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.

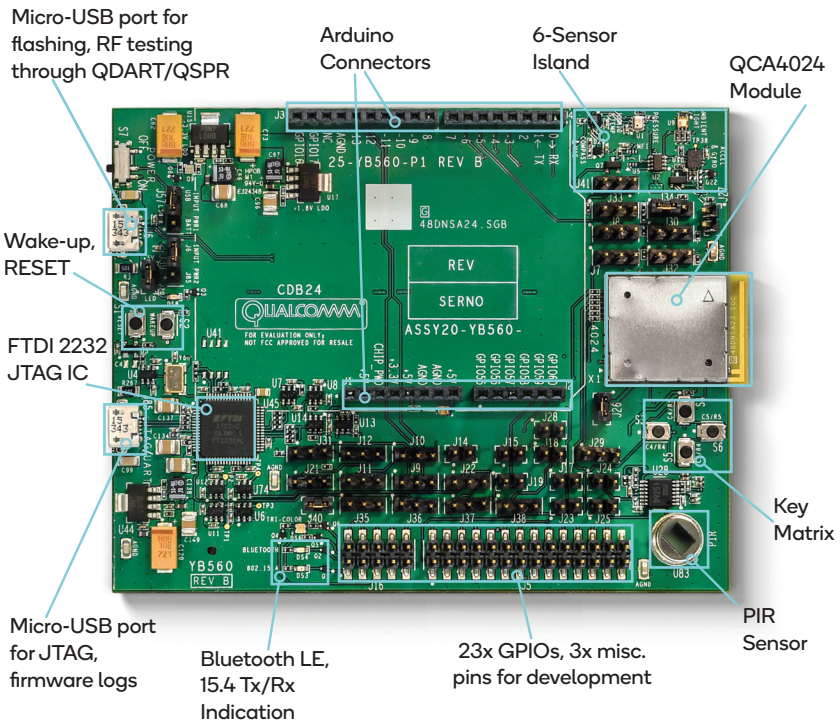
Development Kit Contents

- 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
- Adruino Connector
- Key Matrix
- PIR sensor, LEDs
- FTDI Based JTAG
- USB Interface for RF testing, manufacturing

QCA4024 Development Board



Materials are subject to change without notice.
87-YB801-1 Rev. C

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QCA4024 Target Applications

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

Features

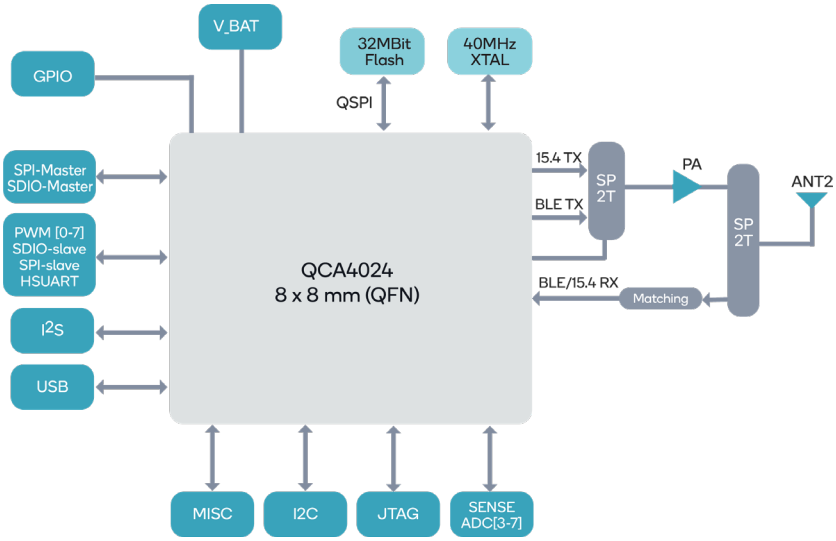
- QCA4024 dual-mode SoC with integrated Bluetooth 5 and 802.15.4 wireless technologies
- On-board FTDI2232 IC for 4-wire JTAG debugging
- Various commercial and free IDE options for JTAG debugging and software development
- Arduino connector to extend kit and add shields
- Open schematics and layout 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

Ordering Information

Product	Part Number
QCA4024 Starter Development Kit	65-YB560-2

To learn more visit: qualcomm.com or developer.qualcomm.com

QCA4024 Module Block Diagram



QCA4024 Module Specifications

Module Size	19.4 x 25 mm 59-pin
Bluetooth LE & 802.15.4 Tx	Shared PA between 15.4 and Bluetooth LE for transmit 17 dBm Pout for 15.4 and 7 dBm Pout for Bluetooth LE
Bluetooth LE & 802.15.4 Rx	Concurrent 15.4 and Bluetooth LE Rx Shared antenna between 15.4 and Bluetooth LE
Voltage	3.3V supply voltage
Application I/O	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
Interfaces	SDIO/SPI/UART interfaces to connect to external MCU/CPU interface
Testing	USB interface for RF testing, factory automation

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