

# Redwood BLUE

## Multipurpose Video Engine



Product Data Sheet



Powered by Harmonic

### KEY FEATURES

**Applications include ingest, playout and channel origination**

**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**

**Modular and scalable software and hardware architecture to meet your needs exactly**

**High level of quality, reliability and redundancy**

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 Take 2, 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 solutions, and Aveco's robust, industry-standard automation system, Redwood BLUE meets the needs of the most demanding customers.

### **Video Engine**

The Redwood BLUE video engine is a 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, the 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.

### 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

#### **Integrated 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

#### **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.



# TECHNICAL SPECIFICATION

<b>Connectivity</b>	SDI Inputs/Outputs	SD-SDI (SMPTE-259M)/HD-SDI (SMPTE-292M) BNC or Mini-DIN female, 75 Ω Up to 2x 8 bidirectional
	Others	TC I/O, Ref In, Ref Loop, AES
	Network	Two 1GbE ports Access: FTP, CIFS, AFP
<b>Video</b>	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
	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 ProRes 422: 122, 147 Mbps; Standard Quality mode
	Aspect Ratio Conversion	Up - Configurable Pillarbox, Crop, Anamorphic Down - Configurable Letterbox, Crop, Anamorphic Cross - 720p to 1080i, 1080i to 720p
<b>Audio</b>	Channels	SMPTE 299M/272M Up to 16 embedded per video channel
	Formats	Uncompressed: 16, 24, 32-bit PCM @ 48 kHz Compressed: passthrough
<b>Auxiliary Data</b>	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
<b>Channel Origination</b>	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	Up to 4 bidirectional HD channels
	Branding & Graphics	Adobe Creative Suite authoring 8 graphics layers Single layers from clip or live inputs Dual DVE for playout 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
<b>Playout &amp; Ingest</b>	Media Ports	Up to 4 bidirectional ports (decoder/encoder)
<b>Integration</b>	Dedication	Videoserver for playout and ingest, Integrated Channel Layout
	Automation	ASTRA Studio, ASTRA MCR, ASTRA MAM and ASTRA Ingest
	MAM	Proxy encoding (MPEG4)
<b>Storage</b>	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)
<b>Power</b>	Power Supply	Dual redundant, hot-swappable
	Input Voltage Range	90-260 V, 45-63 Hz
	Power Consumption	Max 175 W
<b>Physical</b>	Dimensions	1U, depth 67.3 cm / 26.5 in
	Weight	12.2 kg/26.9 lbs.
<b>Environmental</b>	Operating Temperature	+5° to +40° C
	Operating Humidity	10% to 85% non-condensing

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