

# 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 playout

### 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	<ul style="list-style-type: none"> <li>Up to 8x 1G interface, dual 10G/25G/100G interface</li> </ul>
Input Protocols	<ul style="list-style-type: none"> <li>ASI</li> <li>MPEG-2 TS over IP/UDP and IP/UDP/RTP</li> <li>MPEG-2 TS from file (disk)</li> <li>SRT</li> <li>RIST</li> <li>Zixi</li> <li>RTMP</li> <li>HLS/DASH (ABR2TS)</li> <li>DVB-S2 input</li> </ul>
Output Protocols	<ul style="list-style-type: none"> <li>ASI</li> <li>MPEG-2 TS (MPTS or SPTS) over IP/UDP and IP/UDP/RTP up to 10 Gig-E</li> <li>SRT</li> <li>RIST</li> <li>RTMP(S)</li> <li>Zixi</li> <li>DEPI (Aux Video Core)</li> <li>TS over HTTP</li> </ul>
Input Processing	<ul style="list-style-type: none"> <li>Input bitrate monitoring</li> <li>Continuity counter-error detection</li> <li>Forward error correction and hitless merge according to SMPTE 2022-1, 2022-2, 2022-6 and 2022-7</li> </ul>
Output Processing	<ul style="list-style-type: none"> <li>De-jittering with short-/long-term regulation</li> </ul>

## Specific Features

Gateway	<ul style="list-style-type: none"> <li>ASI-to-IP conversion</li> <li>Address flipping</li> <li>Maximum throughput of 50 Gbps</li> </ul>
Multiplexing and Re-multiplexing	<ul style="list-style-type: none"> <li>PID filtering and remapping</li> <li>Fixed output PID remapping</li> <li>PSI/SI/PSIP acquisition, generation and insertion</li> <li>Dynamic PSI/SI/PSIP regeneration with advanced descriptor handling support</li> <li>Service and component merging</li> <li>PID tracking</li> <li>Aux PID synchronization with video</li> <li>Content routing from any input to any output port</li> <li>Output mirroring</li> </ul>
Statistical Multiplexing	<ul style="list-style-type: none"> <li>Statmux controller</li> <li>MPEG-2, H.264, HEVC, UHD, HD, and SD application</li> <li>Holistic encoder buffer-level analysis for precise bandwidth allocation</li> <li>Improved reactivity to scene changes</li> <li>Realignment MUX</li> </ul>
Blackout Switching	<ul style="list-style-type: none"> <li>Automatic blackout switching at transport stream and elementary stream levels</li> </ul>
Clock Synchronization	<ul style="list-style-type: none"> <li>Network Time Protocol Version 4 (NTPv4) Precision Time Protocol (PTP) - IEEE 1588-2019</li> </ul>

Operations	
Redundancy	<ul style="list-style-type: none"> <li>• 1:1 IP interface backup</li> <li>• IP port mirroring</li> <li>• Input service and transport stream redundancy</li> <li>• Hitless merge for MPEG-2 transport stream input and for SMPTE2022-6 input (SMPTE-2022-7)</li> <li>• User-configurable triggers</li> <li>• 1:1 and N:M node redundancy</li> </ul>
Monitoring	<ul style="list-style-type: none"> <li>• Integrated Grafana dashboards</li> <li>• Elasticsearch, Logstash and Kibana (ELK) stack support</li> <li>• Alarm notifications, including SNMP traps</li> <li>• Syslog</li> <li>• Easily controlled local web GUI</li> <li>• 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</li> <li>• Fully documented open API enabling third-party component integration</li> </ul>
Configuration GUI	<ul style="list-style-type: none"> <li>• Statmux pool definition and management rules</li> <li>• Multiplexing configuration, including dynamic rules definition and descriptor edition</li> <li>• Alarm configuration</li> <li>• Triggers and switchover rules configuration for service redundancy</li> <li>• Optional centralized management with Synamedia's VSM</li> </ul>

## Platform Support and Compatibility

Deployment	
Appliance	<ul style="list-style-type: none"> <li>• Multiple appliances available</li> </ul>
Private Cloud	<ul style="list-style-type: none"> <li>• Virtual machine, Docker container</li> </ul>
Public Cloud	<ul style="list-style-type: none"> <li>• Multi-cloud supporting all major cloud providers</li> </ul>

## 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 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 your account manager or **visit our site**.