



kaleidescape

M-Class Architecture

Technical Note

Overview

The Kaleidescape M-Class architecture lays the foundation for the most engaging and powerful movie server experience yet. Benefits of this platform include performance improvements, enhancements to the user experience and support for content from high definition sources.

M-Class Technology

Kaleidescape movie servers are built as appliances. Purpose-built hardware and the Kaleidescape Operating System (kOS) work together to provide exceptional performance and reliability. The M-Class architecture serves as a platform for future movie server innovation from Kaleidescape. Products that leverage the M-Class architecture are the M300 and M500 Players, and the M700 Disc Vault.

Improved User Interface

The graphics facilities of the M-Class architecture enable the onscreen user interface to be fully animated at 1080p. Cover art from the Kaleidescape Movie Guide is presented in high definition. Browsing the cover art and scrolling through lists is faster and more responsive than ever.

Blu-ray Support

M-Class technology provides cutting-edge video decoding and processing as well as the bitstream multichannel audio output necessary to play Blu-ray movies downloaded from the Kaleidescape Store or imported from disc. See Table 1.

Table 1 Audio and Video Codec Support by Player Class

	M-Class Players	Earlier Kaleidescape Players
Video Codecs	MPEG-2 H.264/MPEG-4 AVC SMPTE VC-1	MPEG-2
Audio Codecs	Linear PCM (up to 7.1) MPEG Dolby Digital™ Dolby TrueHD™ Dolby Atmos® DTS Digital Surround™ DTS-HD Master Audio™	Linear PCM (up to 2.0) MPEG Dolby Digital™ DTS Digital Surround™

Gigabit Ethernet

M-Class players also use a Gigabit Ethernet connection for faster import and more responsive playback of high definition movies.

Benefits for Movie Lovers

With M-Class players, Blu-ray movies start instantly, without any need to navigate the disc menu or wait for advertisements and trailers. Blu-ray movies play with high definition video, lossless audio and crisp subtitles.

With the right display device, Blu-ray movies can be output at 1080p resolution at 24 frames per second to match the original frame rate of the film.

Using one of the [CinemaScape](#) modes, the onscreen user interface can be output in a 2.35 aspect ratio for use with a variety of projection lenses. When using auto-masking screens, pixel-perfect masking cues are provided for over 100,000 movie titles. Triggers for control systems are included so that the lights can rise as the credits roll.

Video processing for DVD movies is also improved, particularly for letterboxed 4:3 films.

M-Class architecture enables a high definition user interface. High resolution cover art from the Kaleidescape Movie Guide visually represents all the treasures in your movie library.

The Movie List view helps find what you are looking for, as movies can be sorted by title, genre, cast member, director, year, running time, or rating. See Figure 1.

The City of Lost Children	Adventure	Ron Perlman	Jean-Pierre Jeunès
Dark City	Sci-Fi	Rufus Sewell	Alex Proyas
Don't Look Back	Documentary	Bob Dylan	D.A. Pennebaker
Dr. Strangelove or: How I Learn...	Satire	Peter Sellers	Stanley Kubrick
The General	Silent	Buster Keaton	Buster Keaton
 Title Gone with the Wind	Genre Romance Drama Period Epic	Cast Clark Gable Vivien Leigh Leslie Howard Olivia de Havilland	Director Victor Fleming
Grave of the Fireflies	Anime	Tsutomu Tatsumi	Isao Takahata
Hiroshima Mon Amour	Drama	Emmanuelle Riva	Alain Resnais
Home Movies (Season 1)	Television	Brendon Small	Catherine Bouchard
Human Nature	Satire	Tim Robbins	Michel Gondry
Juliet of the Spirits	Drama	Giulietta Masina	Federico Fellini
Kicking and Screaming	Comedy	Josh Hamilton	Noah Baumbach
Metropolis	Silent	Alfred Abel	Fritz Lang
Miller's Crossing	Drama	Gabriel Byrne	Joel Coen

Figure 1 Movie List View

The Movie Covers view provides a panoramic view of a movie library, suggesting similar movies as you linger on a selection. See Figure 2.

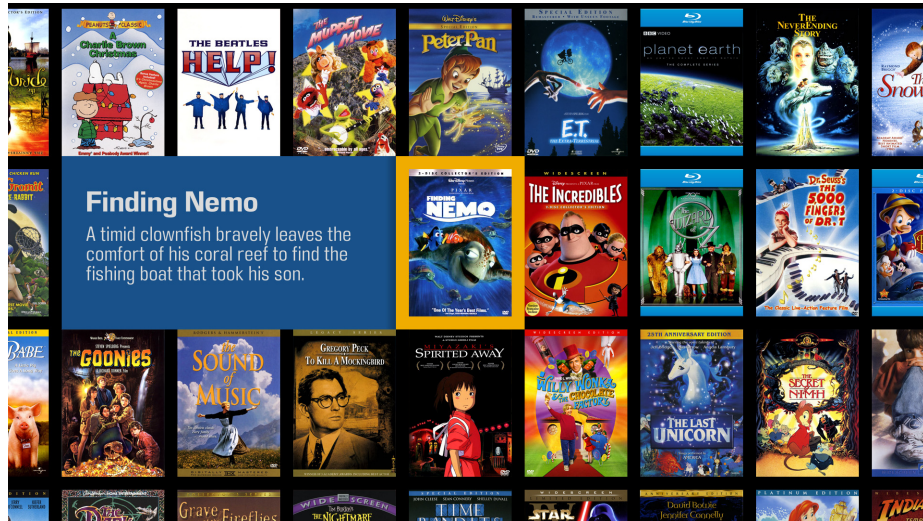


Figure 2 Movies Covers View

You can also create collections and organize any way you want. See Figure 3.

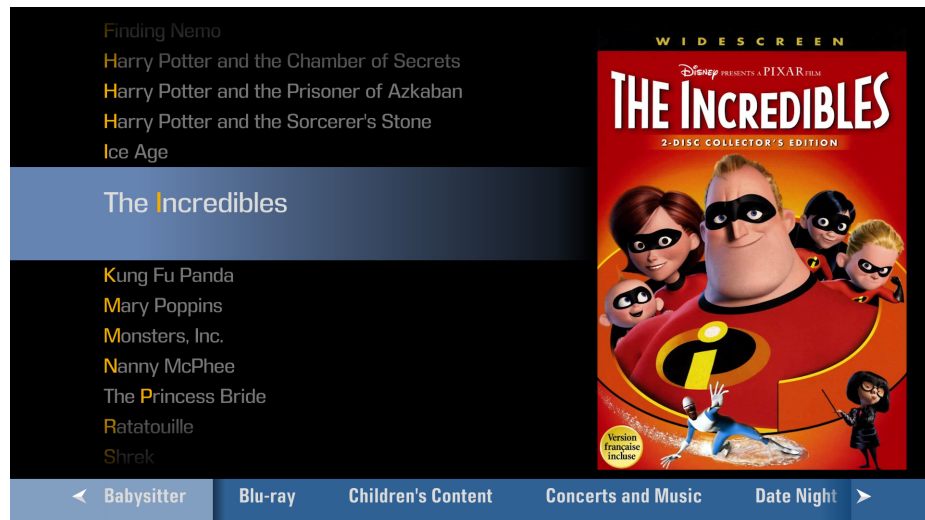


Figure 3 Movies Collections View

Benefits for Music Lovers

Music lovers will appreciate the lossless, high sample rate multichannel audio found on Blu-ray concert discs. M-Class players use bookmarks from the Kaleidescape Movie Guide to jump directly to the start of any song in a concert without navigating menus. See Figure 4.

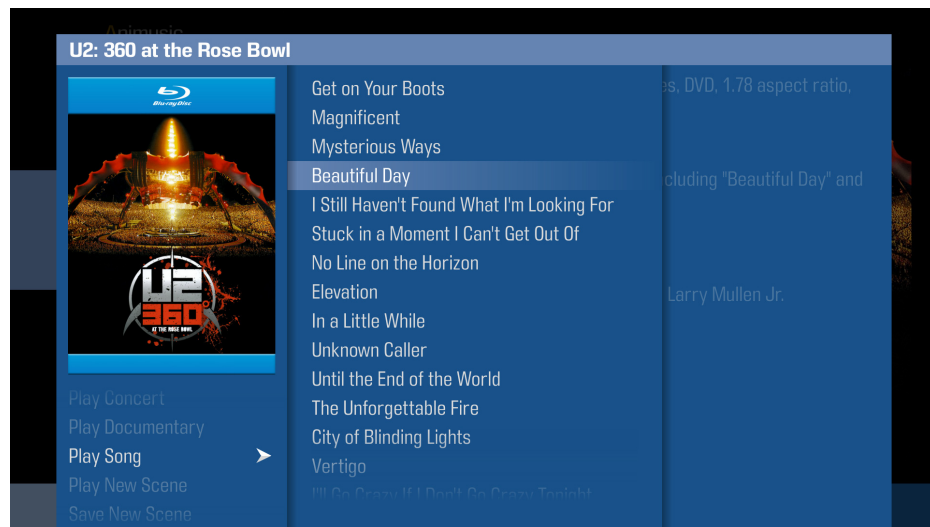


Figure 4 Selecting Concert Songs Directly

Your compact disc collection is presented with the same elegant user interface used for movies. See Figure 5.


The Shadows	Shadows Are Go!	Pop/Rock	1996
The Shangri-Las	The Best of the Shangri-Las [...]	Pop/Rock	1996
Sonny Sharrock	Black Woman	Jazz	2000
Sigur Rós	Ágætis Byrjun	Pop/Rock	1999
Nina Simone	I Put a Spell on You	Vocal	1965
Artist  Frank Sinatra	Album Frank Sinatra's Greatest Hits!	Genre Vocal Pop/Rock Jazz Soft Rock	Year 1968
Nancy Sinatra	How Does That Grab You?	Pop/Rock	1966
The Smiths	Hatful of Hollow	Pop/Rock	1984
Spiritualized	Pure Phase	Pop/Rock	1995
Dusty Springfield	Dusty in Memphis	Pop/Rock	1969
Bruce Springsteen	Nebraska	Pop/Rock	1982
Bridget St. John	Top Gear & Singles 1969-1973	Pop/Rock	1969
Stereolab	Peng!	Pop/Rock	1992
T. Rex	A Board of Stars	Pop/Rock	1976

Figure 5 Music List View

Reconnect with the artwork of your favorite albums presented with eye-popping detail with the Music Covers view. See Figure 6.

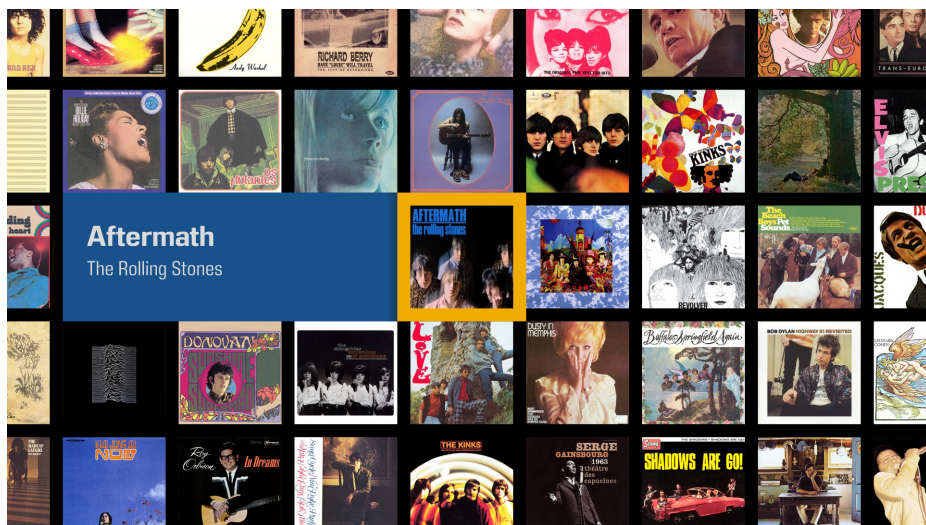


Figure 6 Music Covers View

Select classical music by composer or work as part of the Music Collections view. See Figure 7.

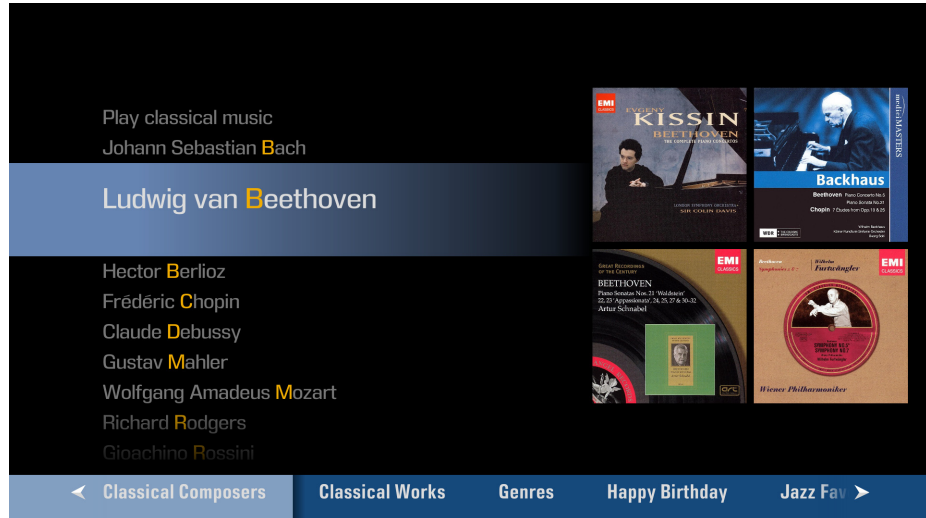


Figure 7 Finding Classical Music

Read about albums and performances in your library and the people behind them on a details page. See Figure 8.

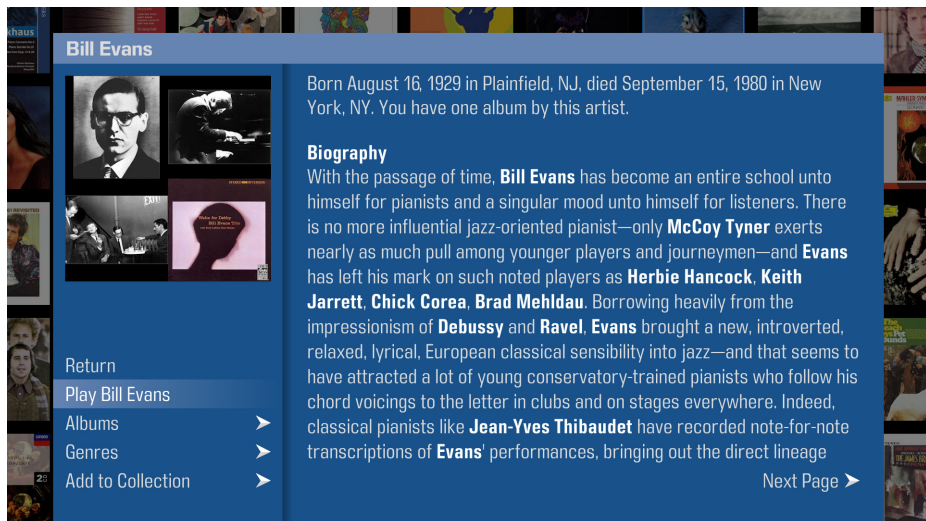


Figure 8 Artist Biography

Compatibility

M-Class players can be used with any server in the Premiere line system, including 1st generation Cinema One.

When a Premiere line system contains both M-Class players and non-M-Class players, the non-M-Class players continue to display the original user interface

and only display DVD movies. Blu-ray movies including those downloaded from the Kaleidescape Store only appear on the M-Class players.

Note: M-Class players cannot be used with Alto or Cinema One (2nd generation).

Conclusion

The Kaleidescape M-Class player architecture improves and enhances the movie server experience. Enjoying the high fidelity of Blu-ray movies is fast and easy.

Whether your passion is movies, music, or both, the M-Class architecture provides convenient access and unmatched elegance in the presentation, protection and distribution of your movies and music.