

# HIO-W221-ADL 21.5" Full HD Capacitive IP65 Open Frame Touchscreen Computer With 12th Gen Intel® N Processor, 2x LAN, 4x USB, 1x DP, 1x HDMI Getting Started Guide for AWS IoT Greengrass

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## 1 Document Information

Version	Date	Description
1.0	August 2024	Publish Document

## 2 Overview

### 2.1 Introduction

The HIO Open Frame Industrial Touchscreen Computer offers a slim 21.5" 16:9 HD display while maintaining a rugged IP65 Front Panel Display with 7H glass for industrial-grade durability. The HIO Series is powered by Premio's CT-DAL01 Single Board Computer with Intel 12th Generation Alder Lake. Intel's Alder Lake-N represents the latest in entry level processors, designed for low power, efficient throughput and multi-core performance. Using the same Gracemont CPU architecture found in the Efficiency cores in 12th/13th Generation Intel Core CPUs, the Alder Lake-N processors boosts the performance over previous entry level processors from Intel by up to 28%, and provides power efficiency in a low TDP design.

### 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](#) to view the datasheet of HIO-W221-N97-P

### 3.2 Additional Hardware References

Please refer to the [HIO-W221-N97-P](#) device page for more product details

### 3.3 User Provided Items

Not applicable.

### 3.4 3<sup>rd</sup> 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](mailto:techsupport@premioinc.com).