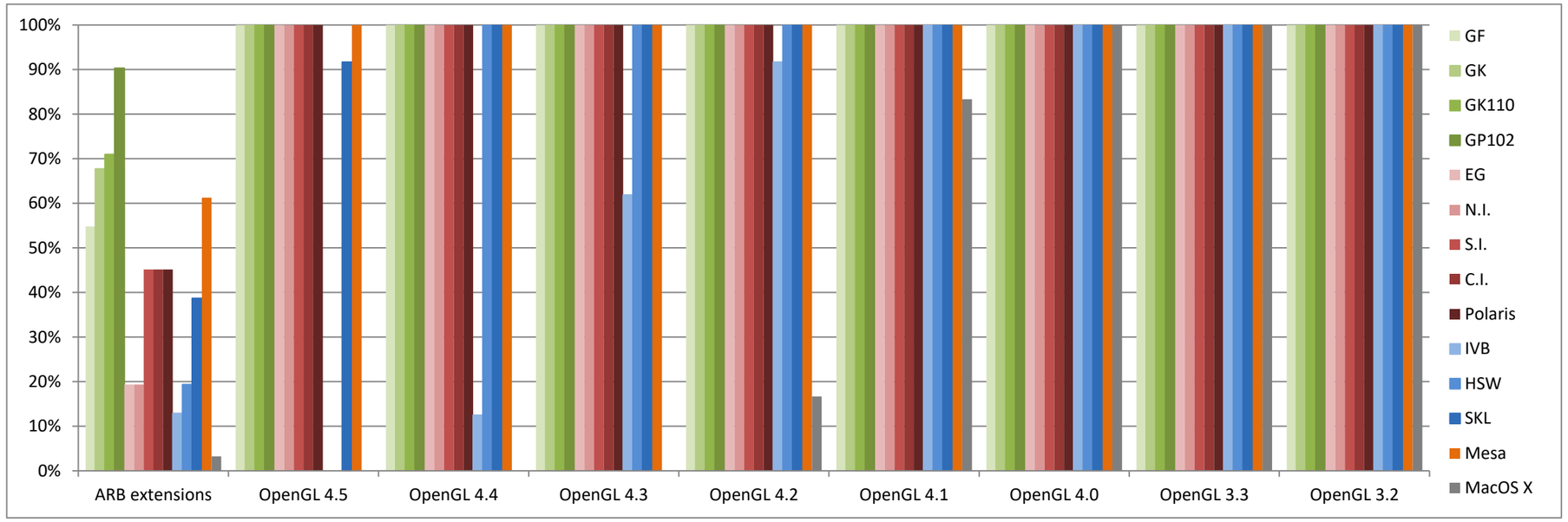
OpenGL hardware matrix

Extensions exposed by OpenGL implementations

July 2017, G-Truc Creation

GF / Fermi: GeForce 400 series, GeForce 500 series
GK / Kepler: GeForce 600 series, GeForce 700 series
GK110 / Kepler 110: GeForce 780
GM200 / Maxwell: GeForce 900 series
GP102 / Pascal: GeForce 10 series
EG / Evergreen: Radeon HD 5000 series, Radeon HD 6000 series
N.I. / Northern Islands: Radeon HD 6900 series
S.I. / Southern Islands: Radeon HD 7000 series, Radeon R7 250X, Radeon R7 265, Radeon R9 280
C.I. / Sea Islands: Radeon HD 7790, Radeon R7 240, Radeon R7 250, Radeon R7 260, Radeon R9 270
V.I. / Volcanic Islands: Radeon R9 285 / 290 / Fury
Polaris: Radeon RX 400 series, Radeon RX 500 series
SNB / Sandy Bridge: HD, HD 2000
IVB / Ivy Bridge: HD4000, HD2500
HSW / Haswell: Iris 5X00 series, HD 4X00 series
BSW / Broadwell: Iris 6X00 series, HD 5X00 series
SKL / Skulake: Iris and HD 500 series, Iris and HD 600 series

Vendor	NVIDIA					AMD						Intel				Mesa	Apple
Drivers version	384.80					17.7.1						4229	4332	4703	4729	git	10.11.3
Platforms	GF	GK	GK110	GM200	GP102	EG	N.I.	S.I.	C.I.	V.I.	Polaris	IVB	HSW	BDW	SKL	Mesa	MacOS X
ARB extensions	55%	68%	71%	90%	90%	19%	19%	45%	45%	45%	45%	13%	19%	19%	39%	61%	3%
OpenGL 4.5	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	0%	0%	25%	92%	100%	0%
OpenGL 4.4	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	13%	100%	100%	100%	100%	0%
OpenGL 4.3	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	62%	100%	100%	100%	100%	0%
OpenGL 4.2	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	92%	100%	100%	100%	100%	17%
OpenGL 4.1	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	83%
OpenGL 4.0	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
OpenGL 3.3	100%	100%	100%	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%	100%	100%	100%	100%	100%



Nomenclature:

Supported

Not supported

Support added from previous report

OpenGL Extensions	GF	GK	GK110	GM200	GP102	EG	N.I.	S.I.	C.I.	V.I.	Polaris	IVB	HSW	BDW	SKL	Mesa	MacOS X
KHR_texture_compression_astc_sliced_3d	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	V	X
KHR_texture_compression_astc_ldr	X	X	X	X	X	X	X	X	X	X	X	X	X	X	V	V	X
KHR_texture_compression_astc_hdr	X	X	X	X	X	X	X	X	X	X	X	X	X	X	V	V	X
KHR_no_error	V	V	V	V	V	X	X	X	X	X	X	X	X	X	X	V	X
KHR_blend_equation_advanced	V	V	V	V	V	X	X	X	X	X	X	X	V	V	V	V	X
KHR_blend_equation_advanced_coherent	X	X	V	V	V	X	X	X	X	X	X	X	X	X	V	V	X
ARB_transform_feedback_overflow_query	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	X
ARB_texture_filter_minmax	X	X	X	V	V	X	X	X	X	X	X	X	X	X	X	X	X
ARB_robustness	V	V	V	V	V	X	X	X	X	X	X	V	V	V	V	X	X
ARB_sparse_texture_clamp	X	X	X	V	V	X	X	X	X	X	X	X	X	X	X	X	X
ARB_sparse_texture2	X	X	X	V	V	X	X	X	X	X	X	X	X	X	X	X	X
ARB_sparse_texture	V	V	V	V	V	X	X	V	V	V	V	X	X	X	X	X	X
ARB_sparse_buffer	V	V	V	V	V	X	X	V	V	V	V	X	X	X	X	V	X
ARB_shader_viewport_layer_array	X	X	X	V	V	X	X	X	X	X	X	X	X	X	X	V	X
ARB_shading_language_include	V	V	V	V	V	X	X	X	X	X	X	X	X	X	X	X	V
ARB_shader_stencil_export	X	X	X	X	X	V	V	V	V	V	V	X	X	X	V	V	X
ARB_shader_group_vote	V	V	V	V	V	X	X	V	V	V	V	X	X	X	X	V	X
ARB_shader_draw_parameters	V	V	V	V	V	X	X	V	V	V	V	X	X	X	V	V	X
ARB_shader_clock	X	V	V	V	V	X	X	X	X	X	X	X	X	X	X	V	X
ARB_shader_ballot	X	V	V	V	V	X	X	V	V	V	V	X	X	X	X	V	X
ARB_shader_atomic_counter_ops	X	X	X	X	X	X	X	V	V	V	V	X	X	X	X	V	X
ARB_seamless_cubemap_per_texture	X	V	V	V	V	V	V	V	V	V	V	X	V	V	V	V	X
ARB_sample_locations	X	X	X	V	V	X	X	X	X	X	X	X	X	X	X	X	X
ARB_robustness_isolation	V	V	V	V	V	X	X	X	X	X	X	X	X	X	V	X	X

ARB_post_depth_coverage	V	V	V	V	V	X	X	X	X	X	X	X	X	X	V	V	X
ARB_pipeline_statistics_query	V	V	V	V	V	V	V	V	V	V	V	X	X	X	X	V	X
ARB_parallel_shader_compile	V	V	V	V	V	X	X	X	X	X	X	X	X	X	X	X	X
ARB_gpu_shader_int64	V	V	V	V	V	X	X	X	X	X	X	X	X	X	X	V	X
ARB_fragment_shader_interlock	X	X	X	V	V	X	X	X	X	X	X	X	X	X	X	X	X
ARB_ES3_2_compability	V	V	V	V	V	X	X	X	X	X	X	X	X	X	X	V	X
ARB_debug_output	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	X
ARB_indirect_parameters	V	V	V	V	V	X	X	V	V	V	V	X	V	V	V	V	X
ARB_compute_variable_group_size	V	V	V	V	V	X	X	X	X	X	X	X	X	X	X	V	X
ARB_compatibility	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	X	X
ARB_cl_event	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ARB_bindless_texture	X	V	V	V	V	X	X	V	V	V	V	X	X	X	V	V	X
ARB_gl_spirv	X	V	V	V	V	X	X	V	V	V	V	X	X	X	X	X	X
Support	54%	66%	69%	86%	86%	17%	17%	40%	40%	40%	40%	11%	20%	20%	43%	65%	3%

OpenGL Extensions	GF	GK	GM100	GM200	GP102	EG	N.I.	S.I.	C.I.	V.I.	Polaris	IVB	HSW	BDW	SKL	Mesa	MacOS X
WGL_EXT_colorspace	V	V	V	V	V	X	X	X	X	X	X	X	X	X	X	X	X
WGL_EXT_swap_control_tear	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	X	X
EXT_window_rectangles	V	V	V	V	V	X	X	X	X	X	X	X	X	X	X	X	X
EXT_texture_compression_dxt1	V	V	V	V	V	X	X	X	X	X	X	X	X	X	X	V	V
EXT_texture_compression_s3tc	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	X	V
EXT_texture_sRGB_decode	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V
EXT_texture_mirror_clamp	V	V	V	V	V	V	V	V	V	V	V	X	X	X	X	X	V
EXT_texture_filter_minmax	X	X	X	V	V	X	X	X	X	X	X	X	X	X	X	X	X
EXT_shader_integer_mix	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	X
EXT_shader_image_load_formatted	X	X	X	V	V	X	X	X	X	X	X	X	X	X	X	X	X
EXT_shader_framebuffer_fetch	X	X	X	X	X	X	X	X	X	X	X	X	X	X	V	X	X
EXT_sparse_texture2	X	X	X	V	V	X	X	X	X	X	X	X	X	X	X	X	X
EXT_raster_multisample	X	X	X	V	V	X	X	X	X	X	X	X	X	X	X	X	X
EXT_post_depth_coverage	X	X	X	V	V	X	X	X	X	X	X	X	X	X	X	X	X
EXT_polygon_offset_clamp	V	V	V	V	V	V	V	V	V	V	V	X	V	V	V	X	X
EXT_framebuffer_multisample_blit_scaled	V	V	V	V	V	X	X	X	X	X	X	X	X	X	X	V	V
EXT_direct_state_access	V	V	V	V	V	V	V	V	V	V	V	X	V	V	V	X	X
EXT_depth_bounds_test	V	V	V	V	V	X	X	V	V	V	V	X	X	X	X	X	V
EXT clip_control	X	X	X	X	X	X	X	X	X	X	X	X	V	V	V	X	X
NV_viewport_array2	X	X	X	V	V	X	X	X	X	X	X	X	X	X	X	X	X
NV_vertex_buffer_unified_memory	V	V	V	V	V	X	X	X	X	X	X	X	X	X	X	X	X
NV_uniform_buffer_unified_memory	V	V	V	V	V	X	X	X	X	X	X	X	X	X	X	X	X
NV_texture_multisample	V	V	V	V	V	X	X	X	X	X	X	X	X	X	X	X	X
NV_texture_barrier	V	V	V	V	V	V	V	V	V	V	V	X	X	X	X	X	V
NV_shader_thread_shuffle	X	V	V	V	V	X	X	X	X	X	X	X	X	X	X	X	X
NV_shader_thread_group	V	V	V	V	V	X	X	X	X	X	X	X	X	X	X	X	X
NV_shader_buffer_store	V	V	V	V	V	X	X	X	X	X	X	X	X	X	X	X	X
NV_shader_buffer_load	V	V	V	V	V	X	X	X	X	X	X	X	X	X	X	X	X
NV_shader_atomic_fp16_vector	X	X	X	V	V	X	X	X	X	X	X	X	X	X	X	X	X
NV_shader_atomic_float64	X	X	X	X	V	X	X	X	X	X	X	X	X	X	X	X	X
NV_shader_atomic_float	V	V	V	V	V	X	X	X	X	X	X	X	X	X	X	X	X
NV_shader_atomic_int64	X	X	V	V	V	X	X	X	X	X	X	X	X	X	X	X	X
NV_sample_mask_override_coverage	X	X	X	V	V	X	X	X	X	X	X	X	X	X	X	X	X
NV_sample_locations	X	X	X	V	V	X	X	X	X	X	X	X	X	X	X	X	X

NV_path_rendering_shared_edge	X	X	X	V	V	X	X	X	X	X	X	X	X	X	X	X	X
NV_path_rendering	V	V	V	V	V	X	X	X	X	X	X	X	X	X	X	X	X
NV_multisample_coverage	V	V	V	V	V	X	X	X	X	X	X	X	X	X	X	X	X
NV_internalformat_sample_query	X	X	X	V	V	X	X	X	X	X	X	X	X	X	X	X	X
NV_geometry_shader_passthrough	X	X	X	V	V	X	X	X	X	X	X	X	X	X	X	X	X
NV_framebuffer_mixed_samples	X	X	X	V	V	X	X	X	X	X	X	X	X	X	X	X	X
NV_fragment_shader_interlock	X	X	X	V	V	X	X	X	X	X	X	X	X	X	X	X	X
NV_fragment_coverage_to_color	X	X	X	V	V	X	X	X	X	X	X	X	X	X	X	X	X
NV_fill_rectangle	X	X	X	V	V	X	X	X	X	X	X	X	X	X	X	X	X
NV_explicit_multisample	V	V	V	V	V	V	V	V	V	V	V	X	X	X	X	X	X
NV_draw_vulkan_image	X	V	V	V	V	X	X	X	X	X	X	X	X	X	X	X	X
NV_depth_buffer_float	V	V	V	V	V	V	V	V	V	V	V	X	X	X	X	X	X
NV_copy_image	V	V	V	V	V	V	V	V	V	V	V	X	X	X	X	X	X
NV_command_list	X	X	X	V	V	X	X	X	X	X	X	X	X	X	X	X	X
NV_conservative_raster_pre_snap_triangles	X	X	X	X	V	X	X	X	X	X	X	X	X	X	X	X	X
NV_conservative_raster_dilate	X	X	X	V	V	X	X	X	X	X	X	X	X	X	X	X	X
NV_conservative_raster	X	X	X	V	V	X	X	X	X	X	X	X	X	X	X	X	X
NV_clip_space_w_scaling	X	X	X	X	V	X	X	X	X	X	X	X	X	X	X	X	X
NV_bindless_texture	X	V	V	V	V	X	X	X	X	X	X	X	X	X	X	X	X
NV_bindless_multi_draw_indirect_count	V	V	V	V	V	X	X	X	X	X	X	X	X	X	X	X	X
NV_bindless_multi_draw_indirect	V	V	V	V	V	X	X	X	X	X	X	X	X	X	X	X	X
NV_blend_equation_advanced	V	V	V	V	V	X	X	X	X	X	X	X	X	X	X	X	X
INTEL_multi_rate_fragment_shader	X	X	X	X	X	X	X	X	X	X	X	X	X	X	V	X	X
INTEL_map_texture	X	X	X	X	X	X	X	X	X	X	X	V	V	V	V	X	X
INTEL_fragment_shader_ordering	X	X	X	X	X	X	X	V	V	V	V	X	V	V	V	X	X
INTEL_conservative_rasterization	X	X	X	X	X	X	X	X	X	X	X	X	X	X	V	X	X
ANGLE_texture_compression_dxt5	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	V	X
ANGLE_texture_compression_dxt3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	V	X
AMD_vertex_shader_viewport_index	X	X	X	X	X	V	V	V	V	V	V	X	V	V	V	X	X
AMD_vertex_shader_layer	X	X	X	X	X	V	V	V	V	V	V	X	V	V	V	V	X
AMD_transform_feedback4	X	X	X	X	X	X	X	V	V	V	V	X	X	X	X	X	X
AMD_transform_feedback3_lines_triangles	X	X	X	X	X	X	V	V	V	V	V	X	X	X	X	X	X
AMD_stencil_operation_extended	X	X	X	X	X	X	X	V	V	V	V	X	X	X	X	X	X
AMD_sparse_texture_pool	X	X	X	X	X	X	X	X	V	V	V	X	X	X	X	X	X
AMD_sparse_texture	X	X	X	X	X	X	X	V	V	V	V	X	X	X	X	X	X
AMD_shader_trinary_minmax	X	X	X	X	X	X	X	V	V	V	V	X	X	X	X	V	X
AMD_shader_stencil_value_export	X	X	X	X	X	X	X	V	V	V	V	X	X	X	X	X	X
AMD_shader_stencil_export	X	X	X	X	X	V	V	V	V	V	V	X	X	X	X	X	X
AMD_seamless_cubemap_per_texture	X	V	V	V	V	V	V	V	V	V	V	X	X	X	X	V	X
AMD_sample_positions	X	X	X	X	X	V	V	V	V	V	V	X	X	X	X	X	X
AMD_query_buffer_object	X	X	X	X	X	V	V	V	V	V	V	X	X	X	X	X	X
AMD_pinned_memory	X	X	X	X	X	V	V	V	V	V	V	X	X	X	X	X	X
AMD_performance_monitor	X	X	X	X	X	V	V	V	V	V	V	X	X	X	X	V	X
AMD_occlusion_query_event	X	X	X	X	X	X	X	X	V	V	V	X	X	X	X	X	X
AMD_interleaved_elements	X	X	X	X	X	X	X	V	V	V	V	X	X	X	X	X	X
AMD_gpu_shader_half_float	X	X	X	X	X	X	X	X	X	V	V	X	X	X	X	X	X
AMD_gpu_shader_half_float2	X	X	X	X	X	X	X	X	X	V	V	X	X	X	X	X	X
AMD_gpu_shader_int64	X	X	X	X	X	X	X	V	V	V	V	X	X	X	X	X	X
AMD_gcn_shader	X	X	X	X	X	X	X	V	V	V	V	X	X	X	X	X	X
AMD_framebuffer_sample_positions	X	X	X	X	X	X	X	V	V	V	V	X	X	X	X	X	X

AMD_depth_clamp_separate	X	X	X	X	X	V	V	V	V	V	V	X	X	X	V	X	X
AMD_blend_minmax_factor	X	X	X	X	X	X	V	V	V	V	V	X	X	X	X	X	X
ATI_texture_mirror_once	V	V	V	V	V	V	V	V	V	V	V	X	X	X	X	X	V
Support	40%	48%	50%	71%	74%	22%	24%	40%	42%	43%	43%	7%	15%	15%	25%	27%	7%

OpenGL 4.5	GF	GK	GM100	GM200	GP102	EG	N.I.	S.I.	C.I.	V.I.	Polaris	IVB	HSW	BDW	SKL	Mesa	MacOS X
KHR_context_flush_control	V	V	V	V	V	V	V	V	V	V	V	X	X	X	V	V	X
KHR_robust_buffer_access_behavior	V	V	V	V	V	V	V	V	V	V	V	X	X	V	V	V	X
KHR_robustness	V	V	V	V	V	V	V	V	V	V	V	X	X	X	X	V	X
ARB_ES3_1_compatibility	V	V	V	V	V	V	V	V	V	V	V	X	X	X	V	V	X
ARB_clip_control	V	V	V	V	V	V	V	V	V	V	V	X	X	V	V	V	X
ARB_conditional_render_inverted	V	V	V	V	V	V	V	V	V	V	V	X	X	X	V	V	X
ARB_cull_distance	V	V	V	V	V	V	V	V	V	V	V	X	X	X	V	V	X
ARB_derivative_control	V	V	V	V	V	V	V	V	V	V	V	X	X	X	V	V	X
ARB_direct_state_access	V	V	V	V	V	V	V	V	V	V	V	X	X	X	V	V	X
ARB_get_texture_sub_image	V	V	V	V	V	V	V	V	V	V	V	X	X	X	V	V	X
ARB_shader_texture_image_samples	V	V	V	V	V	V	V	V	V	V	V	X	X	X	V	V	X
ARB_texture_barrier	V	V	V	V	V	V	V	V	V	V	V	X	X	V	V	V	X
Support	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	0%	0%	25%	92%	100%	0%

OpenGL 4.4	GF	GK	GM100	GM200	GP102	EG	N.I.	S.I.	C.I.	V.I.	Polaris	IVB	HSW	BDW	SKL	Mesa	MacOS X
ARB_buffer_storage	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	X
ARB_clear_texture	V	V	V	V	V	V	V	V	V	V	V	X	V	V	V	V	X
ARB_enhanced_layouts	V	V	V	V	V	V	V	V	V	V	V	X	V	V	V	V	X
ARB_multi_bind	V	V	V	V	V	V	V	V	V	V	V	X	V	V	V	V	X
ARB_query_buffer_object	V	V	V	V	V	V	V	V	V	V	V	X	V	V	V	V	X
ARB_texture_mirror_clamp_to_edge	V	V	V	V	V	V	V	V	V	V	V	X	V	V	V	V	X
ARB_texture_stencil8	V	V	V	V	V	V	V	V	V	V	V	X	V	V	V	V	X
ARB_vertex_type_10f_11f_11f_rev	V	V	V	V	V	V	V	V	V	V	V	X	V	V	V	V	X
Support	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	13%	100%	100%	100%	100%	0%

OpenGL 4.3	GF	GK	GM100	GM200	GP102	EG	N.I.	S.I.	C.I.	V.I.	Polaris	IVB	HSW	BDW	SKL	Mesa	MacOS X
ARB_vertex_attrib_binding	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	X
ARB_texture_view	V	V	V	V	V	V	V	V	V	V	V	X	V	V	V	V	X
ARB_texture_storage_multisample	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	X
ARB_texture_query_levels	V	V	V	V	V	V	V	V	V	V	V	X	V	V	V	V	X
ARB_texture_buffer_range	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	X
ARB_stencil_texturing	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	X
ARB_shader_storage_buffer_object	V	V	V	V	V	V	V	V	V	V	V	X	V	V	V	V	X
ARB_shader_image_size	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	X
ARB_program_interface_query	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	X
ARB_multi_draw_indirect	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	X
ARB_invalidate_subdata	V	V	V	V	V	V	V	V	V	V	V	X	V	V	V	V	X
ARB_internalformat_query2	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	X
ARB_framebuffer_no_attachments	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	X
ARB_fragment_layer_viewport	V	V	V	V	V	V	V	V	V	V	V	X	V	V	V	V	X
ARB_explicit_uniform_location	V	V	V	V	V	V	V	V	V	V	V	X	V	V	V	V	X
ARB_ES3_compatibility	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	X
KHR_debug	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	X
ARB_copy_image	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	X

ARB_compute_shader	V	V	V	V	V	V	V	V	V	V	V	X	V	V	V	V	X
ARB_clear_buffer_object	V	V	V	V	V	V	V	V	V	V	V	X	V	V	V	V	X
ARB_arrays_of_arrays	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	X
Support	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	62%	100%	100%	100%	100%	0%

OpenGL 4.2	GF	GK	GM100	GM200	GP102	EG	N.I.	S.I.	C.I.	V.I.	Polaris	IVB	HSW	BDW	SKL	Mesa	MacOS X
ARB_transform_feedback_instanced	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	X
ARB_texture_compression_bptc	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	X
ARB_texture_storage	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V
ARB_shading_language_packing	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	X
ARB_shading_language_420pack	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	X
ARB_shader_image_load_store	V	V	V	V	V	V	V	V	V	V	V	X	V	V	V	V	X
ARB_shader_atomic_counters	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	X
ARB_map_buffer_alignment	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	X
ARB_internalformat_query	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V
ARB_conservative_depth	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	X
ARB_compressed_texture_pixel_storage	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	X
ARB_base_instance	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	X
Support	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	92%	100%	100%	100%	100%	17%

OpenGL 4.1	GF	GK	GM100	GM200	GP102	EG	N.I.	S.I.	C.I.	V.I.	Polaris	IVB	HSW	BDW	SKL	Mesa	MacOS X
ARB_viewport_array	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V
ARB_vertex_attrib_64bit	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V
ARB_shader_precision	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V
ARB_separate_shader_objects	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V
ARB_get_program_binary	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	X
ARB_ES2_compatibility	V	V	V	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%	100%	100%	83%

OpenGL 4.0	GF	GK	GM100	GM200	GP102	EG	N.I.	S.I.	C.I.	V.I.	Polaris	IVB	HSW	BDW	SKL	Mesa	MacOS X
ARB_transform_feedback3	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V
ARB_transform_feedback2	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V
ARB_texture_query_lod	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V
ARB_texture_gather	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V
ARB_texture_cube_map_array	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V
ARB_texture_buffer_object_rgb32	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V
ARB_tessellation_shader	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V
ARB_shader_subroutine	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V
ARB_sample_shading	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V
ARB_gpu_shader5	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V
ARB_gpu_shader_fp64	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V
ARB_draw_indirect	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V
ARB_draw_buffers_blend	V	V	V	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%	100%	100%	100%

OpenGL 3.3	GF	GK	GM100	GM200	GP102	EG	N.I.	S.I.	C.I.	V.I.	Polaris	IVB	HSW	BDW	SKL	Mesa	MacOS X
ARB_vertex_type_2_10_10_10_rev	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V
ARB_timer_query	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V
ARB_texture_swizzle	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V
ARB_texture_rgb10_a2ui	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V

ARB_shader_bit_encoding	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	
ARB_sampler_objects	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	
ARB_occlusion_query2	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	
ARB_instanced_arrays	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	
ARB_explicit_attrib_location	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	
ARB_blend_func_extended	V	V	V	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%	100%		100%	100%

OpenGL 3.2	GF	GK	GM100	GM200	GP102	EG	N.I.	S.I.	C.I.	V.I.	Polaris	IVB	HSW	BDW	SKL	Mesa	MacOS X
ARB_vertex_array_bgra	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V
ARB_texture_multisample	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V
ARB_sync	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V
ARB_seamless_cube_map	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V
ARB_provoking_vertex	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V
ARB_geometry_shader4	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V
ARB_fragment_coord_conventions	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V
ARB_depth_clamp	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V
ARB_draw_elements_base_vertex	V	V	V	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%	100%	100%	100%