



HPC SDK version 24.5

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## 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 ]**

