GT-SUITE is the leading 0D/1D/3D multi-physics CAE system simulation software developed by Gamma Technologies. GT supplies a comprehensive set of validated component libraries which simulates the physics of fluid, flow, thermal, mechanical, electrical, magnetic, chemistry, and controls. This deep physics approach offers solutions across multiple disciplines from system to component level.

Our Expertise

- Integrated Systems
- Thermal Management
- Multi-Body Mechanics
- Propulsion Systems
- Fluid & Hydraulic Systems
- Environmental Control
- Electric, Hybrid, Battery
- Fuel Systems
- Landing Gears
- Cryogenic Systems

Since 1994, Gamma Technologies has set the standard in system simulation, thanks largely to solving deep multi-physics with an easy to use interface. GT-SUITE’s multi-physics approach to simulation empowers aerospace engineers to tackle their design and modeling challenges.
Environmental Control Systems (ECS)

- Model the complete ECS, including air distribution systems, liquid circuits, and thermal masses
- Fast and efficient model building: Quickly convert 3D CAD to system-level simulation models
- 3D cabin modeling provides temperature, humidity, and airflow results
- Fully parametric for quick and easy model changes
- Air cycle or vapor compression cycle (two-phase flow) systems

Fuel Systems

- Transient fuel transport, pressurization, distribution, inerting, heat transfer, fuel surface tracing, and more
- Define aircraft missions and environment conditions, including altitude, attitude, and 3D accelerations
- Fueling, refueling, defueling, venting of complete systems
- Study interactions with thermal management systems, for example using the fuel tank as a heat sink

Propulsion and Hybrid Electric

- Simulate gas turbine, electric, and hybrid propulsion systems
- Modular model building approach allows modeling of all major engine and non-standard configurations
- Integrate propulsion system with connected systems: thermal management, ECS, APU, fuel systems, and more
- Build any hybrid configuration with any level of electrification
- Analyze batteries and electrical systems, including performance predicted by battery chemistry and aging

Tank Thermal Stratification

- Industry-leading 2-phase, thermal-fluid transient solution
- Extensive fluid properties database provided by NIST
- Link fluid system with thermal FE structures
- Study entire propulsion systems for line priming, tank charging (filling), water hammer, tank stratification and more

Cryogenic Systems

- Industry-leading 2-phase, thermal-fluid transient solution
- Extensive fluid properties database provided by NIST
- Link fluid system with thermal FE structures
- Study entire propulsion systems for line priming, tank charging (filling), water hammer, tank stratification and more