Rugged Small Form Factor Embedded Computers
When Smaller is Better
Rugged Small-Form Factor Embedded Computers

Our Rugged small-form-factor commercial off the shelf (COTS) embedded computer family of products is designed for harsh environments of military, aerospace and heavy industries, which address the challenging need for many space-constrained applications in avionics, aerospace and defense industries.

While our small form-factor (SFF) embedded computers are smaller in size, they are equipped with intelligent features promising higher levels of performance which makes it mightier. Our products are tested to withstand extreme shock, vibration, humidity, and temperature that aerospace and defense electronics systems are subjected to in deployed conditions.

Supported Processors (system Dependent)
- Intel i7 / Xeon / Atom
- NVIDIA Tegra TX2
- NXP QorIQ, T and P-Series
- AMD G-Series SoC
- ARM

Available I/O
- Video / Graphics / GPGPU
- MIL-STD-1553 / ARINC 429/717
- Ethernet / Serial / CAN
- GPIO / Analog / Discrete
- IMU / INU / GPS
- Wi-Fi / Bluetooth
- Storage - SATA / NVMe / mSATA

Key Features
- **CPU**: Latest Intel Multi-Core Processor or NXP T208x Multi-Core QorIQ Processor
- **Memory**: 32 G bytes of DDR4 DRAM,
- **Storage**: nVME/SATA SSD with Terabyte capacity
- **I/O**: Graphics, Video, GPGPU, MIL-1553/ARINC, ADC & DAC with FPGA, 10G, sFPDP
- **Expansion**: PMC/XMC Field I/O’s
- **MIL-Connectors for I/Os**
- **Dimension**: 194 (H) X 200(W) X 238 (D) all in mm
- **Weight**: < 8 Kg
- **Temperature**: -40°C to +71°C (Operating)
- **Pre-Configured Rugged Conduction Cooled System**.

**Osprey - VPX System**

The Osprey is a small form factor embedded computer configured on 3U VPX (VITA 65) architecture, the next generation of ruggedized compact embedded systems for high performance defense systems. It can be scaled across various applications including civilian and military unmanned vehicles, manned commercial and military aircraft, helicopters, over- and underwater research vessels, ground vehicles.

**Osprey**

An off the shelf 3-5 slot 3U VPX COTS computer, predefined to include a CPU, video/graphic interfaces, avionics interface and storage; all integrated with no NRE.

**FALCON**

Conduction cooled, hybrid SFF COTS computer system with optional hot - swappable SSDs.

**Raptor**

Conduction cooled, SFF COTS computer system utilizing ANSI/VITA 74 (VNX) standard modules, supporting redundant or multiple switched processors and I/O.

**Lanius**

Our smallest conduction cooled computer yet: a µSFF hybrid COTS computer system, able to fit in the palm of a hand.
**FALCON II - Hybrid COTS Embedded Computer**

The Falcon II is a rugged Small Form Factor (SFF) computer system is a state-of-the-art open standard platform, which is highly Scalable, configurable & versatile System. It is specifically tailored for the avionic, military and rugged industrial market with optimized SWaP.

**Key Features**
- **CPU:** Latest Intel Multi-Core Processors, NXP Power Architecture and AMD G/R Series Available
- **Memory:** RAM - Up to 32 GB;
- **Onboard Storage** Flash - up to 512GB
- **Expansion Storage** Available (Build Option: RAID and Removable Storage with nVME or SATA 3 Interface)
- **I/O:** 2 x GigE, 2 x USB 2/3, 2 x Serial, HD Audio, GPIO, 2 x DVI/HDMI/DP Video Outputs
- **Expansion:** 1 x XMC Site + 4 x mPCIe Sites (Graphics, Video, GPGPU, MIL-1553/ARINC, 10G, ADC, DAC, GPIO, CAN, Wi-Fi etc.)
- **MIL-Connectors for IOs**
- **Dimensions:** 209mm x 235mm x 95mm (Baseline)
- **Weight:** <3.5 Kg
- **Temperature:** -40° to +71°C (Operating)
- **Rugged Conduction Cooled**

**RAPTOR - VNX (VITA74) COTS Computer**

The Raptor is a pre-qualified computer based on the VNX (ANSI/VITA 74) standard. Derived directly from VPX (VITA 46) & OpenVPX (ANSI/VITA 65), VNX is the continued evolution of the VPX standard, specifically designed for significantly smaller deployments. The Raptor may less than half the size of a typical 3U VPX platform, with System on a Chip (SoC) compute options, high density connectors and advanced cooling design and is suitable for many military and avionic C4ISR applications.

**Key Features**
- **CPU:** Multicore Intel ATOM/Core i7, ARM®, NXP QorIQ® T-Series, and 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

* Trident Infosol is a member of the ANSI/VITA 74 Technical Committee and VNX Marketing Alliance.

**LANIUS - Micro Embedded Computer**

The Lanius is a rugged “micro” Small Form Factor (µSFF) computer system, designed for airborne, ground vehicle or man- wearable applications requiring a minimal footprint. The system offers the best utilization of Size, Weight and Power (SwaP) in the industry, that fit in the palm of the hand.

**Key Features**
- **Lanius IA - Intel® Atom**
  - **CPU:** Quad Core Atom @ 2.0Ghz
  - **Memory:** Up to 4 GB RAM / 64 GB EMMC Flash or 256GB mSATA
  - **I/O:** 2x GigE, 1x USB 3.0 / 2x USB 2.0, 2x Serial, Audio, GPIO, Video (1x DVI / HDMI)
  - **Expansion:** 2x mPCIe + 2x mSATA
  - **Dimensions:** 150mm x 100 mm x 34mm
  - **Weight:** < 0.8 Kg
  - **Temperature:** (Operating) -40°C to +55°C
- **Lanius TX - NVIDIA® Tegra X1/X2**
  - **CPU:** NVIDIA Tegra X2 Quad ARM® A57 with Pascal GPGPU
  - **Memory:** Up to 8 GB RAM
  - **I/O:** 2x GigE, 2x USB 2.0, 2x Serial, 1 x HD Audio, 1 x UART, 8 x GPIO, Video (DP / HDMI / DVI)
  - **Expansion:** 3 x miniPCIe + 1x mPCI / mSATA
  - **Dimensions:** 150mm x 100 mm x 34mm
  - **Weight:** < 1 Kg
  - **Temperature:** (Operating) -40°C to +55°C

MIL-Connectors for IOs & Conduction Cooled System
Applications

- Mission Computer
- Image Processor
- Display Processor
- Data Recorder
- Signal Data Concentrator
- EW Processor
- Data Link Processor
- Communications Controller

About Us
Trident Infosol is a leading solutions provider for embedded COTS hardware, signal processing systems, telemetry systems and engineering software catering to the real-time application. Manufacturer and an international supplier of rugged small form factor embedded COTS computer and rugged systems for the avionics, aerospace, military, navy and heavy industrial markets. Additionally supply parts to build systems such as backplanes, power supplies, storage modules, ethernet switches, development platforms and rugged standard (ATR) and custom based enclosures.

Quality
Trident Infosol is AS 9100C certified to promise the highest level of quality. Our manufacturing and testing facilities use the latest technologies and practices to promise the delivery of high quality products.

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