Trident Systems, Inc.

TREDENT

Fairfax, VA <u>https://www.tridsys.com/</u> 703-460-5897

SINCE ITS FOUNDING IN

181 SBIR Awards

1985

121 Employees

N/A Socioeconomic Category No Patents from SBIR/STTR



Solicitation: Low-Cost, Multi-Channel Arbitrary Waveform Generator

DARPA SBIR Sponsor A07-114 Topic Number Improved Capability, Cost Savings Primary Innovation Adaptability Secondary Innovation

Low-Cost, Multi-Channel Arbitrary Waveform Generator & Advanced Data Converter Module – ADCM

There is a targeted need for high performance Software Defined Radio (SDR) capabilities on cost, size, weight, and power (CSWaP) constrained aerospace payloads; significantly increasing RF performance and flexibility.

Trident Systems, Inc. (Trident) developed the Advanced Data Converter Module (ADCM), a ruggedized, highly desirable, cheaper, lower power, and faster software-defined radio providing the following: 1.) increased Radio Frequency (RF) systems performance including communication, radar, and tuners/receivers applications primarily for the space domain, 2.) suitable for a wide range of environments including ground, maritime, airborne and space, and 3.) modular design with an upgrade path in place to incorporate the latest technology as it is available to industry. The ADCM demonstrated its feasibility in Trident's UltraScale+ Digital RF Transceiver (UDRT) hardware.

IMPACT

The ADCM in combination with the UDRT integrated in space payloads provides reduced SWaP, and rapid tech refresh capable/reprogrammable transceiver providing onboard processing in orbit which enable tactical timeliness at a form factor that is cost competitive.

BEYOND PHASE II

Trident received \$2.4M in Phase III funding from DARPA's Blackjack Program utilizing the UDRT and ADCM transceiver components and received ~\$8M in revenue from prime contractors, related to products derived in this SBIR effort. Trident has been awarded a DARPA adopted Phase II SBIR for \$1.49M based around the architecture of the UDRT/ADCM hardware developed and is currently implementing increased capability.

This research was developed with funding from the Defense Advanced Research Projects Agency (DARPA). The views, opinions and/or findings expressed are those of the author(s) and should not be interpreted as representing the official views or policies of the Department of Defense or the U.S. Government." (Approved for Public Release. Distribution Unlimited 03/31/21)