BROADCOM®

Product Brief

BCM43740 & BCM43720

Best-in-class, Premium Wi-Fi 7 Access Chip to Empower the Next Generation of Enterprise Wi-Fi Access Points

High-performance Wi-Fi Access

- Quad-stream spatial multiplexing along with support for 4K QAM modulation rates and 320 MHz channel bandwidths more than doubles the maximum Wi-Fi peak speed achievable over current generation Wi-Fi 6 and 6E solutions.

Multi-radio/Multi-channel Link Operation

- Multi-channel link support makes real-time decisions to provide a high throughput, low latency, and highly reliable connection for your bandwidth intensive, latency sensitive applications.

Multiuser Technologies

- Support for MU-MIMO and OFDMA technologies in both uplink and downlink directions to allow for high-bandwidth concurrent multi-user data transfer.

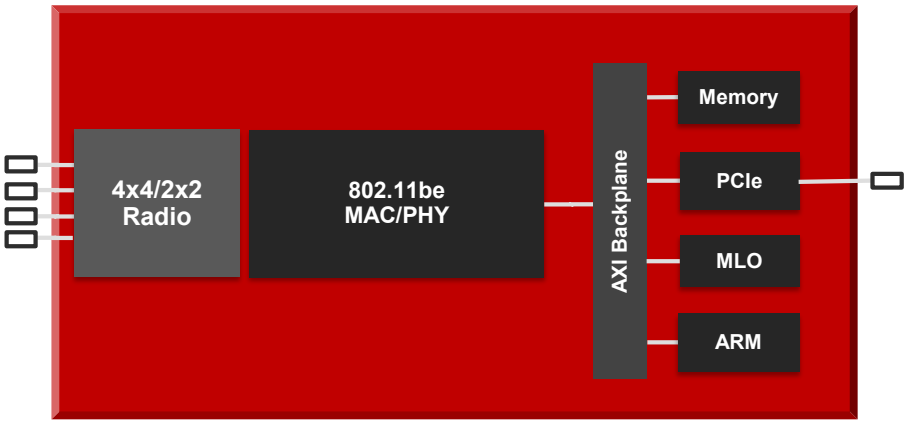
Overview

The Broadcom® BCM43740 and BCM43720 are the world's first 4x4 and 2x2 single-chip Wi-Fi 7 MAC/PHY/Radio solutions packed with industry-leading features and are designed for powering next-generation enterprise-grade Wi-Fi access points.

Built from the ground up to deliver ultra-high performance, the BCM43740 sets a new high ground for throughput and latency. Fully compliant with the latest Wi-Fi 7 standard, the BCM43740 can support up to 320 MHz channel bandwidths and is tri-band (2.4 GHz, 5 GHz, and 6 GHz) capable.

The BCM43720 is also fully compliant with the latest Wi-Fi 7 standard, and can support up to 160 MHz channel bandwidths. The BCM43720 is tri-band (2.4 GHz, 5 GHz, and 6 GHz) capable and is the ideal option for a dedicated scanning radio for Enterprise access points.

BCM43740/BCM43720 Block Diagram



BCM43740 (4x4 320 MHz: 2.4 GHz, 5 GHz or 6 GHz)
BCM43720 (2x2 160 MHz: 2.4 GHz, 5 GHz or 6 GHz)

BCM43740 Specifications

Parameter	Details
Wi-Fi Standards	IEEE 802.11be (Wi-Fi 7) Release 1.0 compliant IEEE 802.11ax (Wi-Fi 6 & 6E) compliant IEEE 802.11 a/b/g/n/ac
Spatial Streams	Quad-stream 4x4:4
Spectral Bands	2.4 GHz 5 GHz 6 GHz
Highest Modulation Rate	4K-QAM
Channel Bandwidths	20/40/80/160/320 MHz
Wi-Fi Peak Speeds	Maximum PHY rate of 11.5 Gbps is achievable with 320 MHz bandwidth support
Multi-Link Operation (MLO)	Supported on all bands
OFDMA	Supported in both uplink and downlink direction
MU-MIMO	Supported in both uplink and downlink direction
Wireless Security	Comprehensive wireless network security support that includes WPA, WPA2, WPA3 (with 192-bit Suite B encryption),AES encryption/decryption, and IEEE 802.1X support
Operating Temperature	0°C to 70°C (commercial temperature) -40°C - 85°C– (industrial temperature)

BCM43720 Specifications

Parameter	Details
Wi-Fi Standards	IEEE 802.11be (Wi-Fi 7) Release 1.0 compliant IEEE 802.11ax (Wi-Fi 6 & 6E) compliant IEEE 802.11 a/b/g/n/ac
Spatial Streams	2x2:2
Spectral Bands	2.4 GHz 5 GHz 6 GHz
Highest Modulation Rate	4K-QAM
Channel Bandwidths	20/40/80/160 MHz
Wi-Fi Peak Speeds	Maximum PHY rate of 2.89 Gbps
Multi-Link Operation (MLO)	Supported on all bands
OFDMA	Supported in both uplink and downlink direction
MU-MIMO	Supported in both uplink and downlink direction
Wireless Security	Comprehensive wireless network security support that includes WPA, WPA2, WPA3 (with 192-bit Suite B encryption),AES encryption/decryption, and IEEE 802.1X support
Operating Temperature	0°C to 70°C (commercial temperature) -40°C - 85°C– (industrial temperature)

Ordering Information

Part Number	Description
BCM43740	4x4 802.11be (Wi-Fi 7) 320 MHz version
BCM43720	2x2 802.11be (Wi-Fi 7) 160 MHz version

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For more product information: broadcom.com

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