

IP TV



Interactive TV via Internet Protocol (IP TV)

Digital Generation

Digital quality represents the state of the art of modern television technology. In a direct comparison with analogue TV, digital comes out the winner thanks to its guaranteed advances in picture and sound quality as well as its ability to receive live broadcasts on high definition LCD televisions. But the digital generation is also a necessary step forwards, since the European Commission has ruled that after 2012 analogue systems will come into disuse in all member countries.

More channels. More functions. And Incredible Performance

TV through IP (Internet Protocol Television) is a very efficient technology platform for distributing TV content in digital format, especially with the presence of structured cabling such as those found in hotels. The signal, in fact, arrives in hotel rooms through a network of cables, Cat5e or higher, or through twisted pair cabling, therefore without the typical problems found with distribution systems based on analogue coaxial cable (disturbances, interference, “snow” effect). Not only, IP TV allows you to furnish the hotel with a much higher number of channels than previously available from traditional analogue systems. It also supports subtitles, the management of multi-language films, electronic TV guide (EPG) and Personal Video Recorder (PVR). The latter, an exclusive to VDA, allows guests to record a television programme when they are away from the room.

WHY IP TV

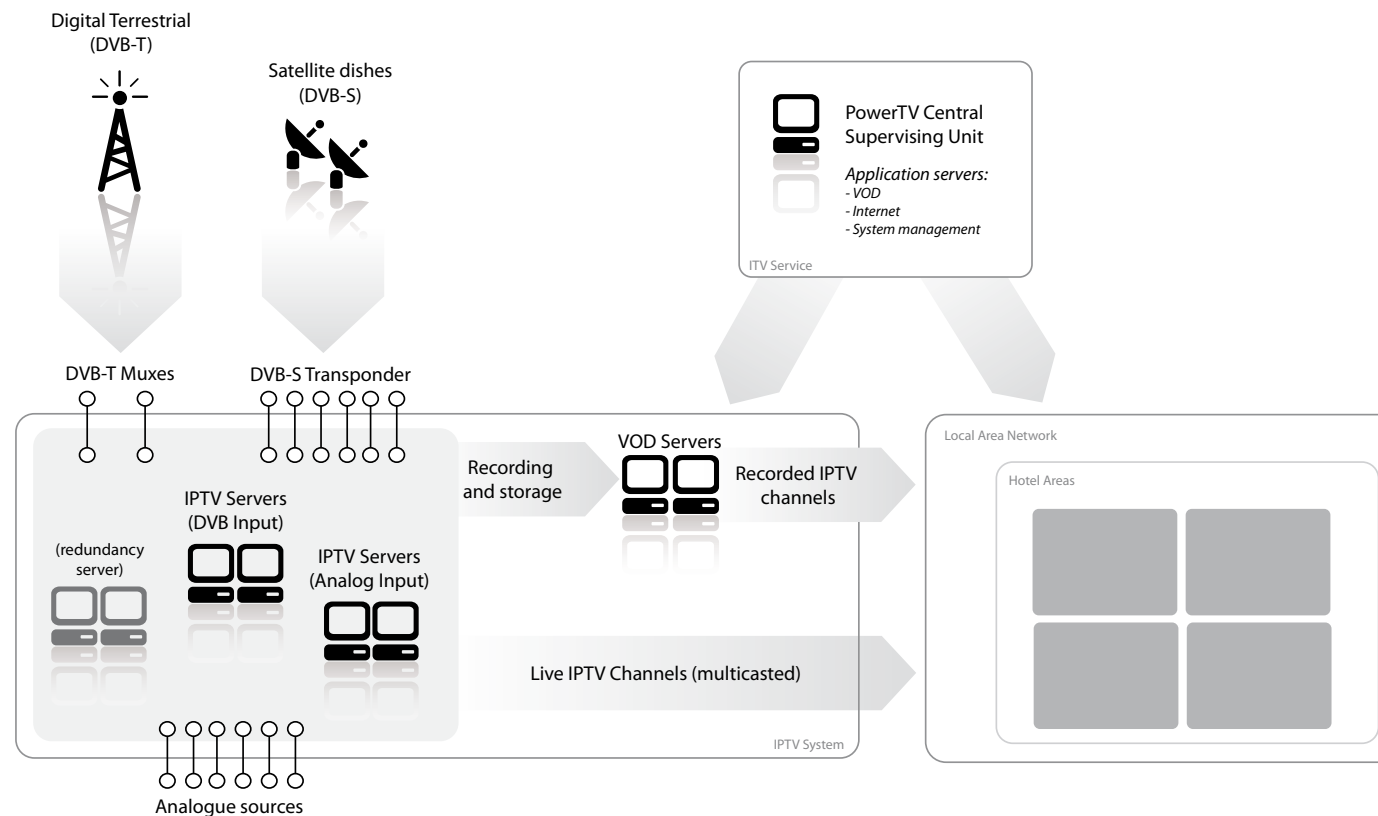
- For its exceptional digital quality picture and sound in every room.
- For the greater number of television channels available.
- For the management of subtitles, multilingual audio and electronic programme guide TV (EPG).

WHY IP TV FROM VDA

- Because it is by far the most tested and reliable on the market today and is already installed in over 50 hotels.
- For its complete integration with the PowerTV, interactive, television system.
- For its Personal Video Recorder (PVR) function.

For the more experienced

How is an IP TV system put together



The standard architecture of an IP TV system is based on a set of hw/sw modules that manage the following logical processes: reception and acquisition of channels, descrambling, distribution and reproduction.

Reception and acquisition of channels

The IP TV system requires one or more satellite dishes and/or antennas for digital terrestrial in order to receive the channels for distribution throughout the hotel. The antenna cables reach the technical centre where the IP TV server (digital headend) is installed. They are connected with a multi-switch to obtain the number of ports required. This ‘bouquet’ of channels carried on the same frequency is defined MPTS (Multiple Program Transport Stream): depending on the type of transmission, we talk about ‘mux’ for digital terrestrial signals and ‘transponder’ for satellite. The average number of television channels for MPTS typically ranges between 4 and 7 (depending on the broadcaster). Each MPTS channel is defined as SPTS (Single Program Transport Stream): within each SPTS is ‘encapsulated’ a mpeg-2 stream with an average bit rate, which can vary between

2 Mbps and 20 Mbps, depending on the content transmitted by broadcasters. The IP TV servers are installed with interface cards (one for each mux or transponders) able to extract mpeg-2 streams from SPTS and pass them along the Ethernet network (the same one used by the Active system).

Descrambling

Descrambling is required only when the programme list contains encrypted satellite channels. In this case we use special cards equipped with a Smart Card reader, or a professional CAM (Conditional Access Module) that descrambles encrypted channels and interfaces with the digital headend using the ASI protocol.

Distribution

The distribution of channels on the Ethernet network is managed by the IP TV digital headend, which is made up of one or more servers based on x86 architecture and the Linux operating system. In each server you can install up to 5 cards, DVB-

T, DVB-S, or analogue input (those capable of administering a single channel output). The cards decode the mpeg-2 stream contained in the DVB transmission and make them available on the LAN hotel network in multicast mode.

For optimal function the TV over IP system requires certain prerequisites for the cat5 network hotel system: Ethernet 10/100 Mbit Cat5e/Cat6, with fibre optic backbones 100/1000 witch layer 3 with multicast support and IGMP 2.0.

Reproduction

PowerTV Clients (HCS9 cards or Set Back Box Active 3 or PowerTV HD) are able to request a stream (corresponding to a television channel) to the IP TV server or ‘engage’ with an existing stream, if it has been established by some other client. Selecting digital TV channels is done through the use of the menu or the P+ / P- and numbers on the remote control (channel surfing).