



Matrox[®] Maevex 6100 Series Encoders

How to create an SDP file for RTP decoding

Reference document

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Introduction

In order to play an RTP stream from a MaeveX 6100 Series encoder, the software decode solution must accept an SDP (Session Description Protocol) file. SDP is a format for describing streaming media initialization parameters.

In three easy steps, this document will explain how to create an SDP file required for connecting an RTP stream when using the MaeveX 6100 encoder with third party decode solutions.

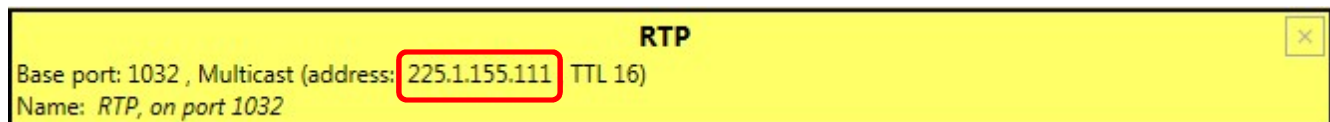
Step 1

In order to create an SDP file, please use the following SDP template. This template will be the basis for all SDP files created where the text inside the pointers (<<< >>>) are the elements that are variable and need to be filled in. PowerStream Plus (MaeveX accompanying software application) can be used to obtain these values. The lines and text outside of the pointers and in lines without pointers should remain as-is and do not need to be changed. The bolded content within the pointers is what needs to be changed.

```
v=0
c=IN IP4 <<<address>>>
m=video <<<base-port>>> RTP/AVP 96
a=rtpmap:96 H264/90000
m=audio <<<base-port+2>>> RTP/AVP 97
a=rtpmap:97 mpeg4-generic/<<<audio-rate>>>
a=fmtp:97 streamType=5;profile-level-id=44;mode=AAC-hbr;sizeLength=13;indexLength=3;indexDeltaLength=3
```

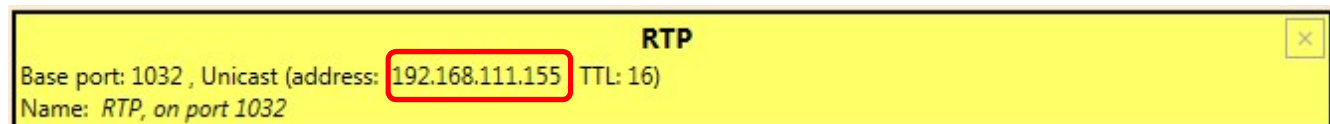
The <<<address>>> is the unicast or multicast IPv4 address. It can be obtained in the PowerStream Plus UI *Processing (main) → Encoding → RTP* section. See illustrations below:

Multicast



The multicast <<<address>>> would be 225.1.155.111

Unicast



The unicast <<<address>>> would be 192.168.111.155.

Matrox MaeveX 6100 Series
How to create an SDP file for RTP decoding

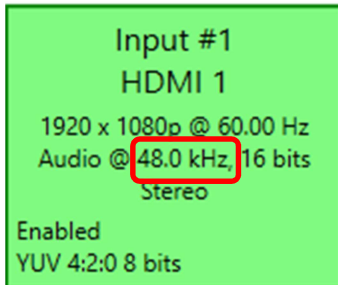
The <<<base-port>>> address can also be obtained in the same PowerStream Plus UI section. See the illustration below:



The <<<base-port>>> value would be 1032.

The <<<base-port+2>>> is the address from the base-port above plus 2. Therefore, using the example above, the <<<base-port>>> value would be 1034 (1032+2).

The <<<audio-rate>>> value is in Hz. It can be obtained from the PowerStream Plus UI *Processing* → *Inputs* section as illustrated below:



The audio-rate is listed in kHz and the SDP file requires the audio rate to be in Hz; a simple conversion from kHz to Hz can be achieved by multiplying the value of the kHz number from PowerStream Plus by 1000. The <<<audio-rate>>> value would be 48000 (48.0 x 1000).

Note: In the case of a picture-in-picture or another multi-source composited stream, you should select the desired audio rate from the appropriate input. Please consult the [PowerStream Plus User Guide](#) for more information. In all cases, the audio rate should be taken from the source that is the selected audio for the stream being sent and associated to the SDP file.

Step 2

Once Step 1 is completed correctly, the multicast template will appear as follows:

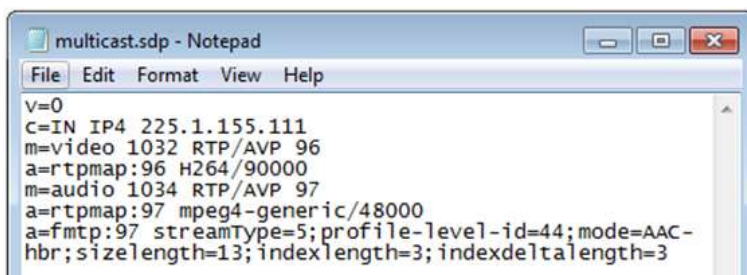
```
v=0
c=IN IP4 225.1.155.111
m=video 1032 RTP/AVP 96
a=rtpmap:96 H264/90000
m=audio 1034 RTP/AVP 97
a=rtpmap:97 mpeg4-generic/48000
a=fmtp:97 streamType=5;profile-level-id=44;mode=AAC-hbr;sizelength=13;indexlength=3;indexdeltalength=3
```

The unicast template will appear as follows:

```
v=0
c=IN IP4 192.168.155.111
m=video 1032 RTP/AVP 96
a=rtpmap:96 H264/90000
m=audio 1034 RTP/AVP 97
a=rtpmap:97 mpeg4-generic/48000
a=fmtp:97 streamType=5;profile-level-id=44;mode=AAC-hbr;sizelength=13;indexlength=3;indexdeltalength=3
```

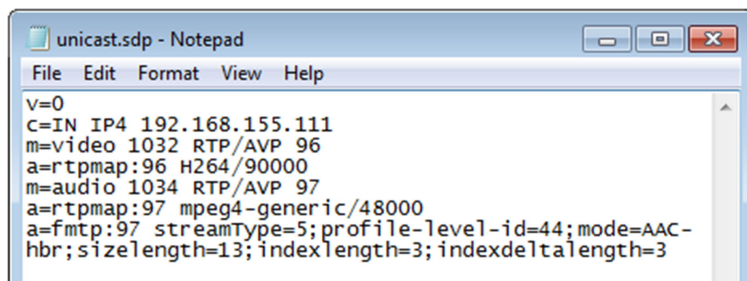
At this point, create a file with an “SDP” extension (e.g., multicast.sdp or unicast.sdp). To do this, simply copy the newly created SDP file contents per above, paste them into a notepad file, and save the file with the “.sdp” extension as illustrated below:

Multicast



```
multicast.sdp - Notepad
File Edit Format View Help
v=0
c=IN IP4 225.1.155.111
m=video 1032 RTP/AVP 96
a=rtpmap:96 H264/90000
m=audio 1034 RTP/AVP 97
a=rtpmap:97 mpeg4-generic/48000
a=fmtp:97 streamType=5;profile-level-id=44;mode=AAC-hbr;sizelength=13;indexlength=3;indexdeltalength=3
```

Unicast



```
unicast.sdp - Notepad
File Edit Format View Help
v=0
c=IN IP4 192.168.155.111
m=video 1032 RTP/AVP 96
a=rtpmap:96 H264/90000
m=audio 1034 RTP/AVP 97
a=rtpmap:97 mpeg4-generic/48000
a=fmtp:97 streamType=5;profile-level-id=44;mode=AAC-hbr;sizelength=13;indexlength=3;indexdeltalength=3
```

Matrox MaeveX 6100 Series
How to create an SDP file for RTP decoding

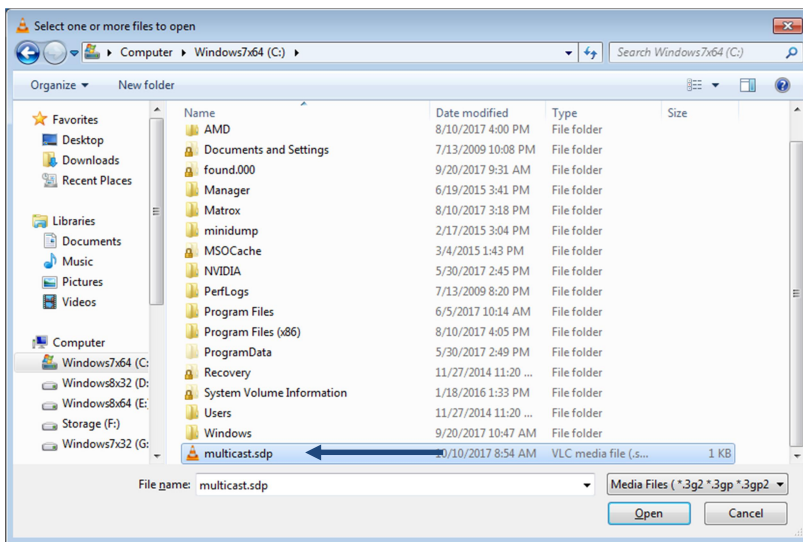
Step 3

Once Step 2 is complete, open the newly created SDP file using your software decode solution. Make sure to copy the SDP file to the computer system that has the software decode player installed. For example, if using VideoLAN[®] (VLC), this will also require opening the file as illustrated below.

Click on “Open file”.



Select the SDP file created in Step 2. In this case, it is the multicast.sdp file.



Once the multicast.sdp file has been opened, VLC will start playing the stream.

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