General Atomics Electromagnetic Systems’ (GA-EMS) satellite platforms, payloads, and integrated support systems help customers demonstrate exciting technologies, launch challenging missions, and create new opportunities to explore the possibilities of space.
SATTELITE AND SPACE SYSTEMS

GA-EMS offers modular and scalable platform designs, integrated system solutions, and a history of operational flight experience to support defense, civil, commercial, and academic mission requirements.

SATELLITE EXPERTISE

- Orbital Test Bed (OTB) hosted payload platforms
- Small satellites (up to 600 kg)
- High reliability, mission-capable CubeSats – 3U, 6U, 12U

SATELLITES AND PAYLOADS – FROM CONCEPT TO LAUNCH

GA-EMS offers tailored solutions leveraging flight-proven technologies for small satellites. We work closely with customers to define and analyze mission and payload requirements to design an optimized solution. Our customized satellite platforms take advantage of scalable architectures, modular designs, and volume-efficient packaging to increase flight opportunities at a lower cost. We support customers seeking solutions from single build spacecraft to more challenging constellation-sized orders.

GA-EMS adheres to stringent quality control standards, is AS9100 certified, and possesses the capabilities and expertise to manufacture, test, integrate, and launch satellites to meet stringent mission requirements.

- Mission analysis/orbital mechanics
- Full system design, modeling, simulation, analysis and test
- Payload design, integration, and test
- Mechanical and thermal design, analysis, and test
- Propulsion system design, analysis, and test
- Guidance, Navigation and Control (GN&C) design, modeling, simulation, and test
- Communication systems analysis, integration, and test
- Satellite avionics and power systems design, build, and test

MISSIONS AND PAYLOADS

- Earth observation
- Communications including Lasercomm
- Position, Navigation and Timing (PNT)
- Remote sensing
- SIGINT and RF missions
- Security and surveillance
- Technology demonstration
- Science

MISSION SUPPORT AND LAUNCH SERVICES

GA-EMS provides satellite ground systems and operations solutions to support full mission lifecycles.

- Ground systems for operation
  - Antennas, components (transportable, network compatible)
  - Ground and flight software design, integration, and test
  - Mission management
  - On-orbit operations
  - Image processing, storage, and archive
  - Installation and training
- Full Hardware-in-the-Loop (HWIL) modeling and simulation
- Mission planning and analysis
- Constellation and communications design and analysis
- Launch integration, negotiation and management