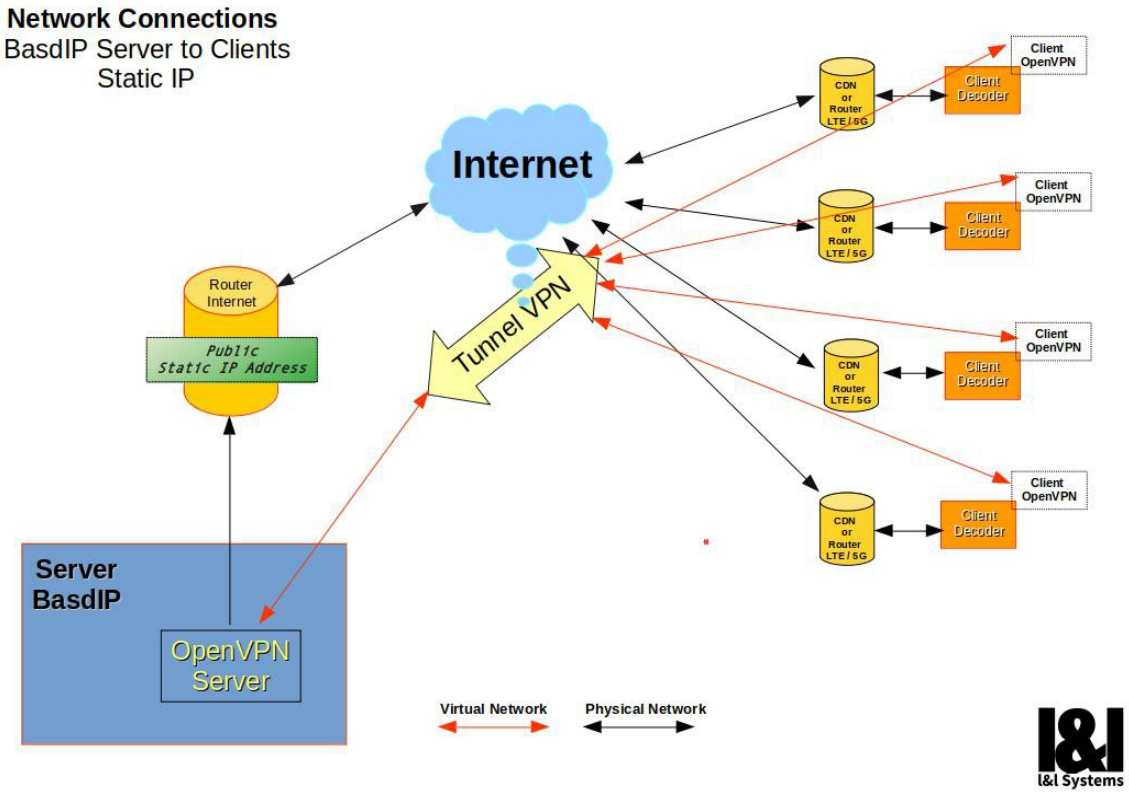
BasdIP
Broadcast Audio Sync Distribution IP

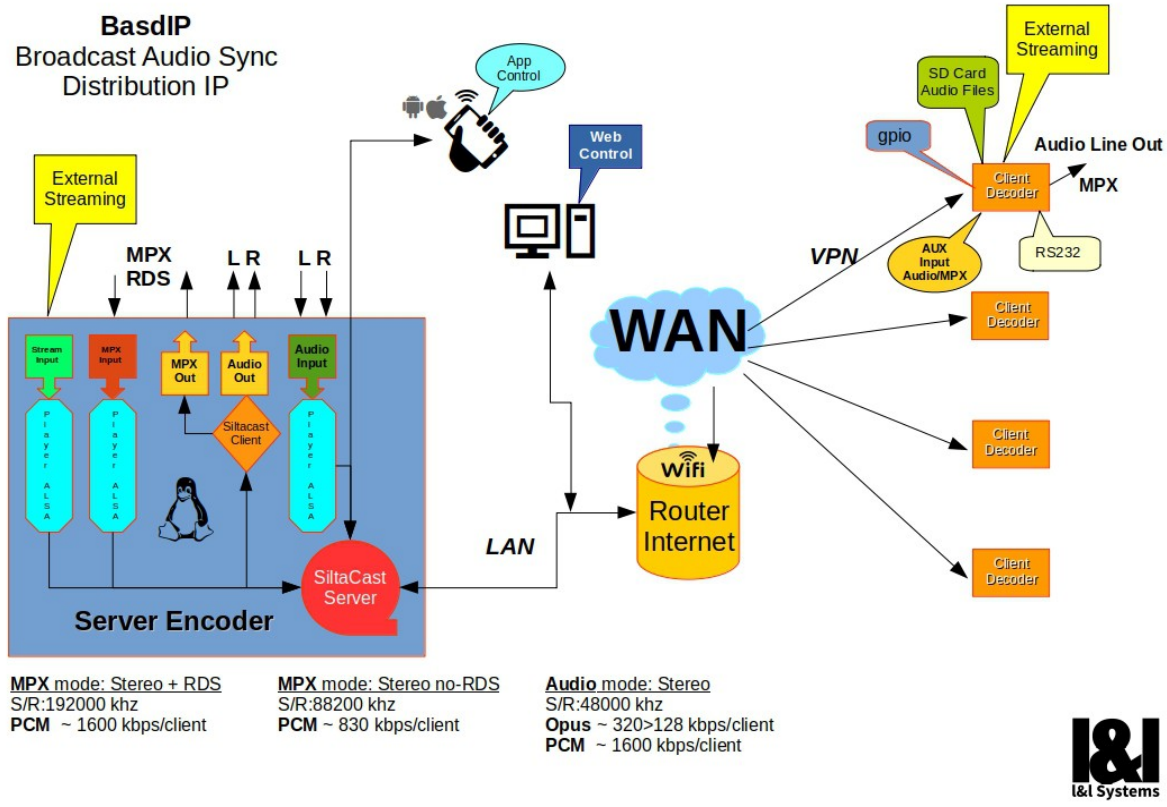
This system has one device called Server and multiple devices called Client.
BasdIP allow to transmit one or more high quality MPX channels or stereo audio (lossless or lossy) over IP from a server to differnte clients with a complete synchronicity.
The system can be used in two different ways: MPX or line audio L&R.
The first can bring the entire MPX signal coded with stereo and RDS data with a 96Khz bandwidth. The second instead brings the pure audio with a 48Khz bandwidth where eventually it will be necessary recode the output of the client.
With two or more clients that receive the same channel, MPX / audio output will be in complete synchronicity. Connecting differents distant but adjiacent transmission systems on the same listening areas the radio listener will never perceive any kind of delay betweem them.
The server communicate with different clients on the Internet with a tunnel OpenVPN generated by itself and configure the client output channel and other configurations.
A Web interface allow to manage all the system from any PC or Tablet.
In the near future will be available a dedicated iOS/Android application.



BasdIP hardware is designed on a ARM device with a Linux operating system.

Server

The **BasdIP** server can brings different sources, it has one or more (optional) MPX and Line IN input. We also have 2 different players that can stream simultaneously a streaming URL to the different connected clients (in audio mode). The clients that use the same input source will receive and play in sync (both in MPX and audio).
On the server there is an MPX output and/or stereo line output that perform in the same way that client does. So is possible to connect a local broadcast system and maintain the audio in sync with the other connected clients.



MPX mode: Stereo + RDS
S/R:192000 khz
PCM ~ 1600 kbps/client

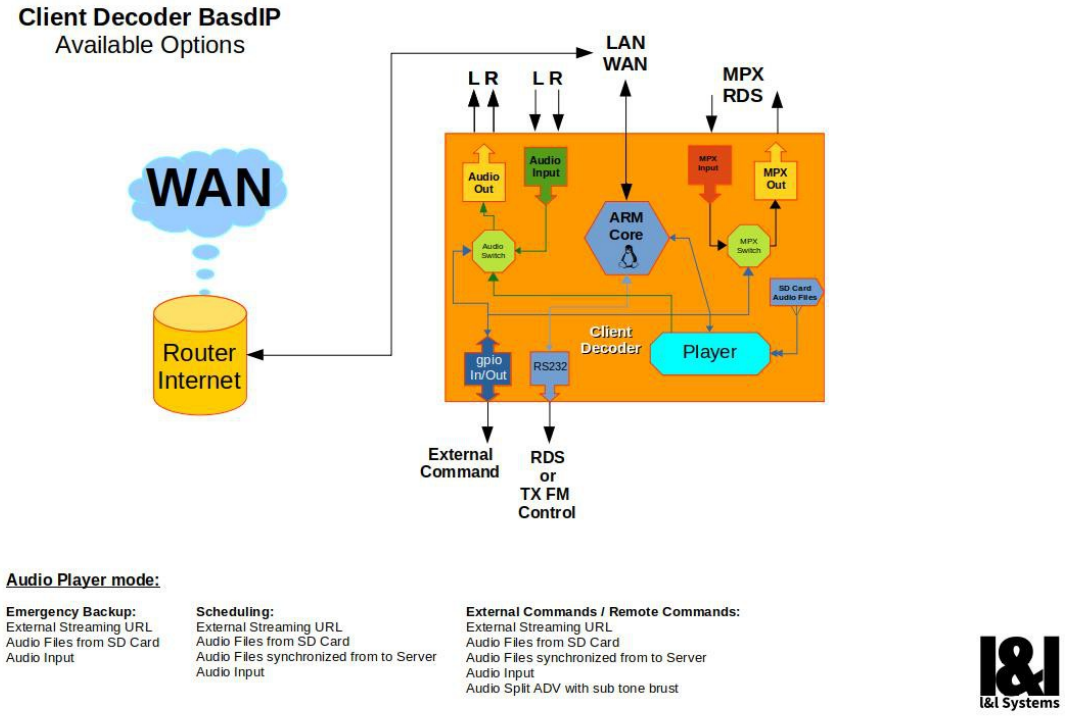
MPX mode: Stereo no-RDS
S/R:88200 khz
PCM ~ 830 kbps/client

Audio mode: Stereo
S/R:48000 khz
Opus ~ 320>128 kbps/client
PCM ~ 1600 kbps/client

I&I Systems

Client

The client is an ARM device that can play what the server transmit. It has on board an Ethernet connector, one MPX output and one stereo line output. The data flows from server to clients through a tunnel OpenVPN. So you can connect your devices to a normal router with a Internet connection that has enough bandwidth without particular configurations.
Client can have different configurations:



- RS232/485 port to communicate with encoder RDS or TX connected in local. For example you can read realtime status or send custom data
- Multichannel Gpio that can be used to power off / on with a scheduling or in realtime different devices.
- microSD with audio files that can be used in emergency mode when the client lost connection to the server
- MPX or Line input for external receivers that can be switched with a scheduling, remote command or in emergency
- Streaming URL

The system is accessible by a real time dashbaord web (in the near future with a Mobile application too) where you can check the system status, send differnete commands to client and eventually read status of different external devices.