

Getting Started with AWS Greengrass

[1] Document Revision History

Document Version	Date	Changes
1.0	2.16.24	Initial Version

[2] Overview

The OnLogic AWS Greengrass Compatible IoT Edge Gateways are designed to simplify deployment of embedded PCs for your AWS Edge projects. Using a Fanless PC increases equipment reliability and decreases downtime at the edge. OnLogic AWS Greengrass Compatible devices come tested for compatibility with to easily integrate into your AWS IoT applications.

[3] Hardware Description

[3.1] Datasheets

Datasheets are available for your OnLogic AWS Greengrass Compatible IoT Edge Gateway on its' product page under the download section. All list of systems is provided here:

- CI200 Small Form Factor Series
 - [CL250](#)
- Helix Industrial Computers Series
 - [HX310](#)

- [HX330](#)
- [HX410](#)
- [HX500](#)
- [HX511](#)
- [HX600](#)
- [HX610](#)
- Factor ARM Gateways
 - [FR201](#)
 - [FR202](#)
- Karbon Rugged Computers Series
 - [K410](#)
 - [K430](#)
 - [K801](#)
 - [K802](#)
 - [K803](#)
 - [K804](#)
- Rugged Panel PCs
 - [CV-P1101](#)
 - [CV-P2102](#)
- Industrial Edge Servers
 - [AC101](#)

[3.2] Standard Package Contents

Each OnLogic Gateway includes the computer itself, depending on chosen accessories the following may be included. Accessories may be purchased separately on onlogic.com where stated.

- Mounting Hardware (Available for individual purchase)
- Accessory Phoenix Connectors for DIO/AIO/GPIO/CANBUS, Power Terminal Block, Serial Cables
- AC Power Adapter, if selected (Available for individual purchase)

[3.3] User Provided Items

OnLogic PCs for AWS IoT Greengrass are designed to integrate into your edge compute applications and as such are only a part of the solution. An IoT solution should include:

- Data collection devices such as sensors and PLCs to connect to local equipment
- Cloud resources to run your application in the AWS Cloud which includes any associated AWS cloud services that you need such as AWS IoT Sitewise, AWS IoT Core, AWS Lambda among others.

[4] Set Up Your Deployment Environment

[4.1] OnLogic I/O Tools

To take advantage of advanced features such as Microcontroller (MCU) access to control DIO, CanBUS, GPIO, automotive ignition timings (on applicable systems). Please consult OnLogic product support pages for the applicable systems for a full guide and links to Git repositories (where applicable).

The following link to individual product support pages:

- CI200 Small Form Factor Series
 - [CL250](#)
- Helix Industrial Computers Series
 - [HX310/HX330](#)
 - [HX410](#)
 - [HX500/HX600/HX610](#)
 - [HX511](#)
- Factor ARM Gateways
 - [FR201/FR202](#)
- Karbon Rugged Computers Series
 - [K410/K430](#)
 - [K801/K802/K803/K804](#)
- Rugged Panel PCs
 - [CV-P1101](#)
 - [CV-P2102](#)
- Industrial Edge Servers
 - [AC101](#)

[5] Set up Device Hardware

[5.1] Device Setup

For an in-depth guide on a product by product basis, visit the OnLogic support page for the product you purchase or consult the product manual. In general:

- 1.) To get started remove the PC and power supply (if you purchased one) from the box. If you have a system with a pre-wired AC power adapter you can plug that into a wall outlet. If you selected a system with a terminal block you may need to wire the system into your DC power supply or an AC power adapter.
- 2.) In order to set up the system you'll need a keyboard, mouse, and display in order to perform the first time setup. Start the system by pressing the power button (if you selected auto-power on your system will start when plugged in).
- 3.) If you selected a pre-install operating system from OnLogic such as Ubuntu or Windows you will be prompted to create a user account or login to an existing account. If installing your own operating system, follow your preferred provisioning method.

[5.2] Deployment Best Practices

- Ensure you are using a PC that is rated for your environment: operating temperature, input voltage, shock, vibration
- Ensure to adhere to any certification requirements for IT equipment: Class 1 Division 2, UL Requirements, etc.
- Use an weather resistant enclosure when appropriate to shield IT equipment from ambient conditions
- Ensure installation technicians are properly trained in setting up devices on site
- Prototype before field installation of larger deployments

Users that have these expertise should expect device setup to take less than 15 minutes for your device to be ready to connect to your existing AWS IoT Console depending on network availability.

As the OnLogic solution does not include any production environments in AWS cloud as such the user is responsible for setup, deployment, and maintenance of their AWS applications and following AWS best practices to ensure operational excellence and security. OnLogic AWS Greengrass Compatible IoT Edge Gateways can be used in any AWS Region or Availability Zone that supports Greengrass. Please ensure to adhere to any importation requirements if deploying outside the United States or European Union as there may be additional regulatory requirements for IT equipment.

[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](#)

[Step 2: Set up your environment](#)

[8] 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](#)

[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/Support

OnLogic does not offer technical support for software issues related to AWS services. Contact your technology integration resources or partner to help resolve software issues. Due to the number of different systems OnLogic offers we have a [support resource site](#) to answer commonly asked questions and offer preliminary troubleshooting information.

For Hardware support you can contact the OnLogic support team at support@onlogic.com or 802-861-2300 ext. 2 (8:30 AM to 5:30 PM EST). For responses via email and voicemail we strive to respond within 1 business day. If received after normal business hours we will respond in the order that they were received. Once an RMA is received normal turnaround when parts are available is 5 business days.

All OnLogic systems come with a standard 2 year warranty (unless otherwise stated). For additional information the following resources are available:

- [Warranty Information](#)
- [OnLogic Terms and Conditions](#)