

## 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: **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`
- `mssa_is_slow`
- `scalarize_vec_and_mat_constructor_args`

## Problems Detected

- Accelerated video decode is unavailable on Linux: [137247](#)  
*Disabled Features: **accelerated\_video\_decode***
- 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***
- 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](#)*
- Checker-imaging has been disabled via finch trial or the command line.  
*Disabled Features: [checker\\_imaging](#)*

## Version Information

<b>Data exported</b>	2018-03-19T10:26:03.917Z
<b>Chrome version</b>	Chrome/65.0.3325.162
<b>Operating system</b>	Linux 4.14.0-3-amd64
<b>Software rendering list URL</b>	<a href="https://chromium.googlesource.com/chromium/src/+5d04e9e9c8ce31bee">https://chromium.googlesource.com/chromium/src/+5d04e9e9c8ce31bee</a>
<b>Driver bug list URL</b>	<a href="https://chromium.googlesource.com/chromium/src/+5d04e9e9c8ce31bee">https://chromium.googlesource.com/chromium/src/+5d04e9e9c8ce31bee</a>
<b>ANGLE commit id</b>	2c9cc8b6e810
<b>2D graphics backend</b>	Skia/65 bd0dafbc8112f6cfa92a8096d8cb5696d8535ef9-
<b>Command Line</b>	/usr/bin/google-chrome --flag-switches-begin --flag-switches-end

## Driver Information

<b>Initialization time</b>	297
<b>In-process GPU</b>	false
<b>Passthrough Command Decoder</b>	false
<b>Direct Composition</b>	false
<b>Supports overlays</b>	false
<b>Sandboxed</b>	true
<b>GPU0</b>	VENDOR = 0x8086, DEVICE= 0x1912 *ACTIVE*
<b>Optimus</b>	false
<b>Optimus</b>	false
<b>AMD switchable</b>	false
<b>Driver vendor</b>	Mesa
<b>Driver version</b>	17.3.6
<b>Driver date</b>	
<b>Pixel shader version</b>	1.30
<b>Vertex shader version</b>	1.30
<b>Max. MSAА samples</b>	16
<b>Machine model name</b>	
<b>Machine model version</b>	
<b>GL_VENDOR</b>	Intel Open Source Technology Center
<b>GL_RENDERER</b>	Mesa DRI Intel(R) HD Graphics 530 (Skylake GT2)
<b>GL_VERSION</b>	3.0 Mesa 17.3.6
<b>GL_EXTENSIONS</b>	GL_3DFX_texture_compression_FXT1 GL_AMD_conservative_depth GL_AMD_draw_buffers_blend GL_AMD_seamless_cubemap_per_texture GL_AMD_shader_stencil_export GL_AMD_shader_trinary_minmax GL_ANGLE_texture_compression_dxt3 GL_ANGLE_texture_compression_dxt5 GL_APPLE_object_purgeable GL_APPLE_packed_pixels GL_ARB_ES2_compatibility GL_ARB_ES3_compatibility GL_ARB_arrays_of_arrays 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\_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\_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\_no\_attachments GL\_ARB\_framebuffer\_object  
GL\_ARB\_framebuffer\_sRGB GL\_ARB\_get\_program\_binary  
GL\_ARB\_get\_texture\_sub\_image GL\_ARB\_half\_float\_pixel  
GL\_ARB\_half\_float\_vertex 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\_multisample  
GL\_ARB\_multitexture GL\_ARB\_occlusion\_query  
GL\_ARB\_occlusion\_query2 GL\_ARB\_pipeline\_statistics\_query  
GL\_ARB\_pixel\_buffer\_object GL\_ARB\_point\_parameters  
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\_texture\_image\_samples GL\_ARB\_shader\_texture\_lod  
GL\_ARB\_shading\_language\_100 GL\_ARB\_shading\_language\_420pack  
GL\_ARB\_shading\_language\_packing GL\_ARB\_shadow  
GL\_ARB\_stencil\_texturing GL\_ARB\_sync GL\_ARB\_texture\_barrier  
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\_filter\_anisotropic  
GL\_ARB\_texture\_float GL\_ARB\_texture\_gather  
GL\_ARB\_texture\_mirror\_clamp\_to\_edge  
GL\_ARB\_texture\_mirrored\_repeat 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\_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\_ATI\_blend\_equation\_separate GL\_ATI\_draw\_buffers  
GL\_ATI\_separate\_stencil GL\_ATI\_texture\_env\_combine3  
GL\_ATI\_texture\_float 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\_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\_shader\_samples\_identical GL\_EXT\_shadow\_funcs  
GL\_EXT\_stencil\_two\_side GL\_EXT\_stencil\_wrap GL\_EXT\_subtexture  
GL\_EXT\_texture GL\_EXT\_texture3D GL\_EXT\_texture\_array  
GL\_EXT\_texture\_compression\_dxt1  
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\_rectangle  
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  
GL\_EXT\_vertex\_array\_bgra GL\_IBM\_multimode\_draw\_arrays  
GL\_IBM\_rasterpos\_clip GL\_IBM\_texture\_mirrored\_repeat  
GL\_INGR\_blend\_func\_separate GL\_INTEL\_performance\_query  
GL\_KHR\_blend\_equation\_advanced  
GL\_KHR\_blend\_equation\_advanced\_coherent  
GL\_KHR\_context\_flush\_control GL\_KHR\_debug GL\_KHR\_no\_error  
GL\_KHR\_robust\_buffer\_access\_behavior GL\_KHR\_robustness  
GL\_KHR\_texture\_compression\_astc\_ldr  
GL\_KHR\_texture\_compression\_astc\_sliced\_3d GL\_MESA\_pack\_invert  
GL\_MESA\_shader\_integer\_functions 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\_barrier GL\_NV\_texture\_env\_combine4  
GL\_NV\_texture\_rectangle GL\_OES\_EGL\_image GL\_OES\_read\_format  
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

<b>Disabled Extensions</b>	GL_ARB_timer_query GL_EXT_timer_query GL_KHR_blend_equation_advanced GL_KHR_blend_equation_advanced_coherent
<b>Disabled WebGL Extensions</b>	EXT_disjoint_timer_query EXT_disjoint_timer_query_webgl2
<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>	Fluxbox
<b>Compositing manager</b>	No
<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>	251

## 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>BGRX_1010102</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

## Display(s) Information

<b>Info</b>	Display[1] bounds=0,0 1680x1050, workarea=0,0 1680x1050, scale=1, external
<b>Color space information</b>	{primaries:INVALID, transfer:INVALID, matrix:INVALID, range:INVALID}
<b>Bits per color component</b>	8
<b>Bits per pixel</b>	24

## Video Acceleration Information

### Log Messages

- [1259:1259:0319/120241.561348:ERROR:gles2\_cmd\_decoder.cc(18268)] : [.DisplayCompositor-0x32e5d4cc1100]GL ERROR :GL\_INVALID\_OPERATION : glCreateAndConsumeTextureCHROMIUM: invalid mailbox name
- [1259:1259:0319/120241.561870:ERROR:gles2\_cmd\_decoder.cc(18268)] : [.DisplayCompositor-0x32e5d4cc1100]GL ERROR :GL\_INVALID\_OPERATION : glCreateAndConsumeTextureCHROMIUM: invalid mailbox name
- [1259:1259:0319/120241.561997:ERROR:gles2\_cmd\_decoder.cc(10094)] : [.DisplayCompositor-0x32e5d4cc1100]RENDER WARNING: texture bound to texture unit 1 is not renderable. It maybe non-power-of-2 and have incompatible texture filtering.
- [1259:1259:0319/120241.562079:ERROR:gles2\_cmd\_decoder.cc(10094)] : [.DisplayCompositor-0x32e5d4cc1100]RENDER WARNING: texture bound to texture unit 2 is not renderable. It maybe non-power-of-2 and have incompatible texture filtering.