

Graphics Feature Status

- Canvas: **Hardware accelerated**
- Flash: **Hardware accelerated**
- Flash Stage3D: **Hardware accelerated**
- Flash Stage3D Baseline profile: **Hardware accelerated**
- Compositing: **Hardware accelerated**
- Multiple Raster Threads: **Force enabled**
- Rasterization: **Software only. Hardware acceleration disabled**
- Video Decode: **Hardware accelerated**
- Video Encode: **Hardware accelerated**
- WebGL: **Hardware accelerated**

Driver Bug Workarounds

- `clear_uniforms_before_first_program_use`
- `count_all_in_varyings_packing`
- `disable_post_sub_buffers_for_onscreen_surfaces`
- `disable_texture_storage`
- `scalarize_vec_and_mat_constructor_args`

Problems Detected

- EXT_occlusion_query appears to be buggy with Intel GPUs on Linux
- Clear uniforms before first program use on all platforms: [124764](#), [349137](#)
Applied Workarounds: `clear_uniforms_before_first_program_use`
- Mesa drivers in Linux handle varyings without static use incorrectly: [333885](#)
Applied Workarounds: `count_all_in_varyings_packing`
- Disable partial swaps on linux drivers: [339493](#)
Applied Workarounds: `disable_post_sub_buffers_for_onscreen_surfaces`
- Always rewrite vec/mat constructors to be consistent: [398694](#)
Applied Workarounds: `scalarize_vec_and_mat_constructor_args`
- Linux Mesa drivers crash on `glTexSubImage2D()` to texture storage bound to FBO: [521904](#)
Applied Workarounds: `disable_texture_storage`
- Accelerated rasterization has been disabled, either via `about:flags` or command line.
*Disabled Features: **rasterization***

GpuMemoryBuffer Status

ATC	Software only
ATCIA	Software only
DXT1	Software only
DXT5	Software only
ETC1	Software only
R_8	Software only
RGBA_4444	Software only
RGBX_8888	Software only
RGBA_8888	Software only
BGRX_8888	Software only
BGRA_8888	Software only

YUV_420	Software only
YUV_420_BIPLANAR	Software only
UYVY_422	Software only

Version Information

Data exported	11/29/2016, 4:45:16 AM
Chrome version	Chrome/48.0.2564.82
Operating system	Linux 4.1.14-galliumos
Software rendering list version	0
Driver bug list version	8.32
ANGLE commit id	unknown hash
2D graphics backend	Skia
Command Line Args	--enable-pinch --flag-switches-begin --ignore-gpu-blacklist --num-raster-threads=2 --flag-switches-end

Driver Information

Initialization time	165
In-process GPU	false
Sandboxed	true
GPU0	VENDOR = 0x8086, DEVICE= 0x1606
Optimus	false
AMD switchable	false
Driver vendor	Mesa
Driver version	10.5.9
Driver date	
Pixel shader version	1.30
Vertex shader version	1.30
Max. MSAA samples	8
Machine model name	
Machine model version	
GL_VENDOR	Intel Open Source Technology Center
GL_RENDERER	Mesa DRI Intel(R) Broadwell GT1
GL_VERSION	3.0 Mesa 10.5.9
	GL_ARB_ES2_compatibility GL_ARB_ES3_compatibility GL_ARB_blend_func_extended GL_ARB_buffer_storage GL_ARB_clear_buffer_object GL_ARB_clear_texture GL_ARB_color_buffer_float GL_ARB_compressed_texture_pixel_storage GL_ARB_conditional_render_inverted GL_ARB_copy_buffer

GL_ARB_copy_image GL_ARB_conservative_depth
GL_ARB_debug_output GL_ARB_depth_buffer_float
GL_ARB_depth_clamp GL_ARB_depth_texture
GL_ARB_derivative_control GL_ARB_draw_buffers
GL_ARB_draw_buffers_blend GL_ARB_draw_elements_base_vertex
GL_ARB_draw_instanced GL_ARB_explicit_attrib_location
GL_ARB_explicit_uniform_location
GL_ARB_fragment_coord_conventions GL_ARB_fragment_program
GL_ARB_fragment_program_shadow GL_ARB_fragment_shader
GL_ARB_framebuffer_object GL_ARB_framebuffer_sRGB
GL_ARB_get_program_binary GL_ARB_half_float_pixel
GL_ARB_half_float_vertex GL_ARB_instanced_arrays
GL_ARB_internalformat_query GL_ARB_invalidate_subdata
GL_ARB_map_buffer_alignment GL_ARB_map_buffer_range
GL_ARB_multi_bind GL_ARB_multisample GL_ARB_multitexture
GL_ARB_pixel_buffer_object GL_ARB_point_parameters
GL_ARB_point_sprite GL_ARB_provoking_vertex
GL_ARB_robustness GL_ARB_sample_shading
GL_ARB_sampler_objects GL_ARB_seamless_cube_map
GL_ARB_seamless_cubemap_per_texture
GL_ARB_separate_shader_objects
GL_ARB_shader_atomic_counters GL_ARB_shader_bit_encoding
GL_ARB_shader_objects GL_ARB_shader_texture_lod
GL_ARB_shading_language_100
GL_ARB_shading_language_packing
GL_ARB_shading_language_420pack GL_ARB_shadow
GL_ARB_stencil_texturing GL_ARB_sync
GL_ARB_texture_border_clamp GL_ARB_texture_compression
GL_ARB_texture_compression_bptc
GL_ARB_texture_compression_rgtc GL_ARB_texture_cube_map
GL_ARB_texture_cube_map_array GL_ARB_texture_env_add
GL_ARB_texture_env_combine GL_ARB_texture_env_crossbar
GL_ARB_texture_env_dot3 GL_ARB_texture_float
GL_ARB_texture_gather GL_ARB_texture_mirrored_repeat
GL_ARB_texture_mirror_clamp_to_edge
GL_ARB_texture_multisample GL_ARB_texture_non_power_of_two
GL_ARB_texture_query_levels GL_ARB_texture_query_lod
GL_ARB_texture_rectangle GL_ARB_texture_rgb10_a2ui
GL_ARB_texture_rg GL_ARB_texture_storage
GL_ARB_texture_storage_multisample GL_ARB_texture_view
GL_ARB_texture_swizzle GL_ARB_timer_query
GL_ARB_transform_feedback2 GL_ARB_transform_feedback3
GL_ARB_transform_feedback_instanced GL_ARB_transpose_matrix
GL_ARB_uniform_buffer_object GL_ARB_vertex_array_bgra
GL_ARB_vertex_array_object GL_ARB_vertex_attrib_binding
GL_ARB_vertex_buffer_object GL_ARB_vertex_program
GL_ARB_vertex_shader GL_ARB_vertex_type_10f_11f_11f_rev
GL_ARB_vertex_type_2_10_10_10_rev GL_ARB_window_pos
GL_EXT_abgr GL_EXT_bgra GL_EXT_blend_color
GL_EXT_blend_equation_separate GL_EXT_blend_func_separate

GL_EXTENSIONS

GL_EXT_blend_minmax GL_EXT_blend_subtract
GL_EXT_compiled_vertex_array GL_EXT_copy_texture
GL_EXT_draw_buffers2 GL_EXT_draw_instanced
GL_EXT_draw_range_elements GL_EXT_fog_coord
GL_EXT_framebuffer_blit GL_EXT_framebuffer_multisample
GL_EXT_framebuffer_multisample_blit_scaled
GL_EXT_framebuffer_object GL_EXT_framebuffer_sRGB
GL_EXT_gpu_program_parameters GL_EXT_multi_draw_arrays
GL_EXT_packed_depth_stencil GL_EXT_packed_float
GL_EXT_packed_pixels GL_EXT_pixel_buffer_object
GL_EXT_point_parameters GL_EXT_polygon_offset
GL_EXT_polygon_offset_clamp GL_EXT_provoking_vertex
GL_EXT_rescale_normal GL_EXT_secondary_color
GL_EXT_separate_specular_color GL_EXT_shader_integer_mix
GL_EXT_shadow_funcs GL_EXT_stencil_two_side
GL_EXT_stencil_wrap GL_EXT_subtexture GL_EXT_texture3D
GL_EXT_texture_array GL_EXT_texture_compression_dxt1
GL_ANGLE_texture_compression_dxt3
GL_ANGLE_texture_compression_dxt5
GL_EXT_texture_compression_rgtc
GL_EXT_texture_compression_s3tc GL_EXT_texture_cube_map
GL_EXT_texture_edge_clamp GL_EXT_texture_env_add
GL_EXT_texture_env_combine GL_EXT_texture_env_dot3
GL_EXT_texture_filter_anisotropic GL_EXT_texture_integer
GL_EXT_texture_lod_bias GL_EXT_texture_object GL_EXT_texture
GL_EXT_texture_rectangle GL_EXT_texture_shared_exponent
GL_EXT_texture_snorm GL_EXT_texture_sRGB
GL_EXT_texture_sRGB_decode GL_EXT_texture_swizzle
GL_EXT_timer_query GL_EXT_transform_feedback
GL_EXT_vertex_array_bgra GL_EXT_vertex_array
GL_OES_EGL_image GL_OES_read_format GL_KHR_debug
GL_KHR_context_flush_control
GL_3DFX_texture_compression_FXT1 GL_AMD_conservative_depth
GL_AMD_draw_buffers_blend
GL_AMD_seamless_cubemap_per_texture
GL_AMD_shader_trinary_minmax GL_APPLE_object_purgeable
GL_APPLE_packed_pixels GL_APPLE_vertex_array_object
GL_ATI_blend_equation_separate GL_ATI_draw_buffers
GL_ATI_separate_stencil GL_ATI_texture_env_combine3
GL_ATI_texture_float GL_IBM_multimode_draw_arrays
GL_IBM_rasterpos_clip GL_IBM_texture_mirrored_repeat
GL_INGR_blend_func_separate GL_MESA_pack_invert
GL_MESA_texture_signed_rgba GL_MESA_window_pos
GL_NV_blend_square GL_NV_conditional_render
GL_NV_depth_clamp GL_NV_light_max_exponent
GL_NV_packed_depth_stencil GL_NV_primitive_restart
GL_NV_texgen_reflection GL_NV_texture_env_combine4
GL_NV_texture_rectangle GL_S3_s3tc GL_SGIS_generate_mipmap
GL_SGIS_texture_border_clamp GL_SGIS_texture_edge_clamp
GL_SGIS_texture_lod GL_SUN_multi_draw_arrays

Disabled Extensions	GL_ARB_occlusion_query GL_ARB_occlusion_query2
Window system binding vendor	SGI
Window system binding version	1.4
Window system binding extensions	GLX_ARB_create_context GLX_ARB_create_context_profile GLX_ARB_create_context_robustness GLX_ARB_fbconfig_float GLX_ARB_framebuffer_sRGB GLX_ARB_multisample GLX_EXT_create_context_es2_profile GLX_EXT_framebuffer_sRGB GLX_EXT_import_context GLX_EXT_texture_from_pixmap GLX_EXT_visual_info GLX_EXT_visual_rating GLX_MESA_copy_sub_buffer GLX_OML_swap_method GLX_SGI_swap_control GLX_SGIS_multisample GLX_SGIX_fbconfig GLX_SGIX_pbuffer GLX_SGIX_visual_select_group GLX_INTEL_swap_event
Window manager	Xfwm4
XDG_CURRENT_DESKTOP 	XFCE
Compositing manager	Yes
Direct rendering	Yes
Reset notification strategy	0x8252
GPU process crash count	0