Synamedia

Media Edge Gateway
Edge Reception and Processing Platform
for Content and Service Providers

Leverage Software-Based Edge Media Distribution Securely and Efficiently

Synamedia's Media Edge Gateway (MEG) is the industry's most comprehensive edge reception and processing platform. The software-centric, cloud-native integrated receiver decoder (IRD) performs all distribution and processing functions – from secure reception, through transcoding and decoding with grooming/multiplexing capabilities, to IP transport.

Scalable and efficient, the future-proof gateway leverages multiple deployment options, such as bare metal, container and full virtual, to keep your business agile. You can work in your environment of choice, including on-premises, public cloud and hybrid cloud, to control costs and simplify management. Integrate with Synamedia's PowerVu or third-party content protection solutions to secure your entire video network chain from distribution, through processing, to delivery.

Synamedia's Media Edge Gateway gives you the flexibility to cost-effectively create new application-specific gateways such as ATSC 3.0 receivers and SMPTE2110 output decoders. This paves the way for you to deliver innovative experiences that bring more value for your customers and new monetisation opportunities for your business.

Key Functionalities

Premium cloud and on-premises distribution

- Leverages in-house-developed video/audio codecs at lowest bitrates
- Optimises distribution bandwidth usage and cost with innovative codecs
- Consolidates workflows to run multiple video applications across all screens efficiently and easily
- Deploys edge application either in cloud or on-premises with Synamedia's VIVID workflows to increase flexibility

Flexible decoding and transcoding across single or multiple streams for greater control

Decoding

- Decodes up to four MPEG-2 advanced video coding (AVC) or HEVC video-encoded services, as well as outputs on SMPTE2110 with future SDI support
- Simultaneously outputs up to full high definition (FHD) with future UHD support
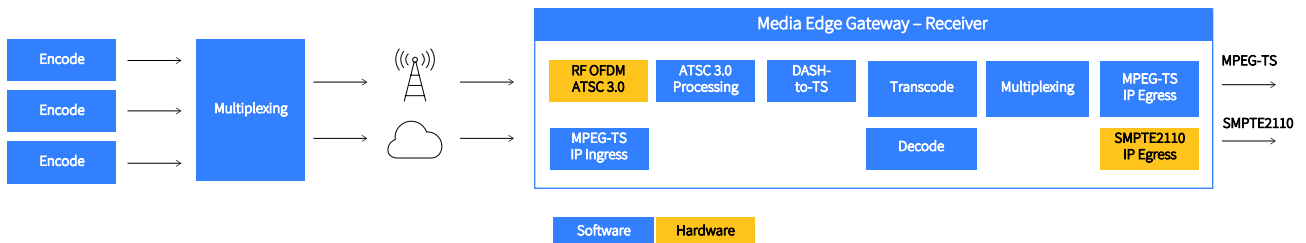
Transcoding/Processing

- Targets applications requiring transcoding of multiple video services within single or multiple transport streams, including HEVC, AVC and AVC/MPEG-2
- Transcodes to ABR profiles for transport to CDN networks
- Offers advanced remultiplexing and PID management

Technical Advantages

- Flexible and pure software-based edge reception and processing capabilities for cloud and on-premises deployment
- Scalable, dense platform with MPEG-2, AVC and HEVC decoding support as well as high-density, HEVC and AVC transcoding support
- Extensive IP delivery support options, such as MPEGoIP with FEC, Zixi, RIST and SRT, including HLS with ABR2TS conversion
- SMPTE2110 output and NMOS support for integration with all-IP production and playout solutions
- Appliance option to support ATSC 1.0 and 3.0 reception
- Future integration with Synamedia's PowerVu Network Center, including PowerVu Insight monitoring
- Future PowerVu and DVB-CI conditional access support

Software-centric application on a single converged platform

- Chooses from among multiple deployment models
- Operates across your preferred work environment
- Uses an intuitive drag-and-drop interface, rich APIs, flexible workflows and automation

Product Specifications

Processing	
Input Formats	• MPEG TS over IP • Multiple program transport stream (MPTS) or single program transport stream (SPTS) • SD, HD, full HD (FHD), and future ultra-HD (UHD) format support • Unicast or multicast • Adaptive transport stream (ATS) input for ABR-to-TS functionality • Zixi, RIST and SRT support for reliable transport over Internet • ATSC 3.0 input option with MEG-ATSC3RF-A appliance configuration

Output Formats	• MPEG TS over IP
	• MPTS or SPTS
	• Live linear ABR support
	  • ATS
	  • Embedded packaging, including HLS and MPEG-DASH
	• SD, HD and FHD, including down conversion support
	• SMPTE2110-10/-20/-21/-30/-40 output support
	• Future SDI support

Video Processing	• Supports up to 4 CH decodes to SMPTE2110 output
	• (Future SDI support)
	  • HEVC, AVC, MPEG-2
	  • HD, FHD
	  • SMPTE2110-10/-20/-21/-30/-40 output support
	• Video transcoding option for HEVC, AVC inputs to AVC, MPEG-2 outputs for SD, HD, FHD, and UHD

Splicing and Switching	• Live linear broadcast splicing • Linear stream switching
Redundancy	• 1:1 IP interface backup • IP port mirroring • Input service and transport stream redundancy • Hitless merge for MPEG-2 transport stream input • User-configurable triggers • 1:1 and N:M MEG node redundancy
Monitoring and Management	• Integrated Grafana dashboards • Elasticsearch, Logstash and Kibana (ELK) stack support • Alarm notifications, including SNMP traps • Syslog • Easily controlled local web GUI • VSM support for line-up configuration, resource pool redundancy, capacity modelling, and centralised monitoring • Fully documented open API enabling third-party component integration • AMWA IS-04 NMOS Discovery and Registration • AMWA IS-05 NMOS Device Connection Management

Platform Support and Compatibility

Appliance Chassis Specifications (MEG-ATSC3RF-A, MEG-DEC-A, MEG-IPGW-A)

Physical and Power	
Size	1RU, 1.70 x 17.11 x 15.05 in, 4.32 x 43.46 x 38.22 cm
Weight	17.41 lb/7.9 kg
Power Supply	2 AC PSU, AC input 100 to 120 VAC/ 200 to 240 VAC
Consumption	550W (at 100 VAC)

Environmental	
Operating Temperature	50-95°F (10-35°C)
Storage Temperature	-40-140°F (-40-60°C)
Operating Humidity	8-90% (non-condensing)
Operating Altitude	0-3,050 m (0-10,000 ft)

Ordering Information

Application	Part Number
Synamedia MEG Software Application (to be installed on Synamedia servers or in data centre)	R-MEG-APPS
Media Edge Gateway ATSC 3.0 RF receiver appliance	MEG-ATSC3RF-A
Media Edge Gateway IP receiver Decoder appliance (SMPTE2110 output)	MEG-DEC-A
Media Edge Gateway IPGW appliance	MEG-IPGW-A

Services & Support

Synamedia provides a broad portfolio of services and support to increase your network's business value and return on investment. We take a customer-centric approach, aligning our level of support to your technological requirements and network complexity. That way, you can successfully operate our products and solutions to ensure that you achieve optimal performance throughout your network's life cycle.

Warranty & Contact Information

Read our detailed warranty information.

Learn more about Synamedia's video network distribution solutions.

For more information, contact your account manager or visit our site.

About Synamedia Video Network Solutions

Synamedia's video network solutions enable media, web and pay TV providers to deliver pristine-quality broadcast and broadband video securely over any network to any screen. Anchored by the industry's most comprehensive processing platform and built with high-quality standards, our solutions ensure outstanding performance and reliability for over 1,000 customers worldwide. Synamedia's solution portfolio covers the entire video network chain – from distribution, through processing, to delivery – enabling you to offer outstanding value-added and personalised experiences while saving costs.