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**FOR IMMEDIATE RELEASE**

## **Jackson Labs Technologies, Inc. delivers the worlds' first CSAC SAASM GPS-Disciplined Miniature 10MHz PVT Reference**

*“SAASM HD CSAC” is the worlds' first Chip-Scale Atomic Clock (CSAC) based GPSDO with integrated dual-frequency SAASM GPS receiver designed for mission-critical applications.*



**Las Vegas, NV, February 11<sup>th</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 SAASM HD CSAC combining for the first time a P(Y) capable military SAASM dual-frequency GPS receiver with a chip-scale atomic clock on a ruggedized PC board with dimensions of only 2.0 x 2.85 x 0.6 inches. The SAASM HD CSAC GPSDO is capable of receiving L1 and L2 GPS signals with C/A and P(Y) code, and is optimized for providing a highly accurate Position, Velocity, Time, and Frequency reference under extreme environments such as could be encountered in aircraft, tracked- and wheeled-vehicles, and man-packs.

The SAASM HD CSAC provides 10MHz, 1PPS, and Position- and Velocity information (“PVT Assured Operation”) to the user operating even in hostile environments using Anti Spoofing and Anti Jamming technology. A built-in Cesium Vapor Atomic Clock provides extremely accurate timing and frequency performance when in GPS holdover mode, up to only 1us drift per day typically, and allows full operational readiness within 2 minutes after power-on. Using the latest generation Rockwell Collins MicroGRAM SAASM GPS Receiver and a Symmetricom/Microsemi CSAC Atomic Oscillator on one PCB allows the SAASM HD CSAC to operate with less than 1.1W total power consumption - more than one order of magnitude less than the closest legacy solutions. With the smallest size, weight, and power (SWAP) specifications in the industry the SAASM HD CSAC suits itself perfectly for implementation in battery-operated man-portable equipment, UAVs’, and retrofit of existing communication gear for SAASM capability. The SAASM HD CSAC includes a standby-zeroize feature that allows emergency key-zeroization without requiring prime-power by using only a small Alkaline or Lithium backup battery, and provides software-initiated key zeroization as well. Key loading is accomplished through DAGR interfacing standard DS-



101 RS-232 communication, and an optional DAGR standard external cold-start assist feature is available to synchronize the unit in the absence of GPS signals.

The SAASM HD CSAC builds upon the very successful and mature Jackson Labs Technologies, Inc. CSAC GPSDO technology allowing the unit to achieve parts-per-trillion (ppt) average frequency accuracy and stability, and better than 25ns UTC average phase synchronization with less than 2 minutes operational warmup time and less than 5 minutes calibration to UTC typically. Frequency stability over 24 hours with GPS reception is better than 5E-013 (0.5ppt) typically, exceeding Stratum-1 requirements.

The SAASM HD CSAC contains an industry-standard 12-channel SAASM-enabled GPS receiver allowing +10V to +15V operation (+12V nominal), and supports easy-to-implement NMEA as well as SCPI serial commands. Separate RS-232 communication interfaces to the SAASM GPS receiver allow communications in ICD-153 format as well as cold-start-assist, key-loading, and firmware upgrades. The SAASM HD CSAC GPSDO is delivered in -40C to +85C temperature range and is available for sampling now.

**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).