HD Video and Digital Signage Over Coax
With Simultaneous Video-over-IP Streaming

**Superior Video Quality**
- Simultaneous QAM/IP stream output with no compromise in performance
- 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 thermal control
- 5 Year Warranty

**Extensible Architecture**
- Easy downloadable firmware updates
- Future enhancements provided regularly
- Emergency Alert System (EAS)
- ZvShow bonus information channel with extended play capability via SD card input suitable for continuous looped messages

**Ease of Management**
- Powerful, highly intuitive web interface for instrumentation and control
- On-site or remote management
- Front Panel Display for on-site status and management at a glance
- Robust features like set-top-box control and delay-matched audio

**Flexible Simultaneous QAM/IP Deployment**

**Simple Installation**
**Easy Setup**
**Quick Rollout**
*It’s Done.*
**ZvPro600i-NA**
HD Digital Encoder / Modulator

**GENERAL**

<table>
<thead>
<tr>
<th>Model Names</th>
<th>ZvPro600 I-Series ZvPro620i</th>
<th>ZvPro610i</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part Numbers</td>
<td>ZvPro620i-NA</td>
<td>ZvPro610i-NA</td>
</tr>
<tr>
<td>Power</td>
<td>100-240 VAC 50/60 Hz, 60W max.</td>
<td>30W Typical IEC 60320-C14</td>
</tr>
<tr>
<td>Cooling</td>
<td>Internal cooling fan, front inlet, rear exhaust</td>
<td></td>
</tr>
<tr>
<td>Temperature/Humidity</td>
<td>Operating +32°F to +113°F (0°C to +45°C) / 10% to 80%, non-condensing</td>
<td></td>
</tr>
<tr>
<td>Vibration</td>
<td>NISTA 1A in carton</td>
<td></td>
</tr>
<tr>
<td>MTBF</td>
<td>62,000 hours</td>
<td></td>
</tr>
<tr>
<td>Compliance</td>
<td>FCC Class A, IEC60065, EN61000 (see manual 70-00031-00), CE, RoHS, RCM C-Tick</td>
<td></td>
</tr>
<tr>
<td>Enclosure Type</td>
<td>Metal</td>
<td></td>
</tr>
<tr>
<td>Mounting</td>
<td>Shelf mount flange or rack ears (ordered separately), 1RU high</td>
<td></td>
</tr>
<tr>
<td>Enclosure Dimensions</td>
<td>8 in. (H) x 10 in. (W) x 1.75 in. (H)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>20.32 cm (H) x 25.4 cm (W) x 4.445 cm (H)</td>
<td></td>
</tr>
<tr>
<td>System Weight</td>
<td>3.1 lbs. (1.4 kg)</td>
<td></td>
</tr>
<tr>
<td>Carton Dimensions (individual)</td>
<td>2.75 in. (H) 14 in. (W) 12 in. (D)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6.985 cm (H) 35.56 cm (W) x 30.48 cm (D)</td>
<td></td>
</tr>
<tr>
<td>Shipping Weight</td>
<td>5 lbs. (2.3 kg)</td>
<td></td>
</tr>
<tr>
<td>Warranty</td>
<td>5 years</td>
<td></td>
</tr>
</tbody>
</table>

**VIDEO INPUT**

- Component Video x2 or x1: DIN connector HDbridge end, RCA connectors for HD source up to 1080
- Computer VGA (Analog) x2 or x1: HD-15 connector, 75 Ohm RGB 0 to 0.7V, separate H and V sync
- VGA Resolutions Supported: 640x480, 720x480, 800x600, 1024x768, 1152x864, 1176x864, 1280x720, 1280x768, 1280x800, 1280x960, 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
- Closed Caption: EIA/CEA-608 captions accepted over composite video input
- ZvShow: 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 connector or digital SPDIF audio input, 3.5 mm digital connector with VGA

**VIDEO ENCODER**

- Encoder Video Profile: MPEG2 HD: ISO13818-2 MainProfile@HighLevel
- Traffic Shaping: Variable Bit 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) interlaving modes: (84,2) only
- Cable Standard: HRC, IRC or STD
- Frequency Range: Up to 2 paired, frequency-agile QAM RF CATV channels 2-135
  - 2 kHz resolution
  - +/- 30 ppm accuracy
  - +/- 35 ppm stability
- Output Power: +45 dBmV typical
- Output Level Adjust: 25 - 45 dBmV in 1dBmV steps
- MER: > 38 dB typical
- I/Q Amplitude Imbalance: < 1% typical
- Spectral Tilt: </= 1 dB over 6 MHz typical

**IP STREAM OUTPUT**

- RJ45 10/100Mb Ethernet connection
  - Up to 2 SPTS, one for each encoded video stream
  - UDP unicast or multicast, IPv4
  - User programmable destination address / port

**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
  - Telnet connection for CLI scripting
  - Read firmware updates
  - All settings saved in NV storage

- Front Panel Color Display: Quickly obtain status at a glance, basic configurations, firmware revisions and updates