

## Marvell Introduces Industry's First 802.11ac 4x4 Wireless Solution Serving End-To-End Enterprise To Consumer Applications

**Marvell's new 802.11ac 4x4 solution raises the bar for wireless performance and range, vastly improving the throughput performance of enterprise and retail APs, service provider gateways, hotspots, video bridges and set-top boxes to further drive the connected lifestyle**

SANTA CLARA, Calif., Dec. 3, 2012 /PRNewswire/ -- [Marvell](#) (Nasdaq: MRVL) today announced the Marvell® Avastar® 88W8864, a wireless local area network (WLAN) system-on-chip (SoC) and the industry's first 802.11ac 4x4 solution built to improve the throughput of enterprise and retail access points (APs) and the robustness of wireless video distribution. The widespread adoption of Wi-Fi enabled devices requires faster, more efficient and reliable wireless that enables quick and seamless connectivity. Compared to its predecessor 802.11n, 802.11ac offers up to a three times increase in Wi-Fi throughput and more than two times the power efficiency when processing high-speed loads. Earlier this year, Marvell announced the industry's first 802.11ac 2x2 combination radio chip, the Avastar 88W8897, which pairs today's leading 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™. The latest addition to Marvell's portfolio of Avastar 802.11ac products, the 88W8864 establishes new industry benchmarks for the wireless performance and range of enterprise and retail APs, service provider gateways, hotspots, video bridges and set-top boxes across the globe and is currently sampling.

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"I believe that with Marvell's new breakthrough 802.11ac 4x4 Wi-Fi solution, we are positioned to change the landscape for enterprise-class network infrastructure and carrier grade video applications, further empowering the entire spectrum of always-on devices. The new era of the digital lifestyle requires superior wireless connectivity which serves as a critical pillar for delivering live content across all screen sizes and 'Smart Furnishings' for connected consumers," said Weili Dai, Co-Founder of Marvell. "I am very proud to see our dedicated team of engineers continue to build ground-breaking wireless technologies that support the latest industry standards, significantly improving network capacity, performance and reliability for Wi-Fi devices accessing the cloud infrastructure. Working with the industry's largest and most innovative global carriers and OEMs over the last decade, Marvell has established a successful track record of delivering world class wireless solutions for enterprise, consumer and mobile applications."

The 4x4 WLAN SoC configuration is the baseline architecture for best-of-breed enterprise, retail and service provider network infrastructures. Since the introduction of the Marvell Avastar 88W8764 802.11n 4x4 SoC in 2010, Marvell has become a leading provider of the 4x4 architecture, delivering the highest peak throughput wireless coverage in the industry and the most robust, reliable link quality available. By combining the advanced 4x4 MIMO solution with Marvell's market-proven beamforming technology and now 802.11ac support, the 88W8864 is poised to further enhance the company's stronghold in indoor and outdoor APs and also expand its presence in the service provider video market.

The 88W8864 is unique in that it is designed to ensure seamless wireless throughput of high bandwidth data applications and enable reliable, carrier-grade HD multi-stream video distribution over Wi-Fi networks, delivering high-quality, low latency, artifact-free video content across service provider gateways and set-top boxes. The 88W8864 will be integrated into a broad range of Marvell's media platforms that serve these markets, including Marvell's video and network SoC platforms, bringing industry-leading 802.11ac connectivity to enhance consumers' immersive digital entertainment experiences.

"Marvell's innovation in the wireless space continues to improve the performance and connectivity of both enterprise and consumer applications, such as access points, set-top boxes and carrier-grade high-definition video," said Will Strauss, president and principal analyst, Forward Concepts. "With the release of the Marvell 802.11ac 4x4 chip, the company is bringing to market a solution that offers a significant increase in Wi-Fi bandwidth capacity and reliability. As the first wireless provider to introduce a 4x4 802.11ac chip, Marvell is building on its tradition of delivering solutions that alleviate design challenges and enhance the end-user experience."

Key features of Marvell's Avastar 88W8864 SoC include:

- **802.11ac:** This standard significantly increases bandwidth available over the Wi-Fi link and network capacity for densely populated environments, extending wireless capabilities to a variety of new use cases such as real-time video streaming and wireless back-up. With built-in 802.11ac support, Marvell's 88W8864

chip delivers up to 1.3 Gbps of throughput and is ideal for enterprise APs and the transfer of carrier-grade wireless.

- **Beamforming:** Beamforming, a specialized method of radio-frequency transmission that can be integrated across a range of devices from APs to laptops and smartphones, greatly improves link robustness and wireless performance enabling, for instance, the seamless streaming of HD video in locations where devices could previously maintain only minimal connection to the network. Marvell is unique to offer support for both implicit and explicit beamforming, which improves the performance of existing devices in the network, even if they themselves do not implement beamforming. Marvell's beamforming technology, which is leveraged by its entire family of Avastar solutions, outperforms other digital signal processing techniques for range extension by at least six times. In addition, beamforming increases the battery life of any device connected to the 88W8864.

#### **Additional Product Highlights:**

- Complete 4x4 MIMO dual-band 802.11ac solution
- 1.3Gbps WLAN PHY rate
- Channel bandwidth up to 80MHz
- 256 QAM modulation scheme
- Market proven implicit and explicit Transmit Beamforming technology
- Low Density Parity Check (LDPC)
- Powerful Wi-Fi offload engine
- Marvell Spectrum Management
- Multi-stream, low PER and latency HD video
- Integrated Wi-Fi position engine
- Marvell Platform Advantage

#### **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](http://Marvell.com)

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