Package, Secure and Deliver Any Content to Any OTT Device

The vDCM Packager and vDCM Origin Server are pure software-based solutions designed to package, secure and deliver media content to the market's widest range of OTT consumer devices. Serving all applications, from live to on-demand, the solutions open your door to value-added services and ad insertion to increase your monetisation opportunities. And thanks to Synamedia's low latency technology, vDCM Packager and vDCM Origin Server deliver near-real-time user experiences for streamed live events.

The infrastructure-agnostic solutions are designed to run on-premises as a software-defined appliance, or on a public cloud or private cloud. Pre-integrated with myriad DRMs and CDNs from around the world and built with high-availability mechanisms, the vDCM Packager and vDCM Origin Server ensure easy, rapid deployment and peace of mind for your mission-critical operations.

Key Functionalities

Monetise myriad video applications with no market reach limits

- Serves live, VOD, time-shift TV – including start-over and catch-up – and cloud DVR applications to extend monetisation opportunities
- Supports extensive set of packaging protocols and DRMs to address wide range of devices
- Deploys per-track encryption, key rotation support, and Synamedia's headend watermarking to meet stringent security-compliance requirements

Easily deploy and configure, while increasing operational efficiency

- Leverages extensive set of pre-integrated DRMs, key stores, and CDNs to reduce integration time
- Features multi-protocol wizard covering all processing use cases to facilitate configuration of outgoing ABR streams
- Offers just-in-time packaging to optimise storage and bandwidth costs
- Provides logs and metrics to handle large operational data sets
- Includes high-availability mechanisms to enable mission-critical service delivery

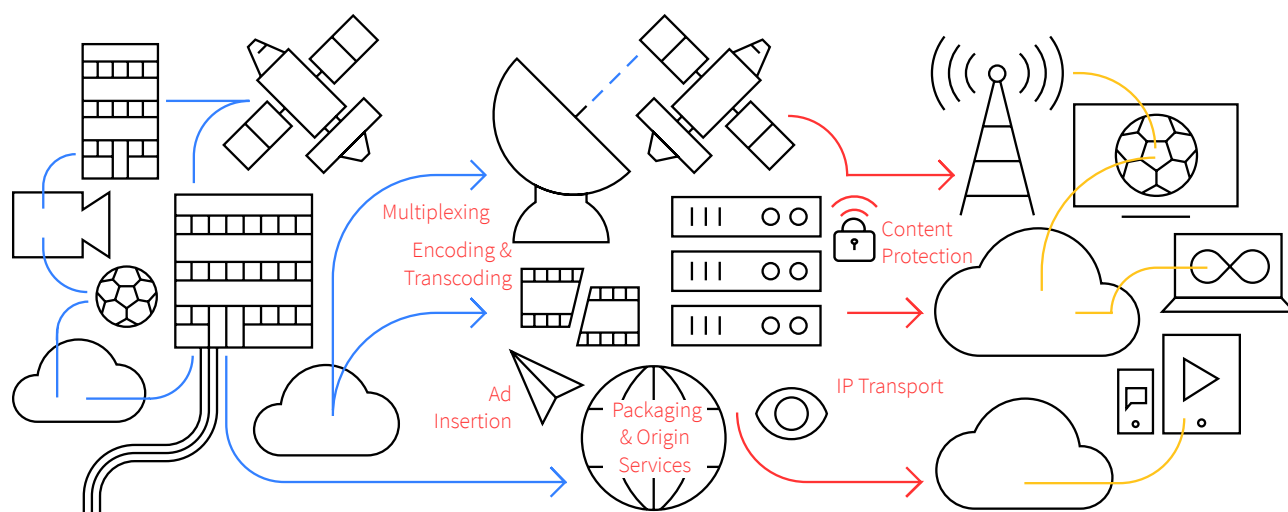### Improves streaming experience

- Harnesses Synamedia security expertise to deliver premium audio and video quality up to UHD resolution
- Takes advantage of leading low-latency technology to enable near- live user experiences

Technical Advantages

- Broad range of supported ABR protocols
- Integration with widely deployed DRMs completed by CPIX 2.0 support for key server integration
- Rich set of processing capabilities with audio and subtitling filtering and large conversion combinations
- Optimised low latency with chunk transfer encoding
- High packager throughput with up to 2,000 profiles
- Origin server capacity up to 5Gbps
- High availability including HA synchronisation
- Easy expandability for recording capabilities
- Flexible licence-based model for feature set and capacity extension

Video Network Chain

Product Specifications

Packaging	
Input Formats	• Adaptive transport stream with encoder boundary points (CableLabs-compliant)
Output Formats	• Up to 2,000 output profiles • Apple HTTP Live Streaming • Microsoft HTTP Smooth Streaming • MPEG-DASH • High Efficiency Streaming Protocol (HESP) • Synamedia Common Intermediate Format (CIF) • Shared CMAF
Filtering and Conversion	• Audio and subtitle filtering • SCTE-35 markers conversion into cue points in client manifest using CableLabs event signalling and management interface (ESAM)
Video	• H.264 • H.265
Audio	• AAC-LC • HE-AAC v1/v2 • Dolby Digital/Dolby Digital+ • Support of multiple audio streams per output
Subtitling Input Formats	• CEA-608/708 • DVB-TXT • DVB-SUB
Subtitling Output Formats	• WebVTT • TTML • EBU-TT-D • SMPTE-TT
Low Latency	• Chunk transfer encoding – DASH CMAF • Apple low latency HLS • HESP
Other	• DVR window support (RAM or SSD) • Integrated with Synamedia's recording solution (TSTV and cloud DVR, common and unique copy)

Content Protection

Encryption Algorithms	• AES-CBC-128 • HLS clearkey • SAMPLE-AES • PIFF 1.1 encryption with AES-CTR • CENC v2 with AES-CTR • CENC v3 with AES-CBC
Integrated DRMs and Key Management System	• Apple Fairplay • Microsoft PlayReady • Google Widevine • Synamedia VideoGuard • Nagra • Pikselguard • EZ-DRM • Verimatrix • Yotta labs • BuyDRM • Irdeto • Castlabs
Key Provisioning	• Key server integration with CPIX 2.0 standard interface • Open KMS interface
Advanced Features	• Periodic key rotation • Per-track encryption • Synamedia headend watermarking

Publication

Mode	• Packager pull mode • Packager push mode
CDNs	• Integration with CDNs all over the world including Synamedia Edge and Akamai

Origin Server

Throughput	• Up to 5 Gbps
Input Traffic	• HTTP
Output Traffic	• HTTP
Internal Storage	• In-memory and enterprise SSD
External Storage	• Cloud object storage
Technologies	• Standalone, virtual machines or containerised infrastructure
Redundancy	• Internal load balancing mechanisms and Kubernetes-based resiliency mechanisms
Other	• S3 and 3rd-party object storage interface • Single- or multi-node deployment • Multiple resiliency mechanisms • Cache/shield capabilities

Monitoring and Management

Configuration GUI	• Easy output configuration due to protocol-dedicated streaming creation wizard
Redundancy	• High availability through packager synchronisation for seamless failure • N:M and 1:1 redundancy options
Monitoring	• Integrated Grafana dashboards • Elastic Search, Logstash and Kibana (ELK) stack support • Alarm notifications including SNMP traps • Syslog • Easily controlled local web GUI • VSM • Fully documented open API enabling third-party component integration

Platform Support and Compatibility

Deployment	
Appliance	See details below
Private Cloud	Virtual machine, Docker container
Public Cloud	Multi-cloud supporting all major cloud providers

vDCM Appliance Chassis Specifications

Physical and Power	
Size	SFF chassis: 1.69 x 17.11 x 27.83 in, 4.29 x 43.46 x 70.7 cm
Weight	28.74lb/13.04 kg minimum, 35.86 lb/16.78 kg maximum
Power Supply	AC input 100-240 VAC
Consumption	800W (power supply) – 500W (for VN-Node XS)

Environmental	
Operating Temperature	50-95°F (10-35°C)
Storage Temperature	-40-140°F (-40-60°C)
Cooling	Smart array controller and seven fans
Operating Humidity	8-90% (non-condensing)
Operating Altitude	0 to 3,050m (0 to 10,000 ft.)

Regulatory Compliance	
Compliance	CE Markings per directives 2004/108/EC and 2006/95/EC
Safety	UL 60950-1, 2nd Edition, 2014-10-14 (Information Technology Equipment -Safety -Part 1: General Requirements) CAN/CSA C22.2 No. 60950-1-07, 2nd Edition, 2014-10 (Information Technology Equipment -Safety -Part 1: General Requirements)
EMC Compliance	EN 55032:2015/AC:2016 EN 61000-3-2:2014 EN 61000-3-3:2013 EN 55024:2010 +A1:2015 EN 61000-4-2:2009 EN 61000-4-3:2006 +A1:2008 +A2:2010 EN 61000-4-4:2012 EN 61000-4-5:2014 EN 61000-4-6:2014 EN 61000-4-8:2010 EN 61000-4-11:2004

Ordering Information

For ordering information, please contact your sales representative.

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.