

# DVD-5910CI

# DENON

Newly Upgraded Flagship Universal Player from Denon is loaded with all of Denon's Best Technologies



## ■ Video Section

### • Latest I/P converter from Silicon Optix, Inc.

The DVD-5910CI uses the latest 10-bit I/P converter developed through a joint development effort that merged image processing algorithms of Silicon Optix, Inc., and Denon video technology on the foundation of an image processing device from Teranex, a manufacturer of video processing for broadcast use in the United States. This 10-bit processing offers high conversion performance and dramatically improves motion detection capability. Regularity in pixel-level patterns are rapidly and accurately detected not only in the 3:2 patterns of film sources but in other patterns as well during I/P (Interlaced/Progressive) conversion. Even when sources contain both Video mode and Film mode material, each mode is detected and processed accurately at high speed. Flicker caused by detection delays is avoided, and Progressive playback with high picture quality is possible from a variety of discs. In addition, Multi-Directional Diagonal Filter (MDDF) technology, used for the first time in the DVD-5910CI, which accurately detects and corrects the directionality of lines on a per-pixel level to avoid "jaggies" that easily appear when video sources are I/P converted, ensuring smooth picture playback.

### • Denon Pixel Image Correction, for more natural contour correction

The Denon Pixel Image Correction feature that incorporates original Denon enhancement technology and makes high-definition video correction possible, has been advanced to even greater heights in the DVD-5910CI. Denon Pixel Image Correction performs detection and correction through 10-bit processing to significantly improve contour correction. This new contour correction circuit uses enhancement processing technology that also considers the influence of pixels surrounding the target pixels. It uses new algorithms to sample and analyze a total of 9 pixels of video data around, and including, each target pixel. Video images are detected and processed in vertical, horizontal, and diagonal directions at a highly detailed per-pixel level to produce contours that are visually more natural. Luminance and chroma signals are also processed with the same algorithms to suppress ringing noise and other artifacts that easily occur during enhancement. By performing the type of processing that is most effective for the current video image, the picture is free of degradation and appears more natural.

### • High-performance DVDO video scaler capable of 1080p output for HDMI

The DVD-5910CI includes the latest high-performance video scaler, completed through joint development between Anchor Bay Technologies, Inc. (ABT), owner of the DVDO brand of advanced video technologies, and Denon. This high-precision 10-bit scaler works with HDMI and DVI digital video output signals. This scaler executes optimum conversion to suit the output to the independent HDMI and DVI transmitters. Users can enjoy the best picture quality for their particular applications. This newly-developed scaler can also simultaneously output the scaled digital video signals through HDMI and DVI (provided the resolution is the same).

### • Newly-developed Dual Discrete Video Circuit (DDVC)

The DVD-5910CI's video circuit features Denon's own DDVC technology designed to enhance the quality of video signals. The use of dedicated circuits – one independent block for composite and S-video signals, another block for component signals, and a dual DAC configuration with built-in video encoder – has made it possible to reproduce detailed video images with greater precision. In order to bring out the maximum quality from both video and audio signals, the DVD-5910CI has a discrete configuration in which the video, audio, and digital blocks that comprise this universal player are all completely isolated from each another in terms of their circuit configuration, boards, and power supplies. Denon engineers have used the expertise gained from their development of earlier universal players to design a configuration that thoroughly suppresses mutual interference among the circuits and prevents noise from affecting the video and audio signals.

### • High-speed, high-precision 14-bit 216-MHz video DAC

To ensure that high-grade video signals from the latest high-performance I/P converter are reproduced with utmost fidelity to the original images, the DVD-5910CI has an extremely fast and accurate 14-bit, 216-MHz video DAC. Oversampling of 8x for Progressive and 16x for Interlaced signals results in sharp, detailed pictures. Composite, S-video and component signals each have their own dedicated video DAC, a design that enhances the reproduction of low-level video signals and reproduces high-definition images that are faithful to the original. In addition, Noise Shaped Video (NSV) technology is used to improve the S/N of video signals and further boost their linearity.

### • Super Sub Alias Filter

The DVD-5910CI's Super Sub Alias Filter cuts signals of unwanted frequencies following D/A conversion. This filter produces flat characteristics, ensuring that adverse influences do not affect video signals inside the essential frequency band, sufficient cutoff characteristics are maintained and folding noise is eliminated.

### • Supports fine picture quality adjustments

Besides the DPIC feature, a total of 12 picture quality adjustments are possible, including contrast, sharpness, white level, chroma level, noise reduction settings, and gamma. Up to five combinations of settings can also be stored in memory, giving the user freedom to adjust picture quality in considerable detail according to individual preferences.

### • Simultaneous output through high-grade HDMI and DVI digital video interfaces

The DVD-5910CI supports the HDMI and DVI digital video interfaces, and simultaneous output through both is possible. The HDMI can be used to transmit digital component signals (Y, Cb, Cr) or RGB signals. Since digital transmission of multi-channel audio is also possible when audio is output through the HDMI (\*1), a single cable for the HDMI interface is sufficient for the digital transmission of both video and audio signals. The DVI-D allows the transmission of digital video signals in RGB format. Both interfaces support HDCP copyright protection technology (\*2) and can be connected to the digital inputs of high-definition monitors.

\*1) Version 1.1 compliant. HDMI audio output capacity is dependent on the monitor being used.

\*2) HDMI and DVI outputs are HDCP compliant. Video cannot be viewed if connected to a monitor that does not support HDCP; video can be viewed only on HDCP-compliant monitors.

# DVD-5910CI

- Simultaneous output possible for all video signals
- Supports PAL and NTSC
- THX Ultra certified

## ■ Audio Section

• **Advanced AL24 Processing, original DENON technology for high-quality audio**  
The DVD-5910CI employs Advanced AL24 Processing, the ultimate analog waveform reproduction technology developed by Denon, for use during PCM signal input (during stereo signal processing). In addition to the data expansion of existing AL24 Processing Plus technology, algorithms developed by Denon for use in large-capacity calculation processors such as DSPs and FPGAs are used to interpolate data along the time axis and up-converted sampling is used to achieve natural interpolation without losing original data. Greater optimization in digital filtering has also been achieved for ringing-free pulse response and for pulsive music data and attack sounds. This results in more natural reproduction of spatial information such as the delicate nuances in the music, the locations of the performers, and the breadth, height and depth of the concert hall. For multi-channel linear PCM audio playback, AL24 Processing Plus technology works to faithfully reproduce the original sound of recordings.

## • High-accuracy D/A converters for all channels

Two of the latest high-accuracy 24-bit, 192-kHz differential operation D/A converters have been dedicated to the two stereo channels, and three additional DACs are used for 5.1-channel playback, delivering significantly improved separation and superior S/N, dynamic range and other aspects of audio performance. Since highly accurate D/A conversion is achieved for all channels, the sonic result is refreshingly transparent. During 2-channel stereo playback, these D/A converters are used in monaural mode, operating as differential output converters independently dedicated to the left and right channels, to achieve high-quality playback of stereo signals.

- Audio output dedicated to high-quality 2-channel playback
- Pure Direct mode, for greater purity in the audio signal
- DENON Link 3rd, for high-grade audio transmission
- IEEE 1394 digital interface
- HDMI output, for multi-channel audio
- Designed for high sound quality
- Bass management function tailored for home theater environments

## ■ Construction

- Construction designed to thoroughly suppress vibration and mutual interference among circuit blocks

- Four-box layout to isolate circuits and minimize mutual interference  
- Thorough vibration-resistant construction

- DENON original high-accuracy drive mechanism

## ■ Other Features

- Supports playback of a wide variety of discs
- Playback frequency ranges of Super Audio CDs are switchable (50 kHz / 100 kHz)
- Independent bass management for analog audio output and HDMI audio signals
- Remote controller with backlight keys
- Wealth of output terminals

## Output Terminals For Every A/V System

### Video outputs

HDMI: 1  
DVI-D: 1  
Component: 2 sets (RCA, BNC)  
Composite: 2  
S-Video: 2

### Audio outputs

Optical digital: 1  
Coaxial digital: 1  
DENON Link: 1  
IEEE 1394: 2  
Analog (L/R): 1 set  
5.1-channel (FL/FR/C/SL/SR/SW): 1 set

## Specifications

### Video Section

#### Signal system

NTSC

#### Disc played

DVD Audio/Video, Music CD, SuperAudioCD, CD-R/RW(audio/MP3/WMA/JPEG), Video CD, DVD-R/RW(Video mode), DVD+R/RW/Picture CD

#### Video outputs

Composite Video Output  
1.0 Vp-p (with 75 ohms load)

#### S-Video Output

Y: 1.0 Vp-p (with 75 ohms load),  
C: 0.286 Vp-p

#### Component Video Output Y, Pb/Cb, Pr/Cr:

Y: 1.0 Vp-p (with 75 ohms load),  
Pb/Cb: 0.648 Vp-p (with 75 ohms load),  
Pr/Cr: 0.648 Vp-p (with 75 ohms load)

### Audio Section

#### Frequency response

##### DVD

2 Hz - 88 kHz (192 kHz sampling),  
2 Hz - 44 kHz (96 kHz sampling),  
2 Hz - 22 kHz (48 kHz sampling)

##### Super Audio CD

2 Hz - 100 kHz

##### CD, VCD

2 Hz - 20 kHz

#### Signal-to-noise ratio

125 dB

#### Dynamic range

112 dB

#### Total harmonic distortion

0.0008%

### General

#### Power supply

AC 120 V, 60 Hz

#### Power Consumption

80 W

#### Dimensions

17-3/32" x 6-11/16" x 17-1/64"  
434 (W) x 170 (H) x 432 (D) mm

#### Weight

41 lbs 14 oz, 19.0 kg



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Denon Electronics (USA), LLC.  
100 Corporate Drive Mahwah, New Jersey 07430 USA  
TEL: 201-762-6500 www.usa.denon.com

Denon Canada Inc.  
505 Apple Creek Blvd, Unit 5, Markham, Ontario, Canada L3R 5B1  
TEL: 905-475-4085 www.denon.ca

Denon Brand Company  
D&M Building, 2-1 Nishin-cho, Kawasaki-ku, Kawasaki-shi,  
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www.denon.com

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