

# HDb2500 Series

## Scalable 720p Encoder/ RF Modulator

For organizations looking for cost-effective HD encoding the HDBridge 2500 Series is the perfect fit. Choose from two or four channels models that allow you to deliver HD video up to 720p resolution to an unlimited number of displays over almost any distance.

The HDBridge 2500 series converts high definition AV sources into an RF signal received a television's QAM (NA model) or DVB-T/C (EU model) digital tuner over coax cable. With its high 45 dBmV RF output, you can send your content to an unlimited number of displays over nearly any distance.



### HDb2520-NA

2 DIN inputs for up to 720p component/VGA video

### HDb2540-NA

4 DIN inputs for up to 720p component/VGA video

### HDb2520-DT\*

2 DIN inputs for up to 720p component/VGA video

### HDb2540-DT\*

4 DIN inputs for up to 720p component/VGA video

\* Includes 4 3-foot DIN to Mini-DIN cables for use with DirecTV H25 receivers, rack ears and power cord. 6-foot DIN to Mini-DIN and VGA cables sold separately.

## Superior Video Quality

- Full MPEG-2 implementation
- I, P, and B Frames
- Low latency
- Full motion estimation with a wide search range

## Extensible Architecture

- Easy downloadable firmware updates
- Future enhancements provided regularly
- Emergency Alert System (EAS)

## High Reliability

- Low-stress power system
- Full system instrumentation and monitoring
- Official international regulatory approval
- Forced air cooling for effective thermal control

## Ease of Management

- Powerful, highly intuitive web interface
- On-site or remote management
- Configure/manage multiple units from
- Front Panel Display for local management

## HDb2500 Series Web-based Administration Interface

The screenshot shows the web-based administration interface for the HDb2500 Series. At the top, there is a header with the Zeevee logo, user information (User Name: admin), and a 'Send Emergency Alert' button. Below the header is a navigation menu with tabs for Status, Channel Plan, AV Source, RF, Device, Network, ZvShow, STB, EAS Config, Admin, Support, and About. The main content area displays a table of channel configurations. The table has columns for System, Slot, AV Port, Enabled, RF #, Channel #, Name, Long Name, and Rating. There are also 'Apply' and 'Reset' buttons and a 'Show advanced controls' checkbox at the bottom of the table.

System	Slot	AV Port	Enabled	RF #	Channel #	Name	Long Name	Rating
48 connected								
1 selected								
4_support_4	1	zshow	Enabled	38	38.1	2840-1	2840-1	TV-G
	2	zshow	Enabled	38	38.2	2840-sh	2840-show	TV-G
	2		Enabled	39	39.1	2840-2	2840-2	TV-G
	3		Enabled	40	40.1	2840-3	2840-3	TV-G
	4		Enabled	41	41.1	BBCAHD	Planet Earth	TV-G

General		
<b>Power:</b> 100-240 VAC 50/60 Hz, 60W max. 30W Typical IEC 60320-C14	<b>Cooling:</b> Dual internal cooling fans, Front inlet, Rear exhaust	<b>Temperature/Humidity:</b> Operating +32 F0 to +113 F0 [0 C0 to +45 C0] / 10% to 80%, non-condens- ing
	<b>MBTF:</b> 62,000 hours	
<b>Compliance:</b> FCC Class A, IEC60065, EN61000 (see manual 70-00031-00), CE, RoHS, RCM C-Tick	<b>Enclosure Dimensions:</b> 1.72 in. [H] x 17.33 in. [W] (without rack mount ears) x 9.9 in. [D] 43.6 mm [H] x 440.2 mm [W] x 251.5 mm [D]	<b>Enclosure Type:</b> Metal
		<b>Shipping Weight:</b> 7.88 lbs. [3.58 kg] 3.58 kg [7.88 lbs.]
<b>Mounting:</b> Rack ears shipped attached, 1RU high	<b>Carton Dimensions (individual):</b> 4.25 in. [H] 30.875 in. W 12.125 in [D] 108 mm [H] 785 [mm] W 308 [mm] [D]	<b>Warranty:</b> 5 Years
		<b>Vibration:</b> NSTA 1A in carton
Input		
<b>Component Video x4 or x2:</b> DIN connector HDbridge end, RCA connectors for HD source up to 720p	<b>VGA Resolutions Supported:</b> 640x480, 720x480, 800x600, 1024x768, 1152x864, 1176x664, 1280x720, 1280x768, 1280x800, 1280x960, 1280x1024, 1360x768, 1440x900 at 60 70, 72, 75, 85 Hz.	<b>Closed Caption:</b> EIA/CEA-608 captions accepted over composite video input
<b>Computer VGA (Analog) x4 or x2:</b> HD-15 connec- tor, 75 Ohm RGB 0 to 0.7V, Separate H and V sync		<b>Extra Digital Channel:</b> MPEG2 Program stream file, up to 200 MB
<b>Stereo Analog and Digital Audio x4 or x2</b>	Line level input per channel DIN connector HDbridge end, RCA connector or digital SPDIF audio input. 3.5 mm pigtail connector with VGA	
Video Encoder		
<b>Encoder Video Profile:</b> MPEG2 HD: ISO13818-2 MainProfile@HighLevel	<b>Traffic Shaping:</b> Variable Bit Rate	<b>Video Encoding Data Rates:</b> Variable, 10 Mbs - 24 Mbs per channel
<b>Average Encoding Data Rate:</b> 18 Mbs per channel	<b>Encoding Latency:</b> Programmable 200 msec to 400 msec	<b>Color Profile:</b> 4:2:0
<b>Encoder Audio Profile:</b> ATSC A/52, [AC-3]	<b>Video, Audio PID:</b> Programmable starting value	<b>Program Information:</b> Programmable program name, EIT
<b>GOP Size:</b> 16		
Modulator/Upverter		
<b>Modulation Types:</b> QAM 256 and 64 [ITU-T J83 Annex B] Interleav- ing modes: [64,2] only	<b>Cable Standard:</b> HRC, IRC or STD	<b>Frequency Range:</b> Single or one paired, frequen- cy agile QAM RF CATV channels 2-135 • 2kHz resolution • +/- 30 ppm accuracy • +/- 35 ppm stability
<b>Output Power:</b> +45 dBmV typical	<b>Output Level Adjust:</b> 25 - 45 dBmV in 1dBmV steps	
<b>I/Q Amplitude Imbalance:</b> < 1% typical	<b>Spectral Tilt:</b> < /= 1 dB over 6 MHz typical	<b>MER :</b> > 38 dB typical
Control Setup		
<b>Network Interface</b>	10/100 Mb Ethernet via RJ45 connection IP address via DHCP or set by user HTML/Javascript served web interface for easy configuration Telnet connection for CLI scripting Easy firmware updates All settings saved in NV storage	
<b>Front Panel Color Display</b>	Quickly obtain status at a glance, basic configurations, software revisions and updates	

ZeeVee, Inc., headquartered in Littleton, Mass., and founded in 2007, is a leading global developer of digital technology and products for distributing audio-video content from any source or multiple sources to any number of displays. Manufactured in the U.S. and used primarily in commercial and corporate applications, ZeeVee products are employed worldwide by major organizations in education, government, hospitality, retail, sports, entertainment, broadcasting, healthcare, housing, energy and other industries. For more information visit [www.zeevee.com](http://www.zeevee.com)