Qualcomm

Qualcomm® QCC730M micro-power dual-band Wi-Fi module

Micro-power Wi-Fi module designed to unleash new battery-powered Wi-Fi or replace traditional Bluetooth® Low Energy-enabled IoT applications.

QCC730M is an industry-leading 1x1 dual-band Wi-Fi 4 module built to deliver micro-power Wi-Fi, flexibility to scale, and versatility for ease of design. The selectable power modes and innovative power management allows for exponential battery life of battery-powered or energy-harvested IoT devices. QCC730M includes an open-source SDK and VS Code-based IDE for ease of development with a software stack that supports cloud connectivity offloading for a comprehensive solution. It offers direct cloud connectivity with full stack offloading to free up the host processor resource for dedicated IoT applications.

QCC730M is driven by an open-source SDK which is available on CodeLinaro. QCC730M is also equipped with Qualcomm® Connectivity Integrated Development Environment based upon Microsoft Visual Studio Code (VS Code). The QCC730M-specific VS Code extension plugin will be made available as open-source software to allow customized VS Code specifically for QCC730M.

Pre-certified, size and cost-optimized modules and associated development kits are also available, which help to accelerate product development and minimize time to market.

Highlights

Unbelievable micro-power Wi-Fi for extremely long battery life

Our selectable power modes and innovative power management maximize savings for extremely long battery life. QCC730M is our lowest-power Wi-Fi module for IoT connectivity.



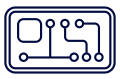
Flexibility to scale

QCC730M offers extreme flexibility for developers by operating in either hostless or hosted mode, supporting an internal or external power amplifier, and having integrated, non-volatile memory.



Versatile system for ease of design

QCC730M has full integration of the on-chip microcontroller, NVM, and SRAM for versatility and ease of design. QCC730M empowers developers with the ability to replace or integrate with traditionally Bluetooth-only applications.



Full cloud connectivity stack

QCC730M is a complete solution with all cloud connectivity stack offloading, an open-source SDK available on CodeLinaro, and a VS Code-based IDE along with an associated development kit.



Ordering Information

Module	Product Code	Order Number	FEM	Embedded Memory	USB	Antenna Config	Ext Memory
QCC730M	QCC730M-1-AA	QCC-730M-1-LGM42-MT-00-0-AA	iPA	No	N	PCB Antenna	4 MB Flash
	QCC730M-1-AB	QCC-730M-1-LGM42A-MT-00-0-AB	iPA			RF Connector	
	QCC730M-1-AD	QCC-730M-1-LGM42B-MT-00-0-AD	xPA			PCB Antenna	
	QCC730M-1-AE	QCC-730M-1-LGM42C-MT-00-0-AE	xPA			RF Connector	

EVK	Order Number		FEM	Antenna Config
QCC730M	65-79685-1	EVK-QCC730M-1-00-0-AA	iPA	PCB Antenna
	65-79685-2	EVK-QCC730M-1-00-0-AB	iPA	RF Connector
	65-79685-3	EVK-QCC730M-1-00-0-AD	xPA	PCB Antenna
	65-79685-4	EVK-QCC730M-1-00-0-AE	xPA	RF Connector

Materials are subject to change without notice.
87-84453-1 Rev. D

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QCC730M Target Applications

- Smart Door Locks
- Battery-Powered IP Cameras
- Video Doorbells
- Smart Sensors
- Wearables and Portable Medical Devices
- Smart Tags



Features

- Dedicated 60 MHz applications processor to cover full cloud connectivity stack and applications
- Dual-band 1x1 802.11a/b/g/n, HT20, up to MCS3
- On-chip 1.5 MB RRAM (NVM) and 640 KB SRAM provide sufficient memory resource without the need for an external NOR flash
- Integrated hardware crypto accelerator
- Advanced power management scheme to minimize power dissipation for each use case

Related Products

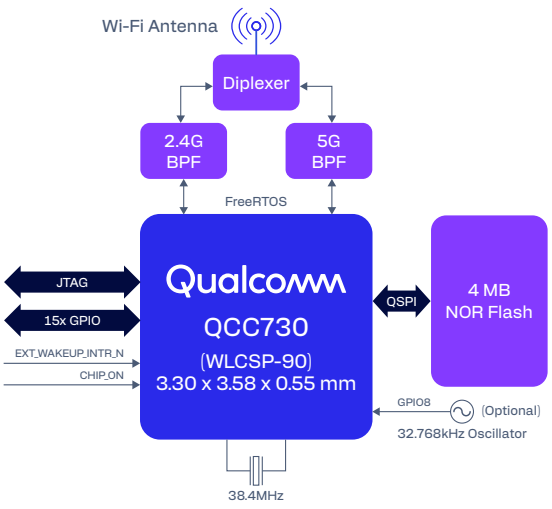
This product is based on the Qualcomm QCC730, an industry-leading 1x1 Wi-Fi 4 transceiver built to deliver ultralow micro-power Wi-Fi, flexibility to scale, and versatility for ease of design.

Specifications

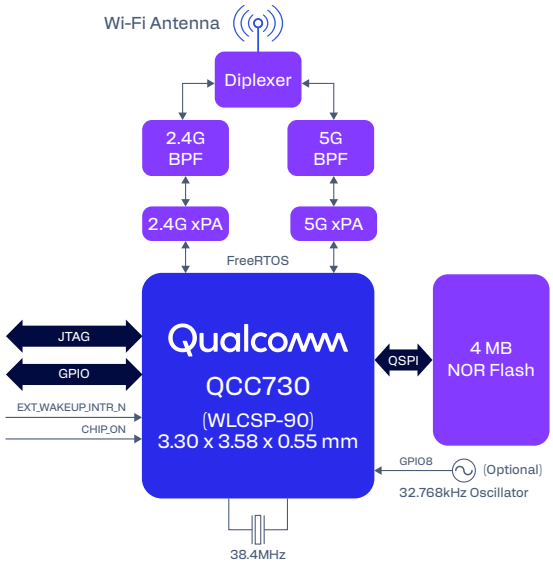
Category	Specifications
CPU	Processor with FPU @ 60 MHz 1.5 MB RRAM (600 KB for applications) 640 KB SRAM (260 KB for applications) XiP over QSPI Flash
Wi-Fi	Dual-band 1x1 802.11a/b/g/n, HT20, up to MCS3
Security Support	Integrated hardware crypto accelerations Security services (boot, debug, provisioning, com/OTA, etc.)
Interfaces & Peripherals	36 Pins SPI (slave), QSPI (master), I2C (master), UART (2-wire) Wakeup, VBAT, GND, FEM Signaling
Package Type	36-pin LGA module package, all module variants are pin-compatible • **iPA:** 12.28 x 19.8 x 2.6 mm (PCB Antenna) and 12.28 x 14.8 x 2.2 mm (RF Connector) • **xPA:** 12.28 x 23.0 x 2.6 mm (PCB Antenna) and 12.28 x 18.0 x 2.6 mm (RF Connector)

Block Diagrams

QCC730M iPA Module Block Diagram



QCC730M xPA Module Block Diagram



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