ZvPro600i-NA
HD Digital Encoder / Modulator

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)

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.
### GENERAL

<table>
<thead>
<tr>
<th>Model Names</th>
<th>ZvPro600i-Series</th>
<th>ZvPro620i</th>
<th>ZvPro610i</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part Numbers</td>
<td>ZvPro620i-NA</td>
<td>ZvPro610i-NA</td>
<td></td>
</tr>
<tr>
<td>Power</td>
<td>100-240 V AC 50/60 Hz, 600 max, 50W typical</td>
<td>ZvPro620i-NA, ZvPro610i-NA</td>
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</tr>
<tr>
<td>Cooling</td>
<td>Internal cooling fan, front inlet, rear exhaust</td>
<td></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>
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<tr>
<td>Vibration</td>
<td>NEMA 1A on cabinet</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MTBF</td>
<td>62,000 hours</td>
<td></td>
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<tr>
<td>Compliance</td>
<td>FCC Class A, IEC60665, EN61000 (see manual 70-00031-00), CE, RoHS, RCM C-Tick</td>
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</tr>
<tr>
<td>Enclosure Type</td>
<td>Metal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mounting</td>
<td>Shelf mount flange or rack ears (ordered separately), 1100 high</td>
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<tr>
<td>Enclosure Dimensions</td>
<td>8 in. (H) x 10 in. (W) x 1.75 in. (H)</td>
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<tr>
<td>System Weight</td>
<td>3.1 lbs. (1.4 kg)</td>
<td></td>
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<tr>
<td>Shipping Weight</td>
<td>5 lbs. (2.3 kg)</td>
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<tr>
<td>Warranty</td>
<td>5 years</td>
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</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, 1280x720, 1160x1080, 1360x768, 1440x900 at 60 Hz
  - 720x480, 1080x720, 1280x768, 1280x960, 1280x1024, 1920x1080
  - 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

### 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 pigtail 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 Mbps - 24 Mbps per channel
- **Average Encoding Data Rate**
  - 18 Mbps per channel
- **Encoding Latency**
  - Programmable 750 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 7 paired, frequency agile BAND RF CATV channels 5-135
    - 2 kHz resolution
    - +/- 30 ppm accuracy
    - +/- 2 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 error 6 MHz typical

### IP STREAM OUTPUT

- **Stream Details**
  - RJ-45 10/100/1000 Ethernet connection
    - By 2 IP's, 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
    - IPv 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

### Front Panel Color Display

- Quickly obtain status at a glance, basic configurations, firmware revisions and updates