Electronic Warfare Solutions
Trident Infosol provides open architecture Commercial Off-The-Shelf (COTS) based solutions for next generation electronic warfare, mission computing, radar and other ISR systems that are more capable, interoperable and affordable than ever before. With almost 20 years of experience in delivering leading edge rugged solutions to defense industry’s most prominent organizations, Trident Infosol is highly adept in providing solutions for complete Electronic Warfare solutions lifecycle -

**Requirement Capture**

Reqtify helps organizations manage their requirement engineering process and ensure compliance with standards such as DO 178C, DO 254, and CMMI for Aerospace and Defense.

**System Design, Modeling and Simulation**


**Implementation**

INTEGRITY RTOS, with support for DO-178B Level A & aviation industry standard ARINC 653-1 application software interface, is a leading RTOS choice for the avionics industry for current and next generation aircraft.

GL Studio - HMI tool with a clear path to certifiable safety critical development, its safety critical runtime library is certifiable to DO-178 B/C or ED-12 B/C Levels E-A.

**Electronic Warfare Subsystems and Solutions**

**Acquire & Digitize**

- **Programmable RFSoC** – Combines RF front-end with the MPSoC architecture on 16nm silicon, Eliminates Discrete ADCs, DACs, FPGAs-to-Analog Interface, RF-design in the digital domain for greater flexibility.
- **FPGAs** – Kintex-7, Virtex-7, Zynq SoC, UltraScale Family with wide range of proven front ends – Up to 6 GHz A/Ds & D/As, Digital I/O.
- **FPGA IP** – A/D acquisition, D/A waveform generation for radar and electronic warfare baseband signal simulation, a controller for all data clocking and synchronization functions, a test signal generator & a PCIe Gen3 interface, DDCs and DUCs for interfacing to IF ports of RF up/down-converters.
**Process**

- **High Performance Embedded Computing (HPEC) Hardware** — Intel: Core i7, Xeon-E3, Xeon-D, Xeon-E5/E7, Freescale (now NXP): T208x, GPGPUs (NVIDIA & AMD)
  - High speed data interface and protocol (PCIe Gen3, 10/40GbE, Infiniband), I/O Connectivity for HPEC (RDMA Over Ethernet (iWARP), MultiWare, QPI), Micro Via Radial Interconnect (MVRI) technology, 3U/6U VPX Module Agnostic Cooling

**Recording Systems**

Ability to capture RF, IF signals, SFPDP, 10 & 40 GbE, LVDS. Radar & EW system verification with data recorder and playback system in lab. Multi-channel phase-coherent signal acquisition for direction finding, phase array radars, GPS and IRIG options for precision time and position stamping of recorded signals.

**Electronic Counter Measures (ECM)**

They include **Digital RF Memory (DRFM)**, wideband and narrowband digital receivers and Digital Frequency Discriminators (DFDs) - Latest Field Programmable Gate Arrays (FPGAs), Analog-digital-converters, High-speed interfaces boards, Signal processing techniques, VITA Technologies. Open-RFM neatly manages RF/microwave and digital processing convergence within the EW domain & OpenRFM is a modular, open architecture that combines hardware, firmware and software that can be applied to EW and SIGINT challenges.

**Prototyping and Deployment**

**Validation & Verification**

Our solutions for validation and verification of Electronic Warfare applications helps you streamline DO-178B/C/ED-12B Compliance & End-to-end quality management. Development Testing Platform for DO-178B/C and ED-12B compliance combines the industry’s deepest and broadest code analysis tools with ground-breaking development management system. **Object Code Testing** - focused on unit testing, whereby individual C functions or the methods of C++ classes are tested to see if they operate as designed.

**System Reliability and Maintenance**

**RAM Commander**, a comprehensive software tool for Reliability, Availability and Maintainability Analysis and Prediction, Spare Parts Optimization, FMEA/FMECA, Testability, Fault Tree Analysis, Event Tree Analysis and Safety Assessment. **FavoWeb FRACAS** covers all FRACAS requirements from Failure Data Collection, Failure Analysis through Corrective/Preventive Action. **D-LCC** analyzes the total ownership costs of various design alternatives and system’s components over the projected life cycle of a system.
System Integration

Trident infosol offers system integration services for various signal processing application meeting demanding requirements. From a basic configuration of COTS cards in a chassis to pre configured sub system with software, we reduce the risk of dealing with many suppliers. This minimizes delivery risk and the learning curve associated with post-delivery integration. Integrated systems are delivered with faster turn around time, allowing for higher productivity at the application development level, catering to -

- Electronic Warfare
- Radars
- Mission Computing
- Software Defined Radio
- Sonars
- Small Form Factor (SFF) Computers
- EO/IR
- C4ISR

Integrated System Solutions for Land, Sea & Air applications

Elements of “SWaP”C²E²R”

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