NVIDIA CUDA Fortran Programming Guide

Preface

This document describes CUDA Fortran, a small set of extensions to Fortran that supports and is built upon the CUDA computing architecture.

Intended Audience

This guide is intended for application programmers, scientists and engineers proficient in programming with the Fortran, C, and/or C++ languages. The tools are available on a variety of operating systems for the x86-64, OpenPOWER and Arm server hardware platforms. This guide assumes familiarity with basic operating system usage.

Organization

The organization of this document is as follows:

Introduction
: contains a general introduction

Programming Guide
: serves as a programming guide for CUDA Fortran

Reference
: describes the CUDA Fortran language reference

Runtime APIs
: describes the interface between CUDA Fortran and the CUDA Runtime API

Examples
: provides sample code and an explanation of the simple example.

Conventions

This guide uses the following conventions:

italic
: is used for emphasis.

`Constant Width`
: is used for filenames, directories, arguments, options, examples, and for language statements in the text, including assembly language statements.

Bold
: is used for commands.

[item1]