

Armadillo-IoT Gateway A9E

Getting Started Guide for AWS IoT Greengrass

Table of Contents

1	<i>Document information.....</i>	2
2	<i>Overview</i>	2
3	<i>Hardware description.....</i>	3
4	<i>Set up your development environment</i>	3
5	<i>Set up device hardware</i>	4
6	<i>About AWS IoT Greengrass</i>	7
7	<i>Greengrass prerequisites.....</i>	7
8	<i>Install AWS IoT Greengrass</i>	7
9	<i>Create a “Hello World” component.....</i>	7
10	<i>Troubleshooting</i>	8

1 Document information

1.1 About this document

This document describes how to use AWS IoT Greengrass V2 with Armadillo-IoT Gateway A9E.

1.2 Document revision history

Version	Date	Description
1.0.0	2025/04/17	• Initial Release

1.3 Applicable operating systems for this guide

- Work PC
A PC that runs either Linux or Windows which has a network interface and at least one USB port.
- Device
Armadillo Base OS (Base: Alpine Linux, Preinstalled on the device.)

1.4 Notes for this guide

The language of the linked page in this document is only Japanese.

2 Overview

The Armadillo-IoT Gateway A9E is a standard IoT gateway that can be used for various applications. It features NXP i.MX 8ULP processor, which is built with heterogeneous multicore design using Arm Cortex-A35 (800MHz) x2 and Arm Cortex-M33 (216MHz). Compared to previous products, its CPU processing power is approximately three times faster, making it suitable for wider range of applications. It is also equipped with a communication module that supports the new standard LTE Cat.1 bis, balancing practical communication speed and power efficiency. Additionally, this device can comply with the "Security Requirement Compliance Evaluation and Labeling System for IoT Products (JC-STAR)" criteria set by the Information-technology Promotion Agency, Japan (IPA Japan). This ensures that it is a highly secure product that can be operated for an extended period.

3 Hardware description

3.1 Datasheet

See below:

<https://armadillo.atmark-techno.com/armadillo-iot-a9e/specs>

3.2 Standard kit contents

See below for information on each model:

- Armadillo-IoT Gateway A9E Cat.1 bis+WLAN model
<https://armadillo.atmark-techno.com/armadillo-iot-a9e/AG9130-C03D0>

3.3 User provided items

If you want to use LTE for network connection, you will need to prepare a SIM card.

SIMs that have been confirmed to work are listed here:

<https://armadillo.atmark-techno.com/howto/armadillo-iot-tested-sim>

3.4 3rd party purchasable items

Not Applicable.

4 Set up your development environment

4.1 Tools installation (IDEs, Toolchains, SDKs)

It is not necessary for the steps described in this guide.

4.2 Other software required to develop and debug applications for the device

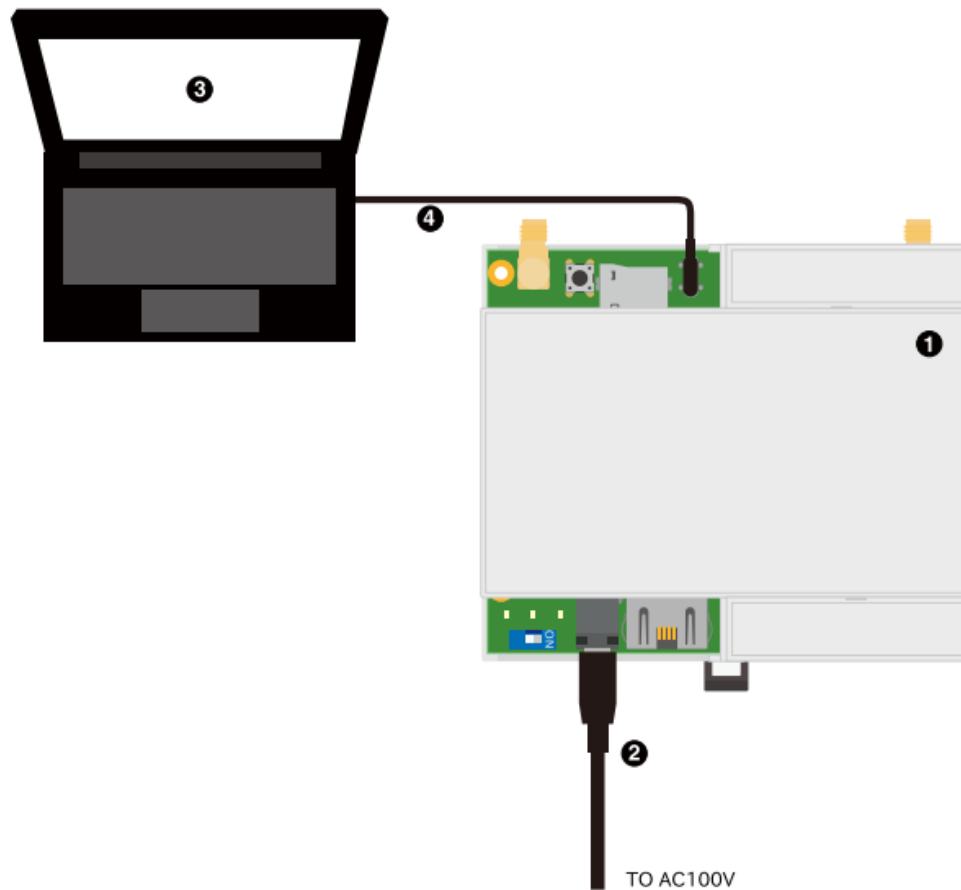
Operate the device using serial communication software.(example: Minicom, Tera Term)

4.3 Additional software references

- Support forum
<https://armadillo.atmark-techno.com/forum/armadillo>
- Device information
<https://armadillo.atmark-techno.com/armadillo-iot-a9e>

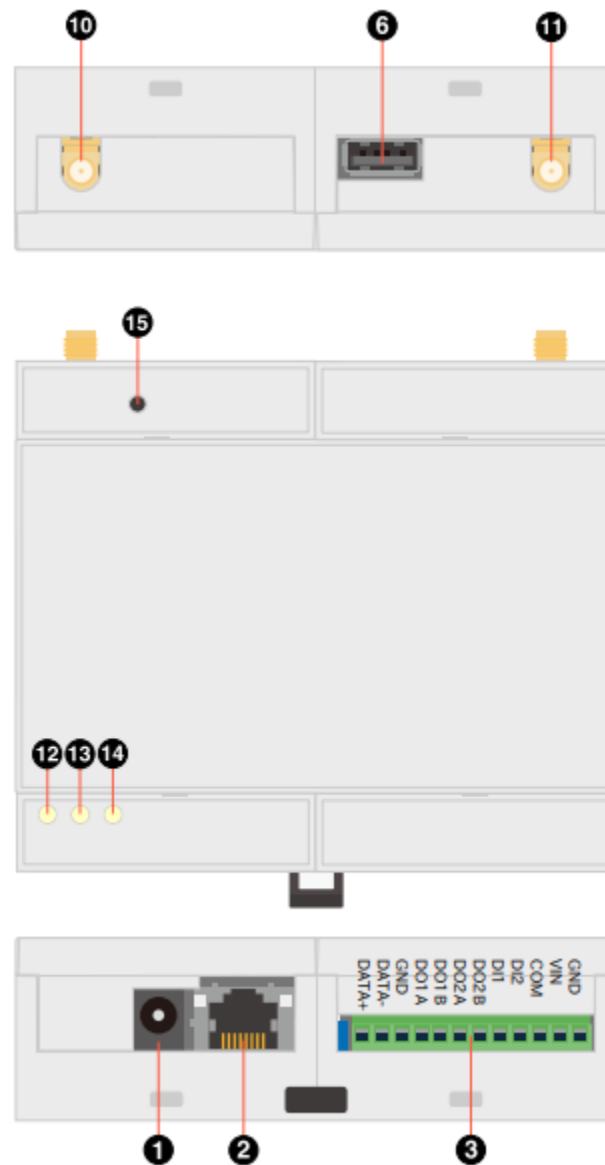
5 Set up device hardware

- Connect device to work PC.



- ① Armadillo-IoT Gateway A9E
- ② AC Adapter(12V/2.0A)
- ③ Work PC
- ④ USB cable(A-Type-C)

- Network Interface

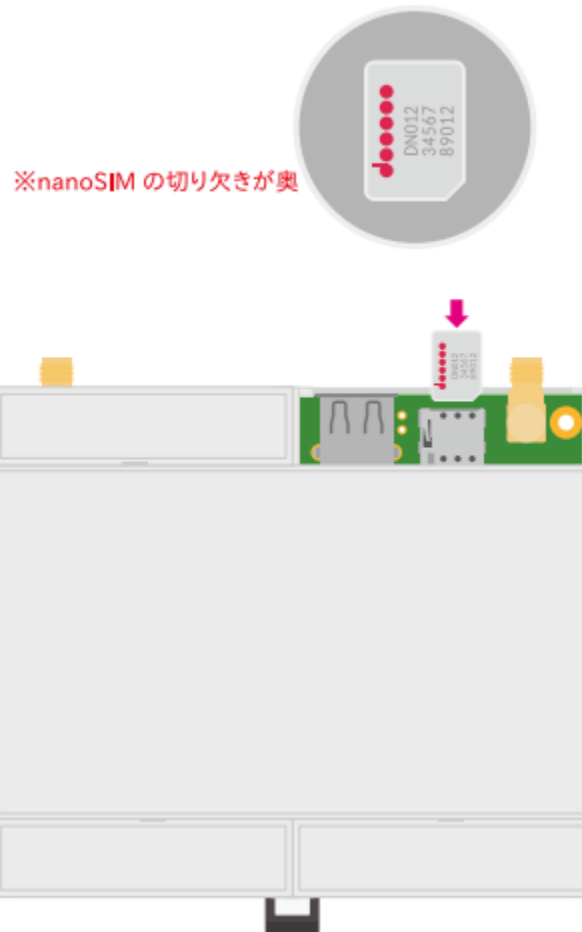


② LAN Interface

⑩ WLAN/BT/TH antenna

⑪ LTE antenna

If you want to use LTE for network connection, connect nanoSIM card.



For more information, refer to the online documentation.

https://manual.atmark-techno.com/armadillo-iot-a9e/armadillo-iotg-a9e_product_manual_ja/

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

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](#)

8 Install AWS IoT Greengrass

Refer to the instructions in the following steps.

※ The target device is Armadillo-IoT Gateway G4, but the operation procedure is the same.

[Step 1: Preparing containers for Armadillo-IoT Gateway G4](#)

[Step 2: Installing AWS IoT Greengrass Core](#)

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 Troubleshooting

We have a troubleshooting page below:

<https://armadillo.atmark-techno.com/faq/troubleshooting-aiota9e>

If you have any other questions about your device, post them in our forums or contact us.

- Support forum
<https://armadillo.atmark-techno.com/forum/armadillo>
- Contact us
https://www.atmark-techno.com/contact/form_sales

For more information about Greengrass, refer to the online documentation [*Troubleshooting Greengrass v2*](#).