MediaCast Broadband

Multicast & Signaling Server for Media Content Delivery

ENENSYS' software solution designed to support the multicast delivery of OTT content, linear TV streaming and filecasting services, over broadband networks

ENENSYS MediaCast Broadband is an efficient and robust Multicast & Signaling Server. It is a unique DVB-standardized solution for Network Operators wishing to offer High-Quality of Experience Streaming TV services whatever the number of users. It also reduces the cost of scaling a traditional Unicast CDN network to support ever-growing video traffic demands and traffic peaks during prime-time and popular events. It also allows filecasting services to efficiently delivery media content in remote and unconnected places.

Standard Compliant

MediaCast Broadband is fully compliant with DVB-Multicast ABR (DVB-MABR) and DVB Native-IP (DVB-NIP) standards. Active DVB members for years, our team chooses and implements the most relevant features from the DVB standards, so our clients can stay ahead of the competition.

Rich Functionality

We are proudly offering the 6th generation of MediaCast Broadband. It is FLUTE enabled by design and supports rigorous carrier requirements such as large file transmissions, real-time data feeds, rich HD video formats, DASH/HLS CMAF Ultra Low Latency features. MediaCast Broadband manage several hundred streams simultaneously, scalable to thousands with a multi-server architecture.

Reliable Delivery

MediaCast Broadband offers powerful FEC, File Repair, and Reception Reporting capabilities to keep tabs on content quality and ensure consistent QoS. The FEC transmits redundant bytes up front to correct potential errors without retransmission. File Repair enables individual devices to acquire missing chunks of data by using traditional CDN capability in order to avoid deployment of additional component on operator's network. The Reception Reporting function stores QoE information that can eventually be processed for service improvements.

Eco-Friendly Product

MediaCast Broadband allows you to multicast your linear and file streaming services. The number of unicast streams will be greatly reduced during a popular event. This translates to fewer CDNs needed to handle peak issues. The power consumption and the ecological footprint of the entire network are reduced.

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Applications

- OTT / Multicast-ABR networks
- Live Streaming TV for popular content delivery
- File Multicasting for Push VOD, application updates...
- Satellite Backhauling for OTT TV Services
- 5G CDN and network scalability
- CDN Pre-caching
- Part of OTT@scale & StarStream Enensys' solution

Other benefits

- Delivers guaranteed bit rate live and linear video streams
- Ensures Digital-Terrestrial-TV-like latency and zapping times
- Reduces CDN cost for Live TV by more than 50%
- Decreases the cost of on-demand content delivery and software upgrades
- Eliminates peaks of traffic automatically
- Intuitive GUI – Easy to setup and to monitor

Technical specifications

INTERFACES

Control
1x Network Interface to access GUI/SNMP/REST API

Content Ingestion
1x Network Interface to manage all HLS, DASH, DASH CMAF Ultra Low Latency and on-demand File contents.

Data Plane
1x Network Interface for all multicast output streams

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FEATURING

OTT

Seamless integration with any CDN

Multiple Origin Server support

DVB compliant Multicast ABR

Service Delivery

Multiple Content Ingestions: HTTP, HTTPS, FTP or SFTP protocol

Streaming: HLS, DASH (template or timeline), DASH CMAF Ultra Low Latency

On-demand File (single delivery, carrousel, auto-update, scheduled repetitions)

Service Announcement and In-band updates

FLUTE: RFC-6726, DVB-I Specs

FEC: FEC Raptor10: RFC-6681/5053, FEC LDPC: RFC-5170, FEC RS: RFC-5510

Monitoring and Supervision

SNMP v2/3

HTML5 Web based GUI

Alarms configuration & monitoring, performance counters

Inventory and configuration management

Backup & restore

REST API

Multicast Service Controller

Service Creation

Service Scheduling

Service Planning and geo-planning

Associated Delivery Procedures

Bootstrap

File Repair

Reception Report / QoE

Unicast Multicast automatic Switch (MooD)

Consumption Report

System / Architecture

Active/hot-standby redundancy on Control Plane

N+P redundancy on User Plane

Geo-Redundancy

IPv4 / IPv6 support for all interfaces

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PHYSICAL

Installation	**Processing**
Virtual Machine or Bare-Metal server	8 CPU - 16 CPU
RAM	**HDD**
16 GB	100 GB

MediaCast Broadband integration into end-to-end solutions
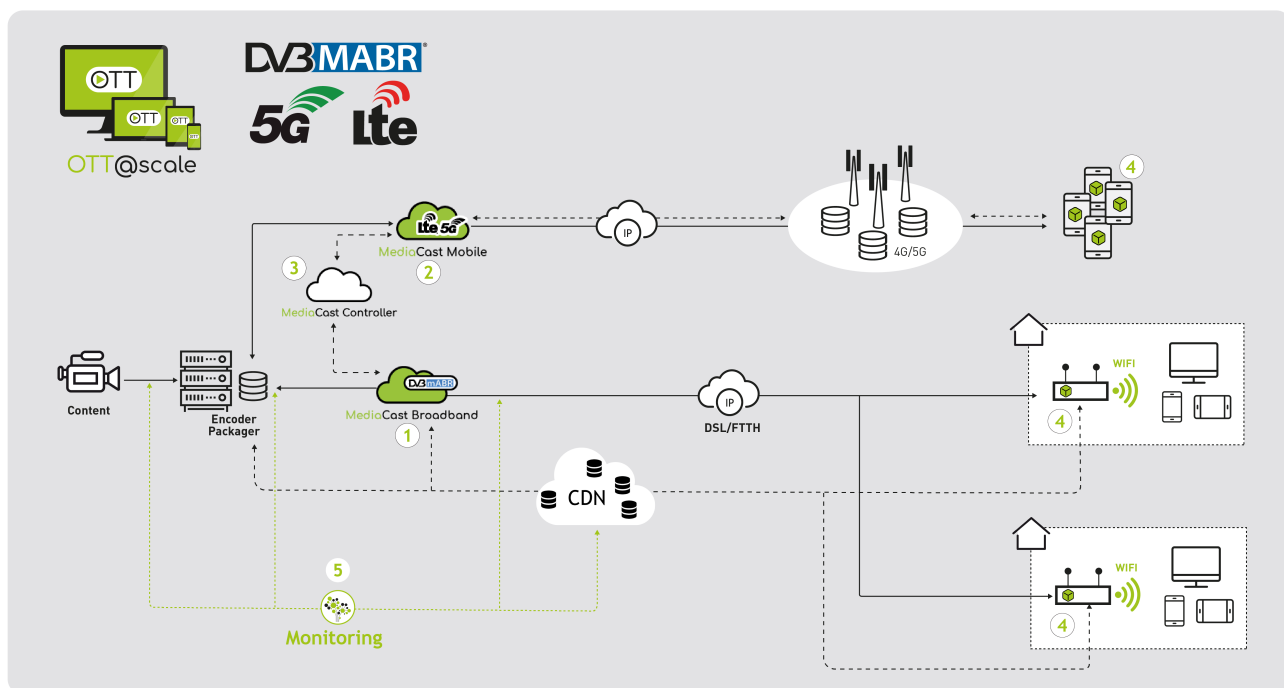
Delivery Server

1/ MediaCast Broadband
- Stream OTT (DASH, HLS) in multicast
- FLUTE/ROUTE delivery
- Generate Bootstrap and Multicast channel map
- Compliant with DVB / 3GPP standards

4G/5G Gateway

2/ MediaCast Mobile
- Gateway for 4G/5G network
- eMBMS, 5GMBS
- Compatible with 5G
- SFN support
- Compliant with 3GPP standards

Provisioning Manager

3/ MediaCast Controller
- Unifying Broadband & Mobile Service Delivery
- Multicast Services Configuration
- Get Audience logs to trigger switch from Unicast to Multicast
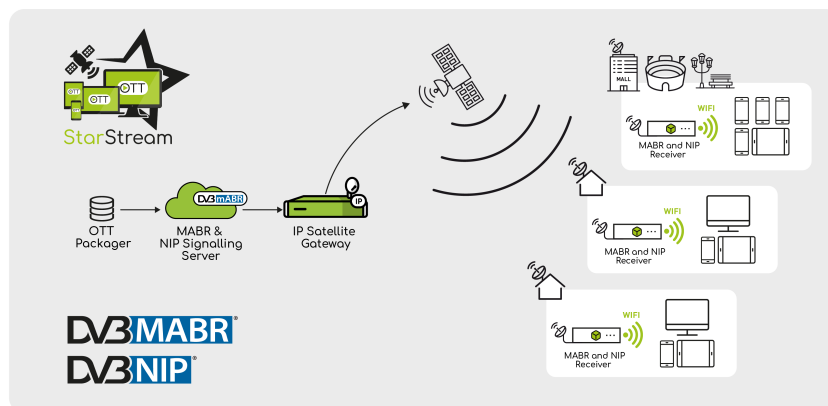- Multi-tenant architecture

Terminal Software

4/ CubeAgent
- Multicast to Unicast ABR
- DVB, 3GPP compliant
- Monitor audience
- Supports multiple profile
- API controllable

Monitoring Probe

5/ TestTree StreamProbe
- Monitor OTT QoS, QoE
- Real-Time detection
- HLS, DASH
- Freeze, Black screen, Audio silence...
- Scalable

MABR & NIP Signalling Server

MediaCast Broadband
- Scheduling the delivery of live streams (DASH/HLS) or files over multicast
- Based on standard (FLUTE, mABR, DVB-NIP)
- Includes File Repair and FEC management

IP Satellite Gateway

SmartGate SAT
- Receive Multicast content from MediaCast Broadband
- IP MPE or IP GSE encapsulation
- DVB-S/S2 or DVB-S2X satellite transmission

Satellite demodulator

Neptune
- DVB-S2 or DVB-S2X professional satellite receiver
- IP MPE or IP GSE decapsulation
- IP output streaming
- Interfaced with CubeAgent

mABR and NIP Receiver

CubeAgent
- Live Multicast (DASH/HLS) reception and Filecasting support
- Interfaces with Application and Player
- Support File Repair and FEC mechanisms

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Ordering codes

MediaCast Broadband

MABR server for multicast delivery of video or multimedia content:
- Management of up to 100 Mb/s of ABR content
- Valid for 10 000 active users

Ordering options

MediaCastBroadband-50Mbps

Support additional 50Mb/s of throughput

MediaCastBroadband-50KUsers

Support additional 50 000 users