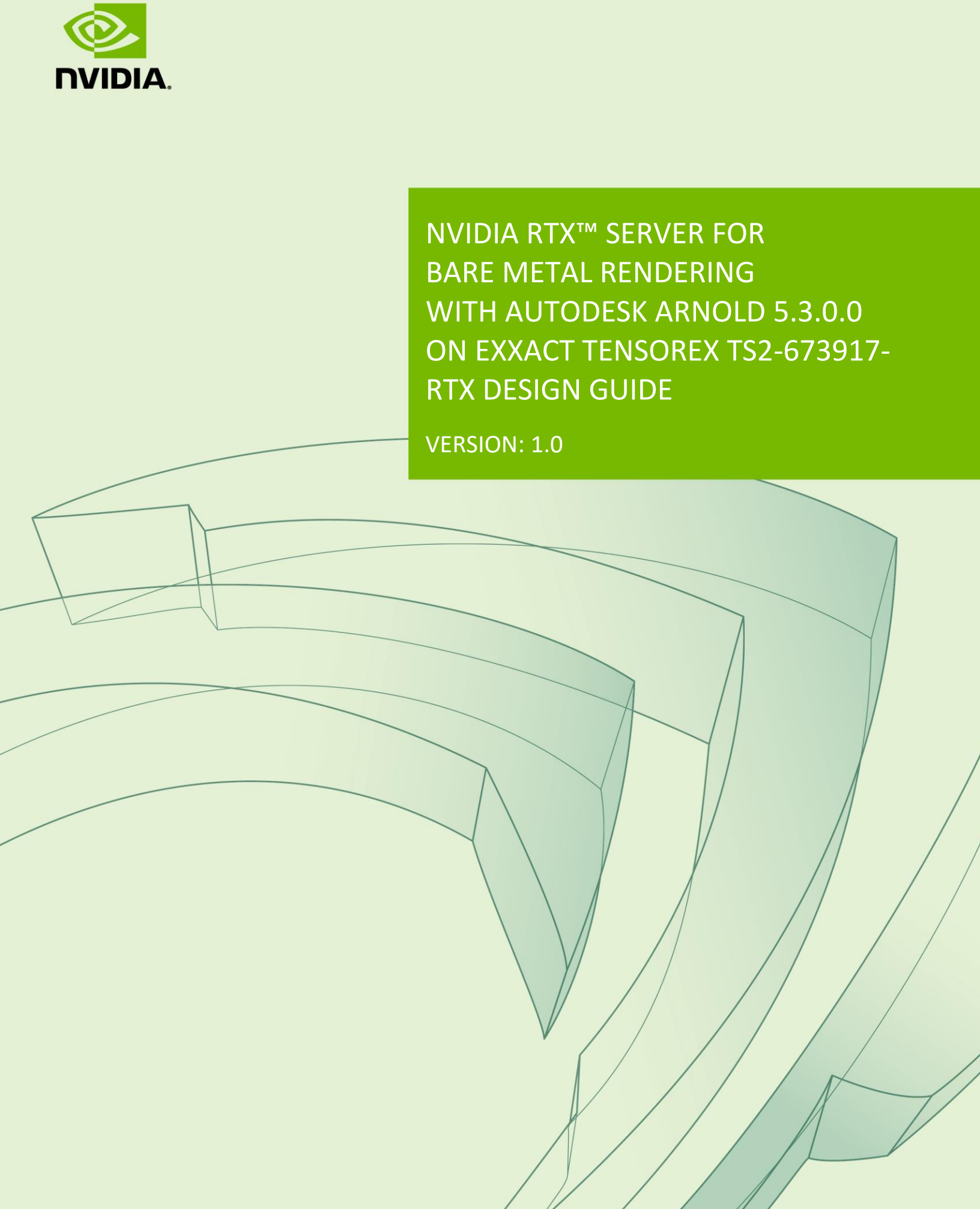

NVIDIA RTX™ SERVER FOR BARE METAL RENDERING WITH AUTODESK ARNOLD 5.3.0.0 ON EXXACT TENSOREX TS2-673917-RTX DESIGN GUIDE

VERSION: 1.0

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SOLUTION OVERVIEW

Designed and tested through multi-vendor cooperation between NVIDIA and its system and ISV partners, NVIDIA RTX™ Server provides a trusted environment for artists and designers to create professional, photorealistic images for the Media & Entertainment; Architecture, Engineering & Construction; and Manufacturing & Design industries.

1.1 RTX SERVER OVERVIEW

Introduction:
Content production is undergoing a massive surge as render complexity and quality increases. Designers and artists across industries continually strive to produce more visually rich content faster than ever before, yet find their creativity and productivity bound by inefficient CPU-based render solutions. NVIDIA RTX Server is a validated solution that brings GPU-accelerated power and performance to deliver the most efficient end-to-end rendering solution, from interactive sessions in the desktop to final batch rendering in the data center.

Audience:
The audience for this document include, but not limited to: Sales Engineers, Field Consultants, Professional Services, Partner Engineers, IT Managers and Customers who wish to take advantage of an appliance that is built and optimized to deliver on batch rendering workflows.

Chapter 2.
SOLUTION DETAIL

NVIDIA RTX Server for Bare Metal Rendering with Autodesk Arnold on the Exxact TensorEX TS2-673917-RTX is a reference design comprised of (a) NVIDIA Quadro RTX 8000 or RTX 6000 graphics cards; (b) Autodesk Arnold rendering software; and (c) Exxact TensorEX TS2-673917-RTX server. Combined, this validated solution provides unprecedented rendering and compute performance at a fraction of the cost, space, and power consumption of traditional CPU-based render nodes.

NVIDIA® Quadro RTX 8000 and RTX 6000, powered by the NVIDIA Turing™ architecture and the NVIDIA RTX platform, brings the most significant advancement in computer graphics in over a decade to professional workflows. Designers and artists can now wield the power of hardware-accelerated ray tracing, deep learning, and advanced shading to dramatically boost productivity and create amazing content faster than ever before.

Autodesk Arnold software is an advanced Monte Carlo raytracing renderer. It's designed for artists and for the demands of modern animation and visual effects (VFX) production. Originally co-developed with Sony Pictures Imageworks and now their main renderer, Arnold is used at over 300 studios worldwide including ILM, Framestore, MPC, The Mill and Digic Pictures. Arnold was the primary renderer on dozens of films from Monster House and Cloudy with a Chance of Meatballs to Pacific Rim and Gravity. It is available as a standalone renderer on Linux, Windows and Mac OS X, with supported plug-ins for Maya, 3dsMax, Houdini, Cinema 4D, and Katana. It is the built-in interactive renderer for Maya and 3dsMax.

Exxact develops and manufactures innovative computing platforms and solutions that include workstation, server, cluster, and storage products developed for HPC, Big Data, Cloud, Visualization, Video Wall, and AV applications. Each of the solutions is fully customizable and precisely built to meet the unique and specific needs of customers.

2.1 SOLUTION CONFIGURATION

Table 1 outlines the system configuration utilized to complete the rigorous NVIDIA NVQual verification as well as the NVIDIA RTX Server validation process.

Table 1: Solution components

Component	Vendor & Model	Details
System	Exxact TensorEX TS2-673917-RTX	• Dual Intel® Xeon® Gold 6126 processor: 2.6-3.7GHz; 12 Cores, 24 Threads • 512 GB Memory • 1.9 TB SSD
Graphics	4x Quadro RTX 8000 or RTX 6000 2x Quadro RTX NVLink High Bandwidth Bridge 2-slot Quadro Driver Release 418 U1 (418.81)	• GPU memory: 48GB or 24GB • CUDA cores: 4,608 • Tensor cores: 576 • RT cores: 72
Application	Autodesk Arnold 5.3.0.0	

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