



Compact Power for Critical Missions:

DiGiCOR solution for a powerful solution in 3D CT Scans workloads



Solution

GPU Storage system



Industry

Defense

Overview

A defence contractor working with the Australian Defence Force partnered with DiGiCOR to upgrade its infrastructure with a compact yet powerful system. They required a solution that could house multiple A100 GPUs and add-on cards in a tight space while maintaining high performance and reliability. DiGiCOR responded by deploying the ASUS ESC4000 G4X 2U configured to deliver intensive GPU workloads with efficiency and density.



Objectives

- Deploy a 2U high-performance server that balances footprint and GPU capacity.
- Support more than two A100 GPUs and add-on cards within a single chassis without compromising performance.
- Deliver a solution with density, flexibility, and ease of deployment under strict defence standards.



Results

- The ESC4000 G4X exceeded performance expectations, supporting multiple GPUs while maintaining compact form.
- System's density and flexibility made it an ideal fit for constrained environments.
- Smooth and efficient deployment.

Background

The company is a leading Australian technology company that specialises in designing, constructing, and managing critical IT infrastructure and communication systems to address intricate business needs. Operating through three main divisions—ICT, MIS, and People—it has earned trust as a longstanding partner of the Australian Defence Force, offering innovative solutions for battlefield information and communication challenges for over two decades.

Additionally, the company caters to corporate, government, and emergency service sectors, delivering intelligent business systems, integration services, information management, process automation, security solutions, and comprehensive support. With a dedicated team of over 150 technical experts stationed in Canberra and Melbourne, the company distinguishes itself as an Australian-owned and operated entity, setting benchmarks in ICT innovation. Anchored in values of respect, excellence, agility, and professionalism, it remains deeply committed to safeguarding and empowering its community.



The Challenge

Prior to finding the ASUS ESC4000 G4X High-Performance 2U, the client encountered significant hurdles in their infrastructure. They needed a solution that provided a compact footprint yet could accommodate over two A100 GPUs and additional add-on AOCs within one system. The aim was to strike a balance between density and performance without sacrificing either aspect.

Objectives

- The client sought a system that offered a compact footprint while also having the capability to support more than two A100 GPUs and other Add-On AOCs within a single system.
- The goal was to find a balance between density and performance without compromising on either.

How DiGiCOR helped

A client required a powerful GPU solution to process 3D CT scans with high memory demands. DiGiCOR introduced a cost-effective, high-performance system tailored to their specific workload needs. Here is how we implement our solutions:

1. Needs assessment: Identified the requirement for large GPU memory to handle three-dimensional CT scan workloads.
2. Solution design: Recommended the ASUS ESC4000 G4X High Performance 2U server, configured with an NVIDIA Quadro RTX 8000 GPU.
3. Optimisation: Chose the Quadro RTX 8000 for its large memory capacity and cost-effectiveness, prioritising performance over training speed since time was not critical.

DiGiCOR Custom Solution

ASUS ESC4000 G4X

- 2 Intel® Xeon® Gold 5220R Processor 24-Core 2.2GHz 35.75MB Cache (150W)
- A robust 5-year warranty
- 512 GB of DDR4 2933 ECC RDIMM RAM & 960GB of SSD
- 3 NVIDIA A100 80GB PCI-e Passives per system

The Result

After implementation, the client experienced immediate and impressive results. The performance of the ASUS ESC4000 G4X exceeded their expectations. The system's flexibility and density profile were particularly notable, making it an ideal fit for their needs. The implementation process was described as "easy without issue," underscoring the system's user-friendliness and the service provider's efficiency.

Client Feedbacks:

- Reason for Purchase: The primary motivation was the system's design, which offered optimal density and the ability to support the A100 GPUs.
- Factors Influencing Purchases: Price, features, ease of use, and density were the main factors that influenced the decision to invest in the ASUS ESC4000 G4X.
- Benefits Experienced: The system's performance was on par or even better than anticipated.
- Achieving Business Goals: The ASUS ESC4000 G4X backs theoretical promises with practical outcomes, aiding in achieving business objectives.
- Useful Features: The system's flexibility and density profile were highlighted as its most beneficial features.
- Recommendation: For those considering the ASUS ESC4000 G4X, the message is clear: "We will deliver good results."

Conclusion

The ASUS ESC4000 G4X High Performance 2U, configured by the service provider, proved to be a transformative solution for the client. It addressed their challenges head-on, delivering exceptional performance, flexibility, and density. With its seamless implementation and the backing of a trusted service provider, the client found a solution that truly delivered on its promises.

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About DiGiCOR

DiGiCOR was founded in 1997 with the goal of becoming a major player in the niche ICT infrastructure market in Australia and New Zealand. Our focus is in providing server, data storage, workstation, networking, edge computing, and IoT solutions. From designing IT infrastructure to deploying the solution, we cover the whole journey for our customers. Traditionally, we were known for Supermicro solutions, but in recent years we have expanded our partnerships to include servers, storage, workstations, and networking from Supermicro, ASUS, Chenbro, Seagate, iXsystems, Hitachi-Vantara, and Juniper Networks.



What can DiGiCOR do for Your Business?

Contact DiGiCOR to deploy compact, mission-critical GPU solutions with density and reliability.

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