naval
applications

Will your technology choices still be seaworthy in 20 years?

It takes careful planning to deploy a system that can deliver high performance throughout its lifetime.

Choosing technology is never easy, but it's particularly difficult for naval applications because many navy systems remain in service for decades. How can you deliver high performance today, while still protecting your investments against the effects of obsolescence? Is there a way to preserve your certifications, even through multiple technology refreshes?

Fortunately, the answer is a resounding "Yes." Our careful design process often allows us to change processor and memory types without changing a board's physical or electrical characteristics. By maintaining form, fit and function for multiple generations, you can minimize re-qualification following an upgrade. Our Board Support Packages provide a stable software interface between the application and the underlying hardware, also minimizing revisions to application software.

Some naval applications require rugged hardware, and our products are designed to be rugged right from the start. We have perfected the development of thermal and mechanical technology coupled with test and qualification techniques to bring the best available COTS technology to the rugged market.

As part of GE, we offer you direct access to invaluable resources at sister divisions such as world-renown GE Research.

We've proven ourselves on the high seas. And beneath them.

Our hardware has been deployed for decades by leading prime contractors in some of their most high-profile programs.

You can turn to us knowing we have the experience to immediately support the development of your latest application, because that's exactly what we've been doing for so many years.

Our expertise reaches from individual boards through fully integrated systems. It includes decades of design, testing and validation of rugged naval electronics. Our real-world learning from deployed systems gives us insights that simply cannot be gleaned from laboratory testing.

Our proven Program Management process is designed to execute on our core competencies: Contract Management, Application Domain Knowledge, System Architecture, Thermal Management, Integration, Validation and Verification, Configuration Management, Engineering Process and Procedures, Program Lifecycle Management (PLM), Logistics and Reliability.

Major naval programs that have selected GE Intelligent Platforms:
→ ADCAP (Raytheon)
→ SQQ-89 (Lockheed Martin)
→ ALFS/LAMPS (Raytheon)
→ LFAS (DRA)
→ NSSN-SIM/STIM (DSR)
→ P3 Upgrade (Boeing)
→ P8 MMA (Boeing)
→ Firescout (Northrop Grumman)
→ AN/BPS-16 (Northrop Grumman)

Computing power drives the latest naval applications.

Our Naval Engineering Group has extensive experience with the sophisticated electronics that are essential to many naval applications.

Whether it is a shipboard or satellite communications network, radar, sonar or ballistic prediction, GE Intelligent Platforms has the relevant hardware, software and experience. We offer the latest rugged boards, systems and development tools for even the most demanding multiprocessing applications.

Unmanned Vehicles

Complex naval applications which strive for truly autonomous operation demand a great deal of rugged processing horsepower, which is one of our core competencies. And our extensive experience with unmanned aircraft also provides a tremendous benefit for

designers who are creating these types of applications. The FireScout UAV is an excellent example of this, as it employs several of our systems for applications such as mission control, navigation and fire control.

Sonar

If you are developing a sonar application, you can turn to us with complete assurance that we know sonar. Our reputation for design excellence has made us the peferred choice for naval fleets across the globe. Our solutions are deployed on over 400 vessels—including the US Navy's Virginia class submarine—and deployed in such major programs as SQQ-89 and the ARCI modernization effort.

Radar

Radar systems designers have been quick to embrace more capable hardware and easier-to-use software. A new generation of multicore processors, plus serial switched fabrics, have delivered enormous improvements. There is also a growing requirement for scalability,

a need to adapt to constantly changing applications, and the absolute necessity of fielding new applications as rapidly as possible. We understand these pressures, and have the hardware and application development tools to help you succeed.

Ballistic Prediction

Our ballistic predictors and system interface modules are employed in a number of naval gun control systems. They provide full ballistic prediction, featuring comprehensive compensation for all parameters to provide high first round hit probability. Versions are available for all types and caliber of gun and ammunition.

Dynamic Gun Alignment

The Dynamic Gun Alignment system is an automated, video-based solution for the assessment of weapon system alignment. It provides accurate measurement of both static and dynamic alignment, and is suitable for all naval gun mountings.

Missile Launch Control

As a close-in ship defense system, it is crucial for the RIM-116 Rolling Airframe Missile (RAM) to have extremely precise, real time targeting information. We were able to provide the necessary processing and networking speed to upgrade the Launch Control System.

As an additional benefit, our hardware solution offers a clear technology insertion path which will simplify future improvements to the system.

Communications

The ability to maintain fast, reliable and secure communication links on board, and with the fleet, is supported by our wide range of communication technologies including Software Defined Radio transceivers and standards-based systems, switches and I/O modules.

To learn more about GE Intelligent Platforms Naval Applications, visit www.ge-ip.com

Battle-tested boards, systems and software tools.

We offer you one of the largest selections of COTS hardware available anywhere, so we are able to meet your needs for almost any type of application. In addition, our deep experience with both surface and submarine vessels helps us better understand the unique demands of naval systems engineering.

Integrated Display Units

Rugged touchscreen displays and computers.
→ Digital Map Electronics
→ Situational Awareness
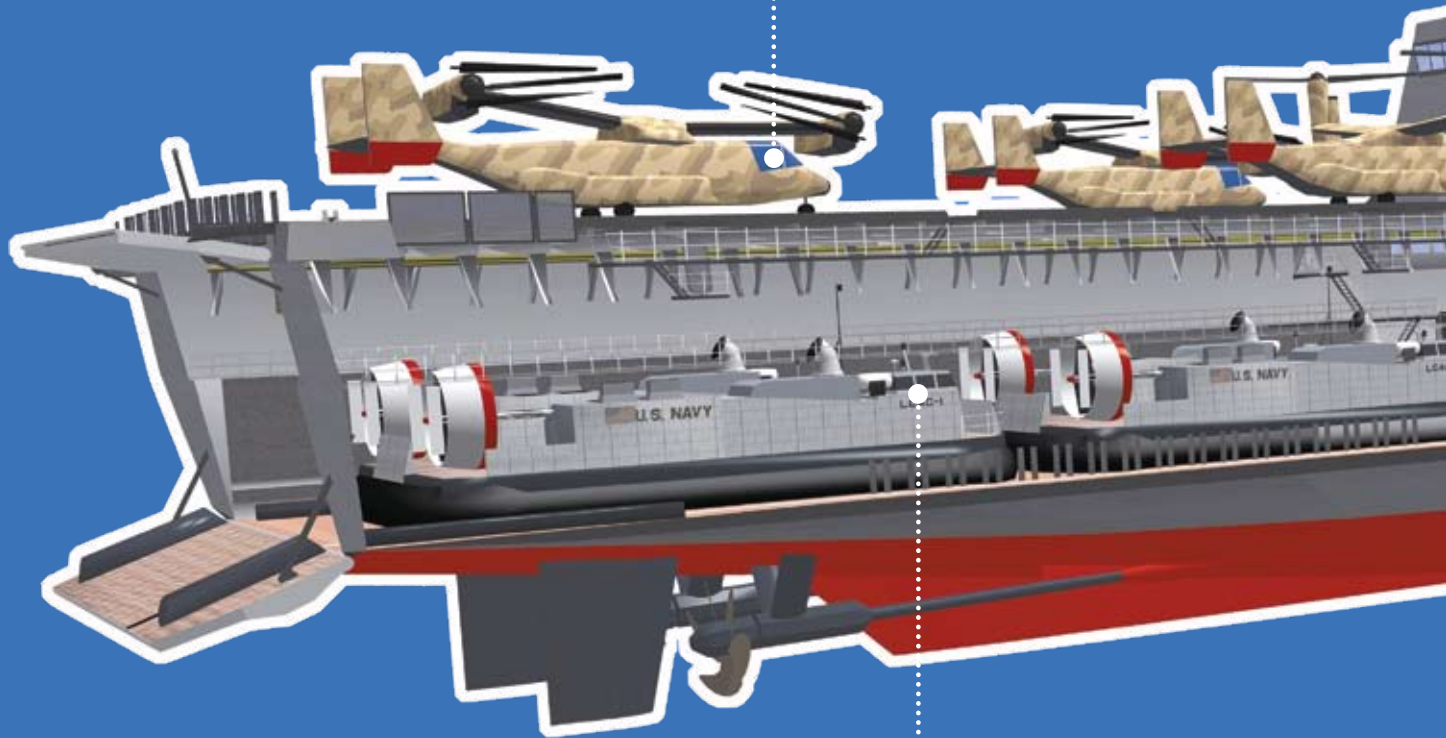
Communications and IFF

Rugged Software Defined Radio transceiver modules.

Shipboard Network Control

Monitoring and alarming for multiple systems.
Network traffic monitoring and analysis.
→ Navigational and Guidance Control
→ Hull and Turret Processing Unit
→ Integrated Embedded Training

Target Detection and Tracking

Control of cameras, antennas and other sensors
for situational awareness, mine detection and
similar applications
→ Sensor Control
→ System FLIR
→ Countermeasure Systems
→ Image Processing

Sensor Processing

Digitizers and DSPs in a range of form factors,
plus software development tools.
→ ADC/DAC Modules
→ Multiprocessors and FPGAs
→ Signal Processing Libraries
→ Acoustic Acquisition Servers

Fire Control Computers

→ Target Acquisition
→ Image Stabilization
→ Image Fusion
→ Systems Interfaces
→ Ballistic Prediction
→ Complete FIre Control Solutions

GE Intelligent Platforms Contact Information

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