

# premio R680E Al Edge Inference Computer Instructions

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RCO-6000-RPL-2-4B7M AI Edge Inference Computer W/ LGA 1700 for Intel 12/13th Gen CPU & R680E PCH, 2x LAN, 6x SDD, 2x PCIe Getting Started Guide for AWS IoT Greengrass

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# **Document Information**

Version	Date	Description
1.0	Dec-23	Publish Document

#### Overview

#### 2.1 Introduction

The RCO-6000-RPL-2-4B7M Series AI Edge Inference Computer incorporates advanced performance with Intel's 13th 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.

# 2.2 About AWS IoT Greengrass

To learn more about AWS IoT Greengrass, see **how it works** and **what's new**.

# **Hardware Description**

#### 3.1 DataSheet

Click on this link (<a href="https://premio.blob.core.windows.net/premio/uploads/resource/datasheet/RCO-6000-RPL-2-4B7M">https://premio.blob.core.windows.net/premio/uploads/resource/datasheet/RCO-6000-RPL-2-4B7M</a> Premio.pdf) to view the datasheet of RCO6000-RPL-2-4B7M.

#### 3.2 Additional Hardware References

Please refer to the RCO-6000-RPL-2-4B7M device page for more product details

## 3.3 User Provided Items

Not applicable.

#### 3.4 3rd Party Purchasable Items

Not applicable.

# Set up your Development Environment

AWS IoT Greengrass supports both Windows and Linux:

https://docs.aws.amazon.com/greengrass/v2/developerguide/operating-system-featuresupport-matrix.html.

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

setup: <a href="https://docs.aws.amazon.com/greengrass/v2/developerguide/what-is-iotgreengrass.html">https://docs.aws.amazon.com/greengrass/v2/developerguide/what-is-iotgreengrass.html</a> It is recommended to install the following tools/SDKs:

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

## Set up your Hardware

Please refer to the device <u>user's manual</u> for the hardware setup.

# **Setup your AWS account and Permissions**

Refer to the online AWS documentation at Set up your AWS Account: <a href="https://docs.aws.amazon.com/iot/latest/developerguide/setting-up.html">https://docs.aws.amazon.com/iot/latest/developerguide/setting-up.html</a>
Follow the steps outlined below to create your account and user to get started:

Sign up for an AWS account: <a href="https://docs.aws.amazon.com/iot/latest/developerguide/setting-up.html#aws-registration">https://docs.aws.amazon.com/iot/latest/developerguide/setting-up.html#aws-registration</a>

- 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: <a href="https://docs.aws.amazon.com/iot/latest/developerguide/setting-up.html#iot-consolesignin">https://docs.aws.amazon.com/iot/latest/developerguide/setting-up.html#iot-consolesignin</a>

#### **Create Resources in AWS IoT**

Refer to the instructions on how to create AWS IoT resource:

https://docs.aws.amazon.com/iot/latest/developerquide/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

#### 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#cliconfigure-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.

# **Install AWS IoT Greengrass**

Refer to the instructions on how to install AWS IoT Greengrass

Core: https://docs.aws.amazon.com/greengrass/v2/developerguide/install-greengrass-corev2.html

You can download the latest version of the AWS IoT Greengrass Core from this location:

https://d2s8p88vqu9w66.cloudfront.net/releases/greengrass-nucleus-latest.zip

Alternatively, you can download a specific version of the AWS IoT Greengrass Core software from the location below. Replace version with the version you wish to download:

https://d2s8p88vqu9w66.cloudfront.net/releases/greengrass-version.zip

# **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-firstcomponent.html

## 10.1 Deploy your component

Follow the instructions online at **Deploy your Component** to deploy and verify that your component is running.

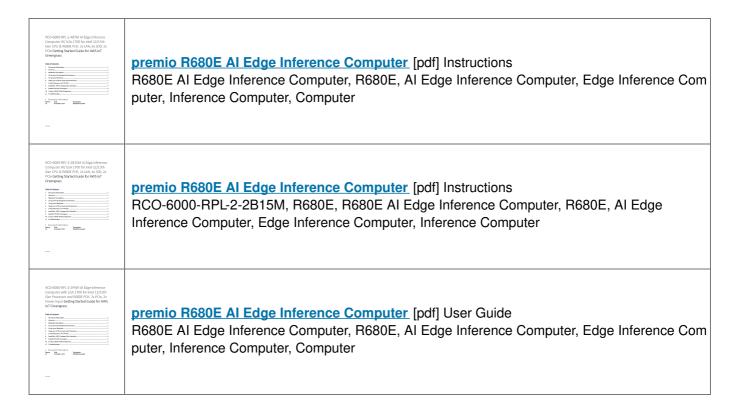
## **Troubleshooting**

For AWS IoT Greengrass general troubleshooting tips, please refer to:

https://docs.aws.amazon.com/greengrass/v2/developerquide/troubleshooting.html

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

## **Documents / Resources**



## References

- OpenJDK Download Corretto AWS
- <u>A OpenJDK</u>
- The GNU C Library GNU Project Free Software Foundation
- User Manual

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