



Flame Detector Communicator Software User Guide

Flame Detector Communicator Software User Guide, August 2020.

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1 Introduction

The Communicator software is required to configure and monitor the Fike flame detectors.

The main features of the software are:


1. Communicate using Modbus over an RS-485 port to the flame detector. Modbus commands allow you to configure parameters and monitor the status of the detector.
2. Communicate using ONVIF / HTTP protocols over a TCP/IP connection to the flame detector. ONVIF allows you to receive a live video stream from the flame detector. With HTTP, it is possible to download recorded video fire events.

2 Installation

1. Go to www.fg-detection.com/communicator web site to download the latest Communicator software. Contact Fike at 1-(800)-979-FIKE (3453) for the required password.
2. Install the Communicator software MSI on your machine.
3. Verify that you have an RS-485 connection from your PC/Laptop to the flame detector. See the flame detector user manual / RS-485 Communication Network section for how to wire to the flame detector's RS-485 port.
4. If you want to see live video and video recordings, connect an ethernet cable to the flame detector. The network cable can connect directly to your PC or via a network router. The flame detector will request an IP from the DHCP server and will be available on the network. The flame detector supports the ONVIF protocol. ONVIF is an open industry forum that provides and promotes standardized interfaces for effective interoperability of IP-based physical security products. Supporting ONVIF allows the flame detector to be used as an IP camera and will allow viewers to connect surveillance management systems to the flame detector's video capabilities.

3 Operation

3.1 Startup

After installation, click on the desktop icon:  FGD Communicator on your desktop

The following screen will appear:

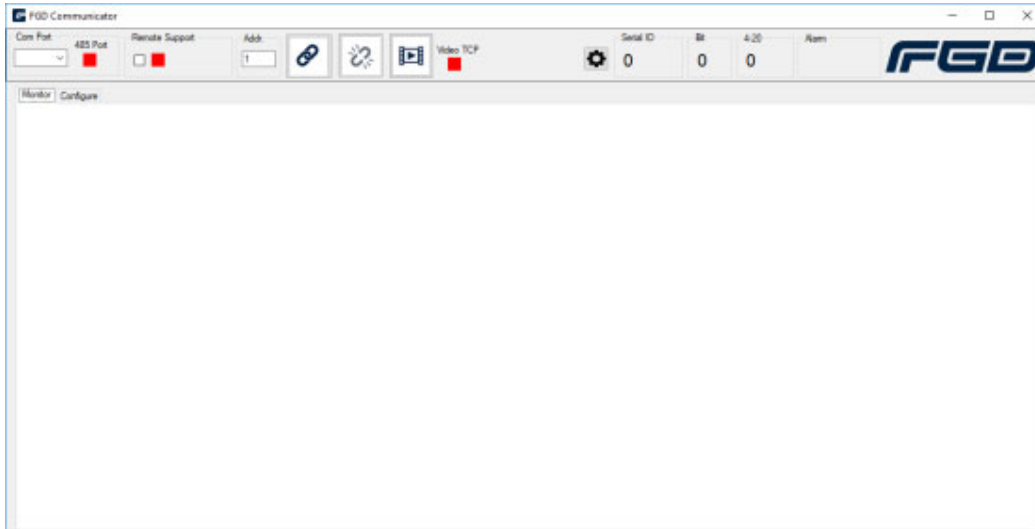



FIGURE 1 - INITIAL SCREEN WHEN OPENING THE FGD COMMUNICATOR

Click the Com Port dropdown button and select the com port that is connected to the RS-485 communication terminal of the flame detector. If the com port doesn't exist, check your network setup.


In the Addr text field, set the Modbus address of the flame detector. The factory setting is address 1. The Modbus Address is configurable, and if the default was changed, the Communicator software will not be able to connect until the correct address is populated in the Addr text field.

After selecting the com port and populating the Modbus Address field, click on the connect button . The Communicator software will attempt to connect to the detector. If the detector is powered up and the green led is showing in the detector led indicator, the connection will succeed, and the 485 port indicator will turn green. As long as the 485 port indicator is green, the connection to the detector is active. Once this indicator turns red, it means that communication to the detector was lost. To reconnect to the detector, click on the connect button again, and the software will attempt to reconnect.

Once a 485 connection is established, the Communicator software will retrieve from the flame detector diagnostic data about the state of the detector. The serial ID, Bit failure indicator, 4-20 value, and alarm state will appear in the top ribbon. The tab selector will change to the Configure tab to show the configuration parameters set on the detector.

3.2 Video Streaming

If the TCP/IP terminals on the flame detector are connected to the IP network, the Communicator software will read from the RS-485, the assigned IP address. The Communicator software will connect to the detector IP and, if successful, will set the Video TCP indicator to green. Be aware that after powering up the detector, it takes about 1 minute from startup for the detector to be available on the network.

Access to live video and recordings are password protected. The default user/password is fgcam/admin. The user/password can be set by clicking on the settings button .

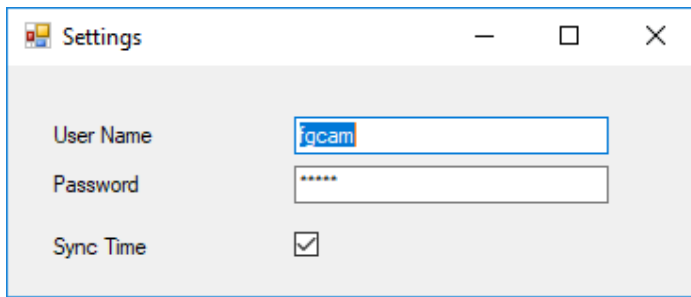



FIGURE 2 - SETTINGS FORM

Changing the user password is done via an ONVIF client.

Once the Video TCP indicator is green, video is enabled, and the correct user name/password is set, the monitor tab will show the live video stream. Recordings are available by clicking on the “Show Video Recordings” button .

3.3 Video Recordings

When the Video TCP indicator is green, it is possible to view the video recordings stored in the flame detector every time an alarm occurs.

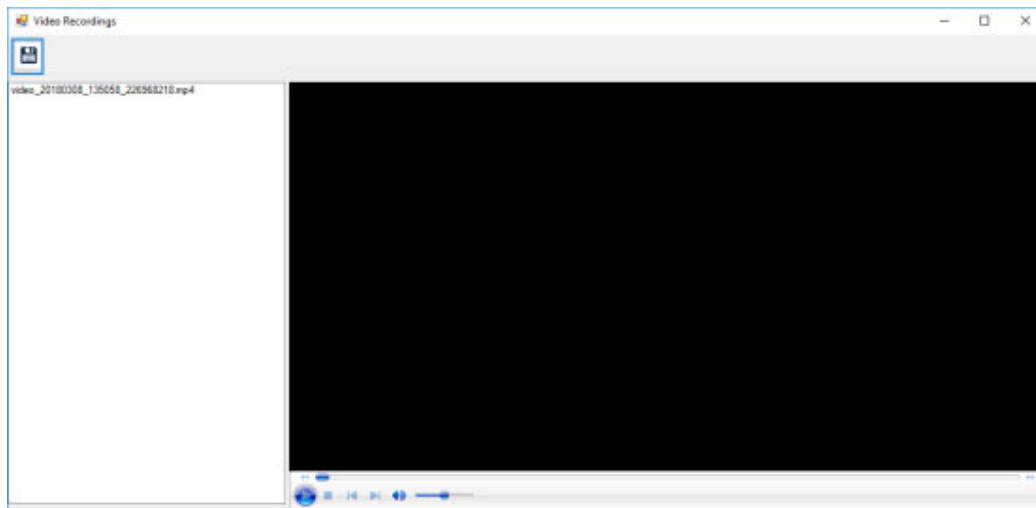


FIGURE 3 - VIDEO RECORDINGS SCREEN

On the left pane, the video recordings will appear from the latest to the earliest. Selecting the recording on the left will automatically stream the video to the player on the right.

To save the recording, click on the Save button  and select a directory to store the mp4 file.


It is also possible to connect to the flame detector through the LAN by opening a browser and setting the URL to:

<http://<ip>/videos>

Enter the username/password (default is fgcam/admin) to access the files.

3.4 Settings

Changing the settings is done on the configuration tab. The configure tab allows you to perform setting modifications. Make sure you understand each parameter before implementing any changes.

When an editable field is modified, the field name is highlighted. To save the configuration, the save button  must be pressed. Once the highlight disappears, the flame detector setting is modified. See the Configure section for details about the available configurable settings.

3.5 Remote Support





In case remote support is required, the Communicator software can allow Fike support personnel to connect to the software remotely. The remote connection is only possible if the Remote Support checkbox is marked and an internet connection is available.

Remote support is only possible from a Windows 10 PC. Through the remote support link, Fike's support can download diagnostic logging from fire events. A full analysis can be conducted as well as updating configuration parameters if required.

4 Field Description

The following section will describe the fields available in the Communicator software.

4.1 Top Ribbon

1. **Com Port** will show the available com ports. Select the com port that has the 485-communication channel.
2. **Remote Support** – Mark the checkbox when instructed by Fike personnel to remotely collect diagnostics from the detector in case of a support case. (Works on Windows 10 only)
3. **Addr** – Modbus address.
4. Connect button  Connects to RS-485 Modbus and TCP/IP ONVIF service.
5. Disconnect Button  from RS-485 Modbus.
6. Video Recordings  Clicking on this icon will open the video recordings when the Video TCP indicator is green.
7. Video TCP indicator – When green, the communicator can connect to the TCP/IP Ethernet. Video streaming will be seen in the monitor, and recording can be viewed from the detector. When the detector is turned on, it may take up to 3 minutes before the IP address is assigned, and the indicator turns green. When red, the communicator is unable to connect to the video TCP/IP communication channel.
8.  Settings – Opens the settings form.
9. **Serial ID** – shows serial id via 485.
10. **Bit** – Bit failure indicator via 485.


11. **4-20** – 4-20ma output current value reported through the RS-485 output channel.
12. Alarm – when red – fire alert. Green – no fire alert.


4.2 Monitor Tab


When a TCP/IP connection is available, the monitor tab will show the video streaming as being transmitted from the flame detector. The stream is using an RTSP protocol. The RTSP address is `rtsp://<user>/<pwd>@<IP>:8554/unicast`.


4.3 Configure Tab

4.3.1 Toolbar

Export  – Creates an export file to save the configuration. The data is saved in JSON format.

Import  - Import a file exported from the export button. Click on save after the import to apply the modified fields.

Revert  - Revert changes to current saved fields.

Save  - save modified configuration parameters to the flame detector.

4.3.2 Configure tab fields

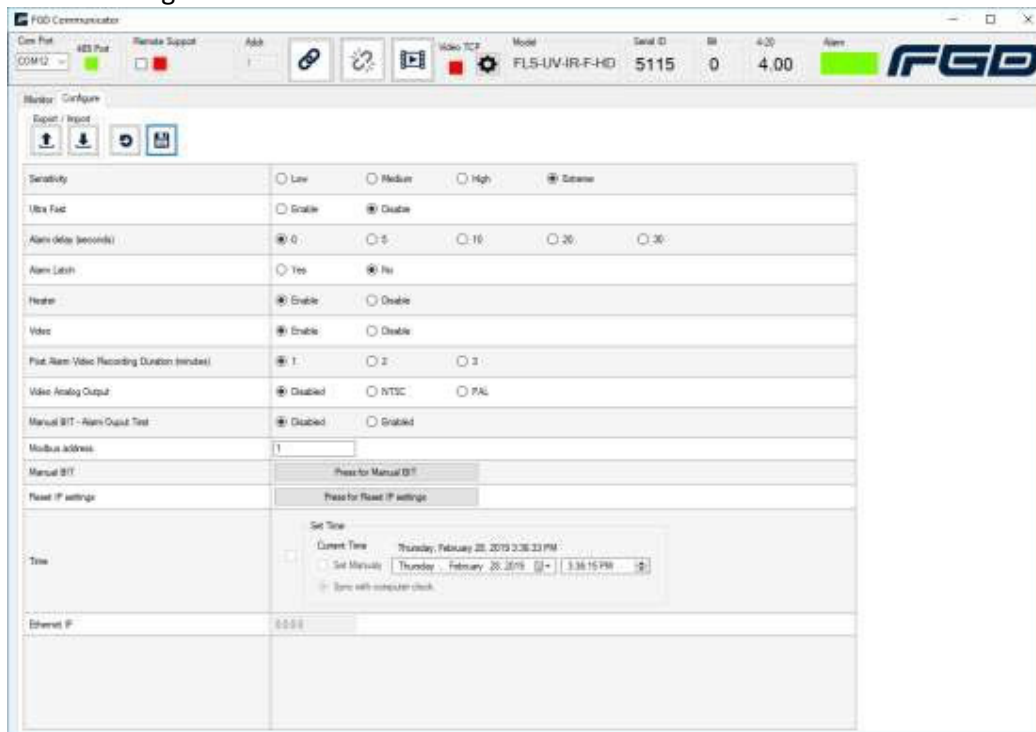


FIGURE 4 - CONFIGURE TAB SCREENSHOT

1. **Sensitivity** – for IR3 detector gasoline pan fire 1sq foot. (default extreme)
 - a. Low – 15m
 - b. Medium - 30m
 - c. High – 60m
 - d. Extreme – 80m

For specific distances, see datasheet for your flame detector

2. **Ultra-Fast** – enables ultra-fast detection. (default: on)
3. **Alarm delay (seconds)** – delay in seconds from (default 0)
4. **Alarm Latch** – default off.
5. **Heater** – Default enabled
6. **Video** – enabled/disables video. Default enabled. Requires restart or till bit test to be applied.
7. **Post alarm video recording duration (minutes)** – default 1
8. **Video Analog Output** – Disabled, NTSC, PAL – Default disabled. It allows you to configure the video analog output.
9. **Manual BIT – Alarm Output Test** – When enabled, the alarm outputs are activated when a Manual BIT is initiated.



Warning


Make sure to disable all fire extinguishing actions or alarms connected to the detector when the manual BIT is initiated and the “Manual BIT – Alarm Output Test” is enabled as the Manual BIT will set the 0-20mA terminal to 20mA and close the alarm relay

10. **Modbus address** – when modified, the 485 port will be disconnected. Set the Modbus address to the new setting and click on connect again.
11. **Manual Bit** – Press to perform a manual bit
12. **Reset IP settings** – Resets all IP settings to default. Should be used in case you are unable to access the IP of the detector. When pressing this button, a warning message will appear. Press yes to reset the IP.
13. **Time** – Enabled when Auto Sync Time is unchecked in the settings screen. Select the checkbox to either sync the time with the computer clock or manually set. When the Auto Sync Time is checked, the communicator will always monitor the time and set it if it is different from the computer clock.

4.3.3 Non-configurable parameters

1. **Ethernet IP** – the IP assigned via the TCP/IP connection and reported via the 485 connections.

4.4 Settings

The settings window appears when pressing the settings icon on the top ribbon .

1. **User Name** – The user name is used to connect to the TCP/IP channel. The live stream and recordings are password protected.
2. **Password** – The password to connect to the TCP/IP channel. The live stream and recordings are password protected.
3. **Sync Time** – When checked, the communicator will synchronize the flame detector’s clock with the PC clock the Communicator software is installed on. The clock is used by the video recordings to timestamp the file. It is also used by internal logging that is accessible by Fike’s remote support when enabled. When the detector is restarted, it will use the last time it was set too before it was shutdown.

5 ONVIF Network Device Client

Flame detectors with video and LAN communication support the ONVIF protocol. ONVIF allows you to monitor and configure the detectors. An ONVIF network device client can be downloaded from the following link:

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

Once the ONVIF client is installed and activated, it will see all the detectors connected to the network. They will be displayed with their IP and hostname on the left side.

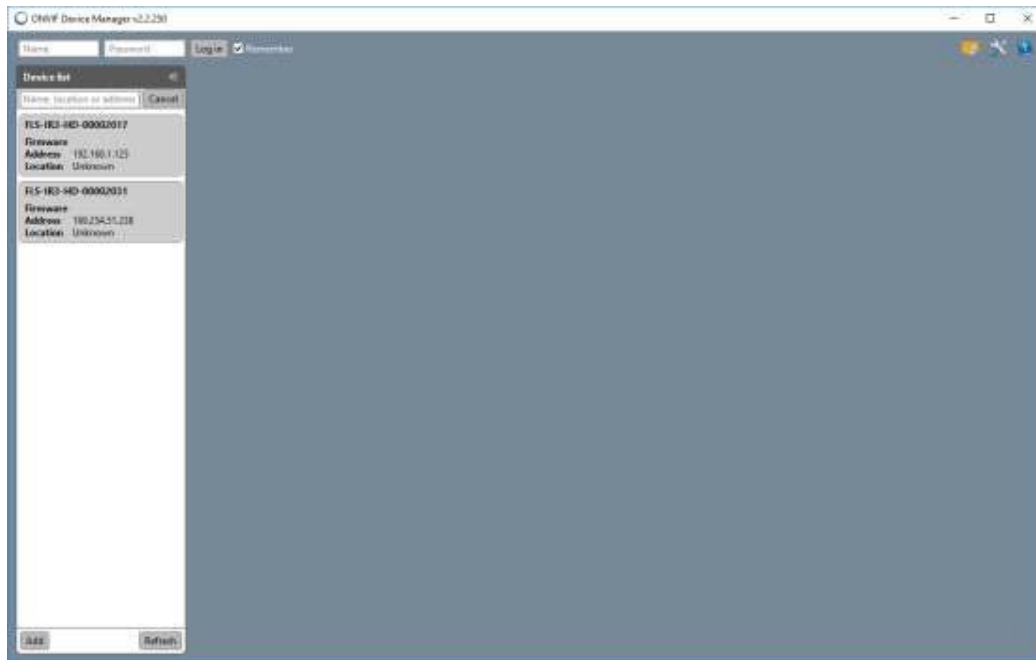


FIGURE 5 - ONVIF DEVICE CLIENT - OPENING WINDOW

To access the detector, you must enter the user/password on the top left side (default is fgcam/admin)

Clicking on the device in the device list will show the settings and NVT (Network Video Transmitters) on the right pane.

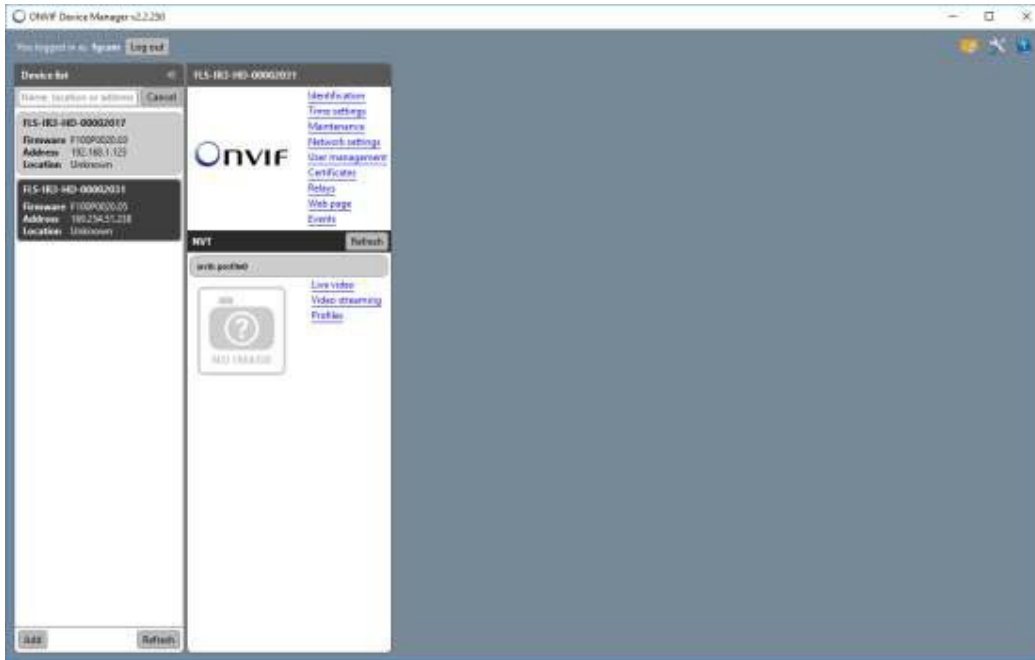


FIGURE 6 - ONVIF DEVICE CLIENT – LOGIN

5.1 HOSTNAME setting

With the ONVIF Device Client, it is possible to set the hostname of the device. The default hostname is <model>-<serial num>. For example, FLS-IR3-HD-0201. To change the hostname, select the Identification link on the top list of settings in the right pane. Change the hostname and click on the apply button.

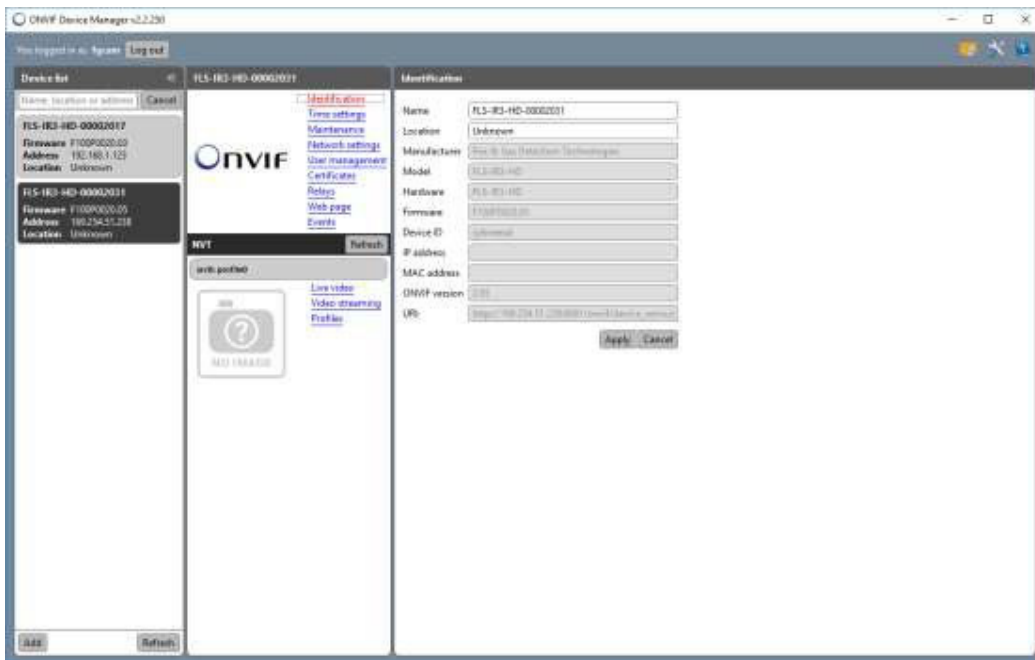


FIGURE 7 - ONVIF DEVICE CLIENT - CHANGE HOSTNAME

5.2 Time Setting

The ONVIF protocol allows you to set the time of the detector. The time setting will be displayed as a timestamp on the video stream, and as a timestamp for internal logging that is stored on the detector. To set the time, click on the Time Setting link in the settings list on the right pane of the detector.

The time, as well as the timezone, can be set from the form. Click Apply when done. Once modified, the timestamp on the real-time stream will be updated.

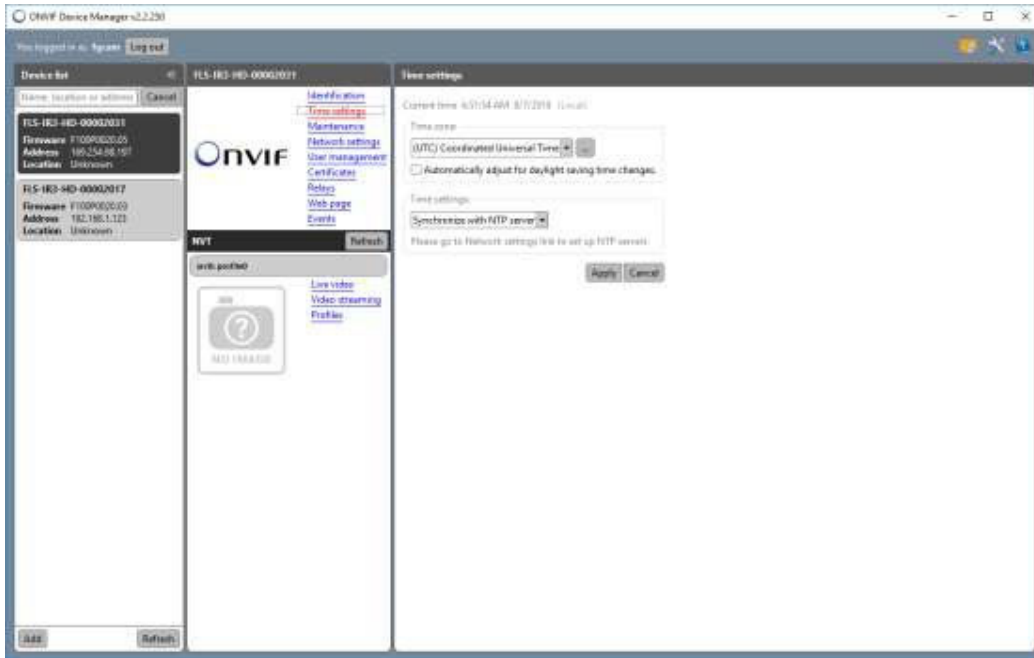


FIGURE 8 - ONVIF DEVICE CLIENT - TIME SETTING FORM

5.3 Network Settings

Network settings can be modified via the ONVIF device client. The IP can be set to static as well as settings to the DNS, NTP servers. Once the IP settings are changed, a restart of the device is required. Restart can be done by powering off and on the detector or by using the reboot button in the maintenance form.

Once the IP is changed, it is the responsibility of the network administrator to maintain access to the device through the network. The configured static or dynamic IP can be seen with the Communicator software in the Ethernet IP field.

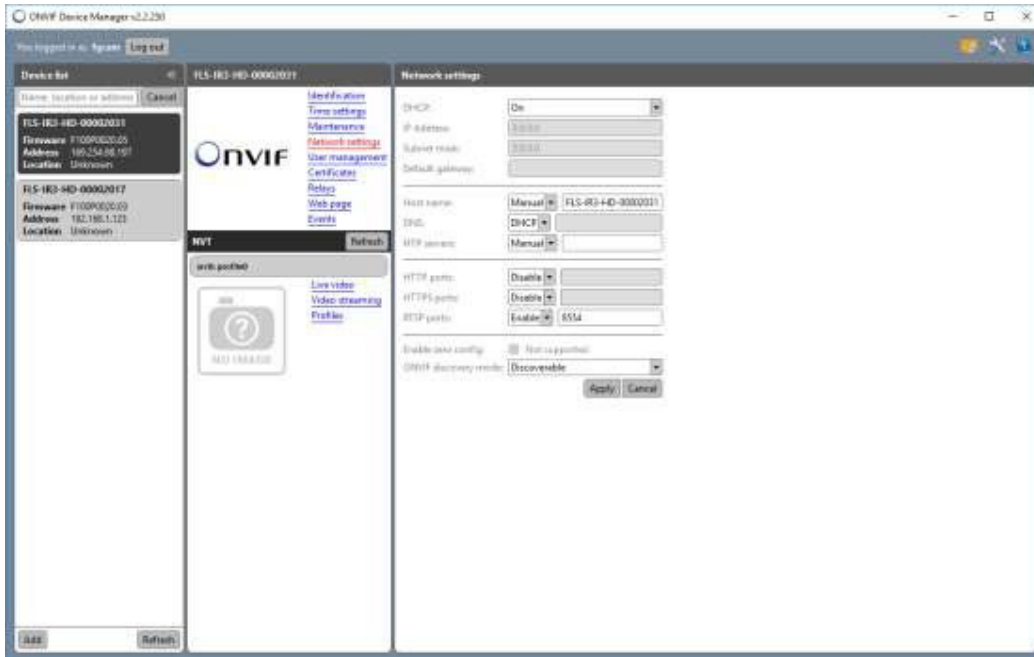


FIGURE 9 - ONVIF DEVICE CLIENT - NETWORK SETTINGS

5.4 User Management

Access to the video stream or the recordings is password protected. The default user password is fgcam/admin. ONVIF device client allows changing the default user password. Click on the User Management link on the right pane. A User Management form will be displayed with a Modify button. Click modify and change the user password. The user password needs to be changed in the ONVIF device client. Click on the logout button and then reenter the user password. The Communicator software user password should also be changed to see video streams and recordings. See section 3.2 Video Streaming for details on changing the user password in the Communicator software.

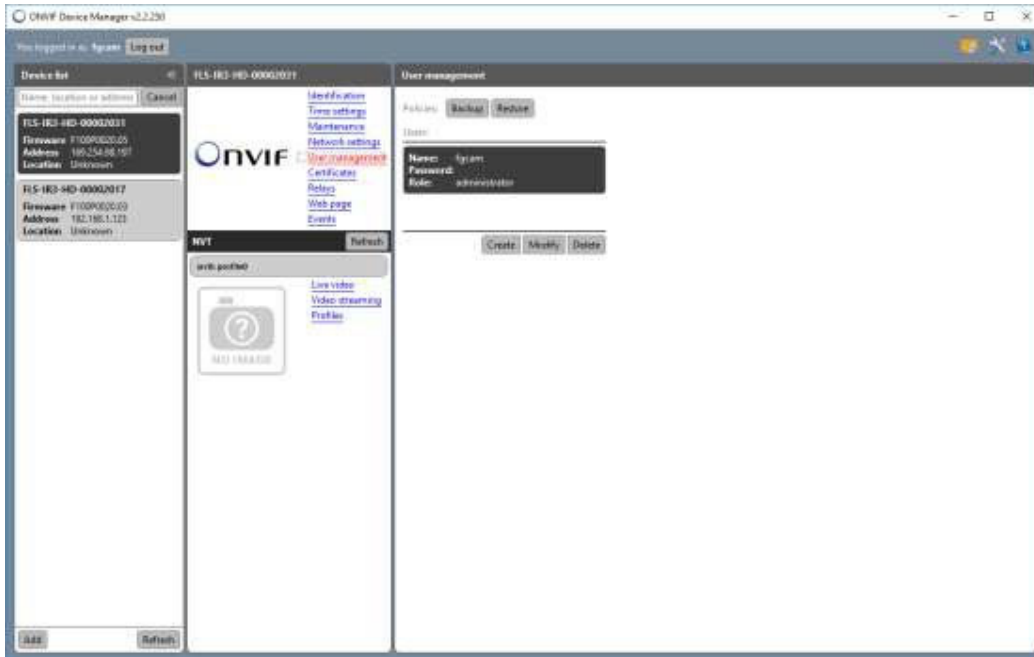


FIGURE 10 - ONVIF DEVICE CLIENT - USER MANAGEMENT

5.5 Video Streaming

With the ONVIF device client, It is possible to see the live video stream. Click on the link Live Video or Video Streaming to see the live video.

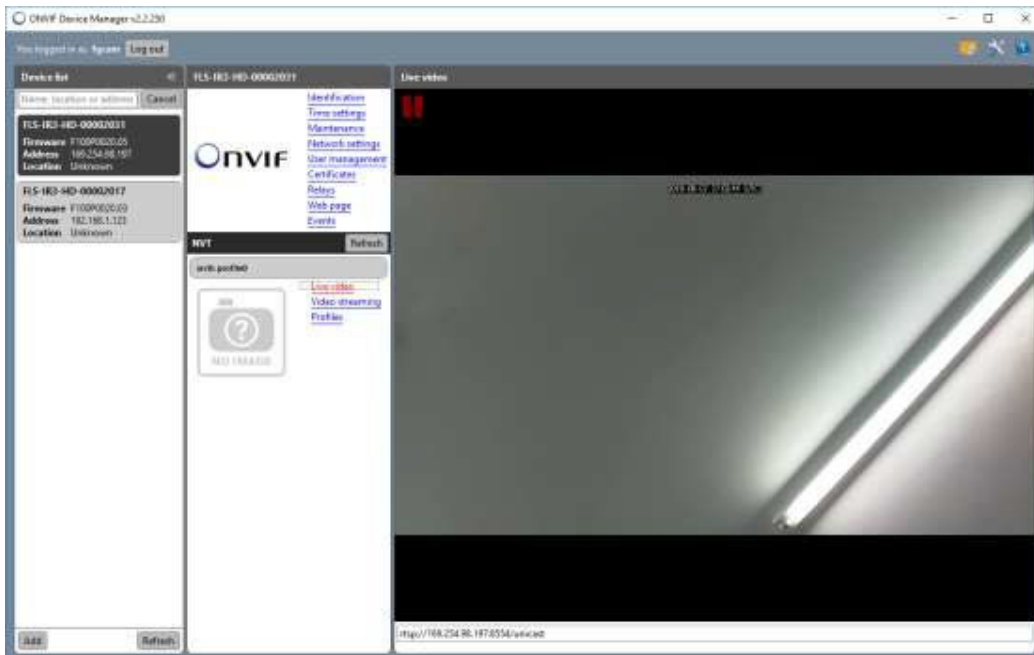


FIGURE 11 - ONVIF DEVICE CLIENT - LIVE STREAMING

5.6 Video Recordings

It is not possible to access video recordings with ONVIF at the moment. See section 3.3 Video Recordings for details on accessing video recordings. Video recordings can be accessed either via the Communicator software or through http.

6 Technical Support

For more information and Technical support call Fike at 1- (800)-979-FIKE (3453)