

OptiML™ Video Tools



Video camera technology is rapidly evolving; more people than ever are using compact mobile devices such as camera phones and pocket camcorders to record and share video imagery. Mobile device users face multiple challenges in recording quality video: one is the difficulty in getting a stable video image from a small handheld device held at arm's length. Another is ensuring the best possible image quality of the faces of the people being filmed. The complete solution to improve these video issues is here – and it's key to your competitive advantage.

OptiML Video Tools provide optimized video image stabilization and video face beautification capabilities for mobile devices such as camera phones, pocket camcorders and digital still cameras. The Video Image Stabilization technology significantly improves video quality by removing jerks and frame jumps and the Video Face Beautification technology softens skin tones and removes blemishes.

These technologies combines image processing hardware and software in a single solution to improve recorded video quality while reducing demands on system resources. Hardware acceleration is used for computationally intensive tasks, with the remainder of the image processing carried out by the software.



Features – Video Image Stabilization

- **Detects and compensates for hand motion induced effects, resulting in smooth, clear video output**
- **Does not impact natural movement such as camera panning or object motion**
- **Works in real-time on high definition (HD) video**
- **Allows closer zoom to be applied during video capture, without additional shake**

Video Image Stabilization

Capable of automatically identifying, isolating and correcting the effect of human induced motion, DigitalOptics Corporation™'s Video Image Stabilization technology does not alter intentional artistic effects such as camera panning or natural object motion. It is suitable not only for day-to-day video recording, but also for events such as sports or wildlife video.

Video Face Beautification

When recording videos in HD certain details of the image can be exaggerated. For faces, this can result in an accentuation of skin imperfections, wrinkles and blemishes. DOC's Video Face Beautification technology automatically identifies and smoothes pixels of detected skin as each frame is acquired, removing the need for post production processing of captured video.

Hardware Acceleration

OptiML Video Tools integrate innovative Hardware Acceleration technology which enables computationally intensive video processing – such as real-time HD video capture – without excessive demands on system resources.

By performing the majority of the computation process in the dedicated hardware, which significantly reduces the processing and memory utilization load, the technology is able to support the large volumes of data produced by full HD videos: up to 60 color frames per second of 1920x1080 pixels.

OptiML Video Tools are flexible and can be implemented on a wide range of application platforms.

System Requirements

	Video Image Stabilization	Video Face Beautification
HW Engine (Gates + Memory)	Frame Displacement Engine (110KG+27KB)	Video Retouching Engine (100KG+43KB)
Software Code Size	< 50KB	< 25KB
RAM	< 10KB	< 20KB
Stack	1KB	1KB

Features – Video Face Beautification

- Enables real-time beautification of detected faces
- Removes wrinkles and blemishes
- Smoothes skin tones
- Enhances an unlimited number of faces at the same time, supporting up to four different skin profiles



Contact a DigitalOptics sales representative for more information.

3025 Orchard Parkway | San Jose, CA 95134 | τ +1.704.887.3154 | www.doc.com

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