

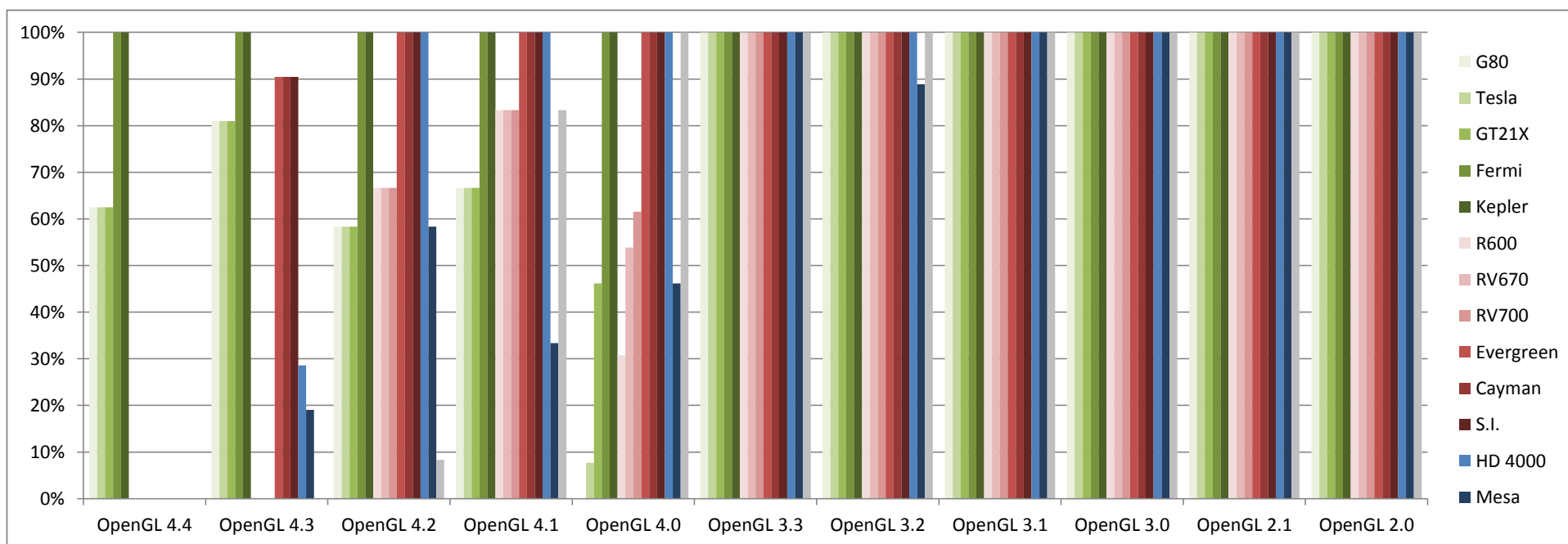
# OpenGL Matrix - September 2013

G-Truc Creation

Vendor	NVIDIA					AMD					Intel		Mesa	Apple
Drivers version	326.98 beta					13.4					10.18.10.3277		git-9.2	10.9.pre
Release date	28/08/2013					24/04/2013					30/08/2013		30/03/2013	14/03/2013
Platforms	G80	Tesla	GT21X	Fermi	Kepler	R600	RV670	RV700	Evergreen	Cayman	S.I.	HD 4000	Mesa	MacOS X
OpenGL 4.4	63%	63%	63%	100%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%
OpenGL 4.3	81%	81%	81%	100%	100%	0%	0%	0%	90%	90%	90%	29%	19%	0%
OpenGL 4.2	58%	58%	58%	100%	100%	67%	67%	67%	100%	100%	100%	100%	58%	8%
OpenGL 4.1	67%	67%	67%	100%	100%	83%	83%	83%	100%	100%	100%	100%	33%	83%
OpenGL 4.0	0%	8%	46%	100%	100%	31%	54%	62%	100%	100%	100%	100%	46%	100%
OpenGL 3.3	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
OpenGL 3.2	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	89%	100%
OpenGL 3.1	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
OpenGL 3.0	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
OpenGL 2.1	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
OpenGL 2.0	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Nomenclature:

Supported
Not supported
Support added from previous report

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<u>ARB indirect parameters</u>	X	X	X	V	V	X	X	X	X	X	X	X	X	X
<u>ARB compute variable group size</u>	X	X	X	V	V	X	X	X	X	X	X	X	X	X
<u>ARB compatibility</u>	V	V	V	V	V	V	V	V	V	V	V	V	X	X
<u>ARB cl event</u>	X	X	X	X	X	X	X	X	X	X	X	X	X	X
<u>ARB bindless texture</u>	X	X	X	X	V	X	X	X	X	X	X	X	X	X
<u>EXT texture sRGB decode</u>	X	X	X	V	V	X	X	X	V	V	V	V	X	V
<u>EXT texture mirror clamp</u>	V	V	V	V	V	V	V	V	V	V	V	X	X	V
<u>EXT framebuffer multisample blit scaled</u>	X	X	X	X	V	X	X	X	X	X	X	X	X	V
<u>EXT direct state access</u>	V	V	V	V	V	V	V	V	V	V	V	X	X	X
<u>EXT depth bounds test</u>	V	V	V	V	V	X	X	X	X	X	V	X	X	V
<u>NV vertex buffer unified memory</u>	V	V	V	V	V	X	X	X	X	X	X	X	X	X
<u>NV texture multisample</u>	V	V	V	V	V	X	X	X	X	X	X	X	X	X
<u>NV texture barrier</u>	V	V	V	V	V	V	V	V	V	V	V	X	X	V
<u>NV shader buffer store</u>	X	X	X	V	V	X	X	X	X	X	X	X	X	X
<u>NV shader buffer load</u>	V	V	V	V	V	X	X	X	X	X	X	X	X	X
<u>NV shader atomic float</u>	X	X	X	V	V	X	X	X	X	X	X	X	X	X
<u>NV multisample coverage</u>	V	V	V	V	V	X	X	X	X	X	X	X	X	X
<u>NV explicit multisample</u>	V	V	V	V	V	V	V	V	V	V	V	X	X	X
<u>NV copy image</u>	V	V	V	V	V	V	V	V	V	V	V	X	X	X
<u>NV bindless texture</u>	X	X	X	X	V	X	X	X	X	X	X	X	X	X
<u>NV bindless multi draw indirect</u>	X	X	X	V	V	X	X	X	X	X	X	X	X	X
<u>NV blend equation advanced</u>	X	X	X	V	V	X	X	X	X	X	X	X	X	X
<u>INTEL map texture</u>	X	X	X	X	X	X	X	X	X	X	X	V	X	X
<u>ATI texture mirror once</u>	V	V	V	V	V	V	V	V	V	V	V	X	X	V
<u>AMD vertex shader viewport index</u>	X	X	X	X	X	X	X	X	V	V	V	X	X	X
<u>AMD vertex shader layer</u>	X	X	X	X	X	X	X	X	V	V	V	X	X	X
<u>AMD transform feedback3 lines triangles</u>	X	X	X	X	X	X	X	X	V	V	V	X	X	X
<u>AMD stencil operation extended</u>	X	X	X	X	X	X	X	X	X	V	V	X	X	X
<u>AMD sparse texture</u>	X	X	X	X	X	X	X	X	X	V	V	X	X	X
<u>AMD shader trinary minmax</u>	X	X	X	X	X	X	X	X	X	V	V	X	X	X
<u>AMD seamless cubemap per texture</u>	X	X	X	X	V	X	X	V	V	V	V	X	X	X
<u>AMD sample positions</u>	X	X	X	X	X	V	V	V	V	V	V	X	X	X
<u>AMD query buffer object</u>	X	X	X	X	X	X	X	X	V	V	V	X	X	X

<u>AMD pinned memory</u>	X	X	X	X	X	V	V	V	V	V	V	X	X	X
<u>AMD blend minmax factor</u>	X	X	X	X	X	X	X	X	X	V	V	X	X	X
Support	37%	37%	37%	59%	70%	22%	22%	24%	35%	39%	48%	7%	2%	15%

OpenGL 4.4	G80	Tesla	GT21X	Fermi	Kepler	R600	RV670	RV700	Evergreen	Cayman	S.I.	HD 4000	Mesa	MacOS X
<u>ARB buffer storage</u>	X	X	X	V	V	X	X	X	X	X	X	X	X	X
<u>ARB clear texture</u>	X	X	X	V	V	X	X	X	X	X	X	X	X	X
<u>ARB enhanced layouts</u>	V	V	V	V	V	X	X	X	X	X	X	X	X	X
<u>ARB multi bind</u>	V	V	V	V	V	X	X	X	X	X	X	X	X	X
<u>ARB query buffer object</u>	X	X	X	V	V	X	X	X	X	X	X	X	X	X
<u>ARB texture mirror clamp to edge</u>	V	V	V	V	V	X	X	X	X	X	X	X	X	X
<u>ARB texture stencil8</u>	V	V	V	V	V	X	X	X	X	X	X	X	X	X
<u>ARB vertex type 10f 11f 11f rev</u>	V	V	V	V	V	X	X	X	X	X	X	X	X	X
Support	81%	81%	81%	100%	100%	0%	0%	0%	90%	90%	90%	29%	19%	0%

OpenGL 4.3	G80	Tesla	GT21X	Fermi	Kepler	R600	RV670	RV700	Evergreen	Cayman	S.I.	HD 4000	Mesa	MacOS X
<u>GL ARB vertex attrib binding</u>	V	V	V	V	V	X	X	X	X	X	X	X	X	X
<u>GL ARB texture view</u>	V	V	V	V	V	X	X	X	X	X	X	X	X	X
<u>GL ARB texture storage multisample</u>	V	V	V	V	V	X	X	X	V	V	V	X	X	X
<u>GL ARB texture query levels</u>	V	V	V	V	V	X	X	X	V	V	V	X	X	X
<u>GL ARB texture buffer range</u>	V	V	V	V	V	X	X	X	V	V	V	X	V	X
<u>GL ARB stencil texturing</u>	V	V	V	V	V	X	X	X	V	V	V	X	X	X
<u>GL ARB shader storage buffer object</u>	X	X	X	V	V	X	X	X	V	V	V	V	X	X
<u>GL ARB shader image size</u>	X	X	X	V	V	X	X	X	V	V	V	X	X	X
<u>GL ARB program interface query</u>	V	V	V	V	V	X	X	X	V	V	V	V	X	X
<u>GL ARB multi draw indirect</u>	X	X	X	V	V	X	X	X	V	V	V	V	X	X
<u>GL ARB invalidate subdata</u>	V	V	V	V	V	X	X	X	V	V	V	X	V	X
<u>GL ARB internalformat query2</u>	V	V	V	V	V	X	X	X	V	V	V	X	X	X
<u>GL ARB framebuffer no attachments</u>	V	V	V	V	V	X	X	X	V	V	V	X	X	X
<u>GL ARB fragment layer viewport</u>	V	V	V	V	V	X	X	X	V	V	V	X	X	X
<u>GL ARB explicit uniform location</u>	V	V	V	V	V	X	X	X	V	V	V	X	X	X
<u>GL ARB ES3 compatibility</u>	V	V	V	V	V	X	X	X	V	V	V	X	V	X
<u>GL KHR debug</u>	V	V	V	V	V	X	X	X	V	V	V	V	V	X

GL ARB copy image	V	V	V	V	V	X	X	X	V	V	V	X	X	X
GL ARB compute shader	X	X	X	V	V	X	X	X	V	V	V	V	X	X
GL ARB clear buffer object	V	V	V	V	V	X	X	X	V	V	V	X	X	X
GL ARB arrays of arrays	V	V	V	V	V	X	X	X	V	V	V	V	X	X
Support	81%	81%	81%	100%	100%	0%	0%	0%	90%	90%	90%	29%	19%	0%

OpenGL 4.2	G80	Tesla	GT21X	Fermi	Kepler	R600	RV670	RV700	Evergreen	Cayman	S.I.	HD 4000	Mesa	MacOS X
<a href="#">GL ARB transform feedback instanced</a>	X	X	X	V	V	V	V	V	V	V	V	V	V	X
<a href="#">GL ARB texture compression bptc</a>	X	X	X	V	V	X	X	X	V	V	V	V	X	X
<a href="#">GL ARB texture storage</a>	V	V	V	V	V	V	V	V	V	V	V	V	V	X
<a href="#">GL ARB shading language packing</a>	V	V	V	V	V	V	V	V	V	V	V	V	V	X
<a href="#">GL ARB shading language 420pack</a>	V	V	V	V	V	V	V	V	V	V	V	V	X	X
<a href="#">GL ARB shader image load store</a>	X	X	X	V	V	X	X	X	V	V	V	V	X	X
<a href="#">GL ARB shader atomic counters</a>	X	X	X	V	V	X	X	X	V	V	V	V	X	X
<a href="#">GL ARB map buffer alignment</a>	V	V	V	V	V	V	V	V	V	V	V	V	V	X
<a href="#">GL ARB internalformat query</a>	V	V	V	V	V	V	V	V	V	V	V	V	V	V
<a href="#">GL ARB conservative depth</a>	V	V	V	V	V	V	V	V	V	V	V	V	V	X
<a href="#">GL ARB compressed texture pixel storage</a>	V	V	V	V	V	V	V	V	V	V	V	V	X	X
<a href="#">GL ARB base instance</a>	X	X	X	V	V	X	X	X	V	V	V	V	V	X
Support	58%	58%	58%	100%	100%	67%	67%	67%	100%	100%	100%	100%	58%	8%

OpenGL 4.1	G80	Tesla	GT21X	Fermi	Kepler	R600	RV670	RV700	Evergreen	Cayman	S.I.	HD 4000	Mesa	MacOS X
<u>GL ARB viewport array</u>	V	V	V	V	V	V	V	V	V	V	V	V	X	V
<u>GL ARB vertex attrib 64bit</u>	X	X	X	V	V	X	X	X	V	V	V	V	X	V
<u>GL ARB shader precision</u>	X	X	X	V	V	V	V	V	V	V	V	V	X	V
<u>GL ARB separate shader objects</u>	V	V	V	V	V	V	V	V	V	V	V	V	X	V
<u>GL ARB get program binary</u>	V	V	V	V	V	V	V	V	V	V	V	V	V	X
<u>GL ARB ES2 compatibility</u>	V	V	V	V	V	V	V	V	V	V	V	V	V	V
Support	67%	67%	67%	100%	100%	83%	83%	83%	100%	100%	100%	100%	33%	83%

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GL NV conditional render	V	V	V	V	V	V	V	V	V		V	V	V		V	V
GL ARB color buffer float	V	V	V	V	V	V	V	V	V		V	V	V		V	V
Support	100%	100%	100%	100%	100%	100%	100%	100%	100%		100%	100%	100%		100%	100%

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