

Ensure High Performance with Feature-Rich Multiplexer and Transport Gateway

Synamedia's virtual Digital Content Manager (vDCM) Multiplexer is a virtualized software-based platform for high-performance multiplexing, remultiplexing, and advanced stream processing operations. It supports various input and output formats, including IP, ASI or satellite (ingest only) on Synamedia appliances. The platform easily integrates with existing architecture and new futureproof setups. Part of Synamedia's market-leading vDCM offering, the platform is designed to run either on-premises as a software-defined appliance or on a public or private cloud to give you deployment flexibility.

Key Functionalities

Unparalleled mix of stream processing and transport gateway functions

- Supports all input-to-output routing combinations, including ASI-to-IP conversion
- Delivers wide range of multiplexing capabilities at PID and service levels
- Works with all stream manipulation functions, including PSI/SI/PSIP table acquisition, generation, insertion and layout

Advanced features for increasing operational efficiency

- Optimizes bandwidth usage with advanced statistical multiplexing for precise cross-channel bandwidth allocation over time
- Maintains an achievable end-to-end broadcast-grade availability
- Provides built-in, stand-alone redundancy support at transport and service levels with configurable triggers and switchover rules
- Offers rich set of configurable alarms at input, bit rate and data levels

Flexible and adaptable offering covering all deployment models and requirements

- Runs as a software-defined appliance or in public/private cloud environments
- Employs license-based model to scale easily and activate new functions

Technical Advantages

- IP and ASI input and output support, including ASI-to-IP conversion
- Ultra-high throughput up to 20Gbps
- IP delivery support via Zixi, SRT and RIST
- Statistical multiplexing and smart rate control functions
- Forward error correction (FEC) and hitless merge capabilities
- Redundancy management at transport and service levels

Product Specifications

I/O Interfaces	
Network Connectivity	Up to 8x 1G interface, dual 10G/25G/100G interface
Input Protocols	- ASI - MPEG-2 TS over IP/UDP and IP/UDP/RTP - MPEG-2 TS from file (disk) - SRT - RIST - Zixi - RTMP - HLS/DASH (ABR2TS) - DVB-S2 input
Output Protocols	- ASI - MPEG-2 TS (MPTS or SPTS) over IP/UDP and IP/UDP/RTP up to 10 Gig-E - SRT - RIST - RTMP(S) - Zixi - DEPI (Aux Video Core) - TS over HTTP
Input Processing	- Input bitrate monitoring - Continuity counter-error detection - Forward error correction and hitless merge according to SMPTE 2022-1, 2022-2, 2022-6 and 2022-7
Output Processing	De-jittering with short-/long-term regulation
Specific Features	
Gateway	- ASI-to-IP conversion - Address flipping - Maximum throughput of 50 Gbps
Multiplexing and Re-multiplexing	- PID filtering and remapping - Fixed output PID remapping - PSI/SI/PSIP acquisition, generation and insertion - Dynamic PSI/SI/PSIP regeneration with advanced descriptor handling support - Service and component merging - PID tracking - Aux PID synchronization with video - Content routing from any input to any output port - Output mirroring
Statistical Multiplexing	- Statmux controller - MPEG-2, H.264, HEVC, UHD, HD, and SD application - Holistic encoder buffer-level analysis for precise bandwidth allocation - Improved reactivity to scene changes - Realignment MUX
Blackout Switching	Automatic blackout switching at transport stream and elementary stream levels
Clock Synchronization	Network Time Protocol Version 4 (NTPv4) Precision Time Protocol (PTP) - IEEE 1588-2019

Operations	
Redundancy	• 1:1 IP interface backup • IP port mirroring • Input service and transport stream redundancy • Hitless merge for MPEG-2 transport stream input and for SMPTE2022-6 input (SMPTE-2022-7) • User-configurable triggers • 1:1 and N:M node redundancy
Monitoring	• 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 for hybrid setups (mix of hardware DCM and software Synamedia DCM), capacity modeling, and centralized monitoring • Fully documented open API enabling third-party component integration
Configuration GUI	• Statmux pool definition and management rules • Multiplexing configuration, including dynamic rules definition and descriptor edition • Alarm configuration • Triggers and switchover rules configuration for service redundancy • Optional centralized management with Synamedia's VSM

Platform Support and Compatibility

Deployment	
Appliance	• Multiple appliances available
Private Cloud	• Virtual machine, Docker container
Public Cloud	• Multi-cloud supporting all major cloud providers

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.](#)

About Synamedia

Synamedia delivers, enriches, and protects video. Our cloud-native and SaaS solutions empower customers to scale and monetize video services efficiently, ensuring low-latency delivery and exceptional image quality. Our Video Network portfolio includes video distribution, streaming, Edge CDN and multi-CDN management, monetization, ad insertion, cloud DVR (cDVR) and time-shift TV, video compression and processing, and cloud and IP transition.

Next Steps

To learn more or to book a demo, [contact us](#).