PE1100 N

Getting Started Guide for AWS IoT Greengrass

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1 Document information

1.1 Document revision history

Date	Version	Description
2025/1/21	V01	First release

1.2 Applicable operating systems for this guide

This guide is applied to the PE1100N with an ARM processor and an Ubuntu operating system to run AWS Greengrass.

2 Overview

ASUS IoT PE1100N is an ultra-compact, ultra-efficient computer for AI inferencing at the edge, and based on the powerful NVIDIA® Jetson Orin™ platform. It features fanless design, rich industrial connectivity and supports a wide range of power inputs and operating temperatures for maximum versatility and durability — making it ideal for diverse, scalable edge AI applications in smart city, transportation, manufacturing and more — including traffic analysis,

people-tracking, counting and surveillance. Also, PE1100N's compact size and anti-vibration are especially good for smart manufacturing solutions, such as automated guided vehicle (AGVs), autonomous mobile robots (AMRs), AI-powered automated optical inspection (AOI) and robotics applications.

3 Hardware description

3.1 Datasheet

https://www.asus.com/Websites/global/products/gcn7qcicn5tmffw3/pdf/mlwsc7maeu0eev7a.pdf

3.2 Standard kit contents

Default packing list include:
- PE2100S system
- SATA cable
- Power terminal block
- wall mount kit

3.3 User provided items

Additional accessories available for order:
- Mounting options: DIN rail.
- Power Adapter + Power Cord

3.4 3rd party purchasable items

None.

4 Set up your development environment

4.1 Tools installation (IDEs, Toolchains, SDKs)

As an industrial PC, the development environment for this device should be determined by the user based on its intended use.

5 Set up device hardware

Please refer to link below for all the manuals of PE1100N, including PE1100N user manual.

If you have problem access the link above, go to ASUS PE1100N product page, click the "Documentation" button for all the product manuals download.

6 About AWS IoT Greengrass

To learn more about AWS IoT Greengrass, see How AWS IoT Greengrass works and What's new in AWS IoT Greengrass Version 2.

7 Greengrass prerequisites

If you do not have an existing AWS account and user, refer to the online AWS documentation at Set up your AWS Account (https://docs.aws.amazon.com/iot/latest/developerguide/settingup.html).

To get started, follow the steps outlined in the sections below:
· Sign up for an AWS account (https://docs.aws.amazon.com/iot/latest/developerguide/setting-up.html#aws-registration)
· Create an administrative user (https://docs.aws.amazon.com/iot/latest/developerguide/setting-up.html#create-an-admin)
· Open the AWS IoT console (https://docs.aws.amazon.com/iot/latest/developerguide/setting-up.html#iot-consolesignin)

Refer to the online documentation detailing the prerequisites needed for AWS IoT Greengrass. Follow the instructions in the following sections:

Step 1: Set up an AWS account
Step 2: Set up your environment

Pay special attention to the Notes.

8 Install AWS IoT Greengrass

Follow the online guide to *Install with automatic provisioning*. Refer to the instructions in the following steps:

- Set up the device environment
- Provide AWS credentials to the device. 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>

  Note: Production environment should use temporary credentials.

- Download the AWS IoT Greengrass Core software
- Install the AWS IoT Greengrass Core software

9 Create a “Hello World” component

9.1 Create the component on your edge device

Follow the instructions online under the section Develop and test a component on your device 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 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 to deploy and verify that your component is running.

10 Debugging

If you meet a problem with the PE1100N system, please contact our local FAE team with your questions, ASUS FAE team would help you clarify and solve the issue.

11 Troubleshooting

For more information, refer to the online documentation *Troubleshooting Greengrass v2*.