NOTE: This information is subject to change without prior notice.

What is VIDJ?

VIDJ is a powerful software library SDK for Windows designed to easily provide full-featured video playback and mixing capabilities to any new or existing audio application.

VIDJ easily integrates into any audio playback engine, providing full video playback capabilities with minimal changes in the code.

- Up to 6 video clips can be loaded and mixed together.
- Supports live cameras and internet video streams.
- ANY video or audio format is supported, provided that a proper codec is installed.
- **VIDJ** feeds your audio engine with the PCM audio decoded from the video file.
- **VIDJ** mixes the video output full-screen using a second screen.
- Preview windows are simultaneously shown at the main screen.
- Full HD-1080 compliant.
- 99.9% PROVEN reliability.
- Customizable background and logo overlay: pictures, videos, cameras or internet streams.
- Integrated text scroller.
- Extremely low CPU usage. Ideal for CPU-intensive applications.
- Compatible with Windows XP / Vista / 7 / 8.

Benefits of VIDJ

Developing a reliable video mixing engine is a huge, costly and frequently frustrating task. The engine behind **VIDJ** has been in continuous development and evolution since 2004 as part of the *Deejaysystem Video VJ2* video player.

- Save costly development time.
- No special coding abilities required.
- A single C/C++ header (.H) file is provided.
- **VIDJ** is deployed in a single standard DLL file.
- Standard function calls allow **VIDJ** to be used in any language, including Visual Basic, C#, managed C++...
- Any existing audio-only application could integrate and use **VIDJ** in just a few hours.

Who is VIDJ for?

VIDJ is suitable for any kind of software application that requires powerful, reliable and flexible video mixing and playback capabilities in real-time:

- TV broadcast
- Video automation
- DJ-Mixing applications
- VJ performance tools
- Video advertising
- Conferences & congress
- Presentations
- Live multi-camera mixing & broadcasting
- Video surveillance

Technical Features

Video playback features

- Up to 6 video files can be played independently at the same time.
- Dual video output: the mixed output is projected full-screen to any available output device (TV, projector, etc.) while displaying video previews on the PC monitor.
- Multiple screens supported, no limit.
- Single-screen mode also supported: enables/disables full-screen mode in the same screen.
- Video mixing (*crossfader*) with 6 different video mixing effects.
- Supports live cameras (USB, 1394...).
- Supports internet streams (Windows Media, mms://)
- Supports multi-channel audio.
- Full HD compliant: 720p, 1080p and higher.
- Frame-exact audio and video synchronization.
- Precise video positioning frame-by-frame, forward and backward.
- Decodes audio, video, and karaoke formats.
- All files are played directly in their native format (no need to convert or import them).
- Almost ANY format is supported provided that a proper codec is installed.
- Aspect-ratio aware according to screen's dimensions.
- Seamlessly play and mix videos in any screen format: PAL, NTSC, DVD, HD...
- Exclusive **VLOCK™** technology. Timming is locked to refresh rate for smooth playback.
- Supports special Windows situations (Change User / Suspend / Hibernate) while playback.
- DRM-enabled for Windows Media files if available (requires a Windows Media DRM license from Microsoft).

Customization features

- Built-in background and overlay logo features: position, size, opacity...
- Background and logo could be static pictures, looping video files, internet streams or live cameras.
- Built-in text ticker features: scrolling tape, static text, font, color, position...
- Custom graphic layers with position, opacity, aspect-ratio and alignment options.
- Custom text layers with font, alignment, shadow and word-wrap options.
- Customizable text fonts with face, color, bold and italic options.
- Supports aspect-ratio correction in text layers.
- Low-level access to custom graphic layers via standard DC (Device Context).
- Automation features on text and graphic layers: alpha transitions, movement.

Developer features

- Multi-thread and multi-process aware.
- Multiple instances of the same application are supported.
- Detailed debug output to text file.
- Low-latency, low CPU-usage video decoding.
- Direct3D-based display routines that take full advantage of available graphics hardware.
- DirectShow-based decoding architecture compatible with any DirectShow codec available.
- MMX and SSE optimized assembly code in critical speed operations.
- DEP (Data Execution Prevention) compliant.

How it works

1.- Initialize the library in your application by specifying:

- A window handle (HWND) that will show the master video preview. This handle will typically be a Panel inside the main application's window.
- The identifier of the screen that will be used for full-screen video playback (TV, projector, etc.)

2.- Initialize each "Deck":

A Deck is a container that will load, control and play a single video file. You can initialize up to 6 decks, named Deck A, Deck B, etc. Each deck works independently from others. Here you can (optionally) assign a window handle to each Deck. If assigned, the window will show the preview of the video file that is being played in that Deck.

3.- Load your files in the Decks. Once loaded you can:

- Retrieve the audio and video properties.
- Seek to any timecode position in the file.
- Read the audio from the video file. The audio is always served as plain, decoded PCM format.
- Play the audio using your audio engine. Then you must notify **VIDJ** about the audio that you have played, so **VIDJ** will automatically keep the audio in sync with the video. The faster (or slower) you play the audio, the faster (or slower) the video will be played.

At this point the Deck will show the video preview in its preview window (if assigned), but it won't be shown at the master preview or full screen windows.

4.- Show the Decks output Live!

You control whether each deck is shown in the master output and its **video level**: 0 = not shown, 1 = show in full, 0.5 partially shown (transparency). In Decks A and B the video level is used for crossfading both videos by applying one of the available video mixing effects.

That's all! The basis is really as simple as described here.

System Requirements & Supported formats

- Windows XP (DirectX 9+) / Vista / 7 / 8
- 3D-capable display adapter with secondary output (HDMI/DVI/VGA/TV), 512 Mb RAM
- CPU and system RAM as recommended for the operating system

CPU and memory usage depend on the video format, the video codec and the video resolution. The display memory usage depends on the video resolution.

Increasing the number of simultaneously playing videos will also increase the CPU and memory requirements accordingly.

Supported formats and devices*

- **Audio:** MP3, MP2, MP1, OGG, WMA, WMA-DRM, WAV, audio CDs (CDA), M4A (from iTunes), FLAC, AC3, ALAC (Apple Lossless), APE, MPC, WavPack, TTA, OFR, MOD music (XM, S3M...), ...
- **Video:** MPEG, MPEG-2, MP4, M4V (from iTunes), AVI, DivX, XVid, DVDs (unencrypted VOB files), WMV/ASF, WMV-DRM, DVR-MS, VCD, Quicktime, FLV (YouTube, Google...), 3GP, Real Media, ...
- **Karaoke:** MP3+G, WMA+G, BIN
- **Output video devices:** secondary DVI/VGA output, HDMI, composite video, S-Video.
- **Input video devices**: Firewire/1394, USB webcam, TV/Video capture devices.

* The exact list of supported formats and devices may change and depends on the *codecs* actually installed on the system when running the application. A proper codec pack, such as the one provided with *Deejaysystem Video VJ2*, is recommended in order to provide maximum compatibility.