



## 2 Overview

### 2.1 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.

### 2.2 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>).

## 3 Hardware Description

### 3.1 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.

### 3.2 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>).

### 3.3 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>).

### 3.4 3rd party purchasable items

Not applicable.

### 3.5 Additional Hardware References

You will find more information in the operating manual (<https://support.industry.siemens.com/cs/ww/en/view/109972660>).

## 4 Setup your Development Environment

### 4.1 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.

### 4.2 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

## 5 Setup device hardware

### 5.1 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.

## 6 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>).

## 7 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>)

## 8 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>)

## 9 Create a "Hello World" component

### 9.1 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.

### 9.2 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.

### 9.3 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.

## 10 Troubleshooting

### 10.1 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>)