



# User Manual

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HDMI Streamer

Ref. 8210



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© Unitron - Frankrijklaan 27 - B-8970 Poperinge - Belgium

**T** +32 57 33 33 63 **F** +32 57 33 45 24

**email** sales@unitrongroup.com

www.unitrongroup.com

## 1. PRODUCT DESCRIPTION

Put an HDMI stream on your (local) network

- The Johansson HDMI Streamer is designed for small to medium-sized projects
- It is a High Definition Video and Audio Encoder that makes it easy to put your HDMI source on a (local) network and/or internet
- This gives the end-user the flexibility to see your real-time video content on their preferred (mobile) device: smartphone, tablet, laptop or TV
- The end-user can simply surf to a dedicated webpage or streaming service
- No need to install a mobile application or additional software, it works on any web browser
- Interesting for local video (surveillance cams, digital signage, advertisements, info channel, creating your own local broadcast, etc) and for streaming to live platforms (e.g. Facebook Live, YouTube Live, Ustream, Wowza, etc).

The 8210 has multiple functionalities:

- Enable a HDMI source on your local network using the built-in webpage (HLS unicast)
- Multicast a HDMI source for an IPTV application (UDP multicast)
- Publish your live stream to an online platform (RTMP)
- HDMI loop-through for simultaneous viewing on a local TV

## 2. HDMI STREAMER APPLICATIONS



## 3. INSTALLATION OF THE HDMI STREAMER

### 3.1. Minimal system requirements

The following web browsers support the module interface: Chrome; Safari; Firefox; Internet Explorer. When using a different browser, we cannot guarantee a correct functioning of the interface.

### 3.2. Starting up the module

Connect all cables needed for your installation.

For the first set-up, it is advised to connect an Ethernet cable directly to your PC (without using a switch).

- After powering the HDMI Streamer, wait until the power led turns green (this can take up to about 2 minutes). Once the power led is green, the unit can be accessed through the WebGUI. The unit uses 192.168.50.50 as the default static IP address. Therefore, you will need to set-up a static IP in your PC that matches the subnet of the device. For example 192.168.50.25.

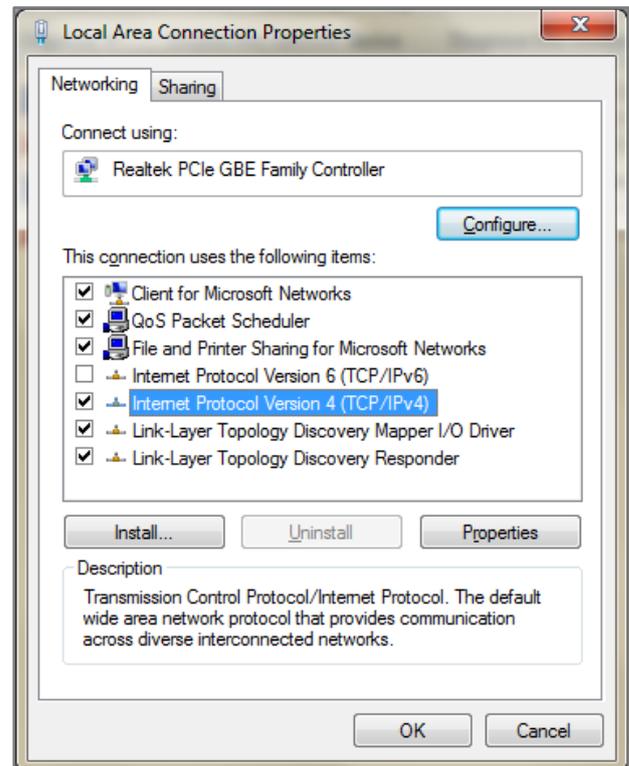
#### Windows 7

Go to start → Control Panel → Network and Internet → Network and Sharing Center → Change Adapter Settings. Right-click on "Local Area Connection" and then on "Properties".

#### Windows 8

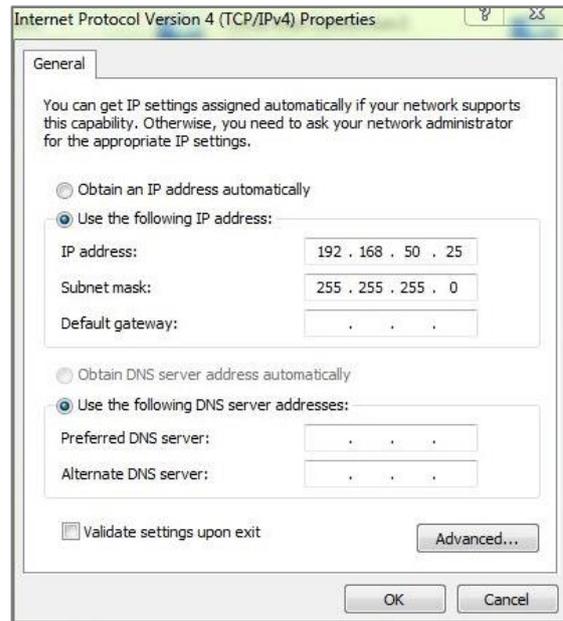
Open the windows 8 start screen by pressing the start button. Type "Control Panel" and press enter. Then go to "Network and Internet" → "Network and Sharing Center" → "Change Adapter Settings". Right-click on "Local Area Connection" and then on "Properties".

Double click on "Internet Protocol Version 4 (TCP/IPv4)" to enter the IP settings of your adaptor.



Check the button “Use the following IP address” and enter an IP and subnet mask.

You can leave the Default gateway and DNS settings empty.



Open your browser and surf to the website <http://192.168.50.50>.

If everything went fine you will see the following webpage, if not check your network settings and try again.

Alternatively, the webpage can default also be accessed via <http://start> but also in this case your PC needs to be in the same subnet.

1. To log in to the device: connect the HDMI Streamer to a local network and go to <http://192.168.50.50/admin/>
2. **Device:** The following screen with general information will appear:

The screenshot shows the UNITRON GROUP admin interface. On the left is a navigation menu with sections: Device (Information, Network configuration, Login configuration, Update, Factory reset, Reboot), Inputs (HDMI), and Outputs (IP, Live Streams). The main content area is titled 'General information' and contains two summary boxes: 'Hardware' (Serial number: 1913010088892, Version: 1.0.0) and 'Software' (Version: 1.0.0.TST-4, Release date: 25 Jul 2019). Below these is a 'Monitoring information' section with a 'Runtime' box showing: Uptime: 0 days, 01:08; Temperature: 58; CPU load: 5; network traffic: 0; CPU speed: 1368.

3. **Inputs:** Define the encoder settings for the HDMI input

The screenshot shows the UNITRON GROUP admin interface with the 'HDMI' input selected in the navigation menu. The main content area is titled 'Status' and shows 'Input 1' with a green checkmark for 'Lock' and 'Video format' set to '720p50'. Below this is the 'Encoder settings' section for 'Input 1', which includes several input fields and dropdown menus: Name (HDMI1), SID (50), PMT PID (60), Video PID (62), Audio PID (61), Video type (H.264), Video bitrate (kbps) (2000), Audio type (AAC), and Audio bitrate (kbps) (128). An 'Apply' button is located at the bottom of the settings area.

#### 4. **Outputs:** Select multicast transport protocol: RTP or UDP

For live streaming, enable the service and define the RTMP address:

RTMP address: URL + private key

e.g. youtube: rtmp://a.rtmp.youtube.com/live2/qxjd-uaps-zfk6-550v

To add multiple Hosts (streams), add the IP addresses (from the same network) and separate with a comma (e.g. 192.168.50.51,192.168.50.52, 192.168.50.53).

Make sure the IP addresses are in the same network.

The screenshot shows the UNITRON GROUP web interface. The left sidebar has a menu with 'Device', 'Inputs', and 'Outputs'. Under 'Outputs', 'IP' is selected. The main content area is titled 'Status' and contains several sections:

- General:** Total bitrate 0 Mbps.
- Multicast settings:** Protocol is set to 'UDP'. Below is a table for SPTS services:
 

Service name	Enabled	Dest. address	Dest. port
HDMI1	<input checked="" type="checkbox"/>	239.50.50.1	49152
- RTMP settings:** A table for SPTS services:
 

Service name	Enabled	Dest. address
HDMI1	<input checked="" type="checkbox"/>	<input type="text"/>
- HLS settings:** A section for 'Additional hosts' with a text input containing '178.118.212.82:56231' and a note 'Separate hosts with a comma (,)'. Below it is a note: '\* Include services from similar devices as "Live Streams"'. An 'Apply' button is at the bottom.

#### 5. **End-user page:** Select Live Streams in admin menu or go to <http://192.168.50.50>

#### **Factory reset:**

Go to **Device > Factory reset**, or press the small button next to the DC input on the HDMI Streamer for 5 seconds. When the HDMI Streamer is resetting, the power LED will blink.

## 4. TECHNICAL SPECIFICATIONS

Parameter	Unit	Value
Inputs	-	1 x HDMI
Outputs	-	1x IP Ethernet RJ-45 jack (for streaming + WebGUI) 1 x HDMI (loop-through)
HDMI input	-	Video resolution : 576i up to 1080p Video encoding : H264/AVC Video bitrate Encoding: from 1 Mbps to 30Mbps Audio encoding : AAC/MPEG2 Audio bitrate Encoding 32 -192 Kbps
Streaming port	Mbps	10/100
Ethernet OTT encapsulation	-	HLS (Apple HTTP Live Streaming) (unicast)
Ethernet multicasting	-	Possible to output UDP multicast
Simultaneous users	-	Up to 30 (depending on the bitrate and the network infrastructure)
Input resolution	-	Up to 1080p60
Supported playback		All HTML 5 browsers on Android/iPhone/Mac/PC/SmartTV/... No need to install mobile application or additional software
Configuration	-	Network/login/input encoder settings/output multicast settings
Power consumption	W	5
Operating temperature	°C	0 to +50 (for indoor use only)
Dimensions	mm	155 x 120 x 50 mm
Weight	Kg	0.6

## 5. SAFETY INSTRUCTIONS



**Read these instructions carefully before connecting the unit**



To prevent fire, short circuit or shock hazard:

- Do not expose the unit to rain or moisture.
- Install the unit in a dry location without infiltration or condensation of water.
- Do not expose it to dripping or splashing.
- Do not place objects filled with liquids, such as vases, on the apparatus.
- If any liquid should accidentally fall into the cabinet, disconnect the power plug.



To avoid any risk of overheating:

- Install the unit in a well aery location and keep a minimum distance of 15 cm around the apparatus for sufficient ventilation
- Do not place any items such as newspapers, table-cloths, curtains, on the unit that might cover the ventilation holes.
- Do not place any naked flame sources, such as lighted candles, on the apparatus
- Do not install the product in a dusty place
- Use the apparatus only in moderate climates (not in tropical climates)
- Respect the minimum and maximum temperature specifications



To avoid any risk of electrical shocks:

- Connect apparatus only to socket with protective earth connection.
- The mains plug shall remain readily operable
- Pull out power plug to make the different connections of cables
- To avoid electrical shock, do not open the housing of adapter.



**Maintenance**



Only use a dry soft cloth to clean the cabinet.



Do not use solvent



For repairing and servicing refer to qualified personnel.



**Dispose according your local authority's recycling processes**

## 6. CONDITIONS OF WARRANTY

Unitron N.V. warrants the product as being free from defects in material and workmanship for a period of 24 months starting from the date of production indicated on it. See note below.

If during this period of warranty the product proves defective, under normal use, due to defective materials or workmanship, Unitron N.V, at its sole option, will repair or replace the product. Return the product to your local dealer for reparation

### **THE WARRANTY IS APPLIED ONLY FOR DEFECTS IN MATERIAL AND WORKMANSHIP AND DOES NOT COVER DAMAGE RESULTING FROM:**

- Misuse or use of the product out of its specifications.
- Installation or use in a manner inconsistent with the technical or safety standards in force in the country where the product is used
- Use of non-suitable accessories (power supply, adapters...).
- Installation in a defect system.
- External cause beyond the control of Unitron N.V. such as drop, accidents, lightning, water, fire, improper ventilation...

### **THE WARRANTY IS NOT APPLIED IF**

- Production date or serial number on the product is illegible, altered, deleted or removed.
- The product has been opened or repaired by a non-authorized person.

### **NOTE**

Date of production can be found in the product's serial number code. The format will either be "YEAR W WEEK" (e.g., 2018W01 = year 2018 week 1) or "YYWW" (e.g., 1847 = year 2018 week 47).



[www.unitrongroup.com](http://www.unitrongroup.com)

**UNITRON NV**  
**Frankrijklaan 27**  
**B-8970 Poperinge**  
**Belgium**

**T +32 57 33 33 63**  
**F +32 57 33 45 24**

**[sales@unitrongroup.com](mailto:sales@unitrongroup.com)**  
**[www.unitrongroup.com](http://www.unitrongroup.com)**