

# HDC-1861 HD Downconverter and DA with analog monitoring



The HDC-1861 is an HD downconverter as well as a distribution amplifier, with an analog monitoring output. The HDC series cards are dual rate for hybrid HD/SD facilities. The DA section provides up to 4 HD re-clocked outputs, and the HD downconverter supports multiple formats of signals,

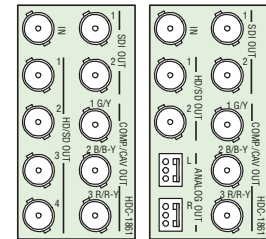
such as 1080i, 720p, 23.98 psf. All Metadata (TC, CC) and audio (2 groups) are processed in HD and SD. When SD is set at the input, the card offers ARC functionality with five presets. The SDI output can add on screen display of Time Code, input format as well as graticules and markers.

## Key Features and Benefits

- HD/SD dual rate auto-detect input with up to 4 re-clocked outputs
- Up to 2 SDI down-converted/ARC outputs
- 12-Bit D to A conversion for the analog video outputs
- 3 Composite, RGB or Y, B-Y, R-Y analog outputs format
- Two analog audio channels
- HD 10-bit downconverter processing
- SD 10-bit ARC processing with 5 presets
- Time Code processing and delay
- Selectable OSD for input format and SD output Time Code
- Selectable Graticules and Markers insertion
- Audio de-embedding/embedding of 2 groups in HD to SD (option)
- VBI by-pass in SD to SD mode
- Thumbnails and audio level meters (ALM) (With audio option)
- Signal presence detection and remote reporting
- Provides output to Monitoring Switching Bridge option (MSB-1121)

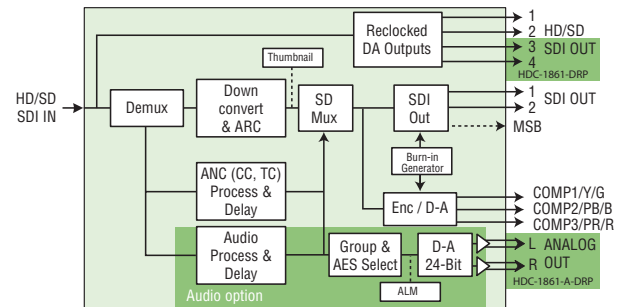


Card streams video thumbnail and ALM via IP



HDC-1861-DRP

HDC-1861-A-DRP



HDC-1861 Functional Block Diagram

## Technical Specifications

<p><b>INPUT</b></p> <p><b>SIGNAL:</b> SMPTE 292M (1.485, 1.485/1.001 Gbps) SMPTE 259M (143, 177, 270 and 360 Mbps)</p> <p><b>INPUT FORMATS</b> 1080i 59.94, 50, 23.98psf, 25psf 720p 59.94, 50</p> <p><b>CABLE LENGTH:</b></p> <p><b>HD:</b> 110 m (350') for Belden 1694A</p> <p><b>SD:</b> 250 m (850')</p> <p><b>RETURN LOSS:</b> &gt; 15 dB up to 1.5 GHz</p> <p><b>DA OUTPUTS (4)</b></p> <p><b>SIGNAL:</b> SMPTE 292M (1.485, 1.485/1.001 Gbps) SMPTE 259M (143, 177, 270 and 360 Mbps)</p> <p><b>RETURN LOSS:</b> &gt; 15 dB up to 1.5 GHz</p> <p><b>ADDED JITTER:</b> &lt; 0.2 UI p-p (wideband)</p> <p><b>PROCESSING PERFORMANCE:</b></p> <p><b>SIGNAL PATH:</b> 10 bits</p> <p><b>PROCESSING DELAY:</b> &lt; 6 ns</p>	<p><b>SDI OUTPUTS</b></p> <p><b>SIGNAL (2):</b> SMPTE 259M-C (270 Mbps)</p> <p><b>RETURN LOSS:</b> &gt; 15 dB up to 270 MHz</p> <p><b>ADDED JITTER:</b> &lt; 0.2 UI p-p (wideband)</p> <p><b>ANALOG VIDEO OUTPUT MONITORING</b></p> <p><b>SIGNAL (2):</b> NTSC (525/60) SMPTE 170M PAL (625/50) ITU 624-4 G/Y, B/B-Y, R/R-Y</p> <p><b>RETURN LOSS:</b> &gt; 35 dB up to 5.75 MHz</p> <p><b>AUDIO OUTPUT MONITORING</b></p> <p><b>ANALOG SIGNAL:</b> Balanced analog stereo audio</p> <p><b>IMPEDANCE:</b> &lt; 55 Ω</p> <p><b>MAX LEVEL:</b> + 24 dBu</p> <p><b>DIGITAL VIDEO PROCESSING PERFORMANCE</b></p> <p><b>SIGNAL PATH:</b> 10 bits</p> <p><b>PROCESSING DELAY:</b></p> <p><b>HD INPUT TO HD</b></p> <p><b>SDI OUTPUT:</b> &lt; 2μS</p>	<p><b>HD INPUT TO SD SDI OUTPUTS:</b></p> <ul style="list-style-type: none"> <li>• Frame rate of 59.94Hz 34ms</li> <li>• Frame rate of 50Hz 41ms</li> <li>• Frame rate of 23.98Hz 83ms</li> </ul> <p><b>ANALOG VIDEO PROCESSING PERFORMANCE</b></p> <p><b>QUANTIZATION:</b> 10 bits</p> <p><b>DACS:</b> 12 bits</p> <p><b>SAMPLING:</b> 108 MHz (8X over sampling)</p> <p><b>TIME CODE:</b> VITC, ATC</p> <p><b>FREQUENCY RESPONSE:</b> ± 0.15 dB to 5.0 MHz</p> <p><b>NOISE:</b> &lt; -60 dB to 5.75 MHz (unweighted)</p> <p><b>VBI:</b> Passed</p> <p><b>ANALOG AUDIO PROCESSING PERFORMANCE</b></p> <p><b>QUANTIZATION:</b> 20-24 bits</p> <p><b>SAMPLING:</b> 48 kHz</p> <p><b>FREQUENCY RESPONSE:</b> ± 0.2dB (20 Hz to 20 kHz)</p> <p><b>SNR:</b> 90 dB (a weighted)</p> <p><b>POWER:</b> 10 W</p>
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## Ordering Information

HDC-1861	HD Downconverter & Distribution Amplifier with Analog Output	HDC-1861-OPT-LS	Line Scope Option for HDC-1861
Rear Panels:		Housing Frame:	Densité, Densité 2
HDC-1861-DRP	Double Rear Connector Panel	Remote Control:	
HDC-1861-A-DRP	Double Rear Connector Panel with Audio Output	iControl	Remote Control and Monitoring
Option:		iControl Solo	Stand-alone Remote Control Software
HDC-1861-OPT-AUD	Optional Audio (Embed & Analog Outputs)	RCP-100	Remote Control Panel

