Television over IP (IPTV)

Albentia Systems presents a new solution based on its WiMAX 802.16 2009 wireless network deployments: IPTV.

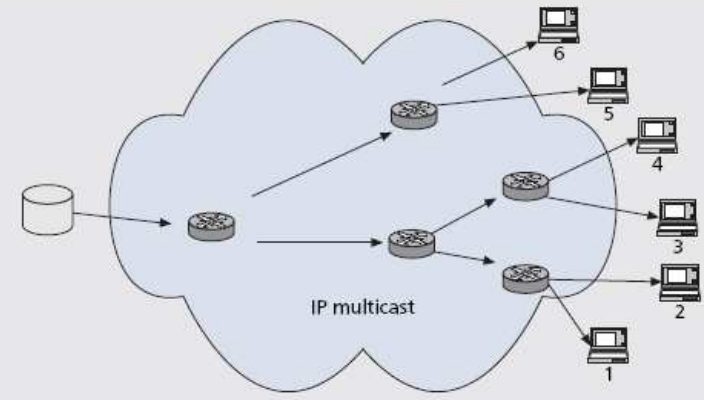
Albentia's base station ARBA-500 now includes a license called LIC-IPTV, which enables the wireless network to work as a multicast platform, i.e., to deliver TV services according to different video qualities: standard, HDTV or SDTV.

ALBENTIA SYSTEMS belongs to BTESA group, one of the world's leading TV broadcast companies. In the most critical scenarios, our technology fully complies with the highest performance and Quality of Service standards.

REFERENCES

Microsoft Mediaroom

T.W.M. telecom



What is IPTV?

Thanks to IPTV, digital TV services are delivered over IP based networks. These IPTV services include multicast and video on demand (VoD).

Video content is typically compressed using either MPEG-2, MPEG-4 or H.264 formats. Depending on the format used -whether MPEG4 or H264- each channel will occupy 1.5 Mb or 4.5 Mb (high definition mode).

Japan was in 2002 the first country in the world to implement IPTV services. When delivered over wireless networks, such services unconditionally require Quality of Service (QoS) guarantees. ALBENTIA SYSTEMS is the sole worldwide manufacturer to offer such services while avoiding video errors or interruptions.





IPTV SET-TOP BOX

- The Equipment is provided with an Ethernet connector which is directly switched to the CPE (Customer Premise Equipment) of the WiMAX network, allowing for the **continuous reception of video TV.**
- Universal remote controls can also be used thanks to the IR receiver**.**

Main features

CPU STM5206 450MHz, 1000 DMIPS

DRAM 256 MB

Flash memory 128 –256-512 MB

Linux 2.6

Dimensions and power consumption

200x150x40 mm

Power consumption: 8W

Input power: 12VDC

Adapter: 90-250V/ 50-60Hz AC

Output

SCART: RGB and CVBS

Video codec

MPEG-1/MPEG-2/MPEG-4 Part 10 / H.264

Resolution: PAL 576i NTSC 480i

Optional: HD support

Input

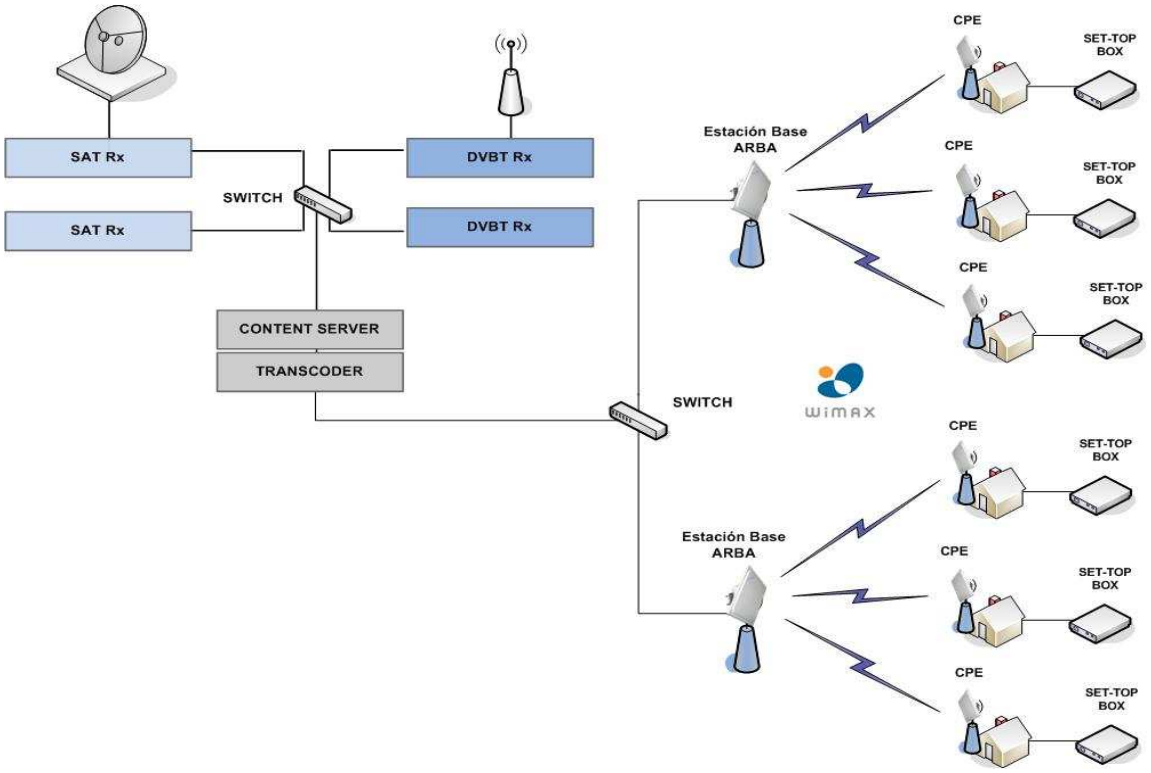
2 x Ethernet, 1 WAN (100mbit—Internet input)

Internal SATA for PVR HDD

USB 2.0 (1 front x 1 rear)

IR receiver

NETWORK DESIGN



NETWORK DESIGN REQUIREMENTS

- Before defining a IPTV network over WiMAX, designers should first analyze which bandwidth needs are to be allocated to end-users for both TV and Internet or data services.
- For those solutions exclusively focused on IPTV and not supporting any data services, the following summary chart shows the estimated number of users and TV channels which can be served per Base Station (BS):

Supported channels	Rate coding	Distance from users to BS (approx.)	TV channels
SD	1-2Mbps	8-12 km	Up to 18
HD	3-4Mbps	8-12 km	Up to 9
SD	1-2Mbps	Up to 20 km	Up to 12
HD	3-4Mbps	Up to 20 km	Up to 6

- Depending on the bandwidth capacities offered to Internet users, the number of available channels will vary in case of mixed solutions where both IPTV and Internet services are provided. The following chart roughly displays several scenarios per BS:

Reserved rate for data (approx.)	Supported TV channels	Rate coding	Distance from users to BS
8Mbps	Up to 11	1-2Mbps	8-12 km
12Mbps	Up to 8	1-2Mbps	8-12 km
8Mbps	Up to 6	3-4Mbps	8-12 km
12Mbps	Up to 4	3-4Mbps	8-12 km
8Mbps	Up to 6	1-2Mbps	Up to 20 km
12Mbps	Up to 4	1-2Mbps	Up to 20 km
8Mbps	Up to 3	3-4Mbps	Up to 20 km
12Mbps	Up to 2	3-4Mbps	Up to 20 km

Ordering information:

LIC-IPTV	IPTV License for WiMAX ARBA Base Station	Minimum order: 100 units
SB-IPTV	Setup box, basic model	Minimum order: 100 units
SB-IPTVHD	Setup box, HD support	Minimum order: 100 units
CB-IPTVJHI	IPTV Headend	

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