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Broadcom Launches First Gigabit Speed 802.11ac Chips - Opens 2012 CES with 5th Generation (5G) Wi-Fi Breakthrough

**5G WiFi Offers Consumers the World's Fastest, Most Reliable Wireless Coverage for HD-Quality Video and Near Instantaneous Data Synchron
Innovation Attracts Support from Industry Leaders - Comcast, Lenovo, Motorola, NETGEAR and Others**

LAS VEGAS, Jan. 5, 2012 /PRNewswire/ -- CES —

News Highlights:

- Broadcom introduces first family of IEEE 802.11ac chips based on the 5th generation of Wi-Fi (5G WiFi)
- 5G WiFi improves wireless range in the home, allowing consumers to watch HD-quality video from more devices, in more places
- The increased speed of 5G WiFi allows consumers to load web content on a mobile device faster, synch large video or music files quickly, all while extending battery life
- 5G WiFi addresses the growing need for a more robust and efficient wireless network

Broadcom Corporation (NASDAQ: BRCM), a global innovation leader in semiconductor solutions for wired and wireless communications, today introduced its first family of 802.11ac (5G WiFi) chips designed for a broad range of product segments. The new IEEE 802.11ac chips are three times faster and up to six times more power efficient than equivalent 802.11n solutions. Visit [Experience Broadcom @ CES](#) for more news, blogs and multi-media from CES and www.5GWiFi.org for more information on consumer advantages of 802.11ac.

5G WiFi is the next generation Wi-Fi standard required for today's mobile and video era. Based on 802.11ac, 5G WiFi is a major evolutionary step from the existing 802.11a/b/g/n networks. Broadcom's 5G WiFi dramatically improves the wireless range in the home, allowing consumers to watch HD-quality video from more devices, in more places, simultaneously. The increased speed enables consumers to download web content from a mobile device faster and quickly synch large files, such as videos, in a fraction of the time it would take on a similar 802.11n device. Since 5G WiFi transfers the same volume of data at a much faster rate, devices enter low-power mode faster, which results in significant power consumption advantages.

Digital-content consumption is on a steep incline, with video content expected to reach approximately 90 percent of global consumer traffic, according to [Cisco's 2011 Visual Networking Index Forecast](#). At the same time, Internet traffic is shifting rapidly from wired to wireless networks. The increased reliance on wireless networks, the explosion of video consumption and the growing number of wireless devices being used are all putting tremendous stress on legacy 802.11a/b/g/n networks. As a result, consumers are prone to experience deteriorated performance, choppy videos and slower load times.

By creating more reliable whole-home coverage, Broadcom's 5G WiFi technology overcomes the digital content and wireless device challenge. Broadcom's family of 5G WiFi solutions includes the BCM4360, BCM4352, BCM43526 and BCM43516.

Product Highlights:

- All 5G WiFi solutions from Broadcom support the following features:
 - 80 MHz channel bandwidth that is 2 times wider than current 802.11n solutions
 - 256-QAM, a higher modulation scheme that increases data transfer efficiency

- Transmit and receive beamforming
- Low Density Parity Check (LDPC) Codes
- Space-Time Block Codes (STBC)
- BCM4360 supports the PCIe interface and implements 3-stream 802.11ac specifications, and reaches speeds up to 1.3 Gbps.
- BCM4352 and BCM43526 implement 2-stream 802.11ac specification to reach up to 867 Mbps. BCM4352 supports PCIe interface; BCM43526 supports the USB interface.
- BCM43516 supports USB and reaches speeds of up to 433 Mbps with its single stream 802.11ac implementation.
- Chips with the PCIe interface are ideal for access points, routers, DSL/cable gateways and PC products; chips that use USB are ideal for consumer electronics devices including televisions, set-top boxes and Blu-Ray players.
- Broadcom's new 5G WiFi chips deliver better coverage and longer battery life in a small form factor that is interoperable and compatible with existing technologies.
 - Beamforming helps steer content in the direction of the intended receiver, increasing reliability and extending range; this is well complemented by STBC and LDPC code support.
 - By transferring the same volume of data at a much faster rate, devices go into a low-power mode faster than existing 802.11n solutions.
 - Designed on 40nm manufacturing process, the new chips are smaller and more power efficient, giving customers more design freedom.
 - Broadcom's 5G WiFi solutions work with all legacy 802.11 standards and complement other wireless technologies — like Wi-Fi Direct, Bluetooth and NFC.

Broadcom is sampling 5G WiFi solutions to its early access partners including retail and PC OEMs, service providers and carriers, and will be demonstrating 5G WiFi capabilities at CES.

802.11ac has generated broad support across the consumer-electronics industry. Companies and partners across the ecosystem recognize that 802.11ac is the future of Wi-Fi and are committed to its development, integration and distribution.

Quotes:

Mark Hung, Research Director, Wireless, Gartner Research

"Wi-Fi-enabled devices will grow from less than 1 billion units in 2010 to more than 3 billion in 2015[1]. Given the current constraints of legacy 802.11 standards and the increased speed, capacity, coverage and battery life that 802.11ac offers, this next generation of Wi-Fi is poised for rapid growth across all product segments. 802.11ac will be one of the most influential mobile and wireless technologies in the years to come."

Julian Chu, Senior Industry Analyst & Senior Manager, Market Intelligence & Consulting Institute (MIC), Taiwan

"As demand for connectivity solutions continues to rise in Asia, consumers are looking for a fast and reliable Internet experience. 802.11ac will be especially beneficial in this region where materials such as concrete are common in buildings and offer unique challenges to delivering reliable Wi-Fi coverage. We anticipate that the innovations reducing dead spots and improving reliability throughout the home will appeal to consumers and will help drive rapid adoption of the technology."

Michael Hurlston, Senior Vice President, Mobile & Wireless Group, Broadcom

"The exponential growth of digital media and wirelessly connected devices requires faster and more reliable ways to connect anytime, anywhere. 5G WiFi solves this media explosion challenge. Broadcom's vast footprint in consumer electronics devices uniquely positions us to lead the transition to the next generation of Wi-Fi."

S.Y. Shian, Corporate Vice President & General Manager of NB BU, ASUS

"Asus prides itself in leading the market with product innovations. 802.11ac offers disruptive technology benefits that Asus plans to use in its PC, tablet and router lines."

Mike Chen, Senior Director, Networking, Belkin

"As the recognized global leader in delivering award-winning connectivity experiences, we're excited to partner with Broadcom to offer consumers even higher-performance products featuring 802.11ac. The enhanced reliability of 802.11ac complements our commitment to delivering an intuitive, easy-to-use experience for consumers."

Robert Stephens, CTO, Best Buy

"It doesn't matter if you're a movie aficionado streaming video to your TV or surfing social networks from the furthest recesses of your home, Wi-Fi's latest and greatest standard, 802.11ac, promises to deliver the best end-user experience yet. I can see 802.11ac going into all the gadgets in your home, including PCs, smart phones, routers, tablets and TVs, and enhancing the connected home experience."

Hajime Nakai, Director, Member of the Board, Buffalo

"We are partnering with Broadcom to provide consumers worldwide with high performance, next generation Wi-Fi solutions that promote high quality use of new network-intensive applications in the home and in the cloud."

A.J. Wang, CTO, D-Link Systems

"Regardless of whether you're a consumer, small business, mid- to large-sized enterprise or service provider, 802.11ac offers significant benefits over legacy 802.11 standards, including faster speeds and broader range. D-Link continues to work aggressively with Broadcom to incorporate Wi-Fi's next-generation standard into our portfolio of award-winning products."

Chao Li, Terminal Access General Manager, Huawei

"Huawei's terminal access and networking product lines will incorporate 802.11ac technology in mobile phone and gateway designs. The Huawei R&D team is pleased to be one of Broadcom's 802.11ac early access partners."

Dr. Qi Wei, PhD, Executive Director of Research and Development, Lenovo

"802.11ac is an exciting and important development for today's consumers and the wireless ecosystem. Lenovo is looking forward to the proliferation of this new technology into PC, Tablet, smartphone platforms. We also wish to extend the truly unlimited user experience that 802.11ac offers to smart TVs."

LG Electronics Spokesperson, LG Electronics

"802.11ac offers LG the opportunity to connect our ecosystem of consumer electronics and mobile products faster in more reliable ways. We are looking to integrate these fifth generation Wi-Fi solutions in our TVs and phones among other products."

Warren Barkley, General Manager, Lync Engineering, Microsoft

"Companies or individuals utilizing unified communications solutions such as Microsoft Lync, will likely benefit from 802.11ac deployment, in particular when utilizing in scenarios requiring high quality video telephony."

Chris Kohler, Senior Director of Engineering, Motorola

"Motorola is committed to the highest performance and quality for our DSL and Cable Gateways. The next generation of Wi-Fi products, enabled by Broadcom, allow us to push that vector further with reliable media distribution solutions that our customers can deliver to their subscribers."

David Soares, VP & GM Retail Business Unit, NETGEAR

"As the worldwide leader in home networking, NETGEAR sets the bar for performance, reliability, and ease of use in wireless networking. We are excited to partner with Broadcom to raise that bar by leading the next generation of Wi-Fi — 802.11ac."

Quan DengPing, CEO, Tenda

"As one of the leading Chinese retail brands, Tenda is committed to bringing new innovations to its customers. Our on-going partnership with Broadcom presents us with an opportunity to lead the technology transition to the fifth generation of Wi-Fi in China and overseas."

Daniel Smires, Senior Vice President of Technology, Ubee

"The prevalence of wireless connected devices in the home requires that advancements in the WLAN standard continue to match the eminent fixed-line DOCSIS speeds. The 5th generation WLAN standard, 802.11ac, represents a tremendous leap forward in wireless home networking technology and will allow our service provider customers to offer their subscribers unparalleled wireless performance. Ubee and Broadcom are partnering to enable state-of-the-art cable gateways and look forward to exploring this new important technology together."

Huang FuZong, Vice President of Network Product Operation Office, ZTE

"ZTE offers wireless video distribution solutions for carriers all over the world. With our Broadcom partnership, we expect to take our product offerings to the next level with faster and more reliable wireless connections."

Supporting Resources:

- [5G WiFi Website](#)
- [5G WiFi Blog](#)
- [5G WiFi White Paper](#)
- [BCM43516 Product Page](#)
- [BCM43526 Product Page](#)
- [BCM4352 Product Page](#)
- [BCM4360 Product Page](#)
- [B-Connected Broadcom Blog](#)
- Subscribe to Broadcom's RSS Feed: [Mobile and Wireless News](#)

About Broadcom

Broadcom Corporation (NASDAQ: BRCM), a FORTUNE 500® company, is a global leader and innovator in semiconductor solutions for wired and wireless communications. Broadcom® products seamlessly deliver voice, video, data and multimedia connectivity in the home, office and mobile environments. With the industry's broadest portfolio of state-of-the-art system-on-a-chip and embedded software solutions, Broadcom is changing the world by Connecting everything®. For more information, go to www.broadcom.com.

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[1] Gartner Research, Mark Hung, Market Trends: Future Platforms for Wi-Fi Growth, 2011-2015, June 29, 2011

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