Marvell 88W8887

Wi-Fi/Bluetooth Combo Single-Chip SoC

OVERVIEW

The Marvell® 88W8887 is a highly integrated connectivity solution enabling 1x1 Very High Throughput (VHT) WLAN, and Bluetooth in a single-chip. The 88W8887 has been specifically designed to meet the speed, reliability, and quality needs of next-generation applications requiring high performance, while minimizing space and power requirements. With integrated front-ends, 88W8887 significantly reduces RBOM and simplifies layout design for fast time-to-market.

Marvell 88W8887 builds on the success of our industry-leading multi-radio solutions. These solutions provide seamless wireless connectivity to enable the digital connected lifestyle experience, while minimizing power consumption at the system level. The Very High Throughput (VHT) WLAN, and Bluetooth 5.0 enable a rich multimedia experience.

With AECQ100 qualification, 88W8887 extends the digital connected lifestyle to the automobile. The device builds on top of the feature-rich and robust software architecture of earlier generations of automotive-grade Marvell products and provides a seamless upgrade path to cutting-edge technologies, such as VHT for multiple high-definition video streaming for rear-seat entertainment and Bluetooth LE for remote key entry.

In addition, internal coexistence arbitration and a Mobile Wireless Systems (MWS) serial transport interface provide the functionality for connecting an external Long Term Evolution (LTE) device.

The 88W8887 System-On-Chip (SoC) provides both simultaneous and independent operation of the following:

- IEEE 802.11ac compliant, 1x1 spatial stream with data rates up to MCS9 (433 Mbps)
- Bluetooth 5.0 Dual-mode + High Speed

For security, the 802.11i security standard is supported through several protocols. And for video, voice and multimedia applications, the 802.11n block acknowledgment extension is supported. The device also supports 802.11h Dynamic Frequency Selection (DFS) for detecting radar pulses when operating in the 5 GHz range, thus extending the frequency spectrum available for use.

Generic interfaces include SDIO 3.0, high-speed UART and PCM interfaces for connecting WLAN/Bluetooth to the host processor. The device is available in QFN and CSP Flip Chip Package options.

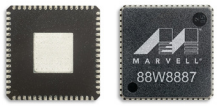
APPLICATIONS

The integrated BOM and simplified design provides manufacturers added flexibility for a complete and seamless wireless experience and short time-to-market. Therefore, a number of electronic devices will significantly benefit from the 88W8887 chip, especially portable consumer devices, video box and automobile head-units. Supporting a data rate of 433 Mbps, the device allows consumers to transmit multiple HD videos in tandem with simultaneous Bluetooth operation.

By leveraging WI-FI CERTIFIED Miracast™ and DRCS, consumers can stream video from their mobile devices while simultaneously surfing the internet, without losing the connection. In addition, the 88W8887 enables constant connectivity, keeping e-mail, social media and digital content up-to-date, even when a device is in standby mode.

Sample applications include:

- Home audio/video systems including set-top boxes, media servers
- Mobile routers
- Automobile head-units and telematics
- Printers and cameras



Marvell 88W8887 SoC (not actual size)

ABOUT MARVELL: Marvell (NASDAQ: MRVL) first revolutionized the digital storage industry by moving information at speeds never thought possible. Today, that same breakthrough innovation remains at the heart of the company's storage, processing, networking, security and connectivity solutions. With leading intellectual property and deep system-level knowledge, Marvell's semiconductor solutions continue to transform the enterprise, cloud, automotive, industrial and consumer markets.

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