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**FOR IMMEDIATE RELEASE**

## **Jackson Labs Technologies, Inc. delivers Low Phase-Noise, Vibration-Insensitive, Cesium-Vapor Frequency and Timing Reference**

*“DROR-II” is a Vibration-Insensitive Chip-Scale Cesium-Vapor (CSAC) Oscillator designed to operate in harsh Environments with minimal power consumption, and extremely low Phase Noise.*



**Las Vegas, NV, February 3<sup>rd</sup>, 2014** – Jackson Labs Technologies, Inc, a designer and manufacturer of cutting-edge gps, timing and frequency equipment, today announced the availability of its breakthrough product DROR-II, a 10MHz/5MHz/1PPS GPS-Disciplined Atomic Frequency and Timing Reference (GPSDO). The DROR-II is a ruggedized frequency and timing reference with a Cesium Vapor Atomic Oscillator followed by a precision SC-cut Crystal Double-Oven Oscillator and an actively vibration-compensated VCXO oscillator, with specific emphasis on ultra low phase noise performance under extreme vibration and acceleration such as could be encountered in aircraft, tracked vehicles, and wheeled vehicles.

The DROR-II unit is optimized for operation in high-vibration and high-acceleration environments that require ultra-low phase noise performance and high frequency stability under extreme conditions. The DROR-II combines the strengths of three different on-board oscillators to provide an overall performance that has not been achievable with legacy products, at a steady-state power consumption of less than 3.85W. The DROR-II uses a GPS receiver to provide long-term phase and frequency accuracy of the built-in CSAC Atomic oscillator which is followed by an SC-cut, Double Oven OCXO (DOCXO) for very high short term stability and low phase noise, which is itself followed by a 3-axis electronically vibration-compensated crystal oscillator for ultra-low-noise under high vibration. Using these four signal sources cascaded to each other allows unmatched Phase Noise and Short Term Stability (ADEV) while also providing long-term atomic holdover, very fast warmup, and long-term phase-lock to UTC. Short term stability of 1E-012 (1ppt), and phase noise floors of



-162dBc/Hz are achieved. Frequency stability over 24 hours is better than  $5E-013$  (0.5ppt) typically when locked to GPS.

The DROR-II supplies three isolated 10MHz Sine Wave outputs, two CMOS 1PPS, and one 5MHz outputs that are phase-synchronized to UTC via the internal GPS receiver. DROR-II contains a 50-channel WAAS/EGNOS/MSAS-enabled GPS receiver that provides support for avionics systems through integrated 3-axis gyro-accelerometers and a -160dBm GPS tracking capability. DROR-II power requirements are less than 3.85W steady-state, and only a single supply of between 11.0V to 32V is required. Support for an external LCD display is standard.

The unit can be monitored and controlled by an RS-232 port or a USB port via industry standard SCPI-99 Commands (GPIB commands), and is capable of generating numerous NMEA-0183 output sentences for easy integration into existing infrastructure. The DROR-II can be ordered with various OCXO options and with different temperature ranges.

**About Jackson Labs Technologies, Inc.:**

Located in Las Vegas, NV, Jackson Labs Technologies, Inc. is a privately held company that is setting new standards in timing and frequency generation for the engineering, test & measurement, broadcast, defense, and research markets. Jackson Labs Technologies, Inc.: The Next Generation of Timing & Frequency. To learn more, visit [www.jackson-labs.com](http://www.jackson-labs.com).