

## 1 Overview

**1.1 Location** `$<APPSDKSamplesInstallPath>\samples\opencl\cl\`

**1.2 How to Run** See the *Getting Started* guide for how to build samples. You first must compile the sample.

Use the command line to change to the directory where the executable is located. The default executables are placed in `$<APPSDKSamplesInstallPath>\samples\opencl\bin\x86` for 32-bit builds and `$<APPSDKSamplesInstallPath>\samples\opencl\bin\x86_64` for 64-bit builds.

Type the following command(s).

1. `LDSBandwidth`  
Measures the peak bandwidth from local memory.
2. `LDSBandwidth -h`  
This prints the help message.

**1.3 Command Line Options** Table 1 lists, and briefly describes, the command line options.

**Table 1 Command Line Options**

Short Form	Long Form	Description
-h	--help	Shows all command options and their respective meaning.
	--device	Devices on which the program is to be run. Acceptable values are <code>cpu</code> or <code>gpu</code> .
-q	--quiet	Quiet mode. Suppresses all text output.
-e	--verify	Verify results against reference implementation.
-t	--timing	Print timing.
	--dump	Dump binary image for all devices.
	--load	Load binary image and execute on device.
	--flags	Specify compiler flags to build the kernel.
-p	--platformId	Select deviceId to be used (0 to N-1, where N is the number of available devices).
-d	--deviceId	Select deviceId to be used (0 to N-1, where N is the number of available devices).
-v	--version	AMD APP SDK version string.
-i	--iterations	Number of iterations for kernel execution.
-c	--components	Number of vector components.

## 2 Implementation Details

This sample measures the peak bandwidth from images using the following subtests.

1. Read Single — All threads are read multiple times from a single memory location that is known at compile time. Broadcasting is supported on hardware local memory in the Radeon 5xxx series.

Radeon 5870 results: 844.581 GB/s

2. Read Linear - Threads read from local memory sequentially.

Radeon 5870 results: 865.792 GB/s

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