

AirStream

IPTV Delivery Solution

Features

- One-way Wi-Fi Transmission
- No need for Wi-Fi Client registration
- Secure Stream using proprietary encryption
- High channel streaming capacity (up to 120 H.264 channels)
- Streaming to unlimited Wi-Fi clients
- Optimized Wi-Fi data transfer performance
- Centralized CMS management
- Centralized access control and key management
- Advanced multi-channel H264 encoding
- Centralized STB provisioning and middleware management

Problem

IPTV providers want to capture local digital television markets using 802.11n technology. They require several central points of Wi-Fi transmission to a large number of subscribers with a minimum of 50 digital channel streaming. The providers require that they stay within the limits of the local power transmission Wi-Fi regulation.

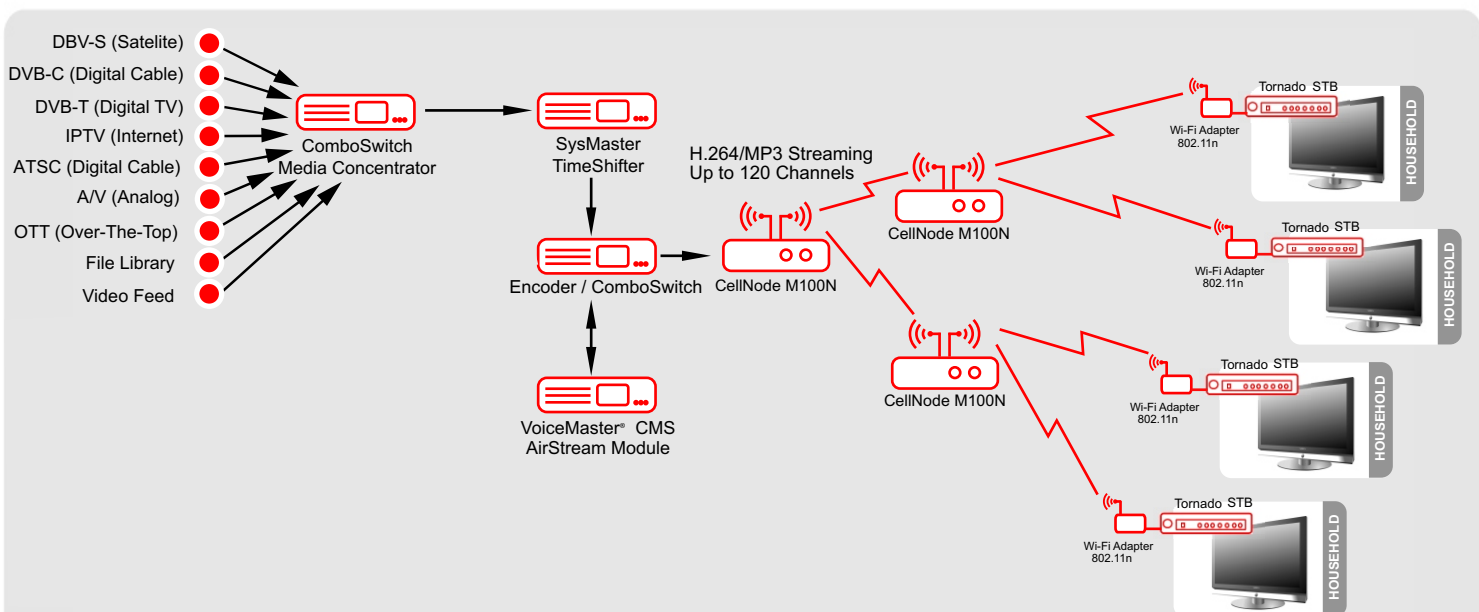
Solution

SysMaster presents the new revolutionary AirStream technology that allows distribution of 120 digital channels via Wi-Fi 802.11n protocol to unlimited number of subscribers. The technology uses custom developed Wi-Fi 802.11n USB devices and the CellNode M100N AirStream access points.

CellNode M100N AirStream is a unique WiFi device which enables providers to securely deploy wireless mesh networks. Every CellNode features two radio transceivers that support the 802.11a/b/g/n standards. The first radio usually serves local wireless subscribers (downlink) at 2.4Ghz, while the second radio is used to connect to the infrastructure backbone (uplink) at 5Ghz. The CellNode device features protected WDS/STP infrastructure data routing transport that allows transparent traffic failover and logically isolates all client networks for improved throughput, advanced roaming, and network security. The device can be provisioned and managed centrally. It includes security software such as Firewall, QoS, and Radius software services for access and traffic management purposes.



CellNode M100N AirStream



One-way Wi-Fi Transmission

Sysmaster Corporation has developed a revolutionary technology called AirStream Digital IPTV that allows Wi-Fi devices to provide one-way IPTV streaming to unlimited number of devices. The technology works in a similar fashion to DVB-T broadcasting, however, it has a much higher channel and client capacity. It requires a direct line-of-site between the Wi-Fi client and the CellNode M100N AirStream device. This is easily achieved using specialized and inexpensive equipment.

No need for Wi-Fi Client registration

Sysmaster Corporation has developed CellNode M100N AirStream and Wi-Fi client devices that do not support active registration and do not exchange system information, thus, allowing independent, high-capacity data broadcasting.

Secure Stream using proprietary encryption

AirStream Digital IPTV uses proprietary channel encryption based on system defined PIN numbers. All devices receive special key to unlock the streams and display the video channels.

High channel streaming capacity (up to 120 H.264 channels)

Sysmaster support up to 120 H264 channels in one 802.11N 40Mhz channel stream. All channels use support channel lists and EPG information and provide between 500-1200kbps bit rate.

Streaming to unlimited Wi-Fi clients

AirStream Digital IPTV supports streaming to unlimited clients from one central CellNode M100N AirStream device. The clients receive stream and filter the proper channels that are decrypted and displayed. Each channel also supports EPG and subtitle information.

Optimized Wi-Fi data transfer performance

AirStream Digital IPTV supports high-capacity data transfer algorithms that allow transfer rates of over 150Mbps. The transfer mode is using one-way, full duplex channels and does not support exchange of system packets.

Centralized CMS management

AirStream solution is fully integrated with Sysmaster CMS system. Every subscriber account is properly managed and authenticated for content management access based on pre-paid or post-paid account balance. Every subscriber can be defined to have access only to a list of channels within a content plan. In addition, the CMS allows advertising management for TEXT and Image advertisement inserts into the stream on the server or client level.

Centralized access control and key management

AirStream uses advanced technology to provide limited content access to subscribers based on their CMS status. If a subscriber does not have a sufficient balance, the CMS will send a special key that will terminate the ability of its STB device to receive video/audio content. With the same procedure, the CMS may send a key to enable the content access once the account is recharged. Different types of recharge methods are acceptable including credit cards, SMS, PayPal, etc.

Advanced multi-channel H264 encoding

AirStream uses a back-end servers that encode video and audio streaming into H264/MP3 stream which is most effective for video/audio distribution. The system uses SysMaster encoding servers or Broadcasters to provide high channel encoding capacity using various types of content feeds such as DVB-S, DVB-C, DVB-T, ATSC, ASI, Analog, SDI, HTTP, etc.

Centralized STB provisioning and middleware management

AirStream uses CMS autoprovisioning and middleware management to allow individual STB devices to receive setup and layout information from a central location. In addition, the procedure allows for easy interface customizations, language customization, and feature targeting.



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