

# CinePlayer SDK

## Comprehensive Media Player Engine

### FEATURES AND BENEFITS

The CinePlayer CE Navigator SDK is a software development kit that allows developers for both PC and consumer electronics (CE) platforms to quickly and easily incorporate comprehensive, reliable playback of BD-ROM, DVD, Super Video CD, Video CD, Audio CD and compressed file formats

#### Blu-Ray

Complete support for all profiles and content types including BDAV and BD-Live advanced content.

#### DVD Formats

Support for DVD-V, +VR, -VR and Divx including software solutions for CSS and CPRM decryption.

#### CD Formats

Support for SVCD, VCD, CD-DA, MP3 and JPEG CDs.

#### Integration Services

Let Sonic's expertise assist you in integrating these features into your embedded platform accelerating your product to market.



## CINEPLAYER

The CinePlayer SDK is Sonic's powerful, comprehensive solution for playback of BD-ROM, DVD-Video, VCD, SVCD, and CDDA formatted discs as well as compressed audio and picture file formats. The SDK makes it simple and fast for OEMs and third-party developers to integrate rich playback functionality into host applications running in embedded environments. The SDK interprets all the details of supported formats so that in-depth knowledge of specifications is not required to enable full-featured, high-quality playback of digital media content.

The family of CinePlayer SDKs are designed to be cross platform to support any embedded environment with well-defined APIs that enables quick, easy, and flexible integration of media playback capabilities into existing systems. Powerful and efficient, the CinePlayer supports an impressive feature set with minimal demand on system resources.

Sonic's 20+ years of engineering experience with optical disc formats provide the highest level of compatibility and quality. Whether your product is targeted toward Consumer Electronics, or Automotive Infotainment markets, Sonic's software and integration services are the preferred solution.

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# CinePlayer CE SDK

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### BD-ROM Features

Operating Systems		
Linux		√
Logical Formats		
Profile 1.1 Title Playback		√
BD-Live Title Playback		√
HDMV Playback		√
Physical Media		
BD25	Play back single-layer packaged BD-ROM media	√
BD-ROM Disc Image	Play back BD-ROM disc images from HDD	√
BD-ROM Volume	Play back BD-ROM Volumes from HDD	√
BD50	Play back dual-layer packaged BD-ROM media	√
BD-9	Play back BD-9 packaged BD-ROM media (BD-ROM AV content recorded onto a DVD-9)	√
BD-R support	BD-ROM recorded onto BD-R will be supported	√
Navigation		
Menu Call	Takes user to TopMenu and terminates current Title	√
Title Search	Search by title number	√
Chapter Search	Allow user to access chapters by number	√
Skip to Next Point	Next Point defined as Chapter Start or Chapter Stop point	√
Resume	Resume Title (e.g. after interrupting title by accessing Menu)	√
Primary Audio Stream Number Change		√
Angle Number Change		√
Subtitles On/Off Control		√
Subtitle Stream Selection Control		√
Player function of Movie object file		
MovieObjects()	Mandatory	√
Player function of Navigation command		
Navigation commands except SetSecondaryStream	Mandatory	√
SetSecondaryStream	Mandatory to be able to parse the SetSecondaryStream command, but the corresponding player functions are optional	√
BD-J object file support		
xxxxx.bdjo		√

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### Standard Definition Features

#### OPERATING SYSTEMS

WinCE	√
Linux	√
QNX	√
Ultron	√
Nucleus	√

#### LOGICAL FORMATS

Video CD (VCD) Version 1.0, 1.1, and 2.0	√
Super-Video CD (SVCD) Version 1.0	√
DVD-Video Version 1.11	√
DVD-R/RW Video (-VR) Version 1.1	√
DVD+R/RW Video (+VR) Version 2.1 (DVD-V compliant discs only)	√
Compressed Audio/Picture formats	√

#### VIDEO/AUDIO

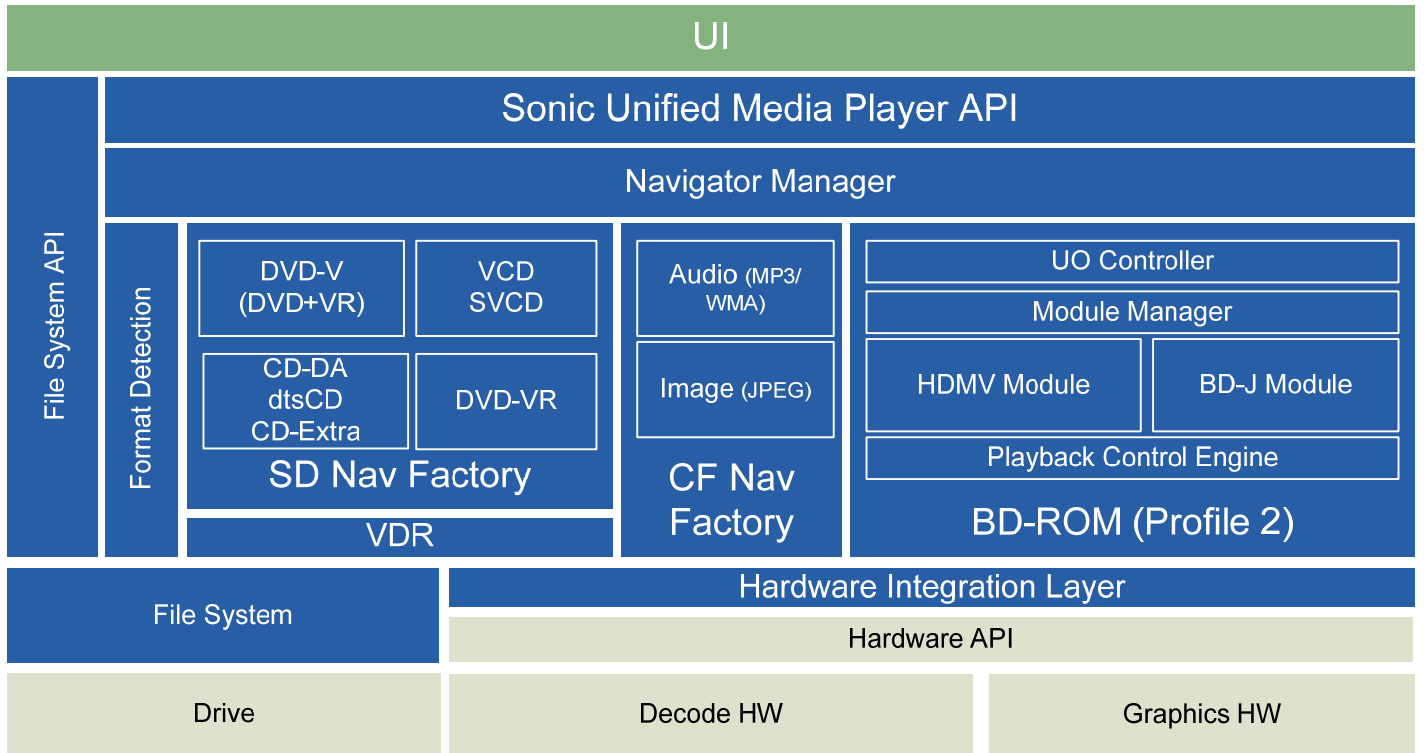
TV formats supported: NTSC/PAL	√
Video aspect ratio supported: 4:3 & 16:9, letter box and pan and scan	√
Navigation of DVD-compliant video in program stream form from DVD	√
Start, pause, stop resume	√
Scan forward / backward (drops frames)	√
Frame Forward/Reverse	√
Multi-speed Fast Forward Playback of all frames	√
Multi-speed Fast Reverse Playback of all frames	√
Skip Next/previous chapter or program	√
Time / chapter search & play	√
AutoPlay	√
Eject	√
Parental lockout control	√
Title Selection/Navigation	√
Chapter Selection / Navigation	√
Menu Selection / Navigation	√
Audio Stream Selection	√
Sub Picture Stream Selection	√
Multiple Angle Selection	√
Seamless and Non-Seamless Branching	√
Title Authoring Errors Workaround / Recovery	√
Closed captioning	√

#### MENU DISPLAY

Title menu	√
VTS (root) menu	√

The logo for SONIC, featuring the word "SONIC" in a bold, red, sans-serif font with a registered trademark symbol (®) to the upper right of the letter "C".

# CinePlayer SDK Block Diagram



Sonic                      OEM                      Silicon Partner

## BD ROM Player Model

