

Leverage High-Performance Scrambler with Advanced Security

Synamedia's vDCM Scrambler is a converged, pure software solution that protects content for primary distribution and pay TV broadcast services. Supporting a wide range of encryption algorithms, the scrambler is pre-integrated with over 20 conditional access systems (CAS) worldwide. The solution offers unmatched throughput, encrypted service coverage, and simultaneous Simulcrypt connections. Leveraging Synamedia's extensive security expertise and experience, the vDCM Scrambler offers system hardening and high availability to ensure business continuity and secure customer revenue.

Key Functionalities

Comprehensive content protection for multiple applications

- Secures content for primary distribution and pay TV broadcast applications
- Supports largest set of encryption algorithms, including DVB CSA v3, to comply with demanding studio security requirements
- Operates with unparalleled number of CAS worldwide

Greater operational efficiency and flexibility

- Delivers unmatched high throughput across all encryption algorithms
- Maintains Simulcrypt capacity of up to 40 simultaneous connections with various CAS
- Ensures high availability for mission-critical service delivery
- Flexibly deploys on-premises as a software-defined appliance or on a public or private cloud
- Employs licensed-based model for growing easily and rapidly activating new functions to satisfy new requirements

Enhanced security capabilities

- Leverages holistic security approach featuring system hardening
- Secures beyond live-broadcast use cases with trick mode support
- Utilizes embedded ECMG to integrate compact, plug-and-play PowerKey solution

Technical Advantages

- Wide range of encryption algorithms, including BISS mode 0/1, DVB CSA v1/v2/v3, AES-CBC, AES ECB, ATIS, DVB-CPCM, AES CISSA, and SPAR
- High performance with up to 8,000 service capabilities, typically up to 20Gbps throughput and as high as 50Gbps
- Insertion of SI/PSI over TCP/IP or MPEG-TS with editing capabilities for private data within CA descriptors
- Multiple SCS, EIS, ECMG and EMMG redundancy options, including load balancing
- Intuitive user interface for simplified configuration
- Embedded PowerKey ECMG

Product Specifications

Content Protection	
Encryption Algorithms	• DVB CSA v1/v2/v3 • BISS mode 0/1 scrambling and descrambling • PowerKey • Synamedia PowerVu technology • AES: AES ECB, ATIS, DVB-CPCM, AES CBC, and AES CTR, according to ETSI TS 103 127 scrambling and descrambling • Synamedia SPAR system hardening • Open CAS
Conditional Access Systems	• Viaccess • Conax • VideoGuard • Irdeto Access MCrypt • Irdeto Access PiSys • NagraVision Aladdin • NagraVision Merlin • MediaGuard • Verimatrix • Enigma • Sidsa KeyFly • Secuencia SafeView • Latens • BetaCrypt • Abel • Communicate Technologies Inc (CTI) • Novel SuperTV • PowerKey • Synamedia PowerVu
DVB-Simulcrypt	• DVB-Simulcrypt compliance, according to ETSI TS 103 197 • Embedded SCS and CWG • Interfaces with EIS, ECMG, EMMG and PSIG
Advanced Integration	• Embedded ECMG for PowerKey
Performance	• Scrambling capacity of up to 2,000 services with 20 Gbps throughput (encryption-dependent) • Simulcrypt capacity of up to 40 simultaneous connections with different conditional access systems (CAS)
Other	• System hardening • Trick mode support • Editing of private data as part of CA description • Headend-based watermarking

Operations	
Redundancy	• 1:1 redundancy with control word synchronizer for minimum downtime • Redundancy support for EIS, ECM-G and EMM-G • Active/standby and live/live redundancy with load balancing
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 lineup configuration, resource pool redundancy for hybrid setups (mix of hardware DCM and software Synamedia DCM), capacity modeling, and centralized monitoring • Fully documented open API allowing third-party component integration and basic SNMP traps/mibs

Platform Support and Compatibility

Deployment	
Appliance	• Multiple VN appliances are 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](#).