



Bandspeed Announces AirMaestro™ Spectrum Analysis Solution for Wi-Fi® Networks

Embedded signal analyzer enables OEM products to detect, classify and avoid radio-frequency (RF) interference to support voice, video and data applications

AUSTIN, TEXAS – November 18, 2009 – Bandspeed today announced the introduction of its AirMaestro Spectrum Analysis solution, which includes the world's first low-cost, highly-integrated radio-frequency (RF) signal analyzer IC, associated firmware and user-application monitoring software. Sold directly to OEMs and ODMs for integration in their system-level products, this solution enables systems to automatically and intelligently adjust network configurations to avoid interference from both Wi-Fi and non-Wi-Fi devices and improve network performance. This solution is ideal for integrating into WLAN access points, WLAN sensors, fixed/portable RF sensors, broadband gateways, laptop computers and test-and-measurement equipment. The complete AirMaestro Spectrum Analysis solution provides comprehensive and centralized monitoring of the RF environment for real-time management and investigation into historical interference events.

Wireless communications have historically been vulnerable to radio-frequency (RF) interference from a variety of sources. 802.11 WLANs, for example, operate in the unlicensed 2.4 and 5 GHz frequency bands, which are also occupied by a range of other devices including cordless phones, microwave ovens, and wireless video cameras. The RF interference from these devices can degrade or, at times, completely disable WLAN communications for networks operating at nearby frequencies.

The AirMaestro Embedded Signal Analyzer is a hardware-accelerated interference classification solution capable of being cost-effectively integrated into networking equipment. Embedding real-time spectrum analysis into the WLAN:

- Improves quality-of-service and WLAN performance,
- Enhances WLAN security,
- Enables remote diagnostics and troubleshooting.

The AirMaestro Embedded Signal Analyzer scans all IEEE 802.11 channels in the 2.4 GHz and 5 GHz Wi-Fi frequency bands, as well as 4.9 GHz Public Safety channels. The embedded interference classification engine detects and classifies a range of interferers, and creates a log of the interferers detected over time. Interfering devices currently classified include:

- Microwave ovens (conventional)
- Microwave ovens (inverter)
- Wireless video cameras (digital and analog)
- Analog cordless phones (2.4GHz and 5GHz)
- FHSS cordless phones (2.4GHz and 5GHz)
- DSSS cordless phones (2.4GHz and 5GHz)
- Bluetooth devices
- Wireless baby monitors
- Game controllers
- RF jammers

New interferers are added regularly through firmware upgrades. The AirMaestro Embedded Signal Analyzer also provides estimates of channel utilization based on both Wi-Fi and non-Wi-Fi devices.

Bandspeed utilizes the information captured from the RF environment to qualify all Wi-Fi channels and dynamically adjust a WLAN access point's channel setting to avoid interference. This Automated and Intelligent Channel Selection (AICS) algorithm is policy-based and configurable.

"Selecting the WLAN channel based on classification of the RF interference in the environment is far superior to alternative approaches that simply detect unclassified energy on the current channel and blindly change to another channel," said Bill Eversole, president and CEO of Bandspeed. "With a simple energy-detect approach, the WLAN access points can change to channels that have worse performance over time. By classifying interference on all WLAN channels and basing the channel selection on both current and historical interference levels and WLAN traffic, the system can automatically and intelligently select the best WLAN channel. This prevents unnecessary channel hopping by the WLAN, adding more stability and performance to the network."

Bandspeed AirMaestro Signal Analyzer software was designed to easily integrate into existing OEM/ODM software stacks. Local and remote user applications interface to the Embedded Signal Analyzer through Application Programming Interfaces (APIs).

Bandspeed AirMaestro user application software allows the user to visualize the RF environment in a range of different ways: from a dynamic channel management display to advanced spectral analysis displays including scanning spectrograms, channel utilization over time plots and persistence displays. Multiple AirMaestro Signal Analyzer-enabled products can be centrally monitored simultaneously, providing comprehensive monitoring of the WLAN for real-time and historical RF diagnostics and management.

Pricing and Availability

The AirMaestro Embedded Signal Analyzer integrated circuit and associated firmware/software is available today, with pricing starting at \$15 in quantities of 25,000. Reference designs and software development kits are also available to OEM/ODM customers. A miniPCI card based on the reference design for the AirMaestro Embedded Signal Analyzer will be available in late 4Q09, with pricing starting at \$40 in quantities of 25,000.

About Bandspeed

Bandspeed is the leader in embedded radio-frequency (RF) interference detection, classification, avoidance and management solutions, providing integrated circuits, firmware and software to OEMs to integrate spectrum analysis into their solutions. Bandspeed is privately held and headquartered in Austin, Texas. For more information on Bandspeed, please contact the company at (512) 358-9000, or visit Bandspeed's website at www.bandspeed.com.

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