

Advanced Technology and Engineering **Solutions**



Delivering a New Era of Engineering Solutions



With the acquisition of Colorado Engineering Inc. (CEI), CAES offers a full range of systems engineering, RF, mixed signal, digital, High Performance Computing (HPC) technologies and engineering services for the most challenging military and aerospace systems. CAES pioneers advances in microelectronics at the board and processing level and combines these innovations with agile systems and digital engineering supporting next generation land, sea, air and space solutions. Embracing the industry through digital transformation enables CAES to bring solutions to the warfighter faster than ever before.

Speed to Market through Agile Engineering

Leveraging the legacy of Colorado Engineering Inc.'s agile technology development process, CAES offers a proven responsive, quick-reaction development methodology leveraging the best combination of commercial off-the-shelf and customized products. This enables customers to develop complex solutions in a matter of weeks and months, not years.

We are a preferred design partner for industry-leading RF, digital and analog technology providers. Our partner alliances allow us to offer a wide range of the highest quality components for our customers and collaborative efforts accelerate your time to market.

Analog Devices

• AMD

• Intel

- NVIDIA Corporation
- NXP
- Texas Instruments

- Infineon Technologies
- Lattice Semiconductor
- Microchip Technology

Systems Engineering

CAES has decades of experience designing, modeling and manufacturing sensor solutions for space constrained SWaP-C solutions to large below deck applications. We offer solutions for all domains such as radar, EW, space, missiles, munitions and hypersonic applications as well as from DC up to 340 GHz and EO/IR. This breadth of capability brings highly differentiated solutions as a partner of choice for our customers and bring next generation technologies to market.

Helping the United States military pioneer the usage of Model-Based Systems Engineering (MBSE) design methodology, CAES is leading the industry's digital transformation. MBSE utilizes real-time domain models that allow cross-functional teams to enter a collaborative design environment simultaneously, significantly reducing system design times.





Digital Engineering

CAES has manufactured a number of custom solutions utilizing the industry's highest end ADC/DACs and computing technologies available in the market today. With expertise in digital hardware, software and firmware, we have developed some of the most complex boards for both military and commercial applications, such as 5G.

Capabilities include:

- Mixed Signal
- Digital Signal Processing (HW/SW/FW)

Applications include:

- Radar Commercial, Industrial, Automotive & Military
- Communications 5G
- Electronic Warfare (EW)
- Radar System Emulation

- Algorithms
- Testing, Training & Optimization
- Sense, Track & Avoid
- Seeker sensor and fuze solutions
- Datalinks & Telemetry

Artificial Intelligence (AI) & Machine Learning (ML)

CAES recognizes speed is an absolute necessity in today's battlefield. Bringing intelligent decision making to the sensors Edge is more critical than ever. AI & ML helps enable solutions by relieving dependency on human interaction and resolving downstream data processing bottlenecks. CAES has implemented a number of sensor solutions for both military and commercial applications.

Applications include:

- Target recognition
- Predictive analysis
- Neural Networks
- Machine Learning
- Big Data Analytics
- Genetic Algorithms
- Autonomous Mission Planning
- Intelligent Agent Architectures
- AI Enabled Sensor Fusion Networks
- Gesture Recognition Radar & Camera
- Fuzzy Systems (e.g. Collision Avoidance)
- · Cognitive Systems (EW, autonomous systems)
- Object Profiling/Tracking (EO, IR, Radar, Lidar)



CAES is a leading RF and high performance computing provider, offering cutting-edge technology solutions for commercial, industrial, automotive, aerospace and defense systems.



We engineer solutions for the world's most critical missions.



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