Broadcom's New Combo Chip Integrates 802.11n Wi-Fi, Bluetooth 4.0 + HS and FM to Bring New Multimedia Applications to Smartphones, Tablets and Other Mobile Devices

New Broadcom® BCM4330 Expands the Wireless Ecosystem by Enabling New Peer-to-Peer Applications, Wireless Sensors and Monitoring

BARCELONA, Spain, Feb. 14, 2011 /PRNewswire/ -- Mobile World Congress -- Broadcom Corporation (Nasdaq: BRCM), a global leader in semiconductors for wired and wireless communications, today announced its newest wireless combination (combo) chip designed to support more media and data applications without impacting size or battery life for smartphones, tablets and other mobile devices. The BCM4330 integrates Broadcom's industry leading 802.11n Wi-Fi, Bluetooth and FM radio technologies on a single silicon die providing significant cost, size, power and performance advantages over discrete semiconductor implementations, making it ideal for mobile devices.

By implementing emerging standards in Wi-Fi and Bluetooth, the BCM4330 will support new and exciting applications. For example, Broadcom's BCM4330 is the industry's first combo chip solution certified with the Bluetooth 4.0 standard that integrates Bluetooth low energy (BLE). BLE enables an ultra-low power implementation of Bluetooth technology, making the BCM4330 the ideal solution for systems that require very long battery life such as wireless sensors, medical and fitness monitoring devices. The BCM4330 also supports Wi-Fi Direct™ and Bluetooth High Speed which enable mobile devices to communicate directly with each other without having to connect first to an access point and be part of a traditional network, thus creating many new wireless device-to-device applications and usage models.

Broadcom continues to support every major operating system (OS) platform, from Microsoft Windows and Windows Phone to Google Chrome, Android and beyond, not only with the BCM4330, but with all Bluetooth, WLAN and GPS chipsets.

The BCM4330 is in production and will be demonstrated this week at the 2011 Mobile World Congress in Barcelona, Spain.

Highlights/Key Facts:

- The Broadcom BCM4330 is a third generation combo chip device that provides the highest level of integration for a mobile or handheld wireless system, and includes IEEE 802.11 a/b/g and single-stream 802.11n (media access controller (MAC)/baseband/radio), Bluetooth 4.0 + HS and FM radio receive and transmit functionality. It also features an integrated Power Management Unit (PMU), Power Amplifiers (PAs), and a Low Noise Amplifier (LNA) to address the needs of mobile devices that require minimal power consumption and compact size.
  - The BCM4330 provides a small form-factor solution with minimal external components to keep the cost down for mass volumes and allow for flexibility in size, form-factor and functionality
  - The BCM4330's extreme integration reduces power consumption and makes the overall solution size over 40 percent smaller than its predecessor
- Dual-band capabilities allow Wi-Fi users to leverage the less crowded 5 GHz spectrum for media applications that require faster guaranteed bandwidth. To eliminate the cost and size barriers of adding dual-band functionality to mobile devices, the BCM4330 integrates 2.4 GHz and 5 GHz power amplifiers, which can reduce bill-of-material (BOM) costs by up to 75 cents while providing the same or better performance than solutions using external power amplifiers.
- Bluetooth 4.0, which contains BLE wireless technology, consumes only a fraction of the power when compared to classic Bluetooth radios. BLE enables many wireless sensor devices powered by small, coin-cell batteries to operate for many years without having to replace the battery. With the integration of BLE onto Broadcom combo chips, smartphones and tablets powered by the BCM4330 will be able to more effectively collect data from a variety of sensors such as those found in pedometers and glucose monitors that require very low power consumption.
  - Broadcom continues to support its widely deployed Bluetooth stack and software for Android offering a carrier hardened stack, rich with many Bluetooth profiles, which now includes BLE support for next generation sensor applications
- Broadcom's support for Wi-Fi Direct enables devices to communicate directly with one another without having to interact with an access point. This not only makes communication between devices simpler and faster, but means devices can connect anywhere and anytime. With the BCM4330 combo chip, portable devices are no longer limited to communications within one single network and can move easily between networks, establishing one-to-one connections on an as needed basis.
- Bluetooth High Speed enables Bluetooth applications to be used over the Wi-Fi connection and at Wi-Fi speeds. The user can connect ad hoc devices using normal Bluetooth pairing and then the BCM4330 combo chip can decide to run...
over Bluetooth or Wi-Fi depending on bandwidth availability.

- Broadcom offers support for Android and Windows Phone in its combo chip products. Broadcom’s OneDriver™ software stack is among the most mature in the industry and includes source code that is part of the generic Android and Windows Phone distribution. OneDriver software, which is bundled with BCM4330 and other Wi-Fi and Bluetooth combo products, reliably brings key emerging features to Android and Windows based phones. These advanced features include:
  - Software and hardware support for WAPI -- the Chinese security protocol that enables OEMs to address the growing market for Internet connected handsets in China
  - In addition, both Android and Windows Phone distributions feature support for 'Soft Access Point' - which allows the Wi-Fi component in a client device (such as a notebook computer or smartphone) to function as an access point enabling the sharing of wireless broadband with other devices

- The BCM4330 implements the industry’s most advanced and proven radio coexistence algorithms and hardware mechanisms to allow an extremely collaborative WLAN and Bluetooth coexistence scheme internally, along with external coexistence scheme support for additional wireless technologies such as LTE and WiMax. As a result, enhanced overall quality for simultaneous voice, video and data transmission is achieved on a handheld system.

- Additional features of the BCM4330 combo chip solution includes:
  - An integrated ARM® Cortex™-M3 processor and on-chip memory for complete WLAN subsystem functionality that minimizes the need to wake-up the application processor for standard WLAN functions. This allows for further minimization of power consumption, while maintaining the ability to perform field upgrades with future features
  - Broadcom’s SmartAudio® technology offers Wide Band Speech (WBS), Packet Loss Concealment (PLC) and Bit Error Correction (BEC) to dramatically improve Bluetooth voice and audio quality

- The BCM4330 is in production with volume shipments to phone manufacturers this quarter.

- Tier one handset manufactures are announcing products this week at the 2011 Mobile World Congress that include the BCM4330 with product shipments expected to occur in the upcoming months.

Supporting Quotes:

Philip Solis, Research Director for ABI Research:

“Combination chips have gained tremendous traction as more manufacturers add multiple wireless features to mobile phones and other handheld devices, including tablets, and will account for nearly 350 million of all wireless connectivity solutions shipped in 2015. Broadcom already controls a significant share of the wireless connectivity market within the rapidly expanding Android smartphone market. We estimate Broadcom’s integrated single chip combo devices were used in greater than 70 percent of Wi-Fi/Bluetooth enabled Android handset shipments in Q3'10.”

Chris Bergey, Vice President of Broadcom’s Mobility WLAN line of business:

“Handset manufacturers are excited about the opportunities that Wi-Fi Direct and Bluetooth 4.0 bring to applications developed for the burgeoning smartphone and tablet markets. The BCM4330 is yet another example of how Broadcom is not only driving, but leading the industry in combo chips by enabling next generation products specifically for mobile devices by providing significant cost, size, power and performance advantages over discrete semiconductor implementations, making it ideal for handheld electronics.”

Robert Rango, Executive Vice President & General Manager, Broadcom’s Mobile and Wireless Connectivity Group:

“Broadcom continues to support every major operating system (OS) platform. For Android based products we are expecting the Android ecosystem to find many new and exciting usages for BLE. Developers have shown an amazing creativity and we expect the deployment of BLE capable handsets in an open OS environment to delight consumers as they’re deployed. We are continuing our long-term commitment to Windows Mobile Phone 7 and to work closely with Microsoft on further enhancements for the Windows Mobile platform. Broadcom's wireless combo solutions are used in most of the Windows Phone 7 products shipped to date. The addition of Nokia to the Windows Phone ecosystem is very exciting for us, as it could drastically increase the addressable market for this platform.”

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About Broadcom

Broadcom Corporation is a major technology innovator and global leader in semiconductors for wired and wireless communications. Broadcom products enable the delivery of voice, video, data and multimedia to and throughout the home, the office and the mobile environment. We provide the industry's broadest portfolio of state-of-the-art system-on-a-chip and software solutions to manufacturers of computing and networking equipment, digital entertainment and broadband access products, and mobile devices. These solutions support our core mission: Connecting everything®.

Broadcom, one of the world's largest fabless communications semiconductor companies, with 2010 revenue of $6.82 billion, holds more than 4,800 U.S. and 2,000 foreign patents, and has more than 7,800 additional pending patent applications, and one of the broadest intellectual property portfolios addressing both wired and wireless transmission of voice, video, data and multimedia.

A FORTUNE 500® company. Broadcom is headquartered in Irvine, Calif., and has offices and research facilities in North America, Asia and Europe. Broadcom may be contacted at +1.949.926.5000 or at www.broadcom.com.

Cautions regarding Forward-Looking Statements:

All statements included or incorporated by reference in this release, other than statements or characterizations of historical fact, are forward-looking statements. These forward-looking statements are based on our current expectations, estimates and projections about our industry and business, management's beliefs, and certain assumptions made by us, all of which are subject to change. Forward-looking statements can often be identified by words such as "anticipates," "expects," "intends," "plans," "predicts," "believes," "seeks," "estimates," "may," "will," "should," "would," "could," "potential," "continue," "ongoing," similar expressions, and variations or negatives of these words. Examples of such forward-looking statements include, but are not limited to, the demand for wireless combo chip solutions in smartphones and tablets, adoption of mobile operating system platforms and our position in that space. These forward-looking statements are not guarantees of future results and are subject to risks, uncertainties and assumptions that could cause our actual results to differ materially and adversely from those expressed in any forward-looking statement.

Important factors that may cause such a difference for Broadcom in connection with its next generation BCM4330 combo chip solution include, but are not limited to:

- The rate at which our present and future customers and end-users adopt Broadcom’s technologies and products in smartphone and tablet markets;
- Delays in the adoption and acceptance of industry standards in those markets;
- The gain or loss of a key customer, design win or order;
- Our ability to specify, develop or acquire, complete, introduce, market and transition to volume production new products and technologies in a cost-effective and timely manner;
- Our ability to timely and accurately predict market requirements and evolving industry standards and to identify opportunities in new markets; and
- The timing of customer-industry qualification and certification of our products and the risks of non-qualification or non-certification.

Additional factors that may cause Broadcom's actual results to differ materially from those expressed in forward-looking statements include, but are not limited to the list that can be found at http://www.broadcom.com/press/additional_risk_factors/Q12011.php.

Our Annual Report on Form 10-K, subsequent Quarterly Reports on Form 10-Q, recent Current Reports on Form 8-K, and other Securities and Exchange Commission filings discuss the foregoing risks as well as other important risk factors that could contribute to such differences or otherwise affect our business, results of operations and financial condition. The forward-looking statements in this release speak only as of this date. We undertake no obligation to revise or update publicly any forward-looking statement, except as required by law.

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