

TRIO MOBIL

Trio Mobil vs. CCTV-Based AI Monitoring Solutions

Capability comparison across Detection,
Real-Time Intervention, and Reporting

Trio Mobil's Business Impact, Executive Summary

- Reduces the accident risk from blind spots fixed cameras cannot see.
- Intervenes in real time, CCTV only records it, Trio Mobil intervenes.
- Cuts post-incident downtime, insurance, and legal risk costs.
- Monitors and compares all sites live from a single dashboard.

Trio Mobil – Full Stack System vs CCTV-Based Solutions

Trio Mobil runs detection, intervention, and reporting together in one full-stack safety architecture. Typical CCTV-based solutions remain limited to fixed-camera visibility and do not natively provide real-time intervention at the point of risk.

1



Coverage

TRIO MOBIL – FULL STACK



- Static AI cameras, forklift-mounted cameras, existing CCTV, and the UWB location layer combine into one connected system, closing blind spots across the facility.

STANDALONE / CCTV – ONLY SOLUTIONS



Fixed camera coverage leaves blind spots and uncovered areas at risk.

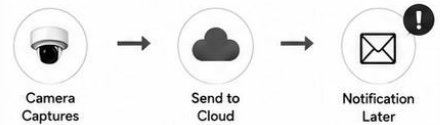
2



Intervention Speed



- Intervenes on-site in under a second the moment a risk occurs: forklift slowdown and real-time alerts act before the incident can happen.



Cloud-based deployments cannot provide dependable real-time intervention due to processing latency. Acting on a forklift or machine still requires additional integration and hardware investment.

3



Management Analytics



- Real-time data from every source is unified with cloud-based risk trends, heatmaps, and KPIs in one centralized dashboard, giving safety and operations leaders instant multi-site visibility and analytics.



Multi-site analytics may be available, but insights remain limited to fixed-camera fields of view. Broader operational visibility typically requires additional coverage, data sources, and integration.



ONE CONNECTED SYSTEM. END-TO-END SAFETY.

Full-stack visibility, faster action, and smarter analytics, all in one platform.



How Trio Mobil's Hybrid Architecture Works

Trio Mobil combines edge-based detection and intervention with cloud-based analytics in one hybrid safety architecture.

EDGE LAYER

AI Cameras + Forklift Integration

Trio Mobil's edge layer pairs AI cameras with real-time intervention, so risks are caught and acted on right where they happen.

- Static True AI operates at the edge, monitors predefined geofenced areas, and detects configured risk scenarios in real time.
 - When a risk is detected, it immediately triggers predefined visual and audible alerts at the point of risk.
 - Through integration with the relevant forklift kits, the system can send a slowdown trigger to the specific forklift involved in the risky interaction.
- 
- This combines static-area intelligence with forklift-level intervention, enabling immediate preventive action without relying on a cloud round trip.

CLOUD LAYER

Multi-Source Reporting

While the edge layer acts in real time, the cloud layer turns every camera into a source of insight, building the visibility leaders need across sites.

- Static True AI cameras used for real-time intervention also generate reporting data.
- Existing CCTV camera feeds can be used for fixed-area AI monitoring and reporting.
- Forklift-mounted AI cameras generate reporting insights while moving across operational areas.
- All sources can be consolidated into dashboards, heatmaps, event review, and safety reports.



Appendix — Detailed Capability Matrix

The 26-item technical comparison that supports the strategic summary — Detection / Real-Time Intervention / Reporting

■ Technology foundation / data source (not scored) ✓ Full capability ✗ Limited / not native

DETECTION		
Requirement	TRIO MOBIL - FULL STACK	STANDALONE / CCTV-ONLY SOLUTIONS
■ Detection technology foundation	Static and Forklift Mounted AI Cameras (pedestrian detection), CCTV Cameras, UWB sensor layer (position data), and a cloud-based AI module (vehicle detection + proactive EHS reporting). Edge-based real-time intervention + cloud-based analytics, a hybrid architecture.	Fixed CCTV + AI analytics. Cloud: all processing takes place in the cloud, no edge component. On-Prem/Edge: processing takes place on a local server on site.
Pedestrian and forklift detection	✓ Pedestrians are detected at the edge by static/Forklift Mounted AI Cameras; equipment position is known via UWB, and vehicle/truck detection is provided by the cloud AI module.	✓ Detects pedestrians/vehicles within camera coverage. Cloud: processing takes place in the cloud. On-Prem/Edge: processing takes place on site, and maintenance must also be done on site.
Detection around blind racks and corners	✓ UWB and blind spot management enable detection beyond direct camera visibility.	✗ Limited by field of view and physical obstructions, regardless of cloud or on-prem/edge.
Detection throughout the forklift's operating route	✓ The UWB tag and Forklift Mounted AI Cameras travel with the forklift; the camera detects pedestrians, UWB provides position/distance data.	✗ Fixed cameras are installed at static locations; detection is limited to installed camera points, regardless of cloud or on-prem/edge.
False-alert control in dynamic aisles	✓ AI-based pedestrian detection, UWB, and configurable zone logic help reduce nuisance alerts.	✗ Camera-based detection is affected by angle, obstructions, and changing backgrounds. On-prem/edge processing only improves speed, not the underlying detection limits.
Yard-wide truck, forklift and pedestrian detection	✓ Equipment position/distance is known via UWB; pedestrians are detected at the edge; truck/vehicle detection is supported by the cloud AI module, position-based alerts + cloud analytics.	✗ Complete detection cannot be provided unless the entire yard is covered; blind spots remain outside camera view, regardless of cloud or on-prem/edge, since there is no UWB-like position layer.
Machine and restricted-zone safety detection	✓ People entering machine hazard zones are detected at the edge; UWB-tagged equipment entry is determined via position data; the cloud AI module engages when vehicle detection is required.	✓ Can detect violations if the area is clearly visible. On-Prem/Edge: can also generate a fast local trigger.

REAL-TIME INTERVENTION

Requirement	TRIO MOBIL – FULL STACK	STANDALONE / CCTV-ONLY SOLUTIONS
■ Intervention technology foundation	True AI (edge) + forklift kit + UWB provide real-time intervention on site; the cloud AI module turns this into proactive EHS reporting, a hybrid architecture.	Uses CCTV analytics. Cloud: analytics run entirely in the cloud, no edge component, additional integration is needed for intervention. On-Prem/Edge: processing takes place on site, fast triggering is possible, but updates/maintenance must be done on site.
Immediate in-cab warning	✔ Provides immediate visual and audible warnings directly to the forklift operator.	✘ Requires separate in-cab hardware and integration, regardless of cloud or on-prem/edge.
Automatic forklift slowdown*	✔ Can automatically slow the forklift when a configured risk is detected.	✘ Not a built-in CCTV feature; even with on-prem/edge fast triggering, a separate forklift integration kit is required.
Intersection and blind spot warnings	✔ Can activate beacons, LEDs, audio warnings, and other local alerts.	✘ Cloud: footage must first be sent to and processed in the cloud, not real time. ✔ On-Prem/Edge: processing takes place on site, the warning is generated locally, fast triggering.
Real-time intervention action set**	✔ Applies predefined actions immediately: slow a forklift, real-time alarm in machine zone, open a door, change traffic lights, trigger visual/audio alerts.	✘ Cloud latency prevents dependable actuation. On-Prem/Edge: simple alerts are faster, but complex actions like machine zone control/door opening still require additional integration.
Real-time yard safety intervention	✔ Truck/forklift/pedestrian interactions are assessed using UWB position + AI pedestrian detection; warning/intervention rules trigger on site the moment a risk occurs.	✘ Coverage gaps prevent dependable yard-wide intervention, regardless of cloud or on-prem/edge, since there is no UWB layer.
Integration with yard safety and control systems**	✔ Integrates with traffic lights, barriers, industrial doors, wheel chocks, and pneumatic systems to execute rules immediately.	✘ Fixed-camera dependency prevents dependable control. On-Prem/Edge: signal generation is faster, but system integration still needs additional hardware/engineering.
Real-time machine safety intervention**	✔ A person's entry into a machine hazard zone is detected at the edge; UWB-tagged equipment entry is detected via position data; machine zone control, alarm, or access control can be triggered.	✘ Monitoring may be possible within coverage; dependable intervention requires additional integration, regardless of cloud or on-prem/edge.
Sub-second response at the point of risk	✔ Edge processing on the forklift/local device provides a sub-second response without a cloud round trip.	✘ Cloud: does not provide a dependable sub-second response. ✔ On-Prem/Edge: processing takes place on site, sub-second response is possible.
Behavior change at the moment of risk	✔ Warns the operator and can intervene immediately when unsafe exposure occurs.	✘ Primarily supports retrospective coaching; even with on-prem/edge immediate detection, there is usually no direct warning interface to the operator.
Real-time prevention and analytics in one platform	✔ Immediate warning/intervention data generated on site is combined with cloud dashboards/heatmaps/trend analytics in one hybrid platform.	✘ Primarily provides monitoring/analytics; real-time prevention needs additional integration. On-Prem/Edge: immediate intervention is possible, but a centralized dashboard still needs cloud integration.

REPORTING

Requirement	TRIO MOBIL – FULL STACK	STANDALONE / CCTV-ONLY SOLUTIONS
■ Reporting data sources	Static and Forklift Mounted AI Cameras (pedestrian detection, edge), CCTV cameras, UWB position data, and continuous vehicle/truck detection from the cloud AI module.	Fixed CCTV feeds. Cloud: all processing/reporting is in the cloud. On-Prem/Edge: records are kept on site; additional integration is needed for centralized reporting.
Centralized dashboards, heatmaps and trend analysis	✔ Provides site-level and multi-site monitoring, benchmarking, and analytics.	✔ Cloud: site-level + multi-site monitoring/analytics are provided. ✘ On-Prem/Edge: typically limited to a single site; multi-site needs additional cloud integration.
Video-based event review and investigation	✔ Captures relevant risk events and short video clips for investigation, reporting, and corrective action.	✔ Captures risk events and short clips. On-Prem/Edge: footage is stored on site; remote access/long-term archiving needs additional infrastructure.
Mobile monitoring capability	✔ Forklift Mounted AI Cameras also collect monitoring insights as the forklift moves (pedestrian density, route risks, etc.).	✘ Fixed cameras only monitor their predefined field of view, regardless of cloud or on-prem/edge.
Unsafe behavior, PPE and process-violation detection	✔ Detects configured unsafe behaviors such as PPE non-compliance, work-at-height violations, restricted-area entry, running/climbing.	✔ Detects PPE non-compliance and work-at-height violations within camera coverage, can be provided via cloud or on-prem/edge.
Ergonomic risk monitoring	✔ Can identify configured ergonomic risks and unsafe working postures for reporting and investigation.	✔ Can identify ergonomic risks where workers are clearly visible, can be provided via cloud or on-prem/edge.
Yard safety monitoring and reporting	✔ UWB position + AI pedestrian detection + cloud vehicle detection together provide event review, risk trends, heatmaps, and reporting yard-wide.	✔ Provides monitoring/reporting for risks within camera coverage. Cloud: consolidated on a centralized platform. On-Prem/Edge: without a position layer, uncovered-area interactions cannot be reported.
Automated safety reporting	✔ Converts detection events into safety KPIs, risk trends, area-level reports, and actionable insights.	✔ Provides event reports/analytics based on monitored areas. Cloud: consolidated across multiple sites. On-Prem/Edge: consolidation typically needs additional cloud integration.

* Automatic slowdown is available where the relevant forklift model is technically compatible and the required integration has been completed.

** Real-time actuation depends on compatible equipment, site controls, and completed technical integration. CCTV capabilities may vary; this comparison reflects typical cloud-based CCTV AI monitoring configurations.

Note: Vehicle/truck detection is provided by the cloud-based AI module; forklift-mounted Mobil AI cameras perform pedestrian/human detection only and do not provide vehicle or forklift detection.