

VkSampler

VkPhysicalDeviceProperties

```
...  
VkPhysicalDeviceLimits limits;  
...
```

VkPhysicalDeviceLimits

```
...  
maxSamplerLodBias: 15  
maxSamplerAnisotropy: 16  
...
```

```
typedef enum VkSamplerCreateFlagBits {  
    VK_SAMPLER_CREATE_SUBSAMPLED_BIT_EXT,  
    VK_SAMPLER_CREATE_SUBSAMPLED_COARSE_RECONSTRUCTION_BIT_EXT,  
    VK_SAMPLER_CREATE_DESCRIPTOR_BUFFER_CAPTURE_REPLAY_BIT_EXT,  
    VK_SAMPLER_CREATE_NON_SEAMLESS_CUBE_MAP_BIT_EXT,  
    VK_SAMPLER_CREATE_IMAGE_PROCESSING_BIT_QCOM,  
} VkSamplerCreateFlagBits;
```

```
typedef enum VkFilter {  
    VK_FILTER_NEAREST,  
    VK_FILTER_LINEAR,  
    VK_FILTER_CUBIC_EXT,  
    VK_FILTER_CUBIC_IMG,  
} VkFilter;
```

```
typedef enum VkSamplerMipmapMode {  
    VK_SAMPLER_MIPMAP_MODE_NEAREST = 0,  
    VK_SAMPLER_MIPMAP_MODE_LINEAR = 1,  
} VkSamplerMipmapMode;
```

```
typedef enum VkSamplerAddressMode {  
    VK_SAMPLER_ADDRESS_MODE_REPEAT = 0,  
    VK_SAMPLER_ADDRESS_MODE_MIRRORED_REPEAT = 1,  
    VK_SAMPLER_ADDRESS_MODE_CLAMP_TO_EDGE = 2,  
    VK_SAMPLER_ADDRESS_MODE_CLAMP_TO_BORDER = 3,  
    VK_SAMPLER_ADDRESS_MODE_MIRROR_CLAMP_TO_EDGE = 4,  
    VK_SAMPLER_ADDRESS_MODE_MIRROR_CLAMP_TO_EDGE_KHR,  
} VkSamplerAddressMode;
```

```
typedef enum VkCompareOp {  
    VK_COMPARE_OP_NEVER = 0,  
    VK_COMPARE_OP_LESS = 1,  
    VK_COMPARE_OP_EQUAL = 2,  
    VK_COMPARE_OP_LESS_OR_EQUAL = 3,  
    VK_COMPARE_OP_GREATER = 4,  
    VK_COMPARE_OP_NOT_EQUAL = 5,  
    VK_COMPARE_OP_GREATER_OR_EQUAL = 6,  
    VK_COMPARE_OP_ALWAYS = 7,  
} VkCompareOp;
```

```
typedef enum VkBorderColor {  
    VK_BORDER_COLOR_FLOAT_TRANSPARENT_BLACK = 0,  
    VK_BORDER_COLOR_INT_TRANSPARENT_BLACK = 1,  
    VK_BORDER_COLOR_FLOAT_OPAQUE_BLACK = 2,  
    VK_BORDER_COLOR_INT_OPAQUE_BLACK = 3,  
    VK_BORDER_COLOR_FLOAT_OPAQUE_WHITE = 4,  
    VK_BORDER_COLOR_INT_OPAQUE_WHITE = 5,  
    // Provided by VK_EXT_custom_border_color  
    VK_BORDER_COLOR_FLOAT_CUSTOM_EXT = 1000287003,  
    // Provided by VK_EXT_custom_border_color  
    VK_BORDER_COLOR_INT_CUSTOM_EXT = 1000287004,  
} VkBorderColor;
```

VkSamplerCreateInfo

```
sType = VK_STRUCTURE_TYPE_SAMPLER_CREATE_INFO;  
pNext = nullptr;  
flags;  
magFilter;  
minFilter;  
mipmapMode;  
addressModeU;  
addressModeV;  
addressModeW;  
mipLodBias;  
anisotropyEnable;  
maxAnisotropy;  
compareEnable;  
compareOp;  
minLod;  
maxLod;  
borderColor;  
unnormalizedCoordinates;
```

```
VkResult vkCreateSampler(  
    VkDevice device,  
    const VkSamplerCreateInfo* pCreateInfo,  
    const VkAllocationCallbacks* pAllocator,  
    VkSampler* pSampler  
);
```

```
void vkDestroySampler(  
    VkDevice device,  
    VkSampler sampler,  
    const VkAllocationCallbacks* pAllocator  
);
```