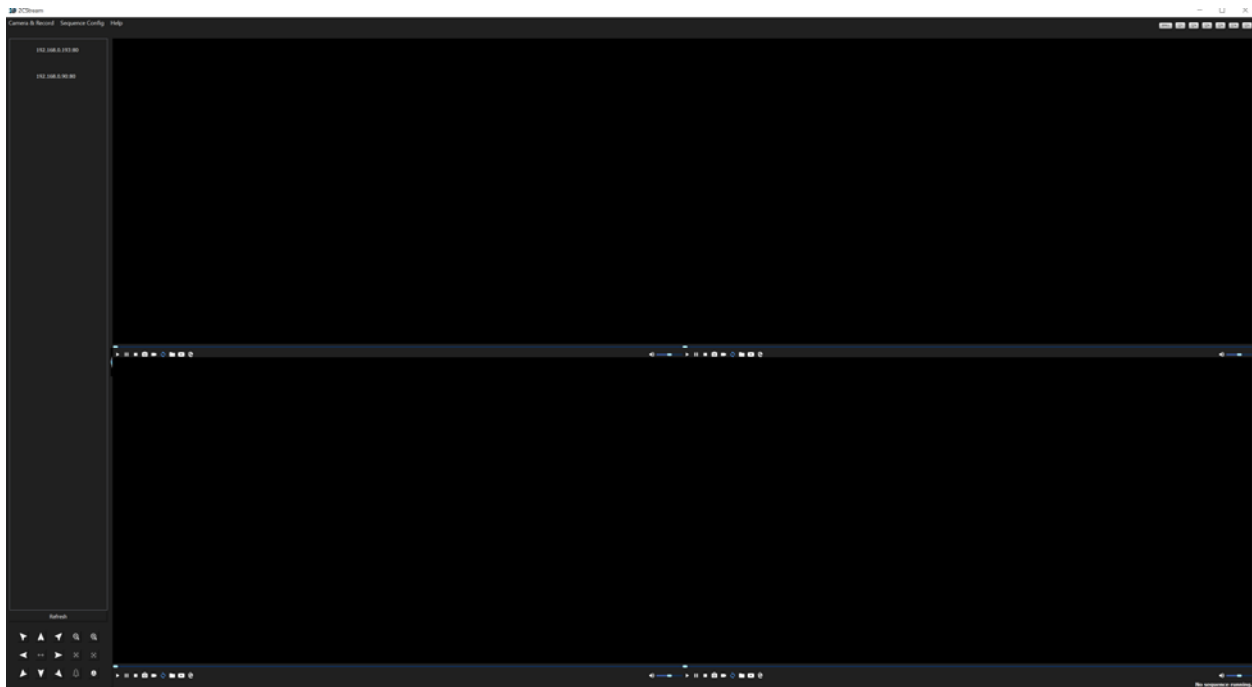
2C Stream

Click on the 2C Stream Icon on the Desktop to activate the 2C Stream software.

**NOTE:** The Decoder will automatically power up the 2C Stream software on a fresh boot up if power goes out.

### 2.2 About The 2C Stream GUI

#### 2C Stream GUI



#### TOP LEFT & TOP RIGHT

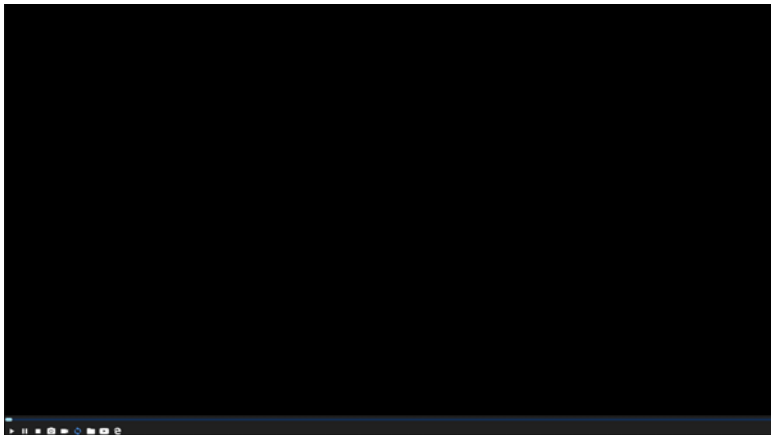


- Camera & Record Settings, Sequence Config and Help configurations (See 2.4.1).

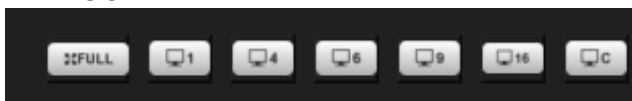
- Window viewing buttons (**FULL** -Full Screen, **1**, **4** (2x2), **6**, **9** (3x3), **16** (4x4), **C** -Custom).

**LEFT**

- Left panel is used for connecting cameras and dragging cameras, links, images and videos in right side windows (See 2.4.2).
- Bottom left panel is for PTZ control of cameras (See 3.2).

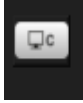
**CENTER**

- Windows for viewing and sequencing objects.
- Icons in bottom left windows for window control.

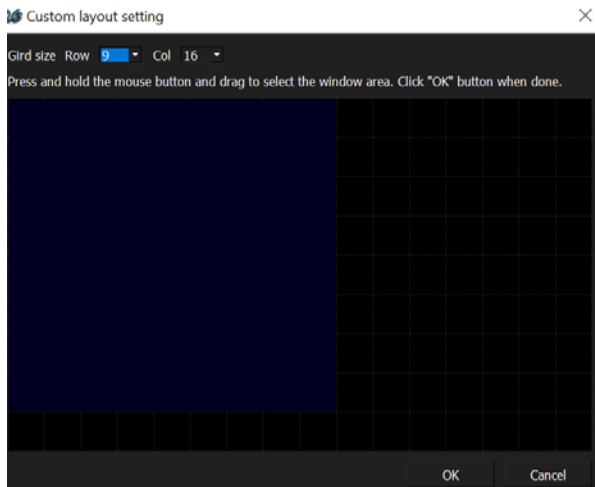
**2.3 Layout, Window, Channel Setup****LAYOUT**

We recommend on the initial window view click a layout view you want (before configuring cameras or media AND if you will only be using one layout window view without sequencing layouts See 2.4.5 for Layout Sequencing). Click on the FULL, 1, 4, 6, 9, 16 or C (Custom) button top right. The default is a 4

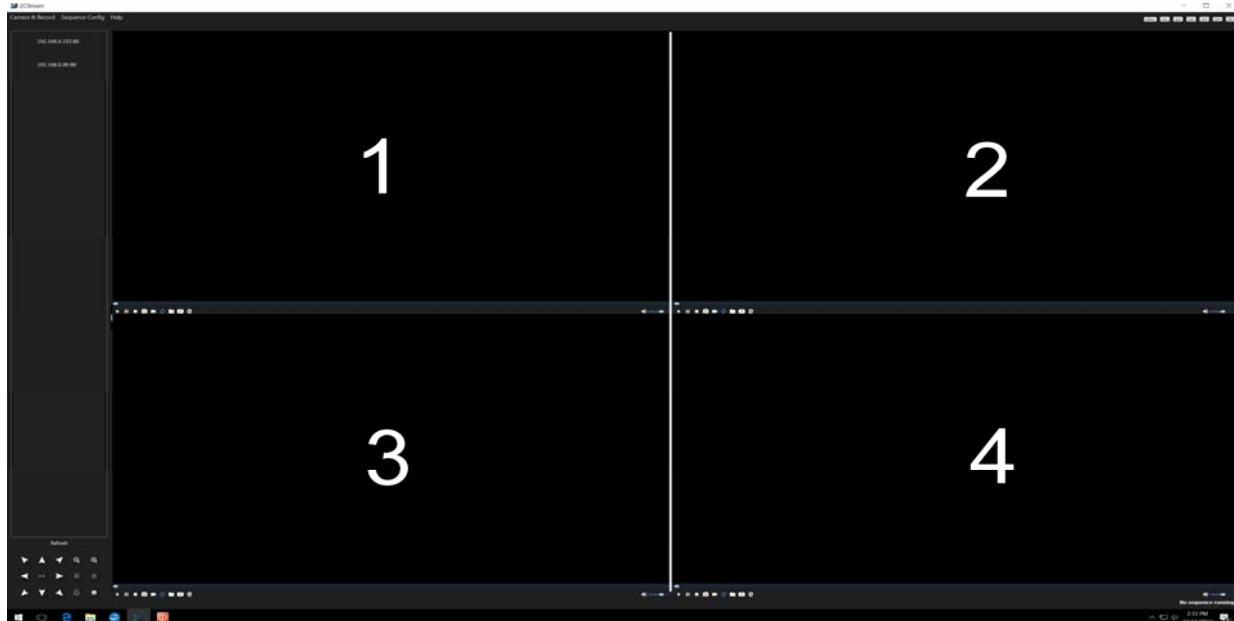
window (2X2 / QUAD). The FULL screen button is used to view windows when configured in full screen without any menu or panel shown (See 2.4.6).



C (Custom) You can choose rows and columns then left click hold and drag window area to create windows in a custom layout. **Note: Custom layouts cannot be sequenced in window or layout app sequences in this 2C Stream version.**



Example 4 Window View Clicking 4 Button Below





## WINDOW

A window is also referred to as a channel. Each window can be customized to feed cameras or media. You can customize a window/channel to hide or view the window menu bar.

### Window Menu Bar

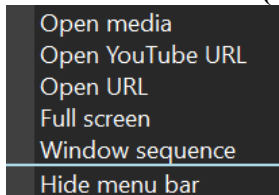


FROM LEFT TO RIGHT

- **Play** Media File
- **Pause** Media File
- **Stop** Media File
- Camera Only **Snapshot**
- Camera **Record** Only
- Loop/**Repeat** Media (example endless repeat a you tube link or .mov file)
- Open **Media Folder** (open image or media files)
- **You Tube or Camera Stream Link** (manually enter or copy/paste HTTP, HTTPS, RTSP)
- **Browser** (use MS Edge to copy and paste web HTTP, HTTPS links)
- **Volume** and Mute (control sound for all objects in a window)

*Note: Right click window to hide or show menu bar*

### CHANNEL SETUP (Window)



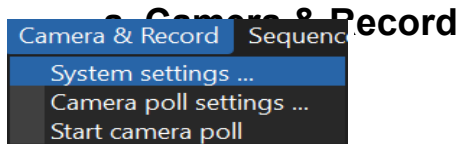
Right click each window to setup a channel/window. The menu items appear -Open media, Open YouTube or RTSP URL, Open URL, Full screen, Window sequence, Hide menu bar.

- **Open media** - Open Media Folder (open image or media files)
- **Open You Tube or RTSP URL** - You Tube or Camera Stream Link (manually enter or copy/paste HTTP, HTTPS, RTSP)
- **Open URL** - Browser (use MS Edge to copy and paste web HTTP, HTTPS links)
- **Full screen** shows that window in full viewing screen mode
- **Window sequence** (Allows users to sequence multiple objects in this window in a set interval or duration per object (**See 2.4.4**))
- **Hide menu bar** – Hides the window menu bar.

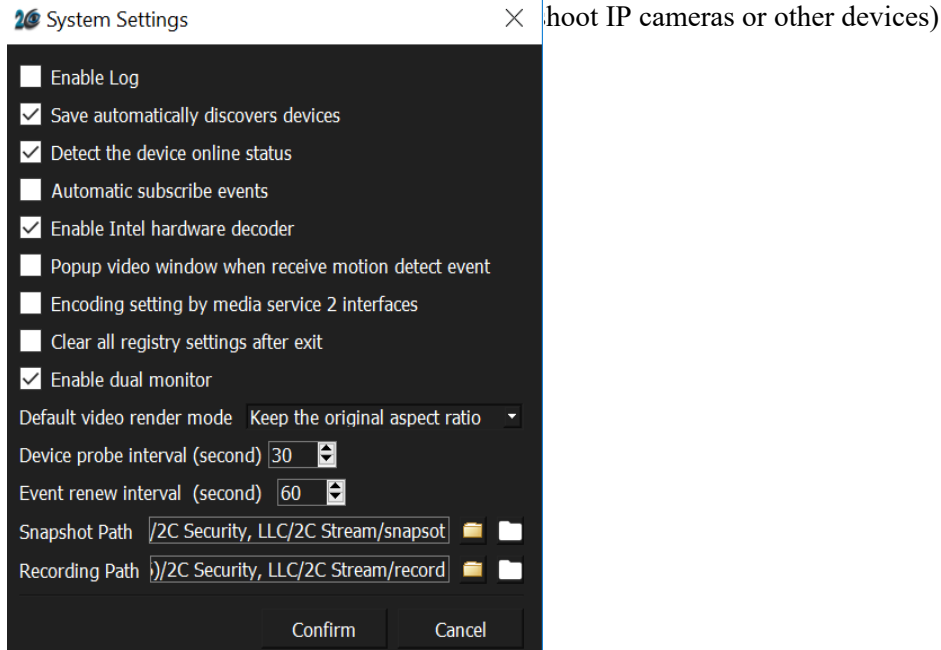
## 2.4 GUI Menu Selections

### 2.4.1 Top Menu Panel





### 1. System Settings

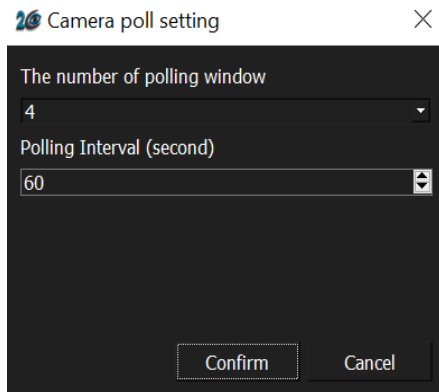
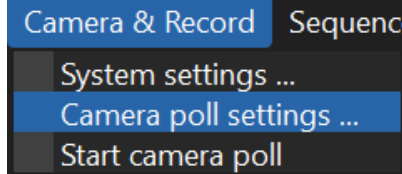


- **Save automatically discovers devices** (automatically saves IP or other ONVIF devices in left viewing panel)
- **Detect the device online status** (offline or online camera or device status in left viewing panel)
- **Automatic subscribe events** (subscribe to motion, event or other events built into a camera setting)
- **Enable Intel hardware decoder** (leave checked as default for ANY Intel processor which speeds up video processing for cameras or devices)
- **Pop-up video window when receive motion detect event** (pops up a camera that has motion detect enabled into one single window)
- **Encoding setting by media service 2 interfaces** (certain cameras or devices that use media service 2, check if needed)
- **Clear all registry settings after exit** (used as a support tool to clear out 2C Stream registry and clear all settings in 2C Stream. **\*\*\*Only use if directed by support\*\*\***)
- **Enable dual monitor** (Use if you want to control 2 separate monitors with dual monitor control – UN check if you want to only clone monitor 1 and not control monitors)
- **Default video render mode** (keep the original aspect ratio is recommended or fill whole window)
- **Device probe interval** (checks a camera or device setting every 30 secs as default)
- **Event renew interval** (resets an event trigger like l=motion or tamper every 60 seconds as default)
- **Snapshot Path** (path where snapshots are stored when the snapshot button is used. Click store yellow folder and image show folder).



- **Recording Path** (To define the storage location of recorded files or snapshots click on the Yellow Folder to set the path/location. **Note:** Recordings are .AVI files and cannot be changed on format at this time.

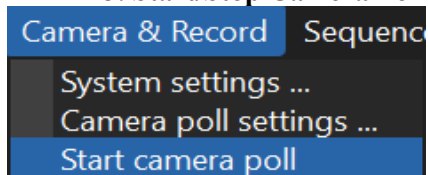
## 2. Camera Poll Settings



The camera poll setting is used to “check and poll” all cameras in the left viewing panel into a window for each camera. For example: if you have 4 cameras setup that show in left panel the camera polling setting this setup will pull “poll” all four cameras and place them in a window. The **polling interval** will poll or check for those cameras every x seconds.

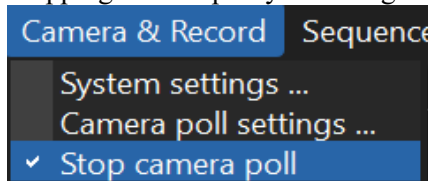
**Note:** You must enable polling by going to **Camera & Settings - Start camera poll**. Stopping camera poll you must go to **Camera and Settings - Stop camera poll**.

## 3. Start/Stop Camera Poll



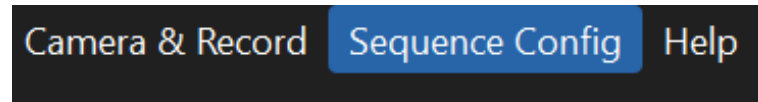
Once you configured the Camera Poll Settings above you must enable polling by going to **Camera & Settings - Start camera poll**.

Stopping camera poll you must go to **Camera and Settings - Stop camera poll**.



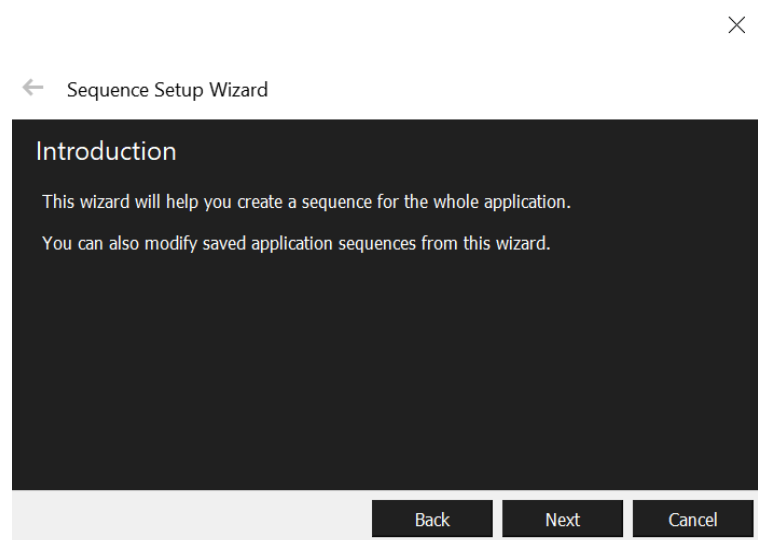
**NOTE:** Camera polling will run indefinitely unless stopped even if you exit and go back into the 2C Stream program.

## b. Sequence Config (For Advanced Users)

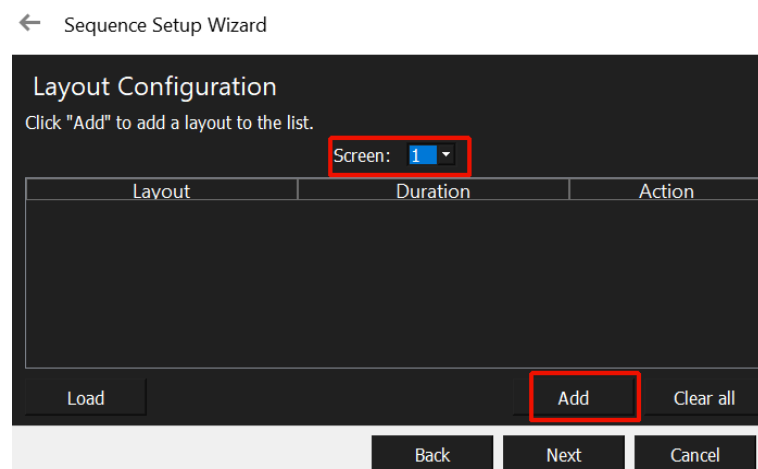


Sequencing configurations allow users to configure layout type sequencing. For example lets say a user wants to sequence a 2x2 window layout and a 3x3 layout window and a 1x1 window layout in 30 second intervals, a user can accomplish this with a few simple wizard setup steps.

### 1. Setup app sequence



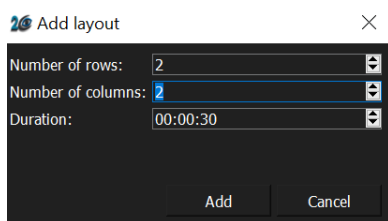
Click next to follow sequence setup or cancel to exit.



- **Screen 1** (If dual monitor extend the displays in Windows was enabled and a 2<sup>nd</sup> monitor existed the user can configure for screen 2 here as well. Configure screen 1 first and add layout(s) for screen 1 then repeat for screen 2 by dropping list box for Screen to 2).

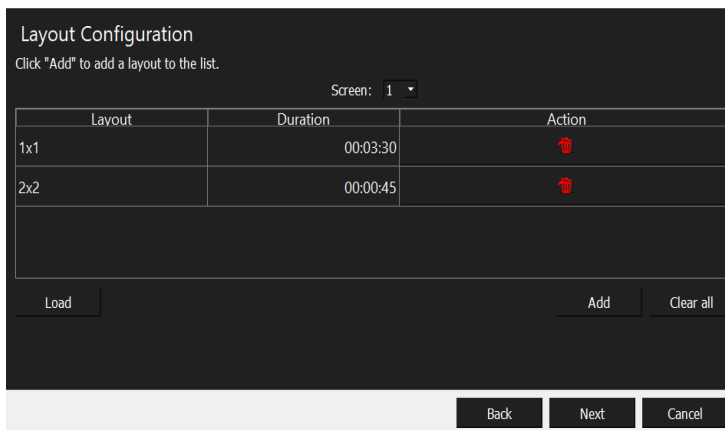
**Note:** A maximum of 2 monitors supported in extended display. Unlimited monitors can be “cloned” via mini or Display Port daisy chaining.

- **Load** (if you had an existing sequence you could load it here by clicking load button and look for saved sequences)
- **Clear All** (clears any layouts that were added in the Layout Configuration screen).
- **Add** (click **Add** button to add a layout type and choose 1x1 or 1x2 or 2x2, etc. Click the cursor inside the Duration box or choose arrows to customize duration of this layout hen click **add**).



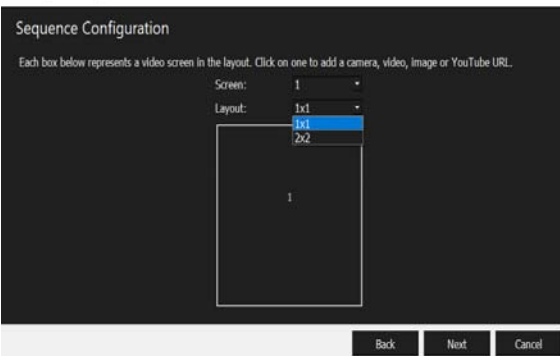
- You can **repeat** this layout adding process to add additional layouts to one configuration. Click the **Add** button again to add more layouts to a sequence. and choose 1x1 or 1x2 or 2x2, etc then click **Add**).

← Sequence Setup Wizard

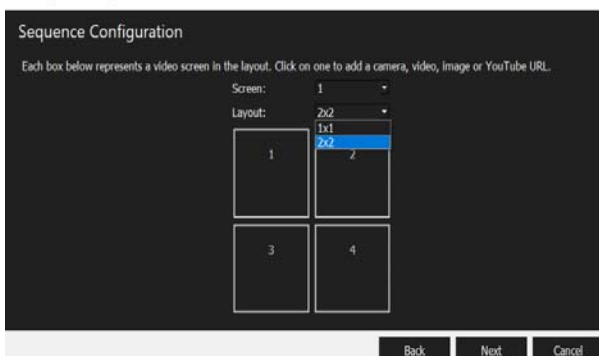


- Once the layouts are added click **Next**.  
**(For example above we created a 1x1 layout to run 3:30 sec. And a 2x2 to run 45 seconds).**
- A **Sequence Configuration** Screen will appear after you click **Next**. Choose the first layout For Example the 1x1 and double click the window below to add objects to window. Repeat for 2x2 by choosing 2x2 in Layout drop list box and double click each window for 2x2.

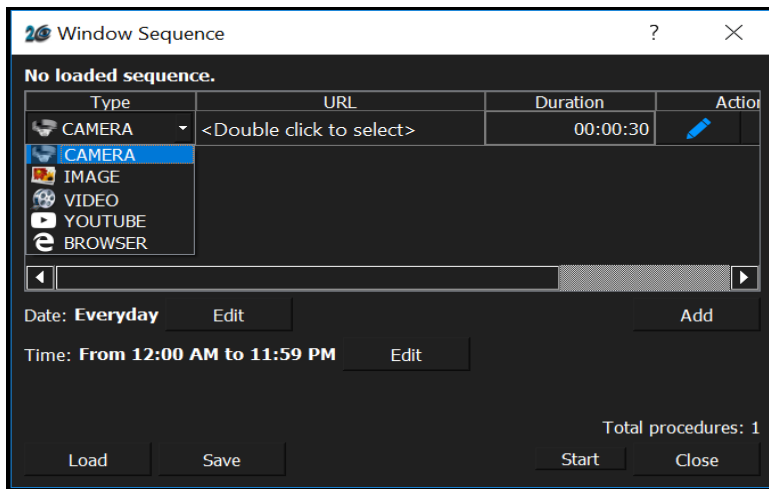
← Sequence Setup Wizard



← Sequence Setup Wizard



- Once you double click a window - user will see dialog below.



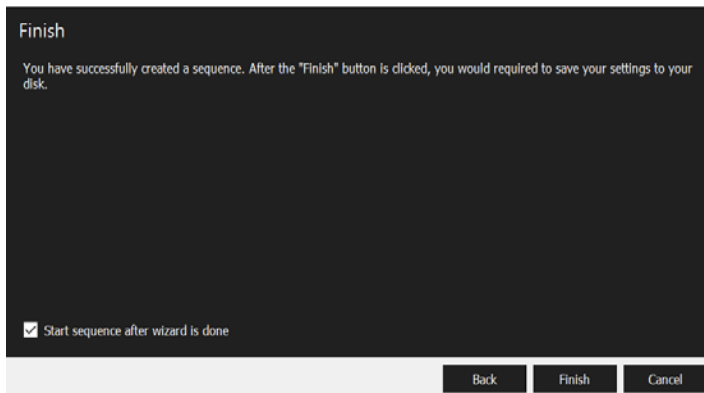
**Load-** You can also load window sequences from here that are already configured (See 2.4.4).

**Type-** You can choose type of object you want to add, then double click **URL** section to add specific configured cameras (must authenticate camera in most cases see section 3.0) or objects and click duration to change duration.

**Add-** Repeat to Add more objects.

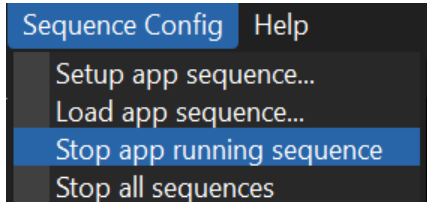
**Set-** Click set to set window with the objects added.

← Sequence Setup Wizard



Once **Set** button has be chosen then the sequence configuration screen will appear. Repeat for each window any configurations in each window and click **Next** then click **Finish** then choose **Save**. (You can also uncheck start sequence after done so it does not run right away). Save the Sequence somewhere you remember on the hard drive and as name you can remember. The file is saved as the name you called the file and extension **.aseq**.

**Note:** If you run the sequence automatically after saving you can stop the sequence by going to **Sequence Config-Stop app running sequence or stop all sequences**.

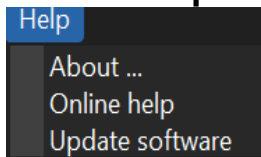


2. **Load app sequence** – Once you created a sequence like above you can load it here. Look for the .aseq extension file.

3. **Stop app running sequence** – User can stop any app sequence here.

4. **Stop all sequence** – User can stop any running window, window or app sequence here.

### c.Help

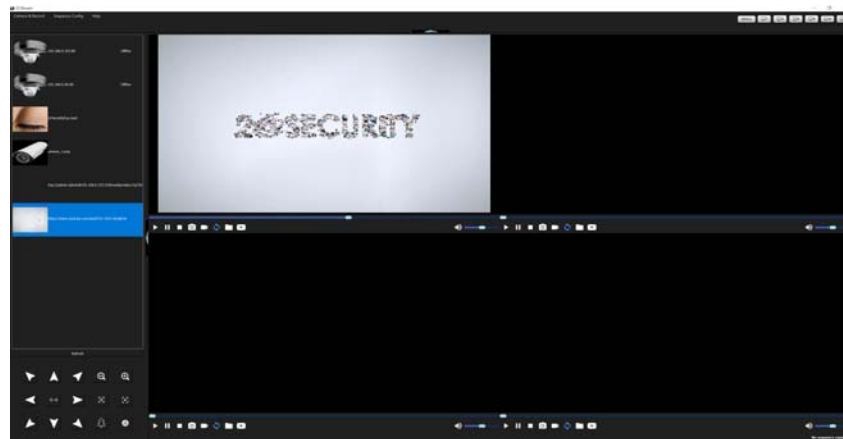
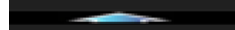


1. **About** – Version & copyright date of 2C Stream Software

2. **Online help** – Takes user to the 2C Security online help page (Internet required)

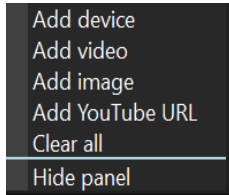
3. **Update software** – Takes user to download link for updating software

You can also **hide** the entire top menu bar by clicking hide top bar button.



### 2.4.2 Left Panel

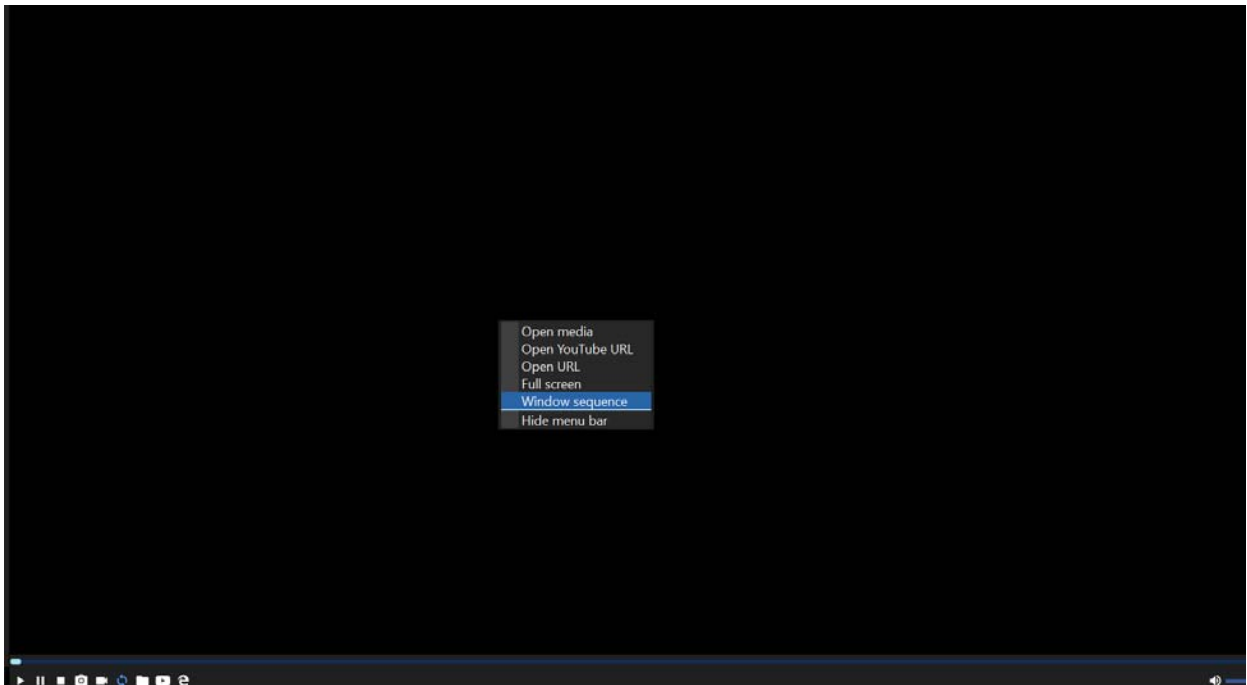
The left panel serves as a medium for automatically detecting ONVIF compliant cameras, adding objects and other media files for each click and drag into windows.



**Right Click Panel** – You can Add a device, video, image, you tube / RTSP camera stream or browser URL. Once added you can then click and drag into windows (channels) on right side of screen. If you do not want to use the panel you can **Hide panel** Also there is a blue hide panel button you can click to hide. **Note: Clear all** wipes out all devices, camera configurations and objects in left viewing panel so use with caution.



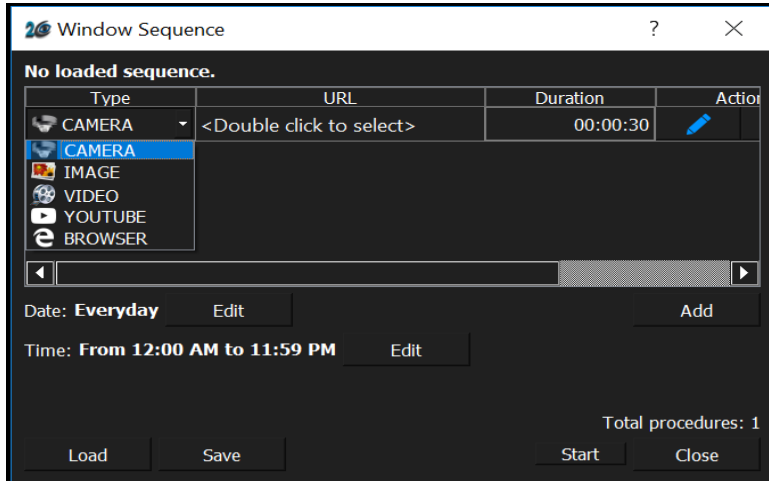
### 2.4.3 Window Sequencing



Users can sequence multiple objects within a window/channel by right clicking the window and choosing **Window sequence**.

#### a. Setup Window Objects





Clicking on **Window sequence** provides the Window Sequence object loading within a window. Click **Add** then choose object type then **<Double click to select>** an object, change **Duration**. Repeat to add more objects. You can choose **Camera, Image, Video, Camera Path/YouTube/, Browser**.

**Save-** After the user has built the objects in the windows then click Save and name it a file to remember. The file is saved as a .wseq file extension. For example name it topleftwindow. File will have extension .wseq.

**Start-** The user can run the sequence now by clicking Start after saving the sequence.

**Load-** A user can load an existing sequence by choosing a sequence saved file then click **Start** to run.

**Date & Time-** Currently this feature is limited but allows a user to start a sequence based on time and date and run when those time and date thresholds are met. This feature will be expanded in future version for layout and window sequencing scheduling.

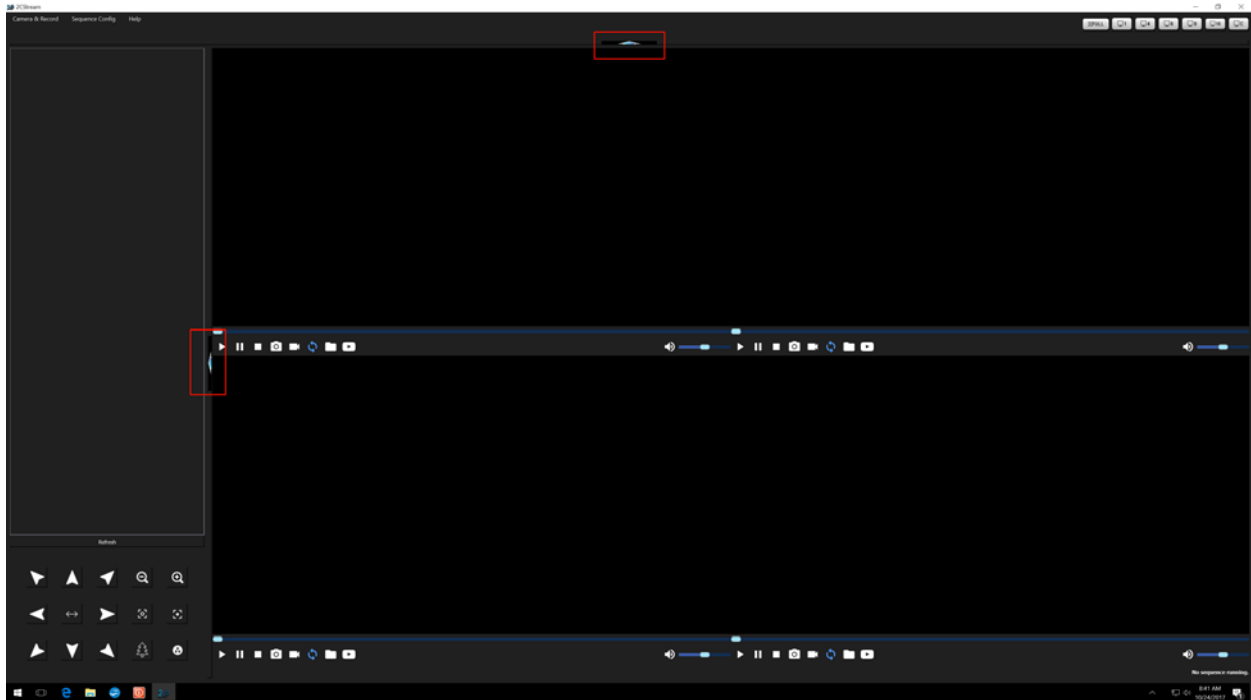
#### 2.4.4 Full Screen Display Options

Once users have configured their desired layouts, sequences or overall design. A user can then publish and run their design in full screen mode. There are a few ways to run in full screen.

**Main Screen-** User can click the FULL button top right.



Or click on the Blue Arrow on Left Side Panel and Top Menu Area.



### *Full Screen Enabled*

**Window Sequences** you can double click that window to enable full screen mode or right click window and choose full screen if you only want that sequence to run in full screen mode. **Use ESC key on keyboard to exit out of full screen.**

**Layout Sequences** run in full screen mode automatically.

Any full screen mode can be terminated by choosing the buttons at top right in full screen mode.



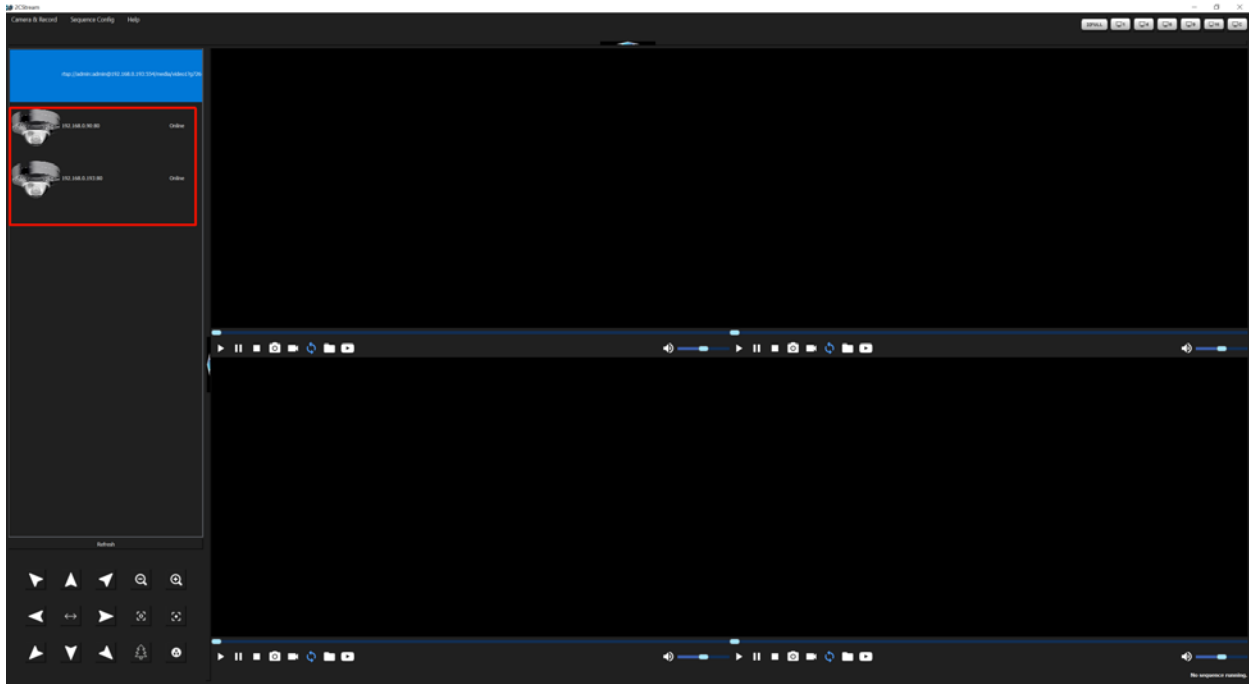
- First button will leave full screen mode.
- X will close the entire 2C Stream program but when you go back into the program it will remember full screen.
- The box stops all sequences running.

## 3.0 IP Camera Setup

Most IP cameras will interface into the 2C Stream software via a RTSP Syntax or ONVIF device service syntax.

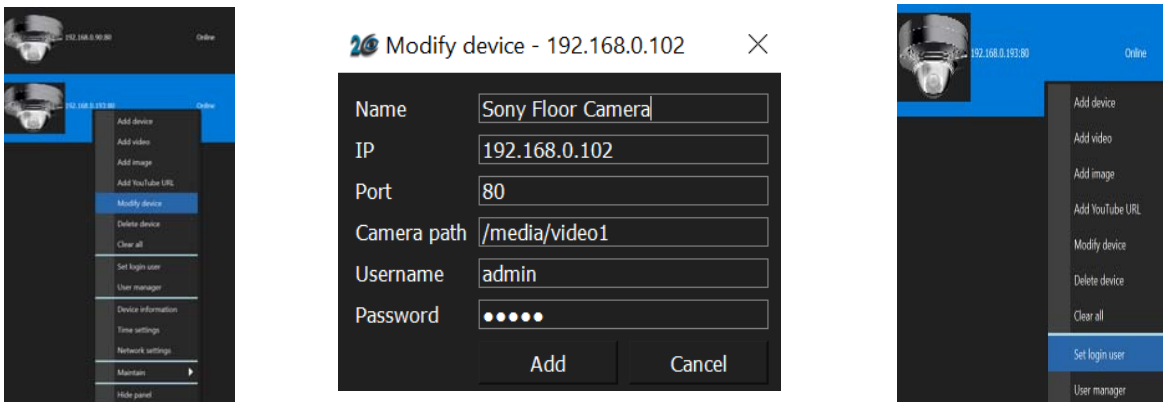
### 3.1 Automatically Discovers IP Camera or Manual Camera Setup

Most cameras will be automatically detected if the camera and Decoder are on the same LAN. The cameras will populate (up to 64 cameras) in the left viewing panel of the software like below.



#### Setup Camera in Left Panel

A user must right click each camera and choose 1. **Modify Device**. Enter 2. **username and password** for camera if camera authentication is required and then right click camera again and choose **Set Login User**.



## ONVIF

ONVIF is an open industry forum that provides and promotes standardized interfaces for effective interchangeability of IP-based physical security products.

The cameras must adhere to ONVIF standards and have the ability to provide a RTSP or HTTP stream. Visit [www.onvif.org](http://www.onvif.org) to view ONVIF compliant cameras. The camera will have an ONVIF logo on packaging or other means if it is compliant.

### Manual Camera Setup

**Note: If a camera does not automatically connect then it could be that the Camera ONVIF path (Camera path) for a camera is not correct in Modify Device.** The Camera path may need to be changed. The camera stream address is usually what follows an IP address of camera if you view the camera in the camera provided software or other device manager like ONVIF Device Manager.

**Example:** Sony Camera stream looks like this

rtsp://192.168.0.102/media/video1?g726=rfc3551

Copy the address info below into *Camera path* to have camera connect.

**/media/video1**

Modify device - 192.168.0.102 ×

Name	Sony Floor Camera
IP	192.168.0.102
Port	80
Camera path	/media/video1
Username	admin
Password	•••••
<input type="button" value="Add"/> <input type="button" value="Cancel"/>	

Wait a few moments after set login User and then drag camera into a window to connect.

**Note:** the Camera path will show default */onvif/device\_service* for protection of stream link so if you copy a different server address it will not show the one you copied after saving.

### **Manual RTSP:**

The other option for connecting an IP camera is to directly input a cameras stream. You can use the Camera Path/ YouTube Link input or the Browser URL input depending on type of stream.



RTSP Stream use the Camera Path/ YouTube Link k input ONLY icon in window or right click left panel and choose Camera Path/YouTube link.

Example Axis camera stream to copy and paste

`rtsp://admin:admin@192.168.0.90:554/onvif-media/media.amp?profile=profile_1_h264&sessiontimeout=60&streamtype=unicast`

<b><u>Interpreted Camera String</u></b>
rtsp is the protocol
admin is the camera username
admin is the camera password
192.168.0.90 is ip address of the camera
554 is the rtsp stream port
/onvif-media/media.amp? is camera path of camera
ONVIF profile is profile=profile_1
h264 is camera streaming codec used.



#### ***Manual HTTP or HTTPS:***

Use the Browser URL input only icon in window or right click left panel and choose Open URL. The Decoder can stream MJPEG encoded video via *HTTP Server Push*. This is a common mechanism for some versions of IP Cameras to stream video. The syntax is camera vendor specific. See camera vendor documentation for example syntax.

### **Helpful Online Camera Connecting Tools**

#### ***ONVIF Device Manager***

You can download the ONVIF Device Manager by searching Google or here.

<https://sourceforge.net/projects/onvifdm/>

#### ***iSpy***

iSpy has the worlds largest camera connection database. It is updated daily with new devices and models (crowd sourced via the ispy community). Best site to find streaming links for cameras.

<https://www.ispyconnect.com/sources.aspx>

#### ***Default User Name and Passwords of Popular Cameras***

<https://ipvm.com/reports/ip-cameras-default-passwords-directory>

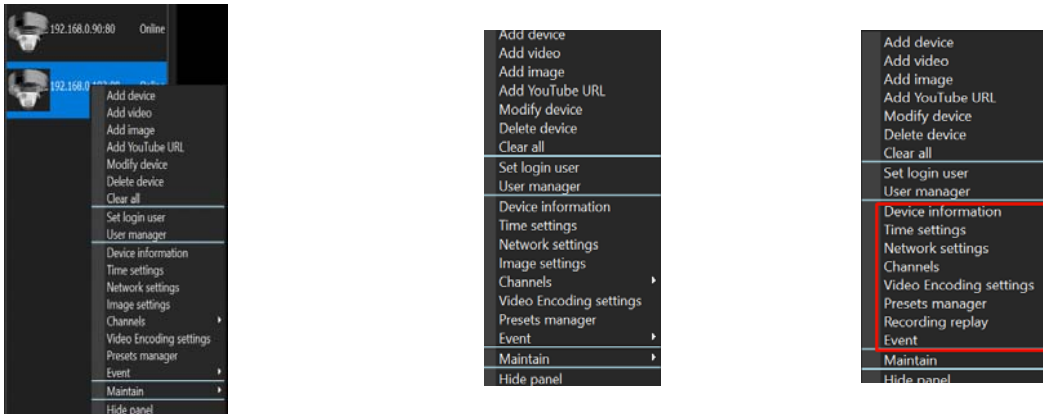
## **3.2 IP Camera Settings & PTZ Control**

## Using Web Browser for Initial Camera Settings

Users can configure IP Camera settings either directly interfacing the camera in a web browser and typing the IP address of camera in browser (recommended for initial settings) or using 2C Stream and right clicking the camera to show settings once camera has been set for the user.

## Using 2C Stream Left Panel View

Right click camera and you will see a variety of settings depending on camera features and camera type. Motion, tamper, encoding settings etc... may show in this area. Example of Sony and Axis PTZ camera below.

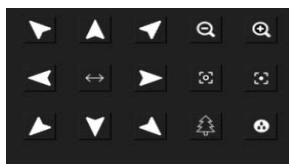


**For Example:** Events can be triggered for motion or tampering by choosing event AND if the camera is setup or has motion or tamper detection enabled. (Make sure in **Camera & Record Settings** that **Automatic subscribe events** is checked and or **Pop-up video window when receive motion detect event** is checked. **Go to event/event subscribe to enable certain events.** This would enable a pop up video window if a motion event happens in 2C Stream for that particular camera.

## Camera Support for 2C Stream

- IP Camera Protocols | RTSP, RTP, ONVIF -Profile S, G, C, Q- Camera Control Ready.
- IP Camera | Audio - g.711, g.726, AAC | Codecs - h.264, h.265, MPEG-4, MJPEG.

## *PTZ Control*



Cameras that have built in PTZ can also utilize a joystick OR our PTZ control on bottom left of 2C Stream. Click on the camera you want to control, the window the camera is in and then click or choose the PTZ function button.

**Note:** PTZ has to be setup in the camera. Also settings can alter our default settings if you have preset or other settings configured.

## 4.0 Media Setup

The 2C Security decoder can act as a digital signage and marketing tool for displaying media, Supported media formats include:

- **Image & Menu Files | .JPG, .JPEG, .BMP, .TIFF, .TIF, .PNG, Non Animated .GIF**
- **Video Files | .mov, .mpg, .AVI, .wmv, .mkv, mp4, .mpeg**

You can mix or match media or camera objects and sequenced based on your preferences. There are a variety of 3<sup>rd</sup> party menu and signage creators online. 2C Security or its partners can provide a list to a user, just contact us.

### 4.1 Images or Video Setup

Images or video can be setup using the folder icon in a window/ channel or right clicking the left panel and adding image or video and dragging into a window.



### 4.2. You Tube, URL, Web Page Setup

Files or videos can be entered in a window by using these icons in a window/channel or right clicking left panel and dragging into a window.



## 4.3 Troubleshooting Media

### *Web / You Tube*

Some You Tube links will not play due to Google protecting or using Codecs that Google has sole ownership and copyright protection. Many sites will work with the 2C Stream software and many more will work in the future.

### *Videos or Images*

Animated GIF files do not work with 2C Stream in full screen mode. Some videos that use H.265 or other Codec may not work in the 2C Stream software. Some people have the files converted to other supported formats.

## 5.0 Sensors

### 5.1 Web Based Sensor Monitoring Setup or Mobile Apps

3<sup>rd</sup> Party or 2C Sensor devices can be accessed in the 2 C Stream software via the Internet Browser URL adding. See instructions from sensor packaging.

3<sup>rd</sup> Party or 2C Sensor devices can be accessed in mobile APP (Android or iOS). See instructions from sensor packaging.