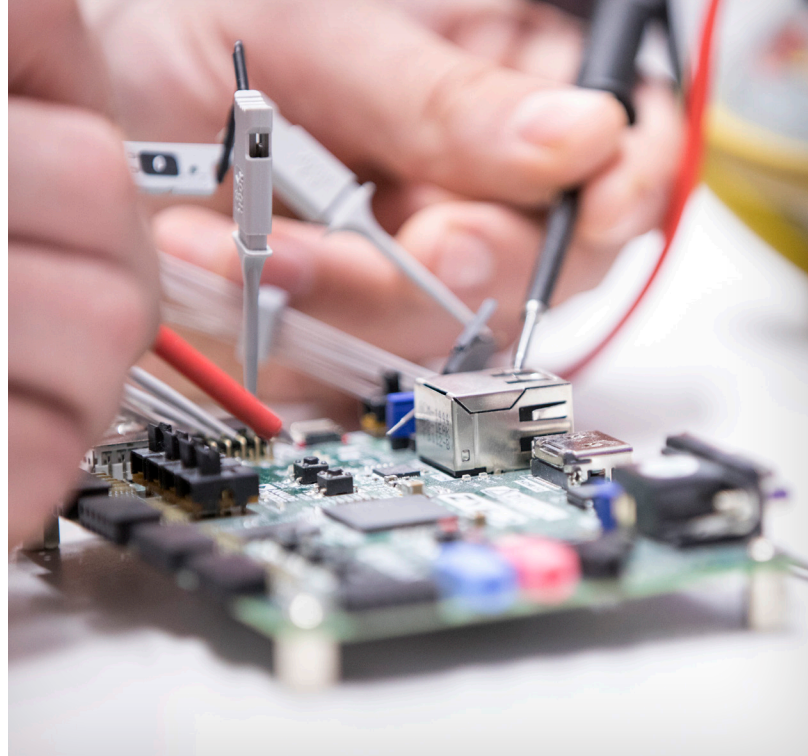




Many fixed and rotary wing aircraft, specialized naval vessels, and critical ground systems were developed decades ago, but remain both viable and functional with ongoing maintenance and sustainment activity. When critical components become no longer supported by their original equipment manufacturer, GS Engineering steps in to redevelop these obsolete parts. Leveraging proven mechanical and electrical engineering expertise, we work from physical specimens and reverse engineer the geometry using our in-house 3D scanning technology or work directly from original prints.

- Portable high-accuracy digitizing arm, hard probe, & 3D laser scanning
- Direct definition for additive manufacturing, high-quality surfacing, or native CAD parametric solid modeling from scan data
- Metallurgical Analysis: mechanical testing, scanning electron microscopy, surface hardness, & optical emission spectroscopy
- Finite Element Analysis: Validate use of new materials when legacy materials are no longer available
- Creation of new Technical Data Package (TDP) up to Government Level III



ANALYZE. UPDATE. REDESIGN.
Replacing obsolete TTL or CMOS logic components with faster, more efficient technology while still considering EMI/EMC ramifications.

FUNCTIONAL REVERSE ENGINEERING
Analyze analog and digital circuitry, printed circuit boards, and related hardware to determine the functional operation of electronics and re-create using updated components and equipment.

AVIONICS UPGRADE

Performing VDHL firmware upgrades and maintaining certification standards and re-certification.

SPACE REDUCTION

Re-design for smaller footprint components, smaller packaging, and lighter weight while maintaining heat transfer and power dissipation.



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GSENGINEERING.COM/OBSOLESCENCE

ENGINEERING WITH PURPOSE.