



NVIDIA 12-Pin Power Plug

Application Note

Document History

DA-10031-001_v03

Version	Date	Authors	Description of Change
01	June 18, 2020	QL, DR	Initial release
02	October 14, 2020	MS, DR	<ul style="list-style-type: none">• Removed 3rd bullet in “Guidelines for Cable Assembly and Use with Power Supplies” section• Updated “Introduction” section• Added Table 1• Updated attachments “B6652212A04-H.pdf”, “A6652212A08.pdf”, “B6652212A04-H.DWG” and “A6652212A08.DWG”
03	November 17, 2020	MS, DR	<ul style="list-style-type: none">• Removed NDA references• Updated “Guidelines for Cable Assembly and Use with Power Supplies” section

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Introduction

This document contains details on the 12-pin power plug compatible with the NVIDIA® GeForce® 30-Series Founders Edition GPUs. This information is intended for power supply vendors designing a native 12-pin power cable on their power supplies.

NVIDIA partners assembling systems should use the specifications provided in this document to ensure mechanical and electrical compatibility with the NVIDIA GeForce 30-Series Founders Edition GPUs.

The PDF and DWG documents for the plug housing and terminals used on the 12-pin power plug are attached.

Table 1 provides the list of approved vendor(s) for the 12-pin power plug.

Table 1. 12-pin Plug and Terminal AVL

Vendor(s)	Part Numbers
Astron	Plug: B6652212A04-H Terminal: A6652212A08

Guidelines for Cable Assembly and Use with Power Supplies

1. Cable assemblies using this connector must be able to deliver the full current rating of the plug and stay within the operating temperature specification after accounting for temperature rise and allowable ambient temperature range.
2. All power pins must come from the same power source and have the same voltage. Furthermore, they need to be energized and de-energized, synchronously. All ground pins must be returned to the same sink.
3. Ensure the end point on the GPU side can maintain 12V within -8% spec for a cable with 9A per wire loading.

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