

## Overview

The camera that is part of the EXP-VC-KIT supports network video streaming and can be openly decoded by a number of software decoding platforms such as OBS (Open Broadcaster Software), VLC media player and many other 3<sup>rd</sup> party options that support RTP, RTSP or RTMP streaming protocols.

To configure the EXP-VC-KIT camera to stream over the network perform the following steps.

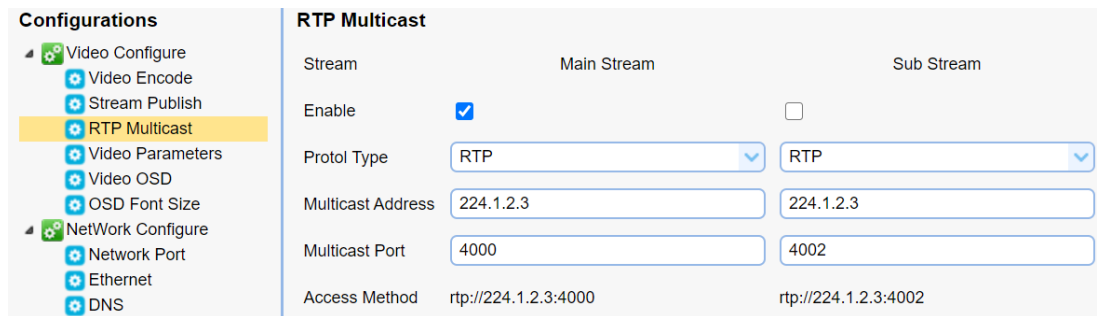
## Stream Setup

Connect the LAN connection on the back of the camera to your network.

Login to the web interface of the camera to access streaming configuration settings. Default IP address: **192.168.11.143**. Default credentials are both **"admin"**.

## RTP Multicast Streaming

1. From the left-hand menu, navigate to **Video Configure > RTP Multicast**.
2. From here you can enable RTP streaming for the main or sub stream. A default multicast IP address and port will be available but can be changed if needed.
3. Copy the RTP URL that is generated and paste it into your decoding software of choice.



The screenshot shows the 'RTP Multicast' configuration page. On the left is a 'Configurations' menu with 'RTP Multicast' highlighted. The main area is titled 'RTP Multicast' and is divided into 'Main Stream' and 'Sub Stream' columns. The 'Enable' checkbox for the Main Stream is checked, while the Sub Stream checkbox is unchecked. Both streams are set to 'RTP' as the protocol type. The Multicast Address for both is '224.1.2.3'. The Multicast Port for the Main Stream is '4000' and for the Sub Stream is '4002'. The Access Method for the Main Stream is 'rtp://224.1.2.3:4000' and for the Sub Stream is 'rtp://224.1.2.3:4002'.

|                   | Main Stream                         | Sub Stream               |
|-------------------|-------------------------------------|--------------------------|
| Enable            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Protol Type       | RTP                                 | RTP                      |
| Multicast Address | 224.1.2.3                           | 224.1.2.3                |
| Multicast Port    | 4000                                | 4002                     |
| Access Method     | rtp://224.1.2.3:4000                | rtp://224.1.2.3:4002     |

**Note:** RTP Multicast streaming requires a managed network switch that supports multicast. Using multicast streaming on an unmanaged switch may cause dropouts and connection issues.

## RTSP Streaming

RTSP streaming is always enabled and there are no settings that need to be adjusted. The RTSP URL syntax is: **rtsp://<Camera\_IP>:554/live/av0**

## RTMP Streaming

An RTMP server can be enabled within the camera to stream either on the LAN or to the internet via live streaming services, such as Wowza.

1. Navigate to **Video Configure > Stream Publish**.
2. From there you can enable RTMP streaming for the main or sub stream. To stream RTMP over the LAN, simply check the enable box and use the following URL syntax:

**rtmp://<Camera\_IP>:1935/live/av0**

| Stream       | Main Stream                         | Sub Stream               |
|--------------|-------------------------------------|--------------------------|
| Enable       | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Protol Type  | RTMP                                | RTMP                     |
| Host Address | 192.168.11.143                      | 192.168.5.11             |
| Host Port    | 1935                                | 1935                     |
| Stream Name  | live/av0                            | live/av1                 |
| User Name    |                                     |                          |
| Password     |                                     |                          |

If you wish to stream the camera to a live streaming service additional steps are required.

**Important!** The camera does not provide audio; therefore, some live streaming services are not compatible as they require audio **AND** video to be sent to receive an RTMP stream. For example, YouTube is not compatible with video only RTMP streams, however Wowza Streaming Cloud is. The steps below show how to enter a public RTMP URL from Wowza. The same process can be translated to other streaming platforms.

1. Navigate to <http://cloud.wowza.com> and log in.
2. From the top menu select **+ Add Live Stream**.
3. Give the stream a name and choose the geographic region closest to where you are located.
4. Choose **Other RTMP** when prompted for the type of encoder being used.

What camera or encoder will you use to connect to Wowza Streaming Cloud?

|                         |                    |                |                      |                     |         |         |            |           |            |
|-------------------------|--------------------|----------------|----------------------|---------------------|---------|---------|------------|-----------|------------|
| Wowza Streaming Engine™ | Wowza ClearCaster™ | Wowza GoCoder™ | Web Browser (WebRTC) | MediaDS™            | Axis    | Epiphan | Hauppauge! | JVC       | LiveU      |
| Matrox                  | NewTek TriCaster   | Osprey Video   | SONY                 | Telestream Wirecast | TERADEK | vMix    | XSplit     | IP Camera | Other RTMP |

- On the same page in the Push/Pull Stream section, choose the option to **Push to a stream source**. No other settings on the page are necessary to adjust. Click next to continue to the next page.

**Do you want to push or pull your stream?**

Push Stream Pull Stream

Select *Push Stream* if your camera or encoder will push the stream to Wowza Streaming Cloud

Select *Pull Stream* if your camera or encoder requires Wowza Streaming Cloud to pull the stream

Push directly to Wowza Streaming Cloud

Push to a stream source

- Playback Setting adjustments are not required unless you feel it necessary.
- Hosted Page Settings can be left as default.
- Click Next and review your settings. Click Finish when you are ready to proceed.
- Once the live stream has been created in the Overview section, locate the **Source Connection Information**.
- Make note of the stream **URL** and the **stream name**.
- Return to the EXP-VC-KIT camera's web interface and select **Stream Publish** from the menu.
- Enter in the Wowza RTMP URL and stream name into the respective areas.

The screenshot shows the 'Stream Publish' configuration page. On the left is a 'Configurations' sidebar with a tree view containing categories like Video Configure, NetWork Configure, and System Configure. The 'Stream Publish' option is highlighted. The main area is titled 'Stream Publish' and is divided into two columns: 'Main Stream' and 'Sub Stream'. The 'Main Stream' column has an 'Enable' checkbox checked, a 'Protol Type' dropdown set to 'RTMP', a 'Host Address' text box containing 'rtmp://origin.cdn.wowza.com/live', a 'Host Port' text box containing '1935', and a 'Stream Name' text box containing '013p2bFp3nzdLfOq23ik93wPm583e'. The 'Sub Stream' column has an 'Enable' checkbox unchecked, a 'Protol Type' dropdown set to 'RTMP', a 'Host Address' text box containing '192.168.5.11', a 'Host Port' text box containing '1935', and a 'Stream Name' text box containing 'live/av1'. Below these fields are 'User Name' and 'Password' text boxes, and a 'Save' button at the bottom.

- Click the save button. The camera will now be streaming to Wowza.