Synamedia

Media Edge Gateway
Edge Processing Platform for Content and Service Providers

Leverage Powerful, Flexible Edge Processing to Reduce Distribution Costs

Media Edge Gateway (MEG) is a flexible, software-defined receiver equipped with powerful edge processing functions such as transcoding, regionalization, time delay, and blackout across satellite/CDN/IP networks. The platform provides cloud-to-ground and ground-to-cloud connectivity and tailors content handoff to meet the needs of affiliates and MVPDs.

The futureproof gateway leverages multiple deployment options – including Synamedia appliances, COTS servers, containers, and full virtual environments – to increase your business' agility. By working in your environment of choice – on-premises, public cloud, or hybrid cloud – you can 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.

MEG includes two satellite RF ports per satellite input card to provide support for up to four satellite demodulators with DVB-S, DVB-S2, and DVB-S2X support.

The platform enables you to create cost-effective, application-specific gateways, such as satellite/ATSC 3.0 receivers and SMPTE ST 2110/SMPTE ST 2022-6/3G-SDI output decoders, to deliver innovative value-added experiences and to unlock new monetization opportunities.

Key Functionalities

Optimized distribution and flexible deployment options

- Leverages in-house, state-of-the-art video/audio codecs to optimize distribution bandwidth cost
- Consolidates workflows to run multiple video applications across all screens efficiently and easily
- Deploys edge application either in the cloud or on-premises with Quortex PowerVu workflows to increase flexibility

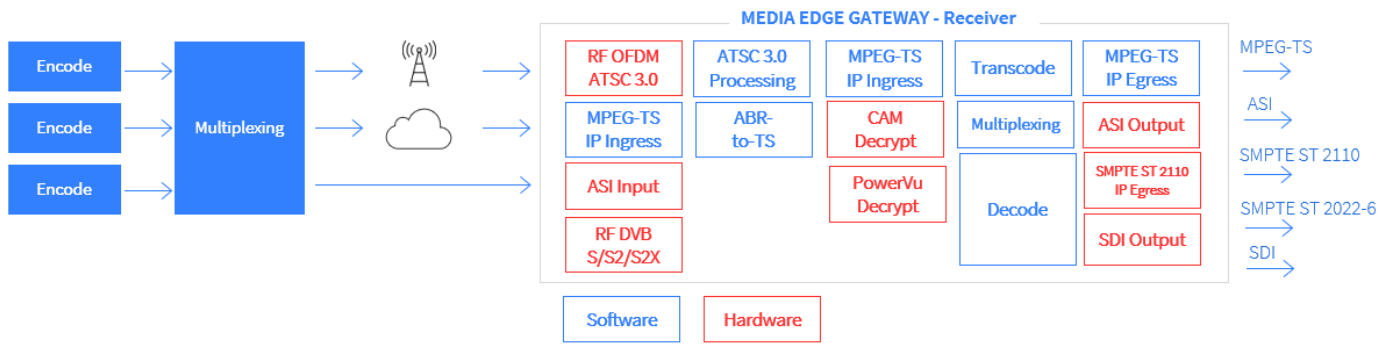### Flexible decoding/transcoding across single or multiple streams

Decoding

- One 4K UHD (2160p)
- Up to four full high definition (1080p)
- Up to eight high definition (1080i, 720p)
- Up to eight standard definition (480i) MPEG-2, advanced video coding (AVC), or HEVC video-encoded services
- Support for SMPTE ST 2110, SMPTE ST 2022-6, or SDI/3G-SDI outputs

Transcoding / Processing

- Targets applications requiring transcoding of multiple video services within single or multiple transport streams, including HEVC, AVC and AVC/MPEG-2
- Offers advanced re-multiplexing and PID management

Technical Advantages

- 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 SMPTE ST 2022-2 with FEC, Zixi, RIST, and SRT, including TS over HTTP, HLS, and DASH with ABR2TS conversion
- SMPTE ST 2022-6 and SMPTE ST 2110 output and NMOS support for integration with all-IP production and playout solutions
- Generic interfaces such as 3G-SDI output, ASI input and output support, satellite RF DVB-S/S2/S2X input support, and appliance option for ATSC 1.0/3.0 reception support
- Integrated with Synamedia's PowerVu Network Center, including PowerVu monitoring via PowerVu Insight, to offer content protection features such as conditional access module (CAM) card, BISS-1/E support, and PowerVu conditional access support
- Flexible TS backup options: any-to-any input type
- Time delay
- Myriad overlay functions for content identification
- Versatile deployment options: Synamedia appliances, COTS servers, virtualized environments, containers
- Myriad graphic overlay functions for content identification

MEDIA EDGE GATEWAY - Receiver

RF OFDM ATSC 3.0	ATSC 3.0 Processing	MPEG-TS IP Ingress	Transcode	MPEG-TS IP Egress
MPEG-TS IP Ingress	ABR-to-TS	CAM Decrypt	Multiplexing	ASI Output
ASI Input		PowerVu Decrypt	Decode	SMPTE ST 2110 IP Egress
RF DVB S/S2/S2X				SDI Output

MPEG-TS → ASI → SMPTE ST 2110 → SMPTE ST 2022-6 → SDI

Software   Hardware

Product Specifications

Processing	
Input Types	• SMPTE ST 2022-2 (MPTS or SPTS) • Zixi/SRT/RIST/TS over HTTP/HLS/RTMP • RF ATSC 3.0 • RF DVB-S/S2/S2X (LNB power insertion (13V, 18V) and 22Khz) • ASI
Output Types	• SMPTE ST 2022-2(MPTS or SPTS) • Zixi/ SRT/ RIST/ RTMP • ASI • SDI • SMPTE2110-10/-20/-21/-30/-40

Video Processing	• 4:2:0/8-bit or 4:2:2/10-bit decoding to SMPTE ST 2110, SMPTE ST 2022-6 and 3G-SDI output:
	  • One 4k UHD (2160p) service
	  • Up to (4) full high-definition (1080p) services
	  • Up to (8) high-definition (1080i, 720p) services
	  • Up to (8) standard-definition (480i) services
	  • Future quad-link 3G-SDI and 12G-SDI support
	• HEVC, AVC, MPEG-2
	• SD, HD, FHD, UHD including down conversion support
	• Video transcoding option for HEVC, AVC inputs to AVC, MPEG-2 outputs for SD, HD, FHD and UHD
	• Time delay

Splicing and Switching	• Live linear broadcast splicing • Linear stream switching
Graphical Overlays in Decoded Output	• Static logos • Scrolling text banner • EAS banner • Slate on input loss • Time ticker • Teletext and subtitle burn-in
Redundancy	• 1:1 IP interface backup • SMPTE ST 2110 port mirroring • Input service and transport stream redundancy hitless merge for MPEG-2 transport stream input using user-configurable triggers • 1:1 MEG node redundancy • TS backup: any-to-any input type
Monitoring and Management	• Integrated Grafana dashboards • Elasticsearch, Logstash, and Kibana (ELK) stack support • Alarm notifications, including SNMP traps • Syslog • Easily controlled via local web GUI • 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

Physical and Power	
Size	1RU, 1.73 x 22.04 x 17.24 in, 4.4 x 56 x 43.8 cm
Weight	21.38 lb/9.7 kg
Power Supply	2 AC PSU, AC input 100 to 240 VAC
Consumption	550W

Environmental	
Operating Temperature	32-113ºF (0-45ºC)
Storage Temperature	4-158ºF (-20-70ºC)
Operating Humidity	0-85% @40ºC non-condensing
Operating Altitude	0-5,000 m (0-16,404 ft)

Ordering Information

Description	Part Number
Synamedia MEG software application (to be installed on Synamedia servers or in data center)	MEG-APPS
Media Edge Gateway appliance	MEG-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.

About Synamedia Video Network Solutions

Synamedia is a leading global provider of video distribution, streaming, processing, and network delivery solutions for content owners and service providers. Our comprehensive, cloud-based SaaS and managed service solutions and software products enable customers to manage OTT media streaming and broadcast workflows, secure video content and services, and deliver premium user experiences across all screens. Leveraging expert know-how and 30-plus years of experience for over 1,000 customers worldwide, Synamedia helps video businesses launch, monetize and scale services across all devices to capture a greater share of the consumer video wallet.

Next Steps

Learn more about **Synamedia Video Network solutions**.

For more information, **contact us**.

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