

PRODUCT BRIEF



GENOVA MOSAIC

VIEW AND PRESENT YOUR ENTIRE CHANNEL LINE-UP

Genova Mosaic is designed to create a live mosaic page that you can configure according to your specific needs. It can be used as a Live EPG to browse live channels or as a multi-viewer monitoring tool.

Genova Mosaic ingests multiple live or file video input feeds, decodes them, and re-encodes the output as a single video output.

Thumbnail sizes and positions can be set independently over a user-defined background, and the composited scene is delivered in high quality IP or OTT TV formats, multiplexed with the associated audio feeds. Genova Mosaic also provides monitoring functionalities such as cycling or alarms for head-end operation rooms.

Genova Mosaic is based on software which makes it upgradeable and future-proof. Since it is not tied to specific hardware, Genova Mosaic can also run in virtual machines and in Docker containers for maximum flexibility. This enables cloud hosting for better OPEX control.



APPLICATIONS

- End-user live EPG for channel browsing
- Multi-viewer monitoring for operations

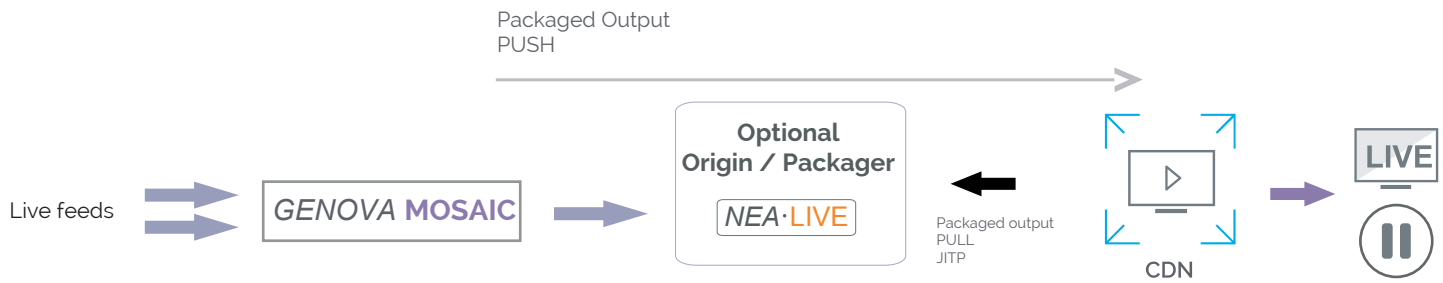


FEATURES AND BENEFITS

- For Live EPG: Provide easy navigation and promote key premium channels through full channel lineup
- For multi-viewer monitoring: Improve Quality of Service by quickly detecting potential problems
- Mosaic generator for up to 20 HD or 64 SD inputs
- Support for multiple simultaneous output mosaics
- H.264 and HEVC encoding, up to 4K
- Multicast or OTT packaged outputs
- Future-proof, upgradeable software
- 'Pay as you grow' licensing



SYSTEM ARCHITECTURE



TECHNICAL SPECIFICATIONS

Service

- Mosaic generator for Live EPG
- Multiviewer for monitoring

Input Format

Video:

- MPEG-2, up to HD60
- H.264, up to HD60
- HEVC, up to HD60

Audio:

- MPEG-1 Layer II
- AAC-LC, HE-AAC v1/v2,
- Dolby Digital (AC-3)
- Dolby Digital Plus (E-AC-3)

Transport:

- Live MPEG-TS / IP in UDP
- Video clips (TS)
- Static pictures (JPG, PNG, BMP)

Output Format

Video Encoding:

- MPEG-2, up to HD30
- H.264, up to UHD30
- HEVC, up to UHD30
- Multi-bitrate video encoding for Adaptive Streaming CBR, VBR, ABR, CVBR, CABR
- Up to 16 video profiles per service

Audio Encoding:

- AAC-LC
- HE-AAC v1/v2
- Dolby Digital (AC-3)
- Dolby Digital Plus (E-AC-3)
- Up to 64 audio tracks per service

Embedded OTT packaging:

- MPEG-DASH/CMAF
- Apple HLS
- DVB-DASH for HbbTV
- Microsoft Live Smooth Streaming
- Adobe RTMP
- SPTS in UDP or RTP/UDP with FEC (IPTV)



TECHNICAL SPECIFICATIONS

Processing

Video Preprocessing:

- Adaptive de-interlacing
- Video cropping and resize
- Aspect-ratio conversion or pass-through
- Frame Rate down-conversion
- Color enhancement

Video Compositing:

- User configurable compositor
- Dynamic 2.0 and 5.1 audio bar graphs
- Different thumbnail sizes in the same scene
- Configurable thumbnail positions
- Configurable background picture

Audio Preprocessing:

- Automatic Gain Control
- Audio level
- Configurable audio delay
- 5.1 and stereo downmix
- Audio resampling

Monitoring and Alarms:

- Audio silence, Audio peaks
- Video freeze, Video black
- Missing audio PID, Missing PID
- Automatic thumbnails labelling from PSI
- Remote live preview of mosaic output
- Closed Caption and DVB-Subtitle burn-in

Administration

- Web GUI
- HTTP RESTful API
- SNMP monitoring
- Easily upgradable
- DataMiner supervision

Performance

- Up to 20 HD / 64 SD input feeds
- Up to 4 mosaic pages per unit
- Round-robin channels cycling
- Up to 128 sources per thumbnail

Scalability and High availability

- N+P redundancy

Platforms

- Runs on Intel based platforms
- Support for GPU acceleration
- Virtualizable
- Docker containerization