

# ANT-35000 to ANT-36000 connection options

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Normal / Proprietary is a more reliable connection method between the ANT-35000 and ANT-36000, but does require some “hand shaking” so will be susceptible to long links or links with long delays or long ping times.

RTSP (Real Time Streaming Protocol) is a standard for media between server and client. Whether using UDP, TCP or Multicast there is setup hand shaking. IP video cameras can stream a RTSP stream which can be successfully connected by client over the internet on the other side of the world.

MPEG-TS is a “fire and forget”. If a packet is lost or delayed the decoder will have a jitter / stutter on the displayed video and audio. There is no hand shaking

For further help and advice please contact Antrica on:  
 Email: [support@antrica.com](mailto:support@antrica.com)  
 Phone: +44 1628 626098, during UK office hours,  
 and ask for technical support

## Document info

Version	date	author	Comments
1.0	23-Jul-19	David M	35000 to 36000 connection setups
1.1	2-Sep-19	David M	Minor textual adjustments
1.2	25-Nov-19	David M	Addition of RTSP multicast
1.3	28-Apr-22	David M	Bi directional settings
1.4	29-Mar-23	David M	RTP and re-order to match decode options in decoder
1.5	12-Apr-23	David	MPEG-TS multicast

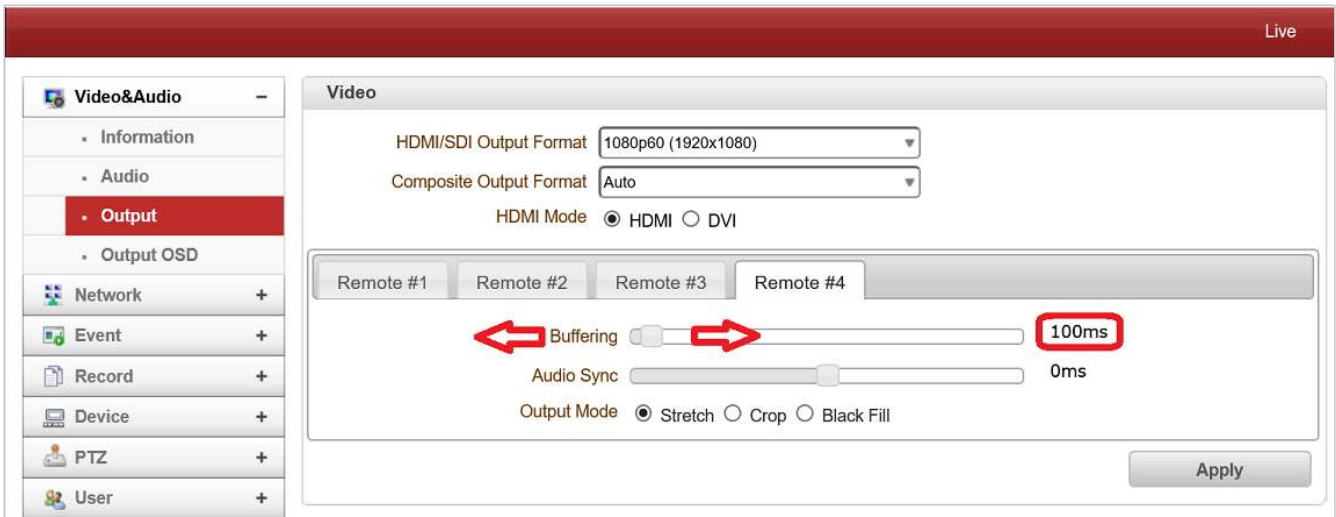
# Setup

## 1. Decoder buffer

This can be adjusted to aid the "smoothness" of the video. If, for example, the network is long and jittery, then a higher buffer value would give a smoother video. A higher buffer value will increase the latency of the overall system. This parameter requires the user to adjust the setting to find the best video.

### 1.1. ANT-36000 -> Video&Audio -> Output

Figure 1 : Decoder buffer



## 2. Normal - Proprietary

This used the proprietary connection method. IN the example the UDP is selected as this is more reliable on longer links. If TCP is used then the hand shaking will require a better network link, if not this may cause stuttering of the video.

### 2.1. ANT-35000 -> Setup -> Network -> IP&Port

The Base port configuration. 2222 is the default setting

Figure 2 : Encoder IP And Port settings – base port

<ul style="list-style-type: none"> <li>Video&amp;Audio +</li> <li>Image +</li> <li>Network -</li> <li style="background-color: #f00; color: white;">. IP&amp;Port</li> <li>. RTSP Multicast</li> <li>. QoS</li> <li>. Discovery</li> <li>. One-way</li> <li>. SRT</li> <li>. SNMP</li> <li>. DDNS</li> <li>. IP filtering</li> <li>. E-mail</li> <li>. FTP</li> <li>. SSL</li> <li>. Connecting</li> <li>Event +</li> <li>Record +</li> <li>Device +</li> <li>PTZ +</li> <li>User +</li> <li>System +</li> </ul>	<div style="border: 1px solid #ccc; padding: 5px;"> <div style="background-color: #f0f0f0; padding: 2px;"><b>Local</b></div> <p>IP Mode <input type="text" value="Fixed IP"/></p> <p>Local IP <input type="text" value="192.168.0.98"/></p> <p>Local Gateway <input type="text" value="192.168.0.1"/></p> <p>Local Subnet <input type="text" value="255.255.255.0"/></p> </div> <div style="border: 1px solid #ccc; padding: 5px; margin-top: 5px;"> <div style="background-color: #f0f0f0; padding: 2px;"><b>DNS</b></div> <p><input type="radio"/> Obtain DNS server address automatically</p> <p><input checked="" type="radio"/> Use the following DNS server addresses</p> <p>Primary DNS Server <input type="text" value="8.8.8.8"/></p> <p>Secondary DNS Server <input type="text" value="8.8.8.8"/></p> </div> <div style="border: 1px solid #ccc; padding: 5px; margin-top: 5px;"> <div style="background-color: #f0f0f0; padding: 2px;"><b>IPv6</b></div> <p>IPv6 Address <input type="text"/></p> <p>IPv6 Subnet Prefix Length <input type="text" value="0"/></p> <p>IPv6 Default Gateway <input type="text"/></p> <p>IPv6 LinkLocal <u>fe80::21c:63ff:feb3:ee2/64</u></p> </div> <div style="border: 1px solid #ccc; padding: 5px; margin-top: 5px;"> <div style="background-color: #f0f0f0; padding: 2px;"><b>Port</b></div> <p><span style="border: 2px solid red; border-radius: 50%; padding: 2px;">Base Port</span> <input type="text" value="2222"/> (1025~65535)</p> <p>HTTP Port <input type="text" value="80"/> (80, 1025~65535)</p> <p>HTTPS Port <input type="text" value="443"/> (443, 1025~65535)</p> <p>RTSP Port <input type="text" value="554"/> (554, 1025~65535)</p> <p>Audio Receive Port <input type="text" value="2280"/> (1025~65535)</p> </div>
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## 2.2. ANT-36000 -> Network -> Remote

The setup is:

Parameter	Value	comments
Media Protocol	UDP	other options are TCP and Multicast
Address	IP address of encoder	
Port	As setup in Figure 2	default is 2222
Remote channel	the encoder channel to view	default is Channel#1, see table below other options
ID	encoder username	default is admin
Password	encoder password	default is 1234

Encoder channel to decoder setting for "Normal" decode options

Encoder	Decoder
Primary	Channel#1
Secondary#1	Channel#1Secondary#1
Secondary#2	Channel#1Secondary#2
Secondary#3	Channel#1Secondary#3

Figure 3 : decoder "Normal" settings

The screenshot shows the 'Remote' configuration page in the ANTRICA web interface. The left sidebar contains a navigation menu with categories like Video&Audio, Network, Event, Record, Device, PTZ, and User. The 'Network' section is expanded, and 'Remote' is selected. The main content area shows settings for 'Remote #1'. The 'Remote Type' is set to 'Normal', 'Media Protocol' to 'UDP', 'Address' to '192.168.0.98', and 'Port' to '2222'. The 'Remote Channel' is set to 'Channel#1'. Other settings include 'Use Streaming Server' (Off), 'SS IP Address' (0.0.0.0), 'SS Port' (0), 'ID' (admin), and 'Password' (masked with dots). The 'Overlapped Connection' is set to 'Disable'.

### 3. Normal – Bi-Directional audio

#### 3.1. Encoder sends G711 & Decoder send G711

##### 3.1.1. Encoder

Version - V3.904B11\_T913

Audio Source has to be "Analog Stereo" as "Embedded Audio" is AAC only, as shown in Figure 4. In Figure 5 the encoding (sending) and decoding (receiving) audio formats are shown.

Figure 4 : encoder Audio settings

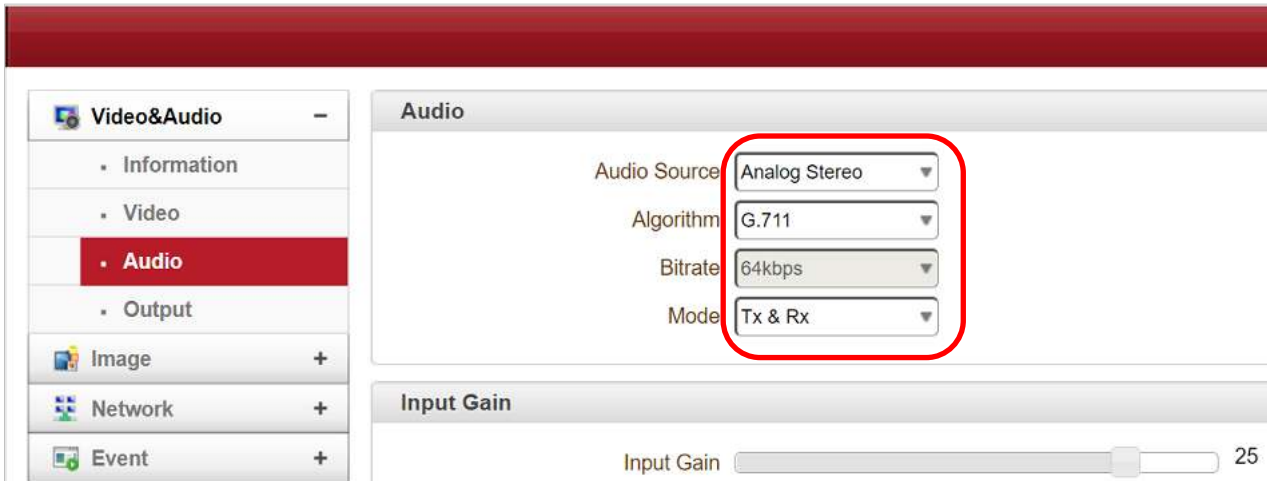
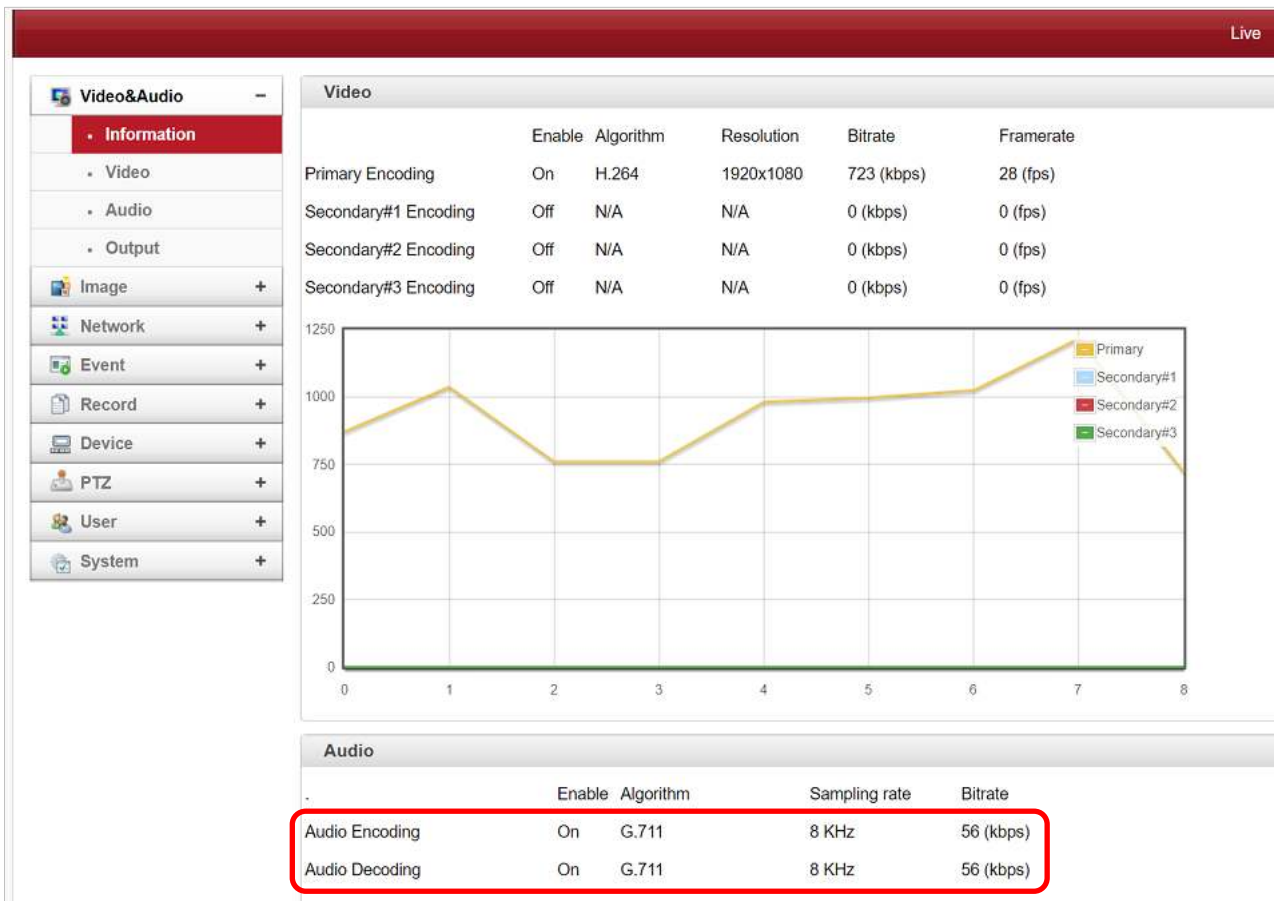


Figure 5 : encoder Video&Audio Information



### 3.1.2. Decoder

Version - V4.002B01\_T913

Audio Source has to be "Analog Mic-In", as shown in Figure 6. **NOTE** that a microphone level signal is expected, not a line level signal. In Figure 7 Figure 5 the encoding (sending) and decoding (receiving) audio formats are shown.

Figure 6 : decoder Audio settings

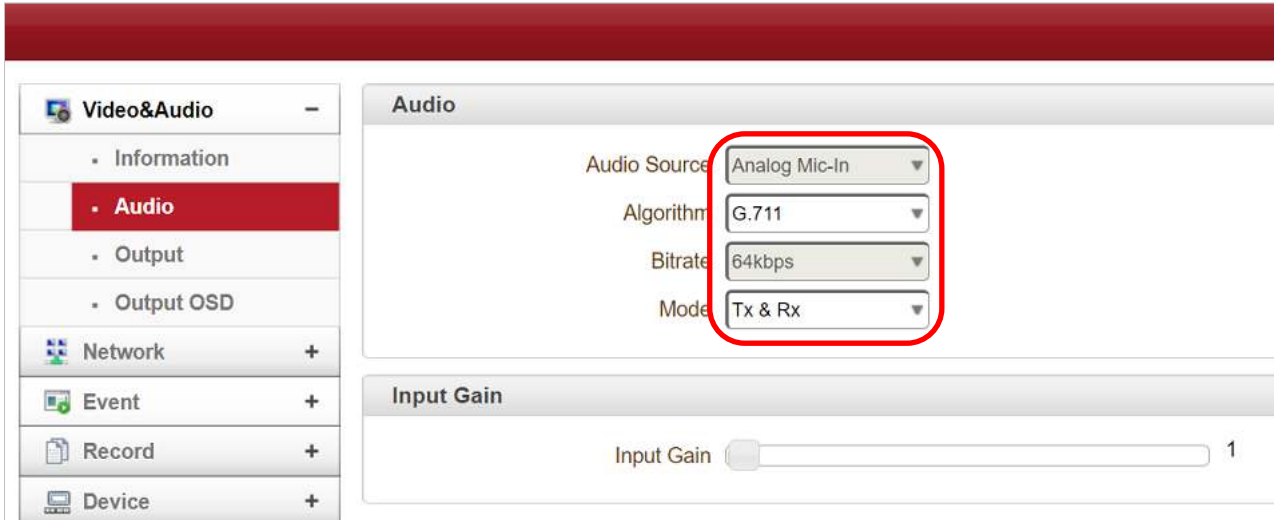
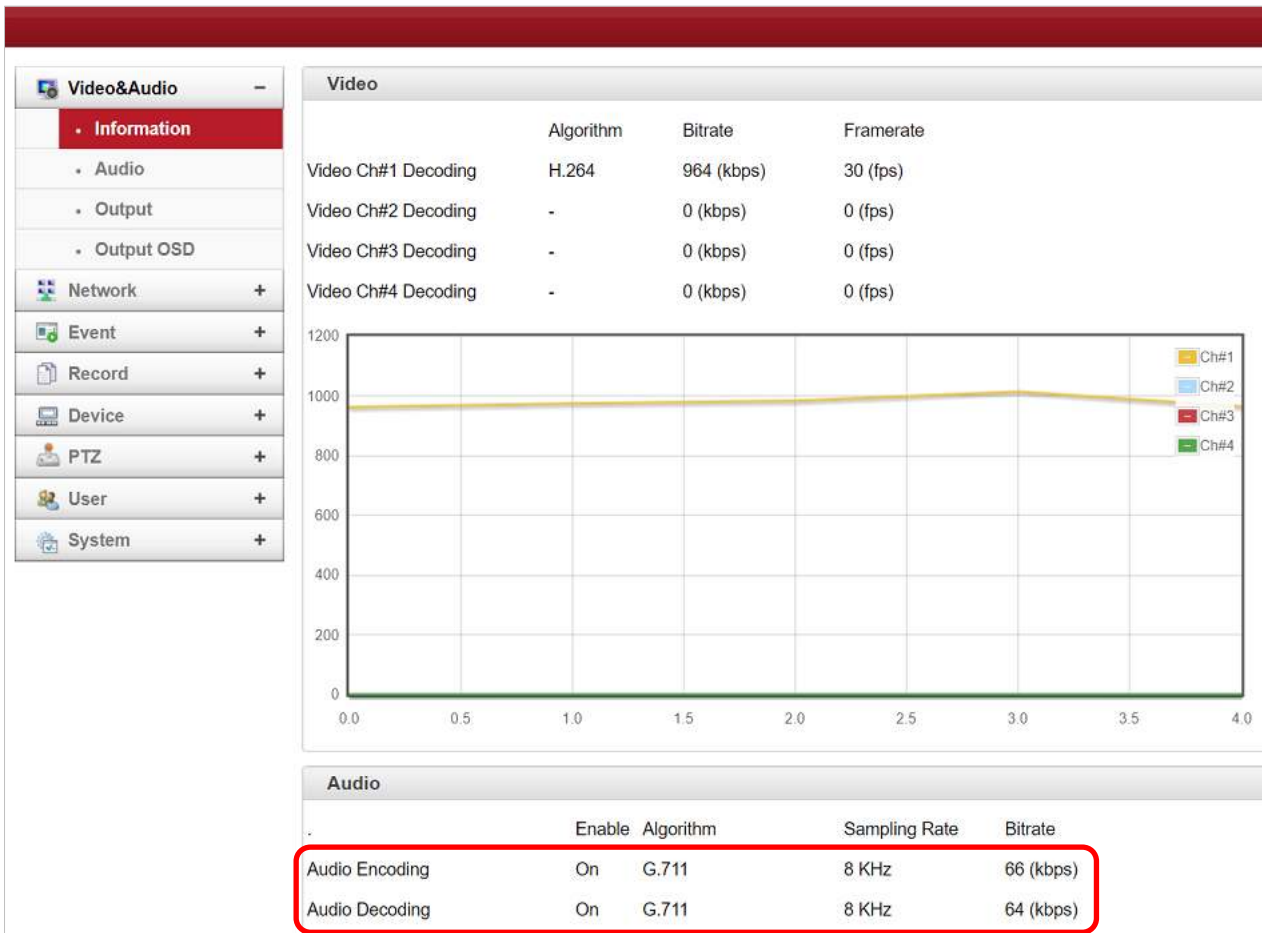


Figure 7 : decoder Video&Audio Information



### 3.2. Encoder sends ACC & Decoder send ACC

It is recommended that the Sampling rate and Bitrate at set the same in the encoder and decoder, as shown in Figure 8 and Figure 10.

#### 3.2.1. Encoder

Version - V3.904B11\_T913

Audio Source can be "Analog Stereo" or "Embedded Audio", as shown in Figure 8. In Figure 9 the encoding (sending) and decoding (receiving) audio formats are shown.

Figure 8 : encoder Audio settings

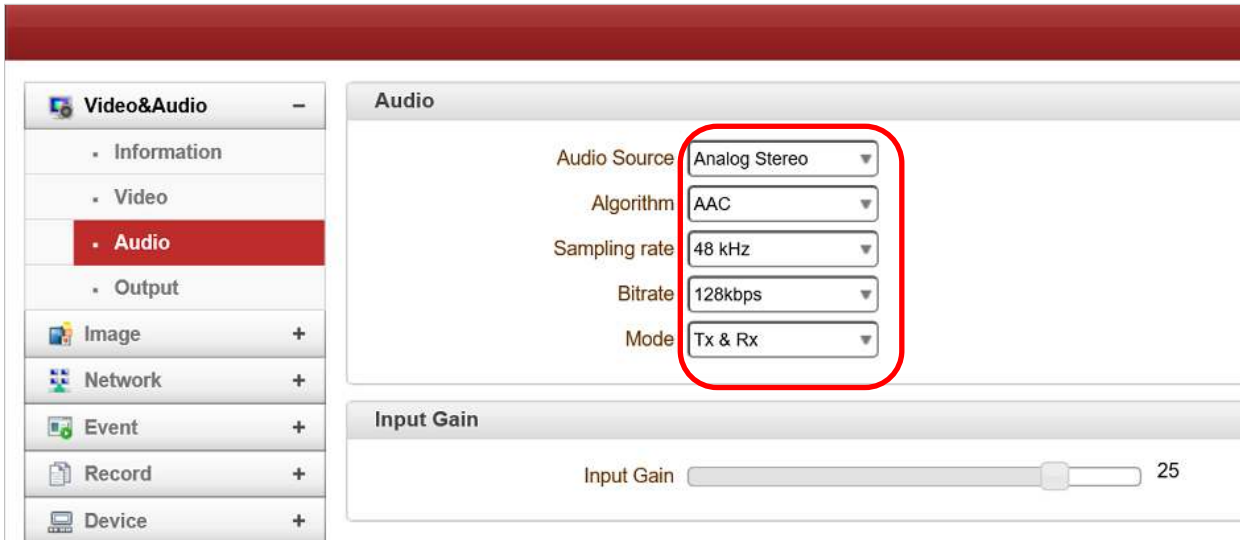
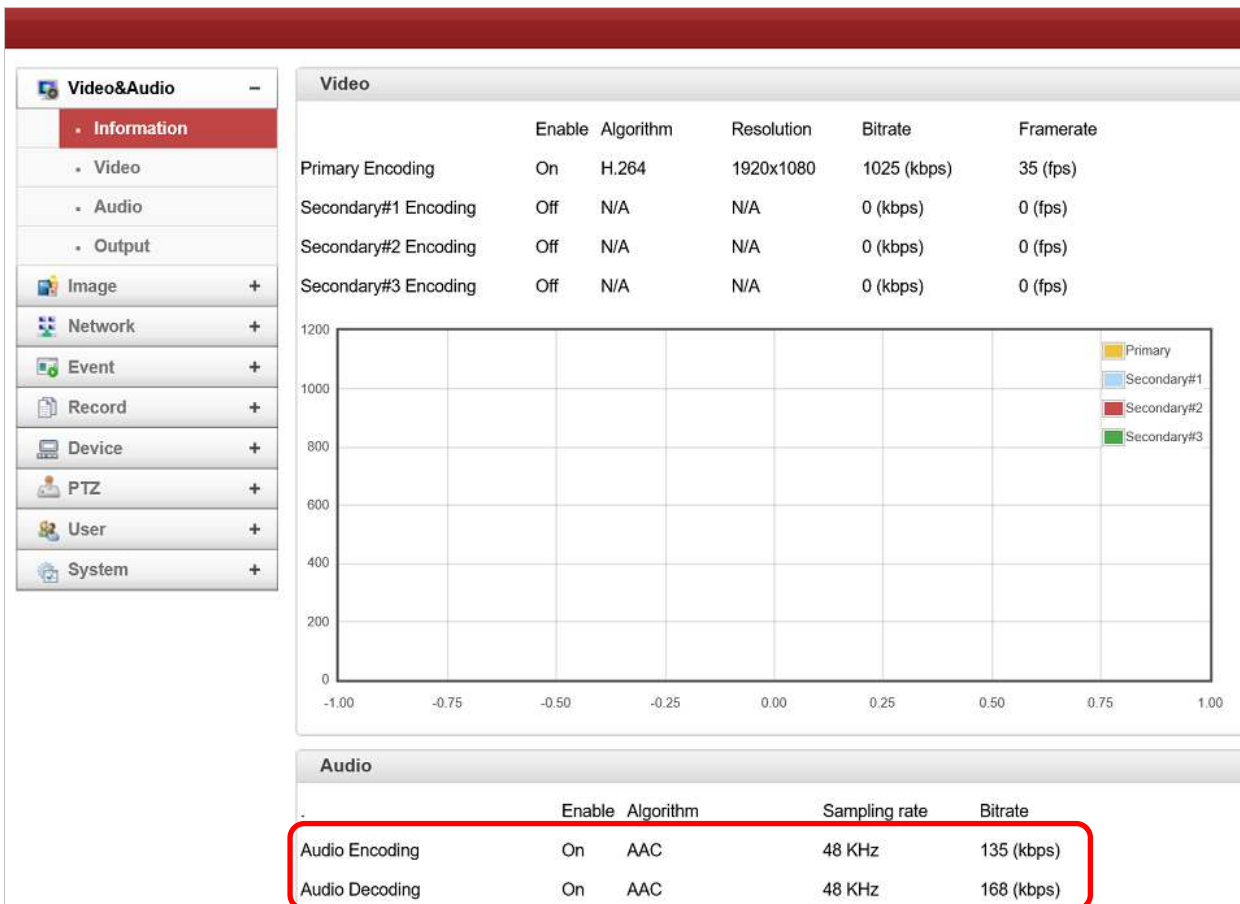


Figure 9 : encoder Video&Audio Information



### 3.2.2. Decoder

Version - V4.002B01\_T913

Audio Source has to be "Analog Mic-In", as shown in Figure 10. **NOTE** that a microphone level signal is expected, not a line level signal. In Figure 11 the encoding (sending) and decoding (receiving) audio formats are shown.

Figure 10 : decoder Audio settings

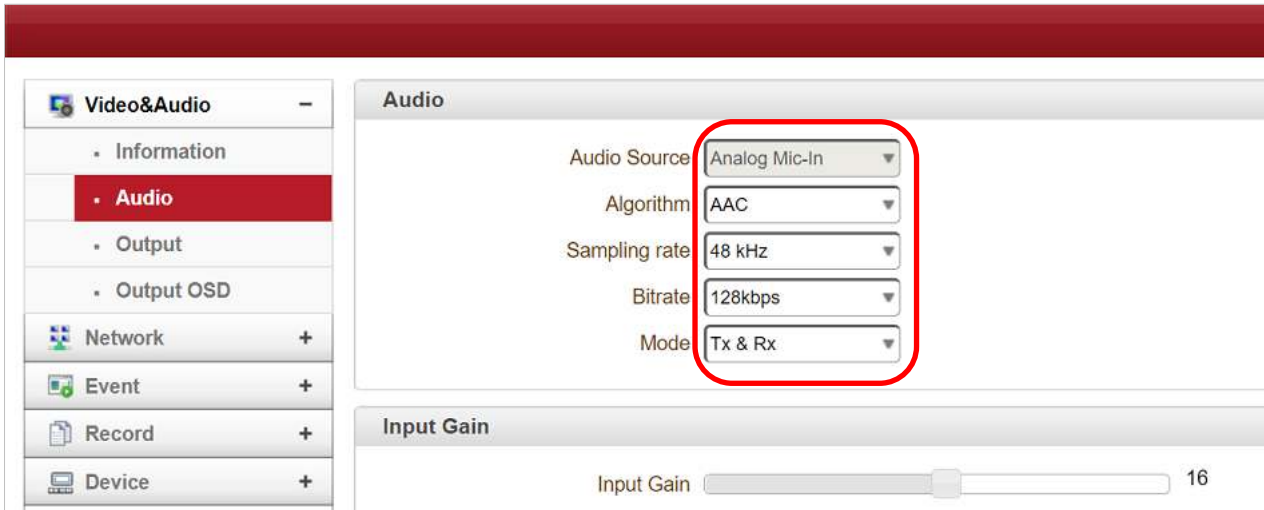
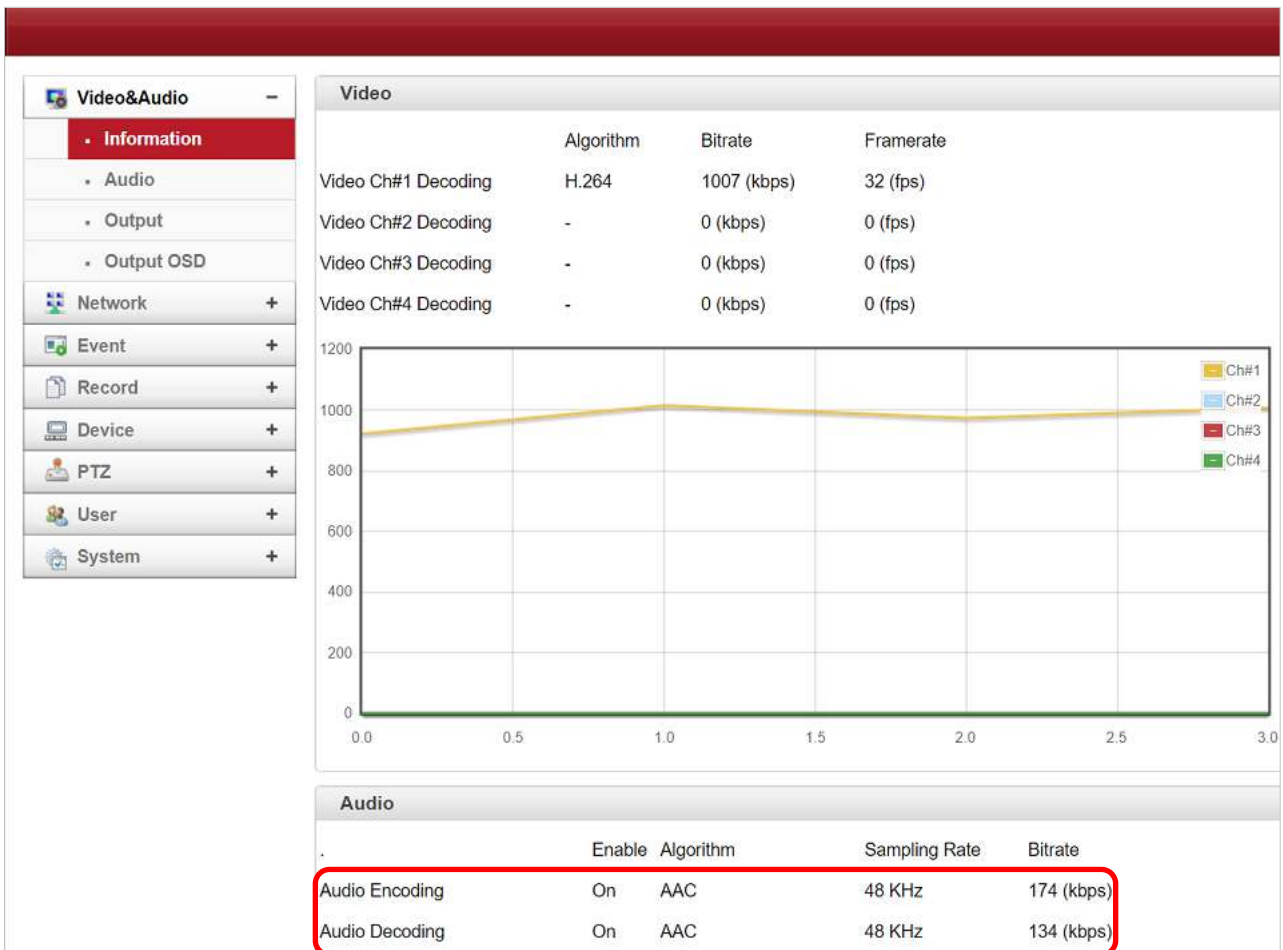


Figure 11 : decoder Video&Audio Information



## 4. RTSP - unicast

This is a widely used connection method. Again with the option to use TCP or UDP.

### 4.1. ANT-35000 -> Setup -> Network -> IP&Port

The RTSP port configuration. 554 is widely accepted default setting

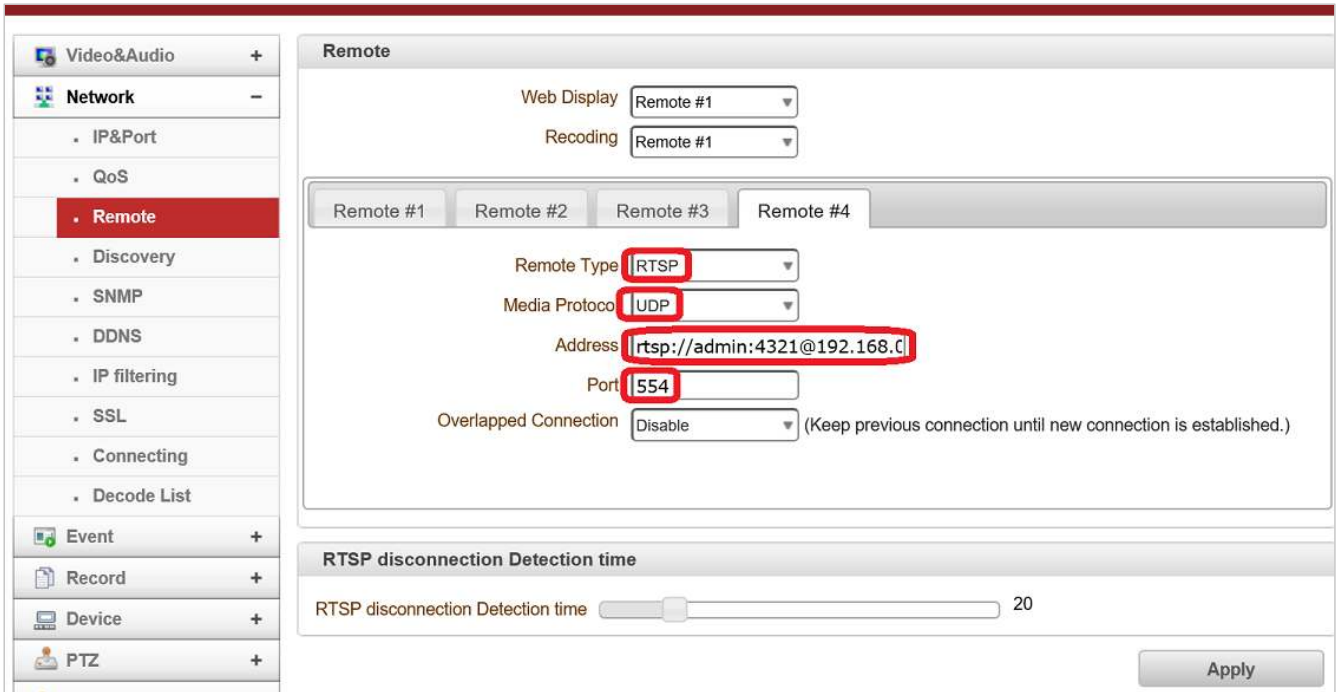
Figure 12 : Encoder IP And Port settings – RTSP port

<ul style="list-style-type: none"> <li>Video&amp;Audio +</li> <li>Image +</li> <li>Network -</li> <li style="background-color: #f00; color: white;">. IP&amp;Port</li> <li>. RTSP Multicast</li> <li>. QoS</li> <li>. Discovery</li> <li>. One-way</li> <li>. SRT</li> <li>. SNMP</li> <li>. DDNS</li> <li>. IP filtering</li> <li>. E-mail</li> <li>. FTP</li> <li>. SSL</li> <li>. Connecting</li> <li>Event +</li> <li>Record +</li> <li>Device +</li> <li>PTZ +</li> <li>User +</li> <li>System +</li> </ul>	<div style="border: 1px solid #ccc; padding: 5px;"> <p><b>Local</b></p> <p>IP Mode <input type="text" value="Fixed IP"/></p> <p>Local IP <input type="text" value="192.168.0.98"/></p> <p>Local Gateway <input type="text" value="192.168.0.1"/></p> <p>Local Subnet <input type="text" value="255.255.255.0"/></p> </div> <div style="border: 1px solid #ccc; padding: 5px; margin-top: 5px;"> <p><b>DNS</b></p> <p><input type="radio"/> Obtain DNS server address automatically</p> <p><input checked="" type="radio"/> Use the following DNS server addresses</p> <p>Primary DNS Server <input type="text" value="8.8.8.8"/></p> <p>Secondary DNS Server <input type="text" value="8.8.8.8"/></p> </div> <div style="border: 1px solid #ccc; padding: 5px; margin-top: 5px;"> <p><b>IPv6</b></p> <p>IPv6 Address <input type="text"/></p> <p>IPv6 Subnet Prefix Length <input type="text" value="0"/></p> <p>IPv6 Default Gateway <input type="text"/></p> <p>IPv6 LinkLocal <u>fe80::21c:63ff:feb3:ee2/64</u></p> </div> <div style="border: 1px solid #ccc; padding: 5px; margin-top: 5px;"> <p><b>Port</b></p> <p>Base Port <input type="text" value="2222"/> (1025~65535)</p> <p>HTTP Port <input type="text" value="80"/> (80, 1025~65535)</p> <p>HTTPS Port <input type="text" value="443"/> (443, 1025~65535)</p> <p style="border: 2px solid red; padding: 2px;">RTSP Port <input type="text" value="554"/> (554, 1025~65535)</p> <p>Audio Receive Port <input type="text" value="2280"/> (1025~65535)</p> </div>
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### 4.1. ANT-36000 -> Network -> Remote

The address is the encoders RTSP URL, which in this case is;  
rtsp://admin:4321@192.168.0.98:554/video1+audio1  
The Port can be ignored (allowed to be blank) as the RTSP port is in the URL.

Figure 13 : decoder - RSTP setup



## 5. RTSP – multicast

This allows multiple clients to access the same server using the same stream as this does load the server as this is only 1 stream being generated.

Tested with VLC 3.0.8, ANT-35000 with V3.907R01\_T913 & V3.911B02\_T913, ANT-36000 with V4.907R01\_T913

### 5.1. ANT-35000 setup

#### 5.1.1. ANT-35000 -> Setup -> Network -> IP&Port

The RTSP port configuration. 554 is widely accepted default setting

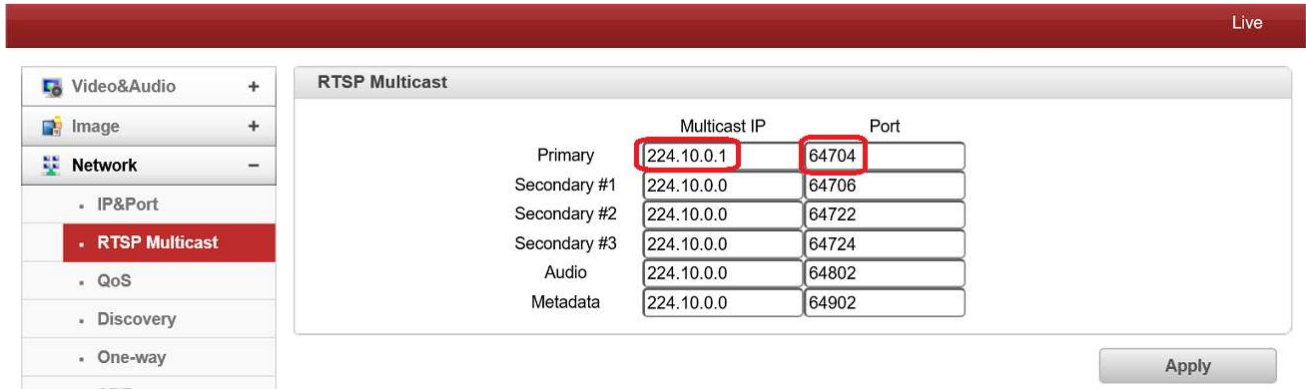
Figure 14 : Encoder IP And Port settings – RTSP port

<ul style="list-style-type: none"> <li>Video&amp;Audio +</li> <li>Image +</li> <li>Network -</li> <li style="background-color: #f00; color: white;">IP&amp;Port</li> <li>RTSP Multicast</li> <li>QoS</li> <li>Discovery</li> <li>One-way</li> <li>SRT</li> <li>SNMP</li> <li>DDNS</li> <li>IP filtering</li> <li>E-mail</li> <li>FTP</li> <li>SSL</li> <li>Connecting</li> <li>Event +</li> <li>Record +</li> <li>Device +</li> <li>PTZ +</li> <li>User +</li> <li>System +</li> </ul>	<div style="border: 1px solid #ccc; padding: 5px;"> <p><b>Local</b></p> <p>IP Mode <input type="text" value="Fixed IP"/></p> <p>Local IP <input type="text" value="192.168.0.98"/></p> <p>Local Gateway <input type="text" value="192.168.0.1"/></p> <p>Local Subnet <input type="text" value="255.255.255.0"/></p> </div> <div style="border: 1px solid #ccc; padding: 5px; margin-top: 5px;"> <p><b>DNS</b></p> <p><input type="radio"/> Obtain DNS server address automatically</p> <p><input checked="" type="radio"/> Use the following DNS server addresses</p> <p>Primary DNS Server <input type="text" value="8.8.8.8"/></p> <p>Secondary DNS Server <input type="text" value="8.8.8.8"/></p> </div> <div style="border: 1px solid #ccc; padding: 5px; margin-top: 5px;"> <p><b>IPv6</b></p> <p>IPv6 Address <input type="text"/></p> <p>IPv6 Subnet Prefix Length <input type="text" value="0"/></p> <p>IPv6 Default Gateway <input type="text"/></p> <p>IPv6 LinkLocal <u>fe80::21c:63ff:feb3:ee2/64</u></p> </div> <div style="border: 1px solid #ccc; padding: 5px; margin-top: 5px;"> <p><b>Port</b></p> <p>Base Port <input type="text" value="2222"/> (1025~65535)</p> <p>HTTP Port <input type="text" value="80"/> (80, 1025~65535)</p> <p>HTTPS Port <input type="text" value="443"/> (443, 1025~65535)</p> <p style="border: 2px solid red; padding: 2px;">RTSP Port <input type="text" value="554"/> (554, 1025~65535)</p> <p>Audio Receive Port <input type="text" value="2280"/> (1025~65535)</p> </div>
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### 5.1.2. ANT-35000 -> Setup -> Network -> RTSP Multicast

In the web GUI navigate to the "RTSP Multicast" page. The items highlighted in Figure 15 are the multicast destination IP address and destination port for the primary video stream. If this was viewed by unicast RTSP it would be RTSP://admin:1234@192.168.10.100:554/video1

Figure 15 : ANT-35000 RTSP multicast settings



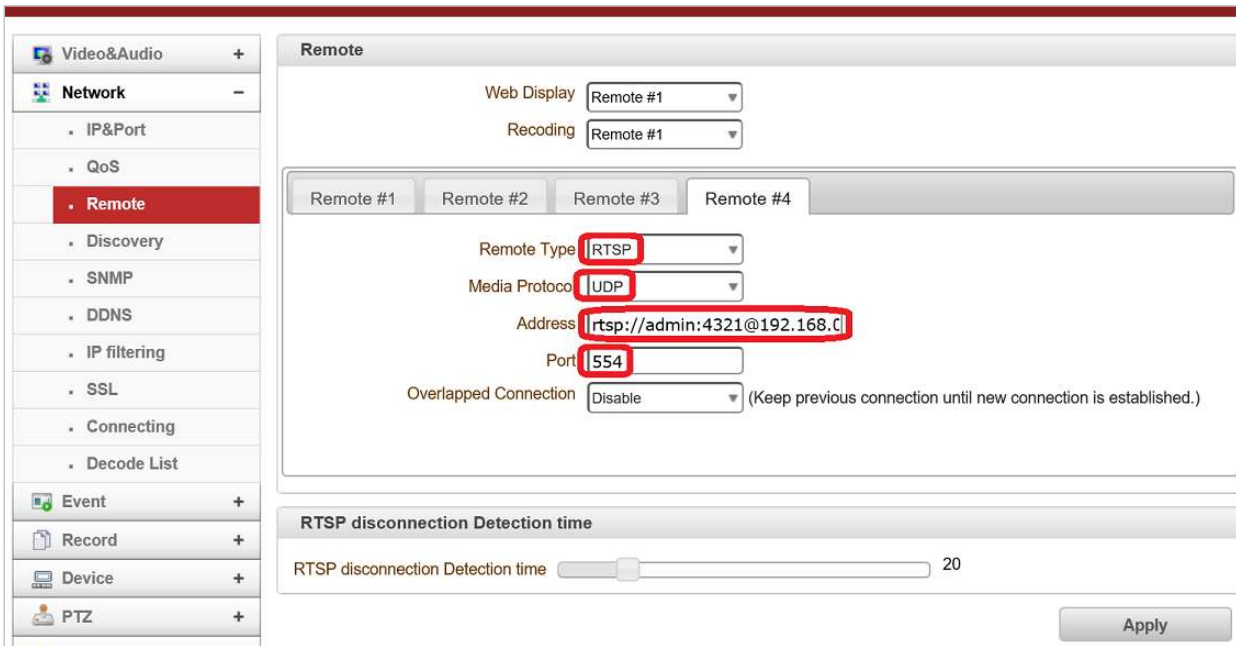
## 5.2. single line URL

### 5.2.1. ANT-36000 -> Network -> Remote

Using the ANT-36000 decoder in the "Remote" setup page, see example in Figure 16, the setup will be:

Parameter	Value	Comments
Remote Type	RTSP	
Media Protocol	UDP or TCP	this is a customer's choice
Address	rtsp://admin:1234@192.168.10.100:554/video1?transport=multicast	same as VLC
Port	554	

Figure 16 : ANT-36000 additional parameter

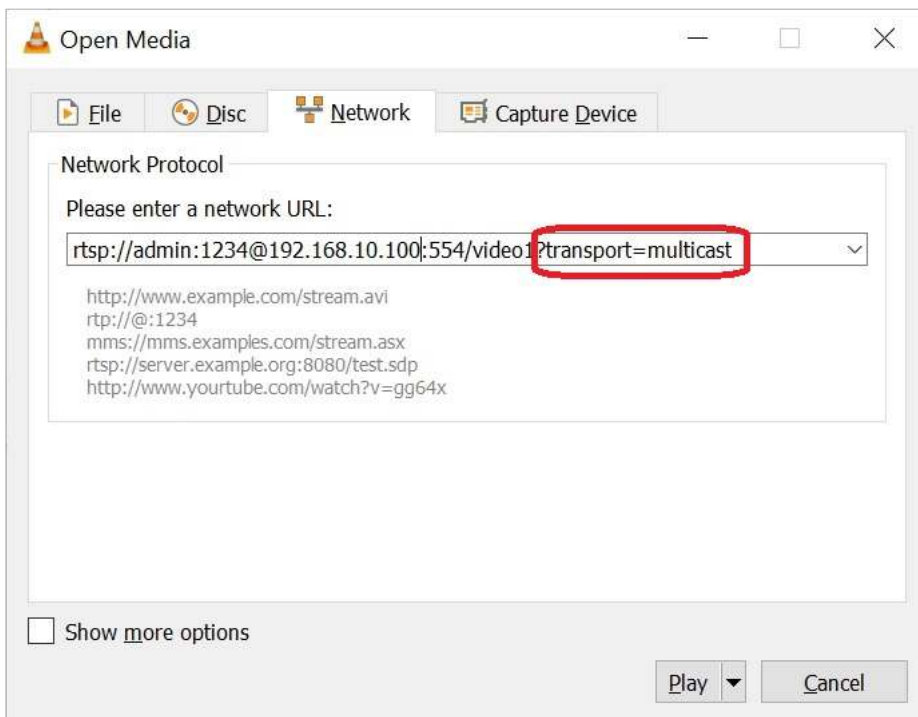


### 5.2.1.VLC setup

In VLC in the network setup add "?transport=multicast" to the end of the Access URL, as highlighted in Figure 17. The complete URL is then

**rtsp://admin:1234@192.168.10.100:554/video1?transport=multicast**

Figure 17 : VLC additional parameter



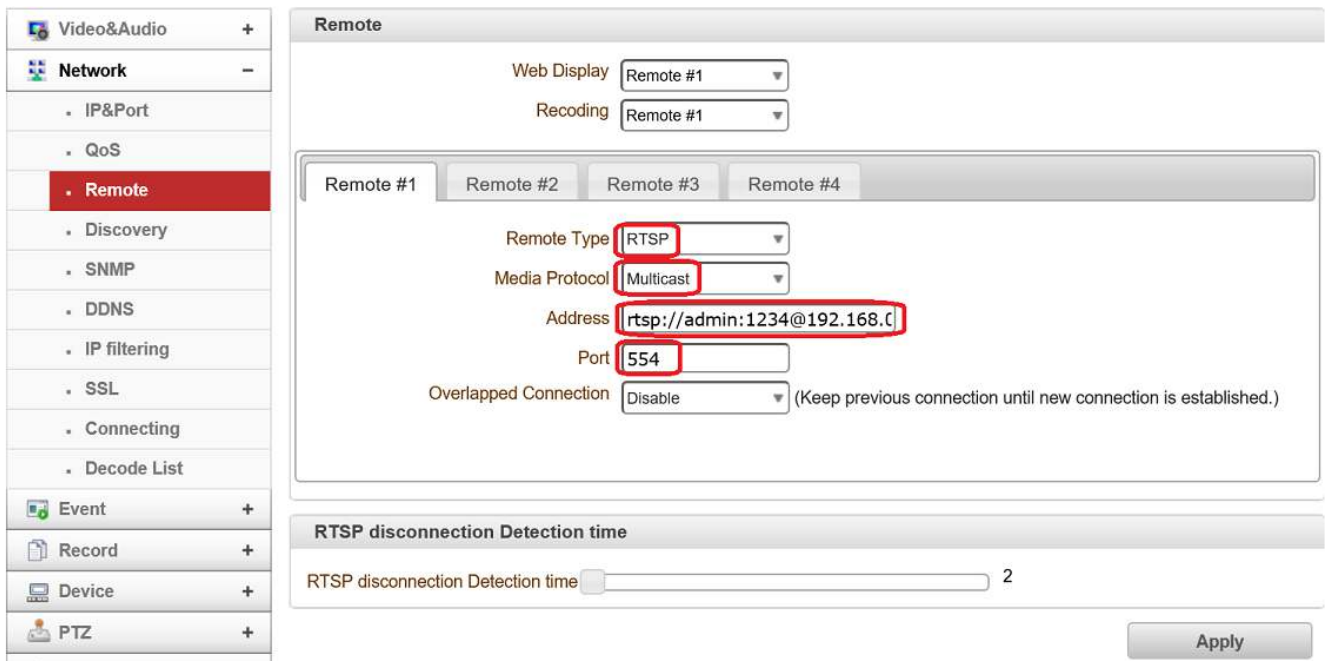
### 5.3. additional parameter

#### 5.3.1. ANT-36000 setup

Using the ANT-36000 decoder in the "Remote" setup page, see example in Figure 18, the setup will be:

Parameter	Value	Comments
Remote Type	RTSP	
Media Protocol	Multicast	
Address	rtsp://admin:1234@192.168.10.100:554/video1	The basic RTSP connection URL
Port	554	

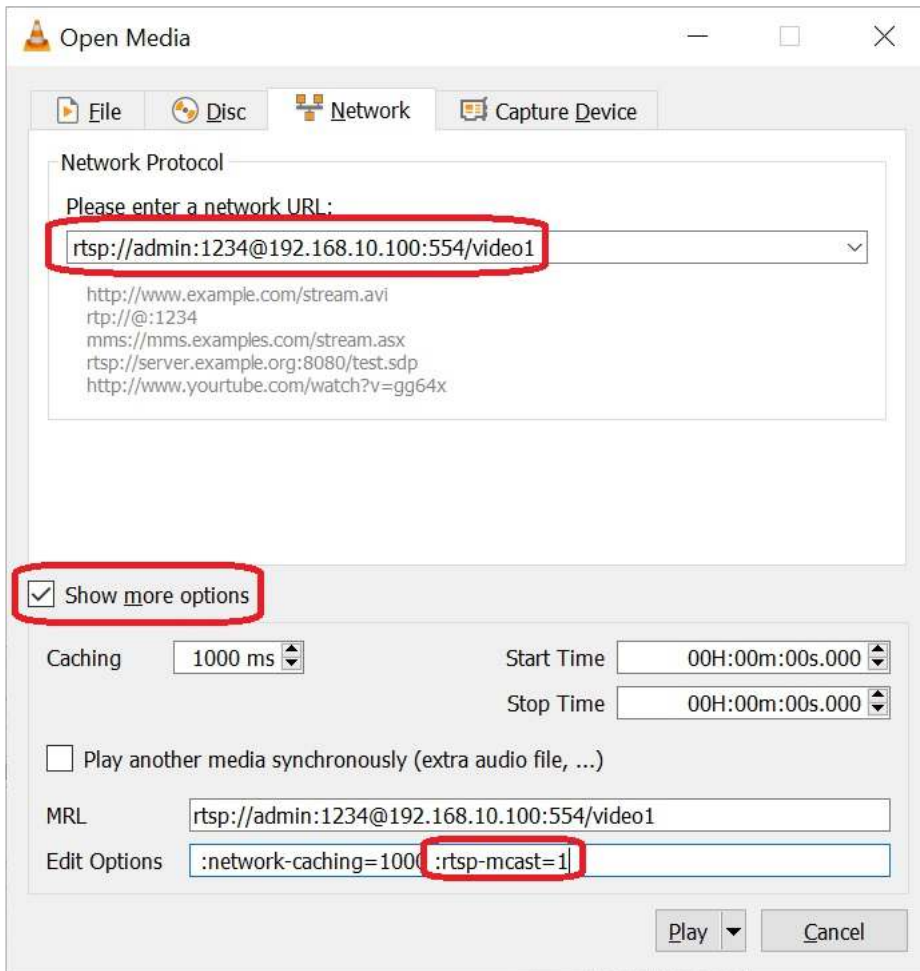
Figure 18 : ANT-36000 additional parameters



#### 5.3.1. VLC setup

In VLC in the network setup select "Show more option" and the command " :rtsp-mcast=1" after the network cache setting, as highlighted in Figure 19. Please note the space between the end of the cache setting the rtps-mcast command.

Figure 19 : VLC RTSP settings



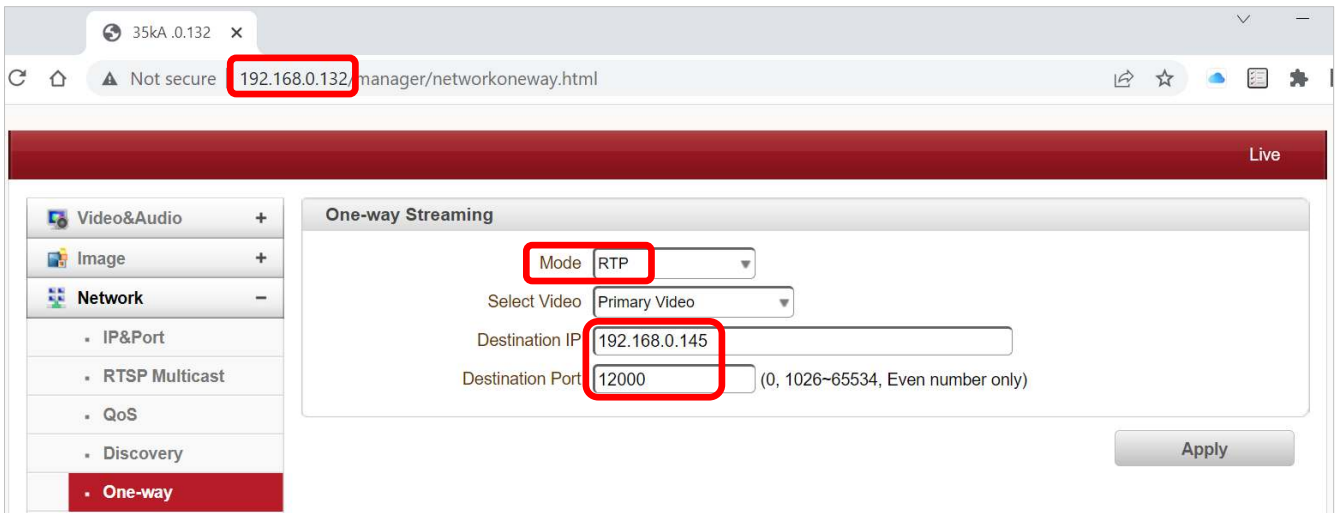
## 6. RTP – unicast

An IP address value over 1.1.1.1 through to 233.255.255.255 will be treated as unicast. In the decoder the resolution of the stream has to be selected, in the "Video Resolution" setting.

In the encoder the "Destination IP" address is that of the decoder, and in the decoder the "Address" is that of the encoder.

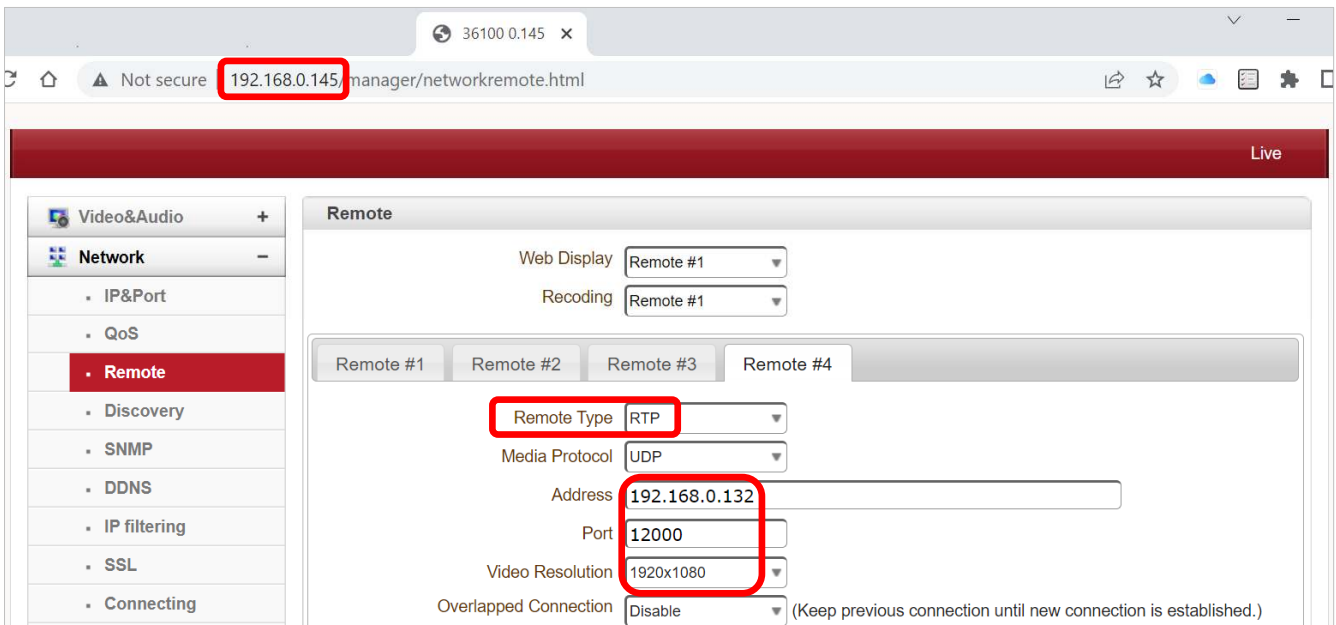
### 6.1. ANT-35000 -> Setup -> Network -> One-way

Figure 20 : encoder "one way"



### 6.1. ANT-36000 -> Network -> Remote

Figure 21 : decoder RTP

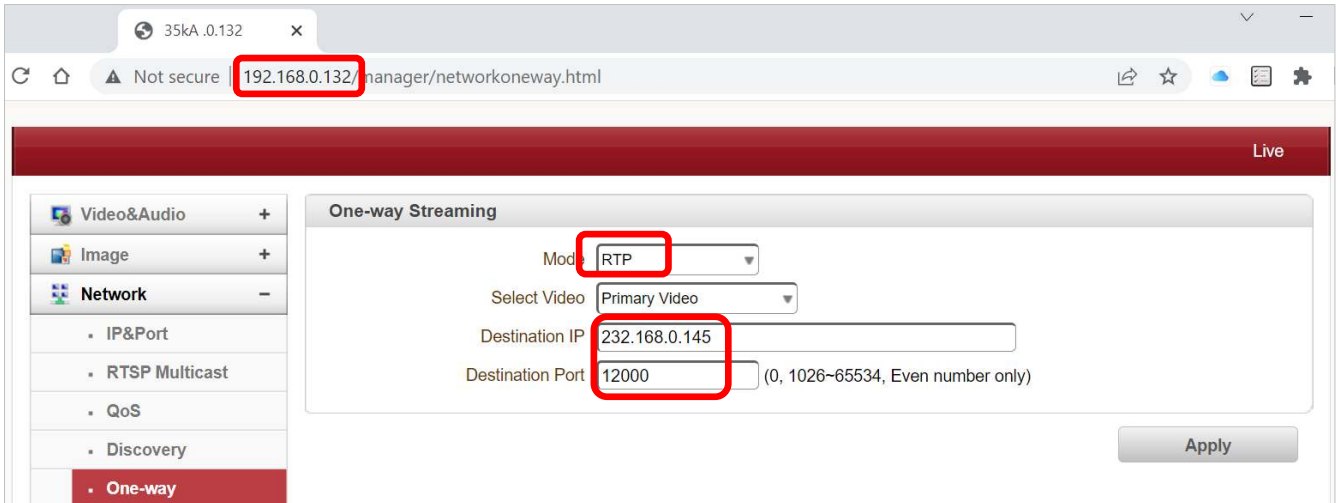


## 7. RTP – multicast

An IP address value over 224.0.0.0 through to 239.255.255.255 will be treated as multicast. In the decoder the resolution of the stream has to be selected, in the "Video Resolution" setting. If required the source of the multicast can be added in the "SS IP Address" field. If left at 0.0.0.0 then any multicast matching the correct destination IP and destination port will be decoded.

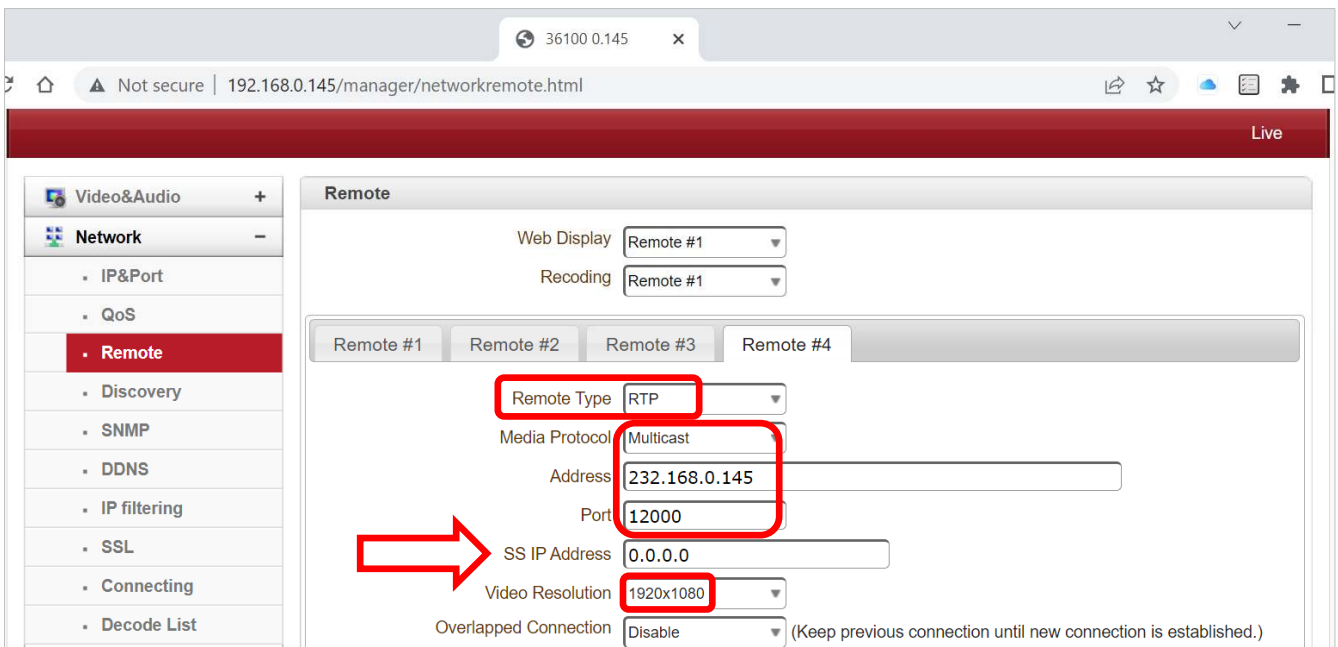
### 7.1. ANT-35000 -> Setup -> Network -> One-way

Figure 22 : encoder "one way"



### 7.2. ANT-36000 -> Network -> Remote

Figure 23 : decoder RTP

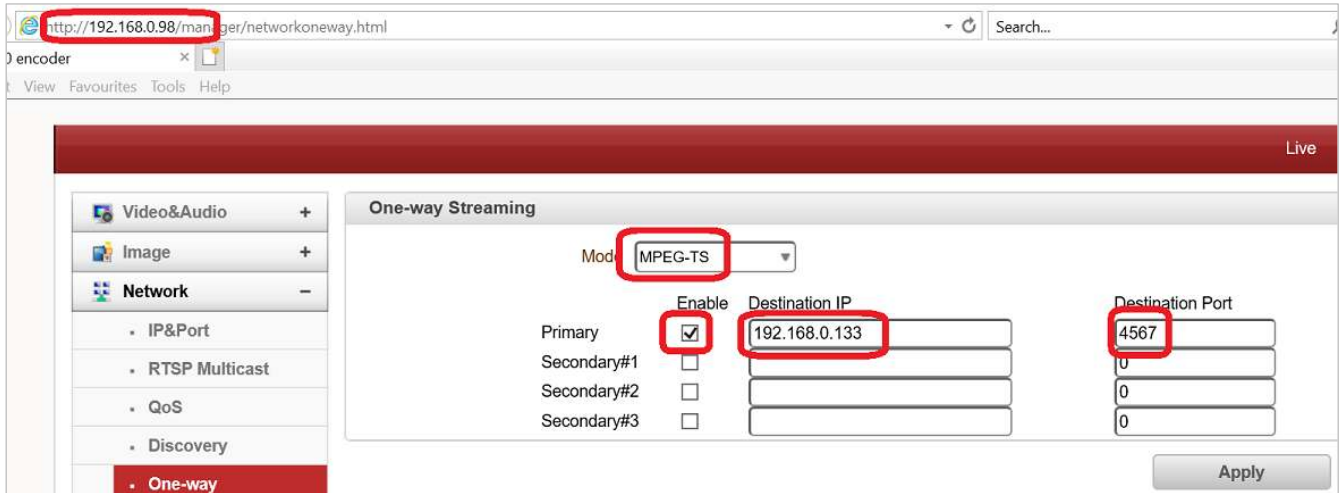


## 8. MPEG-TS - unicast

In the example below the encoder has the decoders IP address, and the decoder has the encoders IP address

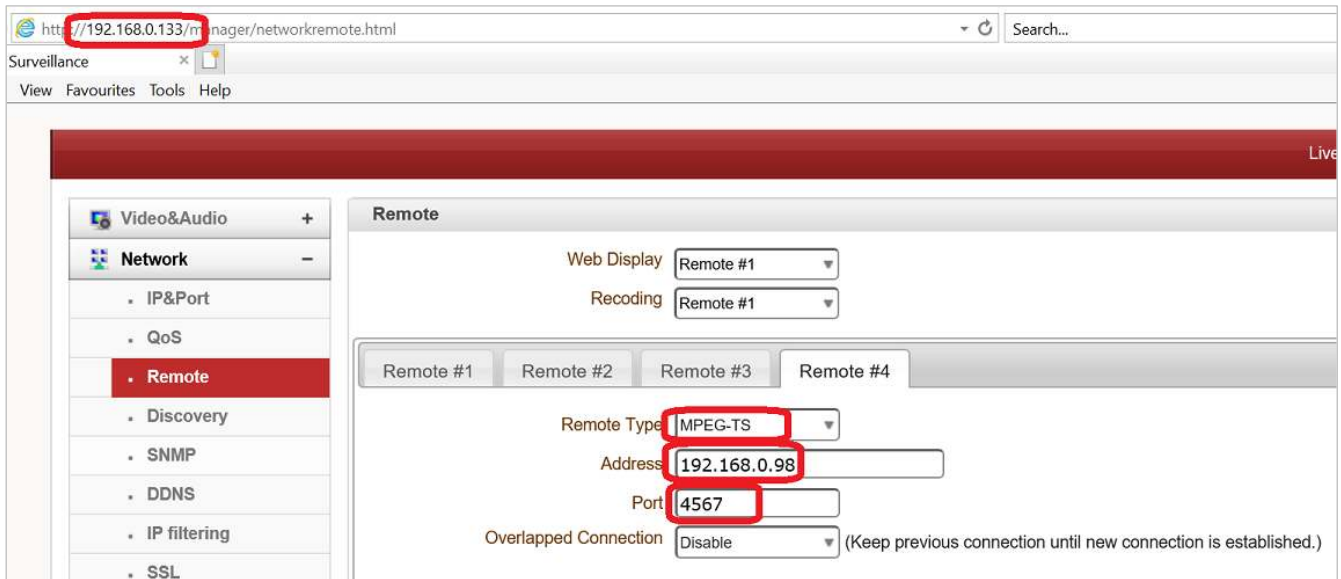
### 8.1. ANT-35000 -> Setup -> Network -> One-way

Figure 24 : encoder "one way"



### 8.2. ANT-36000 -> Network -> Remote

Figure 25 : decoder MPEG-TS



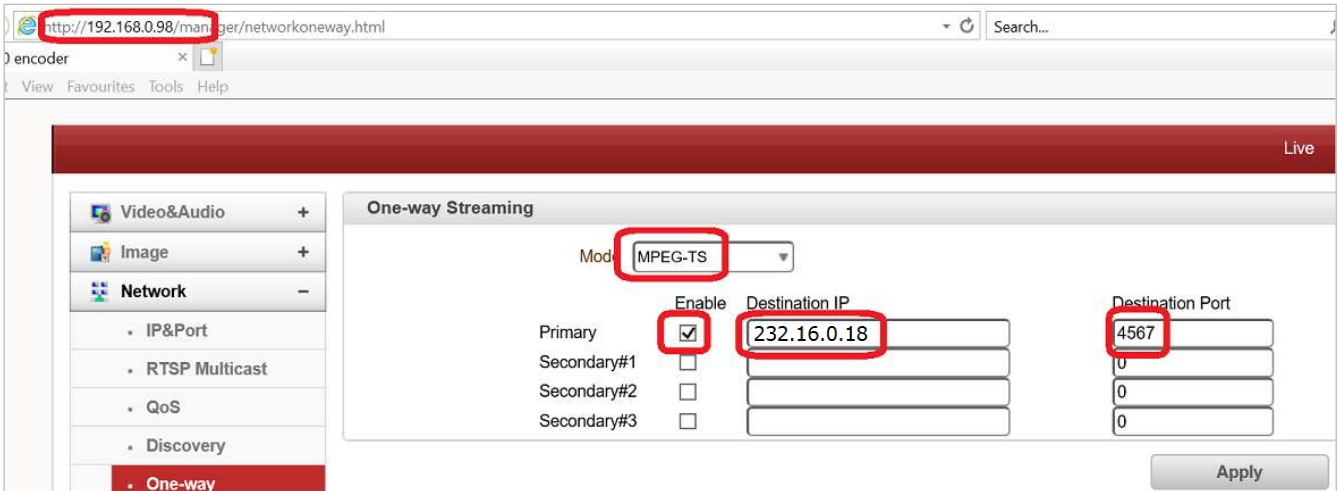
## 9. MPEG-TS - multicast

An IP address value over 224.0.0.0 through to 239.255.255.255 will be treated as multicast.

In the example below the encoder is MPEG-TS multicasting to IP address 232.16.0.18 port 4567, and the decoder is set up to the same values.

### 9.1. ANT-35000 -> Setup -> Network -> One-way

Figure 26 : encoder "one way"



### 9.2. ANT-36000 -> Network -> Remote

Figure 27 : decoder MPEG-TS

