



# Qualcomm® Home Hub 100 Development Kit for Amazon AVS

With Amazon Alexa built-in, the Qualcomm Home Hub 100 Development Kit for Amazon AVS is designed to enable fast time-to-market productization of voice controlled IoT applications.

Based on the low power, advanced hardware security, multi-mode Qualcomm® QCA4020 SoC (System-on-Chip), the Qualcomm Home Hub 100 Platform combines wireless connectivity, cost-effectiveness, security, and voice services for a variety of IoT applications.

The Qualcomm Home Hub 100 Platform is a fully featured hardware and software kit designed for voice-controlled products with Alexa built-in. It is qualified by Amazon for Amazon AVS and leverages AWS IoT core for device connectivity and management. It combines support for multiple radios, standards, protocols, connectivity frameworks, and Amazon Voice Services (AVS) cloud ecosystems.

This development kit is designed to allow interoperability between Wi-Fi, Bluetooth 5.0, and 802.15.4 (ZigBee/Thread) and has advanced hardware based-security features, capable of running on ThreadX or Free RTOS on an Arm-based microcontroller.

This kit also supports a third-party speech input processor supporting voice features such as Wake-on-Voice (WoV), full duplex Acoustic Echo Cancellation (AEC), and far-field noise suppression.

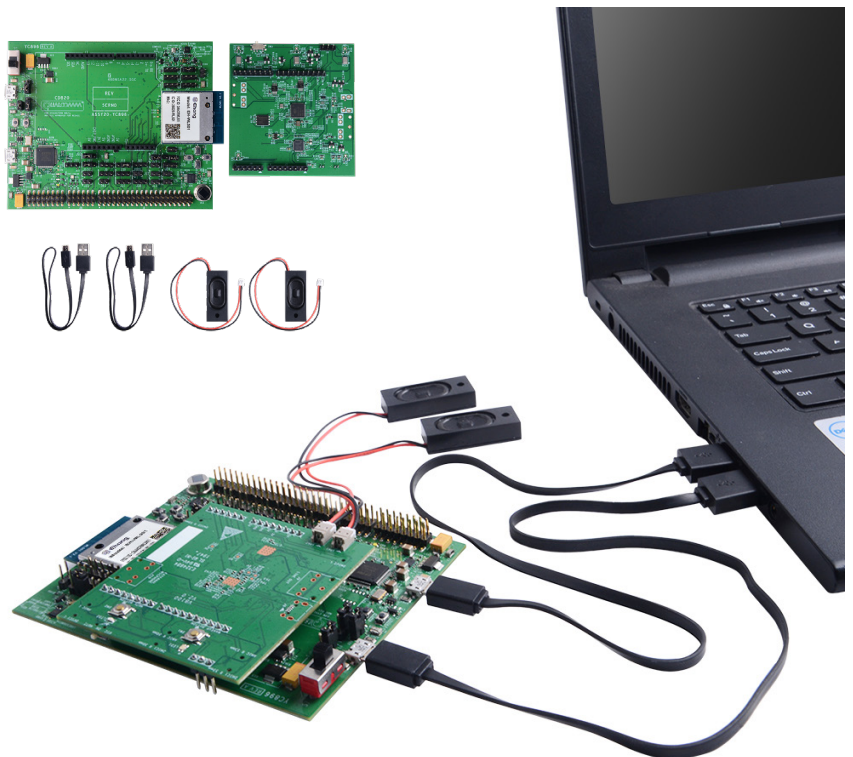
The development kit is ideal for voice controlled IoT applications such as home automation, smart appliances, smart lighting, and home entertainment. It is intended for device manufacturers and developers to integrate, evaluate and test interoperability with AVS in their products before moving into commercial production.

Materials are subject to change without notice.  
87-YC702-1 Rev. B

## Development Kit Contents

- QCA4020 Product Development Board
- Smart Audio Processing Daughter Board
- (2) Micro-B USB Cables
- (2) Speakers
- Set-up guide

## Qualcomm Home Hub 100 Development Kit





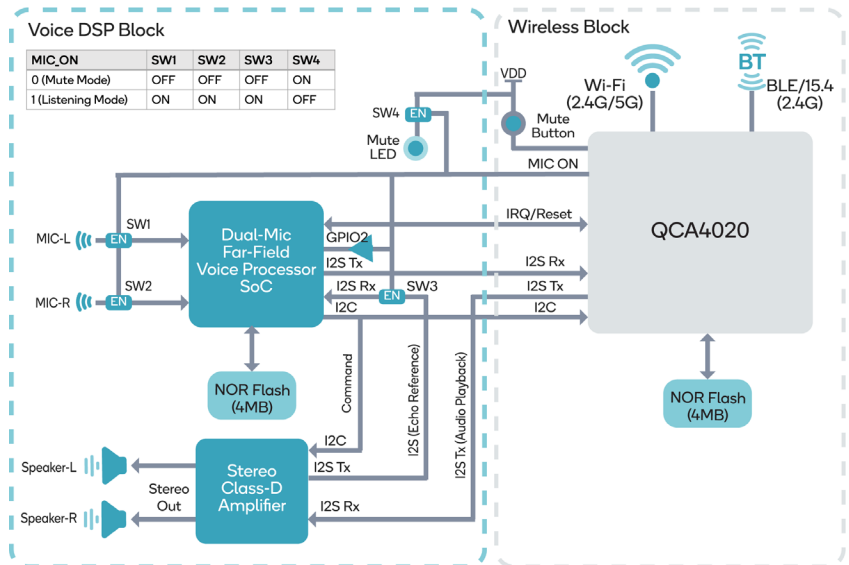
## Home Hub 100 Target Applications

- Smart Appliances
- Smart Lighting
- Home Automation
- Home Entertainment
- Home Security

## Features

- QCA4020 SoC with dual-band 1x1(1-stream) 802.11a/b/g/n Wi-Fi, Bluetooth 5, and 802.15.4 (ZigBee/Thread)
- Advanced voice processor with Wake-on-Voice (WoV), full duplex Acoustic Echo Cancellation (AEC), and far-field noise suppression
- On-board FTDI2232 chip for 4-wire JTAG debugging capability
- Various IDE options for application software development with JTAG debugging
- Arduino headers for easy expansion with industry standard shields
- Rich headers, test-points for power measurement, battery connection, boot-configuration, and other measurements
- Multiple extension ports, speaker Interface, head-phone jack, keypad
- USB 2.0 Interface for RF and manufacturing tests
- Eight on-board sensors (Ambient light, 3D accelerometer, 3D gyroscope/rotation, 3D magnetic field, temperature, humidity, pressure, PIR sensor) and actuators
- Open sourced hardware design (schematics and layout files)

## Block Diagram



## Download Instructions

1. For detailed instruction to connect and getting started, please visit: [www.okdo.com/gettingstarted](http://www.okdo.com/gettingstarted)
2. For more details on the chipset and access to the source code to compile your own software, go to [developer.qualcomm.com](http://developer.qualcomm.com) or visit [www.qualcomm.com/products/qca4020/software](http://www.qualcomm.com/products/qca4020/software). To access source code and detailed information, you need to create an account if you don't have one.
3. A detailed guide is available at [www.qualcomm.com/products/qca4020/documentation](http://www.qualcomm.com/products/qca4020/documentation), "Qualcomm Home Hub 100 Development Kit for Amazon AVS (Doc# 80-Y9381-19)". The instructions include how to set up, build and run an Alexa Voice Service demo.
4. Additional documentation can be downloaded from this link: [www.qualcomm.com/products/qca4020/documentation](http://www.qualcomm.com/products/qca4020/documentation)

### Product Information:

For general information regarding QCA4020 product support, please visit: [www.qualcomm.com/products/qca4020](http://www.qualcomm.com/products/qca4020) and click on the "Support" tab.

For general information regarding Qualcomm Home Hub Platforms, please visit: [developer.qualcomm.com/vertical-platforms/home-hub-platforms](http://developer.qualcomm.com/vertical-platforms/home-hub-platforms)

### Community forums:

For general information regarding community support on QCA4020, please visit: [developer.qualcomm.com/forums/hardware/qca4020-qca4024](http://developer.qualcomm.com/forums/hardware/qca4020-qca4024)

## Ordering Information

Product	Part Number
Home Hub 100 Development Kit for Amazon AVS	201-7851

To learn more visit: [qualcomm.com](http://qualcomm.com) or [developer.qualcomm.com](http://developer.qualcomm.com)

