PCI Express® 6.0 EDSFF/OCP Device Mounting Kit for Test Backplane - Quick Start Guide

KEYSIGHT

QUICK START GUIDE

Notices

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Overview

The PCI Express® 6.0 compliant EDSFF/OCP device mounting kit for the Keysight P5563C Test Backplane allows you to use the Test Backplane for protocol analysis of EDSFF or OCP form factor Solid State Drives (SSDs) based on PCI Express protocols.

The kit includes all necessary mechanical fixtures, such as adapters, brackets, and screws, required to mount an EDSFF or OCP device onto the Test Backplane for PCIe testing.

This guide provides step-by-step instructions for installing the EDSFF Holder Subassembly onto the Test Backplane. Once the subassembly is secured, appropriate brackets and adapters are attached to hold EDSFF or OCP devices of varying thicknesses.

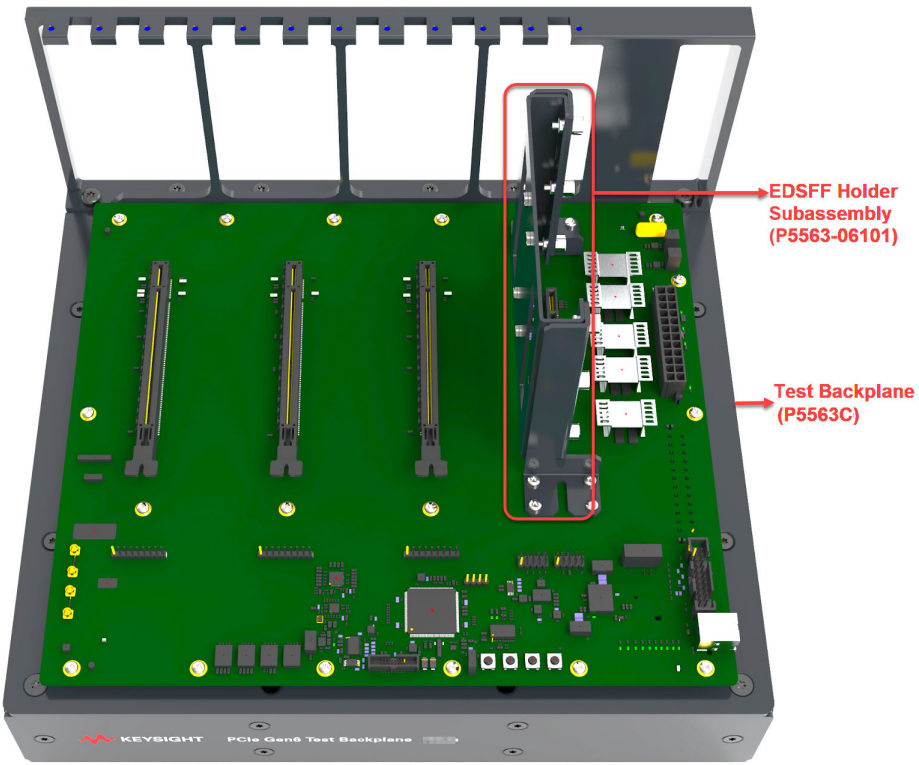

Figure 1 Test Backplane with EDSFF Holder Subassembly

CAUTION

The EDSFF Holder Subassembly (P5563-06101), along with device brackets and adapters required to hold EDSFF or OCP devices, is provided to customers as a separate kit. It must not be pre-installed on the P5563C Test Backplane, as doing so may result in damage during shipping.

The device mounting kit supports the following EDSFF and OCP form factors and along with their corresponding device configurations.

Table 1 EDSFF form factors and device configurations

EDSFF/OCP Form Factor	Device Configuration
E1.L	E1.L 9.5mm E1.L 18mm
E1.S	E1.S 5.9mm E1.S 8mm heat spreader E1.S Symmetric Enclosure_9.5mmTHK E1.S Symmetric Enclosure_15mmTHK E1.S Symmetric Enclosure_25mmTHK
E3.S	E3.S E3.S 2T
E3.L	E3.L E3.L 2T
OCP NIC 3.0	OCP NIC 3.0 W1

For more information on the Keysight P5563CTest Backplane, please refer to the Keysight P5563B/P5563C PCIe 6 Test Backplane Hardware Guide, available on the Keysight website.

Keysight Technical Support

For the latest software updates and product documentation, please visit the Keysight PCI Express® Protocol Solutions website.

For direct assistance, please contact Keysight technical support:

- Email: support@keysight.com
- Website: https://www.keysight.com/us/en/support.html

2 EDSFF/OCP Components

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EDSFF/OCP Components

The kit includes all necessary EDSFF/OCP components such as adapters, brackets, and screws required to install the EDSFF/OCP device on the Test Backplane.

The following components are available in the device mounting kit:

Table 2 EDSFF/OCP components included in the device mounting kit

Components	Keysight Part Number
EDSFF Base Adapter	▪ P5563-06107
EDSFF Vertical Left Support	▪ P5563-06108
EDSFF Vertical Right Support	▪ P5563-06110
E1.S Device Bracket	▪ P5563-06102
E1.S Caseless Device Adapter	▪ P5563-06103
E1.L Device Bracket	▪ P5563-06104
OCP Device Bracket	▪ P5563-06109
E3 Device Base Bracket	▪ P5563-06105
E3 Device Top Bracket Bracket	▪ P5563-06106
M3 Torx screw	▪ 0515-1753
Knob Screw M3	▪ 0515-6657
M2.5 Flat Screw	▪ 0515-2219
Screw-Socket-M2	▪ 0515-1077
M2 Nut	▪ 0535-0069

NOTE Please inspect the device mounting kit for any signs of damage. Carefully unpack the kit and visually inspect each component. If any damage observed, promptly notify your Keysight representative.

3 EDSFF/OCP Components Installation

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Installation

To hold EDSFF and OCP devices, appropriate brackets and adapters must be securely attached to the EDSFF Holder Subassembly (P5563-06101), which is mounted on the Test Backplane.
The subsequent sections of this chapter provide detailed installation steps for the EDSFF Holder Subassembly, followed by instructions for installing the device brackets and adapters.

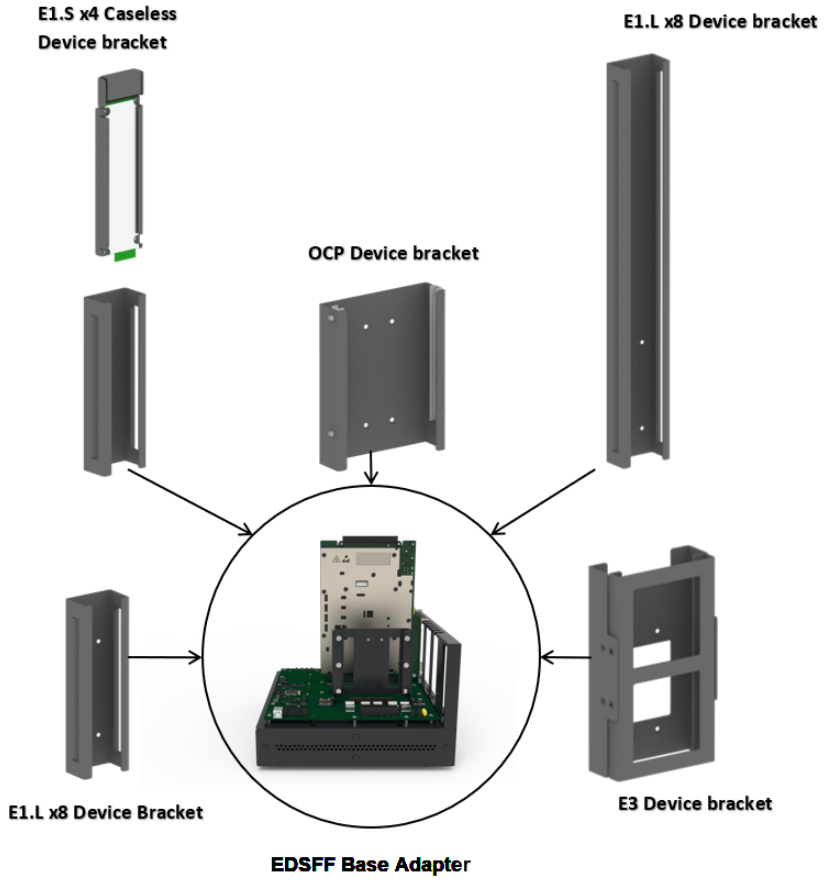

Figure 2 EDSFF/OCP adapters and device brackets

EDSFF Holder Subassembly Installation

The EDSFF Holder Subassembly includes the following components:

- EDSFF Base Adapter (P5563-06107)
- EDSFF Vertical Left Support (P5563-06108)
- EDSFF Vertical Right Support (P5563-06110)
- M3 Knob Screws (0515-6657)
- M3 Torx Screws (0515-1753)

To install the EDSFF Holder Subassembly onto the Test Backplane, perform the following steps:

1 On the Test Backplane, replace the PAN M3X6 screws with M3 Torx screws (0515-1753) to attach the EDSFF Vertical Left Support (P5563-06108) and EDSFF Vertical Right Support (P5563-06110).

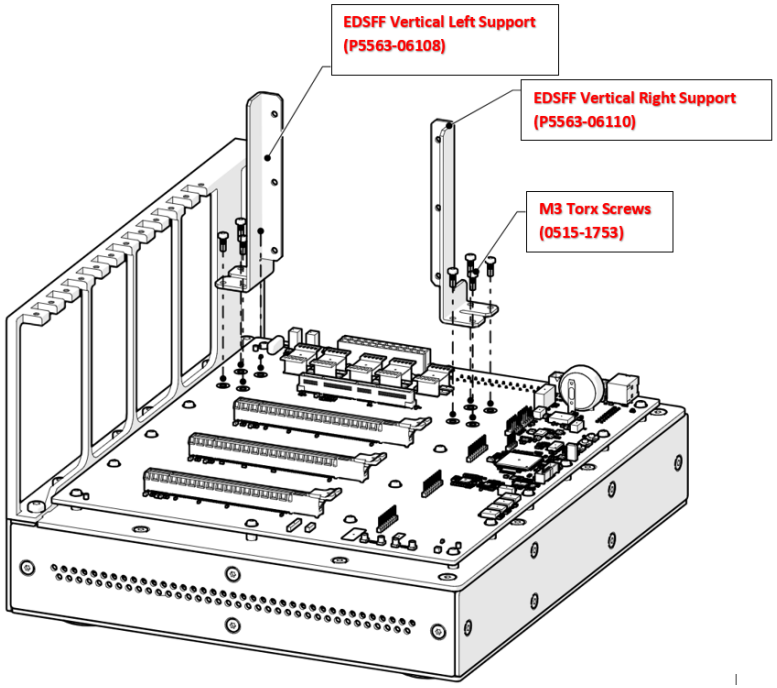

Figure 3 Mounting EDSFF vertical left and right support on Test Backplane

2 Place the EDSFF Base Adapter (P5563-06107) between the mounted vertical supports, and secure it to the supports using M3 Knob screws (0515-6657).

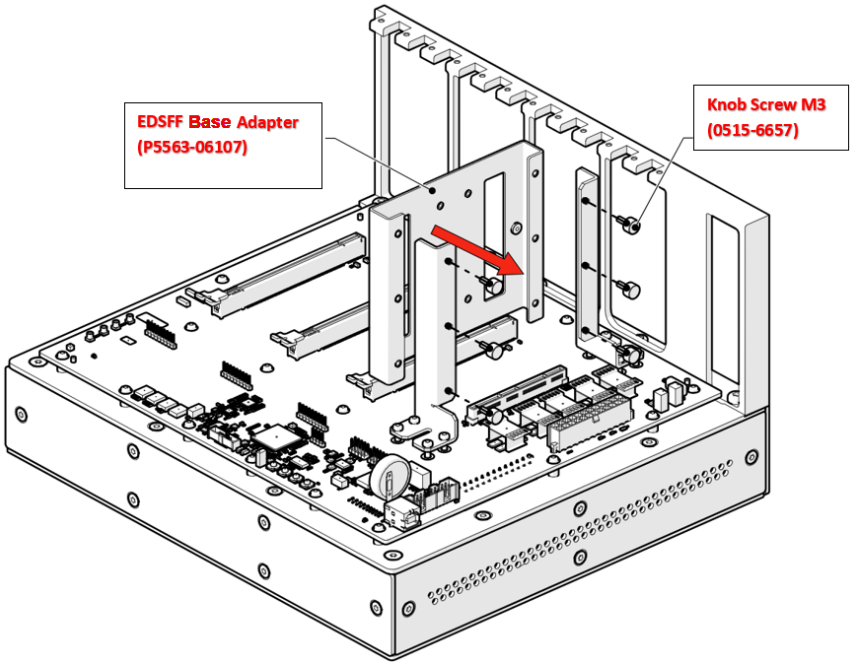

Figure 4 Securing EDSFF base adapter to EDSFF vertical supports

NOTE Ensure all components are properly aligned before tightening the screws. Do not over-tighten the screws during installation, as this may cause damage to the hardware.

E1.S Device Bracket Installation

The E1.S device bracket is designed to securely hold the E1.S device. To install the E1.S device bracket on the Test Backplane, perform the following steps:

1 Ensure that the EDSFF Holder Subassembly (P5563-06101) is already installed on the Test Backplane.

2 Align the E1.S Device Bracket (P5563-06102) with the mounting holes on the EDSFF Base Adapter (P5563-06107).

3 Secure the bracket to EDSFF Base Adapter using M2.5 flat screws (0515-2219).
Note: Make sure the device bracket is properly aligned and the screws are tightened securely to support the device.

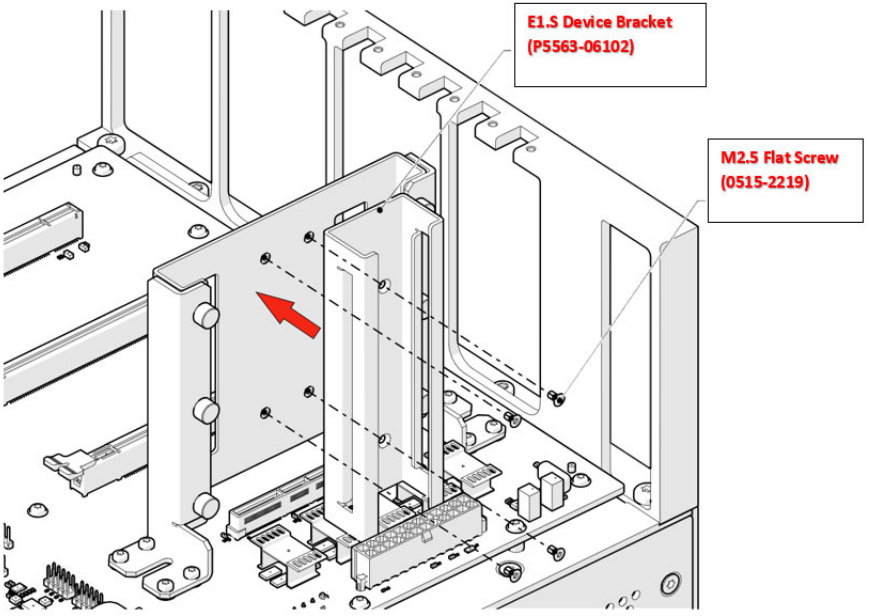

Figure 5 Securing E1.S device bracket to EDSFF base adapter

E1.S Caseless Device Adapter Installation

The E1.S Caseless Device Adapter is provided for the E1.S Caseless Device. Secure the E1.S Caseless Device to the E1.S Caseless Device Adapter before sliding it into the E1.S device bracket. To do this:

1 Attach the E1.S Caseless Device to the E1.S Caseless Device Adapter (P5563-06103) using M2 socket head screws (0515-1077) and M2 nuts (0535-0069).

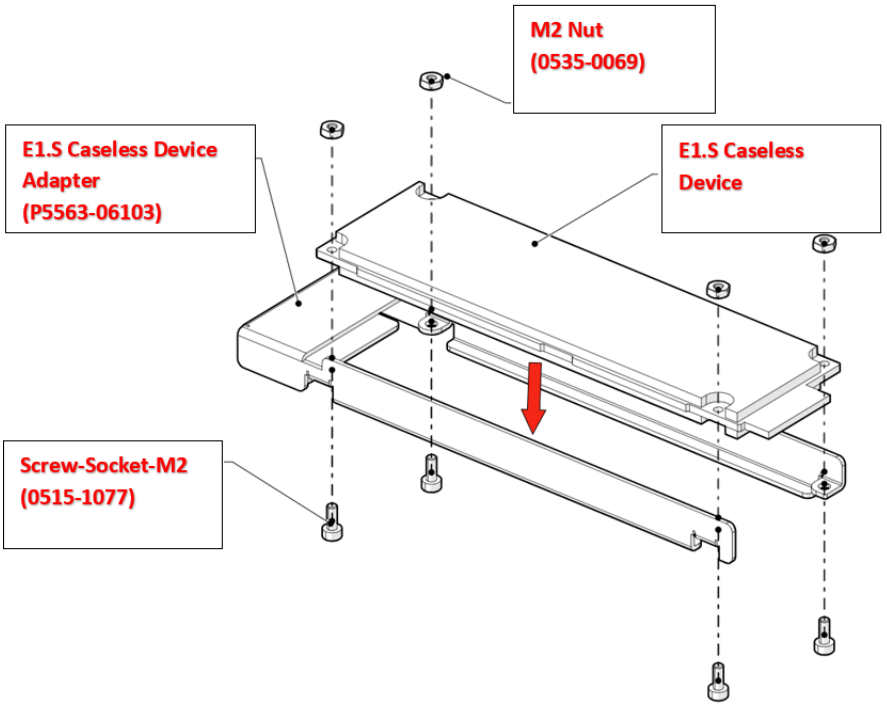

Figure 6 Securing E1.S caseless device with E1.S caseless device adapter

2 Next, insert the assembled x4 E1.S device into E1.S Device Bracket (P5563-06102) and secure it using M2.5 flat screws (0515-2219).

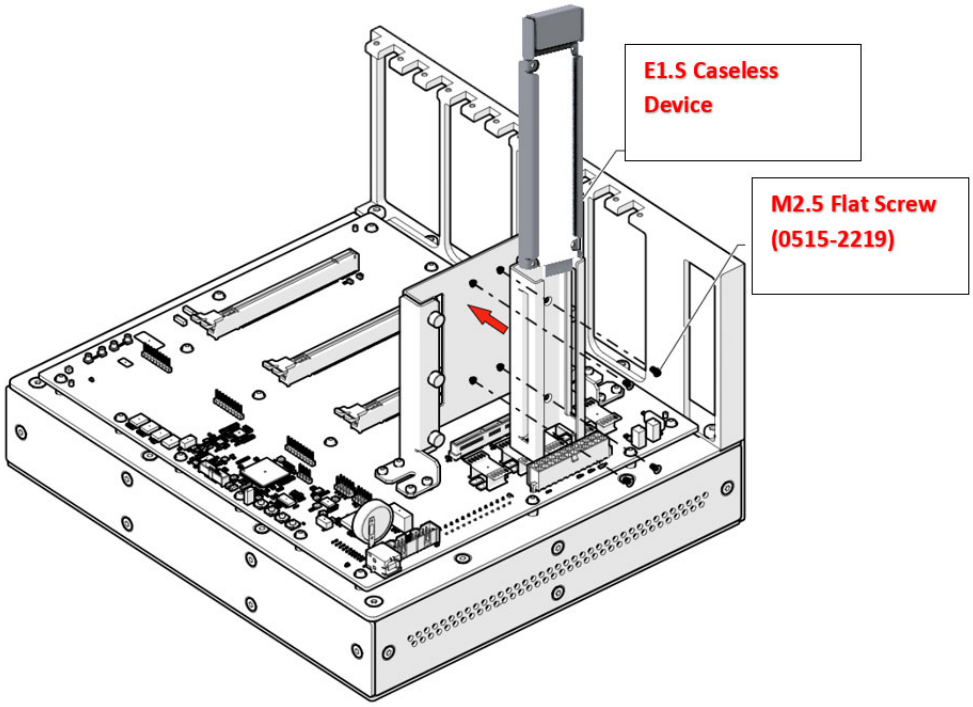

Figure 7 Securing assembled E1.S device into E1.S device bracket

E1.L Device Bracket Installation

The E1.L device bracket is designed to securely hold the E1.L device. To install the E1.L device bracket on the Test Backplane, perform the following steps:

1 Ensure that the EDSFF Holder Subassembly (P5563-06101) is already installed on the Test Backplane.

2 Align the E1.L Device Bracket (P5563-06104) with the mounting holes on the EDSFF Base Adapter (P5563-06107).

3 Secure the bracket to EDSFF Base Adapter using the M2.5 flat screws (0515-2219).
Note: Make sure the device bracket is properly aligned and the screws are tightened securely to support the device.

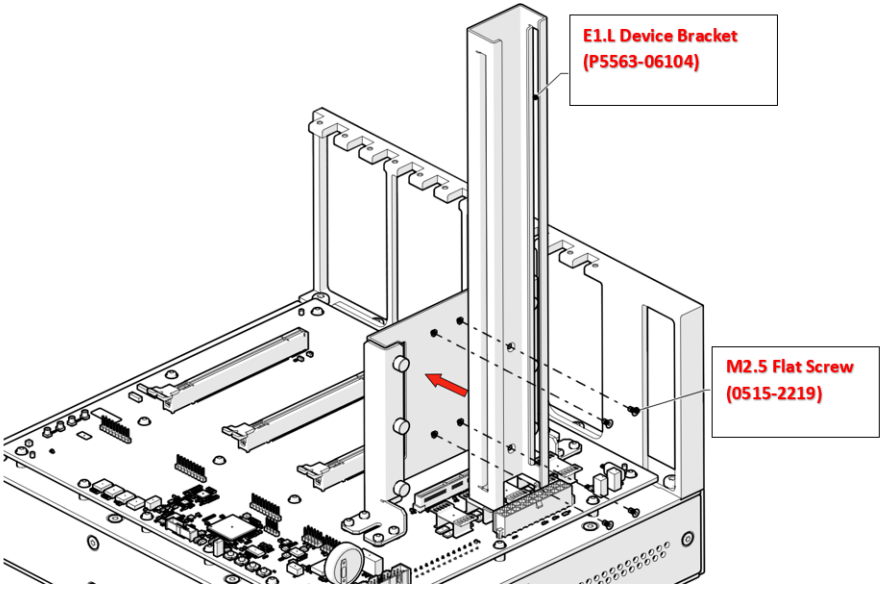

Figure 8 Securing E1.L device bracket to EDSFF base adapter

E3 Device Bracket Installation

The E3 device bracket is designed to securely hold the E3 device. To install the E3 device bracket on the Test Backplane, perform the following steps:

1. Ensure that the EDSFF Holder Subassembly (P5563-06101) is already installed on the Test Backplane.
2. Align the E3 Device Base Bracket (P5563-06105) with the mounting holes on the EDSFF Base Adapter (P5563-06107).
3. Secure the device bracket to EDSFF Base Adapter using the M2.5 flat screws (0515-2219).

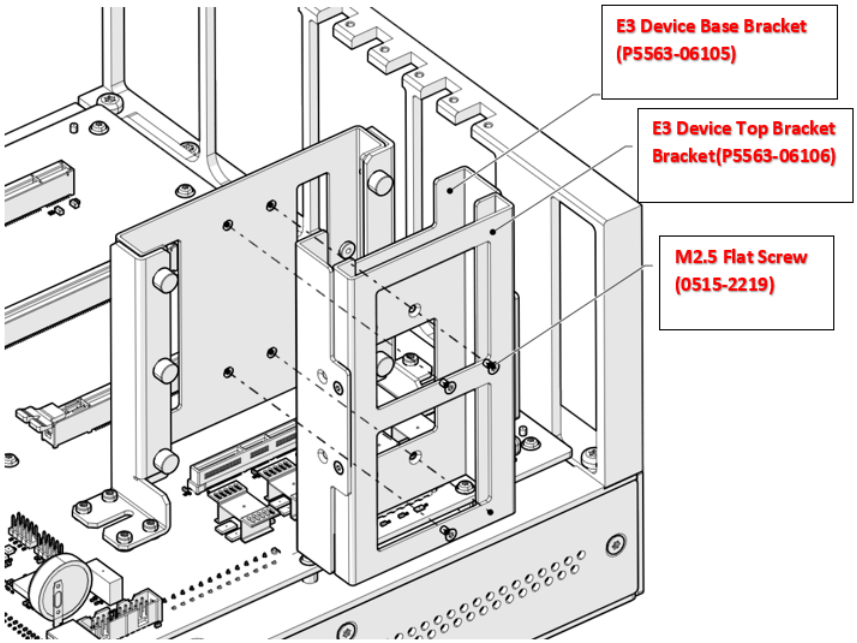

Figure 9 Securing E3 device base bracket to EDSFF base adapter

4 To assemble E3 devices (E3.S and E3.L) of different thicknesses, place the E3 Device Top Bracket (P5563-06106) on top of the E3 Device Base Bracket (P5563-06105). According to device thickness, align the brackets using adjustable mounting holes, and secure using M2.5 flat screws (0515-2219).
Note: Make sure the E3 device brackets are properly aligned and the screws are tightened securely to support the device.

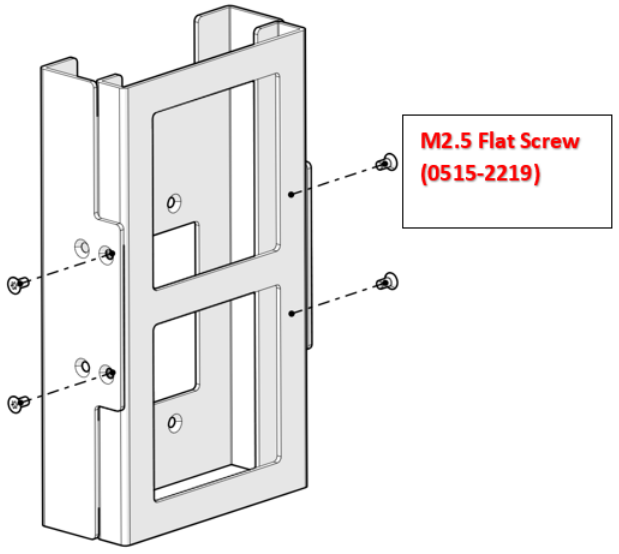

Figure 10 Adjustable mounting holes for E3. L and E3. L 2T devices

OCP Device Bracket Installation

The OCP device bracket is designed to securely hold the OCP NIC 3.0 W1 device. To install the OCP device dracket on the Test Backplane, perform the following steps:

1 Ensure that the EDSFF Holder Subassembly (P5563-06101) is already installed on the Test Backplane.

2 Align the OCP Device Bracket (P5563-06109) with the mounting holes on the EDSFF Base Adapter (P5563-06107).

3 Secure the bracket to EDSFF Base Adapter using the M2.5 flat screws (0515-2219).
Note: Make sure the device bracket is properly aligned and the screws are tightened securely to support the device.

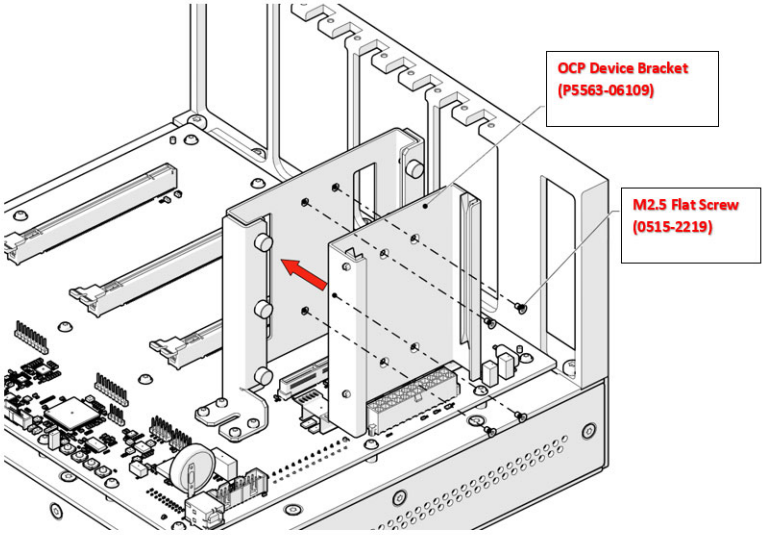

Figure 11 Securing OCP device bracket to EDSFF host adapter

4 Environmental Specifications

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Environmental Specifications

Table 3 Environmental specifications

Parameter	Specification
Operating Temperature	+5 degC to +35 degC
Storage Temperature	-40 degC to +70 degC
Humidity (operating)	15% to 85% non-condensing (relative humidity)
Humidity (non-operating)	15% to 95% non-condensing (relative humidity)