



# ATI STREAM COMPUTING SAMPLE

## 256-Bin Histogram

### 1 Overview

1.1 Location `$(ATISTREAMSDKSAMPLESROOT)\samples\opencl\cl\app`

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 pre-compiled sample executable is at `$(ATISTREAMSDKSAMPLESROOT)\samples\opencl\bin\x86\` for 32-bit builds, and `$(ATISTREAMSDKSAMPLESROOT)\samples\opencl\bin\x86_64\` for 64-bit builds.

Type the following command(s).

1. Histogram  
Runs with default options;  $x = 1024$ ,  $y = 1024$ .
2. Histogram -h  
This prints the help file.

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.
-q	--quiet	Quiet mode. Suppresses all text output.
-e	--verify	Verify results against reference implementation.
-v	--verbose	Verbose output.
-t	--timing	Print timing.
-x	--width	Width of execution domain.
-y	--height	Height of execution domain.
	--device	Devices on which the program is to be run. Acceptable values are <code>cpu</code> or <code>gpu</code> .

### 2 Implementation Details

Each work-item calculates the histogram bin from `BIN_SIZE` elements. The block histogram bin are calculated from the histogram bins of the work-items of each block. The final histogram bin is calculated from the block histogram bins on the host (CPU) side.

---

**Contact**

Advanced Micro Devices, Inc.  
One AMD Place  
P.O. Box 3453  
Sunnyvale, CA, 94088-3453  
Phone: +1.408.749.4000

**For Stream Computing:**

URL: [www.amd.com/stream](http://www.amd.com/stream)  
Questions: [streamcomputing@amd.com](mailto:streamcomputing@amd.com)  
Developing: [ATI\\_Stream\\_SDK\\_Help\\_Request](#)  
Forum: [www.amd.com/streamdevforum](http://www.amd.com/streamdevforum)



The contents of this document are provided in connection with Advanced Micro Devices, Inc. ("AMD") products. AMD makes no representations or warranties with respect to the accuracy or completeness of the contents of this publication and reserves the right to make changes to specifications and product descriptions at any time without notice. The information contained herein may be of a preliminary or advance nature and is subject to change without notice. No license, whether express, implied, arising by estoppel or otherwise, to any intellectual property rights is granted by this publication. Except as set forth in AMD's Standard Terms and Conditions of Sale, AMD assumes no liability whatsoever, and disclaims any express or implied warranty, relating to its products including, but not limited to, the implied warranty of merchantability, fitness for a particular purpose, or infringement of any intellectual property right.

AMD's products are not designed, intended, authorized or warranted for use as components in systems intended for surgical implant into the body, or in other applications intended to support or sustain life, or in any other application in which the failure of AMD's product could create a situation where personal injury, death, or severe property or environmental damage may occur. AMD reserves the right to discontinue or make changes to its products at any time without notice.

**Copyright and Trademarks**

© 2009 Advanced Micro Devices, Inc. All rights reserved. AMD, the AMD Arrow logo, ATI, the ATI logo, Radeon, FireStream, and combinations thereof are trademarks of Advanced Micro Devices, Inc. Other names are for informational purposes only and may be trademarks of their respective owners.