



## Feature Comparison

# Adobe Flash® Lite™, Flash® Player and Flash® SDK at a Glance

version 1.0 as of 18 July 2007

	Flash Lite 1.1	Flash Lite 2.1	Flash SDK 7	Flash Lite 3.0	Flash Player 8	Flash Player 9
<b>Sound Support</b>						
MIDI	Device dependent	Device dependent		Device dependent		
PCM and ADPCM	✓	✓	✓	✓	✓	✓
MP3	✓	✓	✓	✓	✓	✓
8 Channel					✓	✓
32 Channel					✓	✓
<b>Image &amp; Video Support</b>						
PNG	During authoring	During authoring or device dependent <sup>(1)</sup>	During authoring	During authoring or device dependent <sup>(1)</sup>	✓	✓
JPEG	✓	✓	✓	✓	✓ (progressive JPEG)	✓ (progressive JPEG)
GIF	During authoring	During authoring or device dependent	During authoring	During authoring or device dependent	✓	✓
Animated GIF	During authoring	During authoring	During authoring	During authoring	During authoring	During authoring
MPEG-4 and other video formats		Device dependent	During authoring	Device dependent	During authoring	During authoring
Flash Video (FLV)			✓ (On2 codec, in addition to Sorensen)	✓ (On2 codec, in addition to Sorensen)	✓ (On2 codec, in addition to Sorensen)	✓ (On2 codec, in addition to Sorensen)



8 bit alpha channel video					✓	✓
Import/Encode video			✓		✓	✓
<b>Multimedia Support</b>						
Dynamic loading of multimedia files		✓ <sup>(2)</sup>	JPEG / MP3 only	✓ <sup>(2)</sup>	JPEG / MP3 / GIF / PNG / Progressive JPEG	JPEG / MP3 / GIF / PNG / Progressive JPEG
<b>Text Support</b>						
Character set	Latin-1 and Shift-JIS	UTF-8	UTF-8	UTF-8	UTF-8	UTF-8
Complex languages (Thai, Arabic, Hebrew, etc.)		✓		✓		
Dynamic text	✓	✓	✓	✓	✓	✓
Device-specific vector fonts		✓	✓	✓	✓	✓
Improved small text readability		✓	✓	✓	✓	✓
Text measurement		✓	✓	✓	✓	✓
Text wrap		✓	✓	✓	✓	✓
Inline Text Input		✓		✓	✓	
Predictive Text Support		✓		✓		
Rich text styles			✓		✓	✓
FlashType					✓	✓
Improved text layout					✓ (full justified, kerning, character spacing)	✓ (full justified, kerning, character spacing)



Emoticons	✓	✓		✓		
Emoticons in predefined color				✓		
<b>Interactivity</b>						
Keyboard events	Device dependent	Device dependent	✓	Device dependent	✓	✓
Key-based navigation	✓	✓	✓	✓	✓	✓
Mouse/Stylus events	Device dependent	Device dependent	✓	Device dependent	✓	✓
Mouse wheel support			✓		✓	✓
<b>Programming Features</b>						
Flash version supported	Flash 4 or earlier	Flash 7 or earlier	Flash 7 or earlier	Flash 8 or earlier	Flash 8 or earlier	Flash 9 or earlier
ActionScript Version	FlashScript (Flash 4 or earlier)	ActionScript 1.0, 2.0 (Flash 7 or earlier)	ActionScript 1.0,2.0 (Flash 7 or earlier)	ActionScript 1.0, 2.0 (Flash 8 or earlier)	ActionScript 1.0,2.0 (Flash 8 or earlier)	ActionScript 1.0, 2.0, 3.0 (Flash 9 or earlier)
Dynamic loading of SWF data	✓	✓	✓	✓	✓	✓
XML parsing		✓	✓	✓	✓	✓
String/Array/XML-to-native-objects conversion		✓	✓	✓	✓	✓
ActionScript strict mode		✓	✓	✓	✓	✓
Set/Clear interval		✓	✓	✓	✓	✓
Shape-drawing API		✓	✓	✓	✓	✓
Ability to store data		✓	✓	✓	✓	✓
Bitmap effects & filters					✓	✓



Bitmap caching					✓	✓
BitmapData API					✓	✓
Blend modes					✓	✓
9-Slice scaling					✓	✓
Stroke enhancements (endcaps & joins)					✓	✓
Linear & radial gradient enhancements					✓	✓
External API for browser scripting				✓	✓	✓
File Upload/Download					✓	✓
IME API enhancements					✓	✓
<b>Other Features</b>						
Generic browser interface	✓	✓	ActiveX or Netscape	✓	ActiveX or Netscape	ActiveX or Netscape
Dynamic memory handling	✓	✓	✓	✓	✓	✓
Device-specific capabilities	✓	✓		✓		
Meta data support				✓		
Background Transparency		✓ (set in host application)		✓ (set in host application)	✓	✓
Forward lock				✓ (set in host application)		
Printing			✓		✓	✓



Object model (for components)		✓	✓	✓	✓	✓
Improved event model		✓	✓	✓	✓	✓
XMLSockets		✓		✓	✓	
Flash Media Server connectivity (RTMP Streaming)			✓	✓	✓	✓
Flash Media Server connectivity (Remote Shared Object)			✓		✓	✓
Scriptable masks			✓	✓	✓	✓
SWF file compression		✓	✓	✓	✓	✓
Accessibility			✓		✓	✓
Dynamic discovery of device features		✓	✓	✓	✓	✓
ActionScript exception handling		✓	✓	✓	✓	✓
Improved ActionScript performance				+15-20% over FL 2.1	✓	✓
Improved rendering performance				+20-30% over FL 2.1	✓	✓
Web services and SOAP API		✓	✓	✓	✓	✓
New preloader API		✓	✓	✓	✓	✓
Progressive download			✓	✓	✓	✓
Basic version check and update mechanism					✓	✓
Express install					✓	✓
Enhanced local file security				✓	✓	✓

SVG-T 1.1	✓	✓				
<b>Flash Lite Features</b>						
Access to device-specific features (volume, backlight, vibrate, and so on)		✓		✓		
Launch native applications	✓	✓		✓		
Reduced runtime memory consumption	✓	✓		✓		
Graceful handling of out-of-memory condition.	✓	✓	✓	✓		
Interruptible/Re-entrant player	✓	✓		✓		
Runaway script limit	✓	✓	✓	✓	✓	✓
ActionScript slicing	✓	✓		✓		
<b>System Requirements</b>						
Player size (core player DLL)	275K	450K	1.0MB (Win/WinCE)	374K	1.4MB (Win)	~2.0 MB (Win)
CPU characteristics	32-bit data bus, 200Mhz ARM9	32-Bit data bus, 200Mhz ARM9	32-bit data bus, 300Mhz ARM9	32-Bit data bus, 200Mhz ARM9	Desktop Hardware	Desktop Hardware
Minimum RAM requirements	64K	128K	4.5MB	128K	Desktop Hardware	Desktop Hardware
Recommended RAM		2 MB	32MB	2 MB for stand alone content, more for video (varies by file size, duration)	32 MB	32 MB
Content size-to-heap ratio	1:10 <sup>(3)</sup>	1:15 <sup>(3)</sup>	1:30	1:15 <sup>(3)(4)</sup>		

Footnotes

<b>Platform/Browser Support</b>						
Reference platforms	Symbian	Symbian, BREW	Windows XP (Standalone, ActiveX), WinCE (activeX), Linux (Standalone, Netscape plug-in), PocketPC (ActiveX)	Symbian, Windows XP		
Browsers supported			IE, Firefox,		IE, Netscape, Firefox, Mozilla, AOL, Opera	IE, Netscape, Firefox, Mozilla, AOL, Opera

- (1) Transparency supported
- (2) JPEG & MP3; other formats dependent on device-specific codecs
- (3) Estimated worst-case memory consumption: for example, for playback of 100k SWF file, the recommended memory configuration is 1.5 MB
- (4) Memory usage when playing back video is managed by active buffering in Flash Lite 3.0