

Marvell Introduces World's First 802.11ac Mobile MIMO Combo Wireless Solution Including NFC

Avastar 88W8897 leverages 802.11ac, NFC and Bluetooth to deliver the industry's most robust, low power Wi-Fi connectivity solution to consumers

SANTA CLARA, Calif. and TAIPEI, Taiwan, June 4, 2012 /PRNewswire/ -- [Marvell](#) (Nasdaq: MRVL) today announced the Avastar® 88W8897, a low-power 802.11ac combination radio chip designed to vastly improve the mobile computing and high-definition multimedia experience for consumers. The Avastar 88W8897 is the industry's first 802.11ac 2x2 combination radio chip, pairing today's most cutting edge wireless technologies – near field communications (NFC) and Bluetooth 4.0 – with mobile multiple input multiple output (MIMO), transmit beamforming and support for WI-FI CERTIFIED Miracast™ once it becomes available. Marvell's latest addition to its Avastar family of solutions includes advanced power management features and is designed specifically for ultrabooks, tablets, gaming consoles and smart TVs.

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(Logo: https://investor.marvell.com/image/Marvell_logo.jpg)

"Wireless connectivity is a critical pillar in supporting the always-on lifestyle. I am very proud to see the great innovations of our engineers continue to raise the bar by significantly improving network throughput, energy efficiency, and ease-of-use all simultaneously in a highly integrated single chip solution," said Weili Dai, Co-founder of Marvell. "Optimized for the next generation of smart devices in the home and office, the Avastar 88W8897 not only enhances the performance of current consumer electronic devices, but also enables a plethora of new applications and innovative products in mobile commerce, digital entertainment, healthcare and electronic security. I believe the world's first 802.11ac mobile MIMO combo solution with NFC from Marvell will fundamentally change the wireless landscape and truly enable the entire spectrum of always-on consumer products."

Building on the success of the Avastar 88W8797 – Marvell's first mobile MIMO solution – the company's latest chip is a unique wireless combination, unlike any other available on the market, that further enhances wireless performance while simplifying the user experience. The 88W8897 is the only chip that increases throughput with 802.11ac technology while simultaneously leveraging NFC to enable simple tap-and-go wireless capabilities. Additionally, the 88W8897 system-on-a-chip (SoC) offers the highest level of integration available, which enables a rest of bill of materials (RBOM) footprint reduction of 40-to-50 percent and cost reduction of 75 percent compared to previous wireless solutions.

Consumers expect an Always On, Always Connected (AOAC) wireless experience wherever they go. When paired with ultrabooks, the 88W8897 is designed to enable this constant connectivity, keeping e-mail, social media and digital content up-to-date even when a device is in standby mode – a capability lacking in legacy notebooks. By coupling Marvell's full Wi-Fi offload solution with Windows 8 features such as Wake On Wireless functionality and connected standby, 88W8897 is expected to meet the demands of today's consumer and deliver the AOAC computing experience.

Key features of Marvell's Avastar 88W8897 chip include:

- **802.11ac** – This standard significantly increases bandwidth available over the Wi-Fi link, extending wireless capabilities to a variety of new use cases such as reliable high-definition (HD) video streaming, tunneled direct link setup (TDLS) and high-speed wireless backup and sync for mobile devices. Leveraging 802.11ac, Marvell's 88W8897 chip delivers up to 867 Mbps of throughput and is ideal for home digital applications, enabling a robust multi-stream HD video experience. Additionally, 802.11ac allows for high speed data sync, which results in lower power consumption and longer battery life.
- **NFC** – As a pivotal component of Marvell's 88W8897 combination radio chip, NFC simplifies the pairing of two wireless-enabled devices and the technology can replace credit cards when deployed in portable devices. Used as an out-of-band authentication channel for other radios, NFC enables a one-tap pairing experience for Wi-Fi and Bluetooth. Additionally, NFC allows consumers to pay for items with the tap of a phone via mobile commerce and point-of-sale (e-wallet) applications.
- **WI-FI CERTIFIED Miracast** – Designed to support WI-FI CERTIFIED Miracast, expected to be certified later this year, and 802.11ac, along with Marvell's dynamic rapid channel switching (DRCS) technology, the 88W8897 allows consumers to stream video from their ultrabook or tablet to a larger display in 5GHz while simultaneously surfing the Internet without losing the connection in 2.4GHz.
- **Integrated Location Engine** – A Wi-Fi location engine enables accurate indoor positioning by implementing the 802.11v time of flight protocol in hardware. Used in conjunction with other navigation

aids such as GPS and sensor data, products integrating the 88W8897 will feature a rich set of location based services for app developers and retailers.

Industry Quotes

"Consumer demand for functionalities such as mobile commerce and digital wallets necessitate technologies that not only extend wireless range and performance, but also support these new use cases," said Mark Hung, research director of Gartner. "Near field communications (NFC) and 802.11ac enable next-generation wireless capabilities while simultaneously offering increased speed, coverage and battery life. We project that shipments of NFC chipsets will exceed 100 million units in 2012 and forecast that 802.11ac will be one of the most influential new technologies in the mobile market in the coming years[1]."

-- **Mark Hung, research director of Gartner**

"The rampant growth of Wi-Fi enabled devices requires faster, more reliable wireless technologies that enable OEMs to build devices that can connect quickly and seamlessly," said Filomena Berardi, senior analyst at IMS Research (now acquired by IHS Inc. (NYSE: IHS)). "With end-users demanding higher throughput and wider bandwidth for specific applications, 802.11ac will have a substantial impact on the portable computing device market. According to our research, more than 400 million 802.11ac devices will ship in 2016, making it essential for wireless solution providers to realize the benefits of this technology and implement it across their various mobile platforms."

-- **Filomena Berardi, senior analyst of IMS Research (now acquired by IHS Inc. (NYSE: IHS))**

"Superior wireless connectivity is essential for the convergence of mobile devices, digital entertainment and the cloud," said Tim Barajin president of Creative Strategies. "In order to meet the demands of today's constantly connected consumer, OEMs must implement interoperable wireless technologies such as 802.11ac, NFC and WI-FI CERTIFIED Miracast to deliver seamless connectivity between electronic devices that enhances consumers' experience and increases adoption of next-generation electronics."

-- **Tim Barajin, president of Creative Strategies**

Availability

Marvell will be demonstrating its entire portfolio of wireless devices at COMPUTEX 2012 in its suite, No. T101C. COMPUTEX will be held at the Taiwan International Convention Center (TICC) in Taipei, Taiwan.

About Marvell

Marvell (NASDAQ: MRVL) is a world leader in the development of storage, communications and consumer silicon solutions. Marvell's diverse product portfolio includes switching, transceiver, communications controller, wireless and storage solutions that power the entire communications infrastructure, including enterprise, metro, home and storage networking. As used in this release, the term "Marvell" refers to Marvell Technology Group Ltd. and its subsidiaries. For more information, visit Marvell.com

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[1] Market Trends: NFC Is More Than Just Payments; Semiconductor Outlook, Mark Hung, June 29, 2011

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