

Editorial Contact:
Christopher Van Veen
Marketing Communications Manager
Paratek Microwave, Inc.
cvanveen@paratek.com
(603) 598-8880 x259

For Immediate Release

Adaptive Impedance Matching Module for Military and Public Safety Antenna and Power Amplifier Applications

NEXT-GENERATION PARATUNE™ PASSIVE TUNABLE ICs YIELD NEW APPLICATIONS

Columbia, MD – April 23, 2008 – Paratek Microwave, Inc., a technology leader in radio frequency (RF) components for wireless applications, is now shipping high-performance [Adaptive Impedance Matching Module](#) (AIMM™) evaluation kits that have been optimized for Military and Public Safety radio applications. Based on Paratek's ParaScan™ [tunable RF technology](#), AIMM is currently finding widespread application in commercial cellular handsets. The 7mm x 21mm AIMM unit dynamically adjusts its internal impedance matching circuit to minimize reflected power, thereby achieving a near-optimal match. The most common application for AIMM is correcting antenna and amplifier mismatch conditions that often occur with handheld radios and body-worn antennas. AIMM can handle in excess of 2 watts with extremely low intermodulation distortion thanks to Paratek's ParaTune™ family of [Passive Tunable ICs](#) (PTICs). This technology makes AIMM feasible by overcoming the power limitations of other tunable technologies such as varactor diodes and MEMS.

AIMM systems for handheld radios have yielded improvements in total radiated power in excess of 5 dB by correcting the antenna mismatch that occurs when a radio is in close proximity to the user's head or torso. AIMM can also be applied

in sensor networks where the sensor's antenna can be detuned by proximity effects of the ground, foliage, or debris.

While the primary application of AIMM is for antenna or power amplifier tuning, the product can be used for any application that requires forward power to be maximized and reverse power to be minimized.

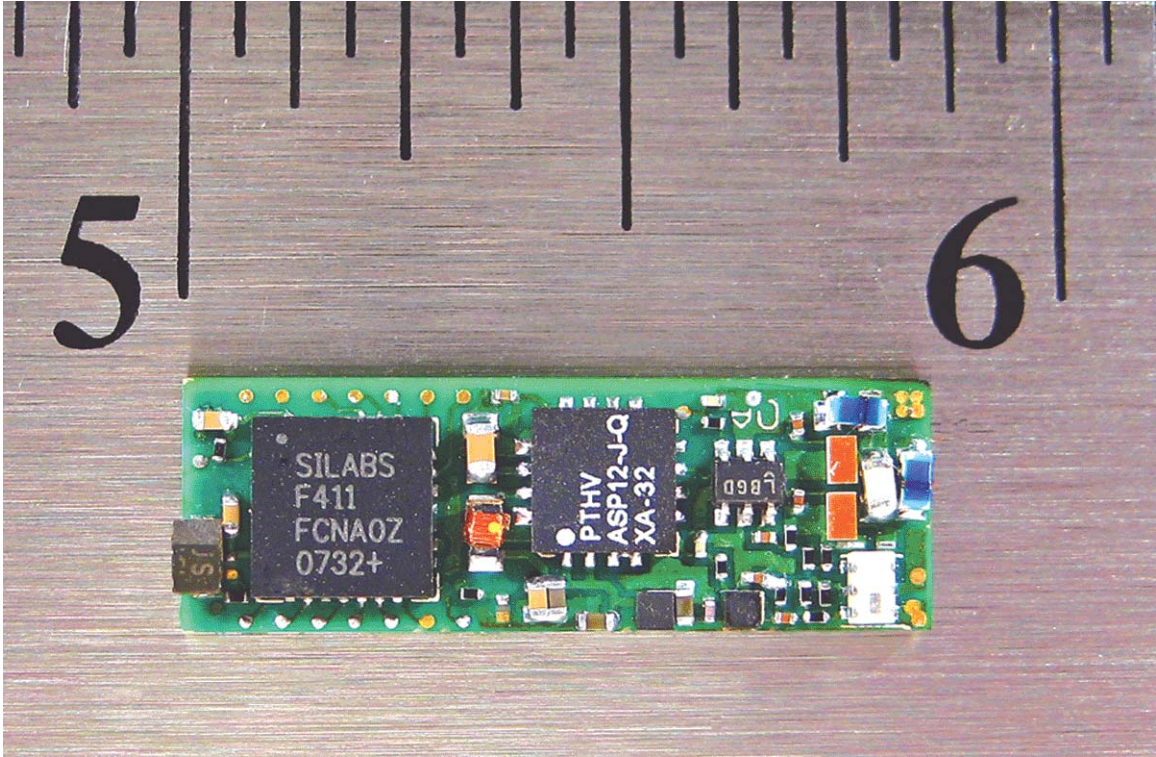
AIMM is a self-contained multi-chip-module (MCM) comprising a tunable impedance network incorporating Paratek's PTICs, an on-board microprocessor with custom control algorithms, forward and reverse power detectors, and a bias voltage generator. AIMM's adaptation and sleep modes are controlled via an SPI interface. The evaluation kit consists of an AIMM mounted on a test fixture with SMA RF connectors as well as an external mechanical switch box that allows standalone operation of the module. While the modules have been optimized for constant amplitude modulation such as FM or BPSK, specialized software loads are available for other modulation types.

Paratek is now shipping AIMM kits operating over 280 - 300 MHz, 824 - 960 MHz, and 1710 - 1980 MHz. Standard kits are priced at \$3,000 and ship approximately four weeks after receipt of order. Other bands within the frequency range of 200 MHz to 2.2 GHz are available for a nominal NRE charge.

To purchase evaluation kits, contact Paratek Government sales at 301-575-0900 x215 or visit our web site, www.paratek.com, for additional information.

About Paratek

Paratek Microwave, Inc. designs and manufactures adaptive RF front-end component solutions for mobile wireless applications requiring multi-mode and multi-band operation. The Company is privately held and headquartered in Columbia, MD, with additional offices in Nashua, NH and Crystal Lake, IL.



AIMM 21mm x 7mm sample kit for military and public radio applications