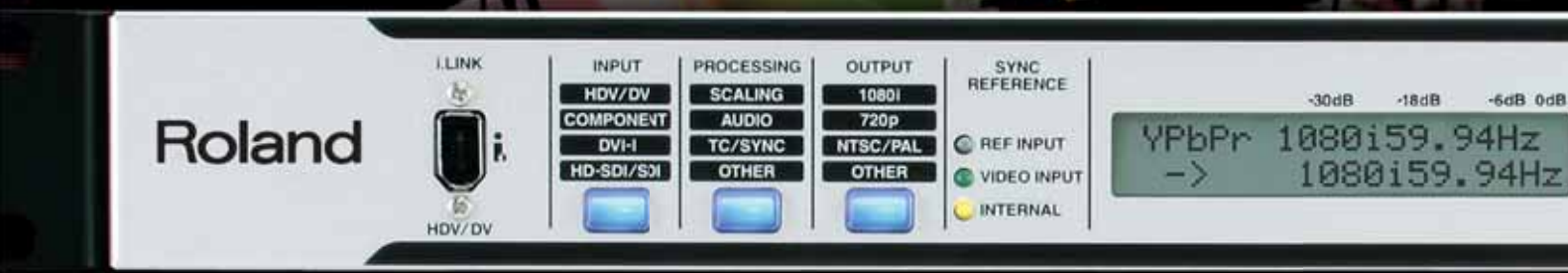
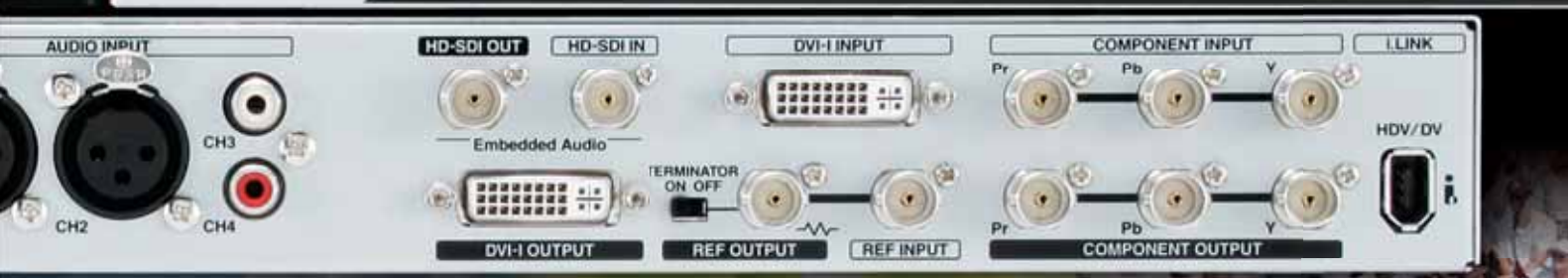
Roland

MULTI-FORMAT CONVERTER

VC-300HD/VC-200HD Ver.2

HD-SDI IN / OUT Built-in
Embedded Audio





Connect Every Piece of Your World

The VC series can convert a variety of source signals to the format you desire. The VC series of multi-format converters is designed for all stages of video production and a central piece of your production work flow.

MULTI FORMAT

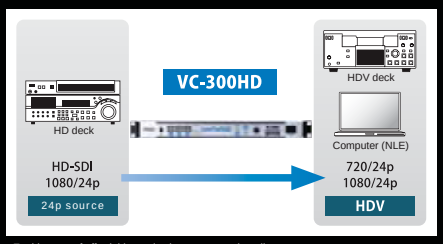
HDV DV RGB HD SD

NEW Version 2 Features

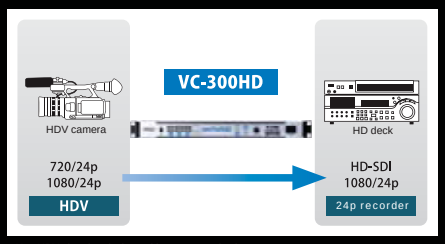
VC-300HD MULTI-FORMAT CONVERTER

Supports 24p Frame Rates

Cinema frame rates like 24p and 23.98p are now supported to enable conversion of footage shot with a variety of cameras.
* Supported frame rates vary depending on Input/Output terminals. Refer to the chart on the opposite side of this document.



Enables use of affordable production system and media.

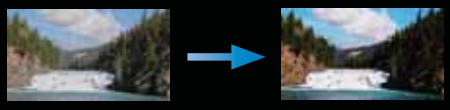


Use HDV shooting devices with current production systems.

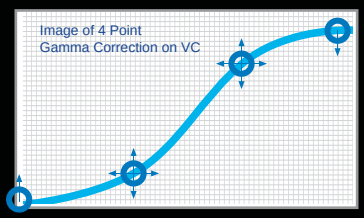
Improved Image Quality and Gamma Correction

4 Point Gamma Correction

The newly added 4 points Gamma Correct function enables adjustment of bright/dark parts independently. Enhances images to have a more film-like color.



Example of Gamma Correction



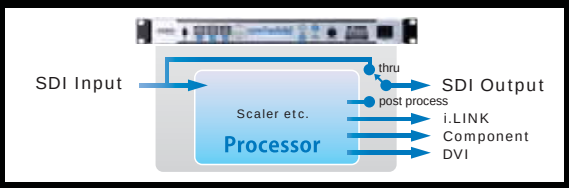
Improved Image Quality

Carefully optimized algorithm of the built-in scaler has resulted in further improvements in the image quality of the VC.
Highly accurate processing is achieved in all types of conversion - up, down and cross-conversion.

Additional Functions on Outputs

SDI thru output function (*)

You can select the SDI (HD/SD) output to be pre-processor or post-processor. This enables a monitor output or split output capability.
* VC-300HD only



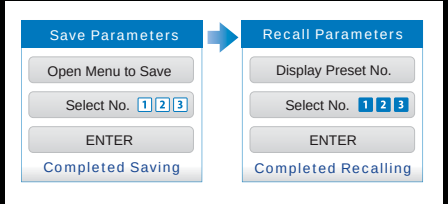
Copy Protection on i.LINK output

You can add CGMS-D (Copy Generation Management System - Digital) to the output signal. This enables limitation to copy of digital contents.

Newly Added Functions for Daily Operations

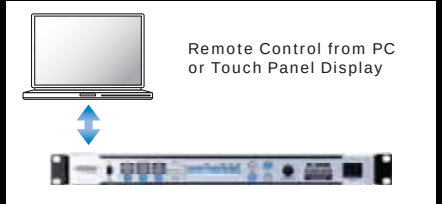
User Presets

Parameters like input signal, conversion or processing can be saved to an internal memory. Up to 3 presets can be saved and enables convenient recall.

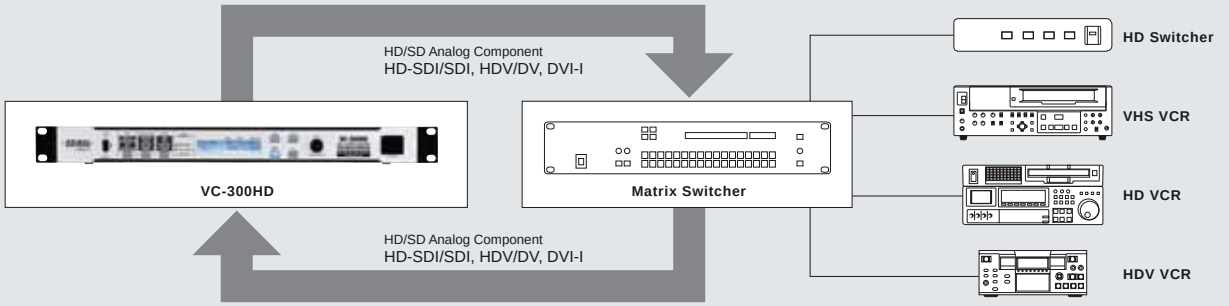


Remote Control

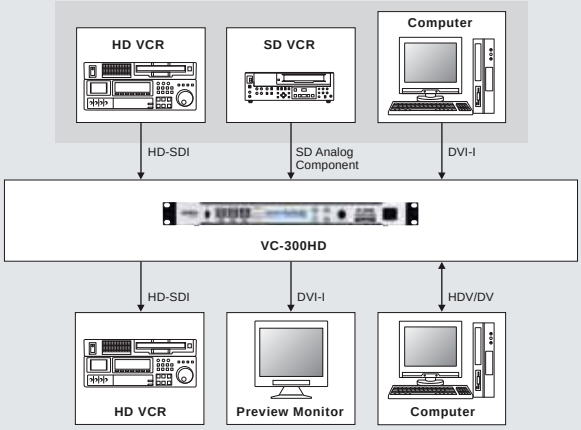
You can now remotely control parameter setup of the VC from external devices, like a PC and over a network, via RS-422A Remote Terminal. This can be also used for parameter data backup.



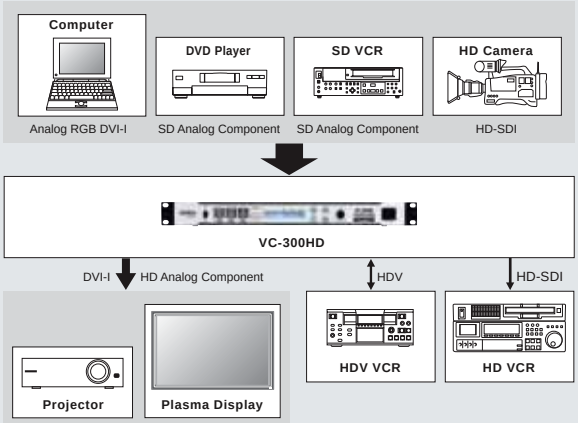
For video post-production workflow



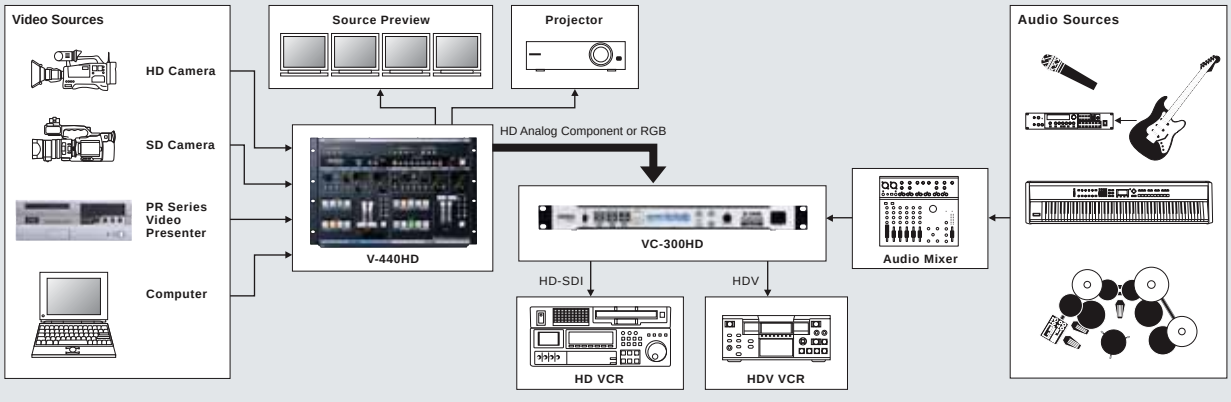
For non-linear video editing



For live presentations



For recording of live video and audio

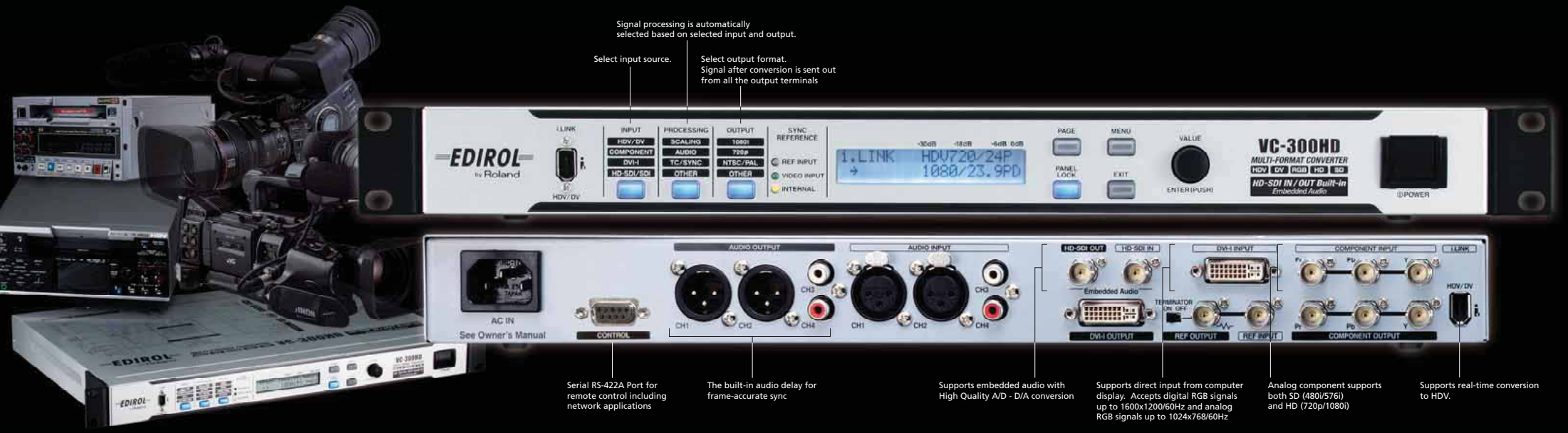


Affordable model for HDV/DV users

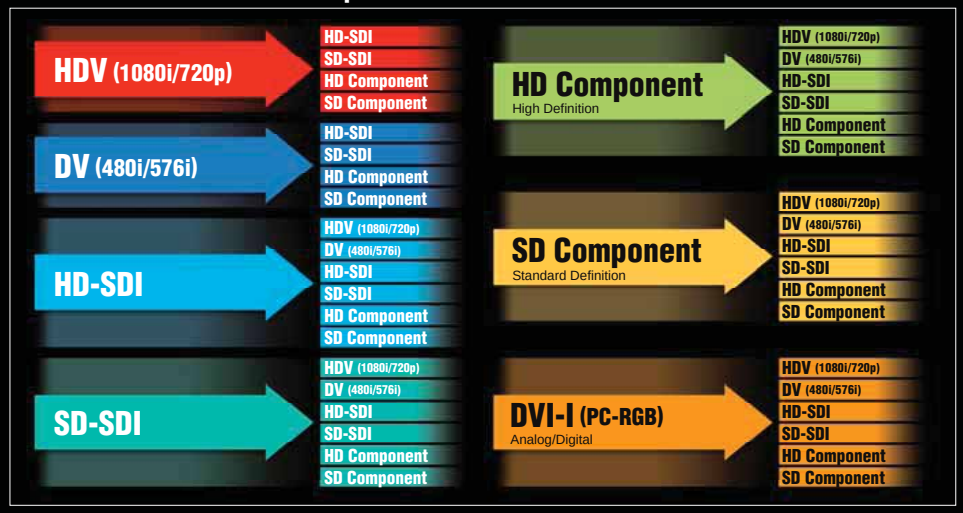
VC-200HD

MULTI-FORMAT CONVERTER

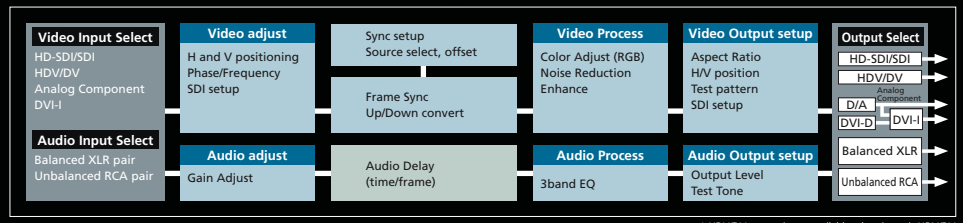
HDV DV RGB HD SD



Multi-format conversion options



Multiple video and audio processing functions



* HDV/DV output is not available when input is HDV/DV

Multi-format In/Multi-format Out

Designed for a wide range of workflows in mid, post and live video productions, the VC Series offers flexible format conversion of Digital/Analog, HD/SD or compressed/uncompressed signals. The VC series also accepts signals and direct connections from computer RGB sources. A wide variety of output devices like record decks, data projectors or plasma/LCD displays can be directly connected.

Designed for the Highest Quality Image

The VC Series uses high quality A/D and D/A converters for input and output along with internal 4:4:4 10 bit signal processing. From simple format conversion to MPEG encode/decode to complex frame rate conversions, the VC Series delivers professional results.

4:4:4 10bit Processing

Compatible with HDV devices

Compatible with wide variety of HDV cameras and VTR's from Sony, Canon and JVC, the VC Series offers a high quality processor for encoding and decoding HDV in real-time. EDIROL's audio technology also makes simultaneous processing of the audio signal possible.

HDV High Quality encode/decode

Auto format detection and simultaneous output from multiple terminals

The VC Series features automatic detection of the input source and simultaneous output of the converted signal to multiple terminals such as SDI, IEEE 1394, DVI and analog component. This enables the recording or display of a single source to multiple recording devices or displays.

Bi-directional Conversion and Scaling

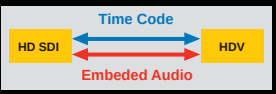
Bi-directional conversion of different formats like 59.94i, 50p etc. is possible with the VC Series. Multiple resolutions like 480i/p,720p or 1080i can be input/output along with NTSC/PAL conversion.

Gen lock with external devices

The input and output to and from the VC series can be gen-locked with external devices. The VC supports a variety of sync signals including analog BB, Bi-level (SD) or Tri-level (HD). The VC Series' built-in frame synchronizer helps to lock signals from consumer products or computers.

Time code and embedded audio

When performing HD-SDI/SDI <> HDV/DV conversion, the VC Series can pass the original time code and audio stream signals. The audio embedded in the HD-SDI or SDI signal can be separated and sent from the analog outputs. The VC Series can embed audio from the analog inputs to the HD-SDI/SDI or HDV/DV signal.



Audio Delay Function

Audio can be precisely delayed by millisecond or frames to compensate for the video delay caused by frame synchronizing or conversion processing. The Audio Delay function makes the perfect "lip sync" possible.

Video Input

IEEE1394 (i-LINK)	HDV	1080/59.94i, 1080/50i, 1080/30p, 1080/25p, 1080/24p, 720/59.94p, 720/50p, 720/30p, 720/25p, 720/24p
	DV	480/60p, 480/59.94i, 480/24p, 576/50p, 576/50i
Component	Y/Pb/Pr	1080/60i, 1080/59.94i, 1080/50i, 1080/24PsF, 1080/23.98PsF, 720/60p, 720/59.94p, 720/50p, 480/59.94i, 576/50p, 480/59.94i, 576/50i
DVI-I	Digital (RGB)	1600x1200/60Hz, 1400x1050/60/75Hz, 1366x768/60Hz, 1280x1024/60/75Hz, 1280x768/60Hz, 1280x960/60Hz, 1152x864/75Hz, 1024x768/60/75Hz, 800x600/60/75Hz, 640x480/60/75Hz, 1080/59.94p, 1080/50p, 1080/59.94i, 1080/50i, 720/59.95p, 720/50p
	Analog	1024x768/60Hz, 800x600/60/75Hz, 640x480/60/75Hz
SDI*	HD	1080/60i, 1080/59.94i, 1080/50i, 1080/30PsF, 1080/30p, 1080/29.97PsF, 1080/25PsF, 1080/25p, 1080/24PsF, 1080/24p, 1080/23.98PsF, 1080/23.98p, 720/60p, 720/59.94p, 720/50p, 720/29.97p, 720/25p, 720/24p, 720/23.98p Pulldown: 1080/24p (over 60i), 1080/23.98p (over 59.94i), 720/30p (over 60p), 720/29.97p (over 59.94i), 720/24p (over 60p), 720/24p (over 60i), 720/23.98p (over 59.94p), 720/23.98p (over 59.95i), 720/25p (over 50p)
	SD	480/59.94i, 576/50i Pulldown: 480/23.98p (over 59.94i)
Video Sampling Rate	SD	4:4:4 (Y/Cb/Cr), 10 bits, 13.5 MHz
	HD	4:4:4 (Y/Cb/Cr), 10 bits, 74.1758 MHz/74.25 MHz
	RGB	4:4:4 (R/G/B), 10 bits, 25 MHz to 90 MHz

Video Output

IEEE1394	HDV	1080/59.94i, 1080/50i, 1080/30p, 1080/25p, 1080/24F, 1080/24p, 720/59.94p, 720/50p
	DV	480/59.94i, 576/50i
Component	Y/Pb/Pr	1080/60p, 1080/60i, 1080/59.94p, 1080/50p, 1080/59.94i, 1080/50i, 1080/30PsF, 1080/29.97PsF, 1080/25PsF, 1080/24PsF, 1080/24p (over 60i), 1080/23.98PsF, 1080/23.98p (over 59.94i), 720/60p, 720/59.94p, 720/50p, 720/30p (over 60p), 720/29.97p (over 59.94p), 720/25p (over 50p), 720/24p (over 60p), 720/23.98p (over 59.94p), 480/59.94p, 576/50p, 480/59.94i, 576/50i
DVI-I	Digital (RGB)	1080i/59.94, 1080i/50, 720p/59.94, 720p/50, 480p/59.94, 576p/50, 480i/59.94, 576i/50)
	Analog(Y/Pb/Pr)	1080/59.94p, 1080/50p, 1080/59.94i, 1080/50i, 720/59.94p, 720/50p, 480/59.94p, 576/50p, 480/59.94i, 576/50i
SDI*	HD	1080/60i, 1080/59.94i, 1080/50i, 1080/30PsF, 1080/29.97PsF, 1080/25PsF, 1080/24PsF, 1080/24p (over 60i), 1080/23.98PsF, 1080/23.98 (over 59.94i), 720/60p, 720/59.94p, 720/50p, 720/30p (over 60p), 720/29.97p (over 59.94p), 720/25p (over 50p), 720/24p (over 60p), 720/23.98p (over 59.94p)
	SD	480/59.94i, 576/50i

Audio Input

IEEE1394	HDV	MPEG1 Layer II 16bit, 48Khz, 384kbps
	DV	Linear PCM 16bit 48kHz, Nonlinear PCM 12bit 32kHz(2ch)
Analog		Balanced XLR (ch1, ch2): +4dBu, -2dBu, -4dBu, -10 dBu (selectable), Unbalanced RCA (ch3, ch4): +0dBu, -6dBu, -8 dBu, -14 dBu (selectable), Audio Sampling Rate: 24 bit, 48kHz, 32 kHz
HD-SDI/SDI		Linear PCM 24bit 48kHz (Embedded Audio*)

Audio Output

IEEE1394	HDV	MPEG1 Layer II 16bit, 48Khz, 384kbps
	DV	Linear PCM 16bit, 48kHz, Nonlinear PCM 12bit 32kHz (2ch)
Analog		Balanced XLR (ch1, ch2): +4dBu, -2dBu, -4dBu, -10 dBu (selectable), Unbalanced RCA (ch3, ch4): +0dBu, -6dBu, -8 dBu, -14 dBu (selectable), Audio Sampling Rate: 24 bit, 48kHz, 32 kHz
HD-SDI/SDI		Linear PCM 24bit, 48kHz (Embedded Audio*)

Video/Audio Processing

Scaling		Scaling between the specfied input and output
Frame Sync		Frame Rate Conversion
I/P Conversion		De-interlace function built-in
Audio Processing		Delay: Adjustment by Millisecond or Frame, Sample Rate Conversion: from 32 to 48kHz etc.

Video Connectors

Component Input	BNC Type	HD/SD: Y/Pb/Pr (75 ohms), Bi-Level, Tri-Level Sync
DVI-I Input	DVI 29-pin single link	RGB (8 bit each), Digital RGB dot clock: 25-161MHz (VGA to UXGA), Analog RGB: R/G/B 0.7Vp-p, 75 ohms, H/V 5VTTL, RGB dot clock: 25-90MHz (VGA to XGA)
HD-SDI/SDI Input*	BNC Type	Supports embedded audio, Conforms to SMPTE259M, SMPTE272M, SMPTE292M, SMPTE299M
HDV/DV in/out	IEEE 1394 6-pin	Conforms to IEEE1394, HDV standards. Same connector on front and rear.
Component Output	BNC Type	HD/SD: Y/Pb/Pr (75 ohms), Bi-Level, Tri-Level Sync
DVI-I Output	DVI 29-pin single link	RGB (8 bit each), Digital RGB: same timing as analog component, Analog Component: Y/Pb/Pr (75 ohms)
HD-SDI/SDI Output*	BNC Type	Supports embedded audio, Conforms to SMPTE259M, SMPTE272M, SMPTE292M, SMPTE299M
Ref Input	BNC Type	Black Burst, Bi-Level, Tri-Level sync
Ref Output	BNC Type	Loop Thru Output

Audio Connectors

Input CH1, CH2	XLR Type	20 k ohms
Input CH3, CH4	RCA Phono	20 k ohms
Output CH1, CH2	XLR Type	600 ohms
Output CH3, CH4	RCA Phono	1 k ohms

Miscellaneous

Display		Character Type LCD: 20 characters, 2 lines (backlit LCD)
Power Supply		AC 117V, AC 230V, AC 240V (50/60Hz), AC 220 V (60Hz)
Power Consumption		60 W
Dimensions		482 (430 without rack mount bracket) (W) x 309 (D) x 44 (H) mm * EIA-1U Rack Mount Size 19 (16-15/16 without rack mount bracket) (W) x 12-3/16 (D) x 1-3/4 (H) inches
Accessories		Owner's Manual, Rubber Foot x 4, Power Cord

Items market with * refer to features available in the VC-300HD only.

In the Americas: www.rolandsystemsgroup.com/vc300hd
Worldwide: www.rolandsystemsgroup.net

Roland Systems Group

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