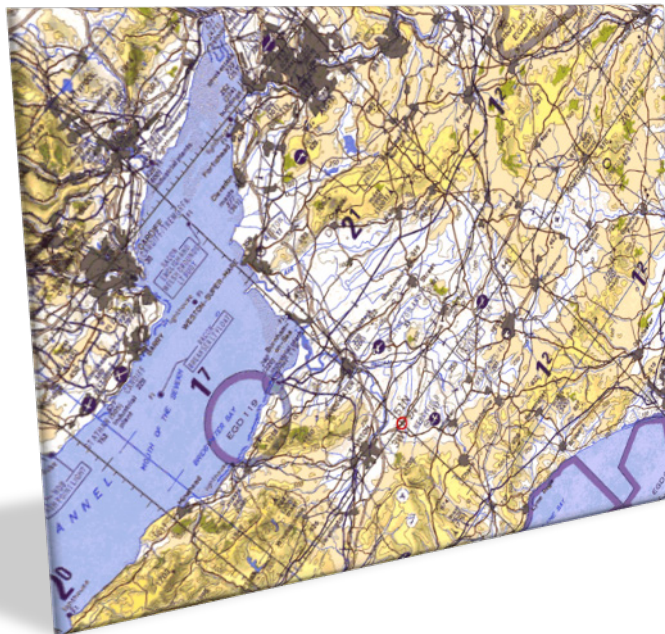


CERTIFIABLE SOFTMAP™

For high-integrity digital mapping



Taking your missions from certifiable to certified

For systems that require high-integrity, software-only, digital map function.

Designed based on end-user classifications

Features:

- Tailored to your mission needs
- Based on a detailed analysis of end use hazard classifications
- A reusable software component to provide maximum platform independence
- Developed through full iteration of the software lifecycle
- Option for additional features
- Supplied with pack to prove certification
- Developed in conjunction with the Federal Aviation Administration designated engineering representative.

Certification

The Certifiable SoftMap has been developed through a full iteration of the software lifecycle, including completed stage of involvement (SOI) audits (one, two, three and four).

A candidate embedded system, both in hardware and software, has been used to develop this enhanced software. This ensured that the Certifiable SoftMap could be fully verified with a formal test and dynamic analysis, whilst operating in the embedded environment it was designed for.

General Dynamics Mission Systems is committed to working with the system integrator for each uniquely certified system; ensuring the system-specific hazards, hardware and software environments, and the functionality for your platform are all considered for your specific need. Based on this work, General Dynamics Mission Systems will produce the final tailored Certifiable SoftMap certification pack, including all the required documentary evidence, for the Certifiable SoftMap to excel in your system.

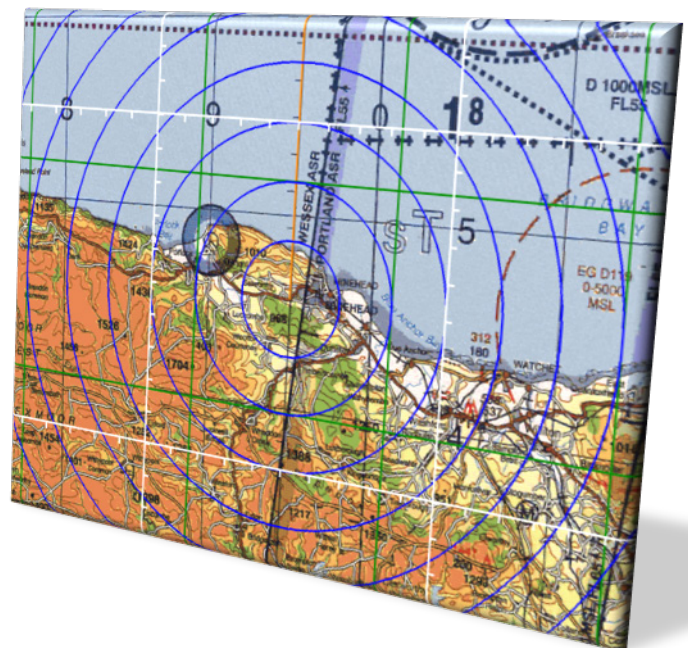


Tailorable

The Certifiable SoftMap is built around a tightly controlled core of software, providing the key functions of a digital map:

- Smooth moving or fixed position, slew-able display
- Centred or de-centred
- North up or rotated
- Raster map support (CADRG)
- Zooming
- Heading indicator
- Three overlay symbols
- Grids (distance, latitude and longitude)
- Range rings

Additional features can be added as required, including bespoke map formats. Please contact us to discuss your specific functional requirements.

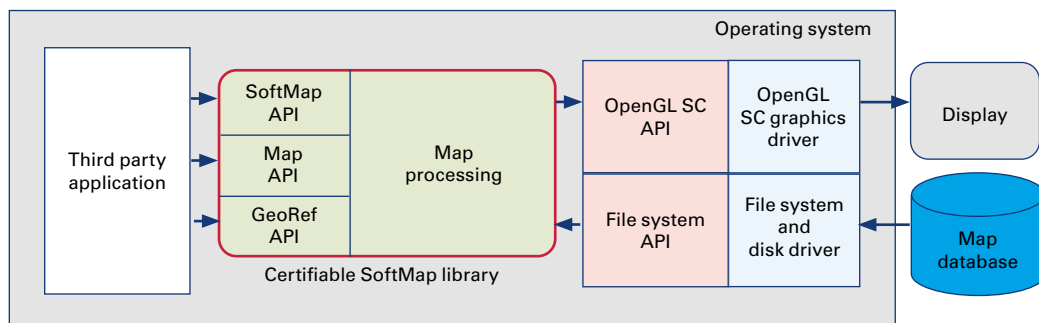


Reusable

To keep the costs of certification as low as possible, Certifiable SoftMap has been developed as a reusable software component (RSC), in accordance with AC20-148. This means that all documents, lifecycle verification artefacts and tests harnesses have been developed to be easily tailored to support your system certification.

Integration

The Certifiable SoftMap is a software library that requires integrating into the user interface (UI) application. The Certifiable SoftMap provides three application programming interfaces (APIs) to the UI application. These APIs allow the UI application to provide positional and control data into the Certifiable SoftMap library in real-time. These APIs also provide a wide range of options to update and customise the displayed map output (eg zooming, movement, rotation etc). Additionally, the GeoRef API allows the UI application to geo-reference third-party overlays and symbols to the displayed map image.



Minimal dependencies

As a reusable software component (RSC), and to minimise the impact of introducing the Certifiable SoftMap into the integrator's certifiable system, the Certifiable SoftMap has been designed to have minimal external dependencies.

On the input side, the Certifiable SoftMap requires access to a standard file system, hosting map data contained within a bespoke map database. The bespoke map database complies with a proprietary interface specification, defining the optimised and compressed data format. This map database can be produced using the SoftMap Studio map database preparation software.

On the output side, the Certifiable SoftMap utilises the CoreAVI OpenGL Safety Certifiable (SC) subset graphics driver (ArgusCore SC), providing a direct route to a proven certifiable graphics software and hardware solution for your system.



Proven pedigree

We have developed the Certifiable SoftMap software product from our extensive experience with SoftMap digital products (SoftMap Run-Time Library and SoftMap Studio).

The SoftMap Run-Time Library is a fully featured, software-only digital map solution, offering support for a multitude of map formats and different digital map functions (including 3D visualisation) which has been deployed in numerous fixed wing and rotary-winged. The SoftMap Run-Time Library can be supplied with DO-178B DAL D artefacts (as required).

SoftMap Studio is a Microsoft Windows application that gives the user full control over digital map, formats and prepares the SoftMap map database for use in the embedded environment.

