

D9800 PowerVu Professional Receiver

Synamedia Secure & Versatile Signal Reception IRD

Synamedia's PowerVu Professional Receiver is a versatile solution designed to support high-efficiency video coding (HEVC) over both satellite and IP content distribution networks.



Extensive content-ingest options for seamless migration to IP distribution

- Offers MPEGoIP for fiber-based applications and adaptive bit rate (TS over HTTP) HLS, Zixi, or SRT for transmission over content delivery networks (CDN) and the public internet
- Maintains output transparency via digital program mapping so output applications can be served with new input sources
- Receives IP inputs in parallel with DVB-S2x four-tuner satellite inputs that can be configured as primary or disaster recovery inputs
- Supports 400Mbps aggregate input and 800Mbps aggregate output

Flexible decoding and transcoding across single/multiple streams for greater control

Decoding

- Decodes MPEG-2, advanced video coding (AVC), or HEVC video-encoded service, and outputs as serial digital interface (SDI) or composite uncompressed video
- Simultaneously outputs up to ultra-high definition (UHD) and down converts to standard definition (SD)

Transcoding/Decryption (multi-stream chassis)

- Targets applications requiring decryption and/or transcoding on multiple video services within single or multiple transport streams
- Decrypts up to 32 PowerVu services and transcodes up to 16 HD/SD AVC services to HD/SD MPEG-2 or AVC to facilitate myriad channels
- Transcodes via optional high-density HEVC card up to 12 HD/SD HEVC channels to HD/SD MPEG-2 or AVC

Advanced decryption for enhanced content protection

- Adds latest AES128 PowerVu decrypt capabilities, while maintaining backward compatibility to provide a seamless transition path for existing systems
- Features optional DVB-CI common interface for 2 CA module slots to enable multicrypt and Simulcrypt environment positioning
- Provides extensive, fully-integrated toolset for VideoGuard (VG) CA pairing, fingerprinting, on-screen messaging, and transport/decode controls, as well as rapid watermarking support across single-stream variant

Technical Advantages

- Scalable platform with MPEG-2, AVC and HEVC decoding support, and high-density HEVC and AVC transcoding support
- DVB-S2x four-tuner satellite input options
- Extensive IP delivery support options – MPEGoIP with FEC, Zixi, SRT, and ABR, including HLS either concurrently or as disaster recovery inputs
- PowerVu and optional DVB-CI conditional access support
- Integrated with Synamedia's PowerVu Network Center, including PowerVu Insight monitoring
- Zixi ZEN master control plane support
- Live event control (LEC) support
- Advanced input control (AIC) support

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Product Specifications

System	
Video Standards	• MPEG-2 4:2:0, MPEG-4 AVC 4:2:0, H.265 HEVC 4:2:0
Tuner RF Inputs	
Number of RF Inputs	• 4 (default 1 active at a time, or can be licensed as individual tuners for MS unit)
RF Demodulation	• DVB-S QPSK, DVB-S2 QPSK, 8PSK, 16/32APSK, DVB-S2x (with GEN2 Tuner)
ASI	
ASI Ports	• Configurable dual input or output
IP Ports	
Ethernet	• RJ-45, 100BASE-T Ethernet and 1000BASE-T Ethernet (3 ports for SS, 5 standard ports for MS)
Input/Output Modes	• UDP, RTP(SMPTE2022-7:2019), FEC (SMPTE2022), ABR input, Zixi input, and SRT input support
Analog SD Video Output	
Number of Channels	• Single-channel decode
Video Decompression Type and Standard	• MPEG-2 4:2:0, MPEG-4 AVC 4:2:0, H.265 HEVC 4:2:0. NTSC and PAL B/G/I/D/M/N
Audio Outputs	
Number of Channels	• 2 stereo pairs or 4 mono channels and 5.1 channel down-mix, 4 stereo pairs or 8 mono channels (with license)
Digital Video Outputs	
Number of Video Channels	• Single-channel decode
SDI Output Ports	• 2 BNC ports, either mirrored output or simultaneous 1 port SD and 1 port HD output
Digital HDMI Video Only Output	• HDMI 2.0a (no HDCP) with HLG HDR and 4K/UHD support (licensed)
HD & SD Video Transcode TS Output	
Output Compression Format	• MPEG-2 and MPEG-4 (optional)
Decryption and Transcoding	
Transcode Density	• Up to 16 AVC including up to 12 HEVC
Decrypt Density	• Up to 32 services of PowerVu
Conditional Access	
Synamedia PowerVu CA	• 56bit/AES128 bit decryption
DVB-CI	• 2 common interface slots: EN 50221 (optional module), multicrypt and Simulcrypt support
VideoGuard	• VideoGuard (VG) pairing, VG fingerprinting, VG on-screen messaging, VG transport/decode controls
Other	• BISS mode I/E

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Monitoring and Management	
Interface	<ul style="list-style-type: none"> Fully documented REST API allowing integration with third-party components and basic SNMP traps/mibs
Interface Capabilities	<ul style="list-style-type: none"> Syslog, ELK Stack/Kibana, FluentBit/InfluxDB/Grafana
Device Specifications	
Chassis Mechanical Specs	<ul style="list-style-type: none"> Height: 1.72 in. (4.37cm) IRU high, 19 in. EIA rack mountable; Width: 17.35 in. (44.07cm); Depth: 20.25 in. (51.44cm)

Ordering Information

Single-Stream Base HW Chassis	Part Number
IRU PowerVu Professional Receiver Base Chassis with ASI and MPEGIOIP Input/Output	D9800-SS-MPEGOIP
Multi-Stream Base HW Chassis	Part Number
IRU PowerVu Professional Receiver Base Chassis with ASI and MPEGIOIP Input/Output	D9800-MS-MPEGOIP
IRU PowerVu Professional Receiver Base Chassis with ASI and MPEGIOIP Input/Output and Analog/SDI Decoder Card	D9800-MS-MPEGOIP-D