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OPPO BDP-105EU Enhanced Universal Blu-ray Player

The OPPO BDP-105EU is designed from the ground up with components optimised for enhanced analogue audio performance. The BDP-105EU features an all-new analogue audio stage powered by two ESS Sabre^{32} Reference Digital-to-Analogue Converters (DAC), balanced (XLR) & unbalanced (RCA) dedicated stereo outputs, a Toroidal linear power supply, and asynchronous USB DAC input. These high-grade components are housed in a rigidly constructed metal chassis and work together to deliver exceptionally detailed and accurate audio quality, along with reference quality video.

New to this model are exciting features such as:

✔ 4k video up-scaling
✔ 2D to 3D video conversion
✔ Dual HDMI inputs allow external devices to take advantage of BDP-105EU video processing
✔ Coaxial and Optical digital inputs
✔ Asynchronous USB DAC input
✔ Headphone Amplifier – Connected directly to one of the dual Sabre^{32} Reference DAC's
✔ MHL compatibility allows direct connection of compatible smart phones to view video, pictures and access music
✔ BDP-105EU directly supports the Roku Streaming Stick via the front HDMI / MHL port
✔ A new dual-core System-on-Chip processor delivers quick start-up and fast disc loading speed
✔ Improved network streaming applications and an enriched media playback interface

Uniquely Better:

• **4K Up-scaling** - Enhance the home theatre experience with four times the resolution of Full HD 1080p by up-scaling all video sources to 4K (3840 x 2160) output resolution (4K capable display required).
• **2D to 3D Conversion** – Take your standard DVD, Blu-ray, and other video content to the next dimension by converting them into 3D with the simple press of a button. The BDP-105EU can also adjust the depth and eye convergence levels to suit your personal preference (3D display required).
• **Dual HDMI Inputs** – Connect external devices such as set-top boxes and network streaming devices to take further advantage of the excellent audio and video processing functions by the BDP-105EU. The BDP-105EU offers two HDMI inputs, one on the front and one on the back, and the front HDMI input doubles as an MHL input.
• **USB Asynchronous DAC** – By bypassing the low fidelity, poor quality DAC of traditional computer sound cards, the BDP-105EU turns any computer into a high performing multi-media source by converting digital audio to analogue through the ESS Sabre^{32} Reference DAC. If your computer can play it, the BDP-105EU can convert it to analogue.
• **Coaxial/Optical Inputs** – For additional convenience and flexibility, the BDP-105EU can convert digital signals from cable and satellite boxes, televisions, video-game consoles and other digital transports with coaxial and optical digital outputs to analogue.

- **DMP & DMR** - Digital Media Player (DMP) and Digital Media Renderer (DMR) features enable wired or wireless access of audio, picture, and video files stored on DLNA-compatible digital media servers such as a computer or network storage device (NAS).
- **SMB/CIFS Access** - The BDP-105EU comes with an experimental feature that can access video, audio and picture files shared by computers on the local network via the Server Message Block (SMB) or Common Internet File System (CIFS) protocol.
- **Headphone Amplifier** – For a more intimate listening experience, a pair of headphones can be connected directly to the BDP-105EU's built-in headphone amplifiers. The headphone amplifier is connected directly to one of the dual ESS Sabre[32] Reference DAC's and offers a unique performance advantage over standalone headphone amplifiers.
- **Rigid Chassis Construction** - Built around a steel chassis, aluminium faceplate, and centre-mounted disc loader, the BDP-105EU is designed to impress as well as to provide a stable base for the highest quality reproduction of your favourite media.
- **Fanless Architecture** – The BDP-105EU is passively cooled, allowing it to run both cool and quiet without the need for internal or external fans.

High Fidelity Audio Performance:

- **SABRE^{32} Reference Audio DAC** - The DAC is one of the most important components for digital audio playback. The SABRE^{32} Reference ES9018 from ESS Technology is the world's best performing 32-bit audio DAC solution targeted for high-end consumer applications and professional studio equipment. With the ESS patented 32-bit Hyperstream™ DAC architecture and Time Domain Jitter Eliminator, the SABRE^{32} Reference DAC delivers an unprecedented DNR (Dynamic Range) of up to 135dB and THD+N (Total Harmonic Distortion plus Noise) of -120dB, the industry's highest performance level that will satisfy even the most demanding audio enthusiast. The BDP-105EU uses two ES9018 DAC chips - one for the 7.1-channel output, and another for the dedicated stereo output. To learn more about the technologies behind the exceptional performance of the SABRE DAC, please read the SABRE Technical White Paper.
- **Toroidal Power Supply** - A toroidal power transformer offers superior power efficiency and much lower exterior magnetic fields over traditional laminated steel core transformers. The BDP-105EU's toroidal linear power supply provides a very clean and robust power source to the critical audio components.
- **Dedicated Stereo Output with XLR Balanced Connectors** - The BDP-105EU features a dedicated 2-channel analogue output with specially optimised ES9018 DAC and output driving stages. The stereo output offers both XLR balanced and RCA single-ended connectors. The balanced output features a true differential signal path all the way from the DAC to the 3-pin XLR connector. By transmitting a pair of differential signals, the balanced output provides better common-mode noise rejection and improves signal quality.
- **7.1-Channel Analogue Output** - Individual analogue 7.1-channel surround outputs are ideal for connecting to a 7.1-channel or 5.1-channel surround sound system. The BDP-105EU delivers an incredible sound stage and an immersive surround experience. The 7.1-channel analogue output can also be configured to a stereo down-mix mode as a Zone 2 audio source.
- **Dolby® TrueHD** - Dolby TrueHD delivers lossless studio master quality audio designed specifically for high definition entertainment. The BDP-105EU supports bit-stream output of Dolby TrueHD via its HDMI 1.4a output. It can also internally decode Dolby TrueHD into LPCM and output via HDMI or the 7.1ch analogue audio output terminals. Dolby Digital and Dolby Digital Plus audio formats are also supported.
- **DTS-HD Master Audio™** - DTS-HD Master Audio delivers an auditory experience that matches the lifelike images of high-definition video with up to 7.1 channels that are bit-for-bit identical to the studio master. The BDP-105EU supports bit-stream output of DTS-HD Master Audio. It can also internally decode DTS-HD Master Audio and output via HDMI or the 7.1ch analogue audio output terminals. (DTS-HD High Resolution Audio and DTS Digital Surround are also supported.)

Diversified Media Support:

- **Blu-ray Disc** - The high definition Blu-ray Disc™ format provides pristine video and audio quality for your home entertainment.
- **Blu-ray 3D** – Experience high definition in all new dimensions. The BDP-105EU supports the Blu-ray 3D specifications and is fully compatible with Blu-ray 3D discs (3D capable display required).
- **SACD** - The BDP-105EU plays Super Audio CD (SACD) and supports both stereo and multi-channel high resolution audio programs. Users can select whether to output the DSD (Direct Stream Digital) signal in its native format or convert it to PCM.
- **DVD-Audio** - The BDP-105EU plays DVD-Audio and supports both stereo and multi-channel high resolution audio programs. Users can select whether to play the DVD-Audio or the DVD-Video portion of the disc.
- **Netflix Instant Streaming** - Instantly watch TV shows & movies streaming from Netflix. Netflix "Just For Kids" is a special selection of kid-friendly TV episodes & movies for younger viewers. It is included with your Netflix unlimited streaming membership. Selected titles support features including 1080p video, 5.1ch audio, subtitles and alternative audio languages (Netflix not available in all countries. Please check local availability).
- **Comprehensive Internet Streaming** - In addition to Netflix, the BDP-105EU provides access to popular entertainment network services from YouTube Leanback and Picasa, with more to come.
- **BD-Live & BonusVIEW** - The BDP-105EU supports BD-Live™ (Profile 2.0) and contains all necessary hardware - audio/video decoder, Ethernet and wireless networking, and 1GB of internal storage - for BD-Live. It also supports BonusVIEW (Profile 1.1) enabling "picture-in-picture" and audio features for viewing director or actor commentary while the main movie is playing.
- **Additional Disc & Media Formats** - Additional disc and file formats, such as DVD, audio CD, HDCD, Kodak Picture CD, AVCHD, MP4, AVI, MKV and other audio/video/picture files on recorded discs or USB drives can be played back on the BDP-105EU. The BDP-105EU fully supports high-resolution lossless WAV and FLAC music formats (Compatibility with user-encoded contents or user-created discs is on a best-effort basis with no guarantee due to the variation of media, software and techniques used).

Unparalleled Video Quality:

- **Qdeo by Marvell** - The BDP-105EU incorporates Marvell's Kyoto-G2H video processor with the latest generation Qdeo™ technology. Qdeo video processing delivers a truly immersive viewing experience by rendering quiet natural video free of noise and artefacts for all types of content. For high-quality Blu-ray content, the BDP-105EU faithfully reproduces the program just as the director intended; for DVD, the up-converted picture quality bridges the visual gap from your current DVD library to Blu-ray discs; for network streaming and user-encoded content at a variety of formats and quality, the BDP-105EU offers enhancement options including video noise reduction, compression artefact reduction, intelligent colour, contrast, detail and edge enhancements. To learn more about the Qdeo video processing technology, please read the Qdeo Extended Technology Brief.
- **DVD Up-Conversion** - Per-pixel motion-adaptive de-interlacing and advanced scaling transform the standard definition image on DVDs to high definition output on your TV. Additional Qdeo video processing options help to deliver a clearer, smoother, and more true-to-life picture free of noise and artefacts.

Full HD 1080p Output - The BDP-105EU features user selectable video output resolutions, including 480i, 480p, 720p, 1080i, 1080p and 4K.

- **True 24p™ Video** - Many Blu-ray Discs are recorded at 24 frames per second, the same frame rate as the original movie's theatrical release. The BDP-105EU can faithfully redeliver the original frames using 1080p 24Hz output (compatible display required) for smoother motion and a flicker-free, film-like home theatre experience. It can also restore the original 24 frames per second progressive-scan video from well-authored DVDs and output 1080p 24Hz.

- **Source Direct Mode** - For users who wish to use an external video processor, the BDP-105EU offers a "Source Direct" mode. The original audio/video content on the discs is sent out with no additional processing or alteration.

- **Multiple Zoom Modes** - The BDP-105EU supports multiple levels of aspect ratio control and image zooming. Users can watch a movie in its original aspect ratio, fit to the full screen, or zoom in to remove the black bars on some titles.

- **Vertical Stretch Mode** - For customers with a 2.35:1 CIH (Constant Image Height) display system, the player's zoom options include a vertical stretch mode to work nicely with an anamorphic lens. A unique subtitle shift feature allows the user to move the subtitle up and down, making it possible to see all subtitle text when using a 2.35:1 CIH display.

- **Advanced Picture Control** - Users can have fine control of brightness, contrast, saturation, hue, sharpness, noise reduction, colour and contrast enhancements. The player can remember and apply three custom picture control modes to suit a variety of viewing conditions and content types.

Ultimate Convenience:

- **Dual HDMI Outputs** – Two HDMI v1.4a output ports are provided to offer the most versatile installation options to both older and newer HDMI equipment. You do not have to upgrade your A/V receiver to a 3D model in order to enjoy 3D. One HDMI output of the BDP-105EU can be connected to a 3D TV and the other can be connected to a pre-3D HDMI v1.1-v1.3 A/V receiver. For projector users, you can connect one output to a projector for home theatre use and the other to a TV for casual viewing. For a multi-room installation the BDP-105EU can output audio and video to two 3D or 2D TVs simultaneously.

- **MHL Input** – Simplify connecting smartphones, tablets and other mobile devices to the home theatre by using the MHL (Mobile High-Definition Link) input port of the BDP-105EU. Display high resolution pictures, 1080p video and listen to pure digital music all while simultaneously charging the connected mobile device. The front HDMI input port of the BDP-105EU doubles as an MHL input.

- **Wireless & Ethernet** – Using the included wireless-N adapter or the built-in RJ45 Ethernet port, users will be able to interact with BD-Live content, watch instant streaming programs from providers such as Netflix or YouTube, playback contents stored on their home network, and keep the BDP-105EU up-to-date with firmware releases to ensure maximum Blu-ray compatibility.

- **Triple USB Ports** - Three USB 2.0 high speed ports are provided, one on the front panel and two on the back. Users can enjoy high definition video, high resolution photos and music directly from their USB drives.

- **PAL/NTSC Conversion** - The BDP-105EU supports NTSC and PAL systems for both disc playback and video output. It can also convert content of one system for output in another. (Subject to DVD and BD region restrictions.)

- **Back-lit Remote Control** - The BDP-105EU comes with a fully back-lit remote control for ease of use in dark home theatres. With its ergonomic button layout and clear labelling, operating the Blu-ray Disc player is easier than ever.

- **World Power Supply** - The BDP-105EU features a world power supply that is compatible with AC power from all regions. Voltage range from 100V-120V and 200V-240V can be selected by flipping a switch on the back panel.

- **External IR** - For integration into home theatre control systems, the BDP-105EU provides an external IR IN port to use with an IR distribution system.

- **RS232 Control** - For custom installation, the BDP-105EU offers an RS232 control port with a rich control and communication protocol. Installers can easily program their favourite control systems to operate the BDP-105EU.

- **Remote Control Apps** – For additional user convenience, the BDP-105EU can be operated using remote control apps running on compatible smartphone and tablet devices. The remote control app for Android is already available. An app for Apple iOS devices is coming soon.

- **HDMI CEC** - HDMI Consumer Electronics Control simplifies the home theatre by allowing a single remote control to operate multiple devices.

- **Gracenote MusicID® and VideoID™** - By connecting to Gracenote's global media database over the Internet, the BDP-105EU can offer an enriched playback experience by displaying Cover Art, Title, Artist, Genre and other media information for CD, DVD, Blu-ray and a wide range of digital media files.

Design and specifications are subject to change without notice.

Disc Types*	BD-Video, Blu-ray 3D, DVD-Video, DVD-Audio, AVCHD, SACD, CD, HDCD, Kodak Picture CD, CD-R/RW, DVD±R/RW, DVD±R DL, BD-R/RE
BD Profile	BD-ROM Version 2.5 Profile 5 (also compatible with Profile 1 Version 1.0 and 1.1)
Internal Storage	1GB (Actual space available for persistent storage varies due to system usage)
Output	Analogue Audio: 7.1ch, 5.1ch, stereo. Dedicated Stereo Analogue Audio: XLR balanced, RCA single-ended. Coaxial/Optical Audio: Dolby Digital, DTS, up to 2ch/192kHz PCM. HDMI Audio: Dolby Digital, Dolby Digital Plus, Dolby TrueHD, DTS, DTS-HD High Resolution, DTS-HD Master Audio, up to 7.1ch/192kHz PCM, up to 5.1ch DSD. HDMI Video: 480i/480p/576i/576p/720p/1080i/1080p/1080p24/4Kx2K, 3D frame-packing 720p/1080p24.
Input	HDMI Audio: Dolby Digital, Dolby Digital Plus, DTS, AAC, up to 5.1ch/192kHz or 7.1ch/96kHz PCM. HDMI Video: 480i/480p/576i/576p/720p/1080i/1080p/1080p24/1080p25/1080p30, 3D frame-packing 720p/1080p24. MHL Audio: Dolby Digital, Dolby Digital Plus, DTS, up to 5.1ch/192kHz PCM. MHL Video: 480i/480p/576i/576p/720p/1080i/1080p24/1080p25/1080p30, 3D frame-packing 720p/1080p24. USB Audio: up to 2ch/192kHz PCM. Coaxial/Optical Audio: Dolby Digital, DTS, AAC, up to 2ch/96kHz PCM.
Analogue Audio Characteristics**	Frequency Response: (RCA) 20Hz – 20kHz: ± 0.2dB, 20Hz – 96kHz: -1.5dB. (XLR) 20Hz – 20kHz: ± 0.3dB, 20Hz 96kHz: -1.5dB Signal-to-Noise Ratio: >130dB (A-weighted, auto-mute), >115dB (A-weighted, no auto-mute) THD+N: <0.0003% or -110dB (1kHz at 48k/24b, 0dBFS, 20kHz LPF), <0.0017% or -96dB (1kHz at 44.1k/16b, 0dBFS, 20kHz LPF) Output Level: 2.1 Vrms (RCA) or 4.2 Vrms (XLR) at 0dBFS Dynamic Range: >110dBV Channel Separation: >110dB
Headphone Audio Characteristics**	Frequency Response: 20Hz – 20kHz: ±0.3dB into 300 Ohm Signal-to-Noise Ratio: >98dB into 300 Ohm (A-weighted, no auto-mute) THD+N: <0.001% or -100dB into 300 Ohm (1kHz at 48k/24b, 0dBFS, 20kHz LPF) Output power: 12mW into 600 Ohm, 23mW into 300 Ohm, 44mW into 150 Ohm, 53mW into 120 Ohm, 91mW into 60 Ohm, 137mW into 32 Ohm (1kHz at 48k/24b, 0dBFS, 20kHz LPF, one channel) Dynamic Range: >110dB Channel separation: >90dB
General Specification	Power Supply: AC ~ 100V – 240V, 50/60Hz Power Consumption: 55W (Standby: 0.5W in Energy Efficient Mode) Dimensions: 430mm x 311mm x 123mm Mass: 7.9kg
Operating Temperature	5°C - 35°C
Operating Humidity	15% - 75% No condensation

* Compatibility with user-encoded contents or user-created discs is on a best-effort basis with no guarantee due to the variation of media, software and techniques used.
** Nominal specification.

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