2.4/5 GHz Dual-Band 1x1 Wi-Fi® 5 (802.11ac) + Bluetooth® 5.2 Solution

88W8987

Last Updated: Feb 22, 2025

The 88W8987 is a highly integrated Wi-Fi (2.4/5 GHz) and Bluetooth single-chip solution specifically designed to support the speed, reliability and quality requirements of Very High Throughput (VHT) products. The System-on-Chip (SoC) provides both simultaneous and independent operation of IEEE 802.11ac (Wave 2), 1x1 with data rates up to MCS9 (433 Mbit/s), and Bluetooth 5.2 (includes Low Energy (LE)). The SoC also provides Bluetooth Classic and Bluetooth Low Energy (LE) Smart Ready operation.

Host interfaces include SDIO 3.0 and high-speed UART interfaces for connecting Wi-Fi and Bluetooth technologies to the host processor.

The device is designed with two front-end configurations to accommodate Wi-Fi and Bluetooth on either separate or shared paths:
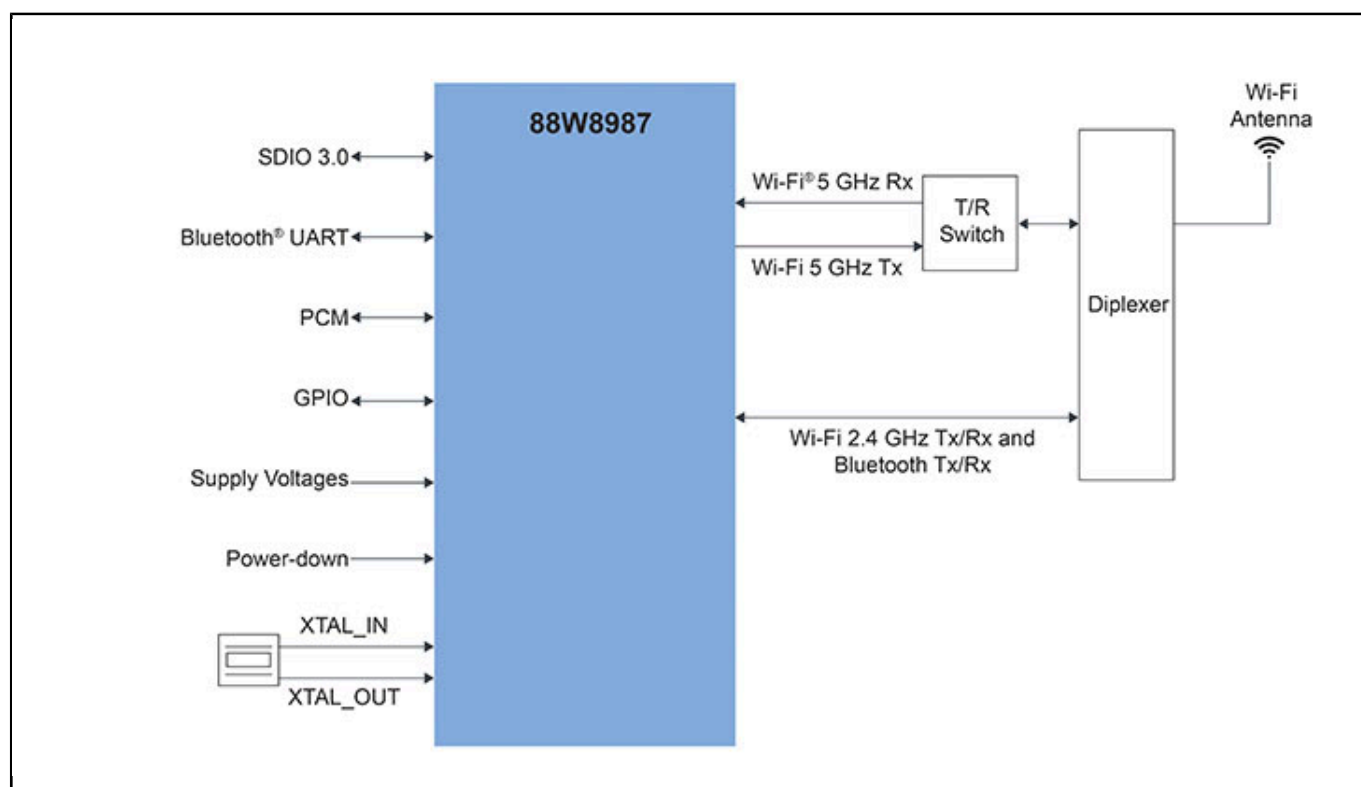
- 2-antenna configuration: 1x1 Wi-Fi and Bluetooth on separate paths (QFN)
- 1-antenna configuration: 1x1 Wi-Fi and Bluetooth on shared paths (eWLP)

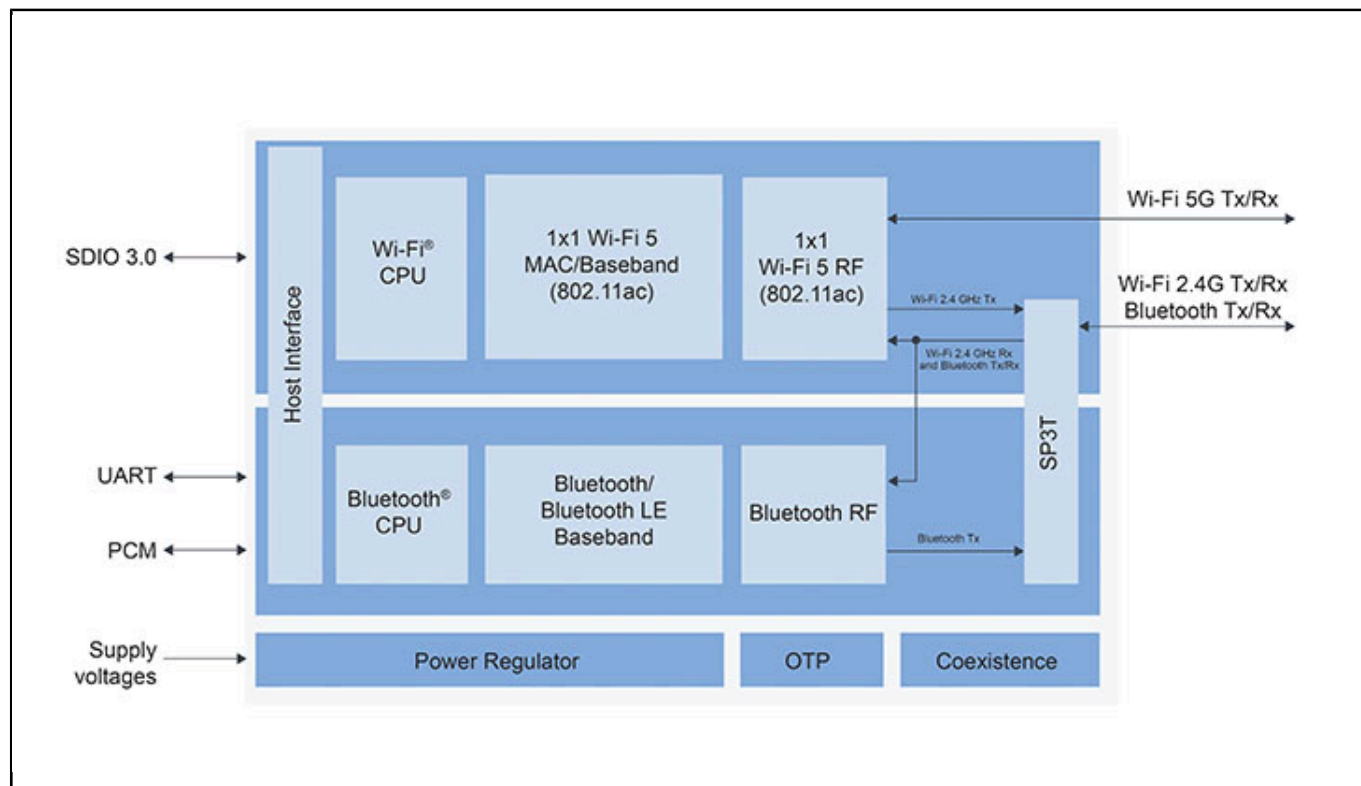Wireless modules based on the NXP 88W8987 are offered by leading module manufacturers.

88W8987 internal diagram – QFN option Block Diagram
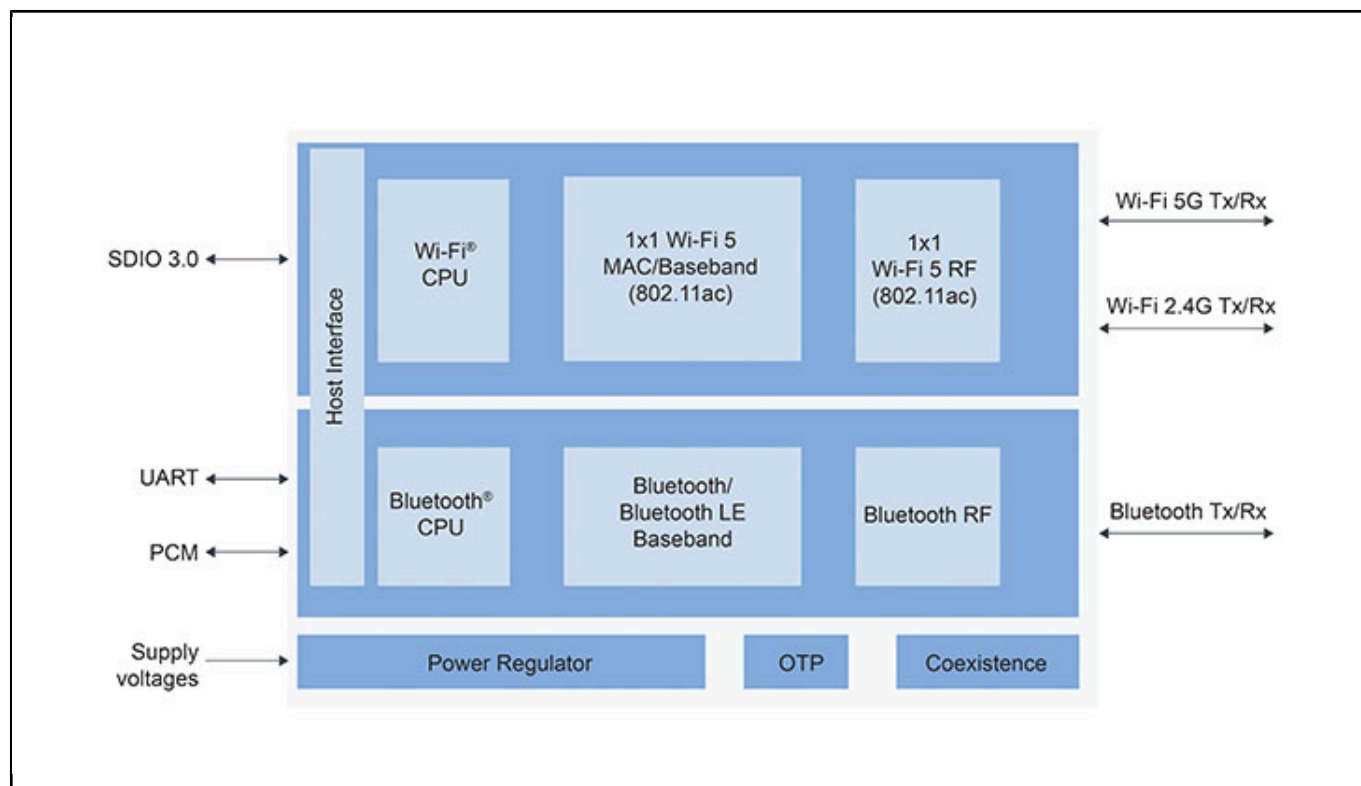
88W8987 application diagram – eWLP option Block Diagram

88W8987 internal diagram – eWLP option Block Diagram

View additional information for 2.4/5 GHz Dual-Band 1x1 Wi-Fi® 5 (802.11ac) + Bluetooth® 5.2 Solution.

Note: The information on this document is subject to change without notice.