

# Encoder stream bit rates (ABR and CBR)

## Constant Bit Rate (CBR) Encoder Events (Recommended)

You are only required to send one stream (per primary and backup). All streams are distributed at the bit rate set at the encoder. These are the system-recommended settings for each player size. These are also the settings that the system will transcode the streams to for the on-demand archive, regardless of live bit rate. With CBR events, you have the option to modify the streaming rate for a higher or lower live bit rate.

**Important:** Streams that exceed 5,000 kbps will have their connection terminated by the system. It is recommended that streams not exceed 4,500 kbps.

If you're broadcasting audio and video, the video player has the following layout options and streams to attendees at the listed bit rates. The audio bit rate is always 96 kbps and is included in the total bit rate.

| Video Player Size | Total Bit Rate |
|-------------------|----------------|
| 480p (854x480)    | 896 kbps       |
| 720p (1280x720)   | 1796 kbps      |

## Slides

Depending on the slide deck, events with slides require an additional ~50 kbps. Once an attendee joins the event, the slides begin downloading in the background regardless of the event's live or pre-live status.

## Adaptive Bit Rate (ABR) Encoder Events

You are only required to send one stream (per primary and backup). All streams are then transrated and keyframe aligned. If the client sends a higher stream than the bit rate listed in the Source Encoder Sending section, it will still get transrated down to the bit rate shown in the Audience Receives section. Sending a lower bit rate than what we ask the client to send is not recommended.

If you're broadcasting audio and video, the video player has a widescreen (16:9) aspect ratio with the following layout options and streams to attendees at the listed bit rates. The audio bit

rate is always 96 kbps and is included in the total bit rate.

### Source Encoder Sending

| Video Player Size | Total Bit Rate |
|-------------------|----------------|
| 480p (854x480)    | 896 kbps       |
| 720p (1280x720)   | 1796 kbps      |

### Audience Receives

If you're broadcasting audio and video, the video player has the following layout options and streams to attendees at the listed bit rates. The audio bit rate is always 96 kbps and is included in the total bit rate.

| Video Player Size      | Resolution | Total Bit Rate |
|------------------------|------------|----------------|
| <b>480p (854x480)</b>  |            |                |
| Low                    | 480x270    | 496 kbps       |
| Standard               | 854x480    | 896 kbps       |
| <b>720p (1280x720)</b> |            |                |
| Low                    | 480x270    | 496 kbps       |
| Standard               | 854x480    | 896 kbps       |
| High                   | 1280x720   | 1796 kbps      |

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