Providing capacity and coverage needed for high-efficiency wireless platforms

NXP® 88W9064 4x4 Wi-Fi® 6 Dual Band with Bluetooth® 5 SoC

The NXP 88W9064 SoC family of Wi-Fi access solutions provides an advanced 802.11ax feature set and draws on the strength of our beamforming technologies. Integrated MU-MIMO and OFDMA solutions help increase capacity for downlink and uplink traffic to allow for overall improved network utilization while meeting the growing demands of user applications.standard compliance.

PRODUCT OVERVIEW

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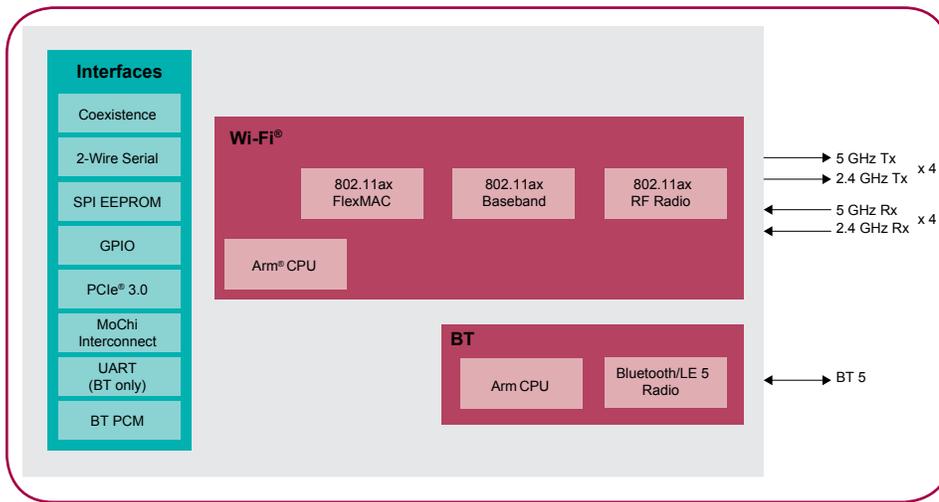
Other features of the 88W9064 family include integrated Bluetooth 5 and precision device location function that provides accurate positioning within 1 meter and 10 degrees. Bluetooth 5 supports classic Bluetooth and Bluetooth Low Energy with features such as long-range and direction finding using angle of arrival (AoA) and angle of departure (AoD). The added Bluetooth capability can be leveraged to provide a more cost-effective and complete solution for users' connectivity needs.

TARGET APPLICATIONS

▶ 88W9064 SoC
 – Enterprise & retail access points
 – Broadband gateway
 – Fixed wireless

▶ 88W9064S SoC
 – Service provider set-top box
 – Over-the-top set-top box

88W9064/88W9064S BLOCK DIAGRAM

KEY FEATURES AND BENEFITS

FEATURES	88W9064	88W9064S
Wi-Fi®	• IEEE® 802.11ax, 802.11ac Wave 2, 802.11a/b/g/n • 20/40/80/160 (80+80) MHz channel bandwidths • 2.4 Gbit/s peak data rate • Implicit and explicit beamforming	• IEEE® 802.11ax, 802.11ac Wave 2, 802.11a/b/g/n • 20/40/80/160 (80+80) MHz channel bandwidths • 1.2 Gbit/s peak data rate • Implicit and explicit beamforming
802.11ax	• Downlink OFDMA and MU-MIMO • Uplink OFDMA and MU-MIMO • 1024 QAM • Spatial re-use • Range extension • DCM	• Uplink and Downlink OFDMA and MU-MIMO • 1024 QAM • Spatial re-use • Range extension • DCM
Flex MAC	• Adaptable architecture for standards evolution • Management of high number of traffic queues • Advanced scheduling	• Adaptable architecture for standards evolution
Bluetooth®	• Support for Bluetooth 5 • Direction finding • Long range • Co-existence arbitration	• Support for Bluetooth 5 • Direction finding • Long range • Co-existence arbitration
Dedicated In-Service Monitoring	• Concurrent spectrum scanning • Zero wait DFS	
Precision Location	• Distance: within 1 meter • Angle: within 10 degrees	• Distance: within 1 meter • Angle: within 10 degrees
Host Interfaces	• MCi (2-Lane) • PCIe® 3.0 (2-Lane) • High-Speed UART (for Bluetooth only)	• MCi (2-Lane) • PCIe 3.0 (2-Lane) • High-Speed UART (for Bluetooth only)