NIRIKHON

SECURITY & DEFENCE TECHNOLOGY

PRODUCT BROCHURE

TRAFFIC CAMERA

AI Speed Detection Camera With ANPR

AI Speed Detection Camera With ANPR by NIRIKHON (Model NKLR-H2B1500M1) is a next-generation Traffic Camera system built on a 12MP Sony IMX600 CMOS sensor and an intelligentAI engine. It delivers real-time over-speed detection, number plate recognition, and instant violation alerts with forensic-grade accuracy. Engineered for law enforcement, border control, and highway traffic authorities, it ensures reliable, 24/7 evidence capture for smarter, accountable traffic management.



AI Speed Detection Camera With ANPR | Official Brochure

SOLUTION SNAPSHOT

Automated Over-Speed Detection	**Number Plate Detection**	**Auto-Prosecution Integrated**
Helmet & Seat Belt Ditection	**Stolen Vehicle Identification**	**Real-Time Alerts & Evidence Generation**

OVERVIEW

Built for Real Operations 01

AI Speed Detection Camera With ANPR by NIRIKHON (Model NKLR-H2B1500M1) is a next-generation Traffic Camera system built on a 12MP Sony IMX600 CMOS sensor and an intelligentAI engine. It delivers real-time over-speed detection, number plate recognition, and instant violation alerts with forensic-grade accuracy. Engineered for law enforcement, border control, and highway traffic authorities, it ensures reliable, 24/7 evidence capture for smarter, accountable traffic management.

CAPABILITIES

Key Features & Product Modules 02

AI Processing Board

Executes real-time deep-learning inference at the edge for instant violation classification and plate recognition. Ensures mission-critical response times even during network disruptions.

High-Resolution CMOS Image Sensor

The 12MP Sony sensor captures ultra-high-definition imagery for forensic-grade evidence. Ensures plates and violation details stay legible across varying distances.

Motorized Varifocal Lens

Allows remote focal adjustment without physical recalibration. Ensures optimal framing across narrow lanes to wide highways.

Infrared (IR) Illuminator

Extends surveillance range into complete darkness with no reliance on ambient light. Maintains full ANPR accuracy during nighttime operations.

Embedded ANPR Engine

Processes license plate data locally into structured, searchable text at high speed. Reduces latency and strengthens data integrity network-wide.

Gigabit Network & PoE Module

Delivers high-speed data transmission with single-cable power delivery. Simplifies deployment while ensuring reliable command-platform connectivity.

Industrial Power Management Unit

Regulates and stabilizes power under fluctuating grid conditions. Safeguards uptime in demanding, unattended field environments.

IP67 Aluminum Weatherproof Housing

Certified resistance to dust, moisture, and physical stress for long-term outdoor durability. Supports permanent, unmanned deployment nationwide.

OPERATIONAL VALUE

Software, Benefits & Outcomes 04

High-Speed Expressway Enforcement System

Manages high-velocity, multi-lane vehicle monitoring across national highways with continuous real-time speed and violation tracking.

- Multi-lane speed violation dashboard with per-lane vehicle logs
- Automated long-range ANPR capture at highway travel speeds
- Corridor-wide violation heatmaps for enforcement resource planning

Metropolitan Traffic Enforcement Suite

Enables centralized, city-wide coordination of urban traffic violations for Traffic Enforcement Divisions managing dense, high-volume road networks.

- Live violation feed segmented by intersection or zone
- Automated e-challan generation linked to municipal traffic records
- Congestion and violation-pattern analytics for urban traffic planning

Smart City Integration Framework

Connects the ANPR network into broader smart city infrastructure, feeding structured traffic data into unified urban command platforms.

- API-based data sharing with smart city command dashboards
- Cross-camera vehicle tracking across city-wide node networks
- Centralized analytics feed for city-scale mobility planning

Municipal Authority Compliance Suite

Supports City Corporations in monitoring civic traffic regulations and generating verifiable compliance records for administrative reporting.

- Ward-level violation reporting and jurisdictional data segmentation
- Automated compliance summaries for municipal governance reviews
- Historical data export for civic infrastructure planning

Toll Corridor Management System

Provides automated vehicle identification and flow monitoring at toll collection points, reducing manual verification workload.

- Real-time ANPR matching for toll transaction verification
- Vehicle classification and axle-pattern flagging for toll accuracy
- Automated alerts for toll evasion or blacklisted vehicle detection

Border Security Monitoring System

Equips Border Security Teams with continuous vehicle identification capability at fixed and mobile checkpoint locations.

- Real-time ANPR cross-referencing against national watchlists
- Automated alert escalation for flagged or high-risk vehicles
- Checkpoint-level activity logs for cross-border movement audits

Airport & Seaport Perimeter Surveillance Suite

Delivers precision vehicle monitoring across high-security transit hubs, supporting controlled access and perimeter integrity for Command & Control Operations.

- Zone-based access monitoring for restricted transit corridors
- Automated vehicle credential cross-verification at entry points
- Incident timestamping for aviation and maritime security audits

Industrial Zone Access Control System

Manages vehicle entry and movement tracking across large-scale industrial and economic zones requiring sustained perimeter oversight.

- Facility-wide vehicle entry/exit logs with automated timestamping
- Unauthorized vehicle detection with instant alert dispatch
- Multi-site fleet monitoring for distributed industrial campuses

Government Security Infrastructure Platform

Provides Government Security Authorities with a hardened, centralized platform for managing critical-infrastructure vehicle surveillance projects.

- Priority-tier alert routing for classified deployment zones
- Encrypted evidence archiving for sensitive installation sites
- Role-based access control aligned with institutional Security Frameworks

SPECIFICATION

Technical Details

05

AUTOMATED OVER-SPEED DETECTION
✓ Included

NUMBER PLATE DETECTION
✓ Included

AUTO-PROSECUTION INTEGRATED
✓ Included

HELMET & SEAT BELT DITECTION
✓ Included

STOLEN VEHICLE IDENTIFICATION
✓ Included

REAL-TIME ALERTS & EVIDENCE GENERATION
✓ Included

SEAT BELT VIOLATION DETECTION
✓ Included

STOP LINE VIOLATION DETECTION
✓ Included

ENTRY RESTRICTION VIOLATION DETECTION
✓ Included

12MP SONY IMX600 CMOS IMAGE SENSOR
✓ Included

ULTRA HD RESOLUTION UP TO (4000 X 3000)
✓ Included

HIGH-SPEED VEHICLE CAPTURE ENGINE
✓ Included

MOTORIZED VARIFOCAL LENS SYSTEM
✓ Included

SMART IR NIGHT VISION
✓ Included

H.265+/H.265 VIDEO COMPRESSION
✓ Included

TRUE WDR (140DB) IMAGING
✓ Included

3D DIGITAL NOISE REDUCTION
✓ Included

GIGABIT ETHERNET & ONVIF-COMPLIANT ARCHITECTURE
✓ Included

IP67-RATED WEATHERPROOF CONSTRUCTION
✓ Included

WRONG PARKING DETECTION
✓ Included

SPEED DETECTION SENSOR
✓ Included

LIGHT SENSOR
✓ Included

LOCATION/TIME
✓ Included

LANE VIOLATION DETECTION
✓ Included

QUESTIONS

Frequently Asked Questions

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Q. How does the system ensure data integrity and prevent tampering with captured evidence?

A. Every detection event is time-stamped, digitally logged, and stored in a tamper-evident format, ensuring that all evidence records remain forensically sound and admissible for institutional review. This chain-of-custody design safeguards data authenticity from capture through to final case processing.

Q. What network security measures protect the system from unauthorized access or cyber intrusion?

A. The platform operates on ONVIF-compliant, encrypted communication protocols with role-based access controls, ensuring that only authorized personnel within a Security Framework can access sensitive footage or system configurations. All data transmission is designed to align with institutional-grade cybersecurity standards suitable for critical infrastructure networks.

Q. What happens during a power outage or network disruption — does the system lose data?

A. The system incorporates industrial power management and local edge-storage capabilities, allowing continuous violation detection and evidence capture even during connectivity interruptions. Once network connectivity is restored, all locally buffered data is automatically synchronized to the central management platform, ensuring zero data loss.

Q. Is the ANPR engine capable of accurately reading local, regional number plate formats?

A. Yes. The embedded ANPR engine is trained and calibrated specifically for Bangladeshi vehicle number plate formats, including regional script and alphanumeric variations, ensuring high recognition accuracy across diverse plate types nationwide. This localized calibration significantly reduces false-read rates compared to generic, non-regionalized ANPR systems.

Q. How does the system perform in extreme weather conditions typical of Bangladesh (heavy monsoon, high humidity, intense heat)?

A. The unit's IP67-rated aluminum housing and True WDR imaging technology are engineered to maintain full operational accuracy through monsoon rainfall, high humidity, and extreme temperature fluctuations. This ensures uninterrupted, mission-critical performance across all seasonal conditions without degradation in detection reliability.

Ready to deploy AI Speed Detection Camera With ANPR?

Talk to Nirikhon for product consultation, installation planning, integration support, and enterprise deployment.

Hotline: 09647 120 120 | Website: www.nirikhon.com