

# Integrating Robot Dogs with CCTV Surveillance for Enhanced Industrial Logistics

Innovating Security and  
Operational Efficiency



# Industrial Logistics Challenges Today



01

## Growing Facility Complexity

Expanding warehouses and distribution centers create vast areas requiring constant monitoring.

02

## Static CCTV Limitations

Fixed cameras leave blind spots and cannot adapt to dynamic environments.

03

## Real-Time Monitoring Needs

Operations demand mobile, responsive surveillance for immediate threat detection.

04

## Intelligent Surveillance Demand

AI-driven monitoring is essential for proactive security management.

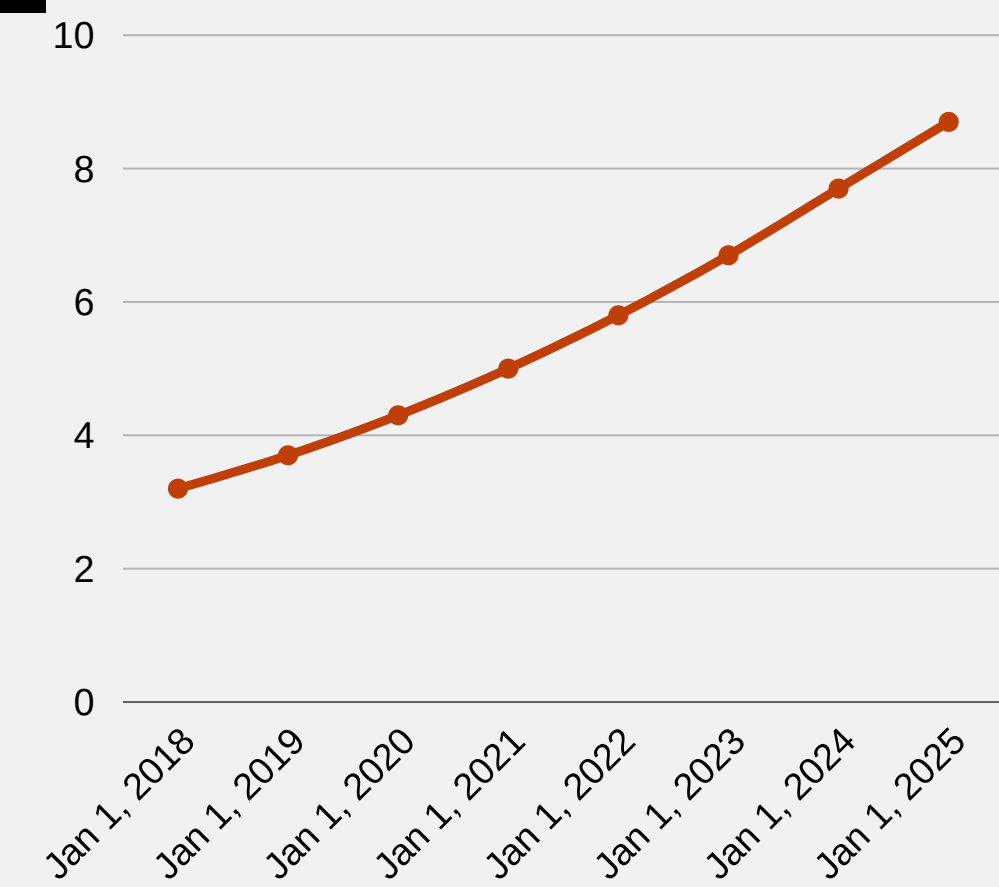


Modern logistics facilities face mounting security and operational challenges that traditional surveillance systems struggle to address effectively.

# Market Trends in Industrial Security Technology



- 01 Autonomous Robotics Growth**  
Industrial robotics market expanding at 15%+ CAGR.
- 02 AI-Driven Surveillance Adoption**  
Smart video analytics becoming industry standard.
- 03 Integrated Security Solutions**  
Demand for unified, proactive monitoring platforms.
- 04 Innovation Momentum**  
Major logistics firms investing in next-gen security.



AI driven in Malaysia began in year 2018 after started the era of digital transformations of Fintech industry

The convergence of autonomous robotics and AI-driven surveillance is reshaping industrial security. Organizations are increasingly seeking integrated, proactive solutions that combine mobility with intelligence.



# Introducing : the Unitree Robot Dog

Advanced autonomous patrol technology combining mobility, multi-modal sensing, and AI-driven intelligence for industrial logistics environments.

01

## Agile Mobility

Navigates complex terrain and tight spaces with ease.

02

## 4D- Lidar L2

360degree\*96degree omni directional ultra wide-angle scanning

03

## AI-Driven Autonomy

Intelligent patrol routes with minimal human oversight.

04

## Anomaly Detection

Real-time alerts for security threats and hazards.

# CCTV Surveillance Systems Overview



01

## Fixed Camera Coverage vs Blind Spots

Static cameras create coverage gaps in dynamic environments.

02

## Real-Time Video Analytics

AI-powered analysis enables automated threat detection.

03

## Integration Challenges

Difficulty connecting fixed systems with mobile assets.

04

## Current System Limitations

Reactive monitoring lacks proactive threat response.



Traditional CCTV systems provide essential monitoring but face inherent limitations in coverage and adaptability. Understanding these constraints is key to identifying integration opportunities.



# Integration Concept: Robot Dog + CCTV



Robot dogs complement and extend CCTV surveillance through mobile coverage and intelligent data fusion.

01

## Mobile CCTV Platform

Robot dog extends camera coverage to blind spots and dynamic areas.

02

## Real-Time Data Fusion

Fixed and mobile sensors merge data streams for comprehensive monitoring.

03

## Centralized AI Analytics

Unified control center with intelligent threat detection and alerts.

# Enhanced Security Capabilities



01

## Continuous Patrol Coverage

24/7 autonomous patrol with real-time anomaly detection alerts.

02

## Immediate Incident Response

Rapid deployment to suspicious activity locations.

03

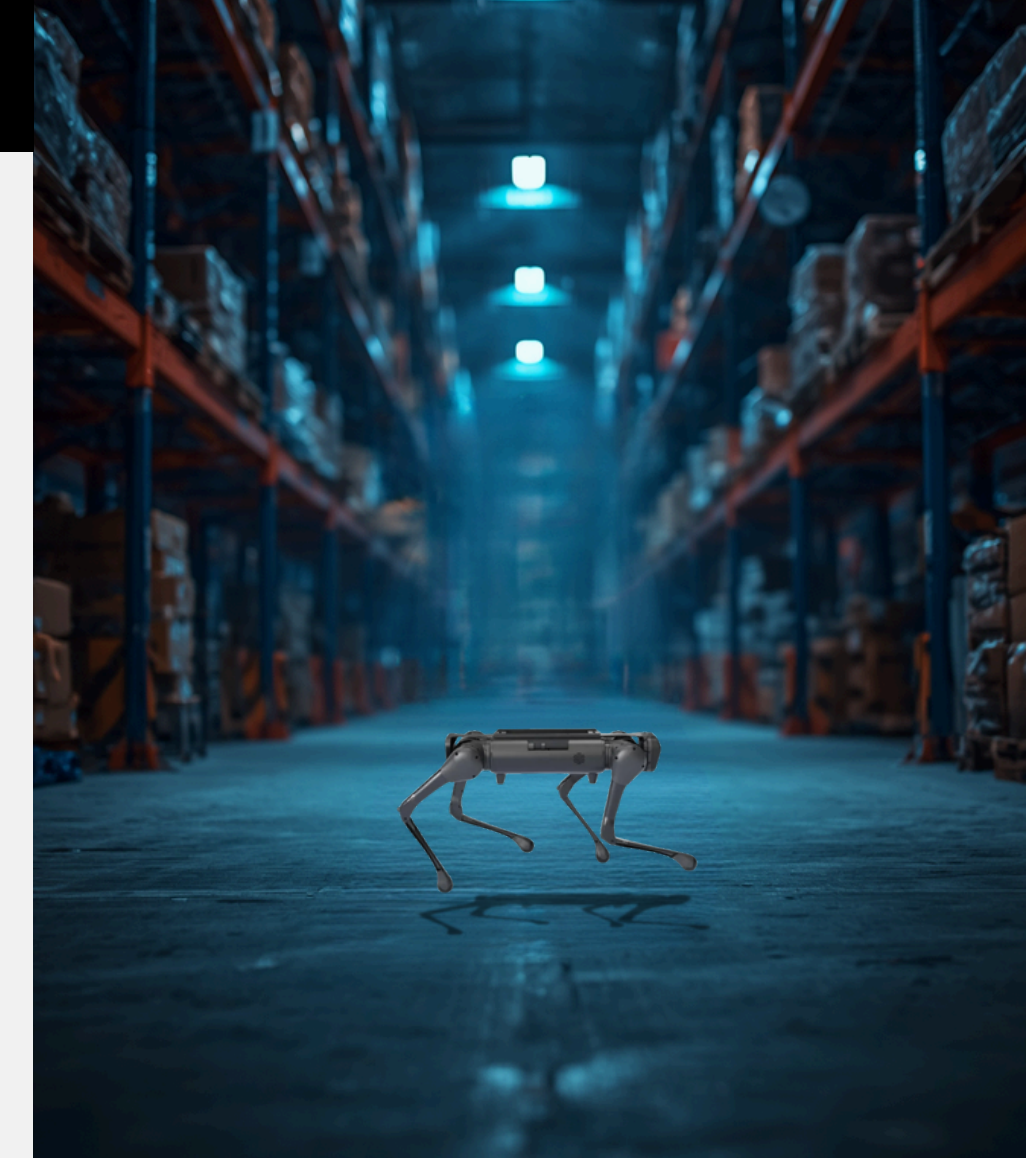
## Reduced Human Patrol Needs

Automated monitoring decreases manual patrol requirements.

04

## Lower Risk Exposure

Remote surveillance keeps personnel safe from hazards.



Robot dog integration with CCTV creates a comprehensive security ecosystem that combines mobile surveillance with fixed monitoring for complete facility protection.

# Operational Efficiency Improvements



01

## Faster Incident Detection

AI-powered alerts enable rapid response to security events.

02

## Off-Hours Asset Monitoring

Autonomous patrols protect critical zones 24/7.

03

## Traffic Flow Data Collection

Sensors capture movement patterns for optimization.

04

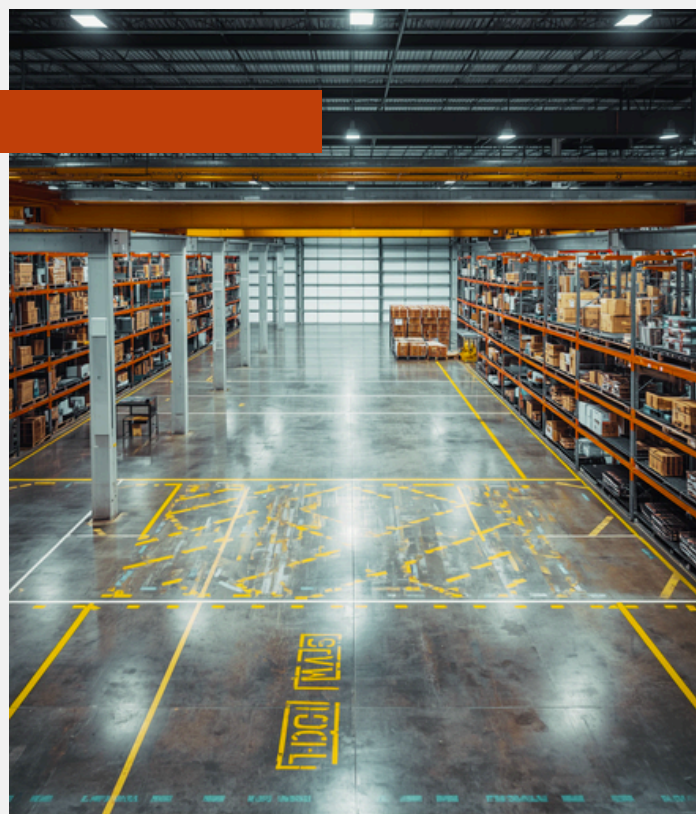
## Operational Insights Generation

Analytics transform surveillance data into actionable intelligence.



Robot dog integration streamlines logistics workflows by providing continuous monitoring, rapid incident response, and valuable operational data that drives smarter decision-making.

# Safety and Compliance Enhancements



01

## Early Hazard Detection

Identifies fires, spills, and unauthorized access in real-time.

02

## Automated Compliance Reporting

Continuous monitoring generates audit-ready documentation.

03

## Improved Worker Safety

Reduces human exposure to hazardous patrol zones.

04

## Remote Surveillance Capabilities

Enables safe monitoring from centralized control rooms.



Robot dog integration with CCTV delivers proactive safety monitoring and automated compliance tracking, reducing workplace incidents and ensuring regulatory adherence.



# Warehouse Security Patrol

Robot dog patrols augment fixed CCTV coverage with autonomous mobile surveillance for comprehensive warehouse protection.

01

## Autonomous Perimeter Routes

Pre-programmed patrol paths cover internal aisles and external boundaries.

02

## Real-Time Breach Alerting

Instant notifications for anomalies, intrusions, or suspicious activity.

03

## Control Center Integration

Live feeds sync with security operations for coordinated response.



# Cargo Yard Monitoring

Robot dogs provide comprehensive surveillance of open yard logistics, coordinating seamlessly with fixed CCTV for complete coverage.

01

## Loading Zone Surveillance

Continuous monitoring of loading and unloading activities.

02

## Unauthorized Access Detection

Real-time alerts for intrusions or equipment misuse.

03

## CCTV Coordination

Seamless integration with fixed cameras for full coverage.

A phased approach ensures seamless deployment of robot dog surveillance, minimizing disruption while maximizing integration success.



# Implementation Strategy Overview

01

## Pilot Testing Phase

Deploy robot dog in limited area to validate performance.

02

## CCTV Infrastructure Integration

Connect robot dog feeds with existing surveillance systems.

03

## Full-Scale Rollout

Expand deployment across entire logistics facility.

04

## Staff Training Completion

Comprehensive training for security and operations teams.

# Pilot Phase Details

## POC (Proven Of Concept)



01

### Site Selection Criteria

High-traffic zones with existing CCTV infrastructure gaps.

02

### Key Performance Indicators

Detection accuracy, response time, and coverage efficiency.

03

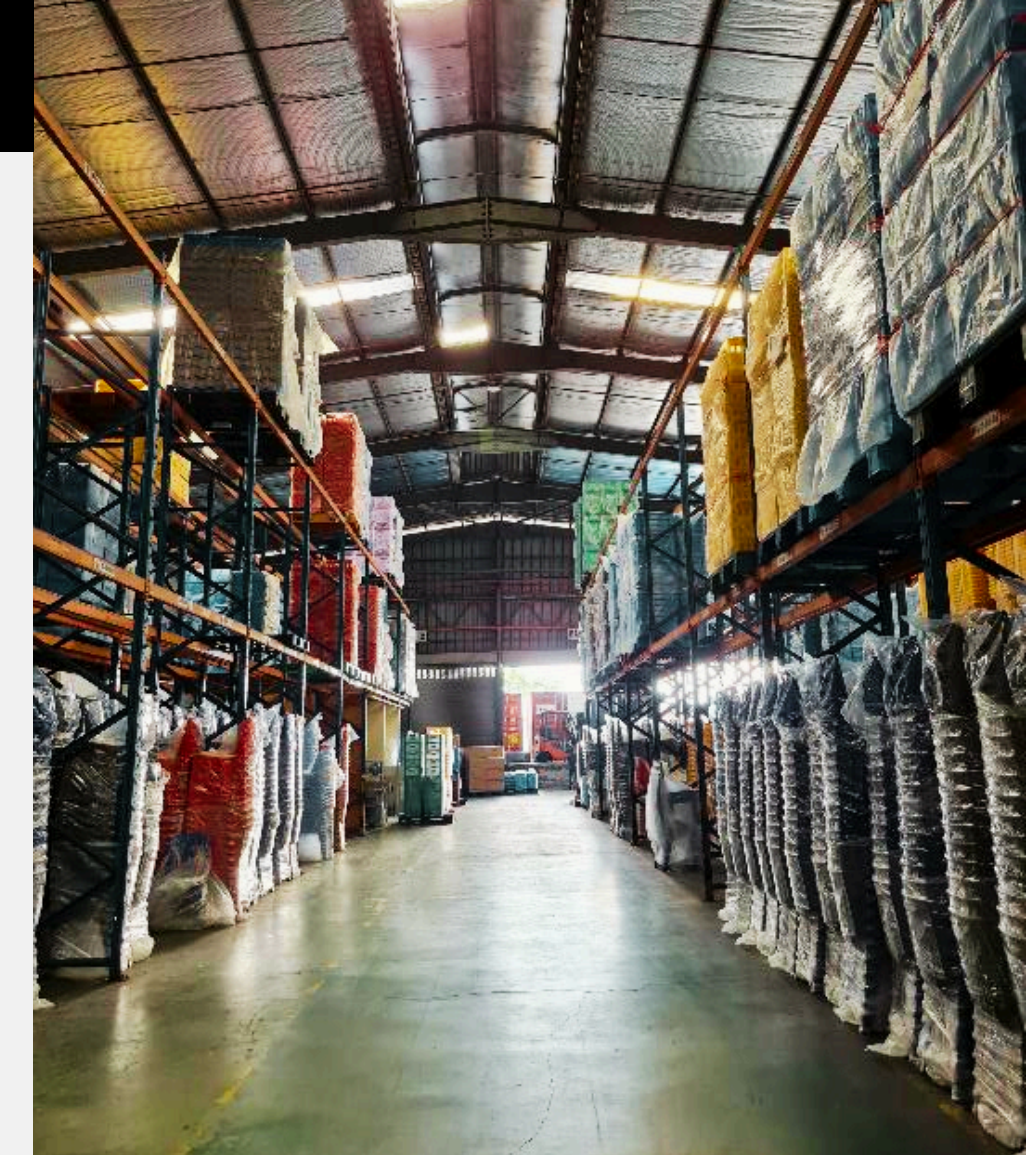
### Data Collection Methods

Sensor logs, patrol footage, and incident reports analyzed.

04

### Analysis and Evaluation

Weekly reviews to refine patrol routes and integration.



The pilot program establishes baseline metrics and validates system performance before full deployment. Rigorous data collection ensures informed decision-making for scale-up.

# Full Integration and Training



01

## Control Room Software Integration

Unified dashboard connecting robot dog feeds with existing CCTV.

02

## Security Staff Training

Hands-on sessions for monitoring and incident response protocols.

03

## Logistics Team Onboarding

Familiarization with robot dog operations and safety procedures.

04

## Maintenance Protocols

Establishing routine checks and technical support workflows.



Successful deployment requires seamless system integration and comprehensive training programs for all operational staff to maximize the robot dog surveillance solution.

# Return on Investment (ROI)



1

## Reduced Security Incidents

Lower theft, damage, and breach-related losses.

2

## Labor Cost Efficiency

Automation reduces manual patrol requirements.

3

## Improved Operational Uptime

24/7 monitoring minimizes costly disruptions.

4

## Asset Protection Gains

Proactive surveillance safeguards valuable inventory.



The integration of robot dogs with CCTV surveillance delivers measurable financial returns through reduced losses, optimized labor costs, and enhanced asset protection across logistics operations.

# Risk Reduction and Compliance Benefits



01

## Lower Theft and Damage Rates

Continuous mobile surveillance deters criminal activity and prevents losses.

02

## Industry Safety Compliance

Automated monitoring ensures adherence to regulatory standards.

03

## Reduced Liability Exposure

Documented surveillance provides evidence and reduces legal risks.

04

## Proactive Monitoring Benefits

Early threat detection prevents incidents before they escalate.



The integrated robot dog and CCTV solution significantly reduces security risks while ensuring compliance with industry safety standards and minimizing organizational liability.

# Productivity Gains and Data Insights



01

## Workflow Optimization

Surveillance data identifies bottlenecks and improves traffic flow.

02

## Predictive Maintenance Support

Sensor data enables proactive equipment servicing.

03

## AI-Driven Analytics

Machine learning extracts patterns from operational data.

04

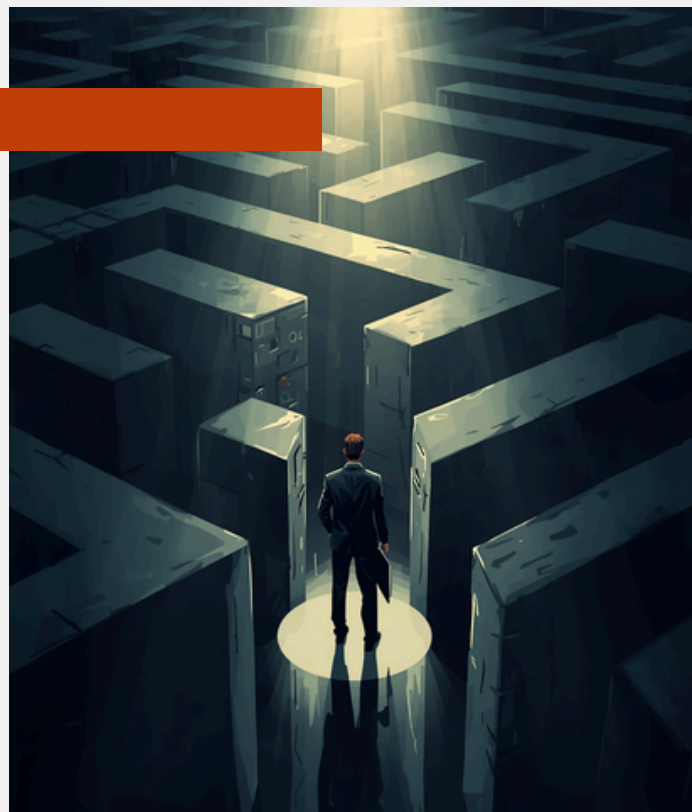
## Enhanced Decision-Making

Real-time dashboards support informed strategic choices.



Robot dog surveillance generates actionable intelligence that transforms logistics operations. AI-powered analytics convert raw sensor data into strategic insights for continuous improvement.

# Potential Challenges and Mitigation Strategies



01

## Legacy System Integration

Use API middleware and phased integration approach.

02

## Staff Change Management

Comprehensive training programs and gradual rollout.

03

## Data Privacy Concerns

Strict data governance and compliance frameworks.

04

## Cybersecurity Countermeasures

End-to-end encryption and regular security audits.



Successful implementation requires addressing key challenges proactively. Each obstacle has proven countermeasures that ensure smooth adoption and secure operations.



# Summary and Next Steps

This proposal demonstrates how robot dog integration with CCTV surveillance delivers transformative value for industrial logistics: enhanced security coverage, operational efficiency gains, and significant ROI through reduced incidents and labor optimization. The path forward begins with stakeholder alignment and pilot approval.



01

## Key Value Propositions

Mobile surveillance extending CCTV coverage, AI-driven anomaly detection, and measurable cost savings through automation.

02

## Immediate Next Steps

Secure pilot program approval, identify stakeholder champions, and schedule site assessment for deployment planning.

03

## Contact for Discussion


Reach out to our OSNET project team for detailed technical specifications, pricing, and customized implementation roadmaps.

# Thank You

Questions & Discussion Welcome

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