Aerospace/Avionics Compliance

ISO

- » 9001:2015 QMS Certified
- » 31000 (Risk)
- » 15909 (Petri nets)
- » 10303 (Automation)
- » 1540/12384 (Electrical)
- » 9662 (Environmental)

RTCA

- » DO-160; DO-178; DO-248; DO-254; DO-275

Certification Authorities Software Team

- » CAST-10; CAST-17; CAST-29

IEC

- » 62304 (SDLC)

FAA/EASA Certifications

Our team of experts will help you get your products off the ground—and stay there

General Digital Corporation
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E-mail gdc_info@generaldigital.com

ISO
9001:2015
QUALITY
MANAGEMENT
SYSTEM
CERTIFIED

SOFTWARE ENGINEERING SERVICES

DEVELOPMENT AND TESTING FOR THE AEROSPACE INDUSTRY

GD GENERAL DIGITAL

Engineering What's Next

Capabilities

SOFTWARE DEVELOPMENT

- » Requirements development and analysis
- » Retrofitting tools into legacy systems
- » Project coordination
- » Updating software to be agency compatible
- » Reverse engineering software to existing hardware
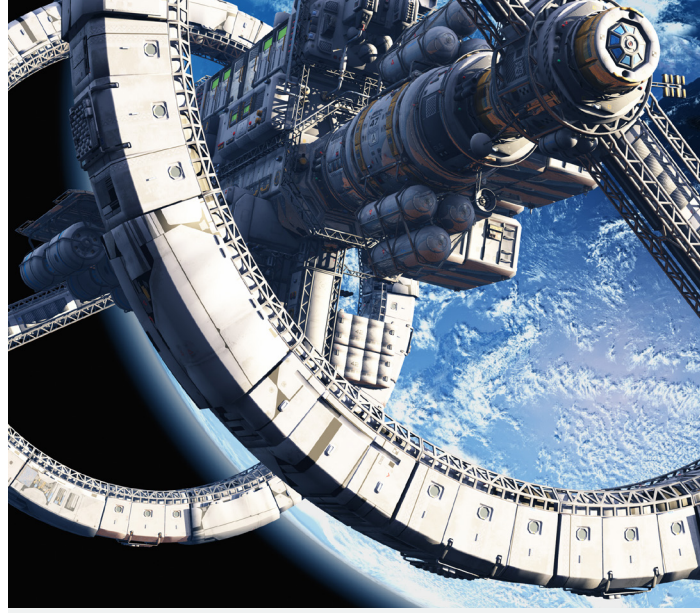- » Documentation

INDEPENDENT VERIFICATION & VALIDATION

- » Requirements development and analysis
- » Tool validation/qualification
- » Test planning and execution
  - › System testing
  - › Regression testing
  - › Integration testing (HSIT, SSIT)
  - › Unit/module testing for safety-critical embedded systems
  - › Code review
- » Project coordination
- » Discrepancy reporting & resolution
- » Results reporting

General Digital ensures full traceability to the requirements—every time

HARDWARE ENGINEERING

- » Electronics development
- » Mechanical development
- » Systems integration services
- » Production services

History

Safety-critical software development and testing has been one of our core competencies since our founding in 1973.

In the nearly 50 years that we've provided safety-critical software engineering services, we've never once validated a project that failed a submission.

Prior to the establishment of DO-178, there was still an urgent need for the development, verification, and validation of embedded software in avionics equipment. Our location in central Connecticut, just minutes from some of the largest military and commercial aviation companies in the world, gave us a unique opportunity to establish ourselves as the market leader in this evolving industry.

We act as an extension of your engineering department, able to provide as much (or as little) assistance as required.

We've completed projects ranging from a few hours of testing to a full software and hardware redesign in support of a successful DO-178C certification.

IV&V, Automated

Our proprietary suite of unit testing software, Gen**IViVe**™, facilitates software IV&V by automating manual steps. In addition, it creates result files that contain clear, concise documentation easily understood by our customers and certifying authorities.

Gen**IViVe** standardizes quality by reducing user error, ensuring full traceability to the requirements—every time.

Gen**IViVe** interfaces with tools such as VectorCAST, LDRA, and TRACE32 to create clear, concise documentation that gives auditors a transparent picture of what is being tested.

While the FAA and other certifying bodies do not define reporting standards, our processes and results are consistently praised for reporting format, traceability, and maintaining compliance.

Developed—and proven—to work in aviation and other certified environments, Gen**IViVe** continues to evolve, putting us many nautical miles ahead of the competition when it comes to embedded software development and testing for aerospace applications.

10-YEAR ESCAPE RATE HISTORY

Year	Escape Rate
2011	0.00%
2012	0.43%
2013	0.00%
2014	0.00%
2015	0.35%
2016	0.16%
2017	0.24%
2018	0.02%
2019	0.03%
2020	0.11%

The dotted line represents General Digital's ISO 9001:2015 goal of maintaining less than 0.5% escapes annually.