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# SIEMENS

## SIEMENS BX-56A Base Module



## Specifications

- Product: SIMATIC Industrial PC SIMATIC IPC BX-56A
- Compatibility: AWS IoT Greengrass
- Compact User Manual included

## Product Information

The SIMATIC Industrial PC SIMATIC IPC BX-56A is designed for use with AWS IoT Greengrass, providing a reliable and efficient platform for industrial applications.

## Document Information

### Document revision history

### History

The following editions of these operating instructions have already been published:

Edition	Comment
08/2024	First edition

## Overview

- The SIMATIC IPC BX-56A IPCs come with a scalable form factor and performance range.

- Thanks to their modularity and numerous configuration options, they offer a solution for almost every application.
- Automation solutions and production-related data management benefits from the balanced cost-value ratio of this entry level modular device.
- The new performance IPCs with high data availability for reliable production tracing are robustly designed for continuous operation even in the case of highly complex automation tasks.
- In this Getting Started document, you will find information about how to setup AWS IoT Greengrass on an SIMATIC IPC BX-56A running Linux or Windows operating system.

## About AWS IoT Greengrass

To learn more about AWS IoT Greengrass, see how it works

- (<https://docs.aws.amazon.com/greengrass/v2/developerguide/how-it-works.html>) and what's new
- (<https://docs.aws.amazon.com/greengrass/v2/developerguide/greengrass-v2-whats-new.html>).

## Hardware Description

### DataSheet

Click on this link (<https://support.industry.siemens.com/cs/ww/en/pv/6AG4132-0....-.../td?dl=en>) to view the datasheet of IPC BX-56A.

### Standard kit contents

You will find more information about scope of delivered components of your SIMATIC IPC in the operating manual

(<https://support.industry.siemens.com/cs/ww/en/view/109972660>).

### User provided items

Suitable power supply for your SIMATIC IPC. Please refer to operating manual

(<https://support.industry.siemens.com/cs/ww/en/view/109972660>).

### 3rd party purchasable items

Not applicable.

## Additional Hardware References

You will find more information in the operating manual

(<https://support.industry.siemens.com/cs/ww/en/view/109972660>).

## Setup your Development Environment

### Tools Installation (IDEs, Toolchains, SDKs)

AWS IoT Greengrass supports various operating systems

(<https://docs.aws.amazon.com/greengrass/v2/developerguide/operating-system-feature-support-matrix.html>). Please refer to chapter 8 below for more information about installation of AWS IoT Greengrass.

### Prerequisites

It's recommended to use

- Java Runtime Environment (JRE) version 8 or greater
- Java Development Kit (JDK) Amazon Corretto (<http://aws.amazon.com/corretto/>) or OpenJDK (<https://openjdk.org/>)
- GNU C Library (<https://www.gnu.org/software/libc/>) (glibc) version 2.25 or greater

## Setup device hardware

Please refer to Operating Instructions

(<https://support.industry.siemens.com/cs/ww/en/view/109749498>) for installing Windows on IPCs. For running AWS IoT Greengrass on Linux please download (<https://releases.ubuntu.com/22.04/>) and install Ubuntu on IPC BX-56A.

## About AWS IoT Greengrass

- To learn more about AWS IoT Greengrass, see How AWS IoT Greengrass works(<https://docs.aws.amazon.com/greengrass/v2/developerguide/how-it-works.html>) and
- What's new in AWS IoT Greengrass Version 2 (<https://docs.aws.amazon.com/greengrass/v2/developerguide/greengrass-v2-whats->

[new.html](#)).

## Greengrass prerequisites

Refer to the online documentation detailing the prerequisites

(<https://docs.aws.amazon.com/greengrass/v2/developerguide/getting-started-prerequisites.html>) needed for AWS IoT Greengrass.

Follow the instructions in the following sections:

- **Step 1:** Set up an AWS account  
(<https://docs.aws.amazon.com/greengrass/v2/developerguide/getting-started-set-up-aws-account.html>)
- **Step 2:** Set up your environment  
(<https://docs.aws.amazon.com/greengrass/v2/developerguide/getting-started-set-up-environment.html>)

## Install AWS IoT Greengrass

Follow the online guide to Install with automatic provisioning

(<https://docs.aws.amazon.com/greengrass/v2/developerguide/quick-installation.html>).

Refer to the instructions in the following steps:

- Set up the device environment  
(<https://docs.aws.amazon.com/greengrass/v2/developerguide/quick-installation.html#set-up-device-environment>)
- Provide AWS credentials to the device  
(<https://docs.aws.amazon.com/greengrass/v2/developerguide/quick-installation.html#provide-installer-aws-credentials>) . For development environments, you can use the option “Use long-term credentials from an IAM User”.

An example of how to do this is shown below:

- export  
AWS\_ACCESS\_KEY\_ID=<the access key id for your user>
- export
- AWS\_SECRET\_ACCESS\_KEY=<the secret access key for your user>

Download the AWS IoT Greengrass Core software

(<https://docs.aws.amazon.com/greengrass/v2/developerguide/quick-installation.html#download-greengrass-core-v2>)

- Install the AWS IoT Greengrass Core software  
(<https://docs.aws.amazon.com/greengrass/v2/developerguide/quick-installation.html#run-greengrass-core-v2-installer>)

## Create a “Hello World” component

### Create the component on your edge device

- Create the component on your edge device.
- Follow the instructions online under the section Develop and test a component on your device  
(<https://docs.aws.amazon.com/greengrass/v2/developerguide/create-first-component.html>) to create a simple component on your device.

### Upload the “Hello World” component

Follow the instructions online at Create your component in the AWS IoT Greengrass service (<https://docs.aws.amazon.com/greengrass/v2/developerguide/upload-first-component.html>) to upload your component to the cloud, where it can be deployed to other devices as needed.

### Deploy your component

Follow the instructions online at Deploy your component  
(<https://docs.aws.amazon.com/greengrass/v2/developerguide/deploy-first-component.html>) to deploy and verify that your component is running.

## Troubleshooting

- Please refer to After Sales Information  
(<https://support.industry.siemens.com/cs/ww/en/view/109782922>) for technical support and more information about repairs and spare parts.
- For more information, also refer to the online documentation Troubleshooting Greengrass v2.  
(<https://docs.aws.amazon.com/greengrass/v2/developerguide/troubleshooting.html>)

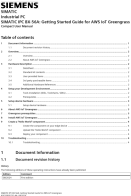
## Siemens Aktiengesellschaft

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- SIMATIC IPC BX-56A: Getting Started Guide for AWS IoT Greengrass
- A5E53995732-AA, 08/2024








## FAQ

- **Q: How do I troubleshoot connectivity issues with AWS IoT Greengrass?**
  - A: Check your network settings and ensure that the device is properly connected to the internet. Verify the AWS IoT Greengrass configuration settings.
- **Q: Can I expand the storage capacity of SIMATIC IPC BX-56A?**
  - A: Yes, you can expand the storage capacity by adding compatible external storage devices following the manufacturer's guidelines.

## Documents / Resources

	<p><a href="#">SIEMENS BX-56A Base Module [pdf]</a> Instructions</p> <p>BX-56A Base Module, BX-56A, Base Module, Module</p>
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## References

-  [OpenJDK Download - Corretto - AWS](#)
-  [Step 6: Deploy your component - AWS IoT Greengrass](#)
-  [What's new in AWS IoT Greengrass Version 2 - AWS IoT Greengrass](#)
-  [How AWS IoT Greengrass works - AWS IoT Greengrass](#)
-  [Greengrass feature compatibility - AWS IoT Greengrass](#)
-  [Install AWS IoT Greengrass Core software with automatic resource provisioning - AWS IoT Greengrass](#)
-  [Install AWS IoT Greengrass Core software with automatic resource provisioning - AWS IoT Greengrass](#)

- [!\[\]\(eae20f1adff742df783f6f7e3bbe72d1\_img.jpg\) Install AWS IoT Greengrass Core software with automatic resource provisioning - AWS IoT Greengrass](#)
- [!\[\]\(43c6e08c5a1618d745b54da5c843274e\_img.jpg\) Install AWS IoT Greengrass Core software with automatic resource provisioning - AWS IoT Greengrass](#)
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- [!\[\]\(da0f02caffeb5a74776a1d5d1892b059\_img.jpg\) Troubleshooting AWS IoT Greengrass V2 - AWS IoT Greengrass](#)
- [!\[\]\(edb096eed27f3ac1241ba8d18d05acad\_img.jpg\) Step 5: Create your component in the AWS IoT Greengrass service - AWS IoT Greengrass](#)
- [!\[\]\(554d866cfdb5a2c8f73998019542d337\_img.jpg\) OpenJDK](#)
- [!\[\]\(c1170582320733ace24db86bc6d97423\_img.jpg\) Ubuntu 22.04.5 LTS \(Jammy Jellyfish\)](#)
- [!\[\]\(51c4b897e692428305845816e97ca71e\_img.jpg\) SIOS](#)
- [!\[\]\(810c0da19263e18e2f95623517bed1dc\_img.jpg\) SIOS](#)
- [!\[\]\(8982e3c27257070d79f8096c6d667915\_img.jpg\) SIOS](#)
- [!\[\]\(cf565e63df317467714cf7de070ecedc\_img.jpg\) SIOS](#)
- [User Manual](#)

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