

RIO™

ROSA Independent Observatory



AUTONOMOUS SECURITY TRAILER

RIO Transforms How Security Incidents Are Detected and Resolved With Real-Time Autonomous Response.



Welcome To Real-Time Security

Most mobile security trailers just record. They wait for someone to review footage and decide if there's a threat. That's not deterrence. It's delay.

RIO is different. It acts the moment something happens. No operators, no guesswork.

Too Many Alerts. Not Enough Action.

Most trailers still rely on someone watching. When an alert triggers, it's sent to a queue, waiting for an operator to decide what to do next.

That's not real-time, that's lag.

As sites get busier, the volume keeps climbing. But the process doesn't change. Every person, every motion, every unknown vehicle gets flagged, and someone has to make the call.

Your team ends up chasing noise instead of stopping threats. Alert fatigue sets in while real risks slip through.

Automation That Speaks for Itself.

RIO doesn't just detect movement. It understands what matters.

With AI analytics running on-device, RIO distinguishes real threats from everyday motion. It knows when someone is loitering near a fence, entering after hours, or breaching a perimeter.

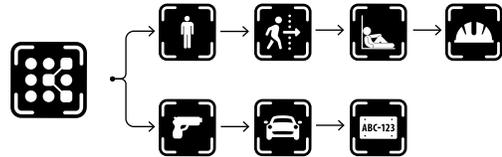
That insight powers its response.

LED warnings activate. Voice commands trigger instantly. Everything is calibrated to interrupt unwanted activity before it escalates.

RIO gives you fewer alerts, more action, and a security trailer that actually changes behavior on site.

From Detection to Action, Instantly

Each RIO unit uses RAD's analytic library to detect and respond in real time. Processing happens on the device or in the cloud, depending on the model.



Real-time detection includes:

Human activity

Identifies individuals moving through the monitored area, even in low-light or off-hours conditions.

Perimeter breaches

Flags movement across restricted boundaries to prevent unauthorized access.

Loitering

Detects when someone lingers too long, often a precursor to theft, trespassing, or vandalism.

PPE compliance

Recognizes whether individuals are wearing required safety gear like hard hats or vests.

Firearms

Detects the visible presence of a firearm and triggers immediate alert and escalation.

Vehicles

Detects the presence and movement of vehicles across entry points or sensitive areas.

License plates (model dependent)

Captures and logs license plate data for review and investigation.

Next, see how RIO goes beyond detection, using built-in tools to disrupt threats the moment they appear.



Built for Real-World Deployment

RIO is ready for the environments your team already secures, from remote yards to high-traffic campuses.

It's solar-powered and fully self-contained. No trenching, networking, or external power required. Setup takes hours, not days, and doesn't need IT involvement.

RIO units come in both 180° and 360° camera configurations, every unit connects via cellular, with optional Wi-Fi or Ethernet backup.

Whether you're deploying one unit or a fleet, you can easily manage RIO with RADSOC, access live views, review footage, and receive alerts remotely.

Intelligence to Act

Most trailers detect motion. RIO delivers a full response.

With intelligent detection, 110 dB speakers, and a bright, customizable LED display, RIO acts immediately when a threat is detected. Voice warnings and dynamic LED commands activate instantly, delivering a clear, on-device pushback that tells intruders they've been seen and need to leave now.

These responses are pre-loaded and automatic, designed to scare off intruders and stop incidents before they escalate.

Verified and Escalated

RIO takes it further.

When a verified threat is detected, RIO can escalate instantly through SARA™, RAD's Agentic AI Operator that responds on behalf of your security team.

If SARA Agent is active, she performs a full autonomous incident response. Using the live feed from RIO, she delivers human-style talk-downs tailored to what's on screen. She might say, "You in the red hat, this area is under surveillance. Leave immediately."

At the same time, she dials up to three contacts in parallel, gives live scene updates, and answers questions like a human operator, only faster.

The entire event is recorded and logged for a full incident report. There are no queues, no operator delays, just clear, immediate action.



From Deterrence To Full Response

Every RIO unit ships with AI-driven detection and pre-loaded deterrent responses, so first response happens automatically.

SARA Edge is built into every RAD device, enabling real-time deterrence through onboard audio and visual tools.

Adding SARA Agent turns RIO into part of a full incident orchestration layer that verifies events, routes notifications to the right people, and documents every step from detection through resolution.

A RIO for Every Application



RIO Mini

Compact deterrence, core analytics
 360°
 Strong – visible & audible
 ROSA Lite Tandem – Neopixel Ribbon Lights
 Yes – via ROSA
 16 ft
 1080W (2x 540W panels)
 5.12 kWh
 Web/Mobile
 Cellular included; Wi-Fi/Ethernet optional
 1,142 lbs
 Simple, smart, affordable deterrence
 Entry-level price, 360° visual presence, core detection, easy to deploy



Feature / Question

Best For
 Coverage
 Deterrence level
 Lighting
 Audio Talk-Downs?
 Mast Height
 Power – Solar
 Battery Storage
 Access
 Connectivity
 Shipping Weight
 Why pay more?
 Lead Selling Points



RIO 180

Entry points, lanes, corridors
 180°
 Strong – visible & audible
 LED with alerts & ribbon (1x ROSA)
 Yes – via ROSA
 16 ft
 1080W (2x 540W panels)
 5.12 kWh
 Web/Mobile
 Cellular included; Wi-Fi/Ethernet optional
 1,142 lbs
 Balanced coverage and analytics
 Best ROI for entry control, 180° real-time deterrence, faster detection/response



RIO 360

Full-site visibility and advanced analytics
 360°
 Maximum – 2x ROSA with full deterrence
 LED with alerts & ribbon (2x ROSA)
 Yes – via ROSA
 16 ft
 2160W (4x 540W solar panels)
 10.24 kWh
 Web/Mobile
 Cellular included; Wi-Fi/Ethernet optional
 2,060 lbs
 Maximum coverage with full response
 Best visibility, 360° real-time deterrence, flexibility, faster detection/response



Capabilities

Human Detection
 Perimeter Intrusion
 Loitering Detection
 Firearm Detection
 PPE Detection
 Vehicle Detection
 LPR
 Video Retention
 Detection Image Retention

Yes
 Yes
 Yes
 Not supported
 Yes
 Yes
 Not supported
 24/7 on board for 21 days
 1 Year

Yes
 Yes
 Yes
 Yes
 Yes
 Yes
 Yes (dependent on view)
 24/7 on board for 21 days
 1 Year

Yes
 Yes
 Yes
 Yes
 Yes
 Yes
 Yes (dependent on view)
 24/7 on board for 21 days
 1 Year

Deployment Requirements

Power Source Needed?
 Towable?
 Placement Method

RIO Mini

No (solar / battery powered)
 No
 Forklift / Flatbed

RIO 180

No (solar / battery powered)
 No
 Forklift / Flatbed

RIO 360

No (solar / battery powered)
 No
 Forklift / Flatbed

SARA Agentic AI

Security Incident Response Orchestration



Detection

Immediate threat detection, through AI-driven analytics.



Verification

SARA Agentic AI verifies alerts in real time.



Deterrence

Autonomous audio and visual pushback to deter intruders.



Escalation

SARA Agentic AI escalates incidents to responders.



Response

Responders receive scene updates and direction.



Resolution

Incident reports are generated instantly.



Autonomous Security That Responds

Whether it's a parking lot, jobsite, substation, or storage yard, RIO delivers fast, visible action without the cost or complexity of other options.

Each unit is solar powered, with built-in cellular and everything it needs to go live on day one.

Full Incident Management

Every RIO unit ships with AI-driven detection and pre-loaded deterrent responses, so first response happens automatically without an operator watching every camera.

Adding SARA Agent turns RIO into part of a full incident orchestration layer. SARA verifies events, initiates voice downs and outbound calls, routes notifications to the right people, and creates a complete, time-stamped record of what happened and how it was handled in real time.

This upgrade doesn't require new hardware on RIO and can be activated on demand across one site or many.

Real-Time Security, Orchestrated By SARA

SARA is designed to match your site's needs, from single trailers to multi-site deployments. She connects RIO and other RAD devices into one incident orchestration layer, reducing noise alerts and giving teams faster, verified incidents to act on.

Security doesn't need to be complex. It just needs to act quickly and consistently when something happens.

See RIO And SARA In Action

Watch how RIO delivers detection and deterrence on site while SARA Agentic AI verifies, escalates, and documents incidents in real time.



Robotic Assistance Devices

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