

AIRBORNE SYSTEMS | NAVAL SYSTEMS | LAND SYSTEMS | AEROSPACE SYSTEMS | EMBEDDED COMPUTING | OPEN ARCHITECTURE SOLUTIONS

VIRTUS
DEFENCE AND AEROSPACE

WHAT'S INSIDE

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VIRTUS
DEFENCE AND AEROSPACE

COMPANY OVERVIEW

Defence Electronics Manufacturer

Virtus Defence & Aerospace Private Limited is an Indian defence and aerospace technology company specialising in the design, development and manufacturing of rugged, semi-rugged and industrial-grade electronics, embedded and mechanical solutions for mission-critical applications.

The company delivers end-to-end engineering, system integration and manufacturing services supporting defence, aerospace, homeland security and industrial sectors with advanced, highly reliable products.



Indigenous
Design & Manufacturing

End - To - End
Design to deployment

4 Core Sectors
Defence - Aerospace - Industrial - HLS

OUR PURPOSE

Vision & Mission

OUR VISION

To be the trusted partner of choice for defence and aerospace organisations by delivering innovative, indigenous, and mission-critical technologies that empower customer success with reliability, excellence, and long-term commitment.

OUR MISSION

To be a trusted engineering and manufacturing partner by delivering innovative, customised, and mission-ready defence solutions that strengthen national capabilities and ensure lasting customer success.

Focus Areas

- **Defence / Military Applications**
- **Aerospace Systems**
- **Naval Applications**
- **Industrial Automation**

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OUR CAPABILITY

Offered Services

01

Design Services

Electronics and mechanical design — PCB, backplane, system engineering and FPGA hardware.

02

Manufacturing & Assembly Services

Precision machining, system integration and cable assembly turning designs into hardware.

03

Proto - Production & Testing Services

Hardened prototyping, qualification and scaled, quality-checked production.

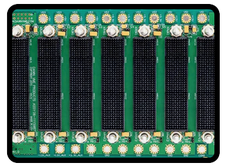
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OFFERED SERVICES

Design Services

Full-spectrum electronics and mechanical design, from architecture through hardware realisation.

PCB & Backplane Design



End-to-end complex PCB and custom backplane design with advanced signal integrity, robust power delivery and strict regulatory compliance.

FPGA - Based Microcontroller & Hardware Design



End-to-end complex PCB and custom backplane design with advanced signal integrity, robust power delivery and strict regulatory compliance.

Product Design & System Engineering



Engineering defence-ready products that balance long-term reliability, repeatable manufacturing and secure compatibility with mission-critical systems.

Mechanical Design



Rugged mechanical design engineered for military standards, shock and vibration resilience in extreme environments.

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OFFERED SERVICES

Manufacturing & Assembly Services

Precision manufacturing and assembly capability turning validated designs into field-ready hardware.

Machining & Sheet Metal Fabrication



Precision machining and sheet metal fabrication turning engineered designs into rugged, reliable components.

Custom Design & Build-to-print Assembly



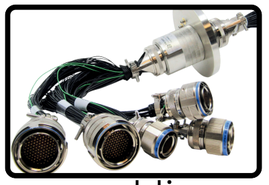
Custom and build-to-print assemblies crafted to strict military standards for shock, vibration and temperature extremes.

System & Sub-system Integration



Engineering defence-ready products that balance long-term reliability, repeatable manufacturing and secure compatibility with mission-critical systems.

Wire-Harness & Cable Assemblies



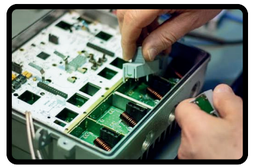
Rugged wire harness and cable assemblies engineered for reliable power and signal under shock and vibration.

OFFERED SERVICES

Proto - Production & Testing Services

Hardened prototypes, qualified through rigorous trials, scaled into repeatable production.

Prototype Development



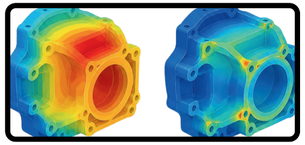
Iterating designs into hardened prototypes through harsh-environment trials and regulatory certification.

Production



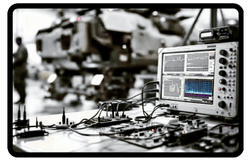
Scaled defence manufacturing transforming validated designs into reliable, repeatable, quality-checked assemblies.

Thermal & Structural Analysis



Simulating heat, vibration and impact response to strengthen electronics for battlefield use.

Testing, Qualification & Analysis



Rigorous testing and qualification that moves components from lab proof to field-certified systems.

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WHAT WE BUILD

Product Range

01



Embedded Computing & Boards

COM Express, FPGA Cards, Backplanes & Motherboards

02



Enclosures & Power

Mechanical Enclosures, Transit cases, Racks & PDUs

03



Processing & Networking

Processing Units, Rugged Chassis, LRUs & Switches

04



Displays & Consoles

Rugged Monitors, Panel PCs, Consoles & Tablets

05



Compute Platforms

TECs, BOX PCs, Custom Builds & Rugged servers

06



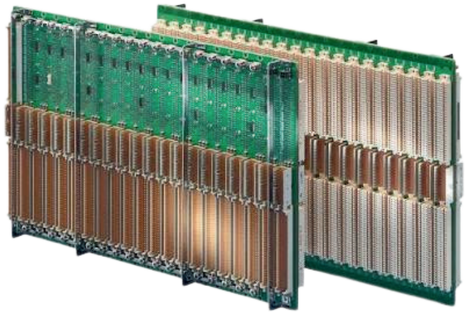
Workstations & Storage

Workstations, Panel PCs, NAS & Industrial storage

PRODUCT RANGE

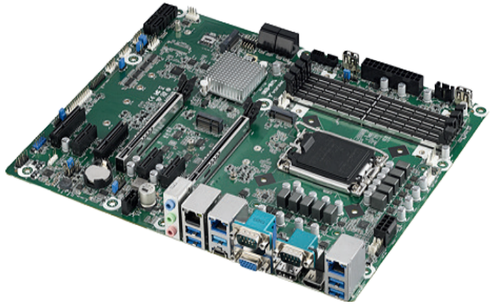
Products

EMBEDDED COMPUTING & BOARDS



Backplanes

Rugged VPX/VME backplanes delivering high-speed interconnects and precise timing for extreme conditions.



Motherboards

Hardened motherboard platforms with long lifecycle support and deterministic real-time processing.



COM Express Modules

Compact, high-performance COM Express modules built for harsh environments and sealed connectors for reliable operations



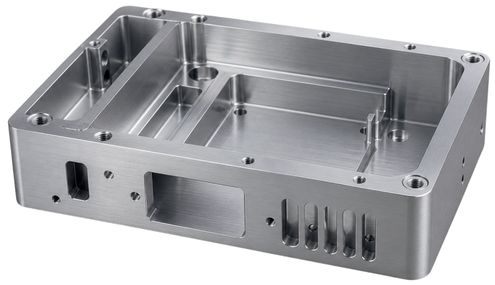
FPGA Based Cards (COTS Boards)

High-performance COTS embedded computing — SBC, GPGPU, SFPDP & FPGA boards.

PRODUCT RANGE

Products

ENCLOSURES & POWER



Mechanical Enclosures

Precision-machined enclosures customised for mounting, cooling and connectivity in demanding environments.



Transit Case

Rugged transit cases with shock-absorbing interiors and secure latching for safe field transport.



Racks & Sub-Racks

High-reliability racks with secure cable management and easy-access maintenance for mission-critical systems.



PDU & Power Distribution Board

Modular power management and fault isolation with hardened connectors for tactical deployments.

PRODUCT RANGE

Products

PROCESSING & NETWORKING



Processing Units

Rugged signal and radar processing units delivering low-latency, mission-ready performance.



Rugged Chassis (VPX, VME & cPCI)

Built-to-spec chassis with flexible module configurations, enhanced cooling and reinforced connectors.



LRUs

Field-replaceable LRUs with clear health reporting and certified reliability for airborne systems.



Ethernet Switch

Hardened switches with fiber & copper options for dependable data delivery in the field.

PRODUCT RANGE

Products

DISPLAYS & CONSOLES



Rugged Monitor

Sunlight-readable rugged monitors from 7" to 42", built for demanding military & industrial use.



Rugged Panel PC

Fanless, wide-temperature panel PC combining enterprise performance with military-grade protection.



Operator Consoles

Customised consoles integrating displays, computing and controls for continuous operation.



Rugged Tablet & Laptop

Drop-resistant, weatherproof tablets and laptops built for long field shifts.

PRODUCT RANGE

Products

COMPUTE PLATFORMS



Thermoelectric Cooler (TEC Unit)

Military-grade thermoelectric cooling with low EM footprint across wide temperature ranges.



Customized Products

Tailored electronics engineered to exact specifications for mission-critical use.



BOX PC

Compute-dense box PC engineered for uptime on factory floors and mobile platforms.



Rugged Server

Hardened server platforms with redundant subsystems for continuous field operation.

PRODUCT RANGE

Products

WORKSTATIONS & STORAGE



Workstation

High-speed workstations with multi-core processors for demanding simulation and rendering.



Panel PC

Shock and vibration-resistant panel PC for reliable 24/7 operation.



Network Attached Storage (NAS)

Enterprise-grade NAS delivering redundant storage and high-throughput data protection.



Industrial PC

Enterprise-grade industrial PC engineered for nonstop operation in extreme conditions.

Our Offerings

Transit Thermal Solutions



Rugged transit cases for secure transport and protection of mission-critical equipment, plus Thermoelectric Cooler (TEC) units for reliable thermal control in demanding defence and aerospace conditions.

COTS Boards Solutions



High-performance COTS embedded computing: SBC, GPGPU, SFPDP, FPGA and OEM boards. Strong sourcing for quick procurement, hassle-free integration, and dependable support for defence and aerospace missions.

IT Solutions



Tailored IT solutions that modernize infrastructure, support enterprise applications, and enable mission systems — improving operational efficiency and system reliability.

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OUR NETWORK

Strategic Collaborations

ADLINK
LEADING EDGE AI COMPUTING

ASRock

SHEELTRON
DIGITAL SYSTEMS PVT LTD

JIIN MING
INDUSTRY CO., LTD.



LET’S BUILD WHAT’S NEXT

Partner with Virtus for mission-critical engineering solutions

VIRTUS DEFENCE & AEROSPACE PVT. LTD. | BENGALURU, INDIA