



SOLUTION SHEET

Protect with intelligence and insight

An integrated approach to secure
correctional facilities





Introduction

Correctional environments are complex, dynamic and high stakes. Blind spots – whether physical, procedural or informational – can result in anything from a minor incident to a serious threat for staff and inmates alike. Combining multiple layers of awareness ensures nothing goes unnoticed, strengthening overall understanding of what's happening across a facility and maximizing the ability to anticipate, respond and maintain safety with confidence.

Octave Coda: The integrated solution for prisons

Unlike fragmented security systems that force correctional staff to juggle multiple tools, Octave Coda (formerly HxGN dC3) is a unified, flexible solution portfolio designed to meet the unique operational demands of correctional facilities. An integrated solution approach allows agencies to tailor capabilities to their environments, centralize oversight and simplify daily workflows.



Perimeter security: Detect flight attempts and external threats

Perimeters are often the first failure point: scaling attempts, cut-fence activity, wall approaches, drone drops or nighttime intrusions.

How it works

Octave Coda Spatial (formerly HxGN dC3 LidarVision)	Establishes enforceable 3D zones – fence lines, rooftops, buffer spaces – unaffected by lighting or weather
Octave Coda Video (formerly HxGN dC3 Video)	Automatically calls up cameras into operator view for instant verification
Octave Coda Video Analytics (formerly HxGN dC3 Video Analytics)	Correlates motion, direction and boundary crossings
Octave Coda Video Locator (formerly HxGN dC3 Video Finder)	Allows staff to rapidly search and review video after an incident, using analytics insights to pinpoint individuals or vehicles and piece together events in minutes

Outcome

Early detection, fewer false alarms, faster verification and defensible investigative records



Sally ports, gates and controlled movement: Ensure procedural compliance

Tailgating, unauthorized entries or vehicle / person mix-ups in secure transfer points are high-risk moments.

How it works

Coda Spatial	Accurately tracks objects and flags unusual movement, helping teams respond quickly – even in challenging weather and low-visibility conditions
Coda Video	Uses patented, automated calibration to align LiDAR and video, overlaying event markers to create a clear, accurate digital twin
Coda Video Analytics	Accurately classifies people and vehicles to understand the scene, detecting events such as line crossing, loitering and unusual movement patterns

Outcome

Reduced procedural violations, enhanced staff safety and clear, actionable event evidence – backed by highly reliable technology that performs in all conditions



Inmate protection: Prevent violence and safeguard vulnerable areas

Concentrated movement, sudden gatherings or unusual motion patterns can foreshadow incidents, and facilities need the ability to identify potential PREA-related risks while preserving inmate privacy and maintaining regulatory compliance.

How it works

Coda Spatial	Identifies if people gather unexpectedly in larger groups, unusual presence in restricted tiers or movement after lights-out – all without capturing identifiable imagery
Coda Video	Provides instant access to relevant cameras when unusual migration patterns have been detected and helps easily identify involved persons
Coda Video Analytics	Validates behavior patterns or tracks individuals if identification is required and detects loitering, unauthorized presence, object placement and other rule-based exceptions that may require investigation
Coda Video Locator	Reconstructs incidents using time-stamped analytics information, allowing staff to quickly understand what happened

Outcome

Early warning indicators for inmate safety, reduced violence and improved situational awareness within the facility for officer and inmate safety

Solutions for better outcomes

Octave Coda: Power of an integrated solution

When LiDAR, video management, video analytics and forensic search operate independently, each solves only part of the challenge. When combined in a unified workflow, they deliver:

- | | | | |
|---|--|---|---|
| 1 | Early detection of emerging threats | 4 | Faster, clearer investigations and accountability |
| 2 | Rapid verification and reduced false alarms | 5 | Enhanced safety for staff and inmates |
| 3 | Coordinated response among staff and supervisors | 6 | Better operational consistency across the entire facility |

Coda Spatial

Spatial awareness engine

Gain a 3D LiDAR-driven understanding of space:

- Visualize yards, corridors, cells and perimeters with a 3D digital twin
- Define virtual zones and automated rules (dwell, direction, size, flow)
- Use DeepTection – an AI object classification system that learns how to distinguish humans, vehicles, etc. based solely on LiDAR motion patterns

Outcome

Reliable detection and contextual intelligence across the entire facility



Coda Video

Reliable video management hosted on-premises

Mission-critical VMS strengthens safety and operational control:

- Instant visual awareness during security events, automatically surfacing the most relevant camera views when an alert is triggered
- Secure, tamper-resistant recording and auditing, preserving evidence integrity for investigations, compliance and oversight
- Streamlined operator workflows, helping staff respond quickly and confidently without navigating complex interfaces or multiple systems

Outcome

Faster, clearer and more informed decision-making



Coda Video Analytics

Turn video into insights

Layered detection for perimeters, pods, gates and high-risk zones:

- Detects line crossing, loitering, tailgating, objects left behind, crowding
- Supports attribute-based classification (e.g., clothing color, vehicle type)
- Identifies unusual movement patterns and activity anomalies in restricted or high-risk areas

Outcome

Stronger detection accuracy and reduced operator overload



Coda Video Locator

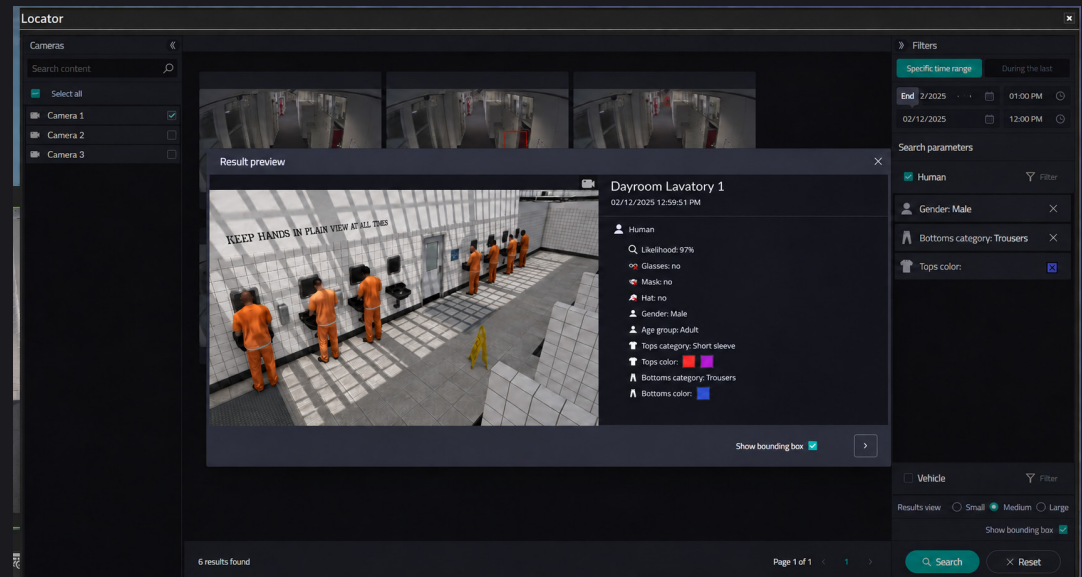
Forensic search at speed

Incidents don't end after detection – they must be understood and documented. Use metadata from edge or server-based video analytics to:

- Search across hours or days of video by attributes
- Easily reconstruct a timeline of movement or interactions
- Support the assembly of case packages with chain-of-custody logging

Outcome

Investigations completed in minutes, not hours, strengthening reporting and oversight



About Octave

Octave is a leader in enterprise software, turning data into decisive action and intelligence into your edge. Our software solves for and simplifies complexity, from the design and build to operations and protection of people, property and assets – for any scope, at any scale. For decades, we've partnered with customers to sharpen performance, elevate efficiency and amplify results. From factory floors to entire cities, our solutions are tuned to scale up what's possible from day one onward.

©2026 Octave Intelligence plc and/or its subsidiaries and affiliates. All rights reserved.

[More information at octave.com](https://octave.com)