

## Jackson Labs Announces the “FireFox” GPS Disciplined Broadband Synthesizer Product Line

*New low-cost FireFox Broadband Signal Generators use GPS reference for better than  $10^{-12}$  long-term Accuracy, and combine 0.00001Hz resolution with 1.64GHz bandwidth for Test & Measurement, Calibration, Defense, and Wireless applications*

**Campbell, CA. October 17, 2005,** – Jackson Labs today announced the revolutionary FireFox Synthesizer product line including the FireFox Desktop Synthesizer and the FireFox OEM module. The FireFox Synthesizers combine a GPS disciplined high-stability, low phase-noise OCXO time-base with a state-of-the-art DDS-based Broadband Frequency Synthesizer in one low-cost, low-power, high performance product.

The FireFox Synthesizer presents unprecedented frequency accuracy and resolution by combining industry-proven GPS timing performance (USNO lab test report available) with the very latest in DDS synthesizer technology in one cost-effective module. An ultra-stable GPS disciplined Frequency Reference is combined with a DC-to-1.64GHz Bandwidth Broadband Synthesizer on one board. The FireFox Synthesizers thus for the first time combine two product types into one small Desktop unit while significantly improving performance compared to competitive products. Previously, users had to purchase expensive, bulky, and power hungry Synthesizers, Function Generators, Mixers, and GPS Disciplined Frequency References and connect these units together to achieve comparable levels of functionality.

The FireFox units may be used to provide accurate frequency and timing for almost any application with their four different output technologies, which are all driven in parallel. The following outputs are standard:

- 50Ohm +10dBm RF-Out with up to 50dB adjustment for wireless applications
- Differential standard LVDS 50Ohm output for high-speed FPGA/ASIC communication and Telecom type applications
- DC-to-398MHz CMOS 3.3Vpp/5Vpp output for general purpose laboratory applications
- 10MHz and 1PPS Reference output for in-house Frequency Standard
- 2GHz General Purpose Broadband Mixer with >350MHz IF Bandwidth
- RS-232 for optional PC-based GPS Receiver Software, and Firmware uploads

The FireFox OEM Module typically consumes less than 8W of a single +12.0V power supply during full operation and thus allows operation in mobile, battery driven environments. This represents over a magnitude reduction in power consumption when compared to typical competitive products.

Any frequency from 0.00001Hz to 1640MHz can be set quickly with 10µHz resolution (15-Digits Resolution) over the entire 1.64GHz bandwidth using the built-in LCD and keypad, or via RS232 control. Settings and calibrations are automatically stored in non-volatile memory, with additional general-purpose 10 user memory presets. RF, LVDS, and CMOS outputs are standard. The RF output provides 60dB adjustable range and more than +10dBm typical output power (2MHz to 1640MHz). Outputs can be continuous wave (CW) or swept.

Further details are available at: [www.jackson-labs.com](http://www.jackson-labs.com)

The FireFox Desktop unit integrates the FireFox OEM module, a power supply, a keyboard, and an LCD into a sleek metal enclosure for Desktop use. All FireFox OEM module features and connectors are available in the FireFox Desktop unit. Extensive connectors on all FireFox products include a 2GHz general purpose, non-dedicated mixer that may have its LO input driven by the FireFox RF output or any other source, and that has a filtered >350MHz IF bandwidth for general purpose Wireless up/down-conversion applications.

The FireFox Synthesizers use the most recent advances in semiconductor technology and integration, and substantial firmware to reduce the BOM cost without compromising quality or performance in any way. Pricing is US\$ 2,495.00 for the FireFox Desktop Synthesizer, and US\$1,995.00 for the FireFox OEM module in single-unit quantities. Pricing includes all necessary accessories to fully and immediately operate the units.

The FireFox Synthesizers with their built-in GPS Frequency Reference represent up to 50% cost savings when compared to competitive products that up until now required a separate Synthesizer and GPS Frequency Reference to be purchased. They are the first Broadband Synthesizers on the market with an integrated GPS Disciplined Frequency Reference.

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### **About Jackson Labs**

Jackson Labs, located in Campbell, CA. is a privately held company that designs and manufactures precision Test & Measurement instruments based on the latest RF, Microprocessor, and software technologies. Jackson Labs strives to provide extraordinary electronic instruments that consistently outperform competitive products at price points that allow users with tight budgets to purchase our equipment.