



Dolby® Digital Plus redefines the home theater surround experience for new formats like high-definition video discs.

What is Dolby Digital Plus?

Dolby® Digital Plus is Dolby's new-generation multichannel audio technology developed to enhance the premium experience of high-definition media. Built on industry-standard Dolby Digital technology, Dolby Digital Plus as implemented in Blu-ray Disc™ features more channels, less compression, and higher data rates for a warmer, richer, more compelling audio experience than you get from standard-definition DVDs.

What other applications are there for Dolby Digital Plus?

The advanced spectral coding efficiencies of Dolby Digital Plus enable content producers to deliver high-resolution multichannel soundtracks at lower bit rates than with Dolby Digital. This makes it ideal for emerging bandwidth-critical applications including cable, IPTV, IP streaming, and satellite (DBS) and terrestrial broadcast. Dolby Digital Plus is also a preferred medium for delivering BonusView (Profile 1.1) and BD-Live™ (Profile 2.0) interactive audio content on Blu-ray Disc. Delivering higher quality and more channels at higher bit rates, plus greater efficiency at lower bit rates, Dolby Digital Plus has the flexibility to fulfill the needs of new content delivery formats for years to come.

Is Dolby Digital Plus content backward-compatible?

Because Dolby Digital Plus is built on core Dolby Digital technologies, content that is encoded with Dolby Digital Plus is fully compatible with the millions of existing home theaters and playback systems worldwide equipped for Dolby Digital playback. Dolby Digital Plus soundtracks are easily converted

to a 640 kbps Dolby Digital signal without decoding and reencoding, for output via S/PDIF. The 640 kbps bit rate, which is higher than the standard 448 kbps used on DVDs, is fully compatible with all existing Dolby Digital decoding products such as A/V receivers, and can provide higher-than-DVD quality from Dolby Digital Plus soundtracks when played back through existing systems.

What products can incorporate Dolby Digital Plus?

Dolby Digital Plus is already a key feature in today's Blu-ray Disc players, advanced digital A/V receivers, and Blu-ray™ software player applications. Additional hardware applications include new-generation set-top boxes, televisions, game consoles, and portable devices.

Does Dolby Digital Plus provide metadata support?

Dolby Digital Plus supports metadata parameters including dialogue normalization and dynamic range control currently used by content producers and broadcasters to ensure a consistent-quality listening experience. Dolby Digital Plus was also designed with the flexibility to support future applications and features that may be enabled by metadata.

What is the full range of data rates for Dolby Digital Plus?

Dolby Digital Plus can scale from 32 kbps all the way up to 6 Mbps. A typical range for Dolby Digital Plus on high-definition optical discs is 768 kbps to 1.5 Mbps.

What is the maximum channel capacity of Dolby Digital Plus?

Dolby Digital Plus supports up to 7.1 discrete channels when implemented in Blu-ray Disc media. Designed to be expandable, Dolby Digital Plus can support up to 15.1 discrete channels in the future, while retaining compatibility with all Dolby Digital Plus decoders. Such future content will be fully backward-compatible with current products that support Dolby Digital Plus decoding.

What are the benefits of Dolby Digital Plus for content providers?

A key benefit of Dolby Digital Plus is its unique combination of efficiency, flexibility, and better-than-DVD quality when played back through any A/V receiver, including the installed base of Dolby Digital 5.1 systems. This makes it possible to produce discs with multiple high-quality soundtracks, such as alternative-language tracks, without sacrificing either video quality or disc space for additional content. Dolby Digital Plus also enables the combination

of an ultimate-quality Dolby TrueHD main soundtrack with alternative high-resolution Dolby Digital Plus soundtracks without compromising disc space or video quality.

Dolby Digital Plus also supports BonusView and BD-Live, interactive Blu-ray Disc features that mix multichannel secondary audio such as a director's commentary with the disc's main theatrical soundtrack. BonusView is an embedded picture-in-picture option for secondary audio and video content recorded on the disc, while BD-Live displays content streamed from the Internet.

What type of connector is required to transport Dolby Digital Plus content?

A high-bandwidth HDMI™ 1.3 digital interface will transport Dolby Digital Plus bitstream signals directly to advanced digital A/V receivers equipped with Dolby Digital Plus decoding. Multichannel Dolby Digital Plus signals decoded inside the player can also be transported to a connected A/V receiver via analog outputs. Dolby Digital Plus signals decoded to PCM inside the player can be transported via HDMI 1.1, HDMI 1.2, and HDMI 1.3 connections, and the majority of Blu-ray players support this capability.

Can Dolby Digital Plus support Dolby Digital Surround EX encoding?

Yes. A Dolby Digital Plus 5.1 audio stream can fully support the matrix-encoded Rear Surround channel of a Dolby Digital Surround EX™ track. Just as with Dolby Digital, Dolby Digital Plus supports the ability to identify Surround EX programs using metadata. Of course, Dolby Digital Plus can also support discrete 6.1 or 7.1 playback.



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