

clCreateKernel

Creates a kernel object.

```
cl_kernel clCreateKernel (cl_program program,  
                           const char *kernel_name,  
                           cl_int *errcode_ret)
```

Parameters

program

A program object with a successfully built executable.

kernel_name

A function name in the program declared with the `__kernel` qualifier

errcode_ret

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

Notes

A kernel is a function declared in a program. A kernel is identified by the `__kernel` qualifier applied to any function in a program. A kernel object encapsulates the specific `__kernel` function declared in a program and the argument values to be used when executing this `__kernel` function.

Errors

clCreateKernel returns a valid non-zero kernel object and *errcode_ret* is set to CL_SUCCESS if the kernel object is created successfully. Otherwise, it returns a NULL value with one of the following error values returned in *errcode_ret*:

- CL_INVALID_PROGRAM if *program* is not a valid program object.
- CL_INVALID_PROGRAM_EXECUTABLE if there is no successfully built executable for *program*.
- CL_INVALID_KERNEL_NAME if *kernel_name* is not found in *program*.
- CL_INVALID_KERNEL_DEFINITION if the function definition for `__kernel` function given by *kernel_name* such as the number of arguments, the argument types are not the same for all devices for which the *program* executable has been built.
- CL_INVALID_VALUE if *kernel_name* is NULL.

- 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

[clCreateKernelsInProgram](#), [clRetainKernel](#), [clReleaseKernel](#), [clSetKernelArg](#), [clGetKernelInfo](#), [clGetKernelWorkGroupInfo](#)



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