

Copy Report to Clipboard

Graphics Feature Status

- Canvas: **Hardware accelerated**
- CheckerImaging: **Disabled**
- Flash: **Hardware accelerated**
- Flash Stage3D: **Hardware accelerated**
- Flash Stage3D Baseline profile: **Hardware accelerated**
- Compositing: **Hardware accelerated**
- Multiple Raster Threads: **Enabled**
- Native GpuMemoryBuffers: **Software only. Hardware acceleration disabled**
- Rasterization: **Software only. Hardware acceleration disabled**
- Surface Synchronization: **Enabled**
- Video Decode: **Hardware accelerated**
- Viz Service Display Compositor: **Disabled**
- WebGL: **Hardware accelerated**
- WebGL2: **Hardware accelerated**

Driver Bug Workarounds


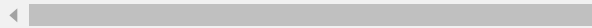
- `adjust_src_dst_region_for_blitframebuffer`
- `clear_uniforms_before_first_program_use`
- `count_all_in_varyings_packing`
- `decode_encode_srgb_for_generatemipmap`
- `disable_framebuffer_cmaa`
- `disable_post_sub_buffers_for_onscreen_surfaces`
- `disable_texture_storage`
- `mssa_is_slow`
- `scalarize_vec_and_mat_constructor_args`

Problems Detected

- 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 Mesa drivers (detected with `GL_RENDERER`): [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`
- On Intel GPUs MSAA performance is not acceptable for GPU rasterization: [527565](#)
Applied Workarounds: `mssa_is_slow`
- Timer queries crash on Intel GPUs on Linux: [540543](#), [576991](#)
Applied Workarounds: `disable(GL_ARB_timer_query)`, `disable(GL_EXT_timer_query)`
- Use `GL_INTEL_framebuffer_CMAA` on ChromeOS: [535198](#)
Applied Workarounds: `disable_framebuffer_cmaa`
- Disable partial swaps on Mesa drivers (detected with `GL_VERSION`): [339493](#)
Applied Workarounds: `disable_post_sub_buffers_for_onscreen_surfaces`
- Decode and encode before generateMipmap for srgb format textures on os except macosx: [634519](#)
Applied Workarounds: `decode_encode_srgb_for_generatemipmap`

- adjust src/dst region if blitting pixels outside read framebuffer on Linux Intel: [664740](#)
Applied Workarounds: [adjust_src_dst_region_for_blitframebuffer](#)
- Disable KHR_blend_equation_advanced until cc shaders are updated: [661715](#)
Applied Workarounds: [disable\(GL_KHR_blend_equation_advanced\)](#), [disable\(GL_KHR_blend_equation_advanced_coherent\)](#)
- Don't expose disjoint_timer_query extensions to WebGL: [808744](#)
- Native GpuMemoryBuffers have been disabled, either via about:flags or command line.
Disabled Features: [native_gpu_memory_buffers](#)
- Viz service display compositor is not enabled by default.
Disabled Features: [viz_display_compositor](#)
- Checker-imaging has been disabled via finch trial or the command line.
Disabled Features: [checker_imaging](#)

Version Information

Data exported	2018-08-24T20:21:08.946Z
Chrome version	Chrome/67.0.3396.87
Operating system	Linux 3.13.0-66-generic
Software rendering list URL	https://chromium.googlesource.com/chromium/src/+878cd31214ac27a3996 ◀  ▶
Driver bug list URL	https://chromium.googlesource.com/chromium/src/+878cd31214ac27a3996 ◀  ▶
ANGLE commit id	702006f4a07e
2D graphics backend	Skia/67 78b60f4ff13b83da98ae2bca85aaef0a98b61098-
Command Line	/usr/bin/google-chrome --user-data-dir=/tmp/test_gpu --ignore-gpu-blacklist --flag-switches-begin --flag-switches-end

Driver Information

Initialization time	20
In-process GPU	false
Passthrough Command Decoder	false
Direct Composition	false
Supports overlays	false
Sandboxed	true
GPU0	VENDOR = 0x8086, DEVICE= 0x0412 *ACTIVE*
Optimus	false
AMD switchable	false
Driver vendor	Mesa
Driver version	10.1.3
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) Haswell Desktop
GL_VERSION	3.0 Mesa 10.1.3

GL_EXTENSIONS

GL_ARB_ES2_compatibility GL_ARB_ES3_compatibility
GL_ARB_blend_func_extended GL_ARB_clear_buffer_object
GL_ARB_color_buffer_float GL_ARB_copy_buffer
GL_ARB_conservative_depth GL_ARB_debug_output
GL_ARB_depth_buffer_float GL_ARB_depth_clamp
GL_ARB_depth_texture 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_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_multisample GL_ARB_multitexture GL_ARB_occlusion_query2
GL_ARB_occlusion_query 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_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_sync
GL_ARB_texture_border_clamp GL_ARB_texture_compression
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_swizzle GL_ARB_timer_query
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_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_provoking_vertex GL_EXT_rescale_normal GL_EXT_secondary_color GL_EXT_separate_shader_objects 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_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_envmap_bumpmap 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_timer_query GL_EXT_timer_query GL_KHR_blend_equation_advanced GL_KHR_blend_equation_advanced_coherent
Disabled WebGL Extensions	EXT_disjoint_timer_query EXT_disjoint_timer_query_webgl2
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	Openbox
XDG_CURRENT_DESK	LXDE
GDMSESSION	Lubuntu
Compositing manager	No
Direct rendering	Yes
Reset notification strategy	0x8261
GPU process crash count	0
System visual ID	32
RGBA visual ID	95

Compositor Information

Tile Update Mode	One-copy
Partial Raster	Enabled

GpuMemoryBuffers Status

ATC	Software only
ATCIA	Software only
DXT1	Software only
DXT5	Software only
ETC1	Software only
R_8	Software only
R_16	Software only
RG_88	Software only
BGR_565	Software only
RGBA_4444	Software only
RGBX_8888	Software only
RGBA_8888	Software only
BGRX_8888	Software only
BGRX_1010102	Software only
RGBX_1010102	Software only
BGRA_8888	Software only
RGBA_F16	Software only
YVU_420	Software only
YUV_420_BIPLANAR	Software only
UYVY_422	Software only

Display(s) Information

Info	Display[4693558865375044] bounds=[0,0 2560x1440], workarea=[0,30 2560x1410], scale=1, external.
Color space	{primaries_d50_referred: [[0.6582, 0.3350], [0.3139, 0.6308], [0.1505,

information	0.0424]], transfer:0.0000*x + 0.0000 if x < 0.0000 else (1.0000*x + 0.0000)**2.2000 + 0.0000, matrix:RGB, range:FULL}
Bits per color component	8
Bits per pixel	24

Video Acceleration Information