ZeeVee encoder/modulators convert video sources such as satellite receivers and media players into digital cable channels that can be broadcast over existing coaxial cabling to an unlimited number of HDTVs. By utilizing the HDTV’s built in tuner, ZeeVee modulators completely replace the need for matrix switches, home run wiring and any devices at individual TVs.

**ZvPro® 280**

**Combo HD MPEG2 Encoder / QAM Modulator**

1080p / 1080i / 720p / 480p / 480i

### VIDEO INPUT

**Component Video (Y, Pr, Pb)**
- RCA connectors, 75 Ohm 0 to 0.7v
- Buffered and looped
- Resolutions Supported: 1080p, 1080i, 720p, 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, 1280x1024, 1360x768, 1440x900 at 60 Hz, 72, 75, 85 Hz, 1680x1050 and 1920x1080 at 60 Hz
- VGA resolutions are broadcast centered in the best vertical fit into 1920x1080p30 or 1280x720p60.

### AUDIO INPUT

**SPDIF Digital Audio**
- Physical Connections: TOSLINK optical, buffered and looped
- RCA 75 ohm, buffered and looped
- USB as PCM audio device
- Formats: 48K bit PCM
- AC-3 Pass-through

**Analogue**
- R/L via RCA, buffered and looped 16-bit 48K bit sampling

**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**
- 38.78 Mbps

**Video Encoding Data Rates**
- Variable, 7 Mbs – 38 Mbs

**Average Encoding Data Rate**
- 35 Mbps

**Encoding Latency**
- Programmable 100 msec to 400 msec

**Color Profile**
- 4:02:00

**GOP Size**
- 24

**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

## RF SPECTRUM ANALYSIS

Automated spectrum scanning and reporting across all channels

Detects Analog, Digital or Empty channels. Also detects STD/HRC/IRC cable plans

## MODULATOR/UPCONVERTER

### Modulation Types

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

### Cable Standard

HRC, IRC or STD

### Frequency Range

50 – 850 MHz (channels 2-135)

2 kHz resolution

+/- 30 ppm accuracy

+/- 35 ppm stability

### Output Power

+25 dBmV typical

### Output Level Adjust

5 – 25 dBmV in 1dBmV steps

### MER

36 dB typical

### I/Q Amplitude Imbalance

< 1% typical

### Amplitude Flatness

+/- 1dB over 6 MHz typical

## CONTROL/SETUP

Powerful command line interface

RS-232 or USB / Parameters saved in NV storage

### Input Switching

IR, RS-232, USB or Front Panel

### RS-232 Port

9,600 baud / 8 bits, 1 stop bit, no parity / hw/sw flow control supported

## GENERAL

### Power

100VAC to 240VAC, 50/60 Hz, 25 Watts

### Cooling

Internal fan, front/back flow

### Mounting

Detachable rack-mounting ears / Rubber feet for counter or shelf

### Enclosure Type

Metal

### Enclosure Dimensions

1.72” H x 17.0” W x 5.75” D / 4.37 cm H x 43.18 cm W x 14.61 cm D

### Carton Dimensions (individual)

5” H x 21”W x 10” D / 12.7 cm H x 53.34 cm W x 25.4 cm D

### Shipping Weight

5.5 lbs (12.13 kg)

### Temperature/Humidity

Operating: +32F to +113F (0C to +45C) / 10% to 80%, non-condensing

### Vibration

NSTA 1A in carton

### MTBF

30,000 hours

### Compliance

Safety UL60065

FCC Class B

### Part number

ZP280-NA

### Model name

ZvPro 280

### Warranty

3 years

For more details and sales information, visit www.zeevee.com or call +(1) 347-851-7364