

KENAI DEFENSE

Capabilities Statement

Dynamic Camouflage

Adaptive Surface Technology for Next-Generation Military Concealment

Kenai Defense develops advanced dynamic camouflage technologies that enable military assets to adapt their visual appearance in real time to changing operational environments. Our solutions enhance concealment across diverse terrains and weather conditions, helping reduce detection risk and improve mission effectiveness.

Designed for modern military operations, our dynamic camouflage systems allow assets to transition seamlessly between environments without requiring camouflage replacement, repainting, or additional logistical support.

Operational Benefits

Our dynamic camouflage provides adaptive control over the visual appearance of asset surfaces, allowing them to blend into changing surroundings. Whether transitioning between forest, desert, urban, or arctic environments, assets can maintain effective concealment while remaining operational.

This technology can be integrated into a wide range of flexible and rigid surfaces, providing versatile deployment options across numerous military platforms.

Key benefits

- Adaptive concealment across forests, desert, urban, and arctic environments
- Reduced visual detection and enhanced survivability
- Eliminates the need for manual camouflage replacement or repainting
- Compatible with flexible and rigid surface materials
- Supports rapid deployment and changing mission requirements
- Reduces logistical burden and maintenance requirements

Example Applications

- UAVs, aircraft, missiles, ground-vehicles, and naval assets
- Tactical vehicles, weapon systems, and logistics assets
- Deployable structures such as billeting and maintenance facilities
- Items used and worn by soldiers
- Forward operating assets used for communication and surveillance

Value to Customers

Kenai Defense provides adaptive camouflage capability that reduces dependence on fixed, environment-specific concealment solutions. By enabling real-time adjustment of surface appearance, assets maintain effective concealment across changing operational environments without additional material changes or field reconfiguration.

This capability reduces logistical complexity associated with repainting, redeployment preparation, and environment-specific camouflage sets. It also supports higher operational tempo by allowing assets to move between environments while maintaining consistent concealment performance.

Infrared Signature Control

Kenai Defense develops infrared signature control technologies that help manage how surfaces appear to thermal sensors across mid-wave and long-wave infrared bands. Our capabilities support applications where thermal appearance, heat rejection, contrast reduction, calibration, or repeatable infrared behavior are mission-critical.

Passive Infrared Coatings

Our passive infrared coatings provide engineered control of how surfaces absorb solar energy and emit thermal radiation. These coatings can be tuned across a broad range of emissivity levels to help manage apparent temperature, infrared contrast, and thermal radiance under changing environmental and operating conditions.

Because the coatings do not require electronics or active control hardware, they offer a durable and scalable approach for platforms, test articles, panels, housings, and surfaces that need predictable infrared performance. They can be applied to a wide range of materials and geometries, including metals, polymers, composites, textiles, and complex components.

Dynamic Infrared Signature Systems

Kenai Defense also develops actively controlled infrared systems that can generate, suppress, or modify thermal patterns in real time. These systems make it possible to create spatially resolved infrared signatures that represent vehicles, personnel, equipment, decoys, or controlled test targets.

The capability supports programmable thermal gradients, repeatable heat patterns, false-target generation, adaptive decoy behavior, and controlled infrared scenes for EO/IR sensor testing, seeker evaluation, tracker development, and autonomous recognition training.

Example Applications

- Aerospace and spacecraft thermal-control surfaces
- UAV, aircraft, missile, ground-vehicle, and naval signature management
- Passive heat-rejection housings and thermal-control panels
- Multispectral camouflage coordination
- Thermal decoys and representative target systems
- EO/IR calibration panels and certified thermal reference surfaces
- Hardware-in-the-loop heat panels and missile-seeker test targets

Value to Customers

Kenai Defense helps customers manage infrared appearance in a controlled, repeatable, and application-specific way. Whether the need is passive thermal behavior, active thermal patterning, calibrated test surfaces, or realistic infrared target generation, our technologies are designed to support practical deployment, repeatable performance, and mission-relevant testing.

Agentic AI

Kenai Defense builds agentic AI systems that turn complex operational workflows into secure, human-supervised digital processes. Rather than deploying generic chatbots, we design AI systems around the way an organization already works: its procedures, documents, approvals, expert judgment, and operational constraints.

Our approach is workflow-first, enterprise-focused, and designed for environments where control, security, auditability, and human oversight matter.

Workflow Automation

Kenai Defense develops AI-powered systems that can assist with repetitive coordination, documentation, analysis, and decision-support work. These systems help teams reduce manual effort while keeping people in control of approvals and final decisions.

Typical workflow areas include:

- Internal approvals and review packets
- Quality and compliance documentation
- SOP-driven administrative processes
- Proposal, grant, and technical documentation support
- Customer or supplier escalation workflows
- Order, logistics, and exception-handling processes

The result is a system that helps teams move faster without removing human judgment from the process.

Secure AI Deployment

For organizations with sensitive data, Kenai Defense supports secure deployment models, including cloud, on-premises, and air-gapped environments. Systems can be built around controlled access, customer-owned data, audit logs, and deployment approaches that avoid unnecessary exposure to third-party model providers.

This makes the capability well suited for defense, manufacturing, government, regulated industries, technical operations, and other environments where data handling and governance are central requirements.

AI Expert Twins

Kenai Defense also develops permissioned AI expert twins that help preserve critical institutional knowledge before it is lost through retirement, turnover, or personnel changes.

An expert twin can capture approved knowledge from documents, SOPs, lessons learned, prior decisions, troubleshooting experience, and expert interviews. It can also reflect how a subject-matter expert explains, prioritizes, escalates, and evaluates tradeoffs.

These systems are not replacements for employees. They are governed knowledge assets that help teams onboard faster, troubleshoot more consistently, and access expert guidance when the original expert is unavailable.

Governance and Human Oversight

Kenai Defense designs agentic AI systems with clear knowledge boundaries, permission controls, validation steps, and escalation paths. When a question or task falls outside the approved scope, the system can be designed to say so and route the issue to the right human reviewer.

This structure helps organizations benefit from AI while maintaining accountability, traceability, and control.

Value to Customers

Kenai Defense helps organizations convert high-friction workflows and hard-to-transfer expertise into secure, governed AI systems. The result is faster execution, better continuity, more consistent documentation, and improved access to critical knowledge without giving up human oversight.