



**galleon**  
embedded computing

## MULTI-PURPOSE GROUND VEHICLE COMPUTER

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 Galleon Embedded Computing

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*GVC provides all of the connectivity required by the display controllers, processing required for the combat management system, and the removable memory for the NAS in a single part number, small enough to fit in the spaces available around the vehicle.*

### Executive Summary

Ground Vehicle computers come in all shapes and sizes, with many different tasks to be performed. When each product is different, spares provision becomes complicated. An alternative approach for a tracked vehicle integration uses a single computer product for multiple different functions inside the vehicle. Galleon Embedded Computing's Ground Vehicle Computer (GVC) was created to provide just the right mixture of processing, IO and data storage to be able to fulfil multiple functions in a single unit.

### Challenges

The application required a single configuration of computer which would perform multiple functions - combat management, vehicle status monitoring, Network Attached Storage (NAS), and video processing for multiple crew stations. Size, Weight, Power and Cost (SWaP-C) also needed to be minimised.

Galleon designed the GVC to provide all of the connectivity required by the display controllers, processing required for the combat management system, and the removable memory for the NAS in a single part number, small enough to fit in the spaces available around the vehicle.

The application also required excellent reliability despite the extreme environment - wide temperature variations, vibration, shock, wash down, sand, and MIL-STD-1275 power supply.



*Multiple GVC are fitted per vehicle to host different application control functionality such as Vehicle Management, Battle Management, Situational Awareness and Navigation*



*The GVC operates under extreme environmental conditions, mitigating risks associated with electronics reliability.*

## How The Product Helped

Galleon's customer can outfit the tracked vehicle with a system which only has one type of spare per vehicle for 5 different functions. The GVC fits into the tiny spaces available inside the vehicle, and it operates under extreme environmental conditions, mitigating risks associated with electronics reliability.

By using the same product for multiple functions, Galleon's customer could simplify the software interface required for those functions.

Galleon's GVC provides easy-access removable storage, simplifying the process for transferring data to and from the vehicle. With data security a standard requirement, the GVC also provides FIPS-140 based encryption, based on the same encryption solutions deployed in many of Galleon's other products.

## Results, Return on Investment and Future Plans

Galleon's GVC allows system integrators to simplify spares provisions by using the same product for multiple different functions, whilst maintaining the SWaP optimised packaging and design necessary for fitting into the small spaces available.

Contact Galleon for details on Victory and GVA options, certified encryption, and nuclear survivability.

