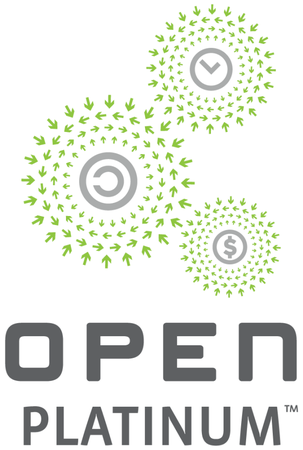
Open. Together.

OCP
REGIONAL
SUMMIT

Open Rack V3 Frame Update

Steve Mills Technical Lead Facebook



RACK & POWER

Agenda

01 Why Open Rack V3?

02 What is New for Open Rack V3?

03 How we are Engaging the Community?

04 What is Next?

Specifications

RACK &
POWER

Agenda

01 **Why Open Rack V3?**

02 What is New for Open Rack V3?

03 How we are Engaging the Community?

04 What is Next?


Physics
Contemporary System Design

OPEN

Compute Project

RACK &
POWER

Why Open Rack V3?

Why Open Rack V3?

Enable adoption across the OCP community

- Common rack frame that is adaptable by the community

Why Open Rack V3?

Enable adoption across the OCP community

- Common rack frame that is adaptable by the community
- Power Architecture that supports a wide range of applications from 15-33kW

Why Open Rack V3?

Enable adoption across the OCP community

- Common rack frame that is adaptable by the community
- Power Architecture that supports a wide range of applications from 15-33kW
- Provide a platform to enable OCP Advanced Cooling Solutions

RACK &
POWER

Agenda

01 Why Open Rack V3?

02 What is New for Open Rack V3?

03 How we are Engaging the Community?

04 What is Next?

New Features Driven by the Community

New Features Driven by the Community

Feature	Facebook V2	Facebook V3

New Features Driven by the Community

Feature	Facebook V2	Facebook V3
Vertical Spacing	OpenU (48mm)	OpenU and EIA RU

New Features Driven by the Community

Feature	Facebook V2	Facebook V3
Vertical Spacing	OpenU (48mm)	OpenU and EIA RU height only
Height	41 OpenU	44x48mm OpenU or 48x RU

New Features Driven by the Community

Feature	Facebook V2	Facebook V3
Vertical Spacing	OpenU (48mm)	OpenU and EIA RU height only
Height	41 OpenU	44x48mm OpenU or 48x RU
Busbar Voltage	12V	48V

New Features Driven by the Community

Feature	Facebook V2	Facebook V3
Vertical Spacing	OpenU (48mm)	OpenU and EIA RU height only
Height	41 OpenU	44x48mm OpenU or 48x RU
Busbar Voltage	12V	48V
# of Power Zones	2	1

New Features Driven by the Community

Feature	Facebook V2	Facebook V3
Vertical Spacing	OpenU (48mm)	OpenU and EIA RU height only
Height	41 OpenU	44x48mm OpenU or 48x RU
Busbar Voltage	12V	48V
# of Power Zones	2	1
Power Solution	6.2kW in 3 OpenU with BBU	15kW(N+1) in 1OU with an optional BBU solution

New Features Driven by the Community

Feature	Facebook V2	Facebook V3
Vertical Spacing	OpenU (48mm)	OpenU and EIA RU height only
Height	41 OpenU	44x48mm OpenU or 48x RU
Busbar Voltage	12V	48V
# of Power Zones	2	1
Power Solution	6.2kW in 3 OpenU with BBU	15kW(N+1) in 1OU with an optional BBU solution
Power Shelf location	Fixed	Located anywhere on the busbar

Optional Features Driven by the Community

Feature	Facebook V2	Facebook V3

Optional Features Driven by the Community

Feature	Facebook V2	Facebook V3
Liquid Cooling Manifold (ACS)	No	Optional Kit

Optional Features Driven by the Community

Feature	Facebook V2	Facebook V3
Liquid Cooling Manifold (ACS)	No	Optional Kit
Rear Door Heat Exchanger (ACS)	No	Optional Kit

Optional Features Driven by the Community

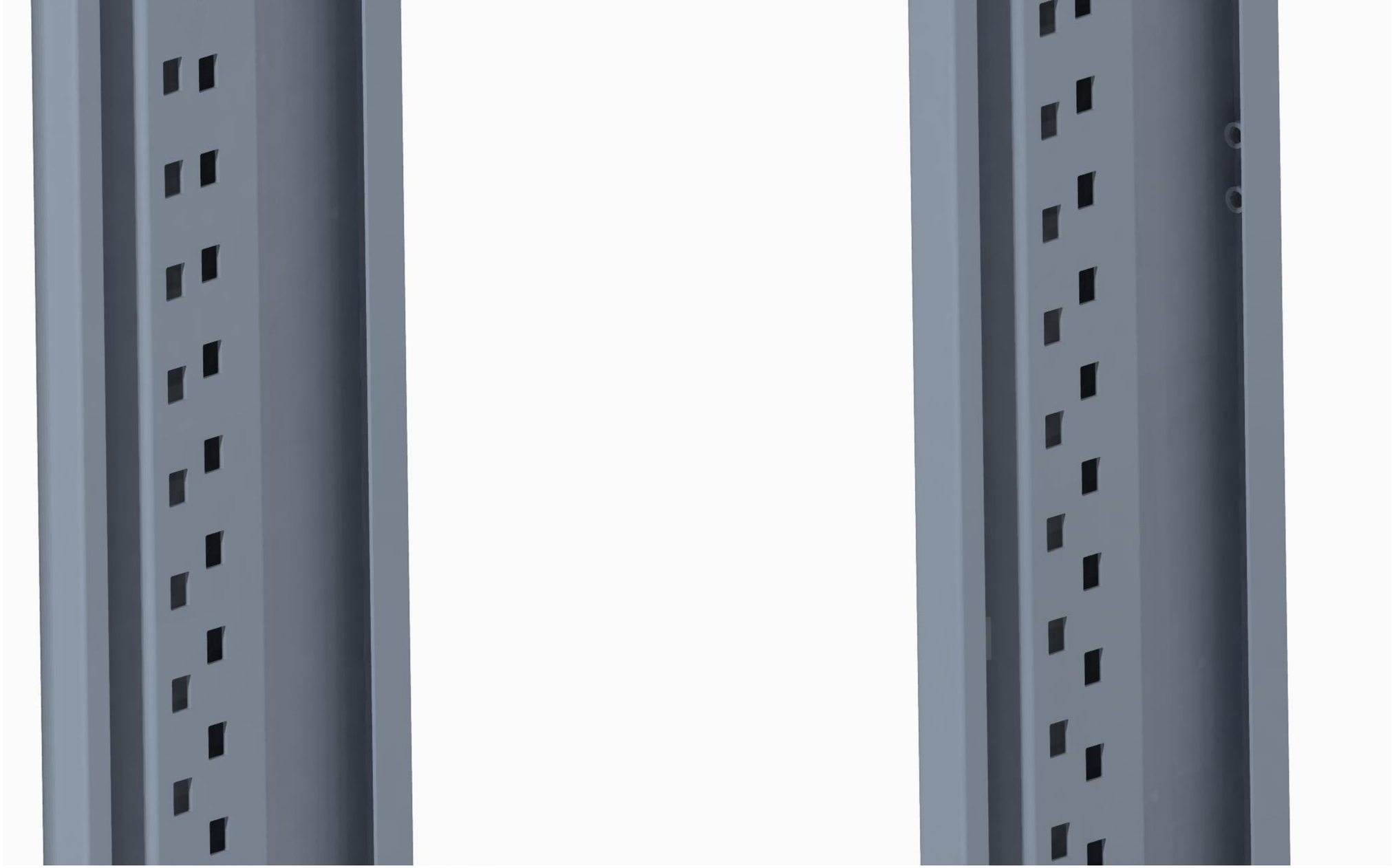
Feature	Facebook V2	Facebook V3
Liquid Cooling Manifold (ACS)	No	Optional Kit
Rear Door Heat Exchanger (ACS)	No	Optional Kit
Co-location Support	No	Optional Kit

Optional Features Driven by the Community

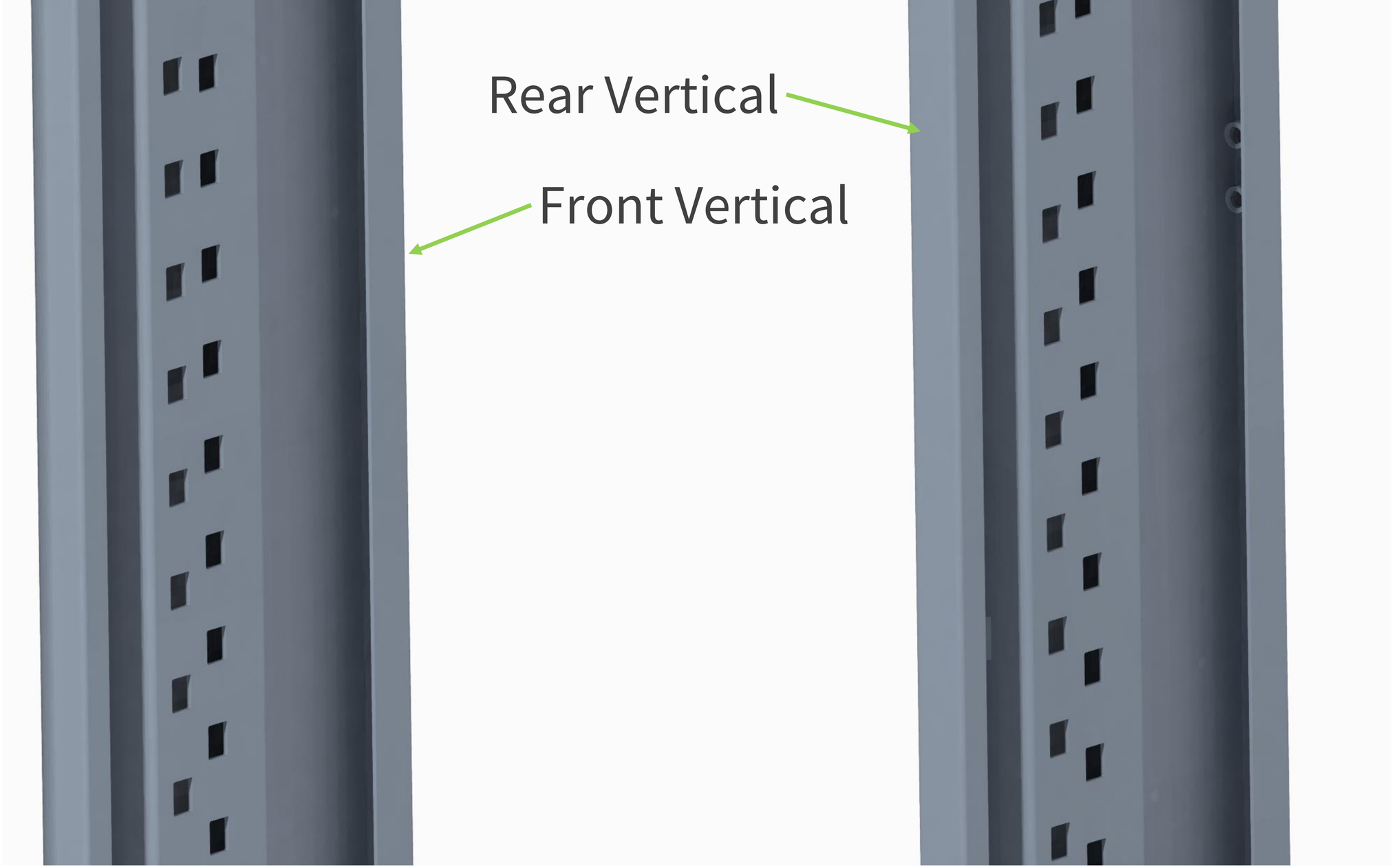
Feature	Facebook V2	Facebook V3
Liquid Cooling Manifold (ACS)	No	Optional Kit
Rear Door Heat Exchanger (ACS)	No	Optional Kit
Co-location Support	No	Optional Kit
Rear Data Fabric	No	Optional Kit

Vertical Spacing

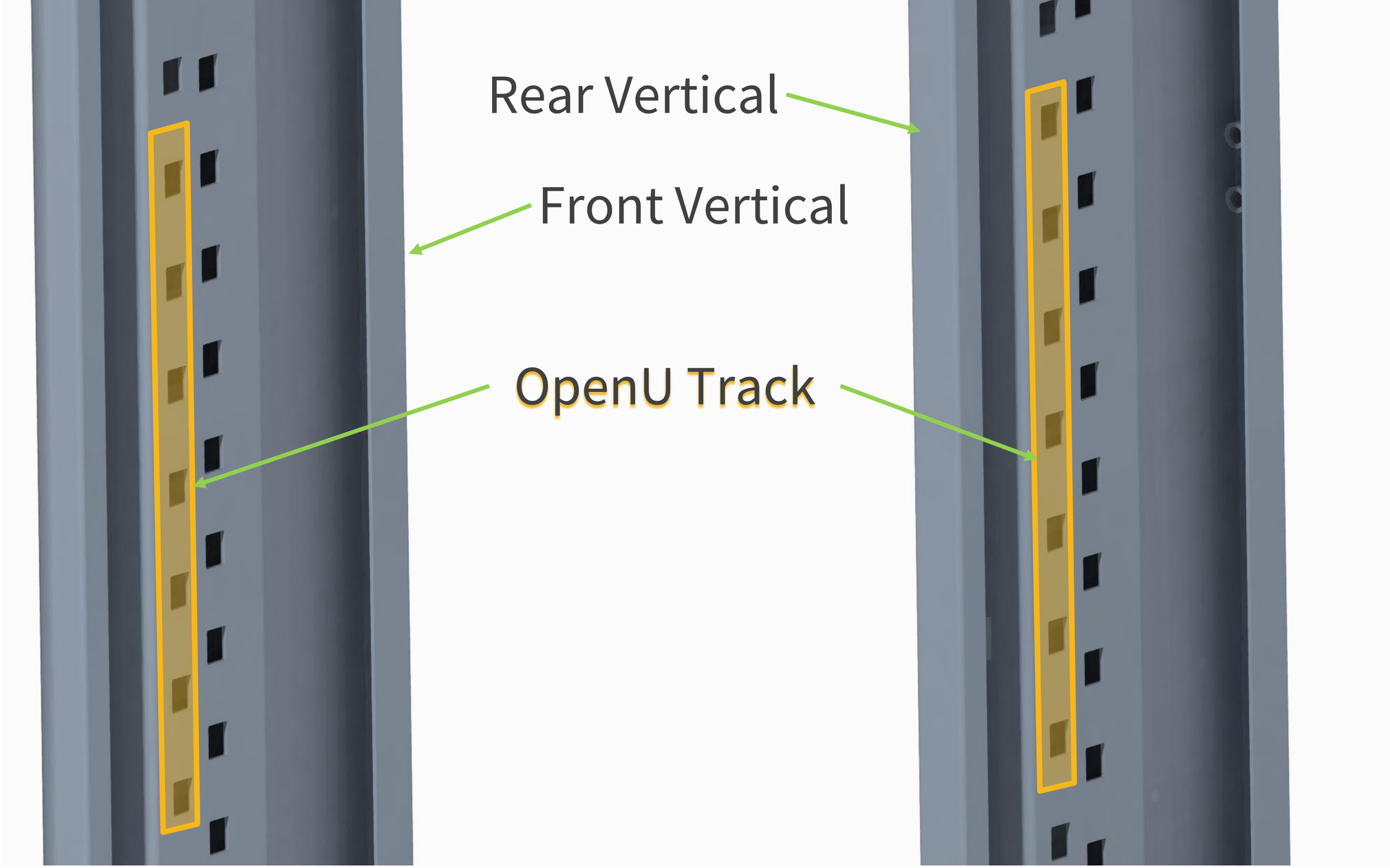
Vertical Spacing



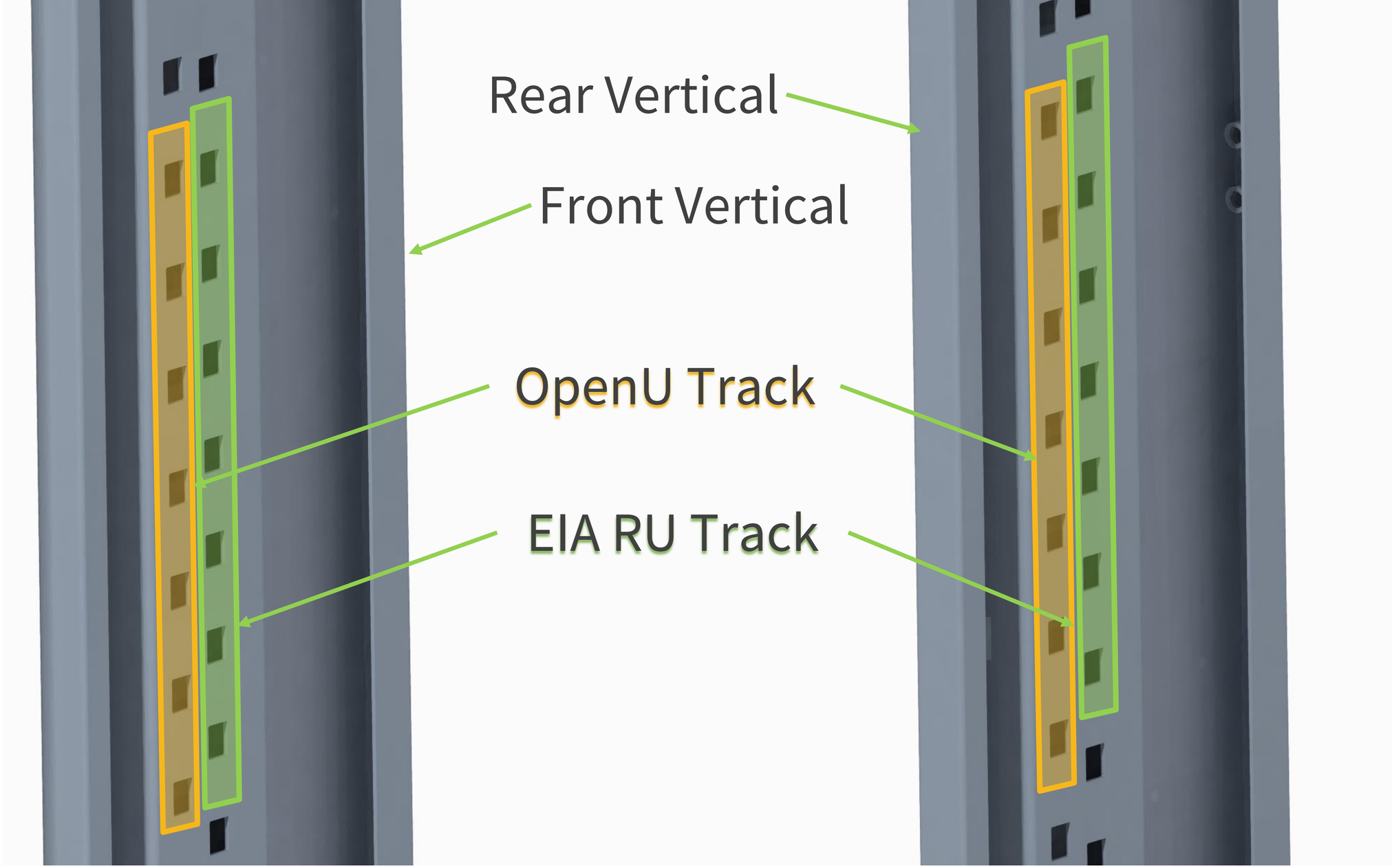
Vertical Spacing



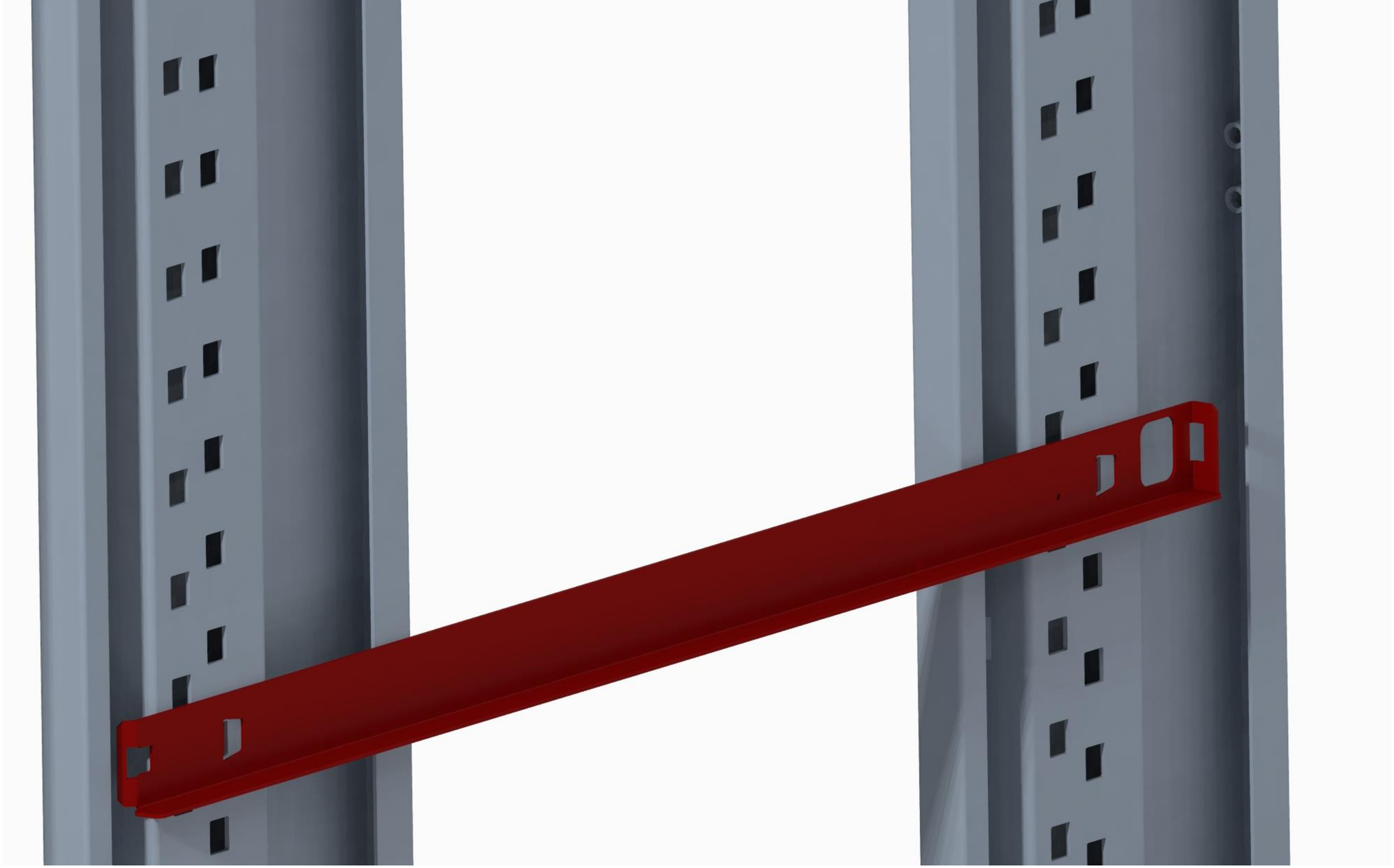
Vertical Spacing



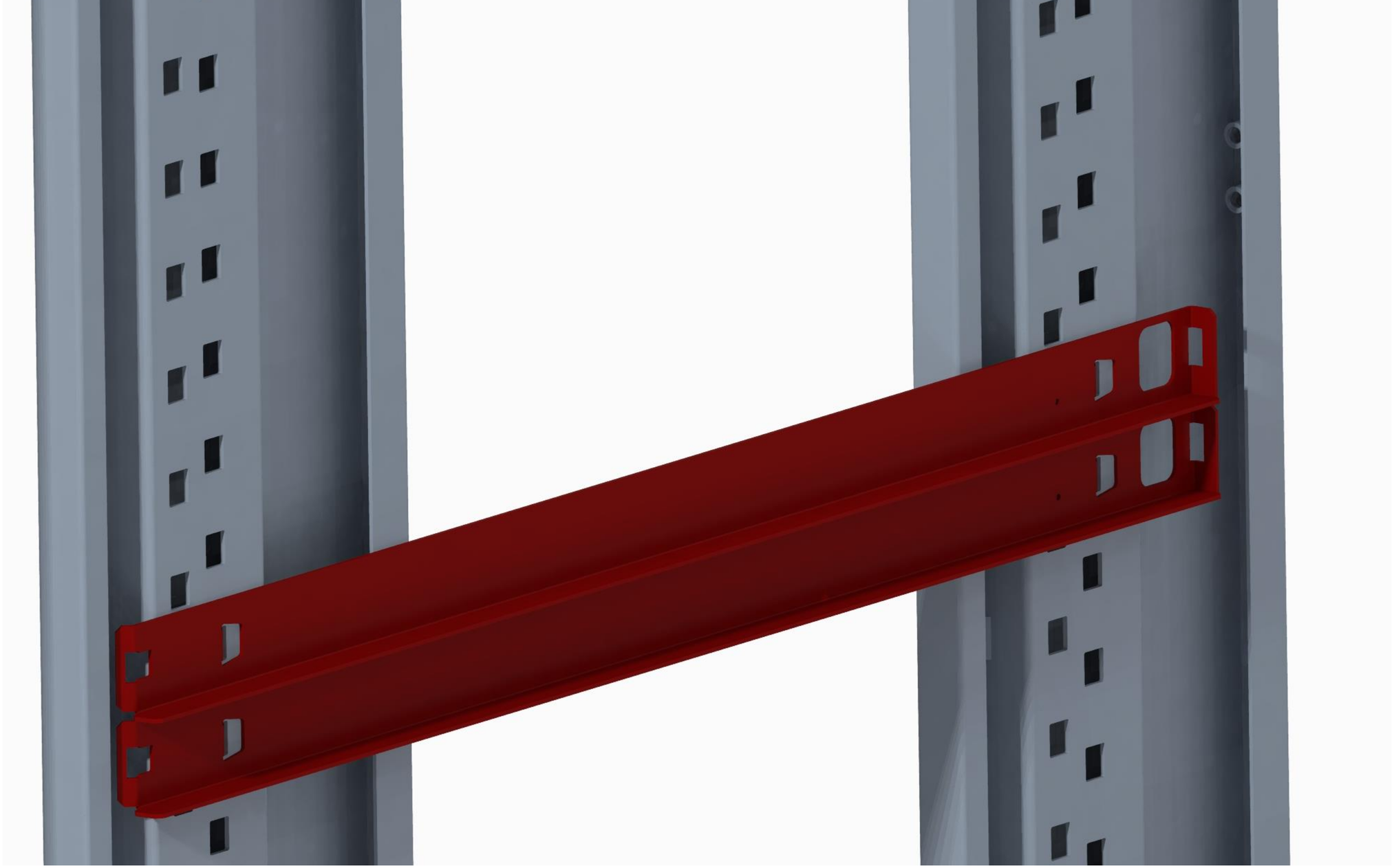
Vertical Spacing



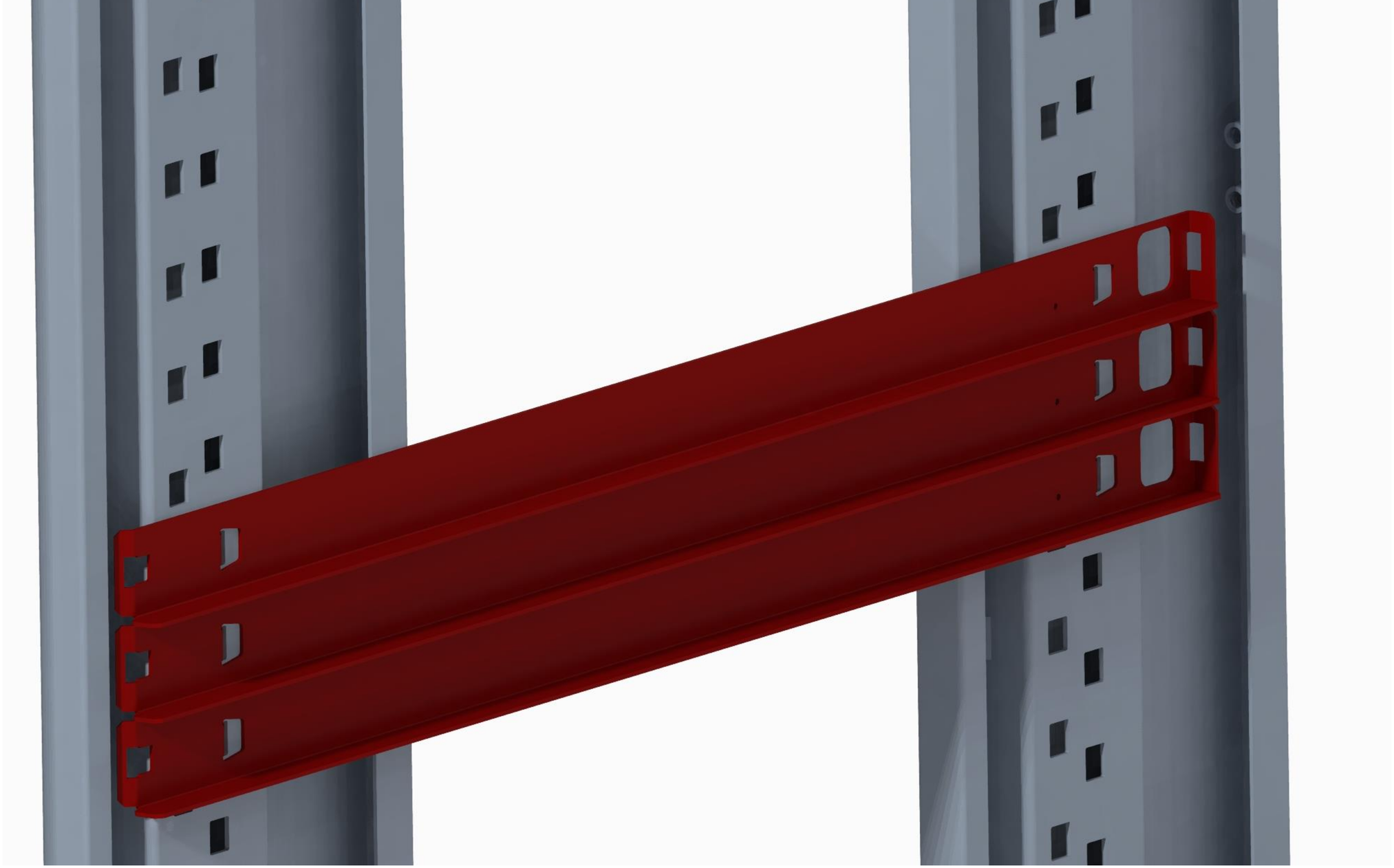
Vertical Spacing



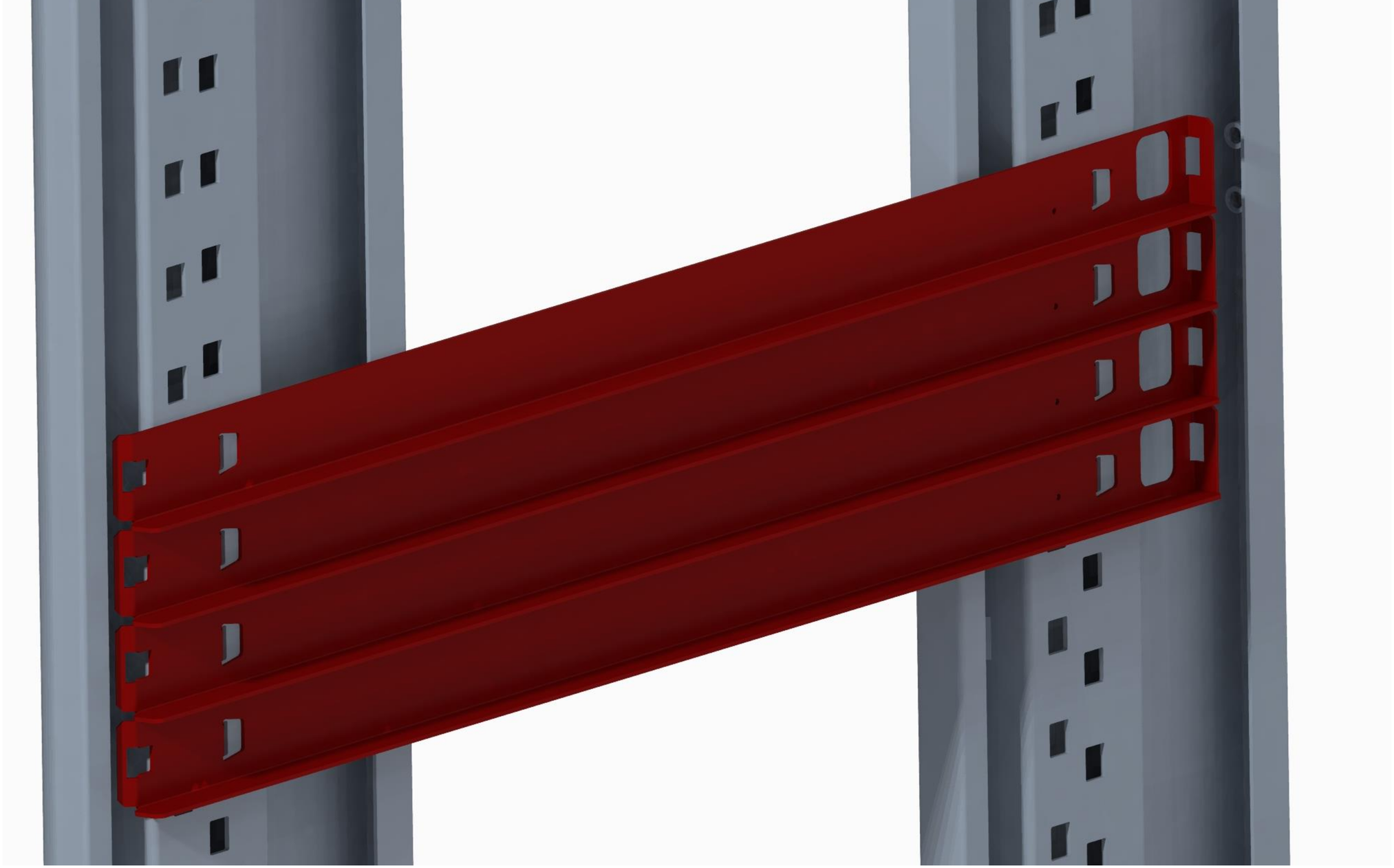
Vertical Spacing



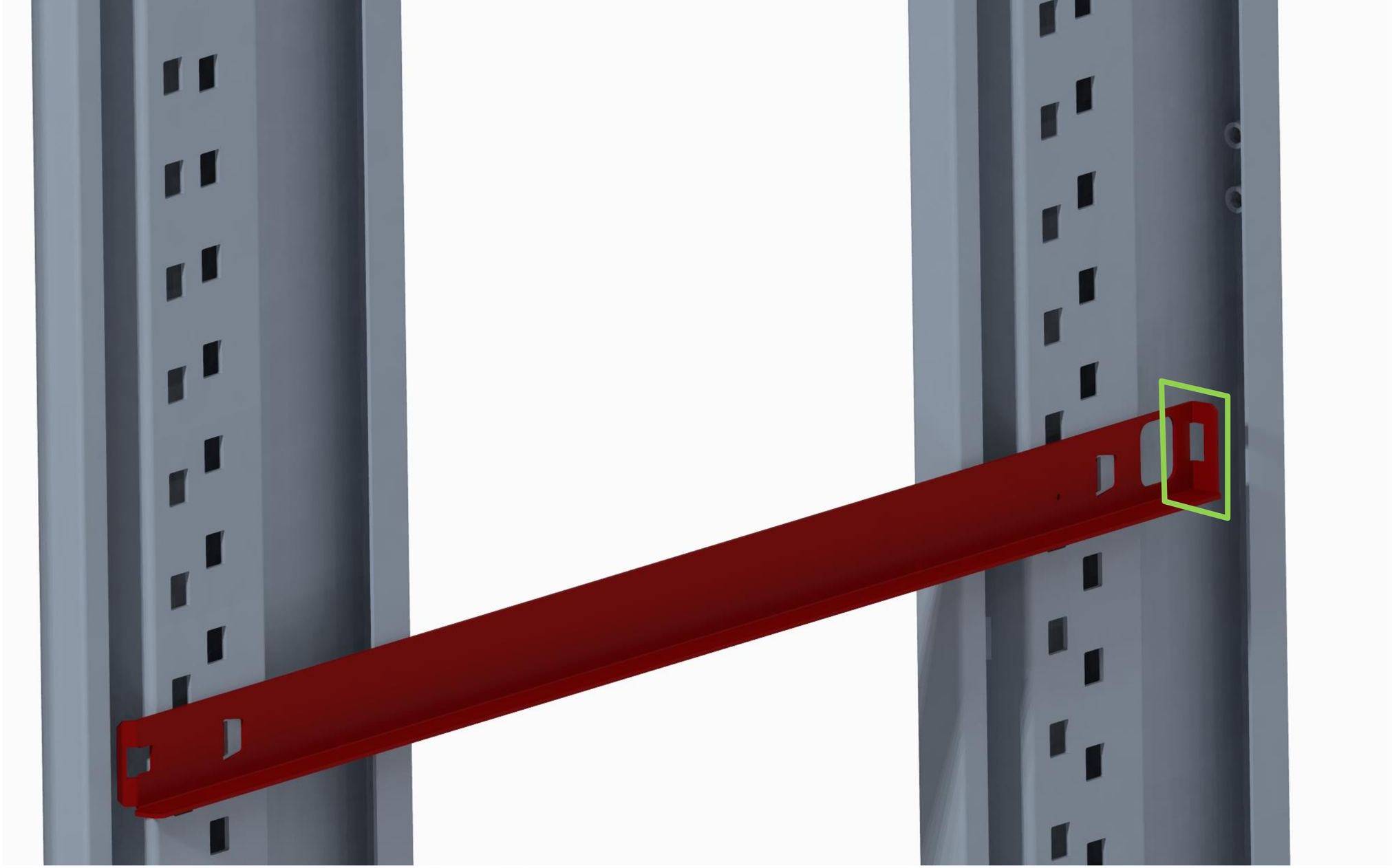
Vertical Spacing

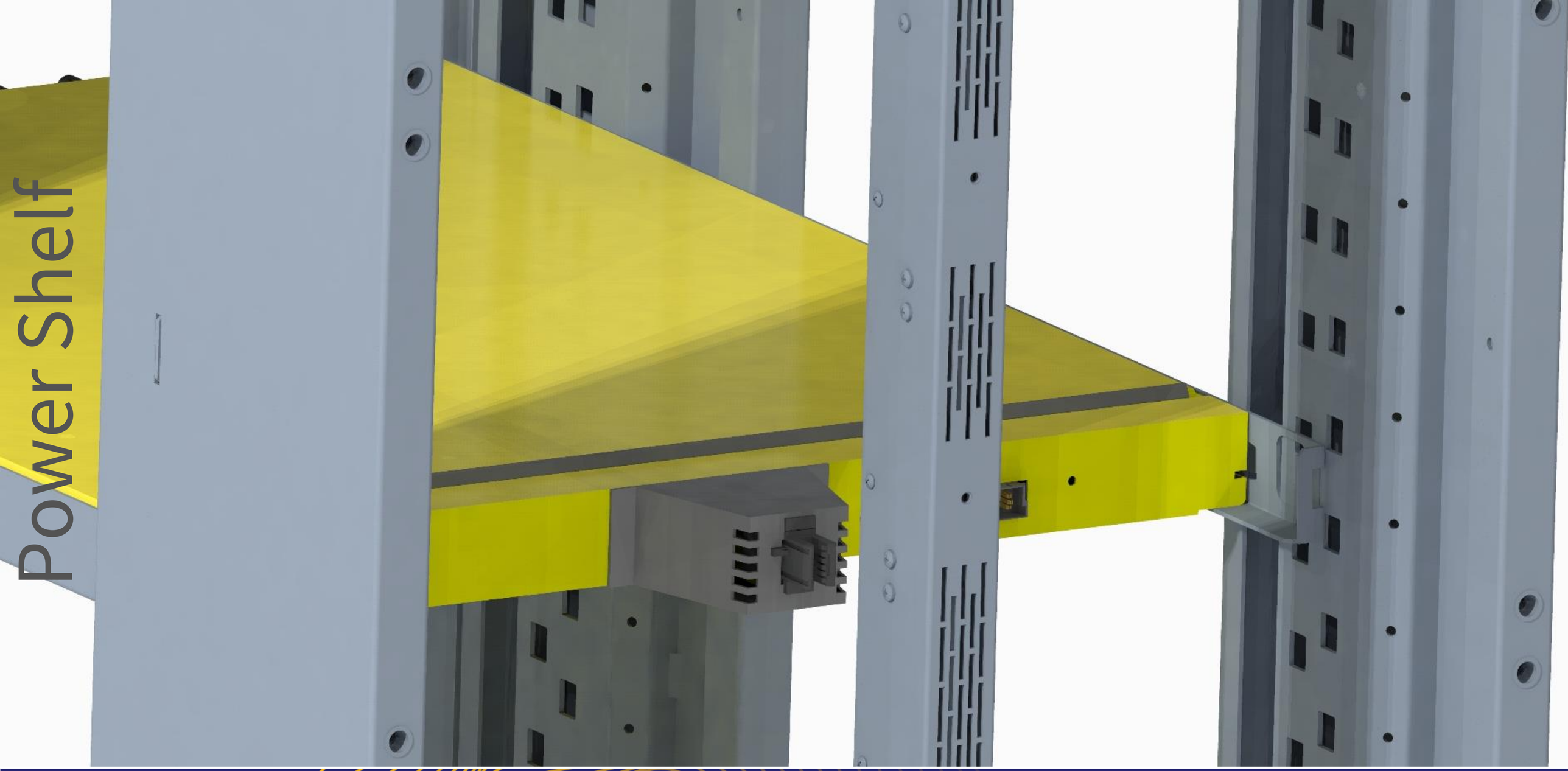


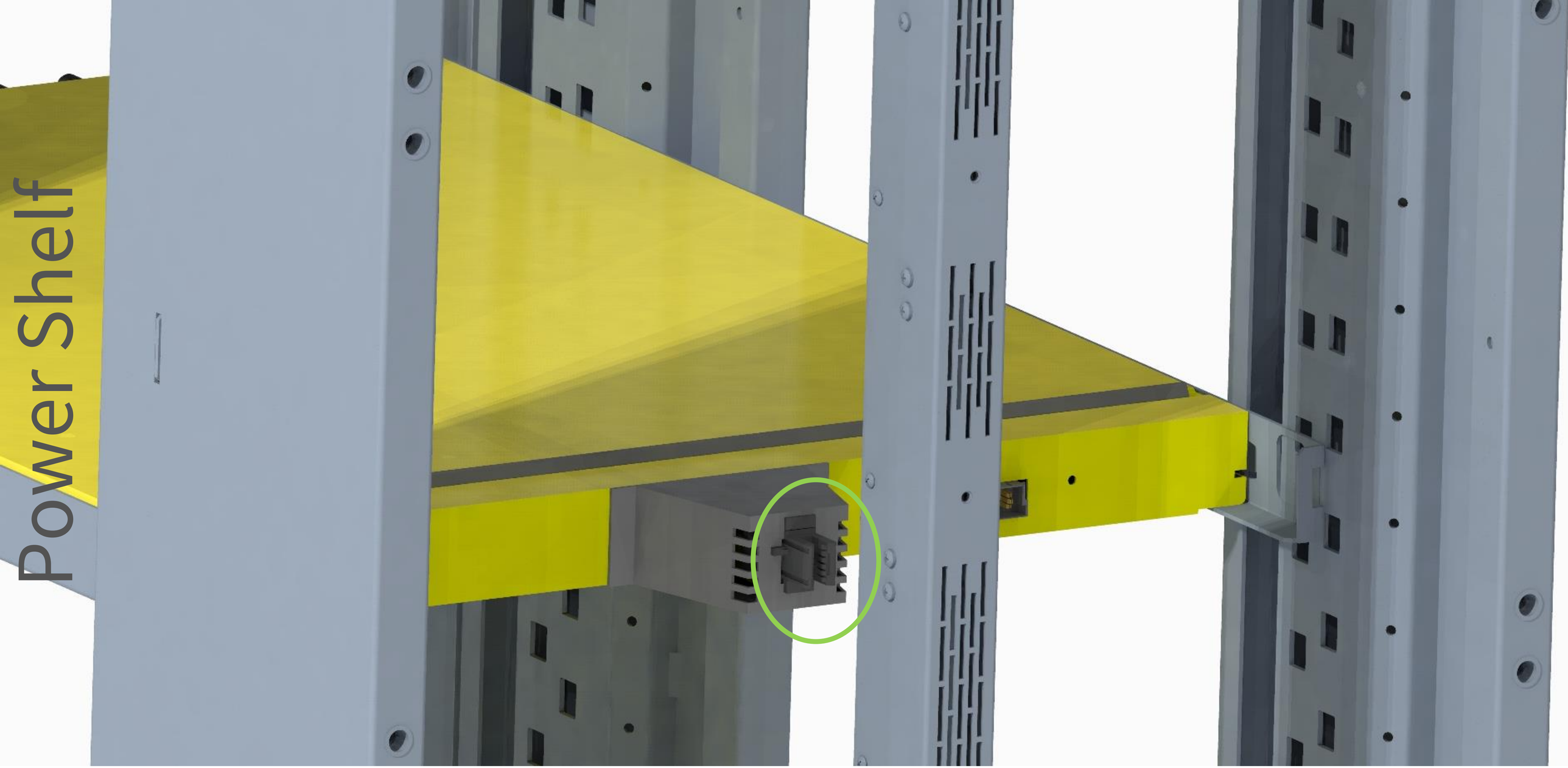
Vertical Spacing

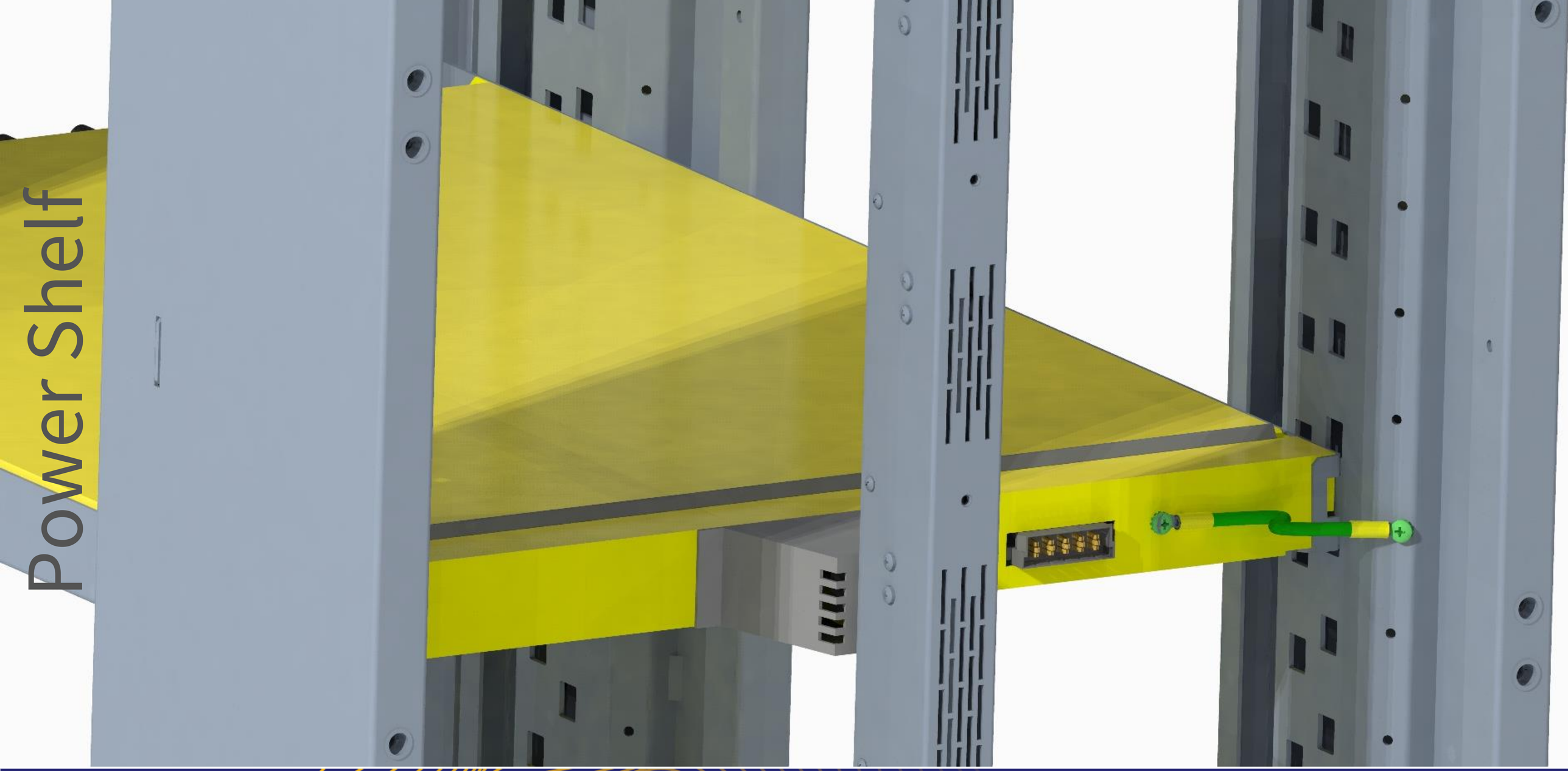


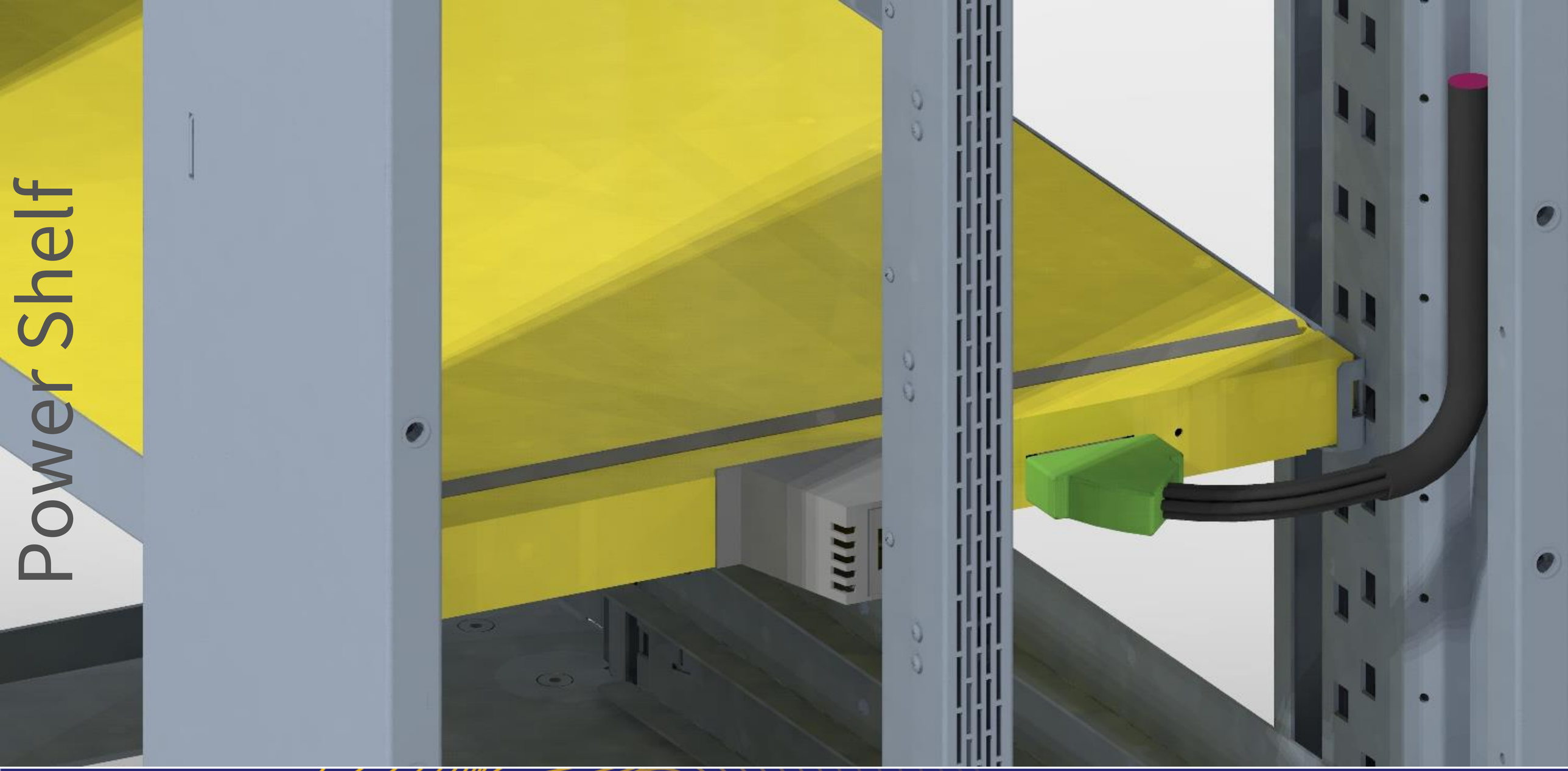
Rear Hard Stop




Power Shelf


Power Shelf


Power Shelf


Power Shelf

Agenda

01 Why Open Rack V3?

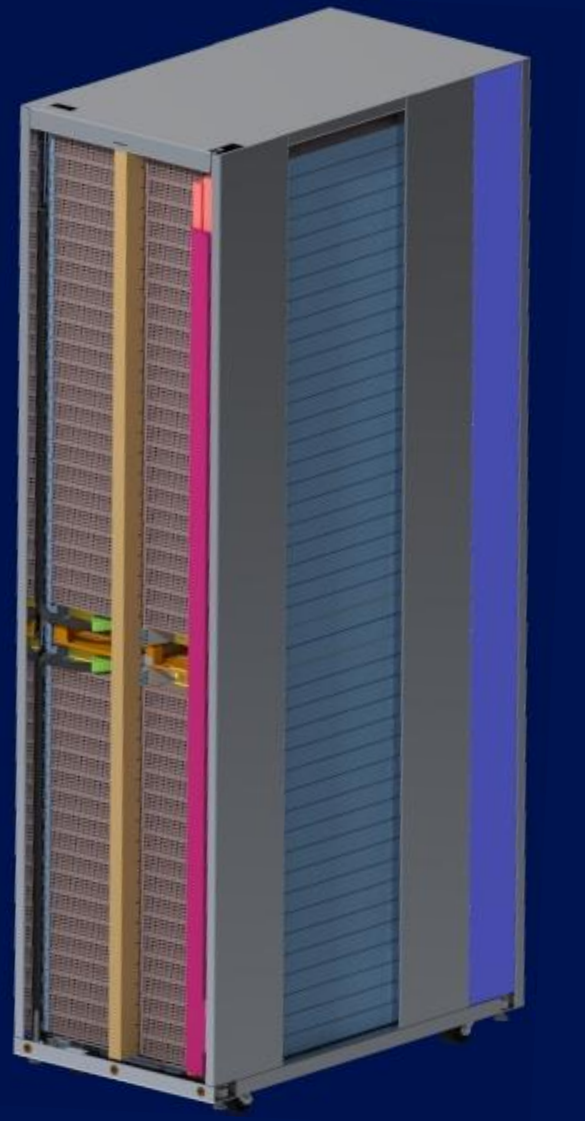
02 What is New for Open Rack V3?

03 How we are Engaging the Community?

04 What is Next?

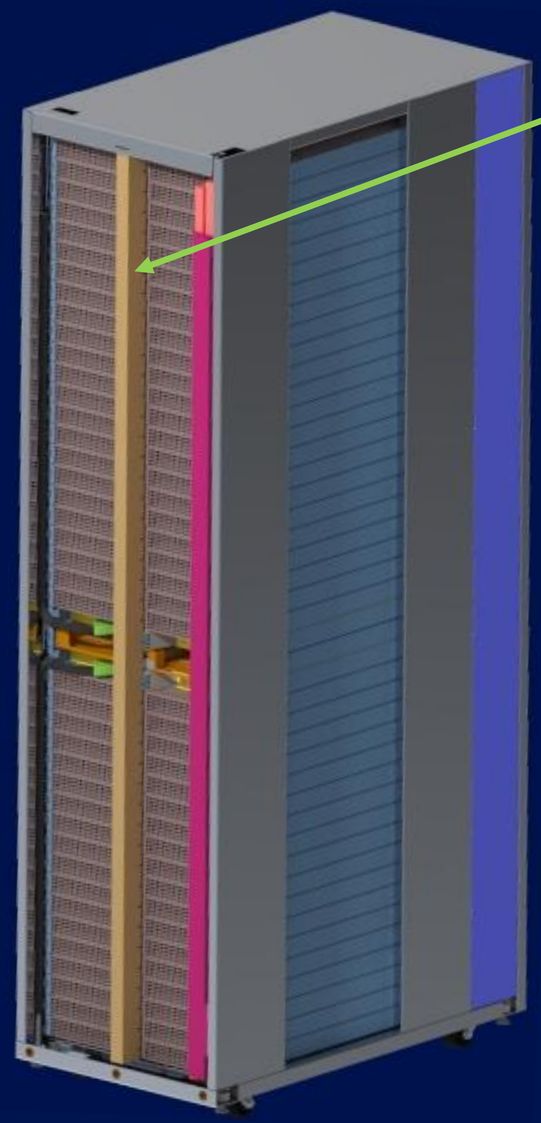
Working Groups

Rear View



Working Groups

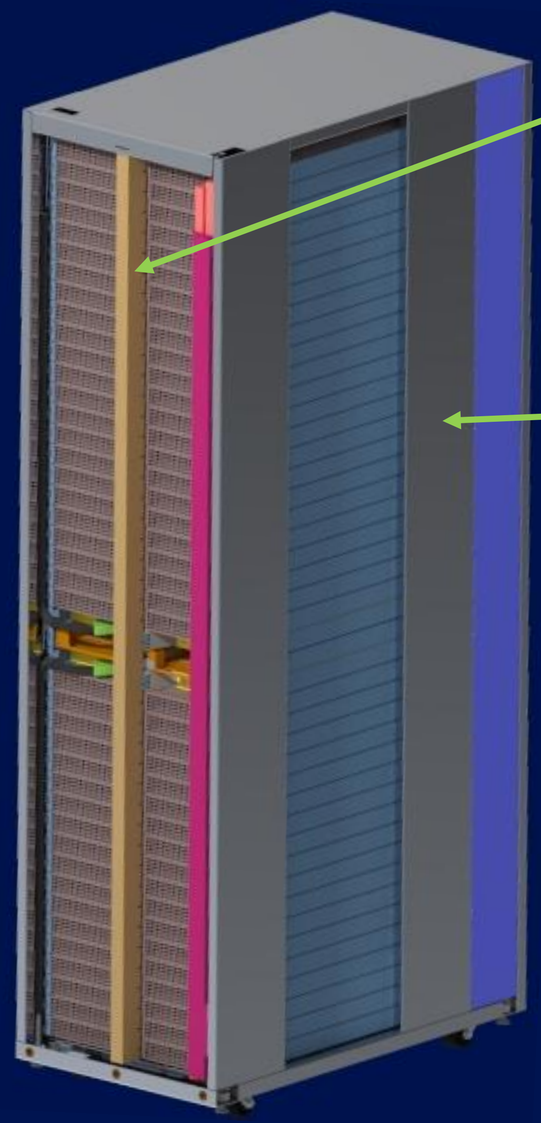
Rear View



48V Busbar (Complete)

Working Groups

Rear View

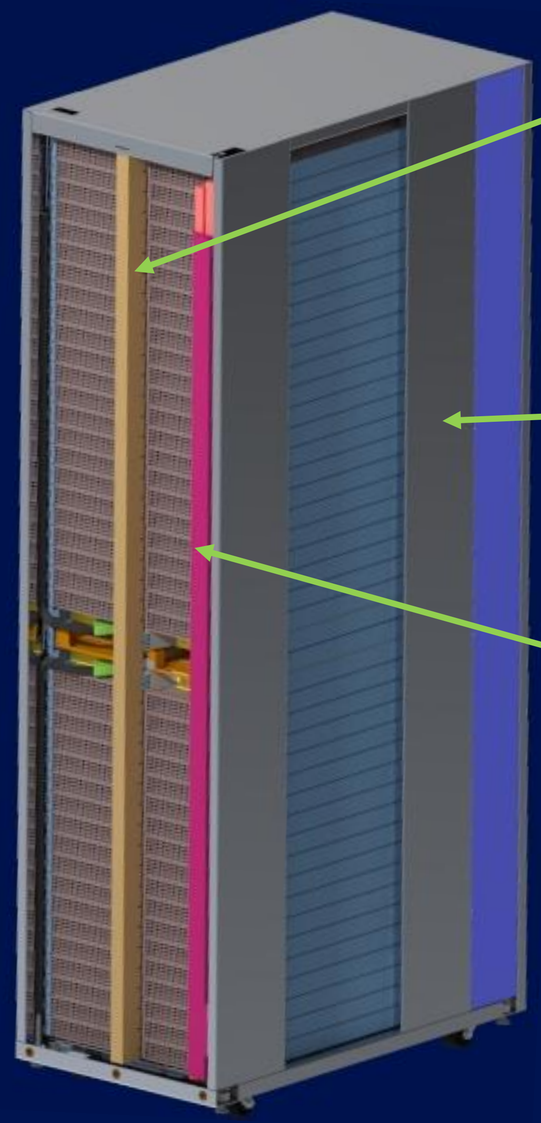


48V Busbar (Complete)

Open Rack V3 Frame

Working Groups

Rear View



48V Busbar (Complete)

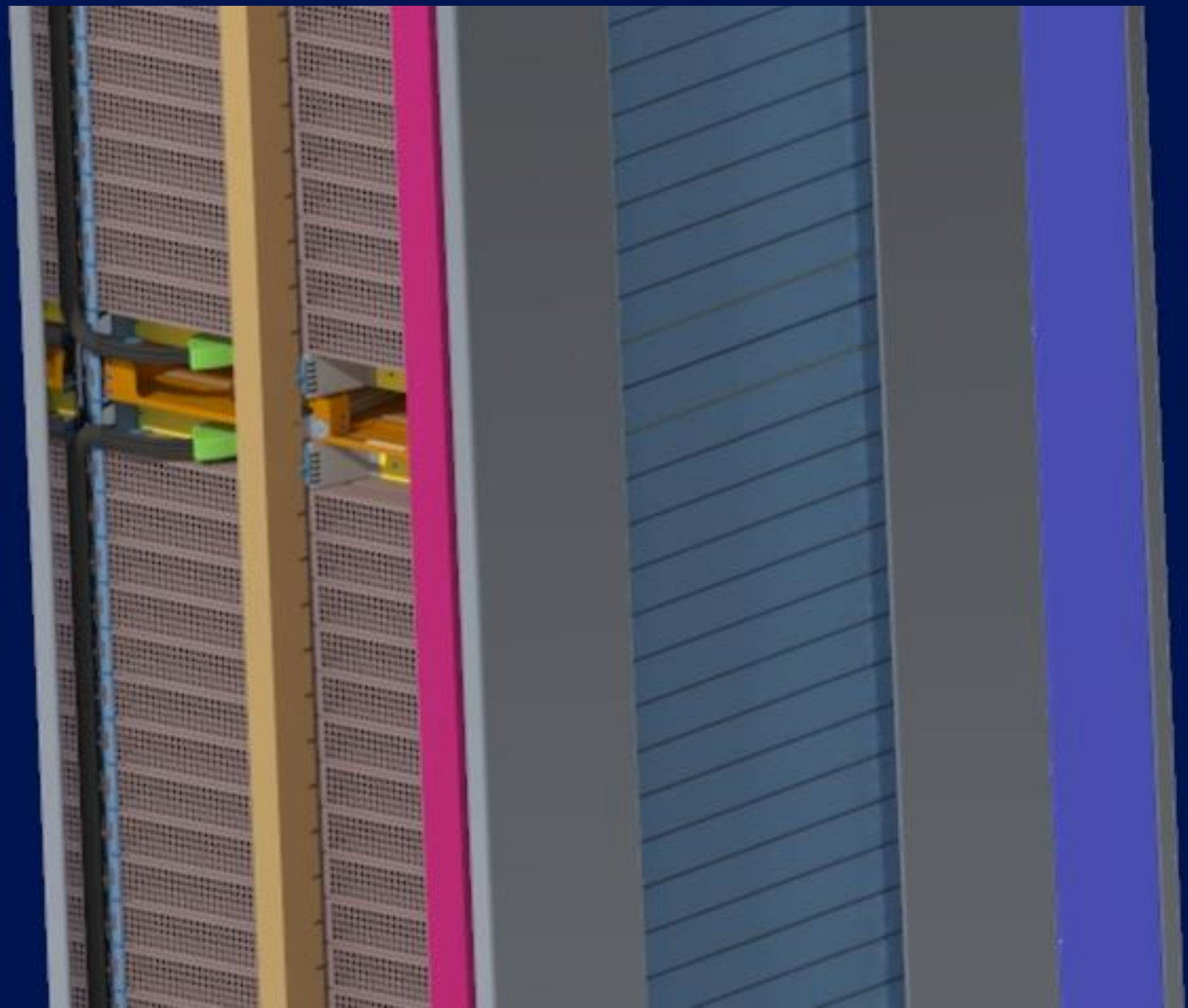
Open Rack V3 Frame

Rear Hot-plug Liquid Manifold

Hot-plug Dripless Valves

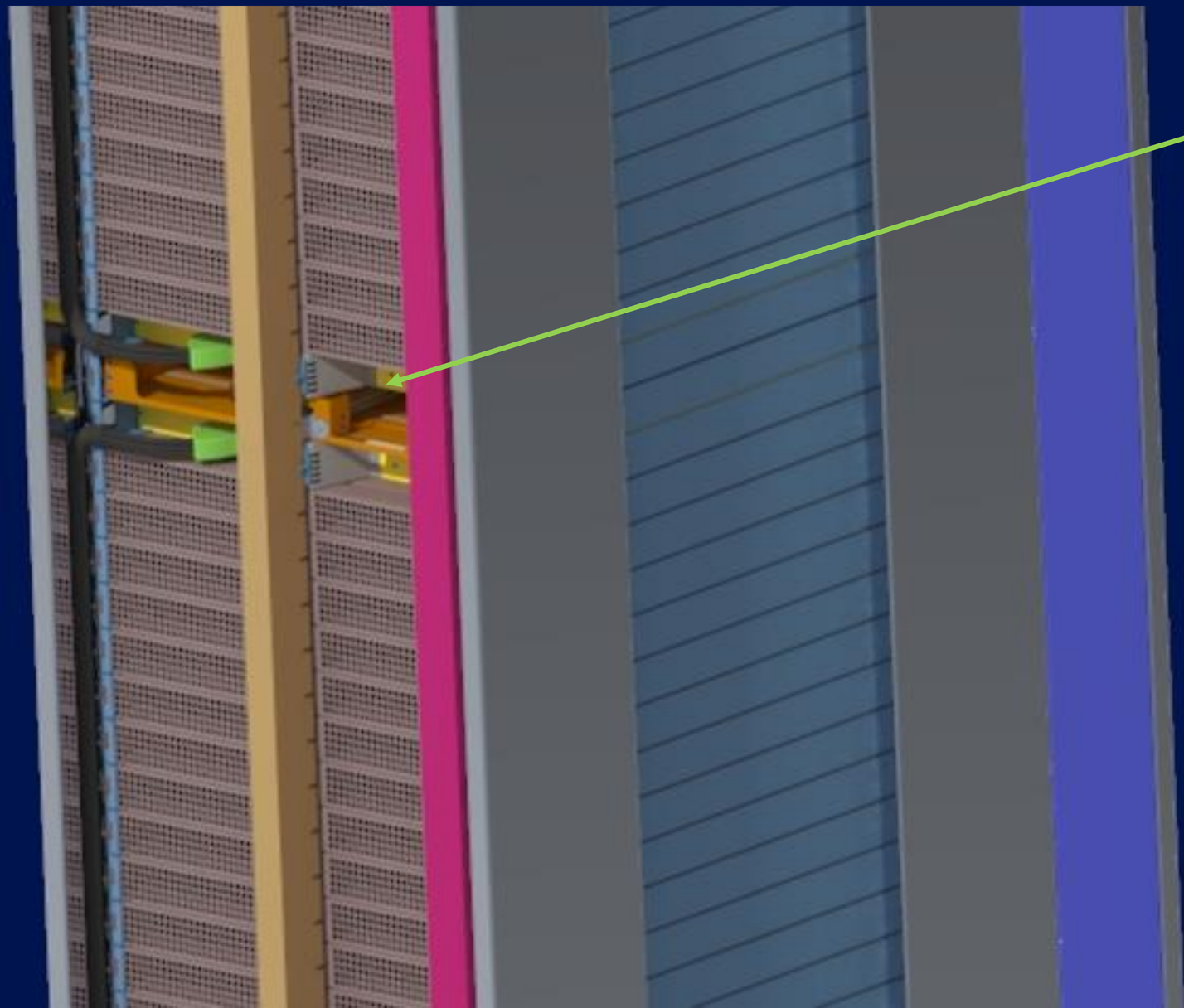
Working Groups – Power Components

Rear View



Working Groups

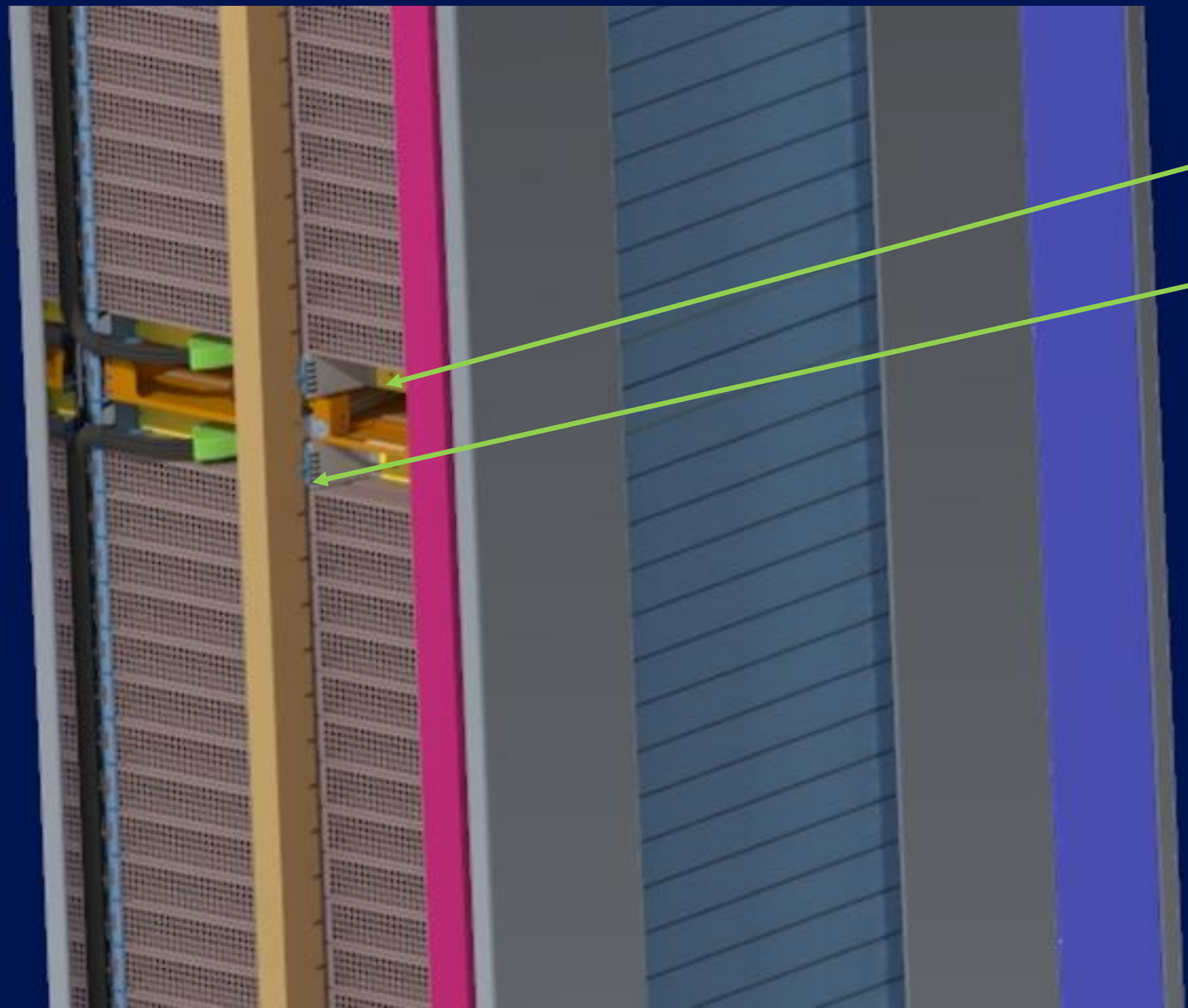
Rear View



Open Rack V3 Power Shelf
Power Rectifier
Management Controller

Working Groups

Rear View

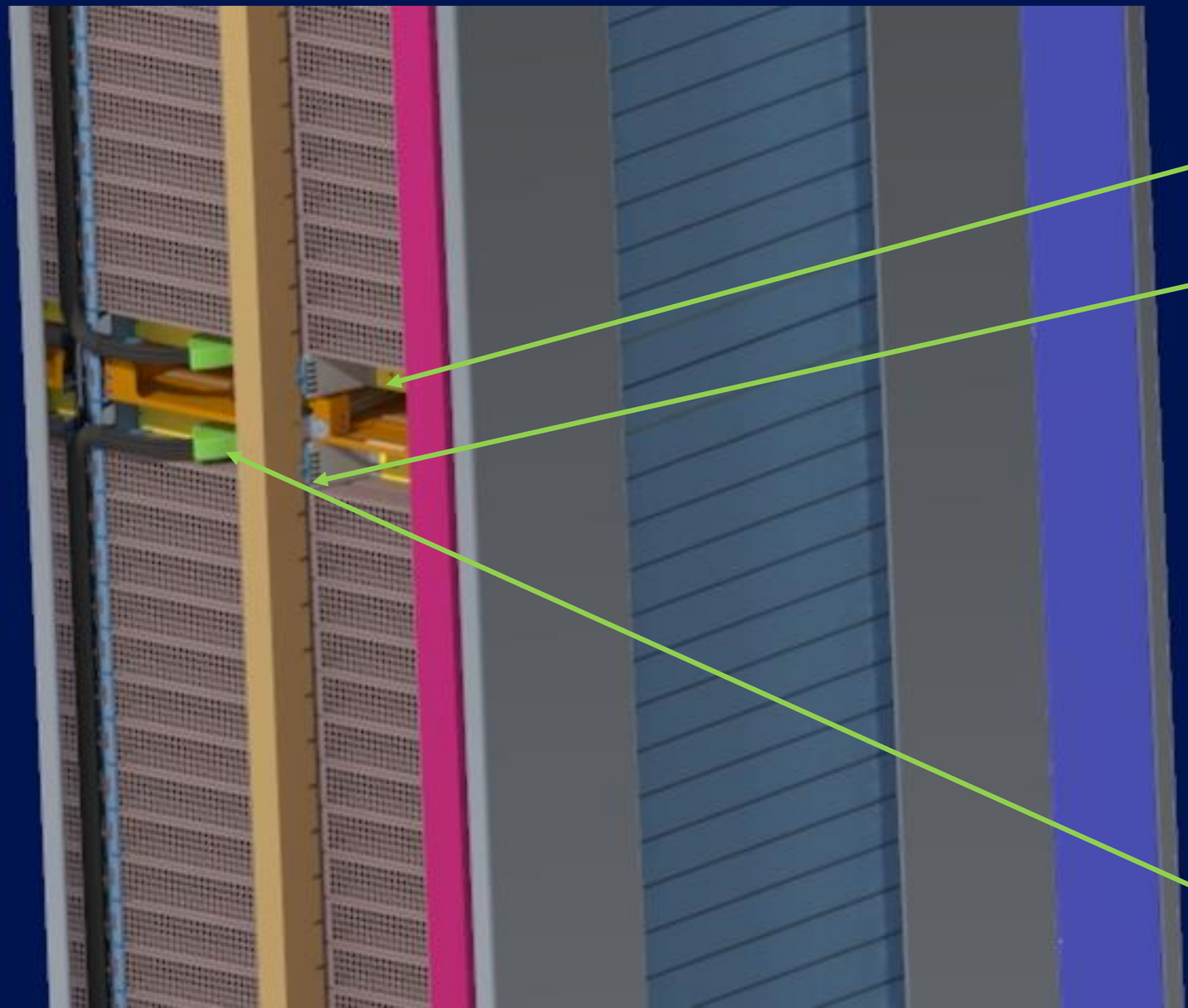


Open Rack V3 Power Shelf
Power Rectifier
Management Controller

48V Output Connector

Working Groups

Rear View



Open Rack V3 Power Shelf
Power Rectifier
Management Controller

48V Output Connector

Universal Input Connector

RACK &
POWER

Agenda

01 Why Open Rack V3?

02 What is New for Open Rack V3?

03 How we are Engaging the Community?

04 What is Next?

Call to Action

Project Wiki with latest specification:
https://www.opencompute.org/wiki/Open_Rack/SpecsAndDesigns

Open Rack Project Info:
Rack and Power wiki: https://www.opencompute.org/wiki/Rack_%26_Power
Rack and Power Mailing list: https://ocp-all.groups.io/g/OCP-RackandPower

OCP REGIONAL SUMMIT

Open. Together.

OCP Regional Summit

26–27, September, 2019