ZvBOX ® 170

COMBINATION 720P HD
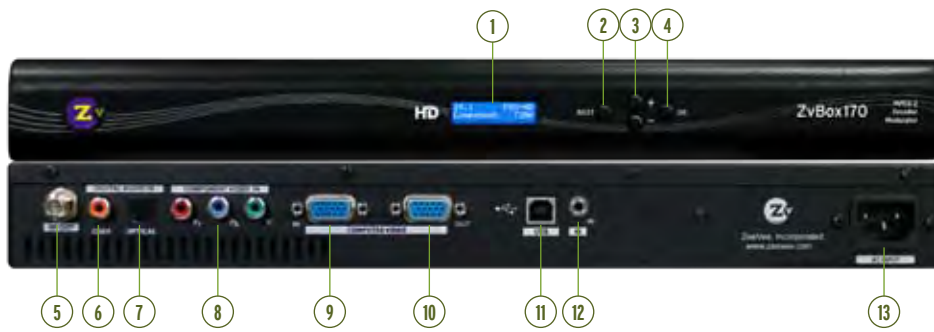## MPEG2 ENCODER/ QAM MODULATOR

**Convert your HD or VGA source into an HDTV channel
for broadcast over coax to an unlimited number of displays**

What makes this so revolutionary?

Based on the same technology used by TV stations and cable companies, ZvBox® 170 makes it affordable to convert your VGA or HD video into an HDTV channel and broadcast it over simple to use COAX wiring to every on-premise HDTV. Its standard QAM cable channel output can be received by practically any off-the-shelf digital cable-ready HDTV without requiring an additional box at the TV.

- **Front panel configuration** – Control buttons and display make ZvBox® 170 easy to set up, without a PC.

- **Works with any Digital Signage or HD video source** – simply connect any Digital Signage Player, Computer, DVD player, Satellite Receiver, Set Top Box or any other device with a VGA or Component HD video output.

- **Multiple channels** – ZvBoxes® are frequency agile, and can be combined to distribute up to 135 HD channels on-premise, all on a single, easy to deploy COAX cable.

- **No matrix switchers or proprietary wiring required** – switching between different content sources is as easy as tuning to a different channel at the HDTV.

- **COAX wiring** – easily integrate and balance into new or existing MATV/SMATV RF distribution systems to add an HD tier of video feeds.

- **Built to last** – steel enclosure, rack mounting, integral power supply, internal fan, and one year warranty.

1. STATUS DISPLAY	8. COMPONENT
2. NEXT BUTTON	9. VGA INPUT
3. +/- SCROLL BUTTONS	10. VGA OUTPUT
4. OK BUTTON	11. USB AUDIO/CONTROL
5. COAX CABLE OUTPUT	12. IR CONTROL
6. DIGITAL AUDIO INPUT (COAX)	13. AC INPUT
7. DIGITAL AUDIO INPUT (OPTICAL)	

ZvBox® 170 Specifications

Video Input

Component Video (Y, Pr, Pb)
RCA connectors, 75 Ohm 0 to 0.7v
Buffered and looped
Resolutions supported:
720p60, 480p, 480i
59.94 frames / fields per second

Computer VGA (Analog)
HD-15 connector
75 Ohm RGB 0 to 0.7V
Separate H and V sync
Buffered and looped
Resolutions supported:
640x480, 720x480, 800x600, 1024x768,
1152x864, 1176x664, 1280x720, 1280x768,
1280x800, 1280x960, 1280x1024, 1360x768,
1440x900 at 60,70,72,75, 85 Hz
1680x1050 at 60 Hz
VGA resolutions are broadcast centered in the
best vertical fit into 1920x1080 or 1280x720 at
59.94 frames per second

Audio Input

SPDIF Digital Audio
Physical Connections
• TOSLINK optical
• RCA 75 ohm coaxial
• USB as PCM audio device
Formats
48k, 44.1k, 32k bit PCM
AC-3 Pass-through
Assignment
Audio inputs can be assigned to either video input

Video Encoder

Encoder Video Profile
MPEG2 HD Profile 2: ISO13818-2 MP@HL
(1920x1080 or 1280x720)
Traffic Shaping – Variable Bit Rate
Video Transport Bit Rate
38.81 Mbps in QAM 256
26.97 Mbps in QAM 64

Video Encoding Data Rates
Variable, 7 Mbs – 30 Mbs
Average Encoding Data Rate – 25 Mbps
Encoding Latency – Less than 100msec
Color Profile – 4:2:0
GOP Size – 16
Intra DC Precision – 8 to 11 bit, programmable
Video, Audio PID – Programmable
Program Information – Programmable
Content Watermarking – Digital and Visual

Audio Encoder

Encoder Audio Profile
ATSC A/52
Digital Pass-through
Dolby Digital® (AC-3) 1 to 5.1 channels

RF Spectrum Analysis

**Automated spectrum scanning and reporting
across all channels:**
Analog, Digital or Open channel
STD / HRC / IRC cable plan detection

Modulator / Upconverter

Modulation Types
QAM 256, QAM 64 (ITU-T J83 Annex B)
Interleaving modes: (64,2) only
Cable Standard – HRC, IRC or STD
Frequency Range
50 – 900 MHz (channels 2-141)
2 kHz resolution
+/- 30 ppm accuracy
+/- 35 ppm stability
Output Power – +25 dBmV typical
Output Level Adjust
0 – 20 dB of attenuation in 5dB steps
MER 34 dB typical
I/Q Amplitude Imbalance < 1% typical
Amplitude Flatness +/- 1dB over 6 MHz typical

Control/Setup

Front Panel Configuration
PC Software via USB
Input Switching
Front Panel, IR, or USB

General

Power – 100VAC to 240VAC, 50/60 Hz, 25 Watts
Cooling – Internal fan, side / back flow
Mounting
Detachable rack-mounting ears
Rubber feet for counter or shelf
Enclosure Type – Metal
Enclosure Dimensions
1.7″ H x 14.8″ W x 4.9″ D
4.32 cm H x 37.6 cm W x 12.45 cm D
Carton Dimensions
5.125″ H x 18″ W x 9.75″ D
13.0 cm H x 45.7 cm W x 24.77 cm D
Shipping Weight – 5.07 lbs (2.3 kg)
Operating Temperature
+32° to +113°F (0° to +45°C)
Humidity – 10% to 80%, non-condensing
Vibration – NSTA 1A in carton
MTBF – 30,000 hours
Compliance
Safety UL60065
FCC Class B
Part Number ZP170-NA
Model Name ZvBox 170
Warranty 1 year plus 1 additional year
with registration

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