

Streaming, how to do it?

Everyone who owns a smartphone or a laptop with UMTS/LTE stick is able to stream.

First of all, an account has to be installed at www.bambuser.com

For mobile phones, the bambuser-app needs to be downloaded at the AppStore / PlayStore.

Please note that it only makes sense if you have a flatrate or WLAN-connection. Mobile flat rates are most times limited to a certain volume. This restricted flatrate is bailed out after a couple of hours. Laptop flats offer a bigger volume, but are more expensive.

1. technical / hardware

The following equipment is required to stream:

a) UMTS/LTE card (mobile internet)

For streaming, you require a good and stable webconnection. In Germany, we can recommend T-Mobile, Vodafone and O2. Pure data-SIM-cards are available as well.

b) Smartphone:

The easiest and fastest way to stream is by mobile phone. Basically every actual smartphone (Android or IOS) is able to do this.

c) Laptop:

Every common laptop can be used for streaming. The processor should be not too old as streaming requires lots of ressources. Furthermore, the battery pack should be charged. The on-board camera is not suitable for streaming. It's better to use an external webcam or a camcorder (with video grabber)

d) Webcam:

we can recommend i.e. the Microsoft LifeCam and the Logitech Webcam proHD-C910. Furthermore, an USB-extension cable should be used

e) Pods:

you can use tripods or monopods. Monopods are more handy, but a tripod can be installed for longstreams.

f) Lights:

Streaming in the dark or during wintertime is quite hard and an additional lighting is necessary. An LED-lamp with scattering filter is highly recommended.

g) Camcorder & Video grabber:

you will have the best performance by using a video camera (camcorder, MiniDV etc), a laptop and a video grabber. In this way, you can see the camera picture on your monitor. Furthermore, you can use a zoom and other features of the camera.

The videograbber connects the camera with the laptop. It converts the video signal into a digital one.

2. Software

For streaming by smartphone, only a login on the bambuser app is necessary. Some adjustments can be made on the website only.

3. Streaming with Laptop

You can stream directly over the bambuser-Website, but also via Adobe Flash Media Live Encoder.

We are using following settings:

Video:

Format: VP6

FrameRate: 20-30fps

InputSize: 320×240

BitRate: 300-400Kbps depending on network quality

Audio

Format: Mp3

Channels: Mono (to save bandwidth)

SampleRate: 96Kbps

SampleRate: 44100Hz (Standard Audio quality)

AutoAdjust: (useful in case of instable networks. In this case the video quality will be reduced automatically in case of bad connection)

Network / sharing:

To share your streams, you can easily embed your player on your website by using following code:

```
<iframe src="https://embed.bambuser.com/channel/yourchannelname"  
width="460" height="345" frameborder="0">Your browser does not support  
iframes.</iframe>
```

Older broadcasts can be embedded by using following code:

```
<iframe src="https://embed.bambuser.com/broadcast/broadcastnumber"  
width="460" height="345" frameborder="0">Your browser does not support  
iframes.</iframe>
```