

Redwood BLACK

Multipurpose Video Engine



Product Data Sheet



KEY FEATURES

Hybrid IP & SDI Workflows

Live-to-disk recording, clip playout, graphics insertion, master control switching including DVEs, subtitling, independent branding of simulcast channels and many other broadcast features

Dolby® E encode/decode

Video processing core powered by Harmonic Spectrum

Modular and scalable software and hardware architecture to deliver the feature set you need

High level of quality, reliability and redundancy

OVERVIEW

Aveco's Redwood BLACK is a multipurpose video engine that provides integrated channel origination, ingest and playout features. It is a proven broadcasting solution with integrated IP and SDI interfaces, graphics, DVE effects, to-from live switching, and support for formats up to UHD HDR for end video delivery – for applications where quality and reliability are paramount. Redwood BLACK is powered by Harmonic Spectrum X technology.

SYSTEM DESCRIPTION

Integrated Channel Workflow

As a platform for live-to-disk recording, clip playout, graphics insertion, master control switching with DVEs, subtitling, independent branding of simultaneous channels and many other

broadcast features, Redwood BLACK's hardware and software are both modular and scalable to deliver the right feature set. Further providing a complete IP workflow using the industry standards SMPTE ST 2022-6 and ST 2110, together with the SDI interfaces, means streamlined delivery of professional content in today's hybrid world where the adoption of IP to the existing SDI infrastructures is in progress.

Best of Both Worlds

As a result of the combined technologies of Harmonic – the worldwide leader in video delivery infrastructure solutions – and Aveco's robust, industry-standard automation system, Aveco delivers integrated solutions that meet the needs of the most demanding users.

Video Engine

The Redwood BLACK video engine, which provides end-to-end SD/HD and UHD HDR video ingest and delivery, is highly scalable and suitable for traditional broadcast chains as well as integrated channel playout. Built-in multi-channel DVE, 8 layers of graphics, master control switching with clip playback, and ingest capabilities make Redwood BLACK perfect for a wide range of applications. With up to four SD/HD channels or one 4K UHD channel per unit, Redwood BLACK gives you the flexibility to add channels as you need. For reliability and fault tolerance, the video engine components operate independently. Redwood BLACK is designed for extreme reliability.

Automation Platform

The ASTRA Suite of Tools can automate your facility's workflows. By automating ingest, media asset management, master control playout and studio operation, your costs are lower and your workflows are simpler. Built on powerful media asset management, ASTRA provides tools to streamline the lifecycle of all of your content locally or from remote locations.



TECHNICAL SPECIFICATION

Connectivity	SDI Inputs/Outputs	SD-SDI (SMPTE ST 259)/HD-SDI (SMPTE ST 292) BNC or Mini-DIN female, 75 Ω Up to 2x 8 bidirectional
	IP Inputs/Outputs	SMPTE ST 2022-6, SMPTE ST 2110, PTP (10 GB optical or cooper) or quad 1 GB for TS ingest
	Others	LTC I/O, Ref In
	Network	Two 1 GbE ports Access: FTP, CIFS, AFP
Video	SD Output Video Definitions	720 x 486i @ 29.97 fps 720 x 576i @ 25 fps
	HD Output Video Definitions	1280 x 720p @ 50 & 59.94 fps 1920 x 1080i @ 25 & 29.97 fps 1920 x 1080p @ 50 & 59.94 fps
	UHD Output Video Definition	2160 x 4096p @ 50 & 59.94 fps (4 x SDI 3G - QUAD)
	Media File Wrappers	QT MOV (self-contained and referenced), MXF OP1a (also low latency), GXF
	Codecs	SD MPEG-2: 3-24.9 Mbps long GOP; 25-50 Mbps I-frame HD MPEG-2: 18-85 Mbps long GOP; 50-100 Mbps I-frame DV 25, DVCPRO 25, DVCPRO 50, DVCPRO HD XDCAM HD: 18, 25, 35, 50 Mbps AVC-Intra Class 50 and Class 100 VC-3 (SMPTE 2019-1) 120, 145 Mbps XAVC Intra or L-GOP up to 50 Mbps AVCU ProRes 422: 122, 147 Mbps; Standard Quality mode
	Aspect Ratio Conversion	Configurable
Audio	Channels	SMPTE ST 299/272 Up to 16 embedded per video channel
	Formats	Uncompressed: 16, 24, 32-bit PCM @ 48 kHz Compressed: passthrough, Dolby® E encode/decode
	Features	Audio track swapping, track tagging, language rules Audio mix effects, voice-over insert
Auxiliary Data	Closed Captions	EIA-608, EIA-708 Up convert: EIA-608 captions translated to EIA-708 Down convert: EIA-608 compatibility bytes extracted from EIA-708 data to create EIA-608 captions
	Subtitles	Line 21, OP47 Up convert: Line 21 OP-42 subtitles translated to OP-47 Down convert: OP-47 subtitles translated to line 21 OP-42
	Digital Cuetone	SCTE 104
	VBI, VANC	Passthrough
Channel Origination	Integrated Channel Layout	Up to 6 live inputs, 4 independent program outputs
	Master Control Switching	Frame-accurate transitions between live and recorded clips
	Clip Layout	2 usable SD/HD players per ICP card, up to 2 ICP cards per chassis, or one 4K UHD player
	Branding & Graphics	Adobe Creative Suite authoring 8 graphics layers Single layers from clip or live inputs Dual DVE for layout of two clips or live inputs Independent branding for simulcast channels Up to 2 external key/fill inputs 3-point animations Dynamic text substitution from ASTRA or external source
	Typefaces	All standard font formats are supported
	Captions & Subtitles	Localized and customized open captions File-based closed-caption insertion
	Audio	Integrated voice-over Independent duck-mix-shuffle of live, clip and graphics audio sources
	Playout & Ingest	Media Ports
Integration	Applications	Integrated Channel Layout, videosever for playout and ingest
	Automation	ASTRA Studio, ASTRA MCR, ASTRA MAM and ASTRA Ingest
	MAM	Proxy encoding (MPEG-4)
Storage	Capacity	Up to four 4 TB hot-swappable SATA drives, 12 TB usable (450 hours at 50 Mbps)
	Redundancy	3+1 modified RAID-4 (single parity)
Power	Power Supply	Dual redundant, hot-swappable
	Input Voltage Range	90-260 V, 45-63 Hz
	Power Consumption	Max 505 W
Physical	Dimensions	1U, depth 70.5 cm / 27.75 in
	Weight	17 kg/29.5 lbs.
Environmental	Operating Temperature	+5° to +40° C
	Operating Humidity	10% to 85% non-condensing

AVECO, Headquarters, Praha, Czech Republic
AVECO Inc., Miami Beach, USA
AVECO India, New Delhi, India

info@aveco.com
info-us@aveco.com
info-in@aveco.com

aveco.com

