TizzBird Wi-Fi 1080p
Streaming Guide

For Smart TV Stick N1
And Other Tizzbird Products

1. Objective

This documentation is intended to provide a proper guide to stream high resolution contents such as *1080p MKV file or You-Tube HD* to Tizzbird N1 and other Tizzbird products thru *Wi-Fi.*

The decoding capability of Tizzbird N1 is fairly high so it can decode 1080p H264 stream up to 15 mbps without problem. It can also decode the 1080p MPEG2 stream up to 25 mbps, and you can confirm it with connecting USB flash drive or external HDD. But its decoding capability is quite limited when streaming thru Wi-Fi, not by decoding performance but by Wi-Fi throughput.

The nature of "Smart Stick" device confines this decoding capability because of Wi-Fi performance. So the setting up the proper streaming environment is quite important.

This documentation describes the steps as following.

1) Setting up the Wi-Fi access point properly.

2) Setting up "Network Server" for maximum performance.

3) Setting up "Audio & Visual " parameter properly to maximize throughput.

If you follow these steps, the **1080p MKV streaming thru Wi-Fi can be done** without any problem at Tizzbird N1. You can also get the beautiful You-Tube HD contents.

2. Setting Up Wi-Fi and Wi-Fi Access Point

Setting up the Wi-Fi and AP (Access Point) is ***the single most important factor*** that determines overall streaming performance.

1) Please SETUP Wi-Fi ACCESS POINT to **<u>802.11n mode only.</u>**

   - This is the **most important** and it will remove many potential streaming problems between SERVER and Tizzbird N1.

   - Normally Wi-Fi access point is set to 802.11b/g/.n mode, and it will prevent Tizzbird N1 from maximum connection speed. The legacy Wi-Fi devices such as older model notebook, smart phone will try to connect Wi-Fi by 802.11g then the speed of Wi-Fi is confined to 802.11g.

   - Please refer to Wi-Fi Access Point manual to change the 802.11n mode only. Normally it's possible thru web-browser. The access point normally provides configuration page thru WEB. For example open the browser and type the http://192.168.1.0 " will pop up the configure window of access point.

   - If you still want to use Wi-Fi access point on other legacy 802.11g devices, <u>GO GET NEW ACCESS POINT for streaming purpose only</u>. It's quite cheap and only $20 or so. **<u>Please don't try share the ACCESS POINT with other legacy devices. It will ruin everything.</u>** Please don't complain to us when using N1 with other legacy 11g devices. There's nothing much we can do here.

2) Check up the connection speed by "Settings" > "Network" at Tizzbird as following figure. The **<u>"Wi-Fi Setting" item shows the current connection speed</u>**. It should be more than 54 mbps. The 54 mbps means it's connected with 802.11g mode. The best is 150mbps connection speed.


3) Install the Wi-Fi access point as close as possible with Tizzbird N1. The access point should reside at direct seeing position where N1 resides at least.

3. Setting Up the Network Server

Setting up the "Network Sever" is the next step. Here's the golden rule. If you want to stream high-res contents thru Wi-Fi, **DON'T USE SAMBA protocol**. Samba is O.K. for Ethernet, but its efficiency will drop to half at least compared to NFS or DLNA.   Please use the NFS or DLNA protocol to stream via Wi-Fi.

1) To use NFS on PC, please install the "TizzNFS" at following Tizzbird website.

   http://www.tizzbird.com/eng/index.php?mm_code=726&sm_code=727

2) To use DLNA, turn DLNA "**On**" at "Settings" > "Network" > "DLNA". DLNA server can be browsed at "File Browser".

3) Select proper protocol (NFS) at "Network Server" configuration as following figure.

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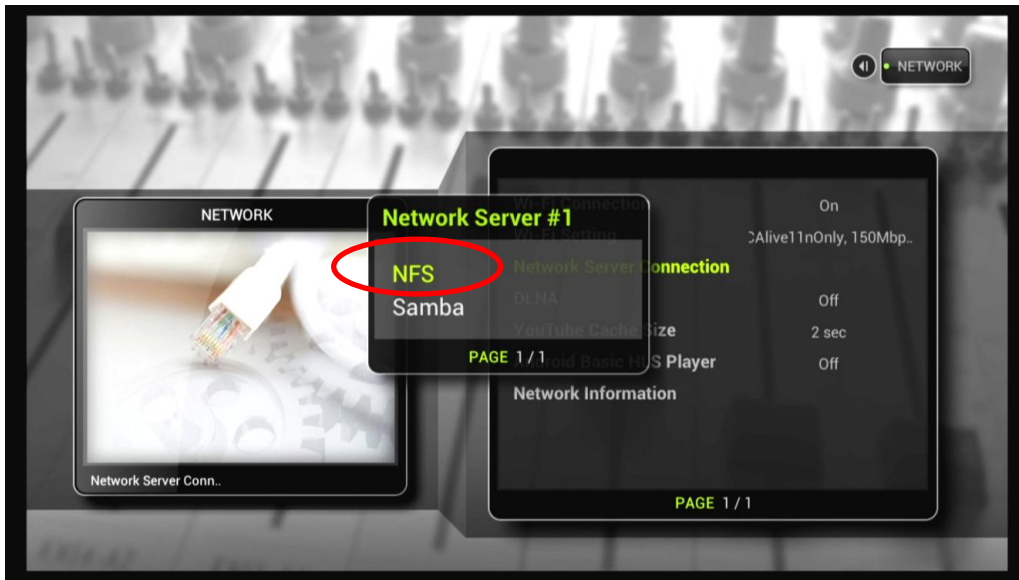
4. Setting Up Audio & Visual

If you did up to here, most of jobs are done. And most of contents except high bitrate BD will be playback without problem. Please don't forget install Wi-Fi access point at direct seeable area of N1.

The following tips will help the smoother contents streaming specially 1080p.

1) Turn "Native Frame Rate" **ON.** Turning on "**Cinema Original (24p)**" will help a lot. It will help the load-balancing of CPU to decode & scaling. So you will get smoother playback and higher bitrate contents.
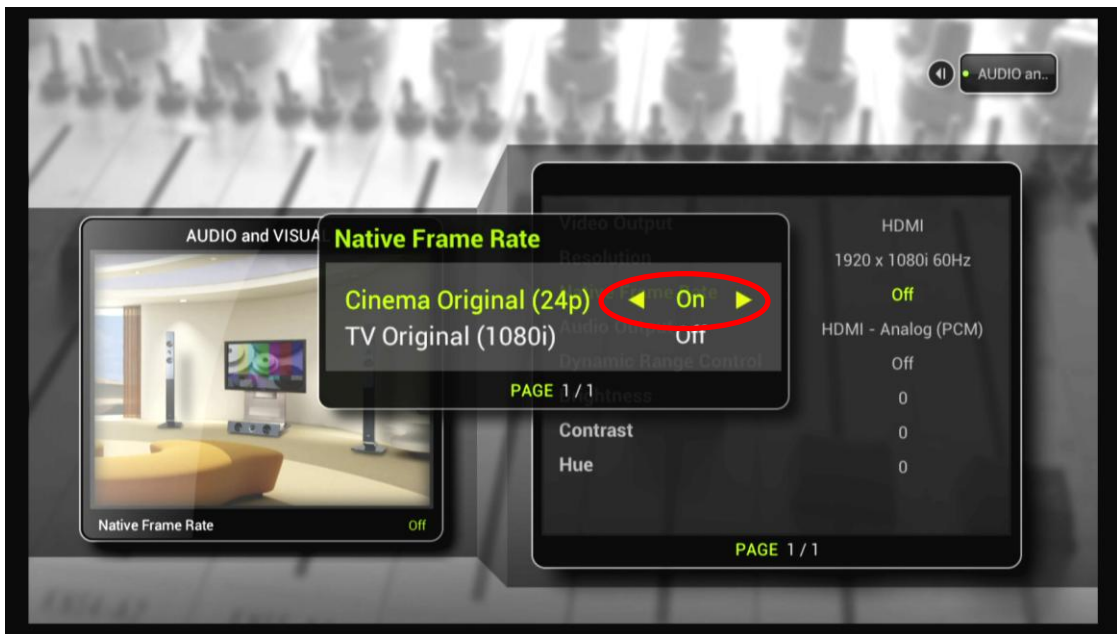
2) If your TV or AV receiver supports the Dolby or DTS digital audio decoding, then setting up audio to "HDMI Digital" will help reducing burden of audio decoding of CPU.