

clCreateSampler

Creates a sampler object.

```
cl_sampler clCreateSampler (cl_context context,  
                           cl_bool normalized_coords,  
                           cl_addressing_mode addressing_mode,  
                           cl_filter_mode filter_mode,  
                           cl_int *errcode_ret)
```

Parameters

context

Must be a valid OpenCL context.

normalized_coords

Determines if the image coordinates specified are normalized (if *normalized_coords* is CL_TRUE) or not (if *normalized_coords* is CL_FALSE).

addressing_mode

Specifies how out-of-range image coordinates are handled when reading from an image. This can be set to CL_ADDRESS_REPEAT, CL_ADDRESS_CLAMP_TO_EDGE, CL_ADDRESS_CLAMP, and CL_ADDRESS_NONE.

filtering_mode

Specifies the type of filter that must be applied when reading an image. This can be CL_FILTER_NEAREST or CL_FILTER_LINEAR.

errcode_ret

Returns an appropriate error code. If *errcode_ret* is NULL, no error code is returned.

Notes

A sampler object describes how to sample an image when the image is read in the kernel. The built-in functions to read from an image in a kernel take a sampler as an argument. The sampler arguments to the image read function can be sampler objects created using OpenCL functions and passed as argument values to the kernel or can be samplers declared inside a kernel. In this section we discuss how sampler objects are created using OpenCL functions.

Errors

Returns a valid non-zero sampler object and *errcode_ret* is set to CL_SUCCESS if the sampler object is created successfully. Otherwise, it returns a NULL value

with one of the following error values returned in *errcode_ret*:

- CL_INVALID_CONTEXT if *context* is not a valid context.
- CL_INVALID_VALUE if *addressing_mode*, *filter_mode*, or *normalized_coords* or a combination of these argument values are not valid.
- CL_INVALID_OPERATION if images are not supported by any device associated with *context* (i.e. CL_DEVICE_IMAGE_SUPPORT specified in the table of OpenCL Device Queries for [clGetDeviceInfo](#) is CL_FALSE).
- CL_OUT_OF_HOST_MEMORY if there is a failure to allocate resources required by the OpenCL implementation on the host.

Specification

 [OpenCL Specification](#)

Also see

[clRetainSampler](#), [clReleaseSampler](#), [clGetSamplerInfo](#)



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