USB Medium Access Controller

Intersil announced its Medium Access Controller (MAC) that reduces Bill-of-Materials (BOM) costs and features a USB interface for embedded WLAN applications as well as stand-alone external WLAN modules. BOM savings are achieved by replacing expensive, large footprint flash memory with a smaller Electrically Erasable Programmable Read-only Memory (E PROM). The E PROM's smaller size saves board space and cost.

The HFA3842 MAC comes with PCMCIA or USB firmware that configures the bus for PCMCIA or USB operation with the PRISM II WLAN chipset. The new MAC supports the IEEE 802.11b standard's data rate of 11 megabits-per-second (Mbps). The PCMCIA/ USB MAC will allow Original Equipment Manufacturers (OEM) to easily add a USB interface into next-generation IEEE 802.11b wireless networking products for home and office.

The HFA3842 is a drop-in, pin-for-pin replacement of the HFA3841, the existing 11 Mbps MAC for the PRISM II chipset, and only requires an included firmware upgrade for it to work with the other PRISM II chips. Intersil's new MAC is designed to provide maximum performance with minimum power consumption for high speed, direct sequence spread spectrum (DSSS) wireless networking systems. Low power consumption is critical, since products will likely be powered via the USB connection and this significantly limits the amount of current the chipset can consume.

The HFA3842 provides full implementation of the MAC protocol specified in the IEEE 802.11b high rate DS standard. When utilized with the PRISM II chipset, the device can deliver wireless data, voice and video at transmission speeds of 11 Mbps. It achieves fallback rates of 5.5, 2 and 1 Mbps making it interoperable with legacy 802.11 DSSS systems.

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