Most U.S. Government and commercial organizations are sensitive to the threat of tampering and take steps to prevent it in their secured work environments. Existing tamper-proofing technologies often use only a single sensor modality, which can be vulnerable to physical hacks and trigger false alarms.

To meet these challenges, CACI introduces EdgSentry Integration Services – a next-generation tamper detection solution that can sense, detect, log, and notify users if a secure workspace, enclosure, or physical device has been compromised. Physical device protection is critical to information assurance, but most alarm systems focus on rooms not devices. EdgSentry surveys an environment and then integrates a hardware and software solution that provides more comprehensive tamper protection. Integration of our CACI-patented hardware into customer equipment then creates a security scenario that is challenging to detect or defeat.

At the heart of this solution is a small, low-power, tightly integrated system on a module (SoM) with multiple sensor modalities and on-board analytics that detect tampering events and attempts. Advanced software analytics fuse sensor data and apply heuristic machine-learning algorithms to protect devices, enclosures, and spaces. The fused, multi-sensor, and advanced algorithm capabilities of EdgSentry technology prevent false alarms and provide unrivaled protection.

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For more information about our solutions, products, and services, visit: www.caci.com
Features

- 0.5 x 0.5” SoM with integrated sensors
  - Light, motion, pressure, temperature, and humidity
  - Magnetometer, accelerometer, gyroscope (9-axis inertial measurement unit)
  - Onboard microphone and camera interface
  - 32-bit ARM CPU with onboard flash memory and real-time clock
- Accurate date and time logging of all events
- Internal audio recording of triggered events, and image recording with external camera chip
- External interfaces for: USB, SD card, camera, SPI, I2C, UART
- Access to all logged data, video, and audio via USB

Benefits

- EdgSentry Integration Services leverages CACI’s record of reliability in anti-tampering capabilities and our exclusive patents
- The EdgSentry technology is small, low-power (below 300 uW), long life, cost effective, and integrates with many devices
- Multi-sensor, multi-interface technology better detects and prevents tampering attempts

About EdgSentry Integration Services

The technology behind EdgSentry Integration Services collects and retains all data from multiple sensors, analyzes data for tamper events, and even encrypts data at rest. EdgSentry is designed to be easily integrated into other products or systems, and includes multiple external communication interfaces that can transfer log files, send real-time alerts, or drive other wireless communications. In addition, it can be configured to directly interface with external LEDs, cameras, buttons, displays, and haptic feedback devices.

In addition to logging tamper events, EdgSentry can be configured to record audio, take pictures, or stream event data in real time when tampering occurs. EdgSentry is designed for long duration and extremely low power applications, and can operate below 300uW while still detecting tamper and logging events.

EdgSentry is designed to be soldered to a printed circuit board (PCB) that will supply power and can take advantage of its external interfaces, including a host device itself. The PCB can include extras such as increased external memory, an SD card, a CMOS digital camera, wireless transceivers, or a connection to the host device for receiving tamper alerts.

Tamper Detection:

- **Chip Scale:**
  - Sensors
    - Light
    - Motion
    - Pressure
    - Sound
    - Temperature
  - CPU
  - I/O Interface
  - Memory
  - Power
- **Software Analytics**