DS4101 Installation Guide

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Revision History

This section lists the summary of changes corresponding to each release.

Release	Date	Change Summary
1.0.0	7/2024	New document
1.1.0	12/2024	Added Revision History
1.2.0	3/2025	Added Ground Lug Assembly (GLA) installation instructions

DS4101 Installation Guide

This reference document provides important legal disclaimers and notices for the DS4101 system.

Disclaimer

Celestica may update product specifications or information without prior notice to enhance reliability, functionality, or design. Although the provided information is believed to be accurate, no responsibility is assumed for its use, or for any infringements of patents or third-party rights.

Preface

Document Scope

This document provides a detailed overview of the DS4101 data center switch's design features and offers guidance on its use.

Intended Audiences

- System architects
- Firmware engineers
- System application engineers

Document Conventions

The following table describes various types of notes used within this installation guide.

Type	Generalized Definition
ⓘ NOTE:	Provides supplemental information.
⚠ CAUTION:	Indicates a situation that if not avoided, may result in equipment damage or minor to moderate injury.
ⓟ TIP:	Indicates information that helps you make better use of your system.
⚠ WARNING:	Indicates a hazardous situation that if not avoided, could result in data loss or serious injury.
ⓘ DANGER:	Indicates a hazardous situation that if not avoided, will result in death or serious injury.

Product Overview

This document describes the installation process of the DS4101 data center switch.

Features

- Interfaces: 32 OSFP 800Gbps ports, 10GbE / 25GbE / 40GbE / 50GbE / 100GbE / 200GbE / 400GbE capable, two 10GbE SFP+ ports, one 1GbE RJ45 management port, one RJ45 Serial Console Port, one USB 3.0 Type A Port
- Switching Capacity: 25.6Tbps IO Bandwidth
- Switch Silicon: Broadcom StrataXGS® Tomahawk® TH4-100
- CPU: Intel Hewitt Lake 4C/8C, up to 32GB ECC DDR4, 128G/256G SSD
- Optics/Cables: Up to 20W transceivers (up to 28W on ports 1, 2, 31, and 32)

Benefits

- Industry-leading 800G switch in a 1U form factor
- Designed with Broadcom's StrataXGS® Tomahawk® 4-100 Ethernet switch chip
- Resiliency with hot-swappable power supplies and field replaceable fans
- BMC System Management option for remote monitoring and management
- Open Network Install Environment (ONIE) for installation of compatible open source and commercial NOS offerings including SONiC
- High performance Intel Xeon D 2.9Ghz Four-core (up to 8-core) Processor

Product Specifications

Type	DS4101
Depth	657.5 mm
Height	43.1 mm
Width	438.5 mm
Power Input (VAC)	100 ~ 240 VAC (50-60Hz)
Power Consumption (W)	<2000 W
Operating Temperature (airflow front to	0° - 40° C

Type	DS4101
back)	
Operating Relative Humidity	5% - 85%

Figure 1. DS4101 Front View

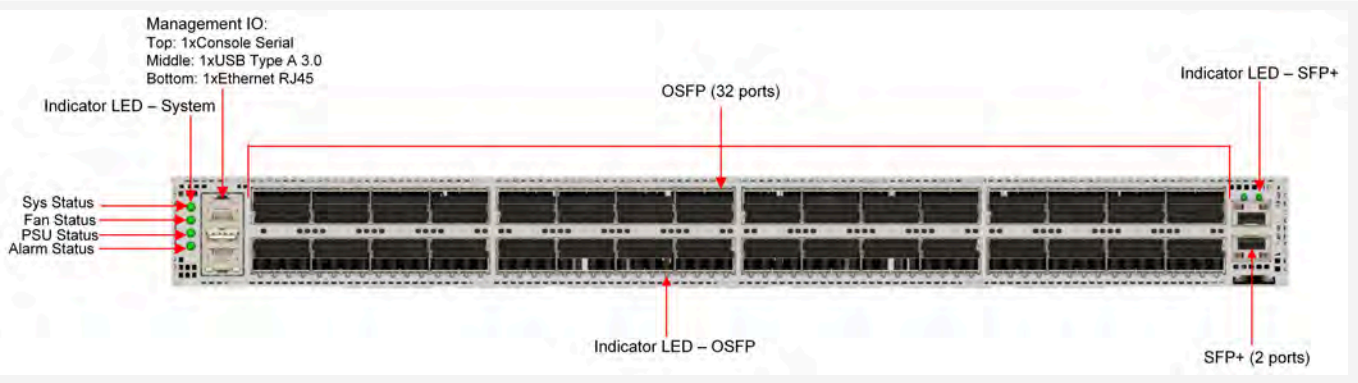


Figure 2. DS4101 Side View

Figure 3. DS4101 Rear View

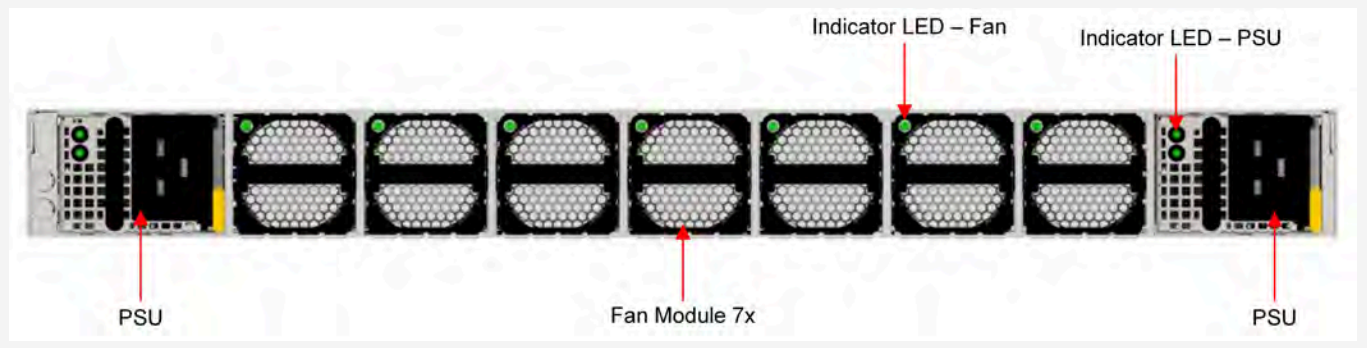


Figure 4. DS4101 Rear Side View

Hardware Overview

This section describes key hardware components of the DS4101 data center switch.

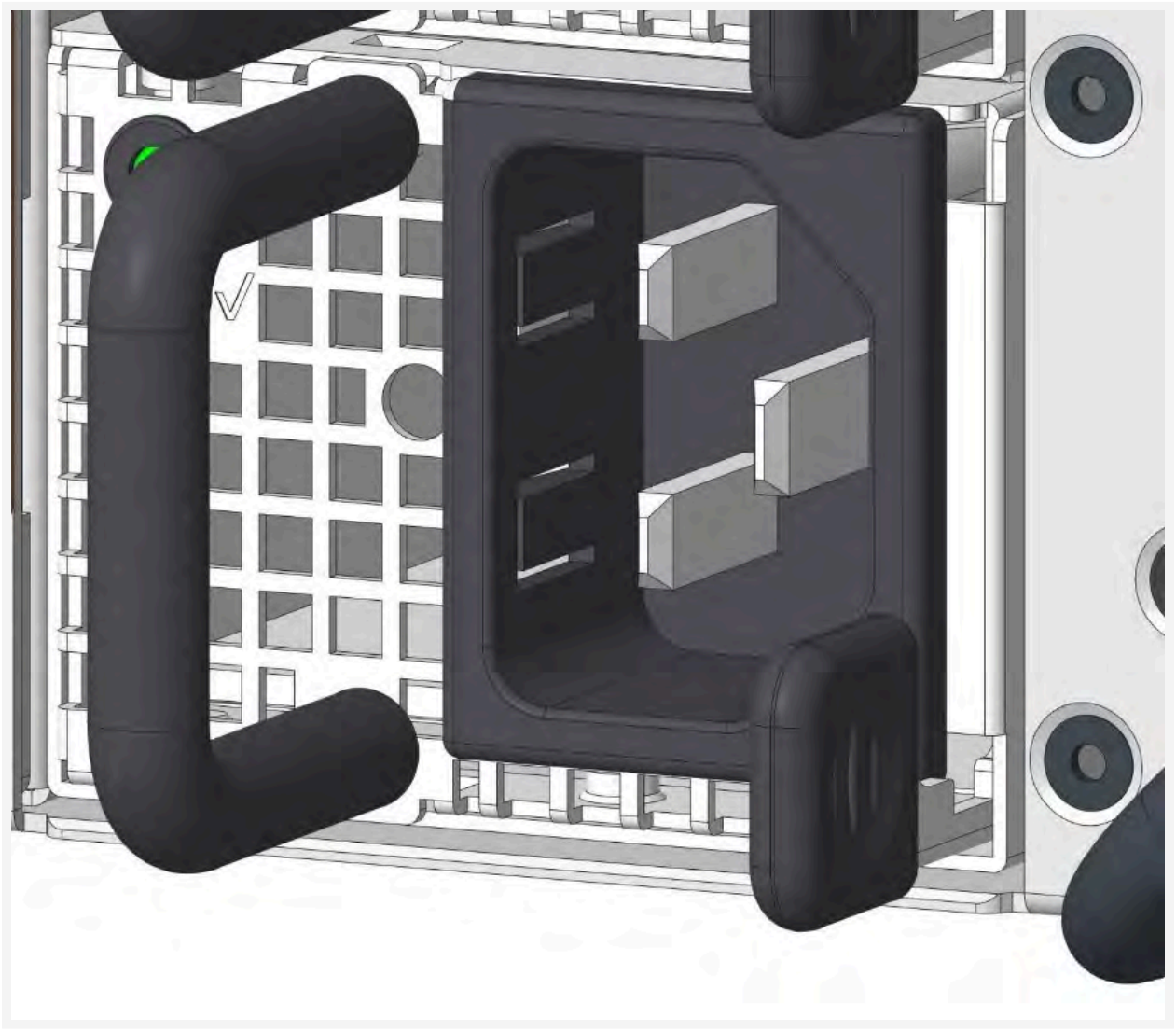
Field Replaceable Units (FRUs)

The DS4101 is designed with redundancy and availability in mind. DS4101 comes with 6+1 redundant fans and 1+1 redundant, hot swappable 2000W PSUs. The following sections cover the removal and installation of these field replaceable units.

PSU Removal

Procedure

1. Press the PSU latch to the left to release the PSU.



2. Use handle to pull PSU straight out of chassis.

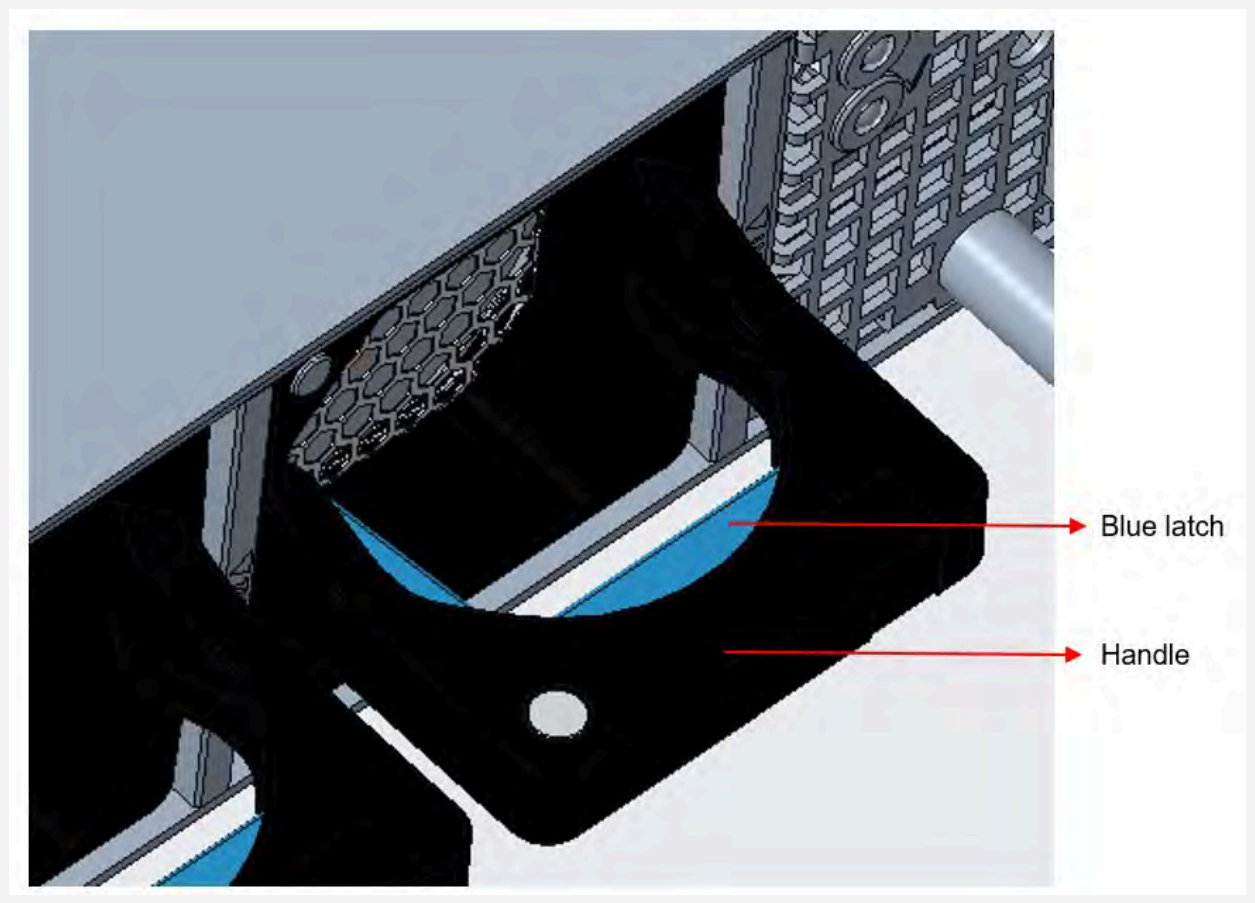
3 Example of PSU when removed.

4 Reverse the steps to reinstall.

Fan Removal

Procedure

1. Press the blue latch release the fan tray from the chassis.



2. Use handle to pull straight back and remove the fan.

3 Example of fan when removed.

4 Reverse the steps to reinstall.

Ground Lug Installation

Context

The ground lug assembly (GLA) is used to safely and effectively ground the DS4101's chassis to the rack in which it is installed. This is an important task in the overall installation process of the data center switch.

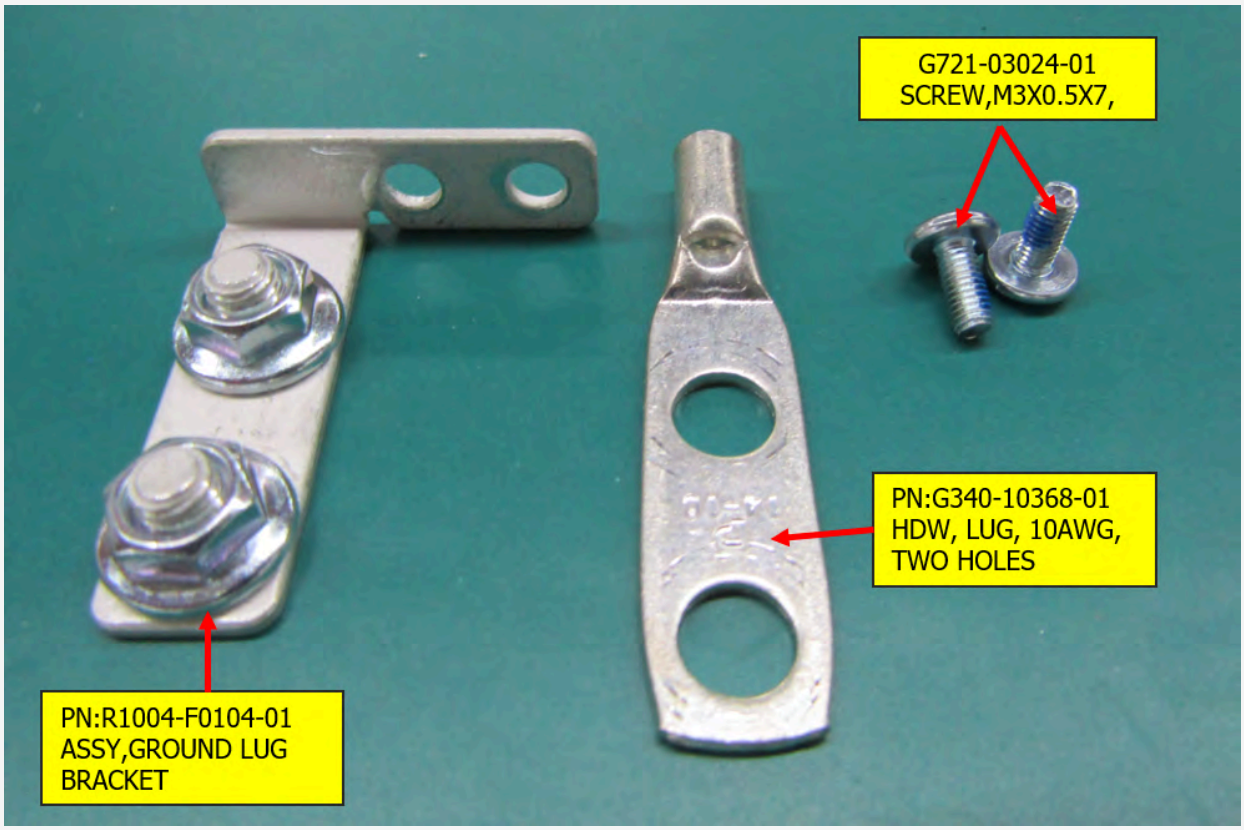
> ⓘ NOTE: The GLA is not applicable to the AC SKUs of the enclosure.

To install GLA, proceed with the following steps:

Procedure

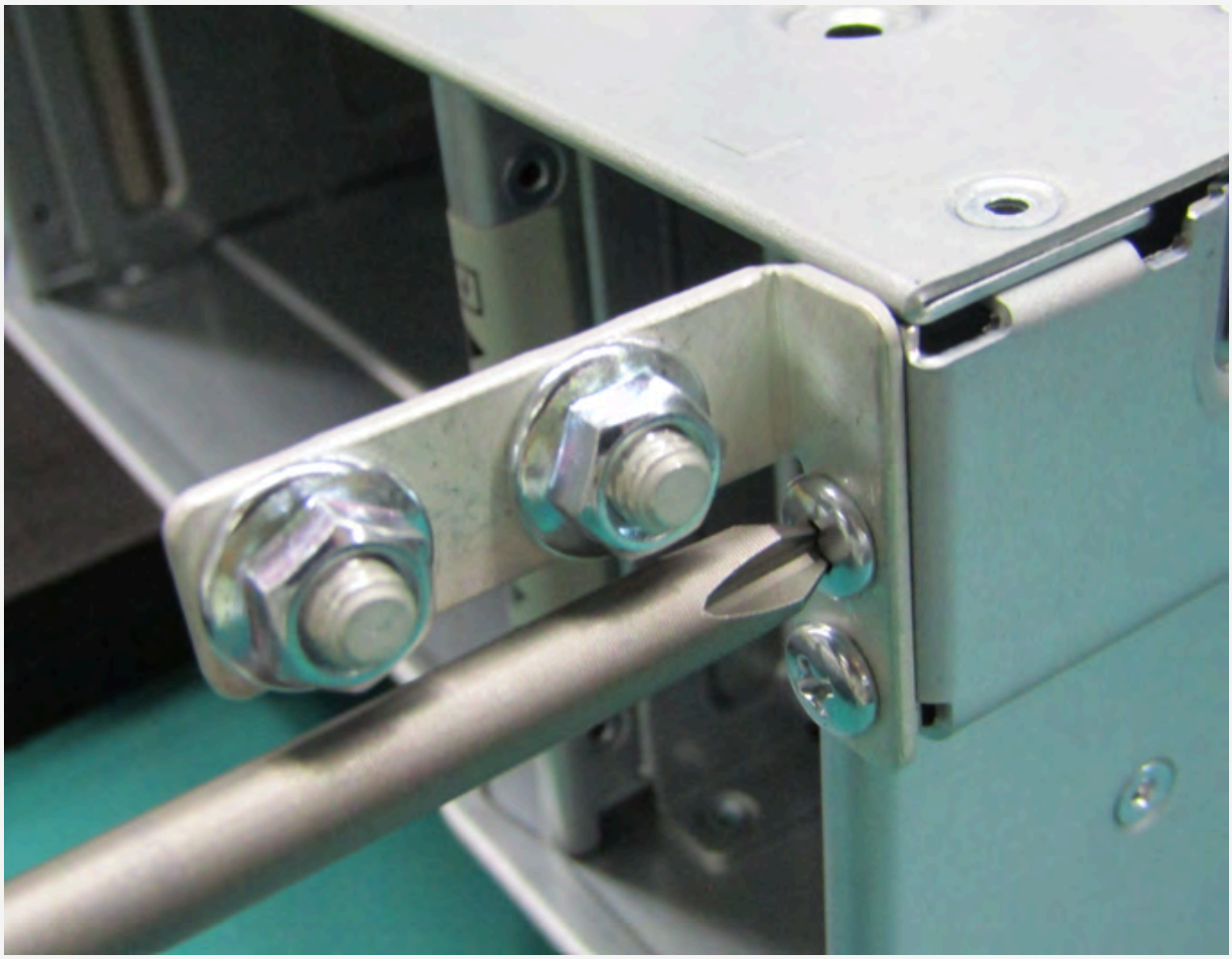
1. Gather a #2 Philips-head screwdriver, an eight millimeter hex socket, and an inch-pound torque wrench.

2 Verify the part numbers as listed within image.

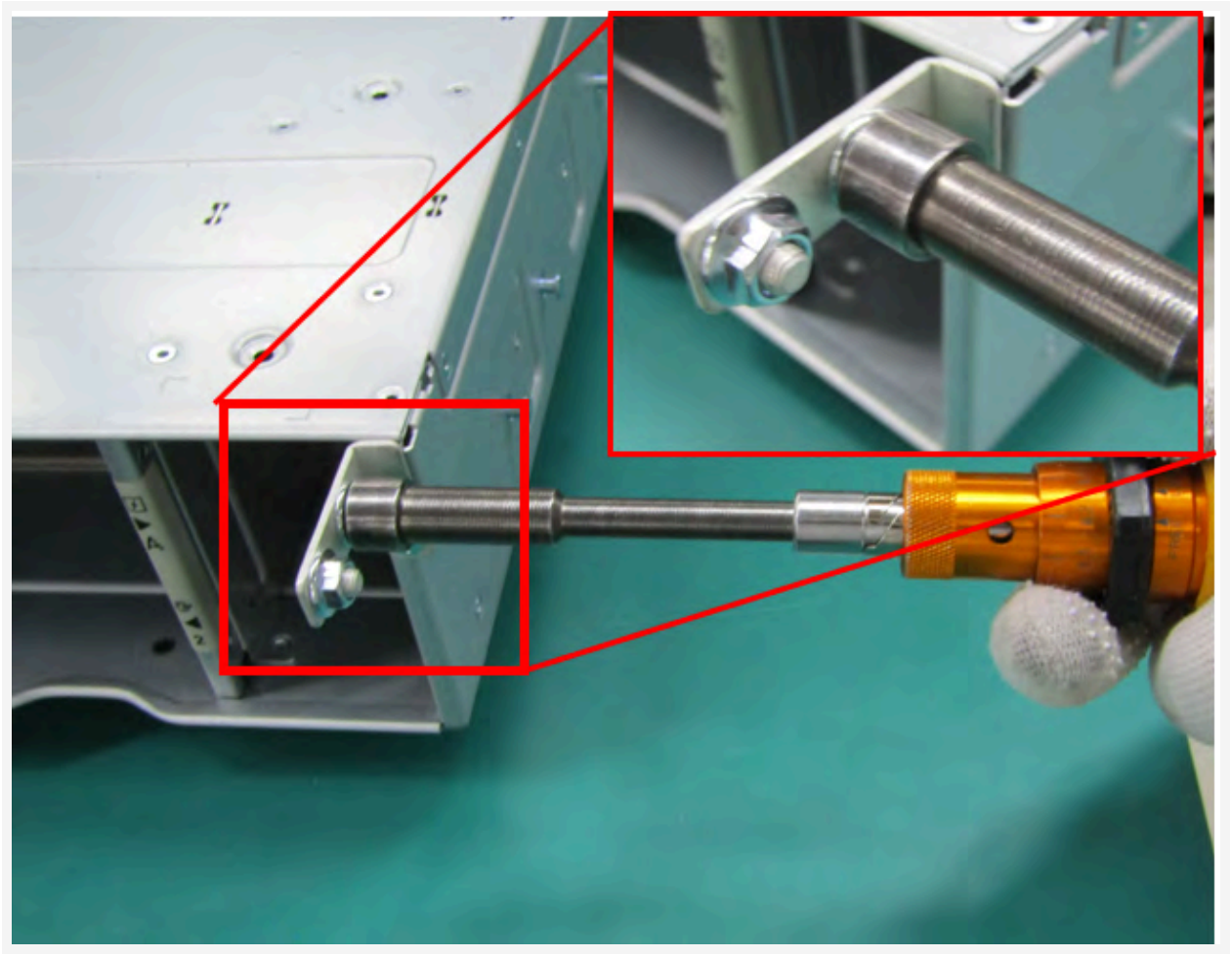


⚠ CAUTION: The image shows the ground lug assembly and the grounding wire terminal. The terminal must have a #10 AWG wire (not shown) crimped within it. The other end of the grounding wire must be securely attached to an unpainted metal surface on the rack. Failure to do so may result in system damage or failure and possible physical injury.

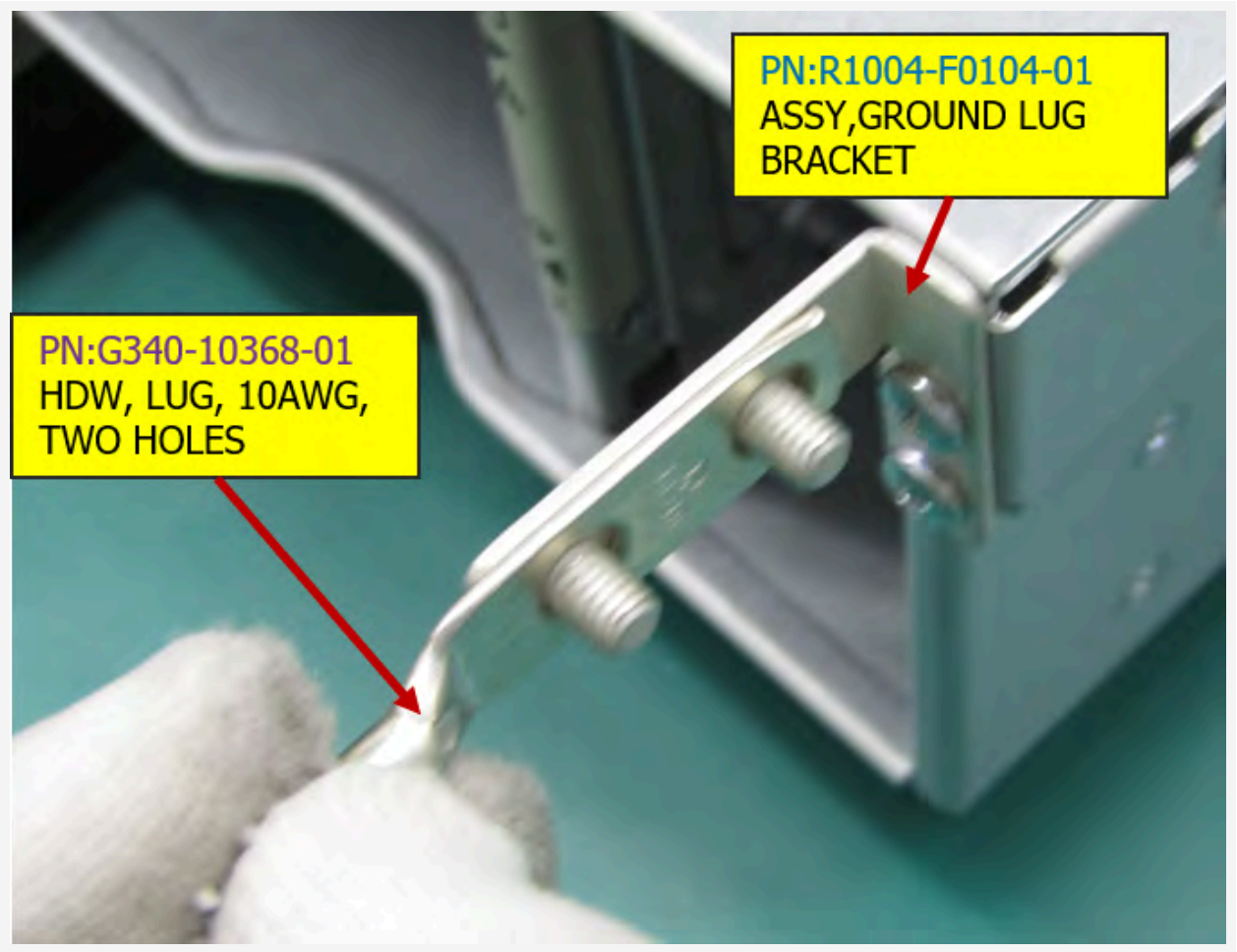
3 Tighten both screws to 4.5 inch/pounds (+/- 0.5 in/lb).



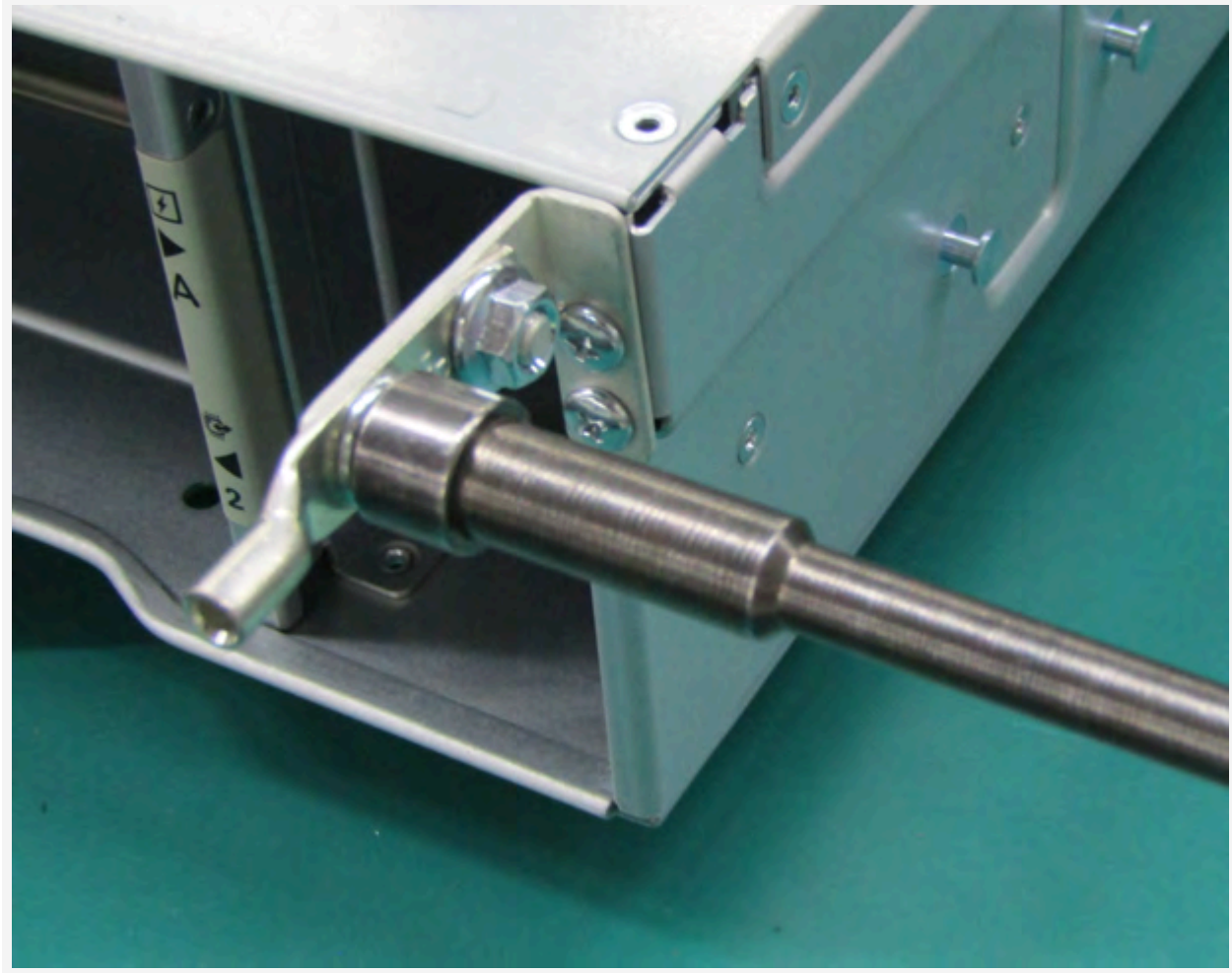
4 Remove both nuts and washers from grounding bracket.



5 Attach the grounding wire terminal and reinstall the washers and nuts.

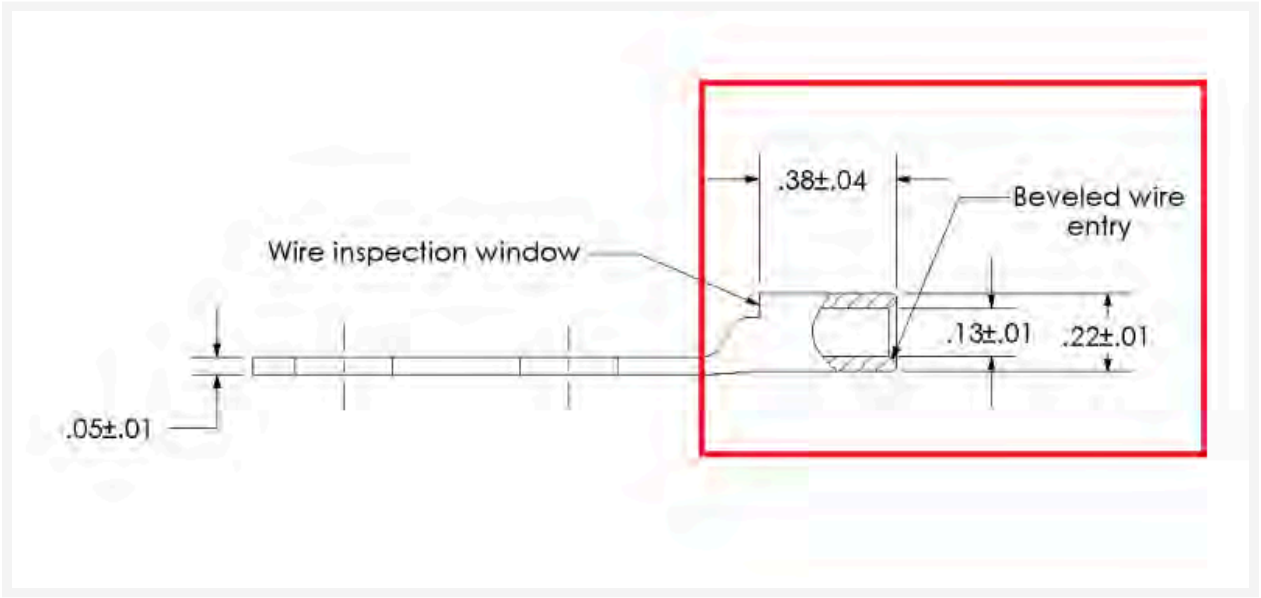


6 Tighten both nuts to 4.5 inch/pounds (+/- 0.5 in/lb).



7 The GLA installation process is complete.

8 When crimping the 10AWG cable to the lug, remove 0.38" of shielding to expose the metal wire. Slide it into the lug and ensure metal-to-metal contact before crimping.



⚠ CAUTION: The terminal must have a #10 AWG wire (not shown) crimped within it. The other end of the grounding wire must be securely attached to an unpainted metal surface on the rack. Failure to do so may result in system damage or failure and possible physical injury.

Regulatory Information

FCC (US)

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

> ⓘ NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy, and if it is not installed and used in accordance with the instruction manual, it may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his/her own expense.

> ⓘ NOTE: Any modifications made to this device that are not approved by Celestica may void the authority granted to the user by the FCC to operate this equipment.

ICES-003 (Canada)

This Class A digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

CE (European Community)

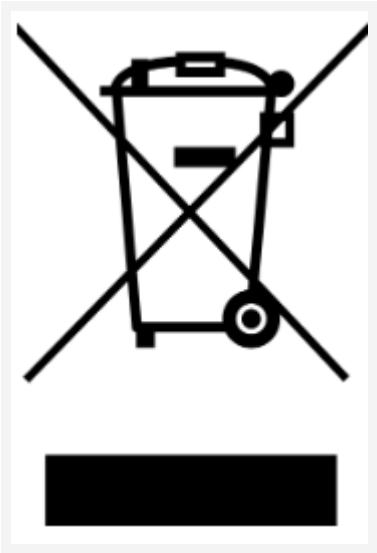
This product conforms to the following European Directive(s) and Standard(s): Application of Council Directive: 2014/35/EU, 2014/30/EU, 2011/65/EU.

Standards to which Conformity is declared: EN55022, EN55024, EN61000-3-2, EN61000-3-3, EN60950-1.

This is a Class A product.

In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Waste Electrical and Electronic Equipment (WEEE)



In accordance with European Directive 2012/19/EU on Waste Electrical and Electronic Equipment (WEEE), the presence of the above symbol on the product or on its packaging indicates that this item must not be disposed of in the normal unsorted municipal waste stream. Instead, it is the user's responsibility to dispose of this product by returning it to a collection point designated for the recycling of electrical and electronic equipment waste. Separate collection of this waste helps to optimize the recovery and recycling of any reclaimable materials and also reduces the impact on human health and the environment.

For more information concerning the correct disposal of this product, please contact your local authority or the retailer where this product was purchased.

VCCI (Japan)

This is a Class A product based on the standard of the Voluntary Control Council for Interference by Information Technology Equipment (VCCI).

If this equipment is used in a domestic environment, radio interference may occur, in which case, the user may be required to take corrective actions.

Contact Information

Celestica operates a customer service portal.

- Self-support resources (knowledge base, FAQ, common fixes, new firmware) are available.
- Our support teams are connected to the support portal and can receive notifications for requests.
- The portal also tracks and collects customer inputs for further improvements to our products and services.

Customers can register and request support (as well as search information in the knowledge base) at: https://customersupport.celestica.com/csm
In case there are any questions or issues using the customer portal visit: https://www.celestica.com/contact-us. For immediate questions, please feel free to call your responsible account manager.