

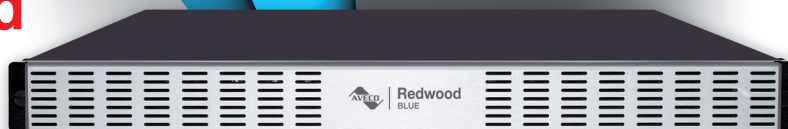


Redwood BLUE

Multipurpose Video Engine

Redwood BLUE

Powered by Harmonic



OVERVIEW

Aveco's Redwood BLUE is a professional multipurpose video engine powered by Harmonic Spectrum technology. It is designed for ingest, playout and integrated channel origination applications where quality, reliability and redundancy are paramount.

SYSTEM DESCRIPTION

Complete Channel Workflow

Providing 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 BLUE's hardware and software is both modular and scalable to provide the right feature set required by today's premium broadcasters as well as budget-constrained stations.

Redwood BLUE is fully integrated with Aveco's ASTRA automation products including ASTRA Studio, ASTRA Take2, ASTRA MCR, ASTRA MAM and ASTRA Ingest, providing a powerful, fully expandable and adaptable system.

Best of Both Worlds

As a result of the combined technologies of Harmonic – the worldwide leader in video delivery infrastructure solu-

tions, and Aveco's robust, industry-standard automation system, Redwood BLUE meets the needs of the most demanding customers.

Video Engine

Redwood BLUE video engine is highly scalable solution suitable for traditional broadcast chains as well as for integrated channel playout. Built-in multilayer graphics and dynamic text over playback or live video, DVE, master control switching with clip playback and ingest capabilities makes Redwood BLUE perfect for a wide range of applications. Providing two SD/HD channels per module, with up to four channels per unit, Redwood BLUE gives you the ability to add channels as your business needs change. For reliability and fault tolerance, video engine components operate independently so that any failure is self-contained and has no impact on any other operation. Moreover, should a failure occur, components are hot swappable so that the system remains operational.

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 around powerful media asset management, ASTRA provides tools to manage all of your content locally, from your desktop or from remote locations.

KEY FEATURES

- Applications include ingest, playout and channel origination
- Provides live-to-disk recording, clip playout, graphics insertion, master control switching including DVEs, subtitling, independent branding of simulcast channels and many other broadcast features
- Proven solution for a wide range of applications
- Video processing core of Redwood BLUE is powered by Harmonic Spectrum technology
- Designed for premium broadcasters as well as for budget-constrained stations
- Modular and scalable software and hardware architecture to exactly meet your needs
- High level of quality, reliability and redundancy

INTEGRATION

Automation & MAM

- ASTRA Studio
- ASTRA Take 2
- ASTRA MCR
- ASTRA MAM
- ASTRA Ingest

TECHNICAL SPECIFICATION

CHANNEL ORIGATION

Branding & Graphics	<p>Eight keyers (graphics layers)</p> <p>Background layer (clip or live)</p> <p>Single layers from clip or live inputs</p> <p>Dual DVE for playout of two clips or live inputs</p> <p>Independent branding for simulcast channels</p> <p>Dynamic text substitution from Astra or external source</p>
Master Control Switching	Frame-accurate switching between live and recorded clips
Clip Playout	Up to four bidirectional HD channels
Typefaces	All standard font formats are supported
Captions & Subtitles	<p>Localized and customized open captions</p> <p>File-based closed-caption insertion</p>
Audio	<p>Integrated voice-over</p> <p>Independent duck-mix-shuffle of live, clip and graphics audio sources</p>

VIDEO

Inputs/Outputs	<p>SD-SDI (SMPTE-259M)/HD-SDI (SMPTE-292M)</p> <p>BNC or Mini-DIN female, 75 Ω</p> <p>Up to eight bidirectional (up to six live inputs) per channel</p>
Graphics Formats	PNG, JPG, TIFF, GIF, Targa and FLV files
Media Wrappers	QuickTime reference, LXF, GXF and MXF OP-1a and OP-1b
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
SD DV	DV 25, DVCPRO 25, DVCPRO 50
HD	DVCPRO HD
XDCAM HD	18, 25, 35, 50 Mbps
AVC-Intra	Class 50 and Class 100
VC-3 (SMPTE 2019-1)	120, 145 Mbps
ProRes 422	122, 147 Mbps; Standard Quality mode

AUDIO

Channels	SMPTE 299M/272M Up to 16 embedded per video channel
Formats	
Uncompressed	16, 24, 32-bit PCM @ 48 kHz
Compressed	Passthrough

RESOLUTION

Up-Conversion	Configurable pillarbox, crop, anamorphic EIA-608 captions translated to EIA-708 Line 21 OP-42 subtitles translated to OP-47
Down-Conversion	Configurable letterbox, crop, anamorphic EIA-608 compatibility bytes extracted from EIA-708 data to create EIA-608 captions OP-47 subtitles translated to line 21 OP-42
Cross-Conversion	720p to 1080i 1080i to 720p
SD Resolutions and Frame Rates	720 x 486i @ 29.97 fps 720 x 576i @ 25 fps
HD Resolutions and Frame Rates	1280 x 720p @ 50 & 59.94 fps 1920 x 1080i @ 25 & 29.97 fps 1920 x 1080p @ 25 & 29.97 fps (carried as PsF in HD-SDI; limited to AVC-I)

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)

NETWORK

NICs	Up to two GbE ports (one per I/O module)
Access	FTP, CIFS and AFP services

INTEGRATION

Automation & MAM	ASTRA Studio, ASTRA Take 2, ASTRA MCR, ASTRA MAM and ASTRA Ingest
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POWER

Power Supply	Dual redundant, hot-swappable
Input Voltage Range	90-260 V, 45-63 Hz
Power Consumption	max 175 W

PHYSICAL

Dimensions	1U, depth 67.3 cm / 26.5 in
Weight	12.2 kg / 26.9 lbs

ENVIRONMENTAL

Operating Temperature	+5° to +40° C
Operating Humidity	10% to 85% non-condensing

