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In November 2006, NVIDIA introduced CUDA ®, a general purpose parallel computing platform and programming model that leverages the parallel compute engine in

NVIDIA GPUs to solve many complex computational problems in a more efficient way than on a CPU.. CUDA comes with a software environment that allows developers to use C++ as a high-level

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CUDA C Programming Guide Version 3.1.1 Changes from Version 3.1 Removed from Sections 3.1.6 and 5.2.3 the paragraph about loading 32-bit device code from 64-bit host code as this capability will no longer be supported in the next toolkit release. NVIDIA CUDA Programming Guide 4 CUDA Programming Guide Version 2.3.1 Figure 1-3. CUDA is Designed to Support Various Languages or Application Programming Interfaces 1.3 CUDA's Scalable Programming Model The advent of multicore CPUs and manycore GPUs means that mainstream processor chips are now parallel systems. Furthermore, their parallelism continues NVIDIA CUDA Programming Guide NVIDIA CUDA™ Programming Guide . ii CUDA Programming Guide Version 3.0. CUDA Programming Guide Version 3.0 iii Table of Contents Chapter 1. Introduction ... CUDA comes with a software environment that allows developers to use C as a high-level programming language. NVIDIA CUDA Programming Guide www.nvidia.com CUDA™ Programming Guide www.nvidia.com NVIDIA www.nvidia.com www.nvidia.com CUDA C Programming Guide www.nvidia.com www.nvidia.com GPU www.nvidia.com www.nvidia.com... www.nvidia.com CUDA C Programming Guide www.nvidia.com www.nvidia.com www.nvidia.com

`__global__` - CUDA C/C++ keyword
`__global__` indicates a function that: Runs on the device Is called from host code
 nvcc separates source code into host and device components Device functions (e.g. `mykernel()`) processed by NVIDIA compiler
 Host functions (e.g. `main()`) processed by standard host compiler - gcc, cl.exe
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cuParamSetv() Simplified all the code
samples that use to set a kernel
parameter of type CUdeviceptr since
CUdeviceptr is now of same size and

alignment as void*, so there is no longer
any need to go through an intermediate
void* variable. Added Section 3.2.4.1.4 on
16-bit floating-point textures.

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