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## 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
- Video Decode: Software only. Hardware acceleration disabled
- Video Encode: Software only, hardware acceleration unavailable
- 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_software_to_accelerated_canvas_upgrade`
- `dont_remove_invariant_for_fragment_input`
- `force_cube_map_positive_x_allocation`
- `force_int_or_srgb_cube_texture_complete`
- `init_texture_max_anisotropy`
- `regenerate_struct_names`
- `remove_invariant_and_centroid_for_essl3`
- `scalarize_vec_and_mat_constructor_args`

## Problems Detected

- Accelerated video decode is unavailable on Linux: [137247](#)  
*Disabled Features: `accelerated_video_decode`*
- Accelerated video encode is unavailable on Linux  
*Disabled Features: `accelerated_video_encode`*
- 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`*
- Linux AMD drivers incorrectly return initial value of 1 for TEXTURE\_MAX\_ANISOTROPY: [348237](#)  
*Applied Workarounds: `init_texture_max_anisotropy`*
- Always rewrite vec/mat constructors to be consistent: [398694](#)  
*Applied Workarounds: `scalarize_vec_and_mat_constructor_args`*
- Linux AMD drivers handle struct scopes incorrectly: [403957](#)  
*Applied Workarounds: `regenerate_struct_names`*

- Linux ATI drivers crash on binding incomplete cube map texture to FBO: [518889](#)  
*Applied Workarounds: force\_cube\_map\_positive\_x\_allocation*
- Limited enabling of Chromium GL\_INTEL\_framebuffer\_CMAA: [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*
- adjust src/dst region if blitting pixels outside read framebuffer on Linux AMD: [664740](#)  
*Applied Workarounds: adjust\_src\_dst\_region\_for\_blitframebuffer*
- AMD drivers in Linux require invariant qualifier to match between vertex and fragment shaders: [659326](#), [639760](#)  
*Applied Workarounds: remove\_invariant\_and\_centroid\_for\_essl3, dont\_remove\_invariant\_for\_fragment\_input*
- Disable KHR\_blend\_equation\_advanced until cc shaders are updated: [661715](#)
- Decode and Encode before generateMipmap for srgb format textures on Linux AMD: [634519](#)  
*Applied Workarounds: decode\_encode\_srgb\_for\_generatemipmap*
- Software to Accelerated canvas update breaks Linux AMD: [710029](#)  
*Applied Workarounds: disable\_software\_to\_accelerated\_canvas\_upgrade*
- Force integer or srgb cube map texture complete on Linux AMD: [712117](#)  
*Applied Workarounds: force\_int\_or\_srgb\_cube\_texture\_complete*
- Accelerated video decode has been disabled, either via blacklist, about:flags or the command line.  
*Disabled Features: video\_decode*
- Accelerated rasterization has been disabled, either via blacklist, about:flags or the command line.  
*Disabled Features: rasterization*
- Native GpuMemoryBuffers have been disabled, either via about:flags or command line.  
*Disabled Features: native\_gpu\_memory\_buffers*
- Checker-imaging has been disabled via finch trial or the command line.  
*Disabled Features: checker\_imaging*

## Version Information

<b>Data exported</b>	3/27/2018, 10:34:52 AM
<b>Chrome version</b>	qutebrowser/1.2.1
<b>Operating system</b>	Linux 4.15.13-1-ARCH
<b>Software rendering list version</b>	13.10
<b>Driver bug list version</b>	10.29
<b>ANGLE commit id</b>	unknown hash
<b>2D graphics backend</b>	Skia/61 9b2caa32d28d80789df32838c8da1dd3164b1036-
<b>Command Line</b>	/usr/bin/qutebrowser --browser-subprocess-path=/usr/lib/qt/libexec/QtWebEngineProcess --disable-setuid-sandbox --enable-threaded-compositing --disable-zero-copy --disable-gpu-memory-buffer-compositor-resources --disable-gpu-memory-buffer-video-frames --disable-mojo-local-storage --disable-shared-workers --enable-features=AllowContentInitiatedDataUrlNavigations --use-gl=desktop --in-process-gpu --disable-gpu-watchdog --use-gl=desktop --supports-dual-gpus=false --gpu-driver-bug-workarounds=1,9,12,27,38,45,51,54,61,75,76,84 --disable-gl-

```

extensions=GL_KHR_blend_equation_advanced
GL_KHR_blend_equation_advanced_coherent --disable-accelerated-video-
decode --gpu-vendor-id=0x1002 --gpu-device-id=0x67df --gpu-driver-
vendor --gpu-driver-version --gpu-driver-date

```

## Driver Information

<b>Initialization time</b>	0
<b>In-process GPU</b>	true
<b>Passthrough Command Decoder</b>	false
<b>Supports overlays</b>	false
<b>Sandboxed</b>	false
<b>GPU0</b>	VENDOR = 0x1002, DEVICE= 0x67df
<b>Optimus</b>	false
<b>Optimus</b>	false
<b>AMD switchable</b>	false
<b>Driver vendor</b>	Mesa
<b>Driver version</b>	17.3.7
<b>Driver date</b>	
<b>Pixel shader version</b>	4.50
<b>Vertex shader version</b>	4.50
<b>Max. MSAA samples</b>	8
<b>Machine model name</b>	
<b>Machine model version</b>	
<b>GL_VENDOR</b>	X.Org
<b>GL_RENDERER</b>	Radeon RX 580 Series (POLARIS10 / DRM 3.23.0 / 4.15.13-1-ARCH, LLVM 6.0.0)
<b>GL_VERSION</b>	4.5 (Core Profile) Mesa 17.3.7
<b>GL_EXTENSIONS</b>	GL_AMD_conservative_depth GL_AMD_draw_buffers_blend GL_AMD_performance_monitor GL_AMD_pinned_memory GL_AMD_seamless_cubemap_per_texture GL_AMD_shader_stencil_export GL_AMD_shader_trinary_minmax GL_AMD_vertex_shader_layer GL_AMD_vertex_shader_viewport_index GL_ANGLE_texture_compression_dxt3 GL_ANGLE_texture_compression_dxt5 GL_ARB_ES2_compatibility GL_ARB_ES3_1_compatibility GL_ARB_ES3_2_compatibility GL_ARB_ES3_compatibility GL_ARB_arrays_of_arrays GL_ARB_base_instance GL_ARB_bindless_texture GL_ARB_blend_func_extended GL_ARB_buffer_storage GL_ARB_clear_buffer_object GL_ARB_clear_texture GL_ARB_clip_control GL_ARB_color_buffer_float GL_ARB_compressed_texture_pixel_storage GL_ARB_compute_shader GL_ARB_compute_variable_group_size GL_ARB_conditional_render_inverted GL_ARB_conservative_depth GL_ARB_copy_buffer GL_ARB_copy_image GL_ARB_cull_distance GL_ARB_debug_output GL_ARB_depth_buffer_float GL_ARB_depth_clamp GL_ARB_derivative_control GL_ARB_direct_state_access

GL\_ARB\_draw\_buffers GL\_ARB\_draw\_buffers\_blend  
GL\_ARB\_draw\_elements\_base\_vertex GL\_ARB\_draw\_indirect  
GL\_ARB\_draw\_instanced GL\_ARB\_enhanced\_layouts  
GL\_ARB\_explicit\_attrib\_location GL\_ARB\_explicit\_uniform\_location  
GL\_ARB\_fragment\_coord\_conventions GL\_ARB\_fragment\_layer\_viewport  
GL\_ARB\_fragment\_shader GL\_ARB\_framebuffer\_no\_attachments  
GL\_ARB\_framebuffer\_object GL\_ARB\_framebuffer\_sRGB  
GL\_ARB\_get\_program\_binary GL\_ARB\_get\_texture\_sub\_image  
GL\_ARB\_gpu\_shader5 GL\_ARB\_gpu\_shader\_fp64  
GL\_ARB\_gpu\_shader\_int64 GL\_ARB\_half\_float\_pixel  
GL\_ARB\_half\_float\_vertex GL\_ARB\_indirect\_parameters  
GL\_ARB\_instanced\_arrays GL\_ARB\_internalformat\_query  
GL\_ARB\_internalformat\_query2 GL\_ARB\_invalidate\_subdata  
GL\_ARB\_map\_buffer\_alignment GL\_ARB\_map\_buffer\_range  
GL\_ARB\_multi\_bind GL\_ARB\_multi\_draw\_indirect  
GL\_ARB\_occlusion\_query2 GL\_ARB\_pipeline\_statistics\_query  
GL\_ARB\_pixel\_buffer\_object GL\_ARB\_point\_sprite  
GL\_ARB\_polygon\_offset\_clamp GL\_ARB\_program\_interface\_query  
GL\_ARB\_provoking\_vertex GL\_ARB\_query\_buffer\_object  
GL\_ARB\_robust\_buffer\_access\_behavior 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\_counter\_ops  
GL\_ARB\_shader\_atomic\_counters GL\_ARB\_shader\_ballot  
GL\_ARB\_shader\_bit\_encoding GL\_ARB\_shader\_clock  
GL\_ARB\_shader\_draw\_parameters GL\_ARB\_shader\_group\_vote  
GL\_ARB\_shader\_image\_load\_store GL\_ARB\_shader\_image\_size  
GL\_ARB\_shader\_objects GL\_ARB\_shader\_precision  
GL\_ARB\_shader\_stencil\_export GL\_ARB\_shader\_storage\_buffer\_object  
GL\_ARB\_shader\_subroutine GL\_ARB\_shader\_texture\_image\_samples  
GL\_ARB\_shader\_texture\_lod GL\_ARB\_shader\_viewport\_layer\_array  
GL\_ARB\_shading\_language\_420pack GL\_ARB\_shading\_language\_packing  
GL\_ARB\_sparse\_buffer GL\_ARB\_stencil\_texturing GL\_ARB\_sync  
GL\_ARB\_tessellation\_shader GL\_ARB\_texture\_barrier  
GL\_ARB\_texture\_buffer\_object GL\_ARB\_texture\_buffer\_object\_rgb32  
GL\_ARB\_texture\_buffer\_range GL\_ARB\_texture\_compression\_bptc  
GL\_ARB\_texture\_compression\_rgtc GL\_ARB\_texture\_cube\_map\_array  
GL\_ARB\_texture\_filter\_anisotropic GL\_ARB\_texture\_float  
GL\_ARB\_texture\_gather 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\_rg  
GL\_ARB\_texture\_rgb10\_a2ui GL\_ARB\_texture\_stencil8  
GL\_ARB\_texture\_storage GL\_ARB\_texture\_storage\_multisample  
GL\_ARB\_texture\_swizzle GL\_ARB\_texture\_view GL\_ARB\_timer\_query  
GL\_ARB\_transform\_feedback2 GL\_ARB\_transform\_feedback3  
GL\_ARB\_transform\_feedback\_instanced  
GL\_ARB\_transform\_feedback\_overflow\_query  
GL\_ARB\_uniform\_buffer\_object GL\_ARB\_vertex\_array\_bgra

	GL_ARB_vertex_array_object GL_ARB_vertex_attrib_64bit GL_ARB_vertex_attrib_binding GL_ARB_vertex_shader GL_ARB_vertex_type_10f_11f_11f_rev GL_ARB_vertex_type_2_10_10_10_rev GL_ARB_viewport_array GL_ATI_blend_equation_separate GL_ATI_meminfo GL_ATI_texture_float GL_ATI_texture_mirror_once GL_EXT_abgr GL_EXT_blend_equation_separate GL_EXT_depth_bounds_test GL_EXT_draw_buffers2 GL_EXT_draw_instanced GL_EXT_framebuffer_blit GL_EXT_framebuffer_multisample GL_EXT_framebuffer_multisample_blit_scaled GL_EXT_framebuffer_sRGB GL_EXT_memory_object GL_EXT_memory_object_fd GL_EXT_packed_depth_stencil GL_EXT_packed_float GL_EXT_pixel_buffer_object GL_EXT_polygon_offset_clamp GL_EXT_provoking_vertex GL_EXT_shader_integer_mix GL_EXT_texture_array GL_EXT_texture_compression_dxt1 GL_EXT_texture_compression_rgtc GL_EXT_texture_compression_s3tc GL_EXT_texture_filter_anisotropic GL_EXT_texture_integer GL_EXT_texture_mirror_clamp GL_EXT_texture_sRGB GL_EXT_texture_sRGB_decode GL_EXT_texture_shared_exponent GL_EXT_texture_snorm GL_EXT_texture_swizzle GL_EXT_timer_query GL_EXT_transform_feedback GL_EXT_vertex_array_bgra GL_IBM_multimode_draw_arrays GL_KHR_context_flush_control GL_KHR_debug GL_KHR_no_error GL_KHR_robust_buffer_access_behavior GL_KHR_robustness GL_MESA_pack_invert GL_MESA_shader_integer_functions GL_MESA_texture_signed_rgba GL_NVX_gpu_memory_info GL_NV_conditional_render GL_NV_depth_clamp GL_NV_packed_depth_stencil GL_NV_texture_barrier GL_NV_vdpau_interop GL_OES_EGL_image GL_S3_s3tc
<b>Disabled Extensions</b>	GL_KHR_blend_equation_advanced GL_KHR_blend_equation_advanced_coherent
<b>Window system binding vendor</b>	SGI
<b>Window system binding version</b>	1.4
<b>Window system binding extensions</b>	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_es_profile GLX_EXT_create_context_es2_profile GLX_EXT_fbconfig_packed_float GLX_EXT_framebuffer_sRGB GLX_EXT_import_context GLX_EXT_libglvnd GLX_EXT_texture_from_pixmap GLX_EXT_visual_info GLX_EXT_visual_rating GLX_MESA_copy_sub_buffer GLX_OML_swap_method GLX_SGI_make_current_read GLX_SGI_swap_control GLX_SGIS_multisample GLX_SGIX_fbconfig GLX_SGIX_pbuffer GLX_SGIX_visual_select_group GLX_INTEL_swap_event
<b>Window manager</b>	bspwm
<b>XDG_CURRENT_DESKTO</b>	
<b>Compositing manager</b>	Yes

<b>Direct rendering</b>	Yes
<b>Reset notification strategy</b>	0x8261
<b>GPU process crash count</b>	0
<b>System visual ID</b>	33
<b>RGBA visual ID</b>	1223

## Compositor Information

<b>Tile Update Mode</b>	One-copy
<b>Partial Raster</b>	Enabled

## GpuMemoryBuffers Status

<b>ATC</b>	Software only
<b>ATCIA</b>	Software only
<b>DXT1</b>	Software only
<b>DXT5</b>	Software only
<b>ETC1</b>	Software only
<b>R_8</b>	Software only
<b>R_16</b>	Software only
<b>RG_88</b>	Software only
<b>BGR_565</b>	Software only
<b>RGBA_4444</b>	Software only
<b>RGBX_8888</b>	Software only
<b>RGBA_8888</b>	Software only
<b>BGRX_8888</b>	Software only
<b>BGRA_8888</b>	Software only
<b>RGBA_F16</b>	Software only
<b>YVU_420</b>	Software only
<b>YUV_420_BIPLANAR</b>	Software only
<b>UYVY_422</b>	Software only