

Product Brief

BCM6772

Quad-Core CPU, Dual-Band 2+2 802.11bn Wi-Fi 8 SoC



Wi-Fi 8 SoC Key Features

- 4-stream, dual-band 802.11bn UHR
- 2x2 2.4 GHz (40 MHz) + 2x2 5 GHz (160 MHz)
- Integrated Quad-Core CPU complex
- Dedicated network processing engine
- DDR4, DDR5 support
- Integrated 2.4 GHz Power Amplifiers (iPA)
- Third generation digital pre-distortion FEM support
- Integrated multi-gig PHY

Applications

- Residential Wi-Fi access points, routers and repeaters
- Service provider gateways
- Mesh networks

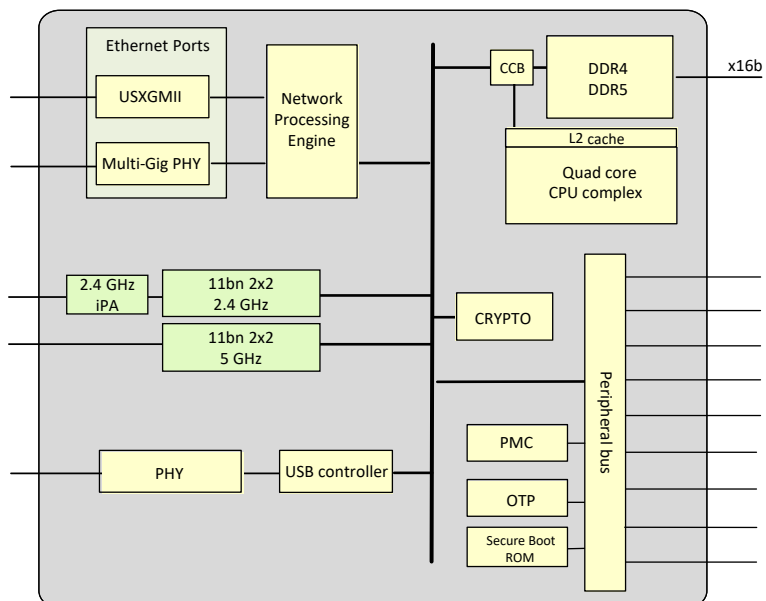
Overview

The Broadcom® BCM6772 is a highly integrated System-on-a-Chip (SoC) designed as the core foundation for next-generation Wi-Fi 8 (802.11bn) mass-market Ethernet routers, extenders, and repeaters. Tailored for smart repeaters and entry-level access points, the BCM6772 supports simultaneous 2.4 GHz and 5 GHz WLAN operation in a 2+2 radio configuration. The architecture incorporates integrated internal power amplifiers (iPAs) and third-generation Digital Pre-Distortion (DPD) Front-End Modules (FEMs) to deliver robust performance within a compact design.

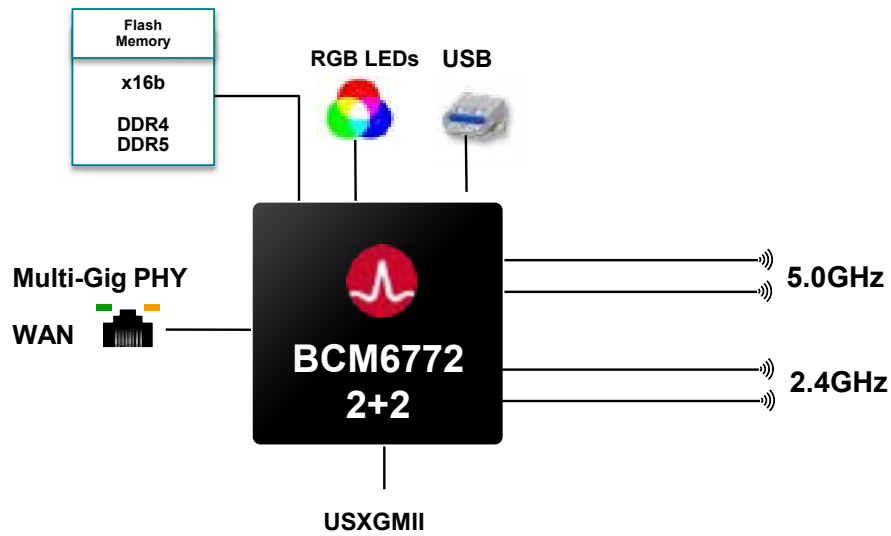
By integrating a powerful network processor and versatile memory controller with a dedicated quad-core CPU complex, the SoC provides a complete multi-gigabit platform that eliminates the need for an external host processor. This high level of integration significantly reduces Bill of Materials (BOM) costs and simplifies PCB design, making it an ideal solution for high-volume deployments.

Housed in an ultra-compact, power-efficient package, the BCM6772 balances essential connectivity with the footprint requirements of modern, entry-level residential networking hardware.

BCM6772 Block Diagram



Single chip Wi-Fi 8 Dual-Band Router



BCM6772 Specifications

Parameter	Details
Wi-Fi Standards	IEEE 802.11bn (Wi-Fi 8) IEEE 802.11be (Wi-Fi 7) IEEE 802.11a/b/g/n/ac/ax (Wi-Fi 6/6E/legacy)
Spatial Streams	Dual Radio: 2x2 (2.4 GHz) + 2x2 (5 GHz). Total 4 streams
Spectral Bands	20/40 MHz (2.4 GHz), 20/40/80/160 MHz (5 GHz)
Modulation	Up to 4096-QAM (for UHR/Wi-Fi 8 operation)
Multi-Link Operation (MLO)	Supported on all bands
OFDMA and MU-MIMO	Supported in both uplink and downlink direction
Wireless Security	Hardware-accelerated WPA3 (including 192-bit mode) and Secure Boot with PQC (Post-Quantum Cryptography) support
Operating Temperature	0°C to 70°C (commercial temperature)

Ordering Information

Part Number	Description
BCM6772A0KFEBG	2x2 2.4 GHz + 2x2 5 GHz Wi-Fi8 (802.11bn) Up to 40 MHz for 2.4 GHz and up to 160 MHz for 5 GHz bandwidth



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