

Armadillo-IoT Gateway G4

Getting Started Guide for AWS IoT Greengrass

Table of Contents

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

1 Document information

1.1 About this document

This document describes how to use AWS IoT Greengrass V2 with Armadillo-IoT Gateway G4.

1.2 Document revision history

Version	Date	Description
1.0.0	2024/05/20	• Initial Release
1.1.0	2024/05/31	• Added LTE+WLAN model

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

Armadillo-IoT Gateway G4 is a high-performance IoT gateway ideally suited for edge AI processing and machine learning. Built on the NXP i.MX 8M Plus with four Cortex-A53 cores, it combines low power consumption and performance for applications such as face recognition, person detection, and AI solutions in the manufacturing and construction industries. The Armadillo-IoT GateWay G4 offers a Linux-based OS, container management, software updates, and network management.

3 Hardware description

3.1 Datasheet

See below:

<https://armadillo.atmark-techno.com/armadillo-iot-g4/specs>

3.2 Standard kit contents

See below for information on each model:

- Armadillo-IoT Gateway G4 LAN model
<https://armadillo.atmark-techno.com/armadillo-iot-g4/AGX4500-C00D0>
- Armadillo-IoT Gateway G4 LTE model
<https://armadillo.atmark-techno.com/armadillo-iot-g4/AGX4520-C02D0>
- Armadillo-IoT Gateway G4 LTE+WLAN model
<https://armadillo.atmark-techno.com/armadillo-iot-g4/AGX4520-C03D0>

3.3 User provided items

If you are using an LTE model or LTE+WLAN model, want to use LTE for network connection, you will need to prepare a SIM.

SIMs that have been confirmed to work are listed here:

<https://armadillo.atmark-techno.com/armadillo-iot-g4/devices>

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

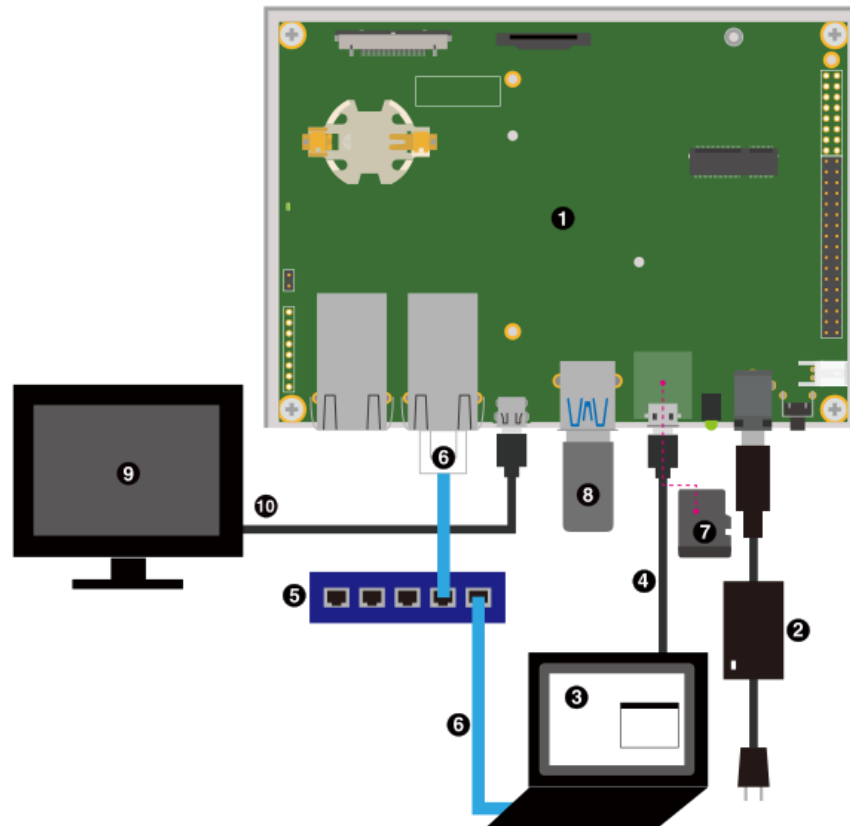
Operate the device using serial communication software.(example: Minicom, Tera Term)

4.3 Additional software references

- Support forum
<https://armadillo.atmark-techno.com/forum/armadillo>
- Device information
<https://armadillo.atmark-techno.com/armadillo-iot-g4>

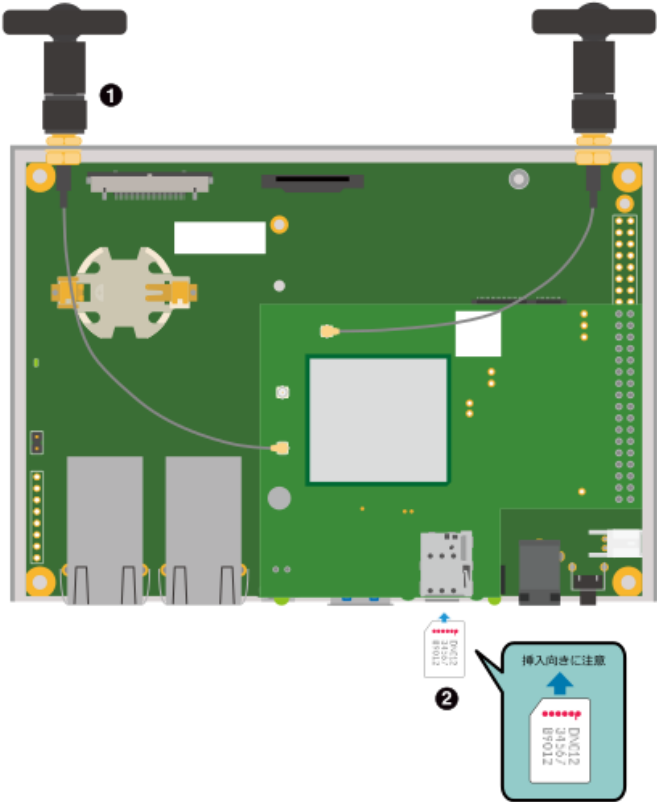
5 Set up device hardware

- Connect device to work PC.



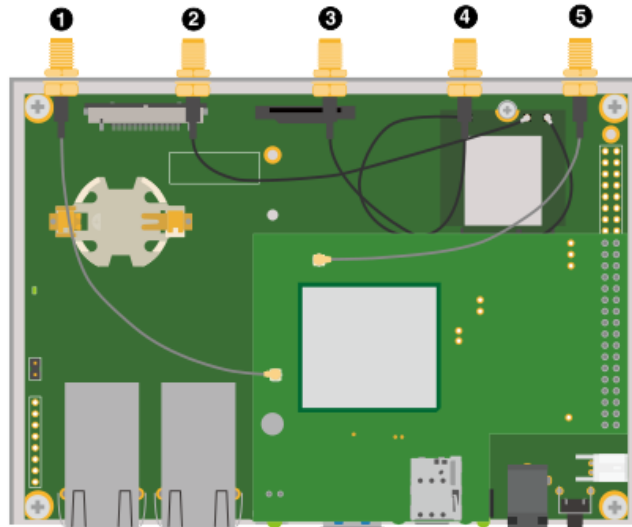
- ① Armadillo-IoT Gateway G4
- ② AC Adapter(12V/3.0A)
- ③ Work PC
- ④ USB cable(A-microB)
- ⑤ LAN HUB
- ⑥ Ethernet cable
- ⑦ (Not needed)microSD card
- ⑧ (Not needed)USB memory
- ⑨ (Not needed)Display(support HDMI)
- ⑩ (Not needed)HDMI cable

- For Armadillo-IoT G4 LTE model, connect the 3G/LTE antenna and nanoSIM card.



- ① 3G/LTE antenna
- ② nanoSIM card

- For Armadillo-IoT G4 LTE+WLAN model, connect the 3G/LTE antenna and WLAN/BT antenna. If you want to use LTE for network connection, connect nanoSIM card.



① , ⑤ 3G/LTE antenna

②, ③, ④ WLAN/BT antenna

For more information, refer to the online documentation.

https://manual.atmark-techno.com/armadillo-iot-g4/armadillo-iotg-g4_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.

[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-aiotg4>

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](#).