

Qualcomm

# Qualcomm® QCA4024 Product Development Kit

The QCA4024 Product Development Kit for creating Internet of Things (IoT) products supports key wireless technologies and cloud ecosystems.

The QCA4024 Product Development Kit is engineered to help developers and device manufacturers create unique IoT products that work in concert with a wide variety of other devices and cloud ecosystems. The kit is well suited for developing IoT applications such as smart cities, toys, home control and automation, appliances, networking and home entertainment.

The QCA4024 kit is designed to provide interoperability among diverse IoT devices including most popular wireless standards, protocols and communication frameworks, and ease connectivity to various cloud and application services.

The QCA4024 SoC is a dual-mode intelligent connectivity solution with advanced smart coexistence, integrating numerous wireless communication technologies into a single SoC, a proven approach to address fragmentation in many technology areas. It integrates Bluetooth® 5 and 802.15.4 based technologies, including ZigBee® and Thread and has advanced hardware-based security features to help improve device protection in ways not possible with just software.

The QCA4024 SoC comes with pre-integrated support for HomeKit™ and the Open Connectivity Foundation (OCF™) specifications, as well as support for AWS IoT software development kit (SDK) and Microsoft Azure IoT Devices SDK to connect with Azure IoT Hub.

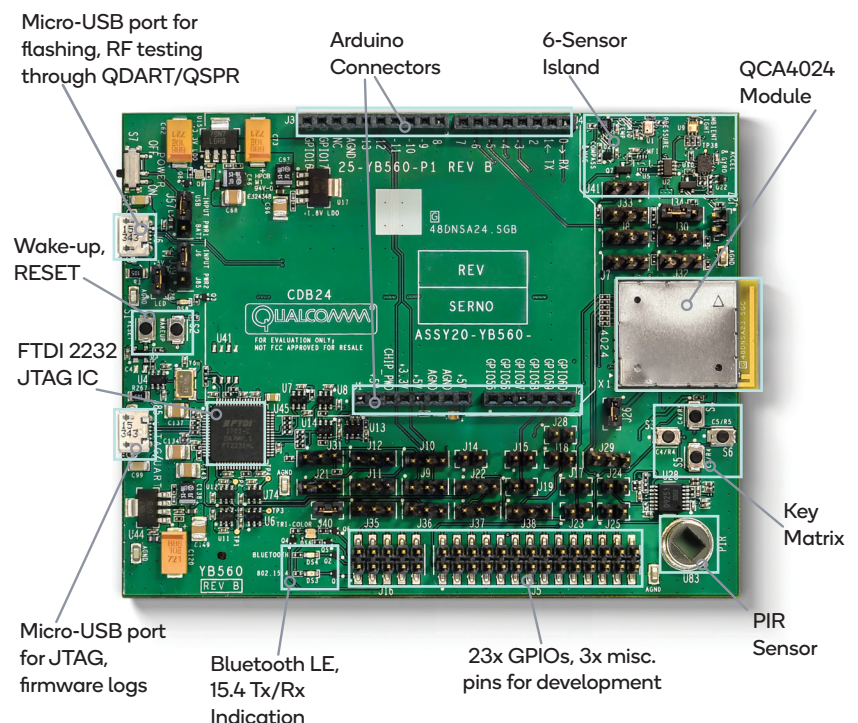
## Development Kit Contents

- QCA4024 Reference Module and Development Board
- 2x Micro USB cables to connect to Host PC and power supply
- Set-up guide

## Development Board Highlights

- 6-Sensor Island
- Arduino Connector
- Key Matrix
- PIR sensor, LEDs
- FTDI Based JTAG
- USB Interface for RF testing, manufacturing

## QCA4024 Development Board





# QCA4024 Target Applications

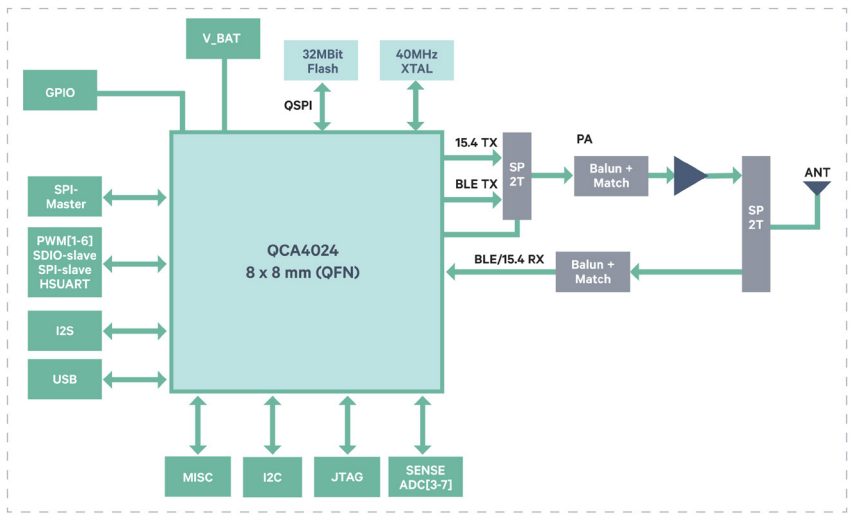


- Industrial IoT
- Home Gateway
- Appliances
- Home Control
- Smart Cities
- Home Entertainment/Toys

## Features

- QCA4024 dual-mode SoC with integrated Bluetooth 5 and 802.15.4 wireless technologies
- On-board FTDI2232 IC for 4-wire JTAG debugging
- Various commercial and free IDE options for JTAG debugging and software development
- Arduino connector to extend kit and add shields
- Open schematics and layout files
- Eclipse IDE for single-step JTAG debugging
- UART-AT commands to connect QCA4024 to MCU/CPU
- Eight sensors and actuators on-board:
  - Ambient light luminosity
  - 3D accelerometer
  - 3D gyroscope/rotation
  - 3D magnetic field
  - Temperature
  - Humidity
  - Pressure
  - PIR sensor
- Miscellaneous headers, test-points for power measurement, direct connect to battery, boot-configuration, and other measurements
- Out-of-box drivers for sensors in demo applications
- Plan for FCC/CE pre-certification

## QCA4024 Module Block Diagram



## QCA4024 Module Specifications

<b>Module Size</b>	19.4 x 25 mm 59-pin
<b>Bluetooth LE &amp; 802.15.4 Tx</b>	Shared PA between 15.4 and Bluetooth LE for transmit 21 dBm Pout for 15.4 and 10 dBm Pout for Bluetooth LE
<b>Bluetooth LE &amp; 802.15.4 Rx</b>	Concurrent 15.4 and Bluetooth LE Rx Shared antenna between 15.4 and Bluetooth LE
<b>Voltage</b>	3.3V supply voltage
<b>Application I/O</b>	SPI master/slave, 6-channel PWM, SDIO master/slave, HSUART, I2C, 12-bit/5-channel 1-MSPS ADC, 4-wire JTAG debugging Extra GPIOs for application-specific use
<b>Interfaces</b>	SDIO/SPI/UART interfaces to connect to external MCU/CPU interface
<b>Testing</b>	USB interface for RF testing, factory automation

## Ordering Information

Product	Part Number
QCA4024 Starter Development Kit	65-YB560-1

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



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