

PRODUCT BROCHURE

COMPANY OVERVIEW

Trident Infosol is a AS9100D Certified Company, providing leading edge solutions on Embedded COTS Hardware, Signal Processing Systems, Telemetry Systems and Engineering Software catering to the Real-Time applications. We offer solutions for a wide range of application serving the Aerospace, Defence, Research & Development, Automotive, Telecommunications, Medical and Industrial segments. Trident represents reputed global OEMs in its endeavour to provide best-in-class products to its ever growing list of clients.

Trident has been consistently at the forefront of introducing the latest cutting edge technologies across a wide spectrum of products. Our strong technical background in Development, Integration and Deployment of solutions for challenging real-world applications coupled with our ability to provide complete end-to-end solutions for complete product development life-cycle with extensive application support, which being the key benefit and differentiator. Our approach towards optimized and fully integrated solutions has helped us develop a unique competence to fulfill our customers' requirement specifications, which helps our customers to deploy their systems faster.

VISION

“To emerge as the most preferred technological partner and be a potential business associate in the field of Strategic Electronics and Avionics for Defense and private sector companies by providing cost effective, competitive and customized solutions for Electro Mechanical application on an integrated approach and turnkey philosophy.”

MISSION

- To be a major supplier of Strategic Electro Mechanical and Avionic system for Global Military and Aerospace Industry.
- To develop cutting edge and end to end solution by innovative design and development.
- To be active partner in system level solutions for Defense, Aerospace and Industrial applications there by adding value to all stake holders”.

WHY WE MATTER

The Trident group offers a Single Source for all your development needs related to Software, Hardware, Design Services and Fully Integrated Systems for a range of Applications. We are an End-to-End Solution provider catering to your complete product development life- cycle right from concept design to final acceptance test and beyond - meeting customer requirement specifications and standards, assuring continued product support. While bringing affordability for you with our cost-effective solutions, reuse of existing design for customization, flexibility to work on limited volume production, we also support your short development cycles with reduced risk ensuring faster time-to-market. The combination of our superior Technology and Engineering expertise along with our wide array of product and service offerings make us a unique technology partner.

INFRASTRUCTURE & FACILITIES

We have an integrated state-of-the-art Design, Development, Manufacturing and Testing facilities with extensive work-floor spanning over 35,000 sq. ft. Our sophisticated infrastructure is coupled with an array of advanced workstations, robust design & development tools (3D CAD, Structural & Thermal Analysis, Cabling, PCB and System Design), cutting-edge computing and network systems. This provides an ideal and excellent environment for our skilled professionals to support large and mission critical applications of various customers.

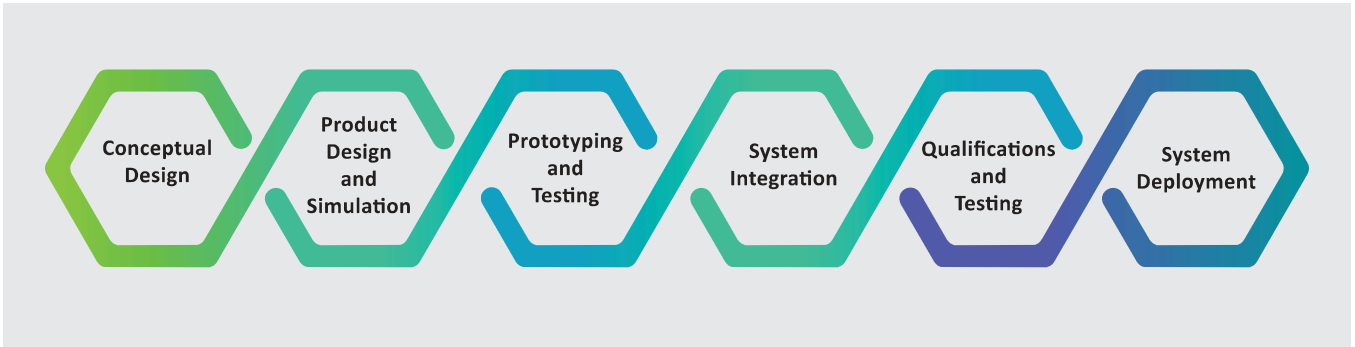
The sprawling Integration Labs help us combine our efforts in delivering fully integrated systems to our customers for their specific application requirements. Our advanced testing facilities include Set-up for PCB Inspection and Backplane Testing (SerDes), Power Supply Testing, Drip Test, Vibration & Shock Test, Thermal and Humidity Chamber (-70°C to +180°C).

With Design, Engineering, Manufacturing, Integration, Testing, Configuration Management, Project Management, Quality Assurance, Technical Support Services and Sales Teams under one roof, we provide expert services to all our customers enabling them to focus on their product/system development through its entire life-cycle. Alligator has evolved and continuously improved on project management processes and quality management system culminating into an AS9100D certified company.



WHAT WE DO

Recognizing the technological and economic challenges faced by the customers in today's competitive market place, we offer range of products, solutions and system integration services for various applications meeting demanding environmental conditions.



OFFERINGS AT A GLANCE

Conceptual Design

<ul style="list-style-type: none"> Requirement Capture Requirement Traceability Tools 	<ul style="list-style-type: none"> Modeling CFD Analysis Mathematical Computation Analog/Mixed Signal Simulation tool chains 	<ul style="list-style-type: none"> Reliability Analysis Static & Dynamic Analysis
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Product Design & Simulation

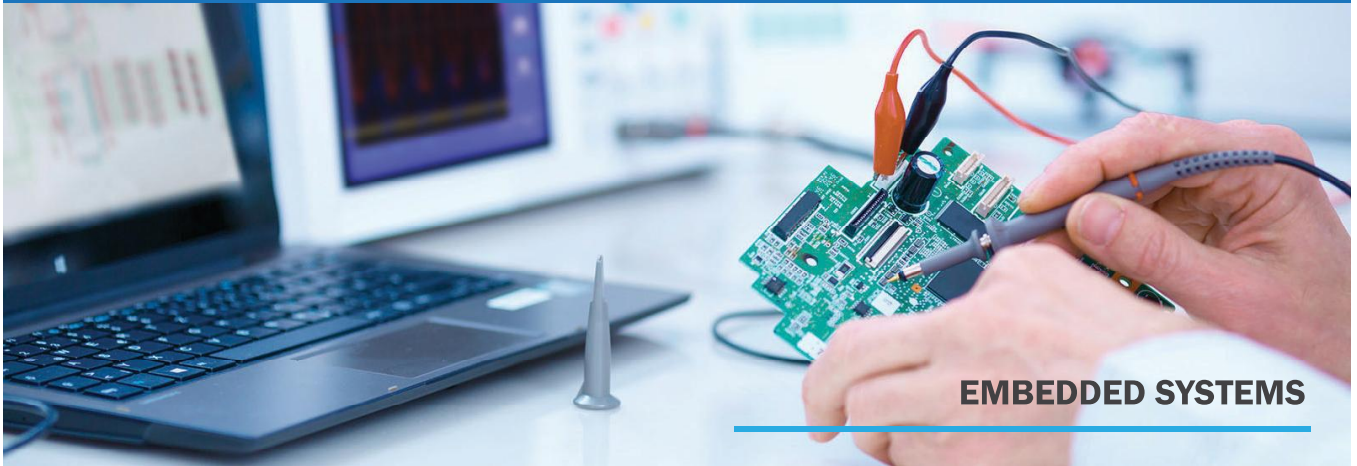
<ul style="list-style-type: none"> Embedded Code Development & Debug Safety Critical RTOS 	<ul style="list-style-type: none"> Graphical Environment OpenGL Libraries - SC & ES 	<ul style="list-style-type: none"> RADAR Video Processing, Scan Conversion & Display Presentation Tracking Solutions ECDIS Solutions
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Prototyping & Validation

COTS (Open System Architecture) <ul style="list-style-type: none"> SBC, I/Os, Video & Graphics Avionics & Communications Interfaces Signal Processing Multicore Multiprocessor Boards FPGA, GPGPU, IF & RF Processing Stand-alone (Small Form Factor) 	COTS (Open System Architecture) <ul style="list-style-type: none"> Rugged - Servers, NAS Ethernet Switch Data Recorders & Playback Rugged Enclosures Backplanes Power Supply Units Mass Storage Rugged Displays & Display Computers 	Integrated Telemetry <ul style="list-style-type: none"> Ground Systems Onboard Systems HILS
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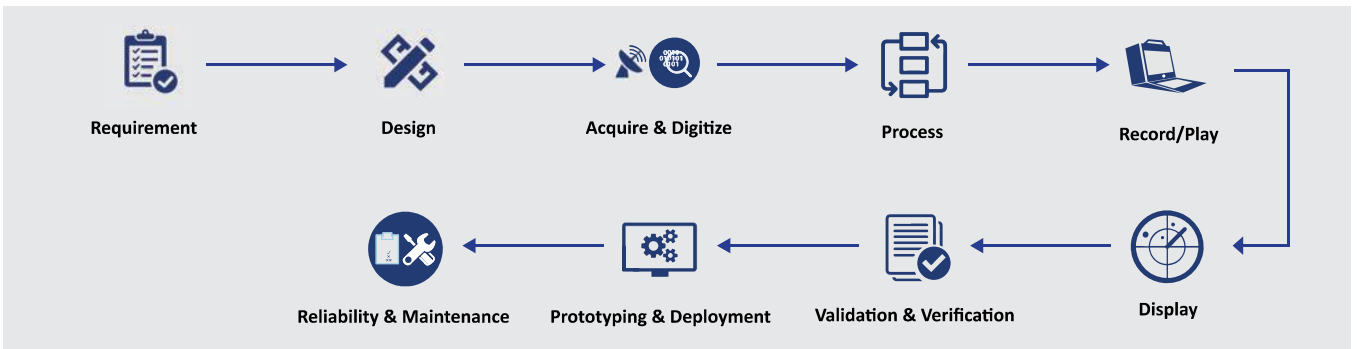
Integrated System Deployment

Systems & Sub-systems <ul style="list-style-type: none"> Rugged Racks Display Consoles SFF Computers & OSA Systems
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EMBEDDED SYSTEMS

We provide open architecture Commercial Off-The-Shelf (COTS) based solutions for mission computing, electronic warfare, radar and other ISR systems that are more capable, interoperable and affordable than ever before. Trident Infosol offers innovative and industry renowned EW solutions for emerging Ground, Air and Maritime threats.



SINGLE BOARD COMPUTERS

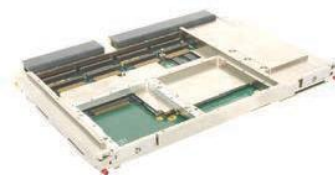
INTEL: SINGLE OR DUAL PROCESSORS SBC'S

- Atom, Core i7, Xeon E3 & Xeon-D latest Multi-Core Processors
- 1/10 GbE, Serial, on-board Flash, GPIOs, PMC/XMC Expansion Sites
- On-board mass storage interfaces like SATA & M.2 SSD (with RAID)
- Windows, Linux, VxWorks, Integrity, LynxOS & QNX support
- Single or Dual PMC/XMC Expansion Sites
- Fast Boot (~3 sec) for speedy startup application
- Platforms: cPCI, VME, OpenVPX & VITA 74
- Switch Configuration Tool for GbE & PCIe fabric products.
- Comprehensive BIT (Built-In Test) Software, Embedded Clustering Software
- Commercial, Rugged Air Cooled & Conduction Cooled Build Grades



POWER PC'S: SINGLE OR DUAL PROCESSORS SBC'S

- Freescale QorIQ P-Series & T-Series, MPC8640D Multi-Core Processors (AMP, SMP)
- On-Board 4-Port GbE Switch, Multi-Protocol Serial Ports, up to 16GB on-board Flash, GPIOs
- 2 x PMC/XMC Expansion Sites, Watchdog, Timer Counters, Temperature Sensors
- Embedded Linux, VxWorks, Integrity, LynxOS Support
- BIT (Built-In Test) Software & Fabric Configuration Management Tools
- Commercial, Rugged Air Cooled, & Conduction Cooled Build Grades
- On-Board User Programmable FPGA-Option
- Flexible user IO Routing-Flex IO-Option
- Platforms: cPCI, VME, OpenVPX



HIGH PERFORMANCE EMBEDDED COMPUTERS (HPEC)

HIGH PERFORMANCE COMPUTING 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)

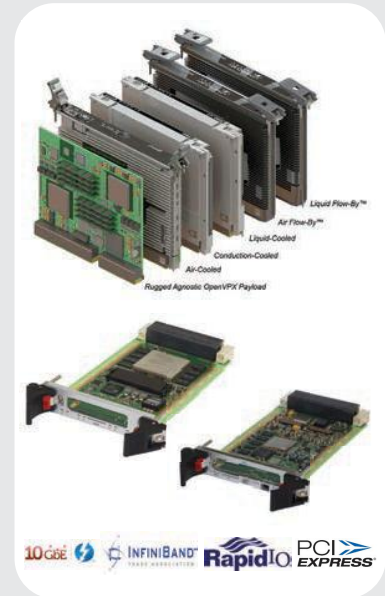
I/O Connectivity for HPEC:

- RDMA Over Ethernet (iWARP): Low latency, High throughput, Zero copy capability, OS/Stack bypass
- Multiware: Seamless PCIe data management in multiprocessor system.
- QPI, allows multiple server-class Xeon processors to be linked into a single SMP processing architecture

Micro Via Radial Interconnect (MVRI) technology has improved OpenVPX switch fabric interconnect data rates by three-fold, enabling switch fabrics and point-to-point connections to run faster and more reliably.

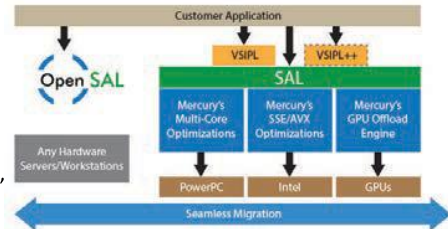
3U/6U VPX Module Agnostic Cooling:

- Air Cooling can handle up to a around 200W per module
- Conduction Cooling can handle up to a around 150W per module
- Air Flow-by Cooling can handle up to a around 200W per module
- Common to ALL these solutions is just one PWA



HIGH PERFORMANCE EMBEDDED COMPUTING SOFTWARE

- **Processing Libraries:** Hardware agnostic High Performance Libraries MKL, IPP, SAL, OpenCL, OpenMPI, CUDA
- **Diagnostic Support Tools:** Diagnostic Tools, System wide fault detection, Tools to build Built-in Test, Field Maintenance.
- **Distributed Computing Software:** Interprocess Communication Suite (ICS), Multiware (with services such as Virtual Ethernet over PCIe, shared memory, message synchronization with DMA powered transfers).
- **System Management:** Subsystem level System Health Monitors with GUIs, Ethernet, USB and/or RS 232 interfaces, data logging, field upgradable firmware, and data password protection.
- **Productivity Tools:** Open Development Suite, Trace Analysis Tool and Library (TATL), FPGA Development Kit.
- **Operating Systems Support:** Windows, Linux, VxWorks



GRAPHICS & VIDEO PROCESSING

EXTENSIVE RANGE OF EMBEDDED VIDEO PROCESSING MODULES, INCLUDING VIDEO CAPTURE, COMPRESSION, AND GRAPHICS OUTPUT

- GPGPU Capable High-Performance Graphics XMC & VPX Solutions.
- Latest AMD & nVIDIA (with CUDA support) many core GPU
- High-Speed PCIe Gen3 Interface.
- Frame Grabber with H.264 Compression.
- Independent Video Capture with up to 4 Video Inputs (3G/HD/SD-SDI/TSC/PAL/RS-170A/VGA/RS-343/RS-170/STANAG 3350).
- Up to 6-Independent Video Outputs (NTSC/PAL/SECAM/STANAG/RS-170/RS-343/RGB/DVI/HDMI /HD-SDI).
- Underlay & Overlay Supported.
- Video Streaming, Recording over TCP/IP (GbE o/p) & Recording to local disk.
- Supports KLV & CoT Metadata.
- Embedded OpenGL ES & SC Graphics Drivers.
- OpenCL Supported on Select Products.
- Commercial, Rugged Air Cooled, & Conduction Cooled Build Grades.
- Windows, Linux OS Support for IA32/64 Architectures.
- VxWorks, Integrity, & LynxOS RTOS Support including Intel & PowerPC Architectures.
- Rugged Video/Audio Recorder/Playback solution on a Single 6U VME/VPX Slot.



GENERAL PURPOSE I/Os

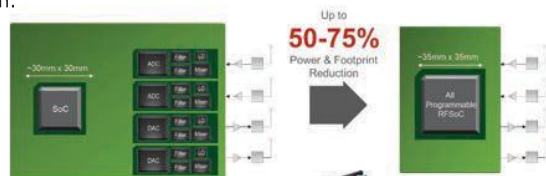
- ADC, DAC cards up to 300KHz, 16-Bit Resolution, Isolated & Non-Isolated Options
- Digital I/O cards, supports TTL, LVDS, Solid State Relays, HV Inputs & Outputs, Isolated & Non-Isolated Options
- Multi-protocol Serial Communication cards: RS232, RS422, RS485
- Dual, Quad Port Gigabit Ethernet cards
- Field Bus Communication: CAN, ARCNET, & INTERBUS
- Motion Control: Servo controllers, Absolute Encoders (SSI) interfaces, Incremental Encoders, Quadrature Decoders, & Synchro/Resolver-to-digital solutions
- Counters & Timer cards
- Commercial, Rugged Air Cooled, & Conduction Cooled Build Grades
- Embedded Windows, QNX, Linux, VxWorks, Integrity, LynxOS Support
- Platforms: PMC/XMC, AcroPack & IndustryPack Modules & Carriers for cPCI, VME & VPX



ACQUIRE & DIGITIZE

Programmable RFSoc

- Combines RF front-end with the MPSoC architecture on 16nm silicon.
- Eight 12bit ADCs @ 4 GSps, Eight 14bit DACs @ 6.4GSps
- Eliminates Discrete ADCs, DACs, FPGAs-to-Analog Interface
- Reduce foot print & power
- RF-design in the digital domain for greater flexibility
- Dual MPO optical connectors as per ANSI/VITA 66.4



FPGAs

- Kintex-7, Virtex-7, Zynq SoC, UltraScale/ UltraScale+ Family.
- Wide range of analog front ends – Up to 6 GHz A/Ds & D/As.
- Wide range of optical front ends - Up to 12/24, 10Gbs transceivers



FPGA IP

- A/D acquisition, D/A waveform generation, 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

MISSION COMPUTING & AVIONICS

- Safety certifiable subsystems range from high-performance OpenVPX to low-power small form factor systems.
- The subsystem uses safety-certifiable 3U OpenVPX SBC, GPU and I/O building blocks.
- Safety certifiable small form-factor systems optimized for minimal size, weight, and power (SWaP).
- OpenGL library with high-performance graphics drivers for safety-critical embedded computing platforms that employ graphics.
- Boards and systems deployed in applications certified up to the highest level of design assurance, DAL-A, for both DO-254 and DO-178



TRUSTED MISSION SOLUTIONS

- Secure Servers that includes both reliability and a trusted supply chain for both hardware and software.
- Cloud Computing Rackmount Servers with latest Intel Xeon Scalable processors.
- Supercomputing and Virtualization Servers with the latest NVIDIA® GPU accelerators (up to four GPGPU's)
- Modular High-Density Servers delivering high-compute density and low-latency.
- Hyperconverged Infrastructure Platforms integrates multiple RES form-factors, ethernet switches, and software-defined storage(SDS)/ hyper - converged infrastructure (HCI) software to deliver all-flash performance for virtualized applications.
- Datacenter in a briefcase, a tactical cloud that can host sensitive missions in theater and operate on almost any power source.
- Provide superior resilience to shock, vibration, and temperature extremes.



AVIONIC INTERFACES & BUS ANALYSIS TOOLS

- **TTEthernet:** End Systems & Network Switches up to 24-Port, Development tools, Verification tools, Middleware.
- **AFDX (ARINC664):** End Systems & Network Switches up to 24-Port, Development tools, Verification tools, Middleware.
- **MIL-STD-1553:** 1-4 Independent, Dual Redundant Channels of Dual Function BC/Mon & Full Function BC/Monitor and mRT (1-32)/ Monitor option available
- **ARINC-A429/575/717:** 4-30 Channels
- **Multi-Protocol Solutions:** MIL-STD-1553, ARINC 429, 708, CAN, RS232/422/485, & LVTTTL interfaces on the single card
- **ENET,** the Ethernet Avionics converter, is a real-time UDP server engine (no IP software stack). Provides automatic 1553 BM or ARINC receive bridging without any host interaction. Fully rugged as per MIL-STD-704F/810G/461F and DO160 Sec 22.
- **Software Analyzer** for MIL-STD-1553/ARINC-429/AFDX and Protocol Validation Software
- **Data Bus Components:** Bus Couplers, Bus Repeaters, Stub Extenders, Terminators, Connectors and cables
- Windows, Linux, VxWorks, Integrity, LynxOS support
- Commercial, Air Cooled Rugged, Conduction Cooled Build Grades
- Boards available in form factors like SFF (VITA74), PMC, XMC, 3U VPX & Standalone



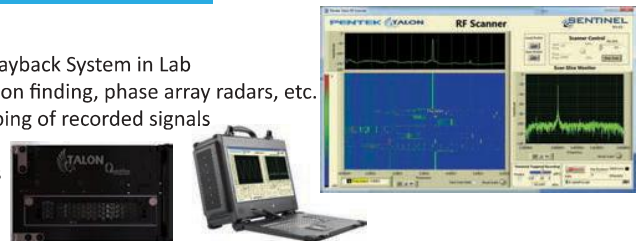
NEW GENERATION NETWORK SWITCHES

- Switch fabric modules supporting PCIe/sRIO/1 or 10 or 40Gbps Ethernet/InfiniBand etc
- Comprehensive network, configuration, management and monitoring using Switchware graphical user interface software
- Security features: 802.1X Port authentication, Multicast/Broadcast limiting, STP/RSTP protocol, Virtual cable tester On-Line, User authentication (certificate HTTPS / Key SSH), Mirror traffic and log recording
- Option of Link-state tracking redundancy, that binds the link-state of a downstream interface (or a group of interfaces) to the linkstate of a upstream interface.
- Up to 32 Configurable 1/10/40 GbE Ports, fully managed layer 2+/3 routing.
- Configurable front and rear I/O port combinations with copper and/or fiber.
- Switch Management by on-board Freescale Processor & Embedded OS.
- TCP offload engine (TOE processor), Traffic filtering
- Configurations with support for IPv4 / IPv6 with advanced networking.
- Commercial, air cooled rugged & conduction cooled versions.
- Open standards-based form factors such as VPX, VME, cPCI & standalone.



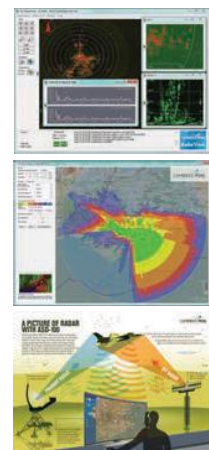
RECORDING SYSTEMS – FLEXIBLE & DEPLOYABLE SOLUTIONS

- 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, etc.
- GPS and IRIG options for Precision time and position stamping of recorded signals
- API, GUI and Signal Viewer analysis tools
- Rack Mount, Portable, Rugged, Conduction Cooled options



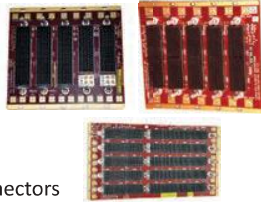
RADAR SCAN CONVERTER, PROCESSING & DISPLAY

- SPx Development is a package that supports the development of custom server and client radar applications.
- SPx Server for Target Tracking, provides the functions of radar recording, network distribution of radar video, plot extraction and target tracking.
- SPx Fusion Server, for the fusion of primary and/or secondary (AIS, IFF, ADS-B) sources.
- SPx Radar Simulator, for the simulation of primary radar video, along with secondary sources and navigation data.
- Radar View Radar Visualisation, for the visualisation of primary radar video, along with graphics and secondary data.
- ASD-100 Air Situation Display, An integrated display application for the acquisition, display and tracking of primary and IFF targets.
- RDR Data Recorder, record and replay application for primary radar video, tracks, AIS, ADS-B, video, navigation data, screen capture and other network data formats.
- VSD Security Display, for the processing and display of radar and camera video, including camera control, slew-to-cue and integrated radar and video tracking.



BLAZE - OPENVPX / VPX BACKPLANE

- Designed to meet ANSI/VITA 46.x 2007 & ANSI/VITA 65.0 2010
- 0.8" / 0.85" / 1.0" Card Pitch
- 3U or 6U Form Factor
- **VITA 67 backplanes available**
- Choice of High Speed Fabrics;
 - Serial Rapid IO
 - PCI Express
 - Gbit Ethernet
- High Speed Multi-Gig RT2 Connectors
- Keying & Alignment Mechanism
- Operating Temperature: -40°C to +85°C
- Power connections at rear for VS1, Vs2, VS3, AUX & Ground
- Custom Designs



HELIOS - POWER SUPPLY UNITS

- 200 W to 1.2 KW Power Output
- 18 – 36VDC / 120 - 230VAC Input
- Single / Dual Slot Options
- Multi Output PSU
- 85% Efficiency (Typical)
- No Minimum Load
- Current Limit
- Input Power & Fault Status Indication
- Remote Power On/Off (Optional)
- IEEE 1101.1x Compliant Front Panel
- MIL-STD-810F & MIL-STD-461F
- MIL-STD-704F, 1275B (Optional)
- Air/Conduction Cooled Units



BLAZE - HYBRID BACKPLANE (VME+VXS & VME+VPX)

VXS + VME64x Hybrid Backplane VME + VPX Hybrid Backplanes

- Designed as per VITA standard
- Superior Power Distribution
- PCB FR4/Rogers
- Zero Cross-talk
- Characteristic impedance 65Ω for VME Signals, 100Ω for Fabrics ±10%
- Operating Temperature: -40°C to +85°C
- Custom Designs



BLAZE - CPCI & VME64X BACKPLANES

- Conforms to PICMG Standards & As per ANSI/VITA 1.1-1997; IEEE 1101.10 Mechanical Standards
- 02 to 21 slots
- Standard Rear I/O & 3U or 6U Form Factor
- 32/64 Bit PCIbus, 8 layer or 12 layer(cPCI)
- FR4 PCB, 4.2mm thick or equivalent
- Excellent Signal integrity
- Superior Power Distribution; Active/Passive bus termination
- Excellent Power Distribution & +5, +3V3 & ±12V Interface Studs
- Operating Temperature: -40°C to 85°C
- Auto Daisy Chain & Custom Designs



SYSTEM HEALTH MONITORS

- Current & Voltage Monitoring
- Fan Speed & Fan Fail Monitoring
- Temperature Monitoring
- Analog & Digital Sensors
- HVHC & TTL Outputs
- RS232/USB/Ethernet Interfaces
- On-board Data Logging
- User Configurable GUI
- Operating Temperature: -40°C to +85°C
- Stand-alone, VME & VPX Form Factors



NETSPYDER - ETHERNET SWITCHES

- Designed for Industrial, Defence & Aerospace Environments
- 8/12/16/24 Gigabit Ports; Layer2/Layer 3 switching capability
- Flexible VLAN assignment- 802.1Q, port & protocol
- Quality of Service engine
- **Security features**
 - Multicast/Broadcast limiting & Virtual cable tester On-Line
- **Flexible management tools**
 - Enhanced Port mirroring & STP/RSTP algorithm for more reliable network
- **Operation Simplicity**
 - Auto-negotiation & Auto Cable Detection (MDI/MDI-X)
 - On-line virtual cable tester with advance cable diagnose capability
 - Conduction or Convection Cooled
 - Custom Designs



AURORA SERIES - INDUSTRIAL CHASSIS

- As per IEEE 1101.1 Mechanical Standards
- 1U to 11U High, Rack Mount
- 2 to 21 Slots
- 3U or 6U Cards
- Forced Air Cooled
- OpenVPX / VPX / VXS / VME64x / cPCI Backplane Options
- Rear I/O Supported
- Custom specific Switch Controls & Indications
- AC or DC input PSUs
- Upto 1000 watts
- Standard Connectors
- Custom Designs



UNICORN - ATR CHASSIS

Forced Air Cooled

- Airborne, Shipborne & Ground Deployment
- Compliance to MIL Specs
- IEEE 1101.10 Mechanical Standards
- Rugged Aluminum Construction
- Standard or Custom Vol./Sizes
- 3U / 6U or Custom Form Factors
- OpenVPX / VPX / VME64x or cPCI Backplane Options
- AC or DC input PSU Options
- Modular I/O transition with I/O PWB (No Cable harness required)
- ARINC or MIL-D-38999 Connector Style
- Hard Mount or ARINC Tray Mount
- Environmental - MIL-STD-810F/RTCA-DO-160E
- EMI/EMC as per MIL-STD-461E



RHINO - ATR CHASSIS

Conduction/Forced Air Conduction/Cold Plate/Liquid Cooled

- Airborne, Shipborne & Ground Deployment
- Compliance to MIL Specs, IEEE 1101.20 Mechanical Standards
- Open VPX / VPX / VME64x of cPCI Backplane options
- Rugged Aluminum Construction, Standard or Custom Vol./Sizes
- Modular I/O transition with I/O PWB (No cable harness required)
- 3U / 6U or Custom Form Factors
- AC or DC input PSU Options
- ARINC or MIL-D-38999 Connectors
- Hard Mount or ARINC Tray Mount
- Environmental: MIL-STD-810F/RTCA-DO-160E
- EMI/EMC as per MIL-STD-461E



OYSTER SERIES - RUGGED CHASSIS

- Shipborne & Ground Deployment
- Compliance to MIL Specs
- IEEE 1101.10 Mechanical Standards
- 19" Rack Mount, Upto 11U High
- Forced Air Cooled
- 3U / 6U or Custom Form Factors
- Upto 18 Slots
- OpenVPX / VPX / VME64x or cPCI Backplane Options
- AC or DC input PSU Options
- Modular I/O transition with I/O PWB (No cable harness required)
- MIL-D-38999 Connectors
- Environmental - MIL-STD-810F / JSS 55555
- EMI/EMC as per MIL-STD-461E
- Altitude upto 10000ft
- Custom Designs



CCORAL - DISPLAY CONSOLE

- Airborne, Shipborne & Ground Deployment
- Compliance to MIL Specs
- Single or Dual Head Display Consoles
- Airborne, Shipborne & Ground Deployment
- Compliance to MIL Specs
- Single or Dual Head Display Consoles
- As per MIL-STD-1472F Human Engineering
- Standard Display Sizes with Tilt Mechanism
- ATRs / Rugged Chassis based Sub-system
- VME / VPX / cPCI Compute Resources
- Touch Input Display with Controls
- Custom specific Switch Controls & Indications
- Foldable or Rigid Desk; Customized Foot rest
- ARINC or MIL-D-38999 Connector Style
- With or Without Shock Isolation
- Environmental as per MIL-STD-810F
- EMI/EMC as per MIL-STD-461E
- Altitude upto 30,000ft
- Custom Designs



TAURUS - RACKS

- Airborne, Shipborne or Ground Deployment
- Multiple Levels for 19" Rack Sub-Systems
- Custom Sub-Systems; Power Supply Sub-System
- ARINC or MIL-C-38999 Connector Style (Sub-Systems level)
- Efficient Thermal Management
- Structure Stability
- EMI protection front door
- Shock Mount Integrated
- Environmental - MIL-STD-810F / JSS 55555
- EMI/EMC as per MIL-STD-461E
- Custom Designs



Netspyder – CR CISCO POWERED ETHERNET SWITCH

- Layer 3 and Layer 2 Support
- Operating System: CISCO Advanced IOS XE operating system
- Supports up to 24-ports Ethernet 1G ports
- Combination of Copper and Fiber
- Supports native PoE and PoE+
- Conduction cooled
- Power
 - AC Input : 230V AC
 - DC Input: 28V Nominal DC (18-36V)
- Interfaces:
 - Upto 24 port 10/100/1000 Ethernet Ports
 - Upto 4 1G Fibre Optic Ports (Build Option)
 - LED Indication per port (link / activity)
 - One RS-232 Console Interface
- Ruggedized for extreme environments
- Operating Temperature: -40°C to +71°C
- Connectors: Circular MIL
- Standards: Compliant to MIL-STD-810G and MIL-STD-461F
- Custom Specific Style & Layouts variant available.



SMALL FORM FACTOR EMBEDDED COMPUTERS

FALCON - II

Configurable SFF Embedded Computer

- **CPU:** Intel Core i7/ Xeon E3 Processors 9th Generation or latest
- **Memory:** up to 64 GB DDR4 RAM (with or without ECC)
- **I/O's (Standard):**
 - 2 x 10G Ethernet (Copper or Fiber)
 - 2 x 1 Gigabit Ethernet (PoE+ Option)
 - 2 x USB 3.0, 2 x USB 2.0
 - 1 x HD AUDIO
 - 4 x RS232 (TX/RX)/RS422/RS485
 - 1 x RS232 (TX/RX- Console)
 - 8 x GPIOs
- **Dimensions:** 217mm x 260mm x 105mm
- **Weight:** ≤ 4.3 to 4.9 Kgs. (Configuration Dependent)
- **Power:** 28 VDC @ 25-100 Watts (Configuration Dependent)
- **Operating Temp:** -40°C to +55 °C, up to +71°C (Depending on Thermal Load)



RAPTOR - VNX(VITA74) COTS COMPUTER

- **CPU:** Multicore Intel ATOM/Core i7, ARM®, NXP QorIQ® T-Series, & AMD G-Series SoC
- **GPU:** Video/Graphics Processing
- **Avionic I/O:** MIL-STD-1553B, ARINC-429
- **Standard I/O:** GigE, USB 2 / 3, Serial, Audio, GPIO, FPGA Processing
- **Storage:** SSD Flash up to 512GB
- **Power:** 28 VDC @ 10 to 60 Watts (Configuration Dependent)
- **Operating Temp:** -40°C to +71°C
- Rugged Conduction Cooled



FALCON - 3

High Performance Configurable Embedded Computing System

- **CPU:** Intel Xeon® E-2276ML or Core™ i7-9850HL Processors or latest
- **Memory:** up to 64 GB DDR4 RAM
- **I/O's (Standard):**
 - 2 x 10G Copper (Optional)
 - 2 x Gigabit Ethernet
 - 2 x USB 3.0, 2 x USB 2.0
 - 2 x RS232 (Full Duplex)
 - 1 x Audio IN & 1x Audio OUT
 - 8 x GPIOs
- **Connectors:** MIL-Circular
- **Dimensions:** 300x115x270mm
- **Weight:** 7.5±0.3 kg without XMC
- **Power:** 28 VDC @ 35 W - 85 Watts (Configuration Dependent)
- **Operating Temp:** -40°C to +55 °C, up to +71°C (Depending on Thermal Load)



LANIUS II - MICRO EMBEDDED COMPUTER

- **CPU:** i7-6th GEN Dual Core / Quad Core
- **Memory:** 8-32 GB (RAM)
- **Mass Storage:** Upto 1 TB
- **Video Output:** 2x DP / DVI
- **I/Os:** (through MIL-STD-38999 & Hercules Connectors)
 - 2x GigE
 - 2x USB3.0
 - 2x USB2.0
 - 1x HD Audio, 2x UART, 8x GPIO
 - 4x miniPCIe + 2x mSATA
- **Dimensions:** 200mm x 175mm x 60mm
- **Weight:** < 2Kg
- **Power:** 12 - 36 VDC
- **Operating Temp:** -40 °C ~ +71 °C
- MIL-STD-810F, MIL-STD-461F, MIL-STD-704F/1275D
- **Operating System:** Linux, Win10



WILLET - N

SFF System with Nvidia Xavier

- **CPU:** 8-Core Carmel ARM 64-Bit CPU, 8 MB L2 + 4 MB L3
- **Memory:** 8GB/16GB/32 GB LPDDR4x
- **Storage:**
 - 32 GB eMMC 5.1
 - Up to 512GB SSD (using mSATA Expansion site)
- **I/O's (Standard):**
 - 2xRS232/2xRS422(Software selection)
 - 2XUSB 3.0, 1xUSB 2.0
 - 1xCAN
 - 1x HD Audio
 - 1x1 Gig Ethernet, 1x10 Gig Ethernet
 - 1x HDMI 2.0/Dp 1.2
 - 4xGPIO
 - 20xMPCIE I/O's
- **Dimensions:** 154mmx76mmx230mm
- **Power:** 35 watt (*Conditions apply)
- **Operating Temp:** -25°C to +65 °C



WILLET - I

SFF System with Intel CPU + Nvidia GPU

- **CPU:** Intel Core i7/ Xeon E3 Processors 9th Generation or latest
- **Memory:** up to 64 GB DDR4 RAM (with or without ECC)
- **I/O's (Standard):**
 - 2 x 10G Ethernet (Copper or Fiber)
 - 2 x 1 Gigabit Ethernet (PoE+ Option)
 - 2 x USB 3.0, 2 x USB 2.0
 - 1 x HD AUDIO
 - 4 x RS232 (TX/RX)/RS422/RS485
 - 1 x RS232 (TX/RX- Console)
 - 8 x GPIOs
- **I/O's Expansion:**
 - 4 x MiniPCIe / AcroPack Sites (Gen 3 PCIe)
- **Dimensions:** 217mm (W) x 260mm (D) x 120mm (H)
- **Weight:** ≤ 4.8 Kgs. (Configuration Dependent)
- **Operating Temp:** -40°C to +55 °C, up to +71°C (Depending on Thermal Load)



SYSTEM INTEGRATION

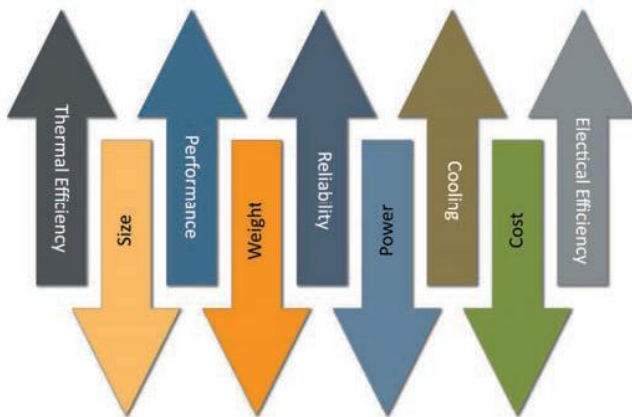
Trident offers System Integration Services for various applications meeting demanding requirements. From a basic configuration of COTS cards in a chassis to customized system configuration, including software, we reduce the risk of dealing with many suppliers. This minimizes delivery risk and the learning curve associated with Post-delivery Integration. Integrated systems are delivered more quickly and economically, allowing for higher productivity at the application development level.

- Electronic Warfare
- Unmanned Aerial/Ground vehicles
- EO/IR
- Sonars
- DO-178B & DO-254B Certifiable Avionics Systems
- Software Defined Radio
- Radars
- C3I & C4I Systems

INTEGRATED SYSTEM SOLUTIONS FOR LAND, SEA & AIR APPLICATIONS



Elements of "SWaP²C²E²R"



INTEGRATED TELEMETRY

AIRBORNE TELEMETRY

- Network Telemetry
- INET- Ready Telemetry Architectures
- Missile & Launcher Telemetry
- Modular Data Acquisition Units
- Data Collection and Transmission
- Data & Video Recorders (FTI)
- Satcom Airborne Terminal
- Flight Termination Devices
- Mission Recorders
- TM Transmitters



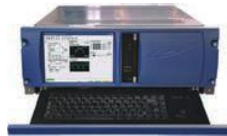
GROUND & SHIPBORNE TELEMETRY

- Air-Ground Telemetry & Data Tracking
- L to Ku band Antennas
- Single/Dual/Three Axis Portable & Fixed Antenna from sizes 1.8 M to 11M
- Single/Dual/Quad channel L, S & C band Receivers
- Telemetry Check-Out Systems
- Ship-borne Antenna with Gyro-Stabilization
- Recorders & Reproducers
- Decommuration Systems



SPACE

- Space Application Ground Equipment
- TT&C and Ranging
- Deep-space Tracking
- Remote Sensing
- Satellite Tracking Ground Station
- Earth Observation
- X and S+X Antennas
- Fixed & Mobile Systems
- Multi- Mission Operations
- Geo-location Solutions



SATCOM & DATA LINKS

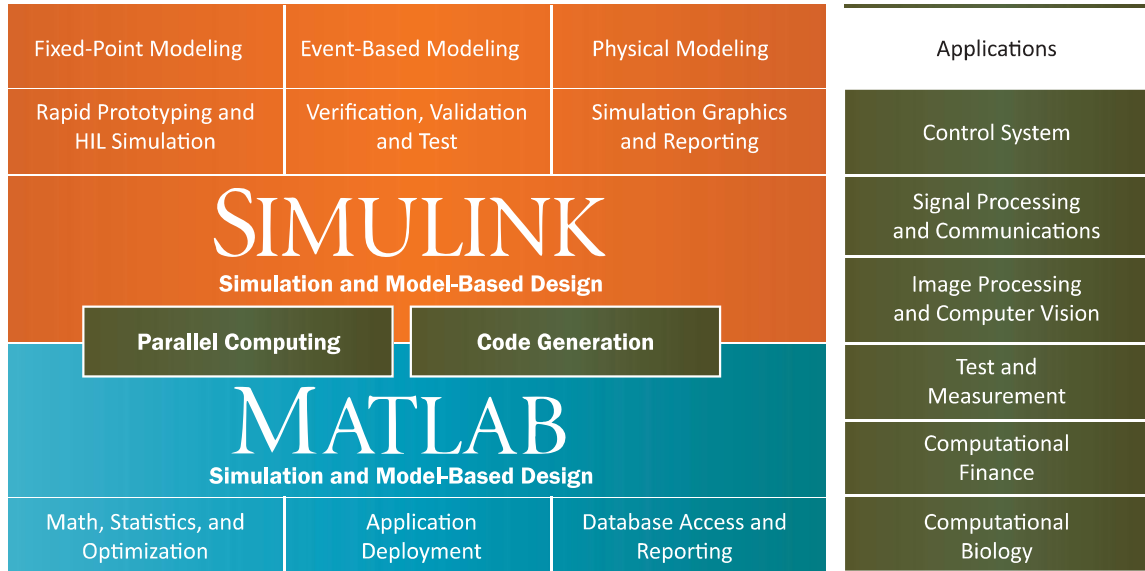
- Satcom Antennas for Armored Vehicles
- Ship-borne satcom with gyro-stabilization
- Satcom Ground Terminal
- Line of sight Data links
- SDR- Signal Analysis and Satcom monitoring



CUSTOMIZED SOLUTIONS

- Hexapod Compact Station
- Quick Deployable Mobile Station
- Large Sized Dual axis antenna with radome
- Tactical Ground Station
- Satellite Interference Reduction Systems
- Muzzle Velocity Radar

SIMULATION & ANALYSIS



MATLAB and Simulink products for Model-Based Design and technical computing are the industry - standard tools for designing, implementing, and testing air, space, naval, and land systems. Aerospace and defense companies worldwide rely on these products in major programs, such as the F-35 Joint Strike Fighter and Mars Exploration Rover, as well as for unmanned aerial vehicles and advanced wireless systems, such as software defined radio (SDR).

Model-Based Design with MATLAB and Simulink is a modular development approach that enables engineering teams to move from internal research and development (IRAD) to design and implementation in a single environment.

Companies are using this approach to:

- Mitigate program risk by sharing system specifications, analysis, and test data
- Reduce costly rework through early simulation of design
- Promote reuse by interfacing with existing tools, simulations, and legacy software
- Leverage new technologies by moving directly from IRAD to production
- Research emerging technologies such as cyber-physical systems

PRODUCTS

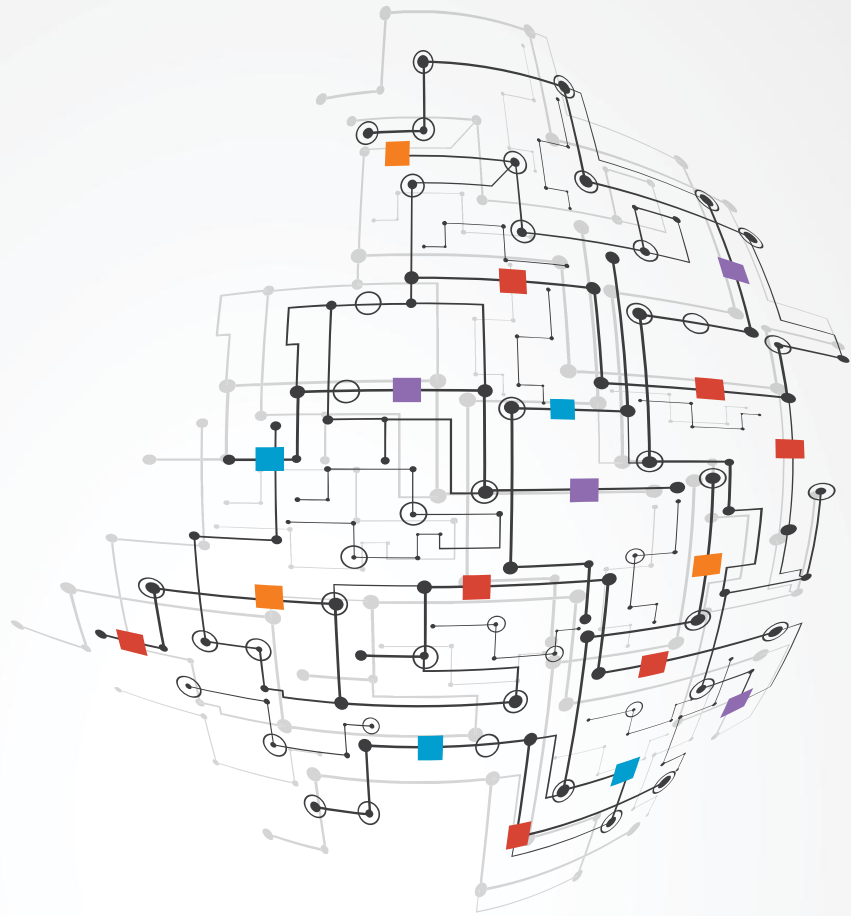
MATLAB PRODUCT FAMILY

- MATLAB- Parallel Computing
- Math, Statistics, and Optimization
- Control Systems
- Signal Processing and Communications
- Image Processing and Computer Vision
- Test and Measurement
- Computational Finance
- Computational Biology
- Code Generation
- Application Deployment
- Database Access and Reporting

SIMULINK PRODUCT FAMILY

- Simulink- Event-Based Modeling
- Physical Modeling
- Control Systems
- Signal Processing and Communication
- Code Generation
- Real-Time Simulation and Testing
- Verification, Validation, and Test
- Simulation Graphics and Reporting

POLYSPACE PRODUCT FAMILY



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ALL PRODUCT NAMES, TRADEMARKS OWNED BY THE RESPECTIVE OWNERS ARE ACKNOWLEDGED

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