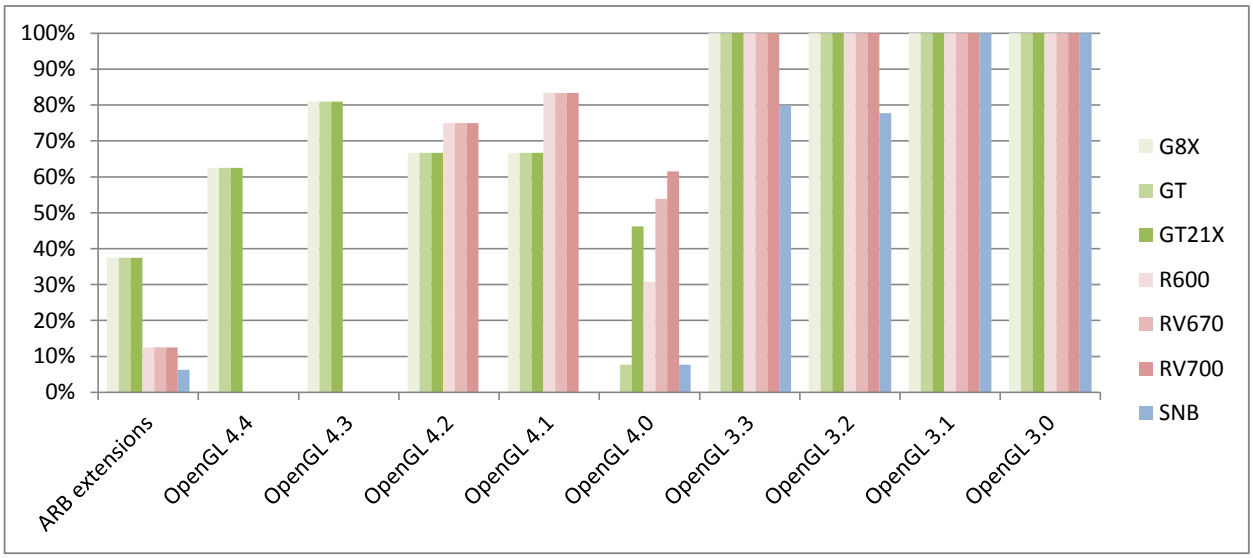
OpenGL 3 hardware matrix

Extensions exposed by OpenGL implementations

April 2014, G-Truc Creation

Vendor	NVIDIA				AMD			Intel
Drivers version	337.50				14.4 rc			3517
Release date	07/04/2014				15/04/2014			11/04/2014
Platforms	G80	G8X	GT	GT21X	R600	RV670	RV700	SNB
ARB extensions	38%	38%	38%	38%	13%	13%	13%	6%
OpenGL 4.4	63%	63%	63%	63%	0%	0%	0%	0%
OpenGL 4.3	76%	81%	81%	81%	0%	0%	0%	0%
OpenGL 4.2	67%	67%	67%	67%	75%	75%	75%	0%
OpenGL 4.1	67%	67%	67%	67%	83%	83%	83%	0%
OpenGL 4.0	0%	0%	8%	46%	31%	54%	62%	8%
OpenGL 3.3	100%	100%	100%	100%	100%	100%	100%	80%
OpenGL 3.2	100%	100%	100%	100%	100%	100%	100%	78%
OpenGL 3.1	100%	100%	100%	100%	100%	100%	100%	100%
OpenGL 3.0	100%	100%	100%	100%	100%	100%	100%	100%
OpenGL 2.1	100%	100%	100%	100%	100%	100%	100%	100%
OpenGL 2.0	100%	100%	100%	100%	100%	100%	100%	100%

G80: GeForce 8800
G8X: GeForce 8600, 8400, 9XXX, GTS 1XX
GT: Tesla, GeForce GTX 2XX
GT21X: GeForce GT 21X, GeForce GT 3XX
R600: Radeon HD 2000 series
RV670: Radeon HD 3000 series
RV700: Radeon HD 4000 series
SNB: Sandy Bridge



Nomenclature:

Supported

Not supported

OpenGL Extensions	G80	G8X	GT	GT21X	R600	RV670	RV700	SNB
KHR_texture_compression_astc_ldr	X	X	X	X	X	X	X	X
ARB_robustness	V	V	V	V	X	X	X	X
ARB_sparse_texture	X	X	X	X	X	X	X	X
ARB_shading_language_include	V	V	V	V	X	X	X	X
ARB_shader_stencil_export	X	X	X	X	X	X	X	X
ARB_shader_group_vote	X	X	X	X	X	X	X	X
ARB_shader_draw_parameters	X	X	X	X	X	X	X	X
ARB_seamless_cubemap_per_texture	X	X	X	X	X	X	X	X
ARB_robustness_isolation	V	V	V	V	X	X	X	X
ARB_robust_buffer_access_behavior	V	V	V	V	X	X	X	X
ARB_debug_output	V	V	V	V	V	V	V	X
ARB_indirect_parameters	X	X	X	X	X	X	X	X
ARB_compute_variable_group_size	X	X	X	X	X	X	X	X
ARB_compatibility	V	V	V	V	V	V	V	V
ARB_cl_event	X	X	X	X	X	X	X	X
ARB_bindless_texture	X	X	X	X	X	X	X	X
Support	38%	38%	38%	38%	13%	13%	13%	6%

OpenGL Extensions	G80	G8X	GT	GT21X	R600	RV670	RV700	SNB
EXT_texture_sRGB_decode	V	V	V	V	X	X	X	X
EXT_texture_mirror_clamp	V	V	V	V	V	V	V	X
EXT_shader_integer_mix	V	V	V	V	X	X	X	X
EXT_shader_image_load_formatted	X	X	X	X	X	X	X	X
EXT_framebuffer_multisample_blit_scaled	X	X	X	X	X	X	X	X
EXT_direct_state_access	V	V	V	V	V	V	V	X
EXT_depth_bounds_test	V	V	V	V	X	X	X	X
EXT clip_control	X	X	X	X	X	X	X	X
NV_vertex_buffer_unified_memory	V	V	V	V	X	X	X	X
NV_texture_multisample	V	V	V	V	X	X	X	X
NV_texture_barrier	V	V	V	V	V	V	V	X
NV_shader_thread_shuffle	X	X	X	X	X	X	X	X
NV_shader_thread_group	X	X	X	X	X	X	X	X
NV_shader_buffer_store	X	X	X	X	X	X	X	X
NV_shader_buffer_load	V	V	V	V	X	X	X	X
NV_shader_atomic_float	X	X	X	X	X	X	X	X
NV_multisample_coverage	V	V	V	V	X	X	X	X
NV_explicit_multisample	V	V	V	V	V	V	V	X
NV_depth_buffer_float	V	V	V	V	V	V	V	X
NV_copy_image	V	V	V	V	V	V	V	X
NV_bindless_texture	X	X	X	X	X	X	X	X
NV_bindless_multi_draw_indirect	X	X	X	X	X	X	X	X
NV_blend_equation_advanced	X	X	X	X	X	X	X	X
INTEL_map_texture	X	X	X	X	X	X	X	X
INTEL_fragment_shader_ordering	X	X	X	X	X	X	X	X

INTEL_conservative_rasterization	X	X	X	X	X	X	X	X
AMD_vertex_shader_viewport_index	X	X	X	X	X	X	X	X
AMD_vertex_shader_layer	X	X	X	X	X	X	X	X
AMD_transform_feedback4	X	X	X	X	X	X	X	X
AMD_transform_feedback3_lines_triangles	X	X	X	X	X	X	X	X
AMD_stencil_operation_extended	X	X	X	X	X	X	X	X
AMD_sparse_texture_pool	X	X	X	X	X	X	X	X
AMD_sparse_texture	X	X	X	X	X	X	X	X
AMD_shader_trinary_minmax	X	X	X	X	X	X	X	X
AMD_shader_stencil_value_export	X	X	X	X	X	X	X	X
AMD_shader_stencil_export	X	X	X	X	X	X	V	X
AMD_seamless_cubemap_per_texture	X	X	X	X	X	X	V	X
AMD_sample_positions	X	X	X	X	V	V	V	X
AMD_query_buffer_object	X	X	X	X	X	X	X	X
AMD_pinned_memory	X	X	X	X	V	V	V	X
AMD_occlusion_query_event	X	X	X	X	X	X	X	X
AMD_interleaved_elements	X	X	X	X	X	X	X	X
AMD_gpu_shader_int64	X	X	X	X	X	X	X	X
AMD_gcn_shader	X	X	X	X	X	X	X	X
AMD_framebuffer_sample_positions	X	X	X	X	X	X	X	X
AMD_blend_minmax_factor	X	X	X	X	X	X	X	X
ATI_texture_mirror_once	V	V	V	V	V	V	V	X
Support	32%	32%	32%	32%	17%	17%	21%	2%

OpenGL 4.4	G80	G8X	GT	GT21X	R600	RV670	RV700	SNB
ARB_buffer_storage	X	X	X	X	X	X	X	X
ARB_clear_texture	X	X	X	X	X	X	X	X
ARB_enhanced_layouts	V	V	V	V	X	X	X	X
ARB_multi_bind	V	V	V	V	X	X	X	X
ARB_query_buffer_object	X	X	X	X	X	X	X	X
ARB_texture_mirror_clamp_to_edge	V	V	V	V	X	X	X	X
ARB_texture_stencil8	V	V	V	V	X	X	X	X
ARB_vertex_type_10f_11f_11f_rev	V	V	V	V	X	X	X	X
Support	63%	63%	63%	63%	0%	0%	0%	0%

OpenGL 4.3	G80	G8X	GT	GT21X	R600	RV670	RV700	SNB
ARB_vertex_attrib_binding	V	V	V	V	X	X	X	X
ARB_texture_view	X	V	V	V	X	X	X	X
ARB_texture_storage_multisample	V	V	V	V	X	X	X	X
ARB_texture_query_levels	V	V	V	V	X	X	X	X
ARB_texture_buffer_range	V	V	V	V	X	X	X	X
ARB_stencil_texturing	V	V	V	V	X	X	X	X
ARB_shader_storage_buffer_object	X	X	X	X	X	X	X	X
ARB_shader_image_size	X	X	X	X	X	X	X	X
ARB_program_interface_query	V	V	V	V	X	X	X	X
ARB_multi_draw_indirect	X	X	X	X	X	X	X	X
ARB_invalidate_subdata	V	V	V	V	X	X	X	X
ARB_internalformat_query2	V	V	V	V	X	X	X	X
ARB_framebuffer_no_attachments	V	V	V	V	X	X	X	X
ARB_fragment_layer_viewport	V	V	V	V	X	X	X	X

ARB_explicit_uniform_location	V	V	V	V	X	X	X	X
ARB_ES3_compatibility	V	V	V	V	X	X	X	X
KHR_debug	V	V	V	V	X	X	X	X
ARB_copy_image	V	V	V	V	X	X	X	X
ARB_compute_shader	X	X	X	X	X	X	X	X
ARB_clear_buffer_object	V	V	V	V	X	X	X	X
ARB_arrays_of_arrays	V	V	V	V	X	X	X	X
Support	76%	81%	81%	81%	0%	0%	0%	0%

OpenGL 4.2	G80	G8X	GT	GT21X	R600	RV670	RV700	SNB
ARB_transform_feedback_instanced	X	X	X	X	V	V	V	X
ARB_texture_compression_bptc	X	X	X	X	X	X	X	X
ARB_texture_storage	V	V	V	V	V	V	V	X
ARB_shading_language_packing	V	V	V	V	V	V	V	X
ARB_shading_language_420pack	V	V	V	V	V	V	V	X
ARB_shader_image_load_store	X	X	X	X	X	X	X	X
ARB_shader_atomic_counters	X	X	X	X	X	X	X	X
ARB_map_buffer_alignment	V	V	V	V	V	V	V	X
ARB_internalformat_query	V	V	V	V	V	V	V	X
ARB_conservative_depth	V	V	V	V	V	V	V	X
ARB_compressed_texture_pixel_storage	V	V	V	V	V	V	V	X
ARB_base_instance	V	V	V	V	V	V	V	X
Support	67%	67%	67%	67%	75%	75%	75%	0%

OpenGL 4.1	G80	G8X	GT	GT21X	R600	RV670	RV700	SNB
ARB_viewport_array	V	V	V	V	V	V	V	X
ARB_vertex_attrib_64bit	X	X	X	X	X	X	X	X
ARB_shader_precision	X	X	X	X	V	V	V	X
ARB_separate_shader_objects	V	V	V	V	V	V	V	X
ARB_get_program_binary	V	V	V	V	V	V	V	X
ARB_ES2_compatibility	V	V	V	V	V	V	V	X
Support	67%	67%	67%	67%	83%	83%	83%	0%

OpenGL 4.0	G80	G8X	GT	GT21X	R600	RV670	RV700	SNB
ARB_transform_feedback3	X	X	X	X	V	V	V	X
ARB_transform_feedback2	X	X	V	V	V	V	V	X
ARB_texture_query_lod	X	X	X	V	X	X	V	V
ARB_texture_gather	X	X	X	V	X	V	V	X
ARB_texture_cube_map_array	X	X	X	V	X	V	V	X
ARB_texture_buffer_object_rgb32	X	X	X	X	V	V	V	X
ARB_tessellation_shader	X	X	X	X	X	X	X	X
ARB_shader_subroutine	X	X	X	X	X	X	X	X
ARB_sample_shading	X	X	X	V	X	V	V	X
ARB_gpu_shader5	X	X	X	X	X	X	X	X
ARB_gpu_shader_fp64	X	X	X	X	X	X	X	X
ARB_draw_indirect	X	X	X	X	X	X	X	X
ARB_draw_buffers_blend	X	X	X	V	V	V	V	X
Support	0%	0%	8%	46%	31%	54%	62%	8%

OpenGL 3.3	G80	G8X	GT	GT21X	R600	RV670	RV700	SNB

ARB_vertex_type_2_10_10_10_rev	V	V	V	V	V	V	V	V
ARB_timer_query	V	V	V	V	V	V	V	V
ARB_texture_swizzle	V	V	V	V	V	V	V	X
ARB_texture_rgb10_a2ui	V	V	V	V	V	V	V	V
ARB_shader_bit_encoding	V	V	V	V	V	V	V	V
ARB_sampler_objects	V	V	V	V	V	V	V	V
ARB_occlusion_query2	V	V	V	V	V	V	V	V
ARB_instanced_arrays	V	V	V	V	V	V	V	V
ARB_explicit_attrib_location	V	V	V	V	V	V	V	V
ARB_blend_func_extended	V	V	V	V	V	V	V	X
Support	100%	100%	100%	100%	100%	100%	100%	80%

OpenGL 3.2	G80	G8X	GT	GT21X	R600	RV670	RV700	SNB
ARB_vertex_array_bgra	V	V	V	V	V	V	V	V
ARB_texture_multisample	V	V	V	V	V	V	V	X
ARB_sync	V	V	V	V	V	V	V	V
ARB_seamless_cube_map	V	V	V	V	V	V	V	V
ARB_provoking_vertex	V	V	V	V	V	V	V	V
ARB_geometry_shader4	V	V	V	V	V	V	V	X
ARB_fragment_coord_conventions	V	V	V	V	V	V	V	V
ARB_depth_clamp	V	V	V	V	V	V	V	V
ARB_draw_elements_base_vertex	V	V	V	V	V	V	V	V
Support	100%	100%	100%	100%	100%	100%	100%	78%

OpenGL 3.1	G80	G8X	GT	GT21X	R600	RV670	RV700	SNB
ARB_uniform_buffer_object	V	V	V	V	V	V	V	V
EXT_texture_snorm	V	V	V	V	V	V	V	V
ARB_texture_rectangle	V	V	V	V	V	V	V	V
ARB_texture_buffer_object	V	V	V	V	V	V	V	V
NV_primitive_restart	V	V	V	V	V	V	V	V
ARB_draw_instanced	V	V	V	V	V	V	V	V
ARB_copy_buffer	V	V	V	V	V	V	V	V
Support	100%	100%	100%	100%	100%	100%	100%	100%

OpenGL 3.0	G80	G8X	GT	GT21X	R600	RV670	RV700	SNB
ARB_vertex_array_object	V	V	V	V	V	V	V	V
EXT_transform_feedback	V	V	V	V	V	V	V	V
ARB_texture_rg	V	V	V	V	V	V	V	V
EXT_texture_shared_exponent	V	V	V	V	V	V	V	V
EXT_texture_integer	V	V	V	V	V	V	V	V
ARB_texture_float	V	V	V	V	V	V	V	V
ARB_texture_compression_rgtc	V	V	V	V	V	V	V	V
EXT_texture_array	V	V	V	V	V	V	V	V
EXT_packed_float	V	V	V	V	V	V	V	V
EXT_packed_depth_stencil	V	V	V	V	V	V	V	V
ARB_map_buffer_range	V	V	V	V	V	V	V	V
ARB_half_float_vertex	V	V	V	V	V	V	V	V
ARB_half_float_pixel	V	V	V	V	V	V	V	V
EXT_gpu_shader4	V	V	V	V	V	V	V	V
ARB_framebuffer_sRGB	V	V	V	V	V	V	V	V

ARB_framebuffer_object	V	V	V	V	V	V	V	V
ARB_depth_buffer_float	V	V	V	V	V	V	V	V
NV_conditional_render	V	V	V	V	V	V	V	V
ARB_color_buffer_float	V	V	V	V	V	V	V	V
Support	100%	100%	100%	100%	100%	100%	100%	100%

OpenGL 2.1	G80	G8X	GT	GT21X	R600	RV670	RV700	SNB
EXT_texture_sRGB	V	V	V	V	V	V	V	V
ARB_pixel_buffer_object	V	V	V	V	V	V	V	V
Support	100%	100%	100%	100%	100%	100%	100%	100%

OpenGL 2.0	G80	G8X	GT	GT21X	R600	RV670	RV700	SNB
ARB_vertex_shader	V	V	V	V	V	V	V	V
ARB_texture_non_power_of_two	V	V	V	V	V	V	V	V
EXT_stencil_two_side	V	V	V	V	V	V	V	V
ARB_shading_language_100	V	V	V	V	V	V	V	V
ARB_shader_objects	V	V	V	V	V	V	V	V
ARB_point_sprite	V	V	V	V	V	V	V	V
ARB_fragment_shader	V	V	V	V	V	V	V	V
ARB_draw_buffers	V	V	V	V	V	V	V	V
EXT_blend_equation_separate	V	V	V	V	V	V	V	V
Support	100%	100%	100%	100%	100%	100%	100%	100%