



XINGHAN LARGE-SCALE AI MODELS

CONSTANT EVOLUTION FOR THE INTELLIGENT AIOT FUTURE



• Design and specifications are subject to change without notice.

Ver. 1, Sept. 2025

DAHUA TECHNOLOGY

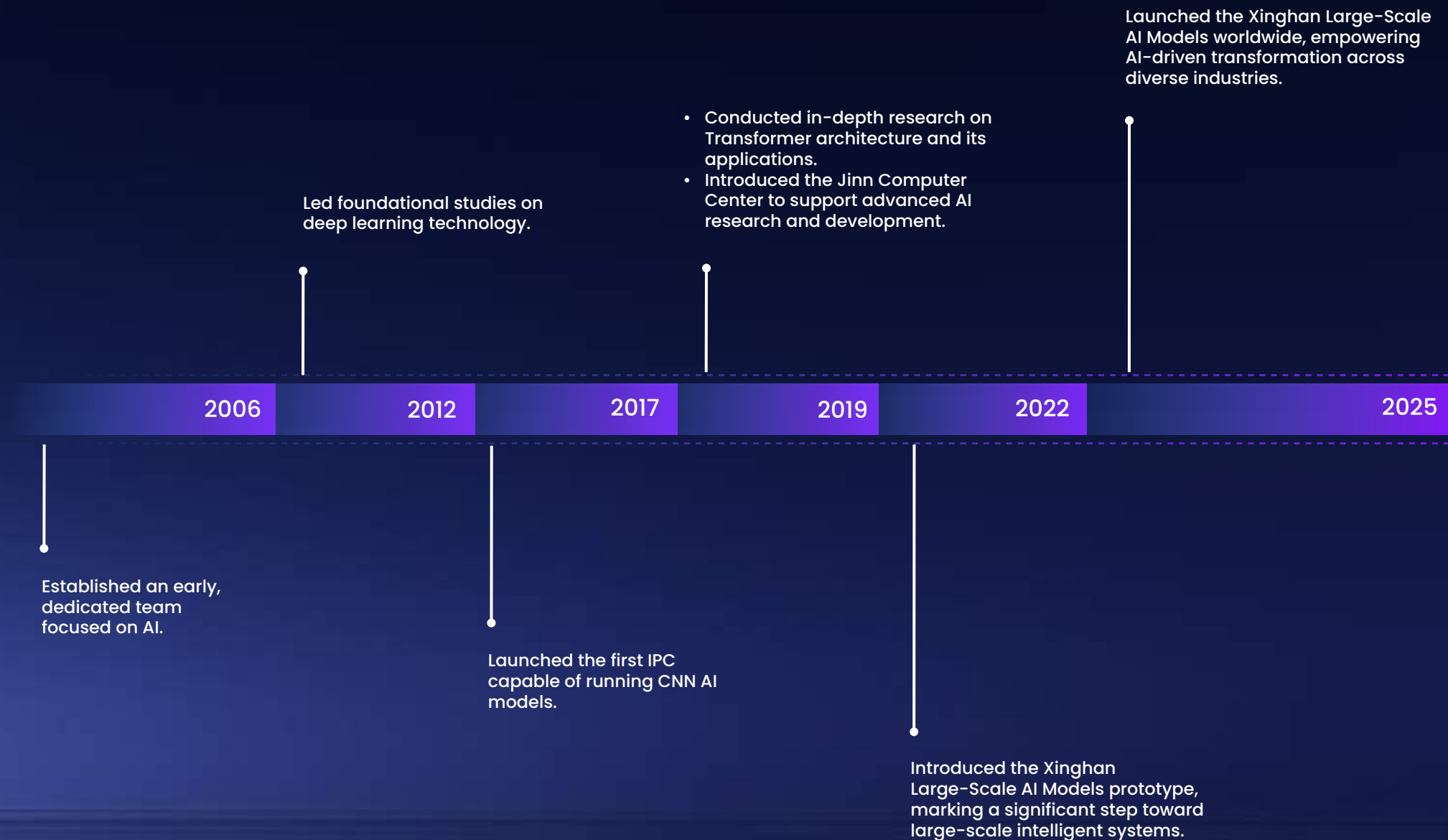
Add: No.1199 Bin'an Road, Binjiang District, Hangzhou, China. 310053
Email: overseas@ddahuatech.com
Website: www.dahuasecurity.com



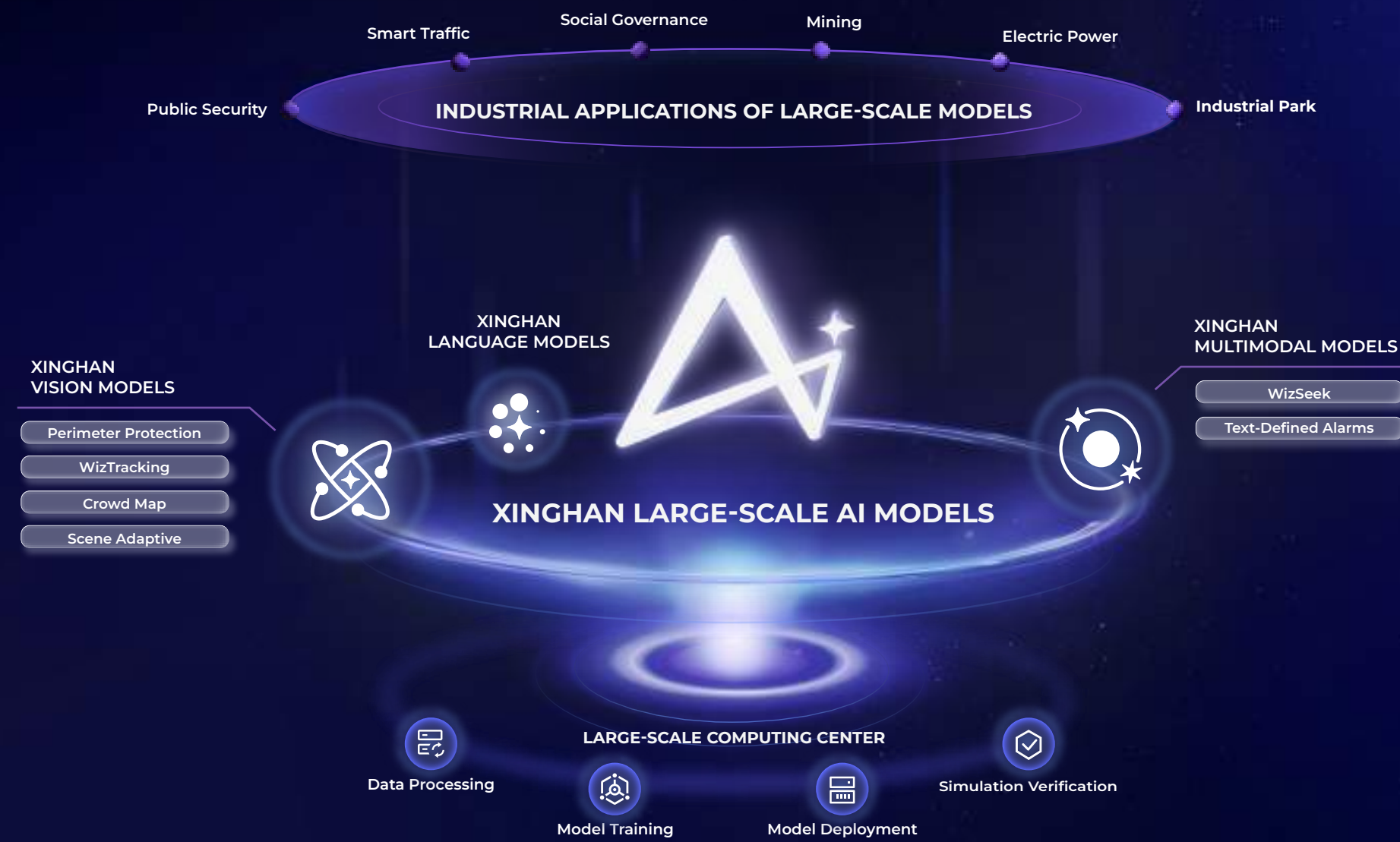
INTRODUCING XINGHAN LARGE-SCALE AI MODELS

Named after the Chinese word for galaxy, Xinghan represents our ambition to process “cosmic-level” information, to find structure in complexity, uncover patterns at scale, and illuminate the AIoT future for our clients through a deeper form of understanding. It reflects a vision that speaks not only of the vastness above, but also of the brilliance within.

Launched in 2025, the Xinghan Large-Scale AI Models are designed to evolve with industry needs. Trained on massive real-world datasets and powered by visual analytics, it combines domain expertise with advanced multimodal learning capabilities.



A SYSTEM OF STRUCTURED INTELLIGENCE



CORE CAPABILITIES



XINGHAN VISION MODELS

Perimeter Protection

WizTracking

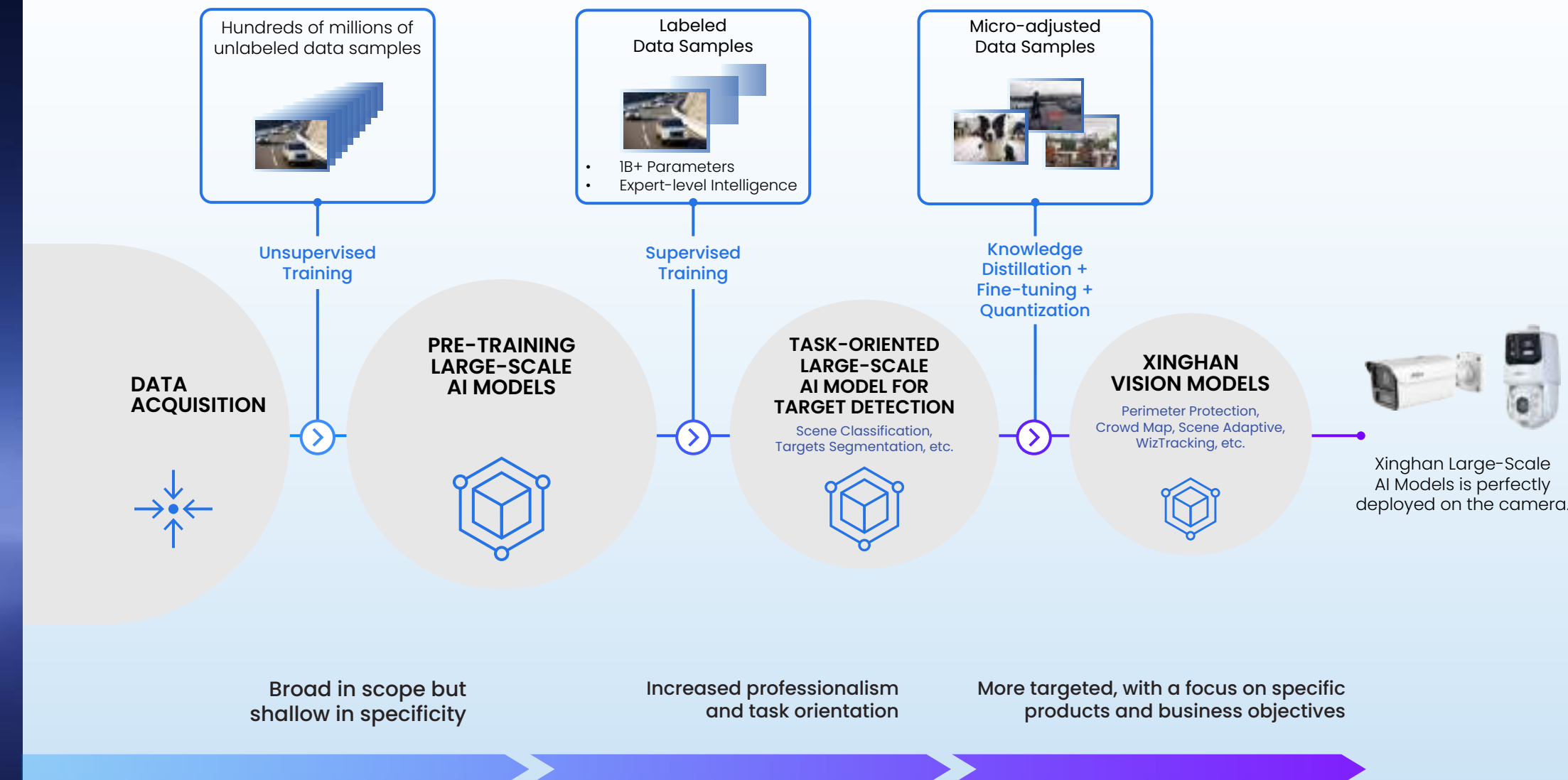
Scene Adaptive

Crowd Map

1

TRAINING METHODS AND PROCESSES

Streamline target categories by focusing on key objects – humans, motor vehicles, and non-motor vehicles – to reduce model complexity while preserving high accuracy in Xinghan Vision Models for industrial domain applications.

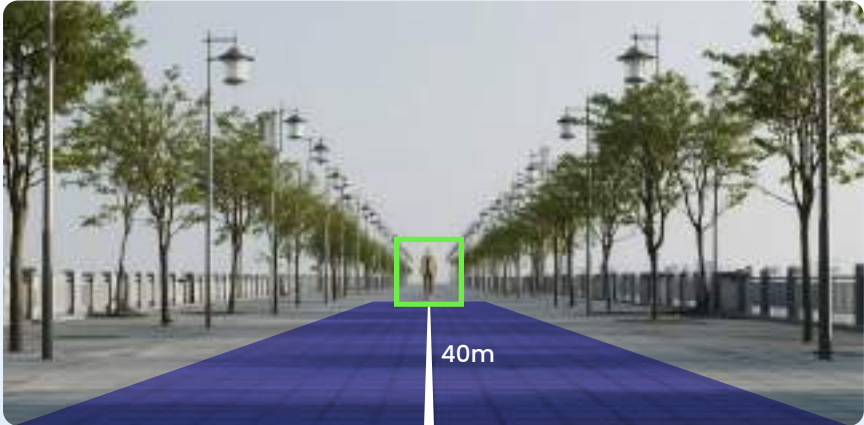


PERIMETER PROTECTION

LONGER DETECTION RANGE

The Xinghan Vision Models extends the coverage and range of perimeter detection by accurately identifying smaller targets.

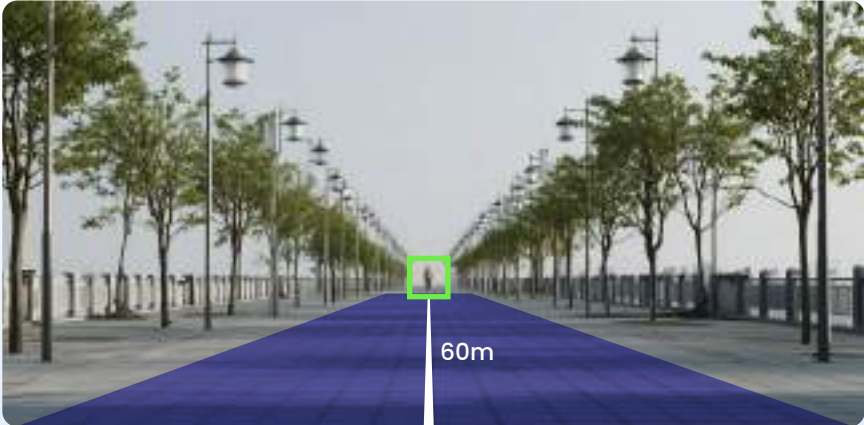
CNN AI Models



Ideal conditions for detection:

- Required Target Pixels $\geq 45 \times 45$ pixels
- Longest detection distance is only up to 40m

Xinghan Vision Models



Ideal conditions for detection:

- Required Target Pixels $\geq 20 \times 20$ pixels
- Detection distance increased by 50%, up to 60m

Compared with CNN AI models,
Xinghan large-scale AI models achieve

up to
50%
increase in detection
distance

with
98%
accuracy
maintained

achieves
92%
false-alarm
reduction

Highlights

1. One-Click Setup

Users can quickly configure
perimeter rules with just one
click.

2. Automated Analysis for Greater Efficiency

Automatically parseas scenes and
generates intrusion rules, significantly
reducing setup time.

3. High-Accuracy Scene Recognition

It deeply understands scene
structures and intelligently filters
out non-intrusion areas.

4. Industry-First Innovation

As the first of its kind, AI Rule Assist
minimizes the learning curve and
sets a new benchmark for
workflow optimization.

Xinghan Vision Models



Pond / Pool



Garden / Backyard



PERIMETER PROTECTION

AI RULE ASSIST

AI Rule Assist is an industry innovation feature designed to simplify the setup of perimeter protection systems. Powered by Xinghan Vision Models, it uses advanced scene analysis to automatically recommend optimal intrusion rule settings based on the layout and environment, minimizing the need for manual drawing.

PERIMETER PROTECTION

ANIMALS DETECTION

Capable of identifying 10+ animal species with over 90% detection accuracy. It enables precise, species-specific alerts, reducing false alarms and enhancing safety in farms, wildlife zones, etc.



10+ types of animal species identified

>90% detection accuracy



WIZTRACKING

The WizTracking feature of the Xinghan Vision Models can handle complex occlusions and variations in target posture, achieving a 50% improvement in accuracy. Now integrated into our PTZ dome cameras, WizTracking significantly enhances continuous tracking capabilities.

Increased accuracy rate by **50%**

Human Body Keypoint Tracking Technology for Occluded Target

Human Body Keypoint Tracking Technology for Occluded Target

CNN AI Models

Target Missing

Xinghan Vision Models

Continuous Tracking via Shoulder Detection

Multi-posture Tracking Technology for Variations in Target Posture

Crouching
Climbing Over a Wall
Crawling

CNN AI Models

Target Detected
Posture Changed (Target not Detected)
Target Missing

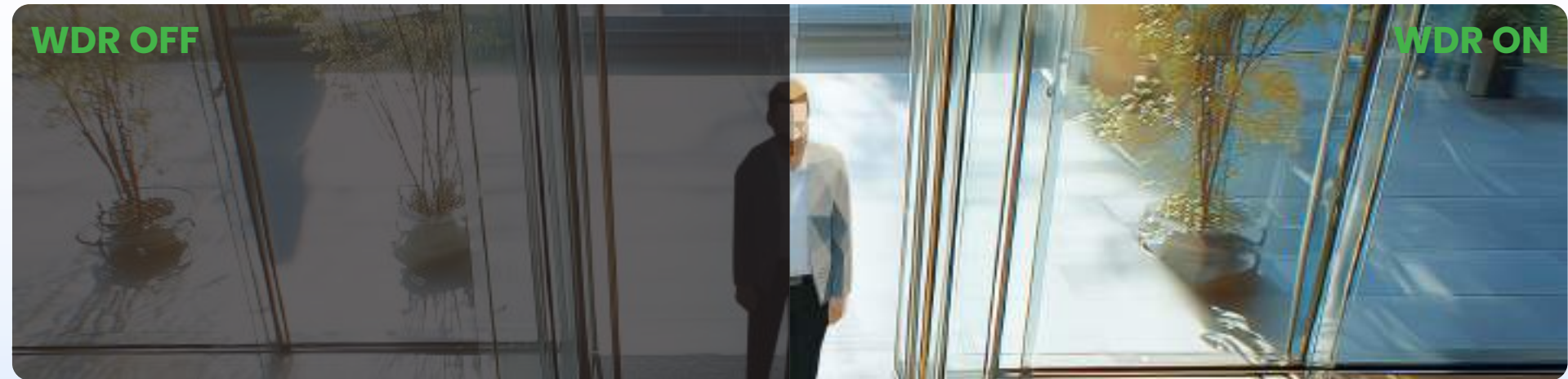
Xinghan Vision Models

Target Detected
Posture Changed (Keep Tracking)
Target Detected (Keep Tracking)

SCENE ADAPTIVE – AI WDR

The Xinghan Vision Models leverage situational awareness to analyze both spatial and contextual characteristics of a scene, enabling intelligent and automated configuration of WDR for cameras.

Xinghan Vision Models



- Target's facial details are obscured due to low lighting
- Overall image brightness is insufficient

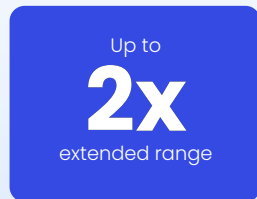
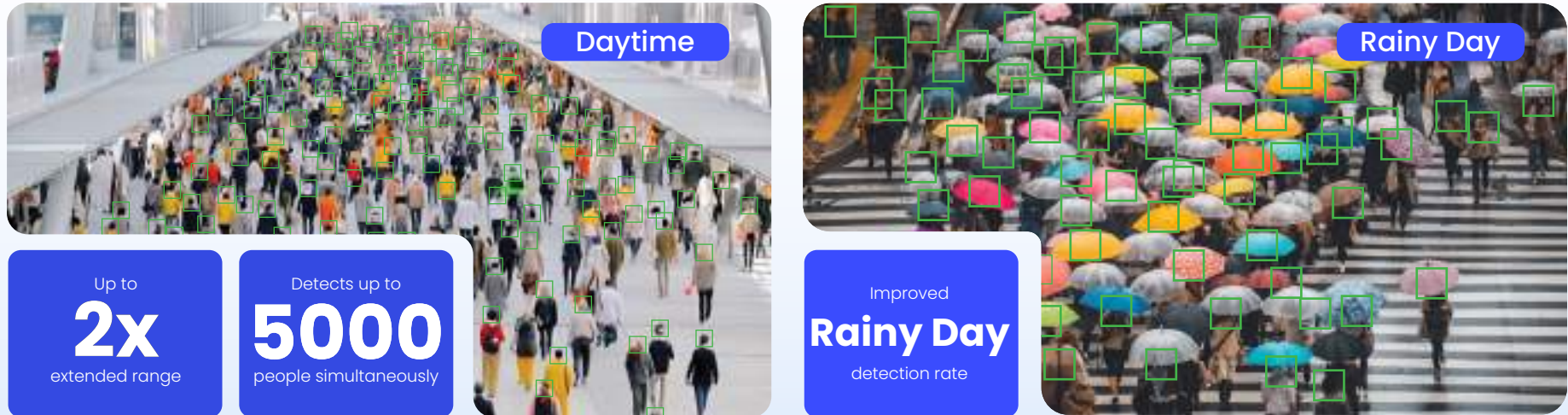


- Facial details of the target are clearly visible
- Bright areas are well-balanced and not overexposed

CROWD MAP

The Xinghan Vision Models' Crowd Map significantly enhances small-target detection at long distances and features umbrella compensation. With robust performance in dense crowds and low-light environments, the system delivers more accurate and reliable crowd management across diverse scenarios.

Xinghan Vision Models



*Result based on standard setup and test environment.

PRODUCTS – IPC

IPC-3 SERIES

IPC-3x49-IL
IPC-3x49-PV-PRO



- Perimeter Protection:
Longer detection distance
Less false alarms
- Scene Adaptive: AI WDR
- 1/1.8" sensor, F1.0 aperture
- WizColor Technology (-Pro Series)

IPC-5 SERIES

IPC-MFW524IT2-E3-ASE



- Perimeter Protection:
Longer detection distance (140m)
Less false alarms
- Independent stream and flexstream
- 3 x 2MP resolution
- Dual mic & speaker, micro PTZ, easy installation

IPC-5 SERIES

IPC-5x59-IL
IPC-5X59-PV-PRO



- Perimeter Protection:
Longer detection distance
Less false alarms
Animals Detection
AI Rule Assist
- 1/1.8" sensor, F1.0 aperture
- WizColor Technology (-Pro Series)
- PTRZ Dome, easy installation

IPC-HUBBLE SERIES

PSDW81652S-A360-D440
PSDW8852S-A180-D440



- Crowd Map:
Max Detection Number - up to 5000 person
Detection Distance - up to 60m
Umbrella Models Compensation
- 180° / 360° panoramic surveillance
- 40x PTZ
- IP67, IK10 protection
- 36 VDC or PoE++ power supply

IPC-7 SERIES

IPC-7x59-PV



- Perimeter Protection:
Longer detection distance
Less false alarms
Animals Detection
AI Rule Assist
- AI-ISP, G-Sensor, TPM2.0
- High Frame Rate:
2MP@120fps, 8MP@60fps
- PTRZ Dome, easy installation

PRODUCTS – PTZ

SD4D SERIES

SD4D825MB-HNR



- Perimeter Protection:
Longer detection distance
Less false alarms
- WizTracking
- 8MP resolution
- 25x optical zoom
- IP67 protection

SDT3 / 4E SERIES

SDT3E410-8P-MB-A-PV1
SDT4Ex25-4F-GB-A-PV1
SDT4E425-8P-GB-A-PV1



- Perimeter Protection:
Longer detection distance
Less false alarms
- WizTracking
- Captures large area and details at the same time
- 25/10x optical zoom
- Active deterrence (red and blue lights)

SD6E SERIES

SD6E825MA-HNR
SD6Ex45MB-HNR



- Perimeter Protection:
Longer detection distance
Less false alarms
Animals Detection
- WizTracking
- 45/25x optical zoom
- IR distance up to 250m
- IP67, IK10 protection

SDT6E SERIES

SDT6E425(32)-8P-MB-A-PV1



- Perimeter Protection:
Longer detection distance
Less false alarms
- WizTracking
- Captures large area and details at the same time
- 32/25x optical zoom
- IP67, IK10 protection

SD8X SERIES

SD8X8(4)42FA-HNF



- Perimeter Protection:
Longer detection distance
Less false alarms
- WizTracking
- 42x optical zoom
- IR distance up to 600m
- Built-in gyroscope to ensure stable image output
- Smart PT Correction

PTZ83 SERIES

PTZ83440-HNR-GA-S



- Perimeter Protection:
Longer detection distance
Less false alarms
Animals Detection
- WizTracking
- 42x optical zoom
- Built-in gyroscope to ensure stable image output
- Smart PT Correction (vertical direction only)



XINGHAN MULTIMODAL MODELS

WizSeek

Text-Defined Alarms

2

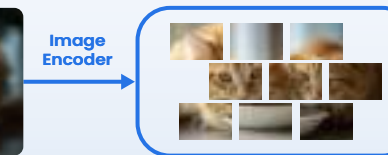
WHAT ARE MULTIMODAL MODELS?

Compared to unimodal models, which are limited to processing a single data type (e.g. text-only or image-only), multimodal models are advanced AI systems capable of simultaneously processing and deeply integrating multiple heterogeneous data types such as text, image, and video.

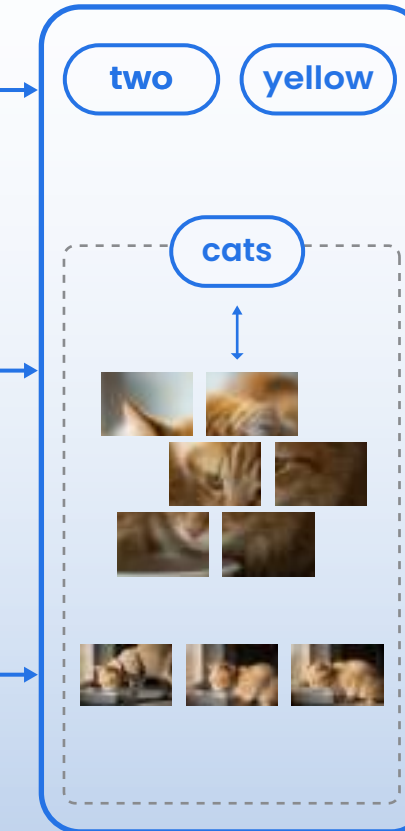
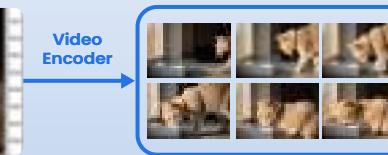
TEXT



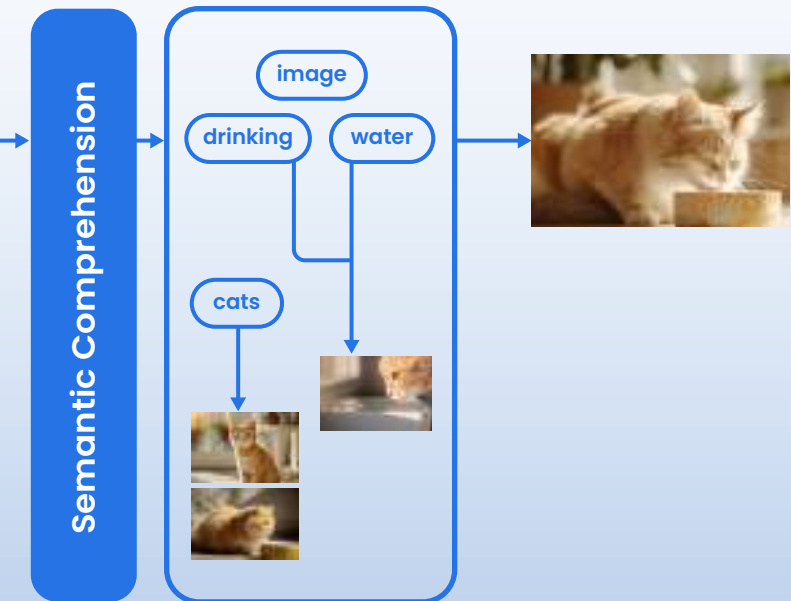
IMAGE



VIDEO



An image of a cat drinking water **Generate**



Multimodal Understanding

Multimodal Generation



YOUR WORDS LEAD TO ALL ANSWERS

Man making a phone call near a car.

Search



SEARCH WIDELY

Covers 400+ categories, from persons, vehicles, animals to signs, plants and beyond.



SEARCH ACCURATELY

High-precision search based on Dahua Xinghan Large-scale AI Models.



SEARCH INSTANTLY

Enter a keyword or phrase to find target results within seconds.



SEARCH FRIENDLY

User-friendly, search-like interface offers one-click access and fuzzy search.



**WizSeek must operate in compliance with local laws and regulations. Searches involving politically sensitive content, pornography, criminal incitement, privacy violations, or hate and discrimination are strictly prohibited. In such cases, no results will be displayed, and the system will prompt: "Avoid using prohibited words.".*

TEXT-DEFINED ALARMS

Generate AI with Text, Deploy Alarms in Seconds

 A person carrying a red backpack



 **ZERO TECHNICAL BARRIERS**
Generate custom algorithms with just words, no coding needed.

 **INSTANT DEPLOYMENT**
Turn text descriptions into real-time alarms within seconds.

 **LOW-COST OPERATION**
Slash expensive data collection and model training costs.

 **MULTI-SCENARIO ADAPTABILITY**
Adapt to diverse scenarios with simple text inputs.

HOW TO OPTIMIZE TEXT-DEFINED ALARMS?

The **Self-Learning Algorithm** allows for on-device training and optimization on the same IVSS, enabling algorithms to grow smarter and more accurate with every use.



PRODUCTS – NVR / IVD AND IVSS SERIES

NVR5–XI/Pro Series

- Supports up to 64-channel WizSeek (with AcuPick cameras).
- Supports Text-Defined Alarms.
- Supports up to 64-channel AcuPick (with AcuPick cameras).
- 40ch@1080P decoding capacity.
- Max. 512 Mbps incoming/recording/outgoing bandwidth.
- Supports 8K HDMI output.



IVSS71–I Series

- Up to 256-ch IP camera inputs, 8/12/16/24 bays.
- Up to 160-ch WizSeek with AcuPick cameras by min. 1 card in Multimodal Large Model Mode.
- Each AI card supports 16-ch AcuPick with normal cameras in Intelligent Analysis Mode.
- Supports Text-Defined Alarms.
- Supports Self-Learning to optimize Text-Defined Alarms.
- Up to 28-ch@1080p decoding capacity.
- Max. 768 Mbps incoming/recording/outgoing bandwidth.
- Supports 10+ industrial algorithms and multi-algorithm deployment per channel.



IVD5148–I Series

- Up to 48-ch IP camera inputs, 1 bay.
- Up to 32-ch WizSeek with AcuPick cameras by min. 1 card in Multimodal Large Model Mode.
- Each AI card supports 16-ch AcuPick with normal cameras in Intelligent Analysis Mode.
- Supports Text-Defined Alarms.
- Up to 16-ch@1080P decoding capacity.
- Max. 256 Mbps incoming/recording/outgoing bandwidth.
- Supports 10+ industrial algorithm and multi-algorithm deployment per channel.



IVSS51–I Series

- Up to 64-ch IP camera inputs, 8 bays.
- Up to 64-ch WizSeek with AcuPick cameras by min. 1 card in Multimodal Large Model Mode.
- Each AI card supports 16-ch AcuPick with normal cameras in Intelligent Analysis Mode.
- Supports Text-Defined Alarms.
- Up to 20-ch@1080P decoding capacity.
- Max. 384 Mbps incoming/recording/outgoing bandwidth.
- Supports 10+ industrial algorithms and multi-algorithm deployment per channel.



3



CITY BUSINESS APPLICATIONS

PUBLIC SECURITY



- Real-time incident detection and proactive early warning, minimizing response delays.
- Dynamic, context-aware video search for post-event investigation, enhancing efficiency and operational precision.

SMART TRAFFIC



- Complex event detection and understanding: congestion, collisions, illegal parking and lane changes.
- Real-time traffic flow monitoring and anomaly alerts.

SOCIAL GOVERNANCE



- AI-based tagging and scene classification for contextual awareness.
- Auto-recommendation of detection algorithms based on location and risk level.
- Reduced manual rule-setting and accelerated large-scale deployment.

ENTERPRISE BUSINESS APPLICATIONS

ELECTRIC POWER



- Intelligent perimeter protection with thermal imaging integration.
- Remote, AI-powered inspection of meters and facilities, minimizes manual patrols in hazardous areas and significantly reduces false alarms.

MINING



- Real-time monitoring of safety compliance (e.g., PPE violations, unsafe actions).
- Minimize manual operations in hazardous conditions, reducing exposure and labor intensity.

INDUSTRIAL PARK



- Intelligent remote inspections and real-time safety checks.
- Instant alerts for unauthorized access or abnormal behavior.
- Environmental monitoring (e.g., emissions, waste, fire risks, etc.)