



c4i **communication**

**EXPERIENCE THE DIFFERENCE
YOUR SECURITY & SAFETY PRODUCTS**

**Customer
Briefing**

LEARN MORE:

<http://c4communication.com>

Who is C4i Communication?



- A **software solutions company** developing **AI/ML Geospatial Computer Vision and Sensor Integration** solutions for **autonomous** physical security perimeter and border protection.
- 20 years of progressively sophisticated successful deployments.
- 20 years of continuous innovation including **16 issued patents** in geospatial computer vision technology.
- Developer of an automated outdoor surveillance software application “**C4i Activ**”.

Automated Geospatial Software Solutions for Border and Perimeter Protection

AIRPORTS | TRANSIT | SEAPORTS | UTILITIES | BORDERS | BASES

www.c4icommunication.com

The advertisement graphic features a central blue triangle with a white border, containing six hexagonal images: an airplane, a train, a port, a power plant, a tunnel, and a military base. The background is a collage of surveillance footage with red bounding boxes around objects. The text 'Automated Geospatial Software Solutions for Border and Perimeter Protection' is in white on a blue background. Below the triangle, the categories 'AIRPORTS | TRANSIT | SEAPORTS | UTILITIES | BORDERS | BASES' are listed in white. At the bottom, the website URL 'www.c4icommunication.com' is displayed in white on a red background.

Our Products



C4i-Activ
AlertView
Common
Operating Picture



C4i-Activ
AI Video Analytics



R-DAPSS
Rapid Deploy
System



VisionView 180
Camera System



C4i-Activ C-UAS



C4i-AI for Central
Monitoring

Our Markets



Esteemed Installed Base



- **U.S. Border – Largest single provider** of Surveillance COP Software on the U.S. Border (**~ 50%**). ~30,000 sq miles coverage, **~ 160 towers, 165 mobile systems, ~1000 video feeds, COP in ~25 border stations**, video analytics out to > 5 miles, radar integration and tracking.
- **Duke Energy - Nuclear Power Plants** – 6 plants. Multi-sensor integrated Automated Early Warning Perimeter System, ~ 5 miles of perimeter detection using video analytics and buried/fence fiber, radar in selected areas, access control integration, solar and other system health monitoring, COP in lookout towers.
- **Bay Area Rapid Transit (BART)** – Rail Intrusion Detection System.
- **Commercial Seaports (Tacoma, Seattle)** – Geospatial Intelligent Video Management Solution ~ 750 cameras and growing.
- **U.S. Defense contractor** – Automated detection along the perimeter. Multiple high security sites around the U.S., centrally monitored.
- **U.S. Military Seaports** – Water-side geospatial perimeter protection solution.
- **U.S. Military Airport** – Geospatial Intelligent Video Perimeter protection system.
- **UAE Ministry of Defense** – Airport, high-risk sites, and mobile systems.
- **Water Utilities** – Geospatial Intelligent Video Perimeter protection system.
- **Major U.S. River Lock System** – Hundreds of cameras protecting critical U.S. and Canadian Lock infrastructure.

What our Customers Say



We selected C4i Communication Systems for our perimeter surveillance software solution due to their ability to integrate best-of-breed perimeter sensors including their award-winning video analytics . After working with them for over 7 years, we are extremely pleased with not only the capabilities of their solution, but also the effort they bring to the table to ensure our needs are met. We consider them a valuable partner."

- MANAGER OF NUCLEAR SECURITY PLANNING AND PROJECTS, UTILITY IN NUCLEAR INDUSTRY

"The integration of C4i-Activ with our Magos radars is the best we've seen and the C4i Communication team did it without needing any technical support from Magos!"

- YARON ZUSSMAN, GENERAL MANAGER, MAGOS AMERICA

We use C4i Communication Systems video analytics to secure the perimeter around our critical manufacturing and test campus long with general video surveillance for our other sites across the nation. We monitor all these sites from a single command center.

C4i technology delivers on its commitments, and **they can be counted on** to provide world class customer service."

- SECURITY OPERATIONS MANAGER FOR A U.S. GOVERNMENT MANUFACTURER

"C4i Communication Systems Inc. is a Gold Tier Member of Intel's Partner Alliance program, and we fuel a powerful fusion of advanced hardware for edge computing and **award-winning AI-boosted Video Analytics**, driving innovation and affordable security. Together, we are revolutionizing security solutions, creating a safer and smarter world for all." – INTEL CORPORATION.

"I have relied heavily on C4i-Activ and thrived off its benefits. **C4i-Activ is a gamechanger**, no doubt about it".

- U.S. DHS USER

"C4i Communication is a long-time provider of Intrusion Detection solutions for our Waterfront and Airfield Surveillance Systems for the US Army. They have supported both maintenance and system upgrade services including integration of a wide variety of supporting technologies. C4i Communication has continually upgraded their solutions to **provide enhanced detection in difficult environments.**"

- RODDY TRAXLER, OPERATIONS MANAGER, INFOTEC SYSTEMS CORPORATION

"It (C4i-Activ) automates the real-time detection and notification of any object of concern on the rail tracks so risks are mitigated with minimal operational impact."

- ANONYMOUS AT TOP 10 RAPID TRANSIT AGENCY

Key Benefits of C4i-Activ



Dramatically increases operator productivity (force multiplier).



Improves site security by automating perimeter detection, deterrence, and response and improving situational awareness.



Lower total system purchase and support costs.

Benefits of C4i-Activ



Autonomous Detection
and Deterrence



Enhances Situational
Awareness

Improves Site
Security



Lowers Operator
Workload/ Increases
Productivity

Improves Communications
and Data Sharing



Helps Mitigate Airborne
Threats

Featured on R-DAPSS
for Rapid Deployment



Lower Acquisition
and Sustainment
Costs

Our Technology Differentiators



- **Higher Accuracy** – High Probability of Detection/Classification and Low Nuisance Alarm Rate.
- **Better Situational Awareness** – GIS Map GUI with Real-time object tracks.
- **Nimble Solution** – Addresses many use cases
 - Can be deployed as whole perimeter, video analytics addition, counter drone, border solution.
 - Integrated with vast number of cameras, radars, other detection and tracking sensors, VMSs, and Physical Security Information Systems.
 - Deploys on edge, server, and in cloud.
 - Scales economically - start small and grow solution as needs change.
- **Superior Quality** - Proven, High Availability, Rapid Break-fix.
- **Rapid Innovation** – Microsoft / Intel development platform enables rapid innovation and continuous modernization, vs. Linux-based OS platforms.

www.c4icommunication.com

Differentiators backed up by head-to-head testing and customer testimonials.

Nuisance Alarm Rejection using C4i Patented AI-Boosted Video Analytics



Sources of Nuisance Alarms in traditional video analytics and other detection sensors.

WATER DROPLETS ON LENS
Motion Video Analytics



CAMERA SHAKING
Motion Video Analytics



LIGHTING CHANGES
Motion Video Analytics



VIBRATIONS DUE TO LOUD SOUND
Fence/Buried Fiber



ANIMALS
Motion Video Analytics



VEGETATION MOVING IN WIND
Motion Video Analytics



SOMETHING MOVING OTHER
THAN PERSON OR VEHICLE
Radar



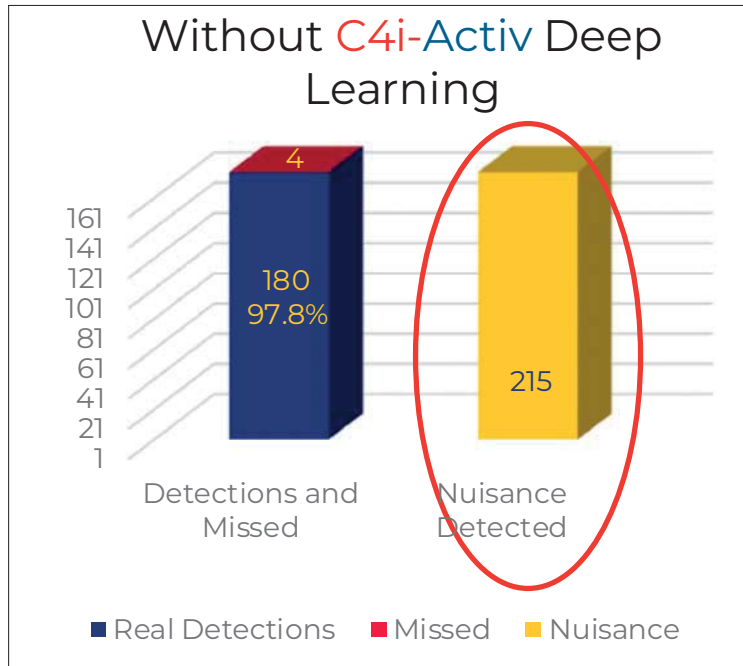
FENCE VIBRATION
Fence/Buried Fiber

www.c4icommunication.com

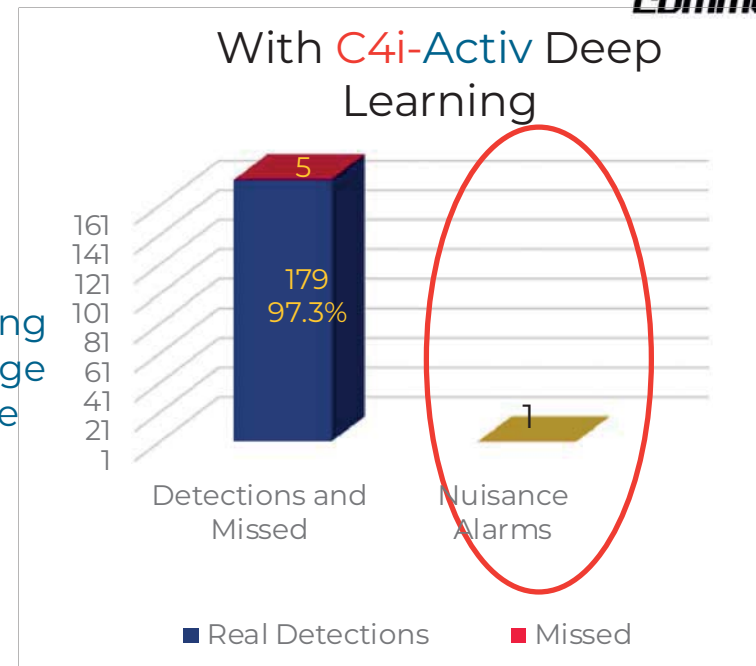
C4i- AI-Boosted Video Analytics eliminates 98%+ of nuisance alarms.

SEEING BEYOND THE OBVIOUS

Real-World Example of Nuisance Alarm Elimination

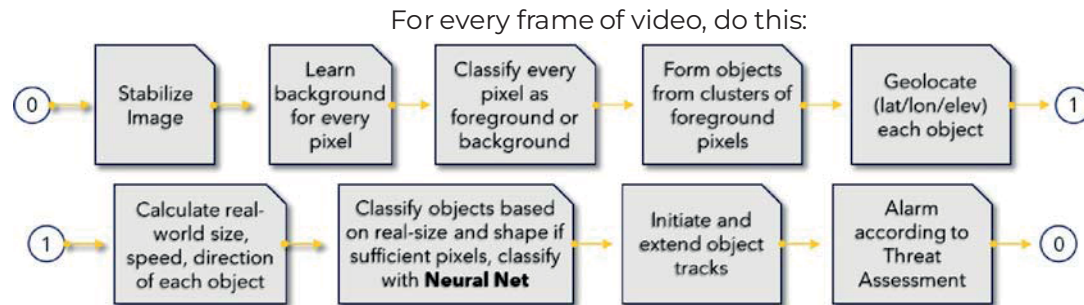


Adding Deep Learning Classification to Image Processing Pipeline



*Sample from 178 actual alarm videos

C4i Geospatial Video Analytics boosted with its Deep Learning Auto-Verification, which incorporates 20 years of surveillance training video, reduced nuisance alarms by 99.5% while maintaining very high probability of detection.





Geospatial Video Analytics With ML

Autonomous Ground & Air Perimeter Protection

Auto **DETECT** and **GEOLOCATE** Intrusions



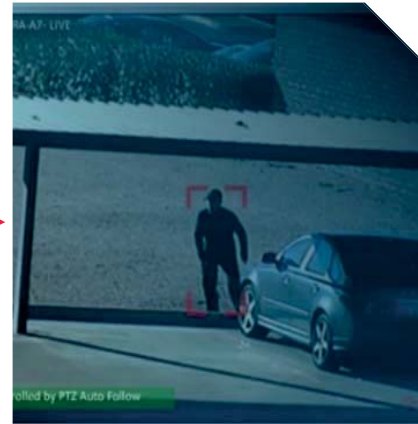
- C4i Communication Geospatial Video Analytics
- Fence Sensors,
- Radars,
- Ground,
- Other sensors.

Auto **CLASSIFY** Intruders



- Autonomously steer cameras, dispatch drones to geolocation of intrusion.
- Using ML, Classify target as a threat/non-threat.

Auto **ALERT** Personnel & **Keep Track** of Intruders



- Issue Alarms – Mobile devices, Workstations.
- Autonomously follow intruders.
- Keep airborne and ground intruders in camera views.

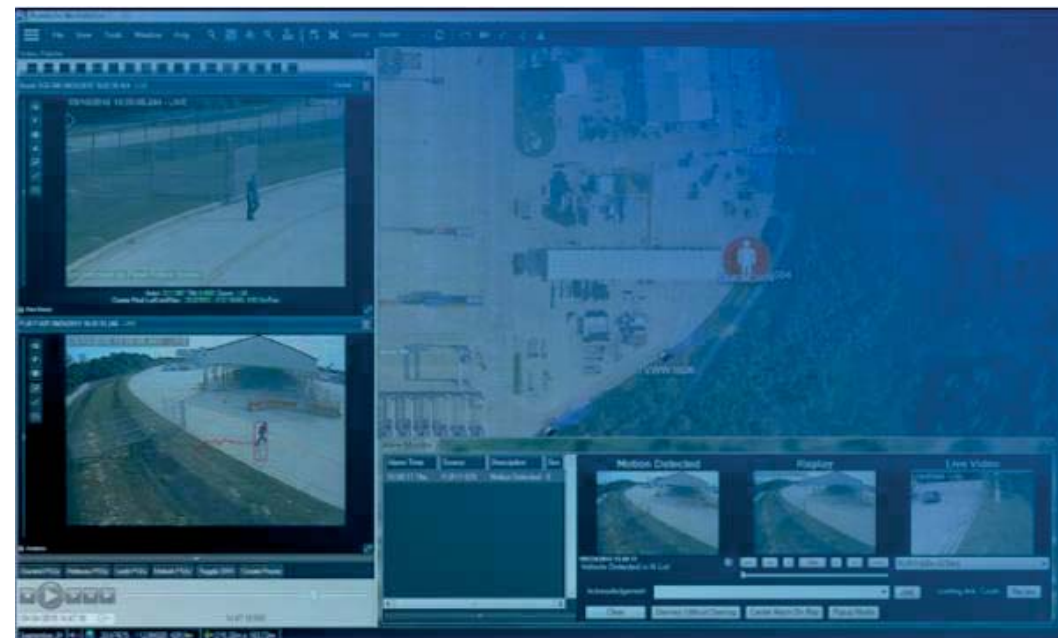
Auto Deter & Defeat



- Blast intruders with deterrent sounds and strobe lights.
- Jam drone communications and GPS.

Autonomous Perimeter Protection

- Autonomously Detects and Geolocates intruders with analytics, radars, and/or fence sensors.
- Slew PTZ cameras and dispatch drones to geolocations of intrusions.
- Auto Classify with A.I./M.L.
- Issue Alarms (image, looping video, live camera view, and map location).
- Auto Lock-on Target and Track the intruder.



Highest Alarm Accuracy Guaranteed

Access Control – Auto-Verifying Real Alarms and Rejecting Nuisance Alarms

SEEING BEYOND THE OBVIOUS

Auto-verify the following PACS events:

- Door forced open,
- Door held open,
- Assisted entry,
- Piggybacking, and
- Eliminate Nuisance Alarms from intermittent door contacts causing repeated Door Forced open alarms.

Outputs to VMS/PACS/PSIM Options:

- Alarms via dry contact,
- Alarms via software integration,
- Alarms sent to VMS/PSIMS can be auto-cleared in the PACS system,
- Live video with annotations, and
- Recorded alarm video with annotations.



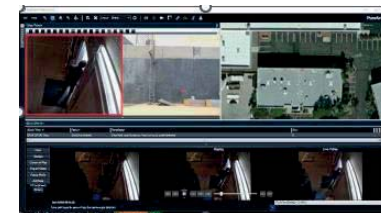
Piggybacking Detected



Tailgating Detected



Forced Entry



Door Held Open



Assisted Entry

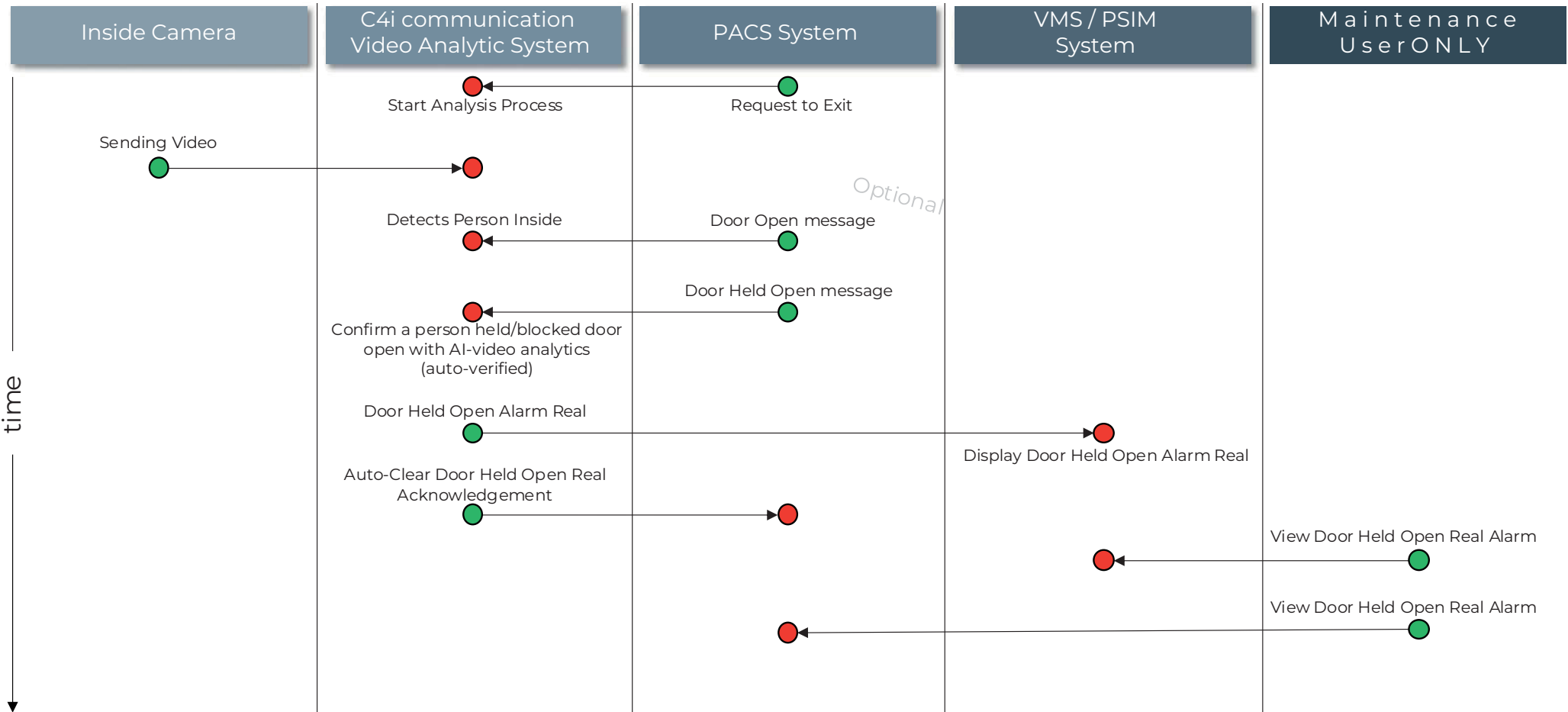


Piggy-Back

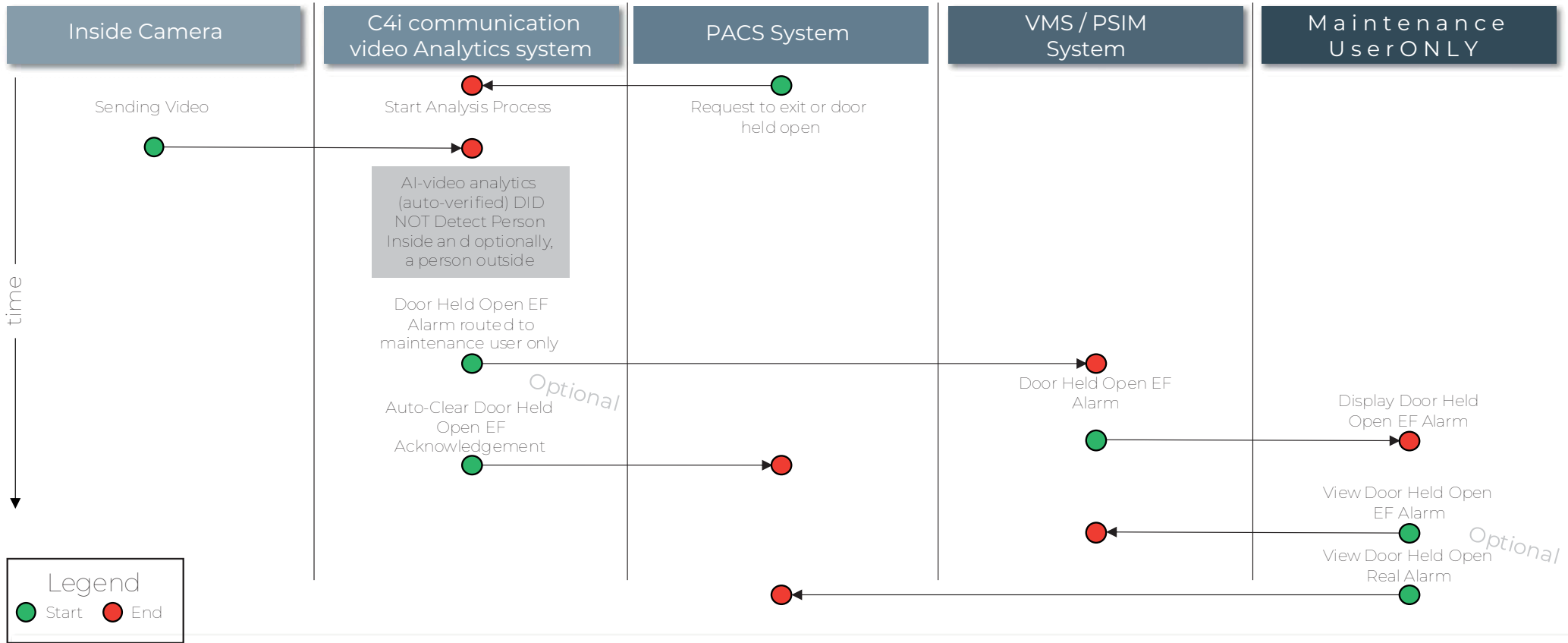
Access Control – Auto-Verified Real Alarm



SEEING BEYOND THE OBVIOUS



Access Control – Equipment Failure (EF) Nuisance Alarm Elimination



Eliminating Equipment Failure Nuisance Alarms by:

- Routing of faulty hardware alarms to maintenance personnel, not security personnel, and
- Alarms can be auto-cleared in the PACS System, if desired.

Geospatial AI-Boosted Video Analytics



Classify & PTZ Auto-follow



Fixed Detect, PTZ Classify



Rail Platform Fall Detection



Slow Belly Crawl



Vehicle Stopped too Long



Classify from Drone



Classify & PTZ Follow



PTZ Follow Through Occlusions



PTZ Follow Specific Target



PTZ Follow Tailgater



Loitering in Bug Infested Video



Loitering Alarm



Object Left Behind 1



Object Left Behind 2



Object Left Behind 3



Removed Object



Thrown Object



Object Classification



Low Signal Detect



Vehicle & Person Detect



Person Detect in Snow



Active Theft - Person Classification



Rail Intrusion - People Classification



Rail Intrusion - Person Classification



Multi-person break-in



Multi-zone Violation Alarm



Intrusion over Wall



PTZ Handoff



X-walk Incursion



Video Analytics Viewer

Long Range/Border Examples

SEEING BEYOND THE OBVIOUS



Long Range People Classification 1



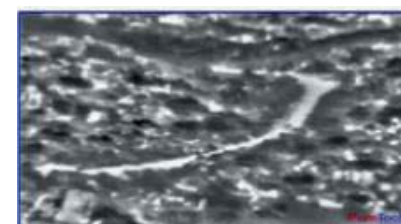
Long Range People Detection 1



Long Range People Detection 2



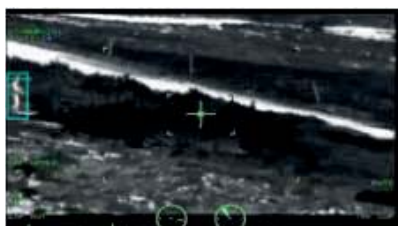
Long Range People Detection 3



Long Range Detection with heat turbulence



Person Classification w/ Cows



Long Range People Classification 2



Long Range Person Classification



Long Range People Detection 4



Long Range People Detection 5



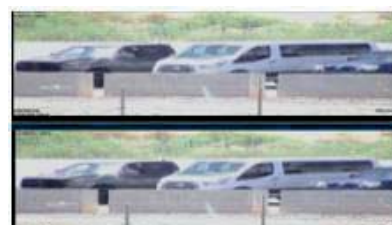
ATAK Integration



Border Radar Follow - Vehicle



Border Radar Follow - Person



Video Stabilization



Drone Detection and Tracking

Critical Infrastructure Solution -



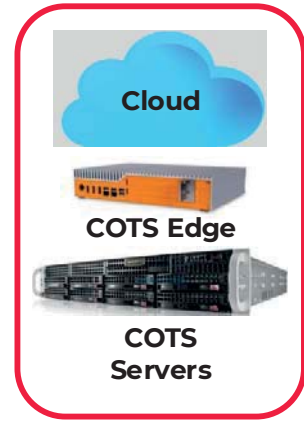
Add Autonomy including Nuisance Alarm Elimination to New or Existing Perimeter System



Color and Thermal PTZ & Fixed Cameras



Ground and Drone Detection Radars



PureActiv Geospatial AI Video Analytics



Buried and Fence Sensors



Existing NVR or PureActiv

- ✓ Utilizes existing cameras, radars, fence sensors, access control, NVR, network.
- ✓ Eliminate up to 95% of nuisance alarms using ML.
- ✓ Gives your NVR live geospatial map capability with no integration required.
- ✓ Autonomous PTZ camera lock-on-target tracking keeps intruder in camera view.
- ✓ Location of detected targets shown on GIS Map.
- ✓ No operational changes.
- ✓ Easily Scales to fit your budget and needs today and tomorrow.
- ✓ Longer detection and classification ranges reduces infrastructure costs by as much as 30%.



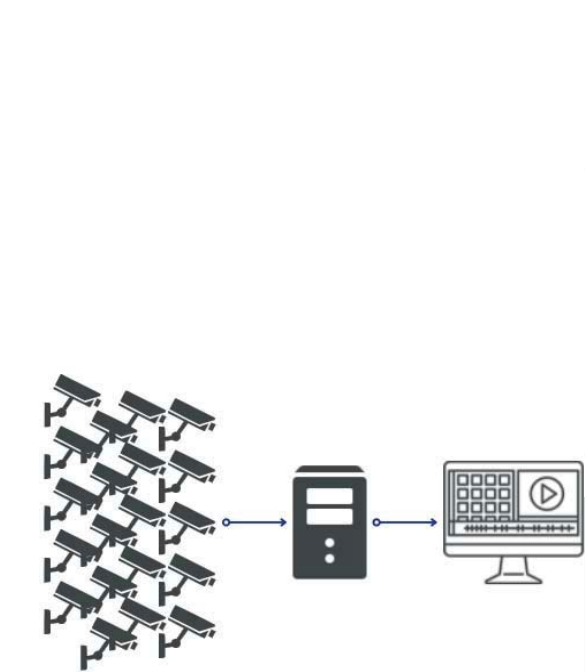
Existing NVR or PureActiv Client

Analytics Behaviors:

- ✓ Zone Entry/Exit,
- ✓ Stopping,
- ✓ Loitering,
- ✓ Crowding,
- ✓ Travel Path,
- ✓ Object left behind,
- ✓ Crawling, walking, running,
- ✓ Wrong Direction of travel,
- ✓ Thrown Object,
- ✓ Removed Object,
- ✓ Person & Vehicle Tailgating, and
- ✓ Counting.

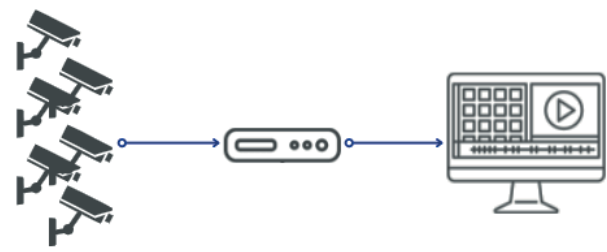
Architecture Example 1 – Using Video Analytics with DL Classification on Fixed Cameras to Reduce Nuisance Alarms

SEEING BEYOND THE OBVIOUS

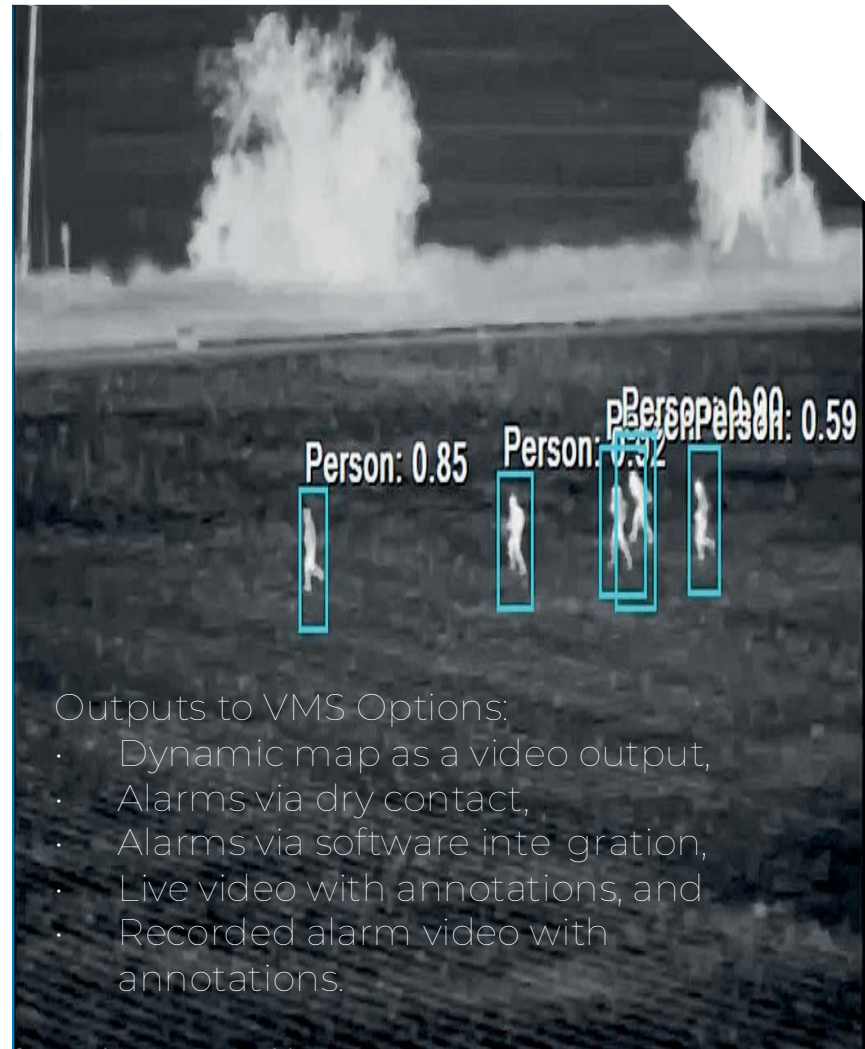


Existing or New Fixed Cameras → C4i-Activ Server Device (DAQ) → Your VMS

	Resolution	HFOV	Human Classification	Vehicle Classification
FLIR FC-3690	320x240	69°	15 m	20m
FLIR FC-3440	320x240	44°	20	40
FLIR FC-6690	640x480	69°	30	45
FLIR FC-6440	640x480	44°	45	75
FLIR FC-3170	320x240	17°	60	100
FLIR FC-6320	640x480	32°	65	105
FLIR FC-6250	640x480	25°	85	135
FLIR FC-6170	640x480	17°	125	200
FLIR FC-6100	640x480	10°	210	340
FLIR FC-6080	640x480	8.6°	245	400
FLIR FC-3040	320x240	4.3°	245	400



Existing or New Fixed Cameras → C4i-Activ Edge Device → Your VMS



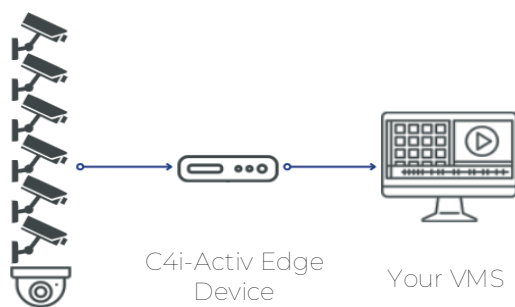
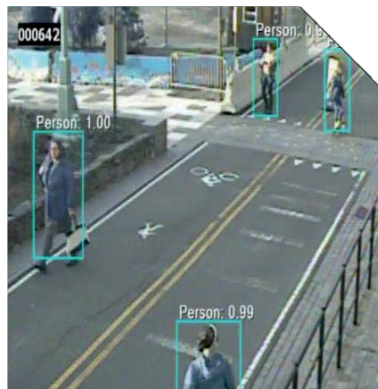
- Outputs to VMS Options:
- Dynamic map as a video output,
 - Alarms via dry contact,
 - Alarms via software integration,
 - Live video with annotations, and
 - Recorded alarm video with annotations.

Architecture Example 2 – Use Fixed Cameras for Recognition with PTZ Cameras for DL Classification

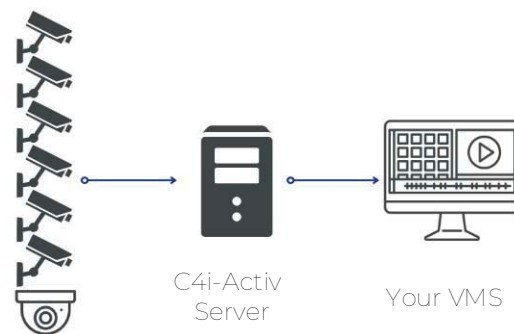
SEEING BEYOND THE OBVIOUS

Outputs to VMS Options:

- Dynamic map as a video output,
- Alarms via dry contact,
- Alarms via software integration,
- Live video with annotations, and
- Recorded alarm video with annotations.



Existing or New Fixed & PTZ Cameras



Existing or New Fixed & PTZ Cameras

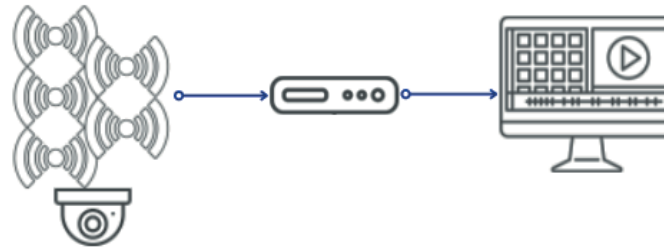
		Human		Vehicle		
	Resolution	HFOV	Recognition	Classification	Recognition	Classification
FLIR FC-3690	320x240	69°	30 m		50 m	
FLIR FC-3440	320x240	44°	50		85	
FLIR FC-6690	640x480	69°	65		105	
FLIR FC-6440	640x480	44°	105		170	
FLIR FC-3170	320x240	17°	140		225	
FLIR FC-6320	640x480	32°	145		235	
FLIR FC-6250	640x480	25°	190		305	
FLIR FC-6170	640x480	17°	275		450	
FLIR FC-6100	640x480	10°	475		765	
FLIR FC-6080	640x480	8.6°	555		900	
FLIR FC-3040	320x240	4.3°	555		900	
Axis 6215-LE	1920x1080	2.2°	2,500		4,050	

*Distances in meters

Architecture Example 3 – Use Radar or Fiber Fence for Detection with PTZ Cameras for DL Classification

Outputs to VMS Options:

- Dynamic map as a video output,
- Alarms via dry contact,
- Alarms via software integration,
- Live video with annotations, and
- Recorded alarm video with annotations.



Existing or New Radars & PTZ Cameras

C4i-Activ Edge Device

Your Existing VMS

*Also available on servers



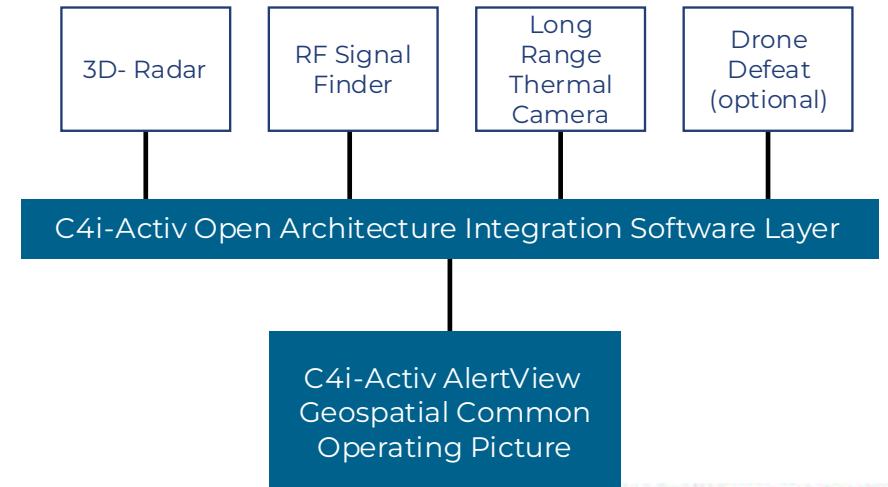
	Resolution HFOV		Human Classification	Vehicle Classification	DJI Phantom 4 Drone Classification
Axis 6215-LE	1920x1080	2.2°	2,500 m	4,050 m	675 m

*Assumes 3D Radar such as EchoDyne EchoGuard

C4i-Activ Counter-UAS



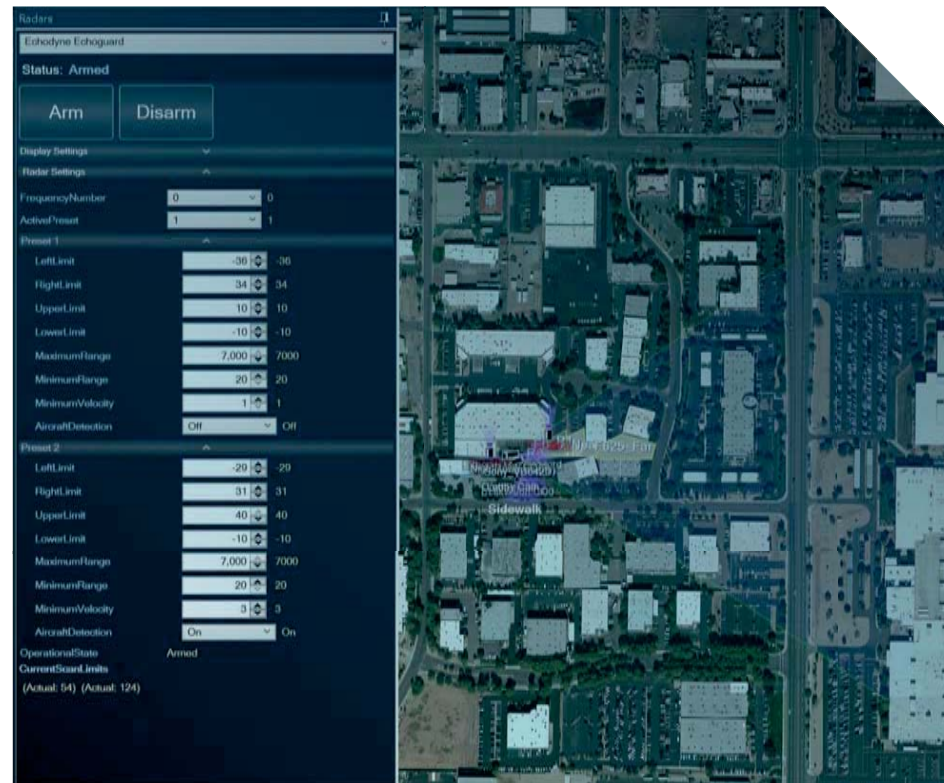
C4i - C -UAS solution provides users with multi-modal autonomous detection, classification, tracking, geolocation, and alerting on both short-and long-range airborne threats. Through seamless integration with geospatial maps, cameras, 3-D radars, and RF Signal Finders it provides security personnel with key information to make rapid informed decisions.



C4i-Activ Echodyne Integration



The Echodyne Echoguard integration screen shot from AlertView.



SWaP and Environmental

Size	20.3 cm x 16.3 cm x 4 cm
Weight	1.25 kg (2.75 lbs)
Power	DC +15 V to +28 V
Operating	< 50 W (Operating)
	< 15 W (Hot standby)
Operating temp	-40°C to +75°C
Weather Protection	IP67



2 km hemisphere of airspace situational awareness from EchoGuard 3D surveillance radars.

Typical tracking ranges for air targets:

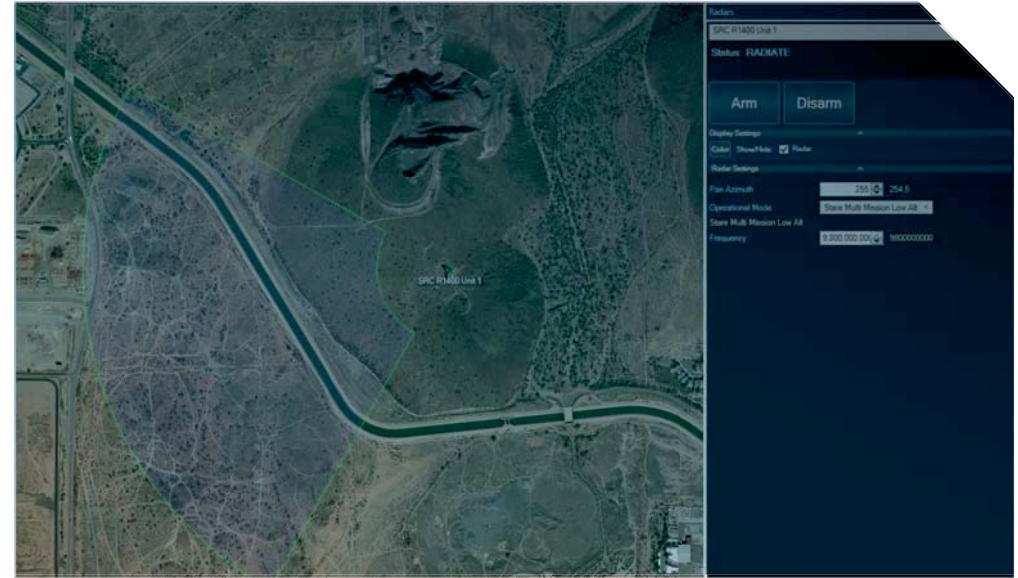


C4i-Activ SRC 1410 Drone Detection Radar Integration



The SRC 1410 Drone Detection Radar integration screen shot from AlertView.

- Multi-mission surveillance radar
 - Optimized for UAS detection and tracking
 - Capable of air, ground, and maritime multi-mission
- Low cost, X-Band AESA
 - Maximum RF spectrum interoperability
 - Enables better slow-moving target detection
- Fixed E-scan modes for maximum range
 - 3° to 120° non-rotating E-Scan
 - 8km sUAS, 25km small manned aircraft in 90° scan
 - 15km dismounted personnel
- Rotating 360° modes for maximum coverage
 - 6.5km sUAS, 23km small manned aircraft

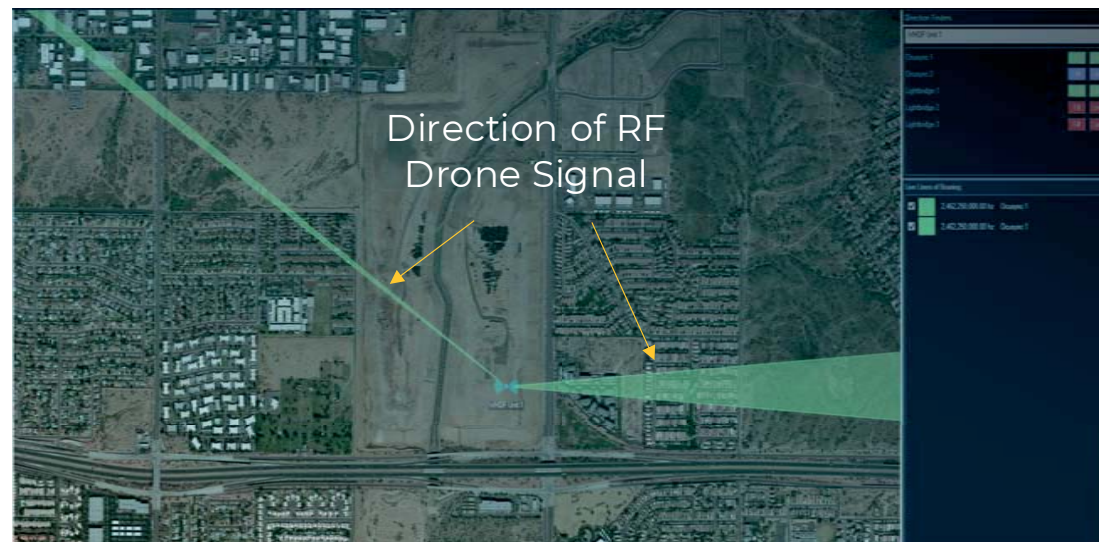


Target	RCS		90° Coverage Fixed Panel			360° Coverage Rotating Panel		
			Detection Range	Revisit Rate		Detection Range	Revisit Rate	
	m ²	dBsm	km	nmi	s	km	nmi	s
Small UAS	0.03	-15	8	4.3	2.2	6.5	3.5	2.2
Single Person*	0.5	-3	15	8	2.6	11	6	5.6
20' Boat*	2	3	19	10	2.6	16	8.5	5.6
Small Manned Aircraft (Cessna)	3	5	25	13.5	2.2	23	12.5	4.7
Vehicles (Pickup Truck)	10	10	28.5	15.5	2.2	27	14.5	4.7
Large Ship*	31.5	15	40	21.5	2.6	31	16.5	5.6

C4i-Activ Whisper Hunter RF Drone Signal Detection & Classification Integration

The Whisper Hunter is an RF Drone Signal Detection and Classification sensor.

- Passively detects RF Signal and Protocol
- Software-defined radio system Uses SRC's micro-transceiver SDR
- Customers include
 - US Army, US Air Force, US Navy
- Coverage: 360° Azimuth, -32° to +48° Elevation
- Frequency coverage: 400 MHz to 6000 MHz



The Whisper Hunter integration screen shot from AlertView.

C4i-Activ AlertView Common Operating Picture

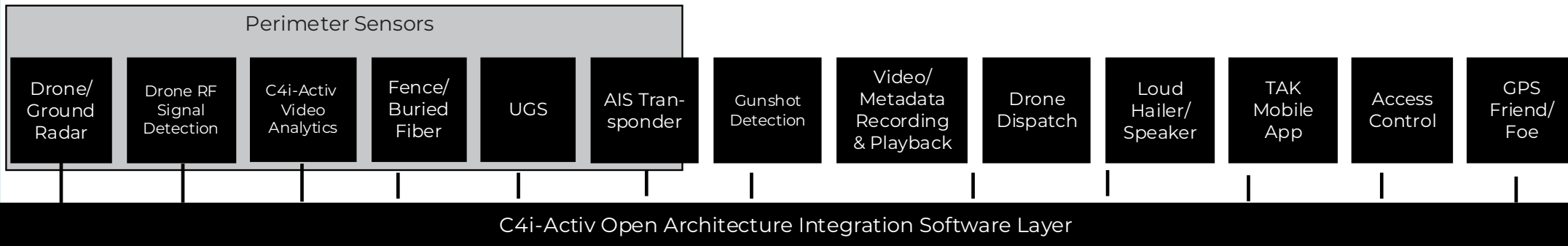
1. Improves site security by automating perimeter detection, deterrence, and response and improving situational awareness.
2. Lower total system purchase and support costs.
3. Dramatically increases operator productivity. (force multiplier).



C4i-Activ Common Operating Picture



SEEING BEYOND THE OBVIOUS



- ✓ Single Common Operating Picture for entire perimeter system. Unifies operation of disparate cameras and sensors.
- ✓ Utilizes existing cameras, radars, fence sensors, access control, NVR, network.
- ✓ Eliminate up to 95% of nuisance alarms.
- ✓ Easily Scales to fit your budget and needs today and tomorrow.
- ✓ Live data on Geospatial map enhances situational awareness.
- ✓ Autonomous PTZ camera lock-on-target tracking keeps intruder in camera view.
- ✓ Live and recorded video.
- ✓ Forensic search speeds investigations.
- ✓ Alarm search and export for reporting.
- ✓ Simple click to dispatch drone to alarm location.

C4i-Activ AlertView
Geospatial Common
Operating Picture

Analytics Support all behaviors:

- ✓ Zone Entry/Exit,
 - ✓ Stopping,
 - ✓ Loitering,
 - ✓ Crowding,
 - ✓ Travel Path,
 - ✓ Object left behind,
 - ✓ Crawling, walking, running,
 - ✓ Wrong Direction of travel,
 - ✓ Thrown Object,
 - ✓ Removed Object,
 - ✓ Person & Vehicle Tailgating, and
 - ✓ Counting.
- ✓ Extensive system health monitoring.
 - ✓ Longer detection ranges reduces infrastructure cost by 30%.
 - ✓ ATAK/WinTAK integration for mobile situational awareness.
 - ✓ GPS integration for Friend/Foe determination.
 - ✓ Access Control integration – alarms and lock doors.
 - ✓ AIS ship transponder integration.
 - ✓ Deterrents – loud hailer/speaker, strobe lights.
 - ✓ Deployable on relocatable RDAPSS Trailer.

C4i-Activ AlertView Real-Time Alerting with Intruder Location & PTZ Auto-Follow



SEEING BEYOND THE OBVIOUS

The screenshot displays the C4i-Activ AlertView software interface, which is divided into several functional areas:

- Camera Control:** Located in the top-left, it shows a live video feed of a parking lot with a red bounding box around a person walking. A red line indicates the camera's pan-tilt-zoom (PTZ) movement path.
- Video Tracking:** This label points to the red bounding box and tracking line in the camera control window.
- Map-Based Sensor Control:** The central part of the interface is a map showing the layout of the facility. A red triangle icon indicates an alarm location, and a red line shows the sensor's field of view.
- Alarm Locations:** This label points to the red triangle icon on the map.
- Target Tracking:** A red circle with a white figure icon on the map indicates the current target being tracked.
- Range & bearing:** A green line and text on the map show the distance (200m) and bearing (80°) from the sensor to the target.
- Active Alarm List:** A table in the bottom-center lists active alarms with columns for Alarm Time, Location, Description, and Zone.
- Live Camera:** A window in the bottom-right shows a real-time video feed from the camera.
- Looping Alarm Video:** A window next to the live camera shows a replay of the alarm event.
- Alarm Image:** A small thumbnail image of the alarm event is shown below the replay.
- Alarm Detail:** A window below the alarm image provides more information about the specific alarm.
- Alarm Management:** A window at the bottom right contains buttons for Acknowledgment, Clear, and other management functions.

C4i-Activ AlertView COP Features

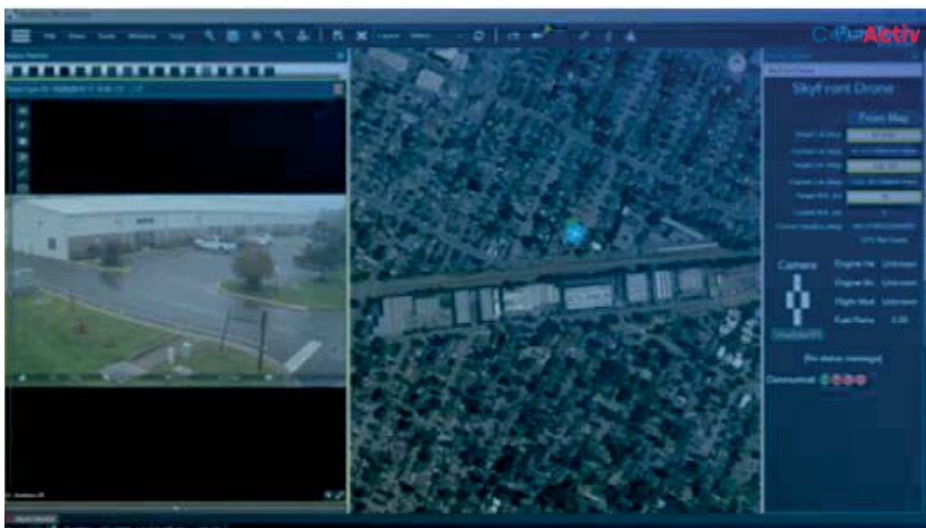


- Autonomy Geographic Monitoring Zones
- Live video viewing
- Recorded playback
- PTZ Camera control
- Spotlight, laser illuminator and laser range finder controls
- Geolocation of lol using just camera
- Map layers
- Alarm Monitor
- Health monitoring
- KML import/export
- Alarm management
- Radar Integration
- LGDS integration
- Tilt Sensors Integration
- Drone tracking
- Landmark creation/mgmt
- Drone dispatch
- Forensic search
- Alarm Search
- Alarm list export
- TAK Integration
- TSM Integration

SEEING BEYOND THE OBVIOUS

C4i-Activ Drone Dispatch to Alarm Location

- C4i-Activ enables users with the ability to dispatch a drone to a given alarm location.
 - The alarm is generated,
 - User pushes a single button to investigate the alarm, and drone automatically flies to the alarm location, and
 - User clicks on map to set a new way point.
- The integration is with Skyfront (MavLink ground station protocol).



Drone Dispatch Demo



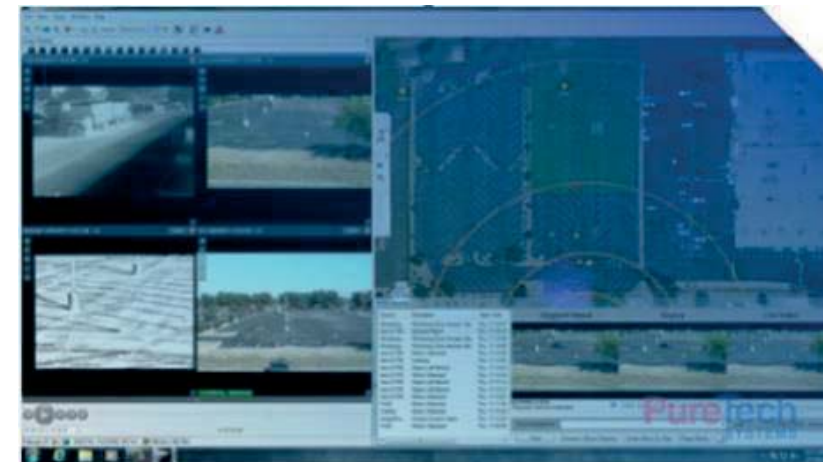
Drone DL

C4i-Activ Radar Integrations

- Complete integrations including configuration, live track management, track filtering and searching.
- C4i-Activ supports short-and long-range ground and drone detection radars.
- Track fusing from multiple radars and C4i-Activ AI Video Analytics, reduces multiple alarms for the same intrusion event.
- Can pair with other sensors to help seal perimeters



Radar Functions Demo

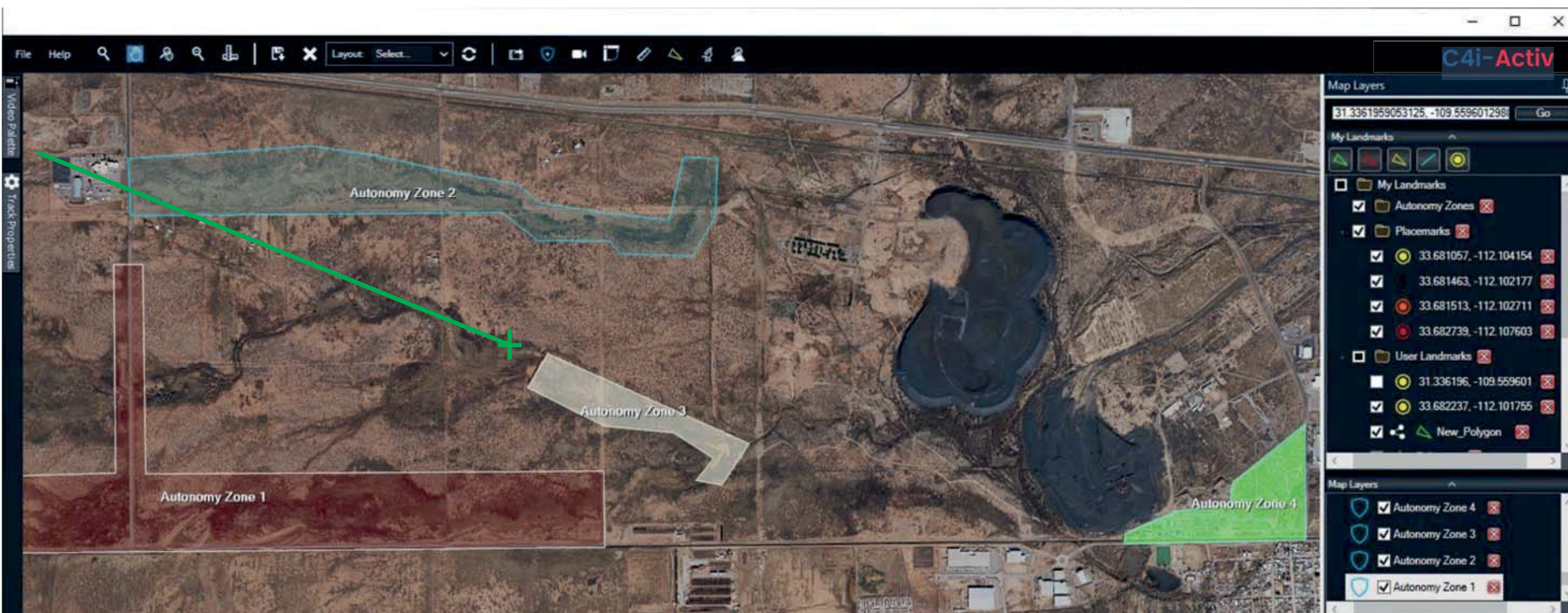


Map Based Target Selection (Radar)



Autonomy Zones

- Autonomy Zones are special geographic polygons that allow for alarming on various tracks in the autonomy zones.
- Autonomy zones can be assigned priorities, along with the target types detected.
- Alarming can require/not require DL (Deep Learning) Auto-Verify (i.e. Identification).
- Upon alarming, PTZ cameras can automatically follow the target. PTZ Auto-follow can follow a specific target (i.e. feature tracking).
- Alarms generated from these zones are displayed on the map and in a prioritized alarm monitoring queue.



Autonomy Zones: Priority Queue

The alarms created by the autonomy zone appear in the Alarm Monitor

Still Image of Detection

Instant Replay

Live Cameras



The screenshot displays the Alarm Monitor interface. On the left, a table lists alarms:

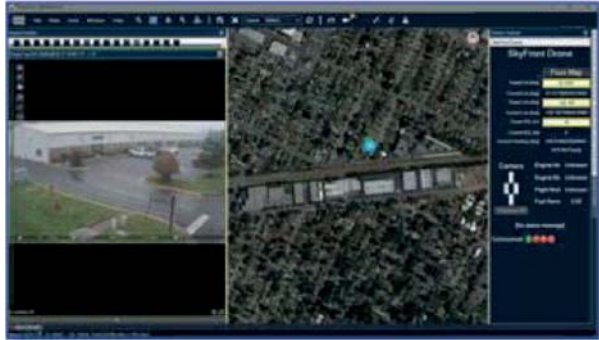
Alarm Time	Source	Zone	Description	Dev
03:18:13 PM, Thu	Monitoring	Autonom	Person Auto Identified	5
03:17:22 PM, Thu	Monitoring	Autonom	Person Auto Identified	5
03:17:18 PM, Thu	Monitoring	Autonom	Person Auto Identified	5
11:39:12 AM, Thu	Monitoring	Autonom	Person Auto Identified	5

The main interface is divided into several panels:

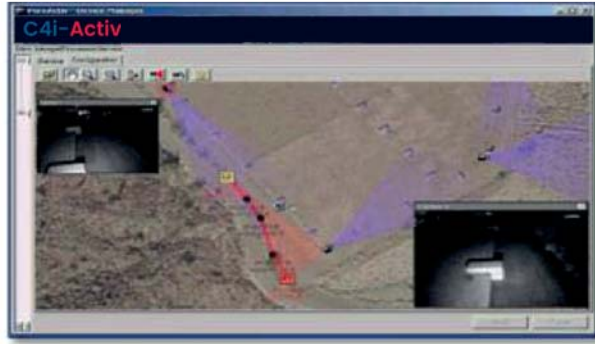
- F-625:** A still image showing a white car with a red bounding box and yellow detection lines.
- Replay:** A video playback window showing the same scene as the still image, with playback controls.
- FLIR-PT-618(V):** A thermal image of a person walking, with a red bounding box and a mouse cursor.
- Live Video:** A live video feed of the same scene, with playback controls.

At the bottom, there are navigation buttons (back, forward, stop) and a status bar showing "Person Auto Identified".

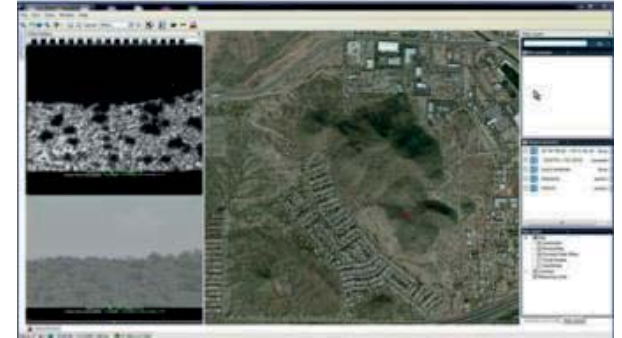
C4i-Activ AlertView COP Videos



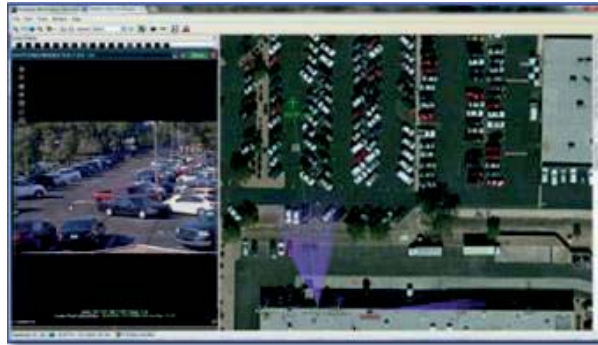
Drone Demo



Fence Alarm



AlertView Placemaker



Camera Control



Multi-Sensor

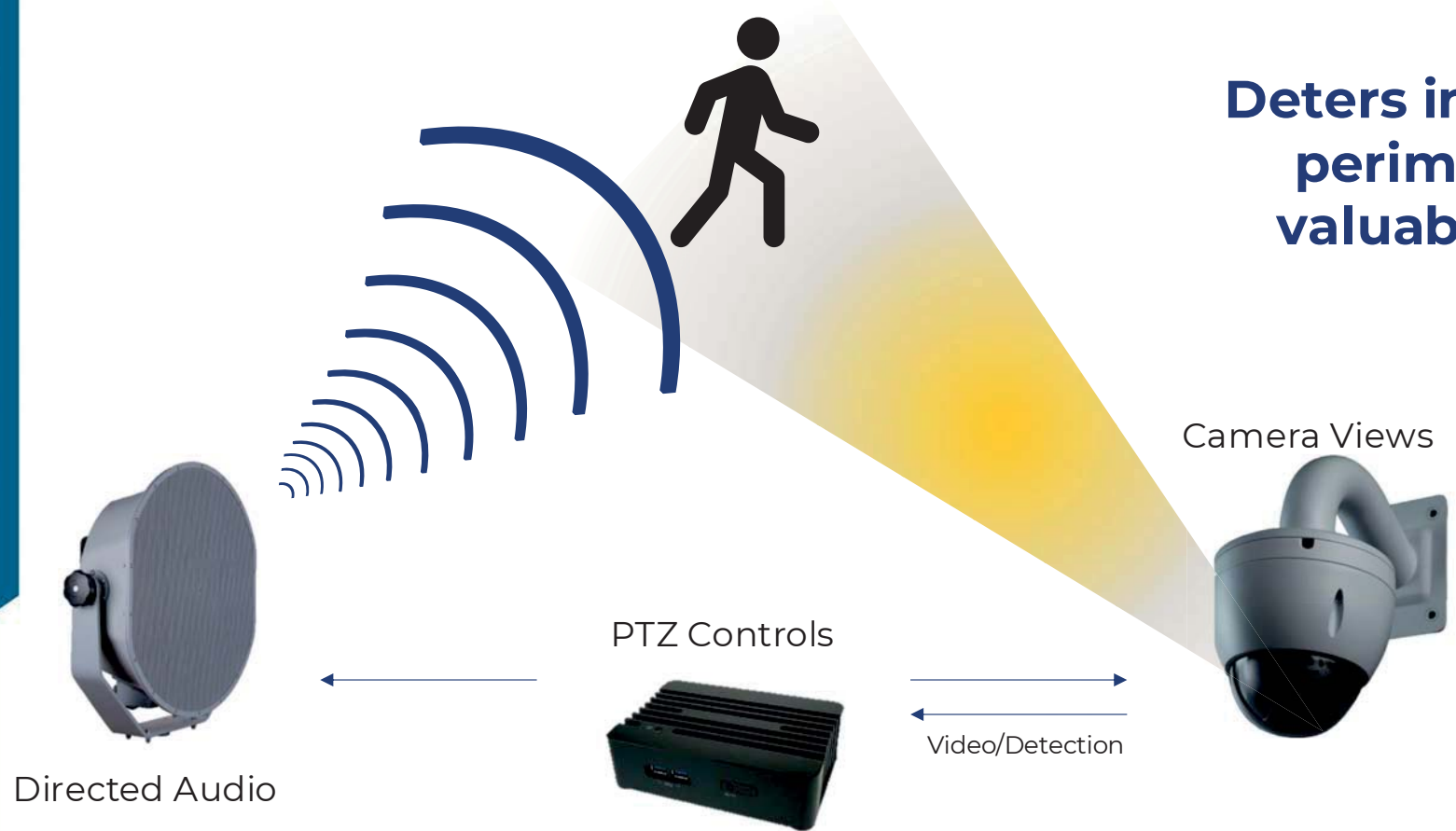
SEEING BEYOND THE OBVIOUS

C4i-Activ Autonomous Non-Lethal Acoustic & Laser Dazzler Deterrents



SEEING BEYOND THE OBVIOUS

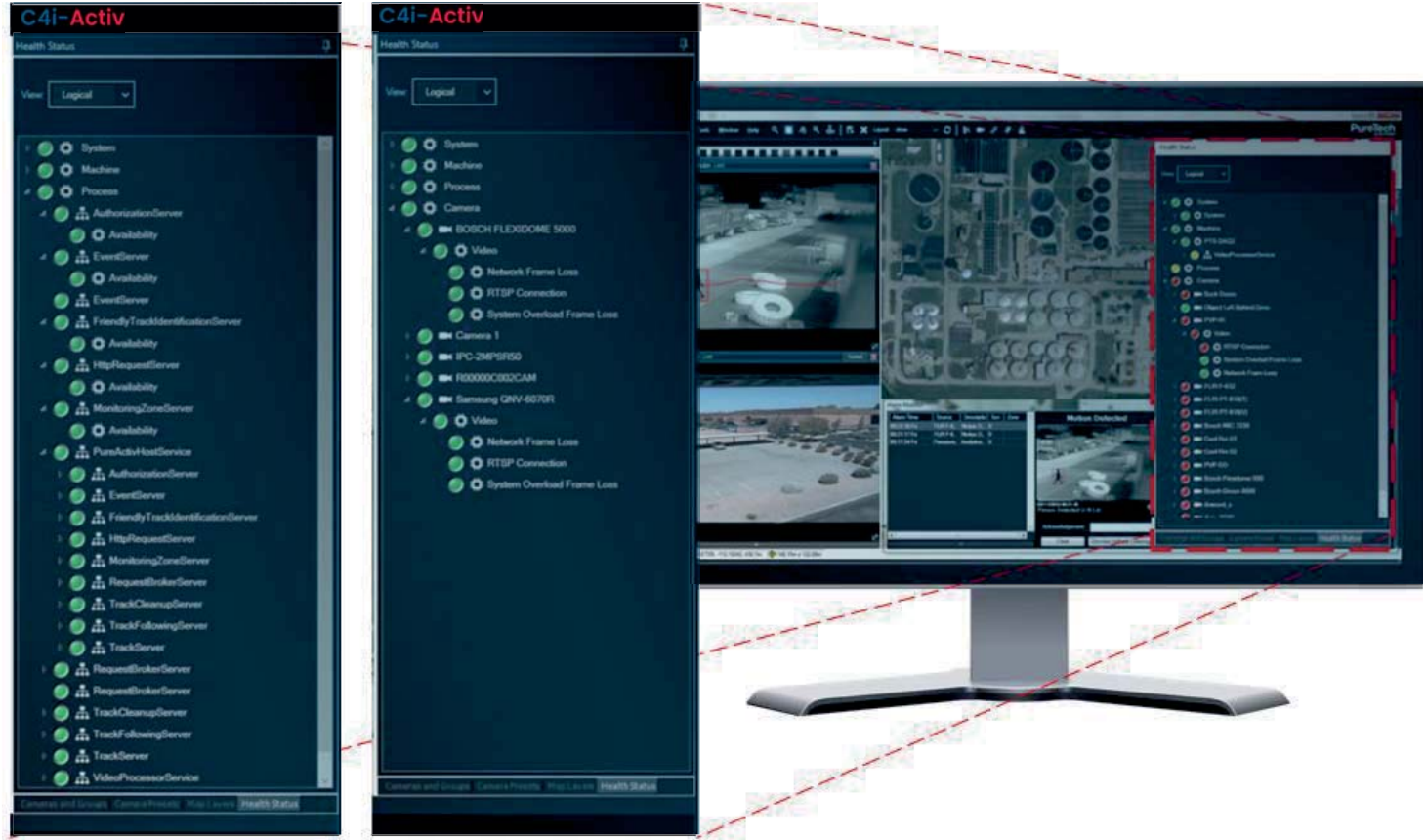
Deters intruders away from perimeters, increasing valuable response time.



C4i-Activ Extensive Real-Time System Health Monitoring



SEEING BEYOND THE OBVIOUS



In-depth monitoring of internal and external processes and communications.

Enables rapid break-fix. Maximizes up-time.

C4i-Activ Video Player



SEEING BEYOND THE OBVIOUS

The screenshot shows the C4i-Activ Video Player interface. On the left, a sidebar contains sections for 'Current Frame', 'Video Details', 'Recording Source Info', 'Camera Location', 'Annotation Control', 'Digital Signing', and 'Playback Controls'. The main area displays a video frame with a red bounding box around a person and a red track trail history line. On the right, there are panels for 'User Annotations' (with a search bar and 'Clear', 'Save', 'Prev', 'Next' buttons), 'Frame Metadata' (with an 'AnalyticsStatus' dropdown), and a 'Recorded Video' section. At the bottom, there are 'Video Looping' and 'Control Overlay' buttons.

- Current Frame
- Video Details
- Recording Source Info
- Camera Location
- Annotation Control
- Digital Signing
- Playback Controls
- User Annotations
- Annotation Search
- Save Annotations
- MetaData Config
- Bounding Box
- Track Trail History
- Recorded Video
- Video Looping
- Control Overlay

Digitally Signed Video & metadata provide frame by frame details.

C4i-Activ Forensic Search

SEEING BEYOND THE OBVIOUS

The image shows two windows from the C4i-Activ Forensic Search software. The 'Region Definition' window on the left shows a camera view of a parking lot with a green 'Watched Region' overlaid. The 'Forensic Browser' window on the right shows a search interface for a specific DAQ (PTS-DAQ2) and camera (Bosch VG5-800). It includes a search window, video playback area, progress bar, search type (Motion Search), time period (09/18/2015 09:55:52 to 10:15:52), camera source, and search results. A table of search results is shown below the search parameters.

Time Period	Camera Source	Search Results
09/18/2015 09:55:51 24.50s	09/18/2015 09:56:24 40.10s	09/18/2015 09:57:12 12.14s
09/18/2015 09:57:40 12.16s	09/18/2015 09:58:00 8.17s	09/18/2015 09:58:20 4.20s
09/18/2015 09:58:36 48.33s	09/18/2015 09:59:56 4.37s	10/00:16 8.43s
10/00:36 32.50s	10/01:20 80.10s	10/02:48 148.40s

Callouts for Region Definition window:

- Camera View
- Region Vertices
- Region to Search
- Region Setup
- Save/Clear Region

Callouts for Forensic Browser window:

- Server
- Search Window
- Video Playback
- Progress Bar
- Search Type
- Time Period
- Camera Source
- Search Results

Callouts for Forensic Browser window (bottom):

- Advanced Search
- Help Window
- Region Setup

C4i-Activ Alarm Search

SEEING BEYOND THE OBVIOUS

The screenshot shows the C4i-Activ Alarm Search interface. On the left, there are search filters for Time Period, Alarm Status, Servers, and Alarm Types. The top left shows Alarm Video and Alarm Image thumbnails. The top center displays a large video feed with a red bounding box around a person. On the right, there is an Acknowledgements panel with details like Date, Type, and Desc. Below the video is an Alarm List table with columns for Image, Alarm Date (Local), Type, Device, Description, and Cleared. A selected alarm is highlighted in the table.

Labels on the left side:

- Alarm Video
- Alarm Image
- Alarm Location
- Time Period
- Start Search
- Alarm Status
- Servers
- Alarm Types

Labels on the right side:

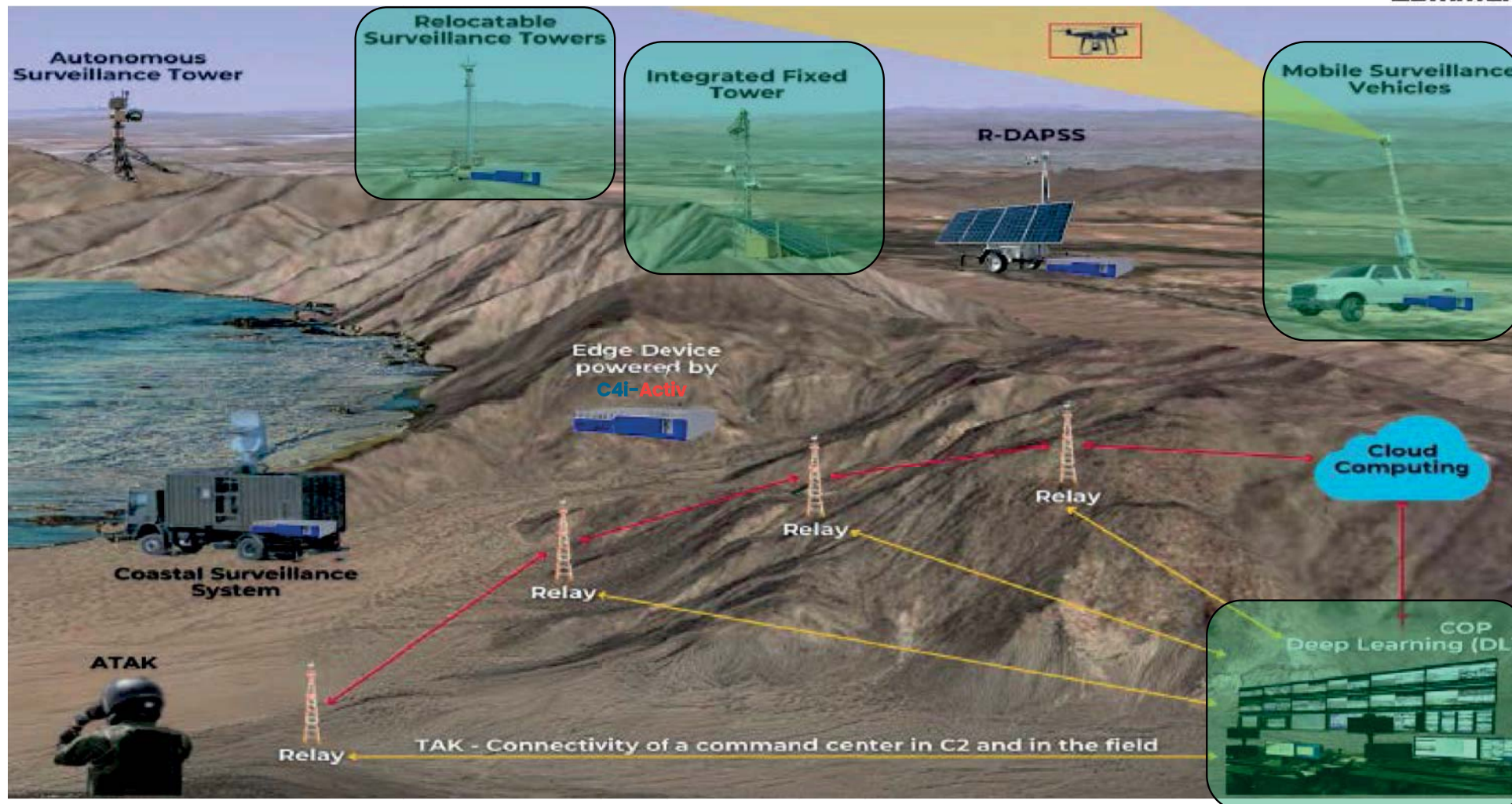
- Acknowledgements
- Alarm Description
- Cleared State
- Alarm Detail
- Selected Alarm
- Alarm List

Image	Alarm Date (Local)	Type	Device	Description	Cleared
	09/15/2015 09:01:16	Motion Detected	FLIR F-625	Person Detected in N Lot	<input type="checkbox"/>
	09/15/2015 09:05:14	Motion Detected	FLIR F-625	Person Detected in N Lot	<input type="checkbox"/>
	09/15/2015 09:08:22	Motion Detected	Panasonic PTZ	Person detected in west parking lot area.	<input type="checkbox"/>
	09/15/2015 09:28:55	Motion Detected	Panasonic PTZ	Person detected in west parking lot area.	<input type="checkbox"/>

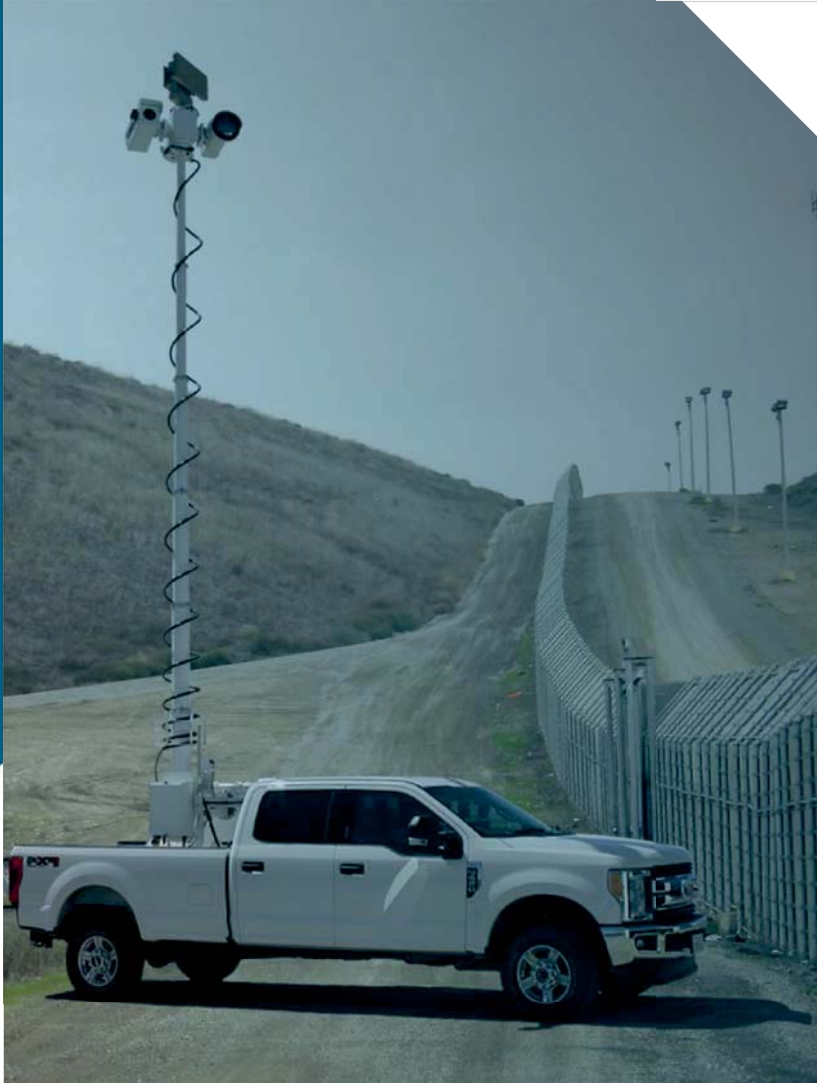
C4i Communication Autonomous Border Surveillance Solution



SEEING BEYOND THE OBVIOUS



Mobile Surveillance System



The MVSS platform utilizes C4i Communication Systems' C4i-Activ software as its central command and control, providing AI enhanced video detection and classification, user interface display, and sensor collaboration logic for the surveillance suite. The suite consists of visible and thermal cameras, laser illuminators and range finders mounted on telescoping masts located in the back of commercial pickup trucks

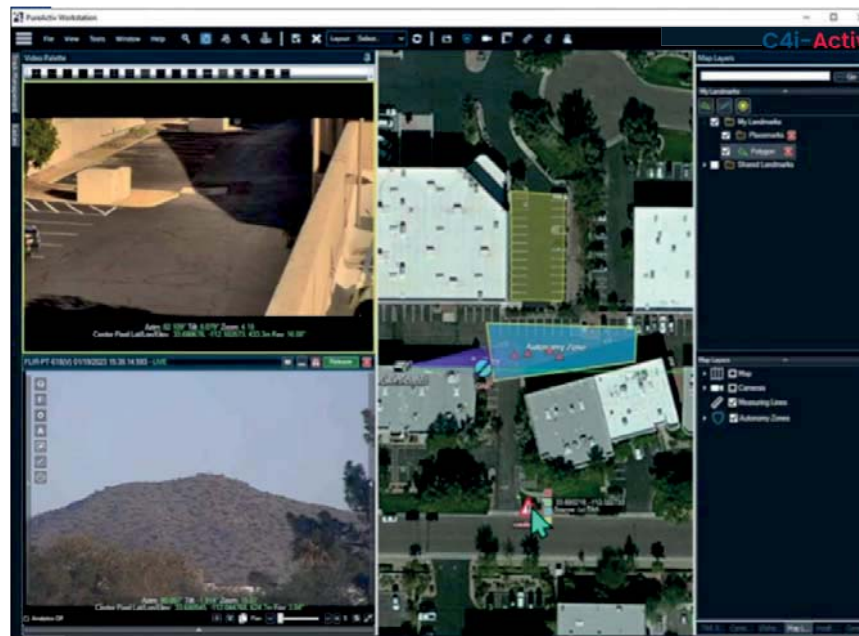
- Rapid deploy in 5 minutes.
- Geospatial map system shows location of detected targets and dropped bundles.
- Automatic detection, tracking, and classifying of humans up to 7.5 miles and vehicles up to 10 miles.
- Deep learning neural net technology for auto-verification of target classification; dramatically reduces nuisance alarms due to animals and weather induced noise.

C4i-Activ AlertView TAK Android and iOS Application Integration



The C4i-Activ TAK Integration allows users to:

- Share location data of sensors and agents.
- Add and share place markers.
- Display camera frustums in TAK phone application.
- Display detected drones and ground targets in TAK phone application.
- Display agent and BF drone locations with TAK application in AlertView.
- Send and receive images and video.



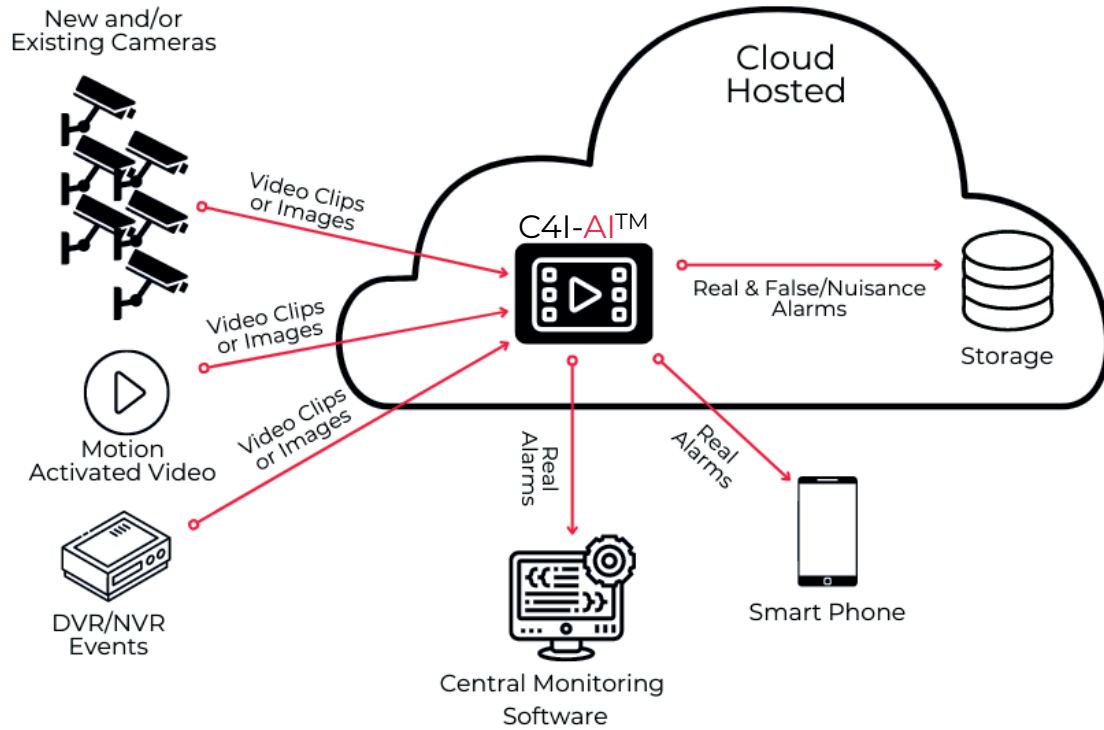
AlertView Screen
on Computer



ATAK Screen
on Android
phone

TAK is Used by U.S. DHS and U.S. Military

C4i-AI Cloud Based Alarm Filtering Solution



Nuisance Alarm Elimination on Your Existing System

* patented

C4i-Activ R-DAPSS



C4i Tech's C4i-Activ Rapid-Deploy Autonomous Perimeter Surveillance System enables airports, borders, military bases, seaports, and utilities to quickly deploy a temporary or permanent high fidelity virtual perimeter system at substantially less cost and time than a hardwired solutions.

ADVANTAGES

Autonomous sealed virtual perimeter.

Scales to small and large sites.

Easily expandable.

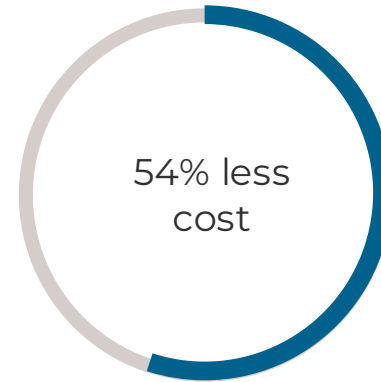
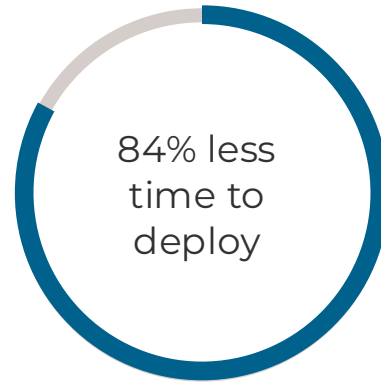
Permanent or relocatable installs.

24/7 all weather protection.

Near 100% detection with guaranteed near zero false/nuisance alarms.



R- DAPSS Virtual Perimeter Time & Cost Comparison to Fixed Installation



On average, it takes 24 months to set up a traditional perimeter, which includes, conduit, cabling, trenching, pole, pole foundation, and installation. For the R-DAPSS, it only takes 120 days for complete system set-up.

*According to Jacobs Engineering

VisionView 180-degree Camera System

SEEING BEYOND THE OBVIOUS



VisionView 180° Camera



The VisionView 180° is an advanced camera system that features six imagers (3 day/night and 3 uncooled thermal) that combine to provide 180° panoramic coverage day, night and in other low visibility conditions.

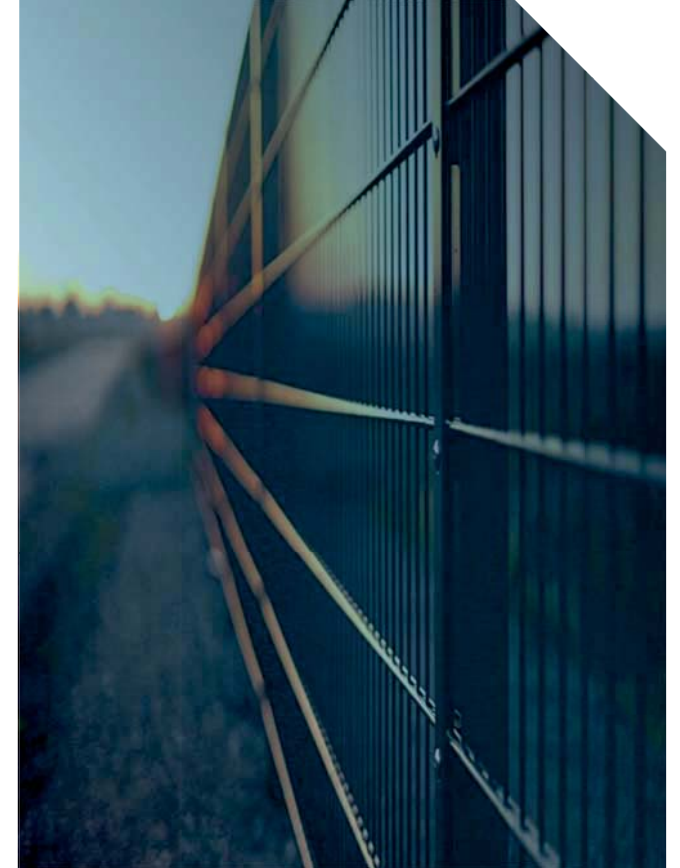
ADVANTAGES

- Enhances Protection of Country Borders, Coastal Areas, and Critical Perimeters.
- C4i Tech's geospatial outdoor video analytics for detection, tracking, classification and PTZ slew-to-cue (optional).
- Integration with C4i Tech's C4i-Activ AlertView Command and Control Software.
- Compatible with other NVR/VMS/PSIM systems.
- Internal managed Ethernet switch with single military grade RJ45 connector.



Key Benefits of C4i-Activ

1. Improves site security by automating perimeter detection, deterrence, and response and improving situational awareness.
2. Lower total system purchase and support costs.
3. Dramatically increases operator productivity. (force multiplier).





LEARN MORE: c4icommunication.com

FOR MORE INFORMATION: contact@c4icommunication.com or +1 (302)9811340