VC-1 Series
VIDEO CONVERTERS

Lossless 3G-SDI and HDMI Conversion

HDMI to SDI
VC-1-HS

SDI to HDMI
VC-1-SH

FS Delay
VC-1-DL
Lossless conversion in the palm of your hand.
Awarding-winning multi-format conversion technology concentrated in a simplified mini-converter.

Uncompromising commitment to picture quality.
The VC-1 series faithfully converts the original source with no change in color or brightness. It supports super-blacks and super-whites, and converts video from cameras and other source devices with all the originality intact.

Faithful reproduction of video characteristics.
The VC-1 series reproduces the video characteristics of the original source with no interlace artifacts, pixel shifting, or other conversion problems or signal errors. Jitter and return loss are at exceptional levels as well.

Support for 1080p 3G-SDI.
Video signals beyond 1080i can be input and output. The VC-1 series supports both level A and level B 3G-SDI, letting you connect a wide variety of 3G-SDI equipment. 1080i, 720p, and SD signals are accommodated automatically on connection.

Uncompromising commitment to picture quality.
The VC-1 series faithfully converts the original source with no change in color or brightness. It supports super-blacks and super-whites, and converts video from cameras and other source devices with all the originality intact.

On-board reclocker.
The VC-1 series features an on-board reclocker to compensate for attenuation of SDI signals carried over long distances. This makes it possible to receive camera-relay video while maintaining a high image quality.

Faithful reproduction of video characteristics.
The VC-1 series reproduces the video characteristics of the original source with no interlace artifacts, pixel shifting, or other conversion problems or signal errors. Jitter and return loss are at exceptional levels as well.

Support for 1080p 3G-SDI.
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High quality and rugged construction for the rigors of front-line use.

High quality, smart design.

The exterior plating is aluminum at 2 millimeters thick. The connectors laid out inside the exterior plates are fastened to the chassis with nuts and bolts. This makes for a heavy-duty specification that can keep the connectors from coming loose even with frequent cable changes, as well as withstanding impact and drops. Every connector has an LED input indicator enabling you to confirm the status of signal transmission at a glance. The series is built for uncompromising reliability that includes accurate operation even over long periods of continuous use thanks to a design featuring exceptional heat-radiating efficiency.

Support for workflow combining audio and video.

Audio embedding and de-embedding features are provided (channel-selectable) in the VC-1 Series. The audio embedding feature lets you place audio signals from a different source into the video output. For example, when converting an SDI signal to HDMI, you can use the audio embedding feature to output high-quality audio from any of the SDI audio channels. Digital (AES/EBU) input and output are also supported, letting you exchange sound between professional audio equipment with no degradaton in signal. Analog input and output is supported as well making it possible to both monitor and input audio to/from a wide variety of equipment such as an audio console.

Easy configuration with DIP switches or dedicated PC/Mac software app.

DIP switches make it simple to accommodate on-site requirements. Change the conversion direction or other settings by simply sliding a DIP switch on the side of the unit. Delay Dials (VC-1-DL only) set the amount of delay for video and audio. Set the amount of delay independently for video and audio in a range of 0 to 9 fields (0 to 4.5 frames). Connection to a computer via USB cable unlocks even greater versatility with advanced settings including a memory location to lock in a favorite configuration. Control and configure multiple VC-1 units at the same time using a USB hub.

Support for HDCP HDMI signals.

The VC-1 series is compliant with HDCP. For example, the VC-1-DL can take HDCP-applied HDMI input signals, apply frame synchronization or delay, and produce HDCP-applied HDMI output. This allows the VC-1 series to be used in any HDCP-based system with no worries.

* HDCP-applied HDMI signals cannot be converted to SDI and recorded to HDMI recorders and editors.

VC-1 RCS

* The VC-1 RCS for PC/Mac can be downloaded from www.rolandsystemsgroup.net.
**SDI to HDMI** VC-1-SH

Conversion of video and audio signals from SDI input to HDMI output

- SDI to HDMI Conversion
- Lossless image conversion
- 3G (Level A&B) / HD / SD SDI
- HDCP support
- Selectable Channel for Embedded/De-Embedded Audio

**HDMI to SDI** VC-1-HS

Conversion of video and audio signals from HDMI input to SDI output

- HDMI to SDI Conversion
- Lossless image conversion
- 3G (Level A&B) / HD / SD SDI
- HDCP support
- Selectable Channel for Embedded/De-Embedded Audio
FS Delay VC-1-DL

Bi-directional Conversion of video and audio signals from HDMI to SDI or SDI to HDMI with Frame Sync and Delay

- HDMI to SDI Conversion
- SDI to HDMI Conversion
- Lossless image conversion
- 3G (Level A&B) / HD/ SD SDI
- HDCP support
- Selectable Channel for Embedded / De-Embedded Audio
- Audio Delay - up to 9 fields (4.5 frames)
- Video Delay - up to 9 fields (4.5 frames)

Block Diagram

- SDI Input
- SDI Output
- Reference Input
- Audio Input
- USB Port

Audio Embed/De-Embed
Frame Sync Audio/Video Delay

HDMI IN
HDMI OUT

Audio IN
Audio OUT

SDI IN
SDI OUT

REF IN
Analog/AES3

Audio IN
Audio OUT

SDI OUT
Audio OUT

HDMI IN
HDMI OUT

VC-1 RCS for PC/Mac

Application for live video production

Synchronizing signal for asynchronous cameras

Application for event

Adjustment of timing among different displays

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## Specifications

### HD/SD-SDI to HDMI/VC-1-HS

<table>
<thead>
<tr>
<th>Input</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>SDI</td>
<td>HDMI</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Analog Audio</td>
<td>Digital Audio</td>
</tr>
<tr>
<td>Connector</td>
<td>Type A (19 pins) x 1</td>
</tr>
</tbody>
</table>

### HDMI to SDI/VC-1-SH

<table>
<thead>
<tr>
<th>Input</th>
<th>Output</th>
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</thead>
<tbody>
<tr>
<td>SDI</td>
<td>HDMI</td>
</tr>
<tr>
<td>Analog Audio</td>
<td>Digital Audio</td>
</tr>
<tr>
<td>Connector</td>
<td>Type A (19 pins) x 2</td>
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<tr>
<td></td>
<td></td>
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<tr>
<td>Video</td>
<td>Digital Audio</td>
</tr>
<tr>
<td>Format</td>
<td>Connector</td>
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</table>

### FS Delay: VC-1-DL

<table>
<thead>
<tr>
<th>Input</th>
<th>Output</th>
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<tbody>
<tr>
<td>SDI</td>
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</tr>
<tr>
<td>Analog Audio</td>
<td>Digital Audio</td>
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<tr>
<td>Connector</td>
<td>Type A (19 pins) x 1</td>
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</table>

## VC-1 Common Specifications

### Input / Output Format

<table>
<thead>
<tr>
<th>SDI Input</th>
<th>HDMI Input</th>
<th>SDI Output</th>
<th>HDMI Output</th>
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<tbody>
<tr>
<td>Video Format</td>
<td>Video Format</td>
<td>Video Format</td>
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<tr>
<td>Linear</td>
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<tr>
<td>PCI</td>
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</tr>
<tr>
<td>A-Frame</td>
<td>A-Frame</td>
<td>A-Frame</td>
<td>A-Frame</td>
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<tr>
<td>Audio Format</td>
<td>Audio Format</td>
<td>Audio Format</td>
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<tr>
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<tr>
<td>A-Frame</td>
<td>A-Frame</td>
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### Dimensions

<table>
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</thead>
<tbody>
<tr>
<td>142</td>
</tr>
</tbody>
</table>

## Related Items

- **VC-300HD**
  - Bi-Directional Multi-Format Converter with Built-in Audio Delay
- **VC-50HD**
  - Bi-directional video conversion between HD/SD-SDI and MPEG-2 TS/HDV/DV
- **VC-30HD**
  - Audio/Video Converter for Webstreaming and Capture/Archiving

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Roland Systems Group, a member of the worldwide group of Roland companies, is dedicated to the support of audio and video professionals demanding excellence in both performance and system design. Through the development and support of video and audio products, we endeavor to improve workflow and maximize creative possibilities.

Ensuring high quality while protecting the environment: Roland is ISO9001 and ISO14001 certified

At Roland, several group companies have obtained ISO9001 certification. In addition, in January 1999, Roland also received ISO14001 international environmental management system certification. We’re actively seeking ways to maintain harmony with the environment.

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