

RCO-6000-CML-4NH AI Edge Inference Computer W/ LGA 1200 For Intel 10th Gen CPU & W480E PCH, 4x U.2 15mm NVMe, Hardware RAID Getting Started Guide for AWS IoT Greengrass

Table of Contents

- 1 Document Information 1**
- 2 Overview 2**
- 3 Hardware Description..... 2**
- 4 Set up your Development Environment 2**
- 5 Set up your Hardware 3**
- 6 Setup your AWS account and Permissions 3**
- 7 Create Resources in AWS IoT..... 3**
- 8 Install the AWS Command Line Interface 4**
- 9 Install AWS IoT Greengrass..... 4**
- 10 Create a Hello World Component 4**
- 11 Troubleshooting 5**

1 Document Information

Version	Date	Description
1.0	February 2024	Publish Document

2 Overview

2.1 Introduction

The RCO-6000-CML-4NH Series AI Edge Inference Computer incorporates advanced performance with Intel's 10th Generation Core processors, an advanced GPU accelerator, and expandable, hot-swappable NVMe SSDs with its modular EDGEBoost Nodes. As processing power shifts away from resources in the cloud, deployments in remote and mobile environments require ruggedized systems that can withstand exposure to environmental factors such as dust, debris, shock, vibration, and extreme temperatures. Premio's AI Edge Inference Computers are tested and validated to ensure reliable performance amid deployments in the harshest environmental settings.

Inference capabilities and real-time computing enabled through hardware acceleration support for hot-swappable NVMe cannister bricks, powerful GPUs and m.2 accelerators.

2.2 About AWS IoT Greengrass

To learn more about AWS IoT Greengrass, see [how it works](#) and [what's new](#).

3 Hardware Description

3.1 DataSheet

Click on this link https://premio.blob.core.windows.net/premio/uploads/resource/datasheet/RCO-6000-CML/DS_RCO-6000-CML-4NH_Premio.pdf to view the datasheet of RCO-6000-CML-4NH.

3.2 Additional Hardware References

Please refer to the [RCO-6000-CML-4NH](#) device page for more product details

3.3 User Provided Items

Not applicable.

3.4 3rd Party Purchasable Items

Not applicable.

4 Set up your Development Environment

AWS IoT Greengrass supports both Windows and Linux:

<https://docs.aws.amazon.com/greengrass/v2/developerguide/operating-system-feature-support-matrix.html>.

Please refer to the developer guide for the required tools and proper setup:

<https://docs.aws.amazon.com/greengrass/v2/developerguide/what-is-iot-greengrass.html>

It is recommended to install the following tools/SDKs:

- Java Runtime Environment (JRE) version 8 or greater
- Java Development Kit (JDK) Amazon Corretto 11 (<https://aws.amazon.com/corretto/>) or OpenJDK 11 (<https://openjdk.java.net/>)
- GNU C Library (<https://www.gnu.org/software/libc/>); (glibc) version 2.25 or greater

5 Set up your Hardware

Please refer to the device [user's manual](#) for the hardware setup.

6 Setup your AWS account and Permissions

Refer to the online AWS documentation at Set up your AWS Account: <https://docs.aws.amazon.com/iot/latest/developerguide/setting-up.html>

Follow the steps outlined below to create your account and user to get started:

- Sign up for an AWS account:
<https://docs.aws.amazon.com/iot/latest/developerguide/setting-up.html#aws-registration>
- Create a user and grant it the proper permissions:
<https://docs.aws.amazon.com/iot/latest/developerguide/setting-up.html#create-iam-user>
- Open the AWS IoT console:
<https://docs.aws.amazon.com/iot/latest/developerguide/setting-up.html#iot-console-signin>

7 Create Resources in AWS IoT

Refer to the instructions on how to create AWS IoT resource: <https://docs.aws.amazon.com/iot/latest/developerguide/create-iot-resources.html>

Follow the steps outlined in these sections to provision resources for your device:

- Create an AWS IoT Policy
- Create a thing object

8 Install the AWS Command Line Interface

To install the AWS CLI on your host machine, refer to the instructions:

<https://docs.aws.amazon.com/cli/latest/userguide/getting-started-install.html>

Installing the CLI is required to complete the instructions in this guide. Once you have installed AWS CLI, configure it per the instructions:

<https://docs.aws.amazon.com/cli/latest/userguide/cli-configure-quickstart.html#cli-configure-quickstart-config>

Set the appropriate values for access key ID, secret access key, and AWS Region based on your AWS account. You can set Output format to "json" if you prefer.

9 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>
```

[Download the AWS IoT Greengrass Core software](#)

[Install the AWS IoT Greengrass Core software](#)

10 Create a Hello World Component

In AWS IoT Greengrass v2, components can be created on the edge device and uploaded to the cloud, or vice versa.

To create, deploy, test, update and manage a simple component on your device, follow the instructions under the section "To Create a Hello World Component":

<https://docs.aws.amazon.com/greengrass/v2/developerguide/getting-started.html>

To upload the component to the cloud, follow the instructions under the section "Upload Your Component":

<https://docs.aws.amazon.com/greengrass/v2/developerguide/upload-first-component.html>

10.1 Deploy your component

Follow the instructions online at [Deploy your Component](#) to deploy and verify that your component is running.

11 Troubleshooting

For AWS IoT Greengrass general troubleshooting tips, please refer to: <https://docs.aws.amazon.com/greengrass/v2/developerguide/troubleshooting.html>

For device specific troubleshooting guide, please contact us directly at techsupport@premioinc.com.