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==========
VULKANINFO
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Vulkan Instance Version: 1.2.135


Instance Extensions: count = 10
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      VK_EXT_debug_report                    : extension revision 9
      VK_EXT_debug_utils                     : extension revision 1
      VK_KHR_device_group_creation           : extension revision 1
      VK_KHR_display                         : extension revision 21
      VK_KHR_external_fence_capabilities     : extension revision 1
      VK_KHR_external_memory_capabilities    : extension revision 1
      VK_KHR_external_semaphore_capabilities : extension revision 1
      VK_KHR_get_physical_device_properties2 : extension revision 1
      VK_KHR_surface                         : extension revision 25
      VK_KHR_wayland_surface                 : extension revision 6

Layers: count = 0
=================
Presentable Surfaces:
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Device Groups:
==============
Group 0:
      Properties:
            physicalDevices: count = 1
                  VeriSilicon  (ID: 0)
            subsetAllocation = 0

      Present Capabilities:
            VeriSilicon  (ID: 0):
                  Can present images from the following devices: count = 1
            Present modes: count = 1
                  DEVICE_GROUP_PRESENT_MODE_LOCAL_BIT_KHR


Device Properties and Extensions:
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GPU0:
VkPhysicalDeviceProperties:
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      apiVersion     = 4198482 (1.1.82)
      driverVersion  = 25182208 (0x1804000)
      vendorID       = 0x10002
      deviceID       = 0x70006214
      deviceType     = PHYSICAL_DEVICE_TYPE_INTEGRATED_GPU
      deviceName     = VeriSilicon

VkPhysicalDeviceLimits:
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      maxImageDimension1D                             = 8192
      maxImageDimension2D                             = 8192
      maxImageDimension3D                             = 512
      maxImageDimensionCube                           = 8192
      maxImageArrayLayers                             = 512
      maxTexelBufferElements                          = 65536
      maxUniformBufferRange                           = 16384
      maxStorageBufferRange                           = 134217728
      maxPushConstantsSize                            = 128
      maxMemoryAllocationCount                        = 4096
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maxSamplerAllocationCount                        = 4000
bufferImageGranularity                           = 0x00001000
sparseAddressSpaceSize                           = 0x00000000
maxBoundDescriptorSets                           = 4
maxPerStageDescriptorSamplers                    = 16
maxPerStageDescriptorUniformBuffers              = 12
maxPerStageDescriptorStorageBuffers              = 4
maxPerStageDescriptorSampledImages               = 16
maxPerStageDescriptorStorageImages               = 4
maxPerStageDescriptorInputAttachments            = 4
maxPerStageResources                             = 128
maxDescriptorSetSamplers                         = 48
maxDescriptorSetUniformBuffers                   = 36
maxDescriptorSetUniformBuffersDynamic            = 8
maxDescriptorSetStorageBuffers                   = 12
maxDescriptorSetStorageBuffersDynamic            = 4
maxDescriptorSetSampledImages                    = 48
maxDescriptorSetStorageImages                    = 12
maxDescriptorSetInputAttachments                 = 4
maxVertexInputAttributes                         = 16
maxVertexInputBindings                           = 16
maxVertexInputAttributeOffset                    = 2047
maxVertexInputBindingStride                      = 2048
maxVertexOutputComponents                        = 68
maxTessellationGenerationLevel                   = 0
maxTessellationPatchSize                         = 0
maxTessellationControlPerVertexInputComponents  = 0
maxTessellationControlPerVertexOutputComponents = 0
maxTessellationControlPerPatchOutputComponents  = 0
maxTessellationControlTotalOutputComponents     = 0
maxTessellationEvaluationInputComponents        = 0
maxTessellationEvaluationOutputComponents       = 0
maxGeometryShaderInvocations                     = 0
maxGeometryInputComponents                       = 0
maxGeometryOutputComponents                      = 0
maxGeometryOutputVertices                        = 0
maxGeometryTotalOutputComponents                 = 0
maxFragmentInputComponents                       = 64
maxFragmentOutputAttachments                     = 4
maxFragmentDualSrcAttachments                    = 0
maxFragmentCombinedOutputResources               = 4
maxComputeSharedMemorySize                       = 32768
maxComputeWorkGroupCount: count = 3
      65535
      65535
      65535
maxComputeWorkGroupInvocations                   = 128
maxComputeWorkGroupSize: count = 3
      128
      128
      64
subPixelPrecisionBits                            = 4
subTexelPrecisionBits                            = 8
mipmapPrecisionBits                              = 8
maxDrawIndexedIndexValue                         = 16777215
maxDrawIndirectCount                             = 1
maxSamplerLodBias                                = 2
maxSamplerAnisotropy                             = 16
maxViewports                                     = 1
maxViewportDimensions: count = 2
      8192
      8192
viewportBoundsRange: count = 2
      -16384
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            16384
        viewportSubPixelBits                            = 2
        minMemoryMapAlignment                           = 64
        minTexelBufferOffsetAlignment                   = 0x00000100
        minUniformBufferOffsetAlignment                 = 0x00000100
        minStorageBufferOffsetAlignment                 = 0x00000100
        minTexelOffset                                  = -8
        maxTexelOffset                                  = 7
        minTexelGatherOffset                            = -8
        maxTexelGatherOffset                            = 7
        minInterpolationOffset                          = -0.5
        maxInterpolationOffset                          = 0.5
        subPixelInterpolationOffsetBits                 = 4
        maxFramebufferWidth                             = 8192
        maxFramebufferHeight                            = 8192
        maxFramebufferLayers                            = 512
        framebufferColorSampleCounts: count = 2
            SAMPLE_COUNT_1_BIT
            SAMPLE_COUNT_4_BIT
        framebufferDepthSampleCounts: count = 2
            SAMPLE_COUNT_1_BIT
            SAMPLE_COUNT_4_BIT
        framebufferStencilSampleCounts: count = 2
            SAMPLE_COUNT_1_BIT
            SAMPLE_COUNT_4_BIT
        framebufferNoAttachmentsSampleCounts: count = 2
            SAMPLE_COUNT_1_BIT
            SAMPLE_COUNT_4_BIT
        maxColorAttachments                             = 4
        sampledImageColorSampleCounts: count = 2
            SAMPLE_COUNT_1_BIT
            SAMPLE_COUNT_4_BIT
        sampledImageIntegerSampleCounts: count = 1
            SAMPLE_COUNT_1_BIT
        sampledImageDepthSampleCounts: count = 2
            SAMPLE_COUNT_1_BIT
            SAMPLE_COUNT_4_BIT
        sampledImageStencilSampleCounts: count = 2
            SAMPLE_COUNT_1_BIT
            SAMPLE_COUNT_4_BIT
        storageImageSampleCounts: count = 1
            SAMPLE_COUNT_1_BIT
        maxSampleMaskWords                              = 1
        timestampComputeAndGraphics                     = false
        timestampPeriod                                 = 0
        maxClipDistances                                = 0
        maxCullDistances                                = 0
        maxCombinedClipAndCullDistances                 = 0
        discreteQueuePriorities                         = 2
        pointSizeRange: count = 2
            1
            64
        lineWidthRange: count = 2
            1
            8
        pointSizeGranularity                            = 0.125
        lineWidthGranularity                            = 0.125
        strictLines                                     = false
        standardSampleLocations                         = false
        optimalBufferCopyOffsetAlignment                = 0x00000100
        optimalBufferCopyRowPitchAlignment              = 0x00000100
        nonCoherentAtomSize                             = 0x00000100

VkPhysicalDeviceSparseProperties:
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      residencyStandard2DBlockShape            = false
      residencyStandard2DMultisampleBlockShape = false
      residencyStandard3DBlockShape            = false
      residencyAlignedMipSize                  = false
      residencyNonResidentStrict               = false

VkPhysicalDeviceIDProperties:
-----------------------------
      deviceUUID      = 00000000-0000-0000-0000-000000000000
      driverUUID      = 00000000-0000-0000-0000-000000000000
      deviceNodeMask  = 0
      deviceLUIDValid = false

VkPhysicalDeviceMaintenance3Properties:
---------------------------------------
      maxPerSetDescriptors    = 0
      maxMemoryAllocationSize = 0x00000000

VkPhysicalDeviceMultiviewProperties:
------------------------------------
      maxMultiviewViewCount     = 0
      maxMultiviewInstanceIndex = 0

VkPhysicalDevicePointClippingProperties:
----------------------------------------
      pointClippingBehavior = POINT_CLIPPING_BEHAVIOR_ALL_CLIP_PLANES

VkPhysicalDeviceProtectedMemoryProperties:
------------------------------------------
      protectedNoFault = false

VkPhysicalDeviceSubgroupProperties:
-----------------------------------
      subgroupSize              = 0
      supportedStages: count = 0
            None
      supportedOperations: count = 0
            None
      quadOperationsInAllStages = false


Device Extensions: count = 15
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      VK_EXT_queue_family_foreign       : extension revision 1
      VK_KHR_16bit_storage              : extension revision 1
      VK_KHR_bind_memory2               : extension revision 1
      VK_KHR_dedicated_allocation       : extension revision 3
      VK_KHR_descriptor_update_template : extension revision 1
      VK_KHR_device_group               : extension revision 3
      VK_KHR_external_fence_fd          : extension revision 1
      VK_KHR_external_memory            : extension revision 1
      VK_KHR_external_semaphore_fd      : extension revision 1
      VK_KHR_get_memory_requirements2   : extension revision 1
      VK_KHR_maintenance1               : extension revision 2
      VK_KHR_maintenance2               : extension revision 1
      VK_KHR_maintenance3               : extension revision 1
      VK_KHR_swapchain                  : extension revision 70
      VK_KHR_variable_pointers          : extension revision 1

VkQueueFamilyProperties:
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      queueProperties[0]:
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            minImageTransferGranularity = (1,1,1)
            queueCount                  = 1
            queueFlags                  = QUEUE_GRAPHICS | QUEUE_COMPUTE |
QUEUE_TRANSFER
            timestampValidBits          = 0
            present support = false

VkPhysicalDeviceMemoryProperties:
=================================
memoryHeaps: count = 1
      memoryHeaps[0]:
            size   = 805306368 (0x30000000) (768.00 MiB)
            budget = 0 (0x00000000) (0.00 B)
            usage  = 0 (0x00000000) (0.00 B)
            flags: count = 1
                  MEMORY_HEAP_DEVICE_LOCAL_BIT
memoryTypes: count = 2
      memoryTypes[0]:
            heapIndex     = 0
            propertyFlags = 0x0007: count = 3
                  MEMORY_PROPERTY_DEVICE_LOCAL_BIT
                  MEMORY_PROPERTY_HOST_VISIBLE_BIT
                  MEMORY_PROPERTY_HOST_COHERENT_BIT
            usable for:
                  IMAGE_TILING_OPTIMAL: color images, FORMAT_D16_UNORM,
FORMAT_X8_D24_UNORM_PACK32, FORMAT_S8_UINT, FORMAT_D24_UNORM_S8_UINT
                  IMAGE_TILING_LINEAR: None
      memoryTypes[1]:
            heapIndex     = 0
            propertyFlags = 0x0001: count = 1
                  MEMORY_PROPERTY_DEVICE_LOCAL_BIT
            usable for:
                  IMAGE_TILING_OPTIMAL: color images, FORMAT_D16_UNORM,
FORMAT_X8_D24_UNORM_PACK32, FORMAT_S8_UINT, FORMAT_D24_UNORM_S8_UINT
                  IMAGE_TILING_LINEAR: None

VkPhysicalDeviceFeatures:
=========================
      robustBufferAccess                      = true
      fullDrawIndexUint32                     = false
      imageCubeArray                          = true
      independentBlend                        = true
      geometryShader                          = false
      tessellationShader                      = false
      sampleRateShading                       = false
      dualSrcBlend                            = false
      logicOp                                 = false
      multiDrawIndirect                       = false
      drawIndirectFirstInstance               = false
      depthClamp                              = false
      depthBiasClamp                          = false
      fillModeNonSolid                        = false
      depthBounds                             = false
      wideLines                               = true
      largePoints                             = true
      alphaToOne                              = false
      multiViewport                           = false
      samplerAnisotropy                       = true
      textureCompressionETC2                  = true
      textureCompressionASTC_LDR              = false
      textureCompressionBC                    = false
      occlusionQueryPrecise                   = true
      pipelineStatisticsQuery                 = false
      vertexPipelineStoresAndAtomics          = true
```

```
      fragmentStoresAndAtomics                = true
      shaderTessellationAndGeometryPointSize  = false
      shaderImageGatherExtended               = false
      shaderStorageImageExtendedFormats       = false
      shaderStorageImageMultisample           = false
      shaderStorageImageReadWithoutFormat     = false
      shaderStorageImageWriteWithoutFormat    = false
      shaderUniformBufferArrayDynamicIndexing = false
      shaderSampledImageArrayDynamicIndexing  = false
      shaderStorageBufferArrayDynamicIndexing = false
      shaderStorageImageArrayDynamicIndexing  = false
      shaderClipDistance                      = false
      shaderCullDistance                      = false
      shaderFloat64                           = false
      shaderInt64                             = false
      shaderInt16                             = false
      shaderResourceResidency                 = false
      shaderResourceMinLod                    = false
      sparseBinding                           = false
      sparseResidencyBuffer                   = false
      sparseResidencyImage2D                  = false
      sparseResidencyImage3D                  = false
      sparseResidency2Samples                 = false
      sparseResidency4Samples                 = false
      sparseResidency8Samples                 = false
      sparseResidency16Samples                = false
      sparseResidencyAliased                  = false
      variableMultisampleRate                 = false
      inheritedQueries                        = false

VkPhysicalDevice16BitStorageFeatures:
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      storageBuffer16BitAccess           = false
      uniformAndStorageBuffer16BitAccess = false
      storagePushConstant16              = false
      storageInputOutput16               = false

VkPhysicalDeviceMultiviewFeatures:
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      multiview                   = false
      multiviewGeometryShader     = false
      multiviewTessellationShader = false

VkPhysicalDeviceProtectedMemoryFeatures:
----------------------------------------
      protectedMemory = false

VkPhysicalDeviceSamplerYcbcrConversionFeatures:
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      samplerYcbcrConversion = false

VkPhysicalDeviceShaderDrawParametersFeatures:
---------------------------------------------
      shaderDrawParameters = false

VkPhysicalDeviceVariablePointersFeatures:
-----------------------------------------
      variablePointersStorageBuffer = false
      variablePointers              = false
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