Headend Ready for High Density Distribution of HD Video and Digital Signage

Superior Video Quality
- Full MPEG2 implementation
- I, P, and B Frames
- Low latency
- Full motion estimation with a wide search range

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
- Web accessible instrumentation and management
- Single session configures and manages all connected units
- Front Panel Display for on-site status and management at a glance

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

A Clean Headend

HD Satellite Receivers
24
Composite video and analog audio
24
HD Satellite Receivers
16
Component video and digital audio
16
Digital Signage Players
Unencrypted HDMI

HDb2512 x2
12 SD Channels Each
HDb2540 x4
4 HD Channels Each
HDb2840
4 HD Channels

8:1 combiner
Single coax wire carries all channels

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## GENERAL

### Model Names
HDbridge Series 2000, HDb2540 | HDb2520

### Part Numbers
HDb2540-NA | HDb2520-NA

### Power
100-240 VAC 50/60 Hz, 60W max. 30W Typical IEC 60320-C14

### Cooling
Dual internal cooling fans, Front inlet, Rear exhaust

### Temperature/Humidity
Operating + 32° F to + 113° F (0° C to + 45° C) / 10% to 80%, non-condensing

### Vibration
NSTA 1A in carton

### MTBF
62,000 hours

### Compliance
FCC Class A, IEC60065, EN61000 (see manual 70-00031-00), CE, RoHS, RCM C-Tick

### Enclosure Type
Metal

### Mounting
Rack ears shipped attached, 1RU high

### Enclosure Dimensions
1.72 in. (H) x 17.33 in. (W) (without rack mount ears) x 9.9 in. (D)

### System Weight
6.25 lbs. (2.84 kg)

### Carton Dimensions (individual)
4.25 in. (H) x 30.875 in. W x 12.125 in (D)

### Shipping Weight
7.88 lbs. (3.58 kg)

### Warranty
5 years

## VIDEO INPUT

### Component Video x4 or x2
DIN connector HDbridge end, RCA connectors for HD source up to 720p

### Computer VGA (Analog) x4 or x2
HD-15 connector, 75 Ohm RGB 0 to 0.7V, Separate H and V sync

### VGA Resolutions Supported
640x480, 720x480, 800x600, 1024x768, 1152x864, 1176x664, 1280x720, 1280x768, 1280x800, 1280x960, 1280x1024, 1360x768, 1390x768, 1440x900 at 60 Hz, 70, 75, 85 Hz.

### Closed Caption
EIA/CEA-608 captions accepted over composite video input

### Extra Digital Channel
MPEG2 Program stream file, up to 200 MB

## AUDIO INPUT

### Stereo Analog and Digital Audio x4 or x2
Line level input per channel DIN connector HDbridge end, RCA connectors or digital SPDIF audio input. 3.5 mm pigtail connector with VGA

### Encoder Video Profile
MPEG2 HD: ISO13818-2 Main Profile @ High Level

### Video Shaping
Variable Bt Rate

### Video Encoding Data Rates
Variable, 10 Mbs - 24 Mbs per channel

### Average Encoding Data Rate
18 Mbs per channel

### Encoding Latency
Programmable 200 msec to 400 msec

### Color Profile
4:2:0

### GOP Size
16

### Video, Audio PID
Programmable starting value

### Program Information
Programmable program name, EIT

## AUDIO ENCODER

### Encoder Audio Profile
ATSC A/52, Dolby® Digital (AC-3)

## MODULATOR / UPCONVERTER

### Modulation Types
QAM-256 and 64 (ITU-T J83 Annex B) Interleaving modes: (64,2) only

### Cable Standard
HRC, IRC or STD

### Frequency Range
Up to 4 paired, frequency-agile QAM RF CATV Channels 2-135

#### • 2 kHz resolution
#### • +/- 3 ppm accuracy
#### • +/- 3s ppm stability

### Output Power
+45 dBmV typical

### Output Level Adjust
25 to 45 dBmV in 1dBmV steps

### MER
> 38 dB typical

### I/Q Amplitude Imbalance
< 1% typical

### Spectral Tilt
<1 dB over 6 MHz typical

## CONTROL SET-UP

### Network Interface
10/100 Mb Ethernet via RJ45 connection
IP address via DHCP or set by user
HTML/Javascript served web interface for easy configuration
Telenet connection for CLI scripting
Easy firmware updates
All settings saved in NV storage

### Front Panel Color Display
Quickly obtain status at a glance, basic configurations, software revisions and updates