# Splunk<sup>®</sup> Edge Hub User Manual

May 2023 SPLKEH201GL





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# Support and Community

To request a demo, get a product overview, or see a list of partners, visit the <u>Edge Hub Central</u> <u>website</u>.

For information about configuration, required companion apps, data handling, and more, see the <u>Splunk Edge Hub software documentation</u>.

For product specifications and sensor information see the <u>Splunk Edge Hub Product</u> <u>Specifications</u> document.

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# Welcome to Splunk Edge Hub by Actineon

Get environmental sensor data into your Splunk platform instances without any complex configuration using Splunk Edge Hub. The Splunk Edge Hub is a hardware device built by Actineon. It has built-in sensors and is specifically configured to integrate into your Splunk-based IoT solutions. It collects sensor data and streams the data into your Splunk platform instance.

Here you'll find device specifications, hardware information, and safe handling instructions.

To learn how to configure and set up the Splunk Edge Hub, see <u>Get started with Splunk Edge</u> <u>Hub</u> in the Splunk documentation.

# About the Splunk Edge Hub partner program

Splunk matches customers with a partner who handles Splunk Edge Hub transaction, installation, and support.

### Partner services

The partner provides the following Splunk Edge Hub services:

- Upon request, provides bumper guards and splash guards to protect ports
- Manually creates indexes for cluster environments.
- Creates Edge Hub app for dashboard viewing
- Creates and configures dashboards
  - Adds dashboard to Dashboard studio
  - Add threshold to sound sensor chart
  - Add temperature marker gauge graph
- Creates email, SMS, and Splunk mobile app alerts

### Edge Hub Central (EHC)

EHC handles third party distribution, fulfillment, and marketing for Splunk Edge Hub hardware, software, and solutions. EHC is an intermediary between Splunk and partners, which allows for a direct relationship with hardware manufacturers. EHC assembles and markets Edge Hub hardware and software bundles, and the partner transacts, installs, services, and supports customers.

### Customer support escalation

Customers can report issues with their Splunk Edge Hubs to their partners using the contact info provided in their sales contract. The following describes the customer support escalation process:

- 1. Customer logs case with partner.
- 2. Partner troubleshoots the issue.
- 3. If necessary, the partner will escalate to EHC or Splunk.
  - a. EHC troubleshoots hardware issues.
  - b. Splunk troubleshoots Splunk Edge mobile app, Splunk Secure Gateway, Splunk App for Edge Hub and AR, data ingestion, and Splunk platform issues.

To file an issue with your Splunk Edge Hub, contact your partner.

To troubleshoot Splunk Edge Hub yourself, see the Troubleshooting section of this document for hardware instructions or <u>Troubleshoot Splunk Edge Hub</u> in the Splunk documentation website for software instructions.

# Splunk Edge Hub warranty

Appendix A.

Warranty; Limitation of Liability

Supplier warrants that each Product is free from defects in materials and workmanship. Unless Supplier specifies otherwise, these warranties apply only in the country or region in which you purchased the Product.

THESE WARRANTIES ARE SUPPLIER'S EXCLUSIVE WARRANTIES WITH RESPECT TO THE PRODUCT AND REPLACE ALL OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTY OR CONDITION (1) OF MERCHANTABILITY, MERCHANTABLE QUALITY, FITNESS FOR A PARTICULAR PURPOSE, PERFORMANCE, SUITABILITY OR NONINFRINGEMENT; (2) RELATING TO ANY THIRD-PARTY PRODUCT OR SOFTWARE; (3) AS TO THE UNINTERRUPTED OR ERROR-FREE OPERATION OF A PRODUCT, OR (4) REGARDING THE RESULTS TO BE OBTAINED FROM THE PRODUCT OR SOFTWARE. ACTINEON EXPRESSLY DISCLAIMS ALL WARRANTIES AND CONDITIONS NOT STATED IN THIS LIMITED WARRANTY. SOME STATES OR JURISDICTIONS DO NOT ALLOW THE EXCLUSION OF EXPRESS OR IMPLIED WARRANTIES, SO THE ABOVE EXCLUSIONS MAY NOT APPLY TO YOU. NO WARRANTIES APPLY AFTER EXPIRATION OF THE WARRANTY PERIOD. SOME STATES OR JURISDICTIONS DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

This warranty does not cover any of the following:

- Failure resulting from misuse, abuse, neglect, normal wear and tear, accident, disaster, modification, unsuitable physical or operating environment; or improper installation or maintenance by Customer;
- Any software programs, whether pre-loaded or shipped with the Product, or installed subsequently;
- Servicing not expressly authorized by Supplier in writing;
- Problems caused by using accessories, parts or components not supplied by Supplier;
- Failure caused by a product for which Supplier is not responsible;
- Any non-Supplier products, including those that Supplier may procure and provide with or integrate into a Supplier Product at Customer's request.
- Products for which Supplier has not received payment in full

The warranty is voided by any unauthorized repair or modification of the Product, or removal or alteration of identification labels or tamper proof seals on the Product or any of its parts or components.

• Supplier does not warrant SSDs against wear out or against disk image corruption. The useful life of an SSD is determined by many factors including, but not limited to: the size of the disk chosen for the deployment and the usage pattern of the application. At a Customer's request, the Supplier will provide recommendations regarding disk

selections and good practices for SSD's deployments, but SSDs have a practical limit to their useful life (primarily determined by the number of write cycles a particular Flash storage cell can accommodate). It is the sole responsibility of the Customer to choose an SSD and manage that disk's contents in a way that will result in a service life that is acceptable for the target deployment.

Supplier will warrant that a disk image, as it leaves the factory, is the disk image mutually
agreed upon with a Customer and that Supplier has dutifully replicated and/or installed
that image. During deployment there are many sources of potential disk image
corruption including, but not limited to: memory leaks, driver corruption application
errors, and improper shutdown of the operating system or application. Therefore,
Supplier does not warrant a disk against corruption during field deployments.

The term of this limited hardware warranty extends for the time period specified in the applicable quotation. The warranty period begins when the Product is shipped from the factory.

The warranty period is not extended if Supplier repairs or replaces a warranted product or any of its parts. Supplier may change the provision or term of these limited hardware warranties at its discretion, but any changes will not be retroactive.

ACTINEON'S SOLE RESPONSIBILITY FOR DEFECTS IN MATERIALS OR WORKMANSHIP IS LIMITED TO REPAIR OR REPLACEMENT OF THE PRODUCT, OR A PART OR COMPONENT THEREOF, AS DETERMINED BY ACTINEON.

Supplier may replace or repair the product with either new or reconditioned parts, and the product, or part thereof replaced by Supplier becomes Supplier's property. Supplier reserves the right to replace discontinued products with an equivalent or current generation product.

To return a product to the Supplier factory, Customers must:

- Obtain a Return Material Authorization (RMA) number and include documentation with the returned product.
- Pay shipping charges and assume the risk of damage or loss in transit if the product is shipped.
- Pack the returned Product in the original container or one equally suited to protect the product in transit.

Any technical or other support provided for a Product under warranty, such as assistance with "how-to" questions and those regarding Product set-up and installation, is provided WITHOUT WARRANTIES OF ANY KIND.

# Set up and configure Splunk Edge Hub software

The Splunk Edge Hub device requires the Splunk App for AR and Edge Hub installed on your Splunk platform deployment. The Splunk Edge Mobile apps are required to set up and configure your Splunk Edge Hub using a compatible mobile device.

You can find the Splunk App for Edge Hub and AR on Splunkbase. The Splunk Edge Mobile apps are available on the Apple App Store and Google Play Store.

See the following documentation to set up and configure the Splunk Edge Hub software:

Get started with Splunk Edge Hub

# Mount your Splunk Edge Hub

Mount the Splunk Edge Hub where you want to collect and monitor data. You can mount your device using a bracket or DIN rail.

The Splunk Edge Hub uses the following hardware for two mounting methods:

Ou or 1u bracket mounting:

- 2 bracket pieces
- 4 bracket screws
- 2 or 3 rack bolts (not included)

DIN rail mounting:

- 1 DIN rail (not included)
- 1 DIN rail bracket
- 3 DIN rail screws

### Mounting considerations

Do not place the Splunk Edge Hub in a location or position that might be dangerous. Consider the following factors when choosing a location to mount the Splunk Edge Hub:

- Ensure the location has minimal dust, dirt, and airborne contaminants.
- Review the environmental specifications listed in the Product Specifications document.
- Allow for adequate air flow and overall enclosure cooling.
- Attempt to minimize shock and vibration on the mounting surface.
- Consider cable lengths and cable routing provisions for attached devices.
- Consider proximity to a neighboring power supply.
- Consider the need for a surge protection device or uninterruptible power supply.
- For manual startup and shutdown, allow access to the power button.
- Ensure it is not difficult to plug in or remove the power adapter.

# Mount your Splunk Edge Hub in a 0u or 1u orientation using a bracket

You can mount the Splunk Edge Hub in 2 orientations using the provided brackets.

Mounting the device on the side walls of an enclosure is called a 0u orientation:



Mounting above or below a horizontal surface is called a 1u orientation:



Mount your Splunk Edge Hub to a server rack using the provided bracket and screws.

Remove the Splunk Edge Hub from the packaging and visually inspect the device for damage before proceeding.

#### 1a. Assemble in the Ou orientation

Assembling the bracket and mounting the Splunk Edge Hub so that the screen faces outward is called a 0u rack mount, because it uses 0 unit space on your rack.

See the following images to assemble the bracket and attach the Splunk Edge Hub to the bracket in the 0u orientation.

Align the 4 holes in a square position and use the screws to attach the bracket pieces together according to the following image:



Align the three holes with the corresponding ones on the Splunk Edge Hub and use the screws to attach the device to the bracket:





#### 1b. Assemble in the 1u orientation

Assembling the bracket so that the device screen faces upward is called a 1u rack mount because it uses 1 unit of space on your rack.

See the following images to assemble the bracket and attach the Splunk Edge Hub to the bracket in the 0u orientation.

Align the 4 holes in a square position and use the screws to attach the bracket pieces together:



Align the three holes with the corresponding ones on the Splunk Edge Hub and use the screws to attach the device to the bracket:





#### 2. Mount your Splunk Edge Hub to your rack

Your server rack comes with standardized bolts to mount equipment. Use these bolts to mount your device to rack. Use 2 or 3 bolts for both the 0u or 1u mounting method.

This is the device mounted in a 0u orientation:



This is the device mounted in a 1u orientation:



### Mount your Edge Hub using a DIN rail

You can mount the Splunk Edge Hub using a DIN rail, as shown in the following image:



1. Attach the Splunk Edge Hub to the DIN rail bracket

Align the 3 holes on the back of the device with the DIN rail bracket. Use the 3 DIN rail screws to attach the bracket to the device:



#### 2. Attach the Splunk Edge Hub on the DIN rail

Slide the Edge Hub on the DIN rail so that the bracket spring compresses and snaps on the rail:



To remove the Edge Hub from the rail, push the springs again to release the device.

#### 3. Mount your Edge Hub to your rack

Your rack comes with standardized bolts to mount equipment. Use these bolts to mount your Edge Hub to your rack.



### Mounting solutions for more applications

As part of the public preview program, Splunk hopes to gain more knowledge about various mounting approaches. Email edgesupport@splunk.com to share your approach and feedback, so that Splunk can provide more robust compatibility to suit industrial mounting standards.

# Power your Splunk Edge Hub

You can power the Splunk Edge Hub with the provided AC adaptor, USB-C cable or Power-Over-Ethernet (PoE) cable. You can also use both a PoE and USB-C cable together, so that one cable is a backup power source in case the other is unplugged.

The following image displays where the USB-C and PoE ports used to power the Splunk Edge Hub are located:



The following image displays where the power button is located:



### Use the provided USB-C adaptor

- 1. Plug the adapter into a power outlet. Use regional adaptors as needed.
- 2. Plug the other end of the adaptor into the USB-C port on the Hub.
- 3. Press the power button.

### Use a USB-C cable

You can use a USB-C cable with a power source that is capable of Power Delivery (USB-PD). The power source must be capable of providing 15V/2A.

### Use a PoE cable

Ensure that your switch is PoE enabled. The Edge Hub was developed according to the standard for PoE 802.3bt (PoE++) and requires 40W.

- 1. Plug the PoE cable into the PoE port.
- 2. Press the power button.

#### Use a PoE and USB-C cable together

If you use both a PoE and USB-C cable to power the Splunk Edge Hub, the default power source is the USB-C cable. If the USB-C cable is removed, the Splunk Edge Hub switches to the PoE cable for power without interruption.

If the Splunk Edge Hub is running on PoE and then the PoE cable is removed, it switches to the USB-C cable for power without interruption.

## Shut down your Splunk Edge Hub

Turn off your device using the Splunk Edge mobile app or from the device screen.

Shut down Splunk Edge using your mobile device:

- 1. In the Splunk Edge app, select the name of your Splunk Edge Hub that you want to shut down.
- 2. Tap the gear icon to navigate to **Settings**.
- 3. Tap Shut down Edge Hub.

You can also shut down your Splunk Edge Hub on the device screen:

- **1.** Press the settings icon.
- 2. Press Shut down.

# Connect external devices

Connect any external devices, such as sensors, to the appropriate ports or connectivity options on the Splunk Edge Hub. See the <u>Splunk Edge Hub Product Specifications</u> document to learn more about external connections.

# Set up the Splunk Edge Hub software

After powering your Splunk Edge Hub, follow the on-screen prompts to configure your device. See the <u>Splunk Edge Hub software documentation</u> for more information about configuring the Splunk Edge Hub software.

Install, set up, and configure any necessary software for the external devices that you choose to connect.

# Splunk Edge Hub indicator ring

The Splunk Edge Hub has an indicator ring that illuminates in different colors to indicate the status of the device.



The following table describes the meaning of each indicator ring color:

Indicator ring color	Meaning
Blue	The device is unregistered.
Red	The Splunk App for AR and Edge Hub cannot be reached.
Green	The device has network connection.

# Troubleshoot the Splunk Edge Hub

The following documentation provides troubleshooting steps for if you encounter issues with the Splunk Edge Hub hardware.

### Unable to load sensor readings ( "-" value on screen)

Perform a soft reset from the settings menu or press the power button and check if the sensor readings load. If you are still unable to load sensor readings, perform a hard reset by removing and reconnecting the USB-C or PoE cable.

If the issue still persists, perform a factory reset.

### Unable to register Splunk Edge Hub or connect to network

On first launch, follow the on-screen instructions to register your Hub. If registration is unsuccessful, try the following troubleshooting steps:

- Make sure that you have entered the WiFi network name and password correctly in the Splunk Edge mobile app.
- If you get the message "Error: Unable to register your Edge Hub. Please try again", make sure that your device is not using VPN and does not have Private Relay enabled.
- If the issue still persists, perform a factory reset.

#### Touch screen is unresponsive or other hardware issue

Perform a soft reset from the settings menu or press the power button. If the hardware issue doesn't resolve, perform a hard reset by removing and reconnecting the USB-C or PoE cable.

If the issue still persists, perform a factory reset.

### Troubleshoot Splunk Edge Hub sensors

If you don't see sensor data coming in, try the following:

- Make sure you have network connectivity.
- Validate the HEC endpoint address. Use the **Test Connection** button in the Splunk App for Edge Hub and AR.
- If you are testing with a Splunk platform instance without static IP, make sure the HEC instance hostname and IP didn't change.

If the temperature reading is higher than expected, check both sensors. Splunk Edge Hub comes with an onboard sensor and an external sensor that connects with a 3.5mm auxiliary plug. The onboard sensor readings might be higher due to heat generated by hardware and should not be used for ambient readings. For ambient readings, use the external sensor

### Perform a factory reset on your Splunk Edge Hub

Complete these steps to reset the device to its original factory settings. This doesn't unregister your Splunk Edge Hub.



The following image displays the location of the hardware reset pinhole:

- 1. On your Splunk Edge Hub, locate the reset pinhole. Depending on your version of the hardware, the pinhole may be on the front of the device or next to the USB and external sensor ports.
- 2. Using a < 3mm diameter pin-shaped tool, press and hold the reset button for more than 6 seconds.
- 3. Wait for the factory reset to complete.