Stock Code: 2533.HK

BLACK SESAME TECHNOLOGIES
Corporate Introduction



2026/08/05

BLACK SESAME TECHNOLOGIES

We're going to make the chip that changes the way we travel.

— Johnson SHAN, Founder & CEO of Black Sesame Technologies

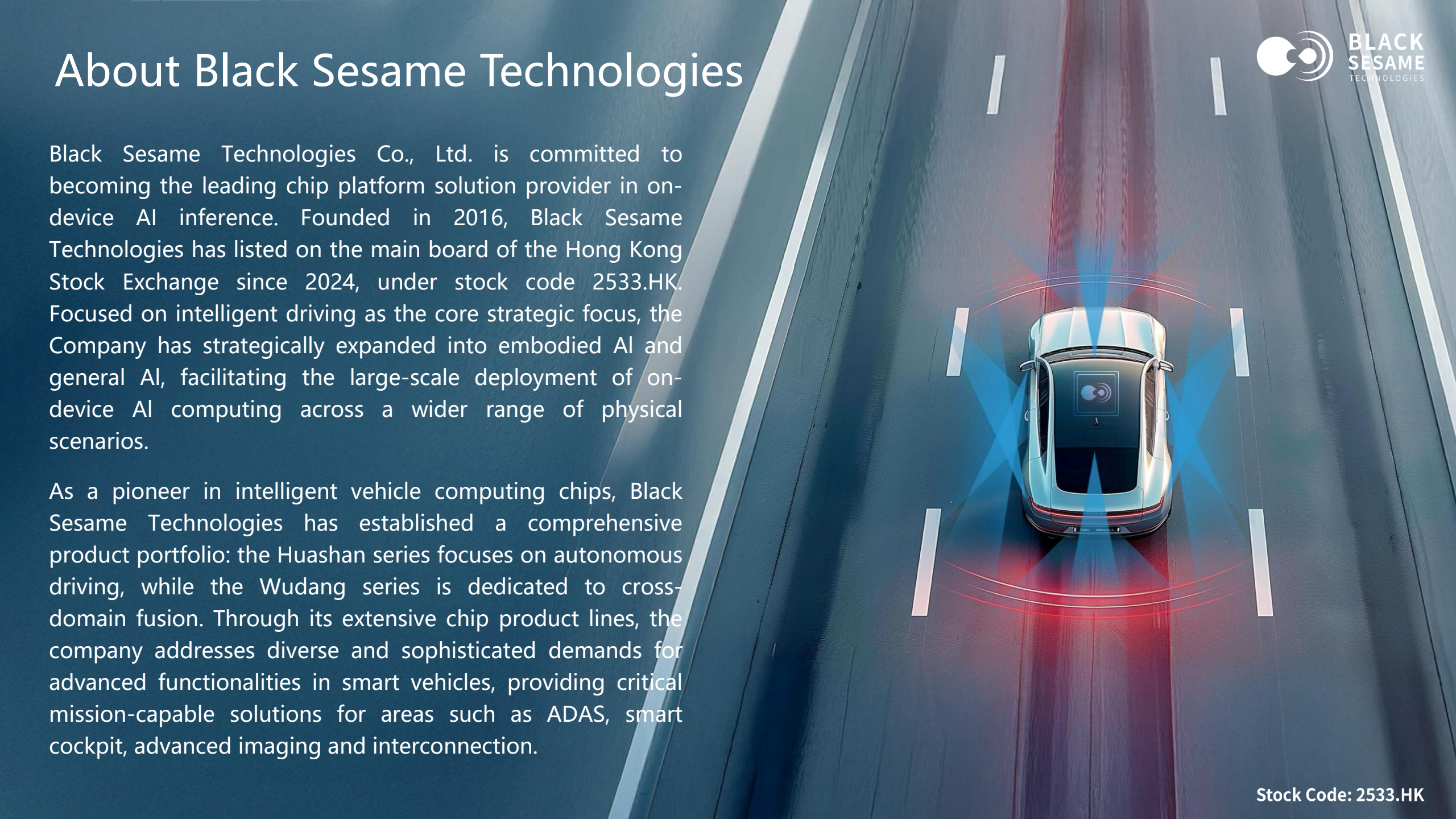


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About Black Sesame Technologies

Black Sesame Technologies Co., Ltd. is committed to becoming the leading chip platform solution provider in on-device AI inference. Founded in 2016, Black Sesame Technologies has listed on the main board of the Hong Kong Stock Exchange since 2024, under stock code 2533.HK. Focused on intelligent driving as the core strategic focus, the Company has strategically expanded into embodied AI and general AI, facilitating the large-scale deployment of on-device AI computing across a wider range of physical scenarios.

As a pioneer in intelligent vehicle computing chips, Black Sesame Technologies has established a comprehensive product portfolio: the Huashan series focuses on autonomous driving, while the Wudang series is dedicated to cross-domain fusion. Through its extensive chip product lines, the company addresses diverse and sophisticated demands for advanced functionalities in smart vehicles, providing critical mission-capable solutions for areas such as ADAS, smart cockpit, advanced imaging and interconnection.



BLACK SESAME TECHNOLOGIES

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Becoming the Leading Chip Platform Solution Provider in On-device AI Inference

BLACK SESAME TECHNOLOGIES

Core Products & IP Core

Automotive-grade On-device AI Chip

Self-developed Core IP





Key Business Domains

Intelligent Vehicle



Embodied AI



General AI



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International Talents and Global Offices

Having over 1000 employees worldwide, Black Sesame Technologies established R&D and sales centers in the Silicon Valley, Singapore, Hong Kong and mainland China. Our core team consists of talents from top companies like Bosch, OV, Nvidia, Ambarella, Microsoft, Qualcomm, Huawei and ZTE, with averages 15+ years professional experiences.



50+ PhD | > 85% R&D Team | Avg. 15+yrs Dedicated Experience | Top Computer Vision Experts Worldwide | Solid SoC Design Capability

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The Road to Mass Production of Black Sesame Technologies' chips

BLACK SESAME TECHNOLOGIES

2016-2018 Technology Validation Phase | **2018–2020 Product Development Phase** | **2020–2023 Commercial Deployment Phase** | **2023–2026 Market Expansion Phase** | **2026– Horizontal Expansion Phase**

2016

Jul. Company founded

2018

Mar. Entered into global strategic cooperation agreement with **Bosch**

2019

Nov. Entered into strategic cooperation agreement with **FAW Group**

2020

Jun. Launched **Huashan A1000** and **Huashan A1000L**



Oct. Launched autonomous driving solutions and V2X solution



2021

Sep. Entered into strategic cooperation with **JAC Motors**



2022

Sep. Awarded project with **Utopilot** on L4 AGV and heavy truck models

Dec. Announced joint collaboration with **Dongfeng Motor** to deploy Huashan A1000 SoCs on its first all-electric sedan and SUV models

Reached a commercial vehicle platform-level strategic cooperation with SANY

2023

Aug. The GEELY – **LYNK & CO 08** with Huashan A1000 start to sell



Iveco Olsson equipped with Huashan A1000 are mass-produced this year



May. Announced joint collaboration with **FAW Group** to deploy Huashan A1000L on the **Hongqi models**

Apr. Announced **the industry's first cross-domain computing platform** for intelligent vehicles, **Wudang Series**, achieving four-domain with single chip



2024

Dec. **Launched Huashan A2000 family chips** and announced the three major technological innovations



Sep. Signed a technical cooperation framework agreement with Dongfeng Motor

Aug. **Officially listed on the main board of the HKEX**



Jun. **Dongfeng eπ008** with Huashan A1000 started to sell



May. **LYNK&CO 07EM-P** with Huashan A1000 started to sell



Mar. **Dongfeng eπ007** with Huashan A1000 started to sell



2025

Dec. Entered into In-depth cooperation with **Li Auto**



Nov. Entered into In-depth cooperation with **DEEPROUTE.AI**

Launched multi-dimensional embodied intelligence computing platform:**SesameX**

Sep. Entered into strategic cooperation with **Chery Commercial Vehicles**, and **CPIC**

Aug. Entered into strategic cooperation with **DEEP Robotics**

Apr. **Launched "Safety Intelligent Platform"** based on **Wudang C1200 family chip.**



Awarded project with **Dongfeng Motor** on Wudang C1296

Mar. **Geely Galaxy E8, Galaxy Xingyao 8** with Huashan A1000 **started to sell**



Feb. Awarded project with **FAW Group** on Huashan A1000

Jan. Entered into global strategic cooperation agreement with **Continental**

2026

Apr. **Dongfeng eπ007 Flash Edition with** Huashan A1000 started to sell



Reached a platform-level cooperation with **Dongfeng TIANYUAN Intelligent Cockpit Plus**, making the Wudang C1296 the first domestically mass-produced cockpit&driving integrated chip

Entered into strategic cooperation with Ontime

Feb. Awarded project with **AICC for a mass-production solution** based on the Huashan A2000 chip

Jan. Announced a strategic cooperation with **Qingdao cosco shipping Digital Intelligence Technology co., Ltd.**

Announced a strategic cooperation with **Apollo Go**

Announced strategic collaboration with **Lenovo Research Robotics Lab**

Completed strategic acquisition of **EeazyTech**

Huashan A2000 chip passes US review, officially launched globally

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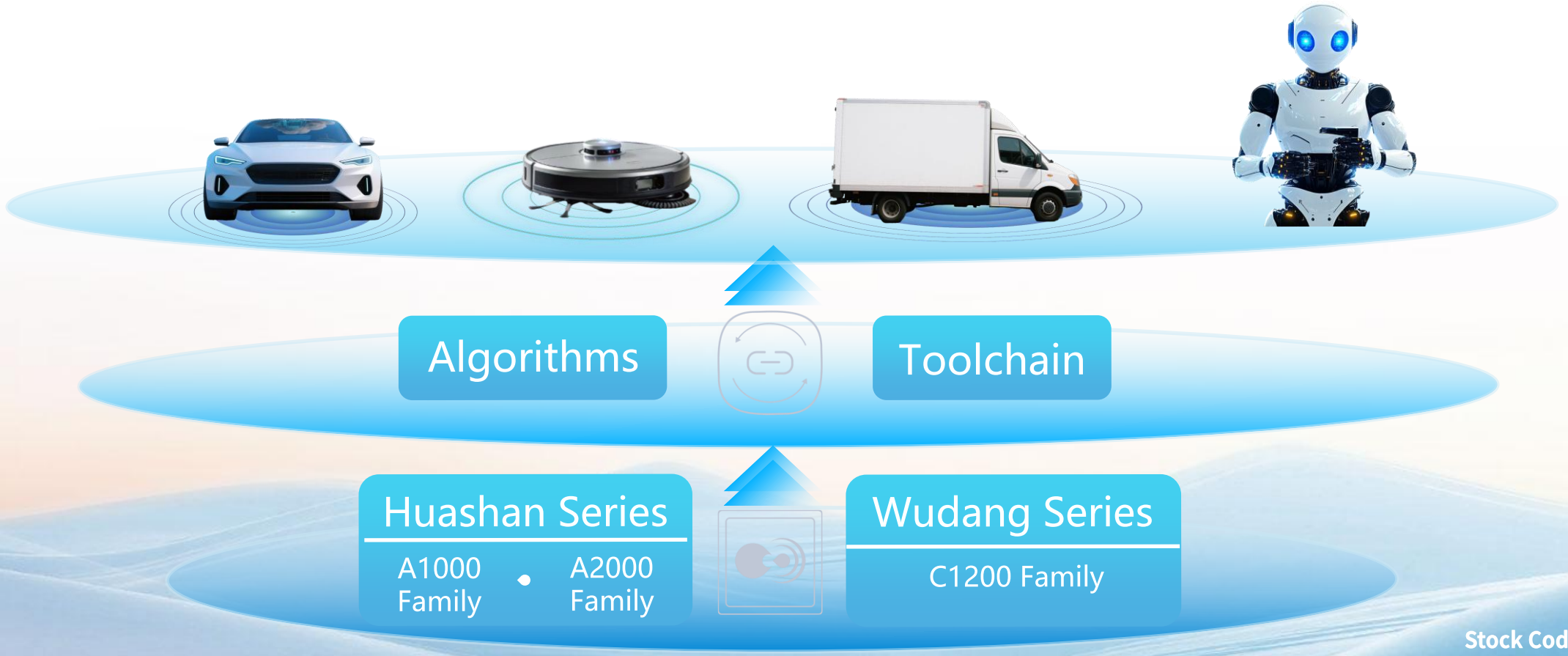
Qualifications & Honors

By the end of 2025, Black Sesame Technologies had secured over 200 granted invention patents globally and has won over 190 awards from major industry and media.



Products, Technologies and Solutions

Leveraging the Company's self-developed IP cores, algorithms, and supporting software, Black Sesame Technologies delivers full-stack autonomous driving capabilities via its SoCs and SoC-based solutions to meet a wide range of customer needs. In 2025, the company strategically expanded into the field of embodied intelligence, launching the SesameX multi-dimensional embodied intelligence computing platform for commercial robot deployment and constructing a “whole-brain system for robots” to promote the application of intelligent technologies in broader physical scenarios.



Core Products & IP Core

Full-scenario, Multi-dimensional Computing Chip Portfolio

BLACK SESAME TECHNOLOGIES

Huashan A2000 Family



Huashan A2000 Family

Next-generation High-performance Chip Platform
Purpose-built for Physical AI







Huashan A1000 Family



Huashan A1000 Famly

High Performance & Cost-effective
Autonomous Driving Chip Platform










Wudang C1200 Family



Wudang C1200 Family

The First Cross-domain Computing
Platform for Intelligent Vehicles in China











Cost-effective chip family



Cost-effective Chip Family

Cost-effective & Low-power
On-device AI Chip Platform









Stock Code: 2533.HK

From Autonomous Driving to Cross-domain Fusion

BLACK SESAME TECHNOLOGIES

Black Sesame Technologies chip product lines fully support L2-L4 autonomous driving and solutions of cross-domain computing platform in need of different customer requirements.

Huashan Series

Huashan A2000 Family

Next-generation High-performance Chip Platform Purpose-built for Physical AI

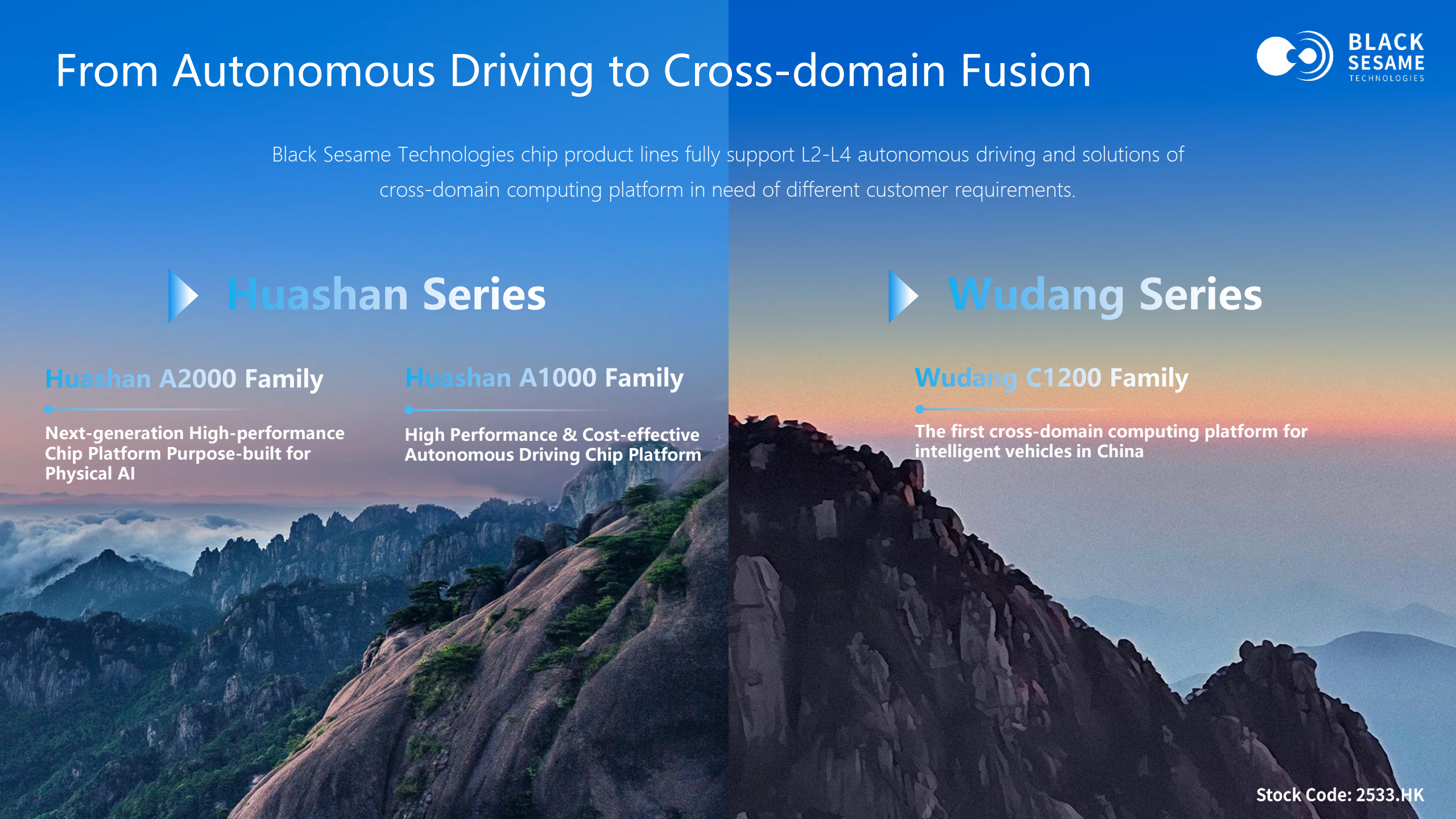
Huashan A1000 Family

High Performance & Cost-effective Autonomous Driving Chip Platform

Wudang Series

Wudang C1200 Family

The first cross-domain computing platform for intelligent vehicles in China



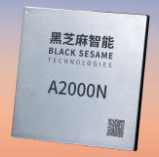
Stock Code: 2533.HK

Product | Huashan Series

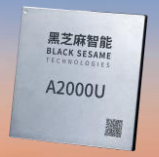
Huashan Series
Autonomous Driving Computing Chip

AUTONOMOUS DRIVING

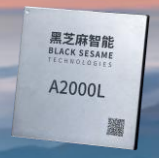
Huashan A2000 Family



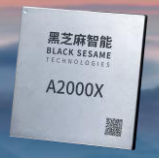
A2000N
Powering AI-Enabled Cockpits



A2000U
Full-scenario Knowledge-driven AD Chip

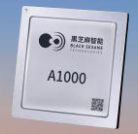


A2000L
Cost-Effective Urban NOA SoC

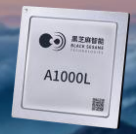


A2000X
High-End Full-scenario Knowledge-driven AD Chip

Huashan A1000 Family



A1000
Automotive Grade High Performance Autonomous Driving Chip



A1000L
Autonomous Driving Chip

Stock Code: 2533.HK

BLACK SESAME TECHNOLOGIES

Huashan A2000 Family

High safety & Reliability
Supports redundancy-based Safety NPU

Full-link floating-point support
Supports FP16/FP8/INT8 mixed precision

Dedicated transformer hardware acceleration module & sparse acceleration

Comprehensive product portfolio coverage
From NOA to robotaxi



The most advanced NPU architecture in the industry

Ultra-high integration level
Supports up to 6-in-one integration:
CPU+DSP+GPU+NPU+MCU+ISP/CV

New generation ISP
4-Frame exposure, 150dB HDR

Single-chip data closed-loop Self-developed high-performance RISC-V scheduling core

Flexible scalability
Supports multi-chip scalability

Stock Code: 2533.HK

BLACK SESAME TECHNOLOGIES

Huashan A2000 Family: Next-generation High-performance Chip Platform Purpose-built for Physical AI

Highly efficient and easy-to-use Shanhai Toolchain

From prototype to mass production – get up to speed quickly and stay ahead

Ultra-fast compilation capability

Minute-level compilation – iterate without waiting

Flexible operator development

Triton automated operator – adaptive development

Ease-of-use design

Ready to use, clear at a glance

Industry-leading JIUSHAO NPU core

Highest efficiency

Lower power consumption at same computing power, with no loss of accuracy

Most user-friendly

Run directly without waiting for the FP16 model

Highest-performance XINGMOU ISP:

All-weather, full-chain, full-sensing – self-developed industry-leading technologies

All-weather + Full-scene visual coverage

3.6 Gbps

Ultra-high-definition brightness + Extreme signal-to-noise ratio

150 dB, 3DNR

Lossless direct-through + More accurate perception

RAW format direct-through to NPU



Built for the future: fully supporting VLA × World Model

Reserving "future interfaces" for L3/L4 autonomous driving

Advanced model support

Native acceleration, direct deployment of VLA / World Models

High scalability

High-speed interconnect, compute stacking

Safety is the non-negotiable bottom line of intelligent driving

Core verification + hardware isolation + process certification –Three in one

Safety NPU

On-core verification, computation error-free

Unique "3L" design

Chip-level isolation – without interference even under extreme conditions

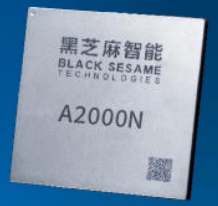
Safety system assurance

Full-process automotive-grade certification complete coverage, no blind spots

Stock Code: 2533.HK

ALL-NEW Huashan A2000 Family

A2000N



- Light urban MOA
- Cockpit agent

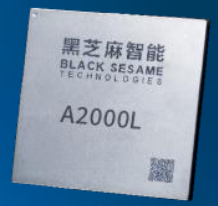
Equivalent computing power **200 TOPS**

Proprietary near-memory compute architecture

Up to **176K DMIPS** CPU compute power

Self-developed ISP
4-exposure / 150dB HDR / 3DNR

A2000L



- Cost-effective urban NOA
- AI new paradigm-based assisted driving

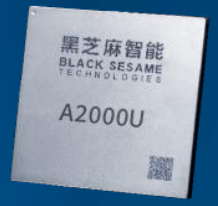
Equivalent computing power **400 TOPS**

Proprietary near-memory compute architecture

Up to **264K DMIPS** CPU compute power

Self-developed ISP
4-exposure / 150dB HDR / 3DNR

A2000U



- L2+/L3 autonomous driving foundation
- Assisted driving with world model integration

Equivalent computing power **700 TOPS**

317-352K DMIPS CPU compute power

30K+DMIPS ASILD computing power

Proprietary near-memory compute architecture

Self-developed ISP
4-exposure / 150dB HDR/ 3DNR

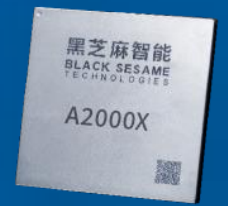
NPU dedicated SRAM 8 TB/S

NPU large-capacity cache Hundreds of MB

Supports C2C high-speed coherent interconnect

Self-developed Vector Engine
Superior exponential computing power >4.8-5TFLOPS FP32 computing power

A2000X



- L3/L4 autonomous driving
- In-vehicle local AI agent

Equivalent computing power **1000 TOPS**

370-458K DMIPS CPU compute power

30K+DMIPS ASILD computing power

Proprietary near-memory compute architecture

Self-developed ISP
4-exposure / 150dB HDR/ 3DNR

NPU dedicated SRAM 8 TB/S

NPU large-capacity cache Hundreds of MB

Supports C2C high-speed coherent interconnect

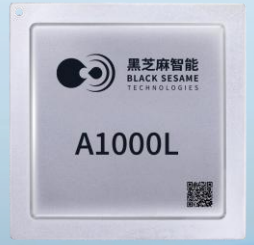
Self-developed Vector Engine
Superior exponential computing power >4.8-5TFLOPS FP32 computing power

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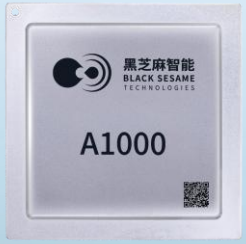
Huashan A1000 Family Chips

A1000 is the high-computing-power platform equipped in the most mass-produced car models in industry, with the highest performance in **16nm** auto-grade chips.

A1000L



A1000



2020

2023

GEELY 吉利控股集团



LYNK&CO 08

GEELY 吉利控股集团



LYNK&CO 07

2024

东风汽车 DONGFENG MOTOR



Dongfeng eπ008



Dongfeng eπ007

GEELY 吉利控股集团



Geely Xingyao 8



Geely Galaxy E8

2025





东风汽车 DONGFENG MOTOR



Dongfeng eπ007 Flash Edition

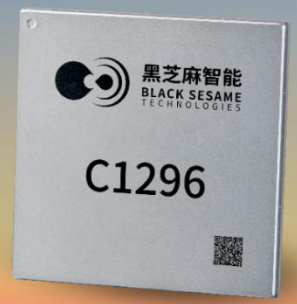
2026+

Stock Code: 2533.HK

Product | Wudang Series

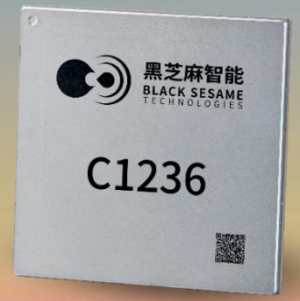
Wudang Series
Cross-domain Computing Chip

CROSS-DOMAIN FUSION



Wudang C1296

The Industry's First Computing Chip
To Support Multi-domain Fusion



Wudang C1236

The Single Autonomous Driving
Chip To Support Noa Driving

Stock Code: 2533.HK

Wudang C1296 | Single Chip Integrate Multi-domains

BLACK SESAME TECHNOLOGIES

CMS system




- In-car streaming rear view mirror
- Exterior mirror replacement

Vehicle computing



- Data gateway exchange
- Body/chassis algorithm
- Data security management
- SOA service

Auto-parking system

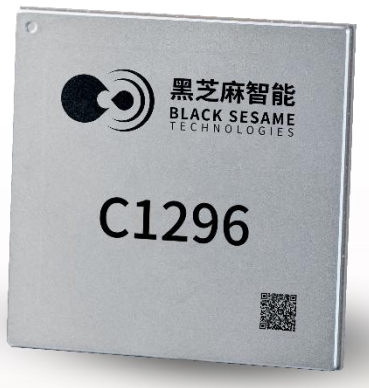


- Fusion APA
- HPA
- AVP

Infotainment



- Central navigation
- Audio processing
- Rear entertainment



C1200 Family

L2++ driving system



- ACC/AEB
- LCA
- HWP
- NOA

In-cabin sensing system




- DMS/OMS
- Cabin monitoring
- Gesture recognition
- Multimodal interaction

Intelligent headlight



- New scene interaction
- Intelligent headlight control

Safety information system



- Digital dashboard
- Digital control panel
- AR HUD

Stock Code: 2533.HK

Wudang C1236 | Single Chip Supports NOA Solution

First A78AE SOC

ARM-core performance improved >50% compared to the competing product

- Localizing
- Fusion
- LiDAR processing

Self-developed core DynamAI NN NPU

VS A1000 performance up to 20%

Transformer supported

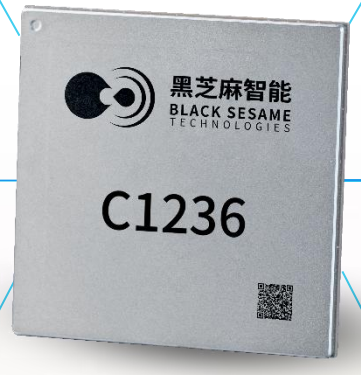
- BEV
- 17MP camera supported

Built-in Ethernet switching

MIPI CPHY/ CSI TX

Support SIP module

- Optimal system BOM
- No need for water cooling



C1200家族

MOST powerful integrated MCU

ASILD
16K DMIPS

- External MCU not required
- ASILD safety island
- Global cybersecurity standards

The First High-performance ARM Automotive Grade GPU Mali G78AE

5x performance vs competing product

- Extremely vivid visual effect (virtual scene)
- Premium 3D surround view

Shanhai Development Toolchain

Mass production - proven IP

Upgrade & Reuse

- "One-click" algo migration
- Reuse A1000 investment

Self-developed Core IP

BLACK SESAME TECHNOLOGIES



ISP auto-grade image processing

Imaging • See clear

Our automotive grade ISP provides exceptional image processing capabilities, ensuring that everything on the road is crystal clear.

> Matured technology
> Full scenarios covered
> Better cost and power consumption
> Integration of traditional ISP technology and deep learning

NPU auto-grade deep neutral network accelerator

Intelligence • See through

Our automotive grade NPU for deep learning delivers high-performance neural processing capabilities, transforming vehicles into intelligent companions.

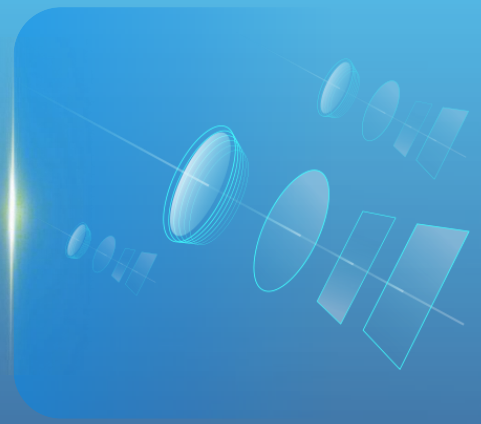
> Low power consumption and low latency
> High bandwidth data throughput
> Support Transformer
> Accelerator fully decoupled with algorithms

Stock Code: 2533.HK

XINGMOU ISP | Self-developed industry-leading ISP with highest performance

Multi-mode processing at high speed

High quality image processing



30Gbps, 16 channels camera, 1.2 billions pps

Multi cameras, High transmission rate, High processing rate, Low latency, High dynamic image processing, Multi sensor formats



Image pre-processing ISP

Completely Self-Developed ISP algorithms and multi platform implementations



Perfect performance even in extreme light condition

Reflection in rainy night/Extreme foggy/Backlight



Image processing examples: Low light, high dynamic range140dB

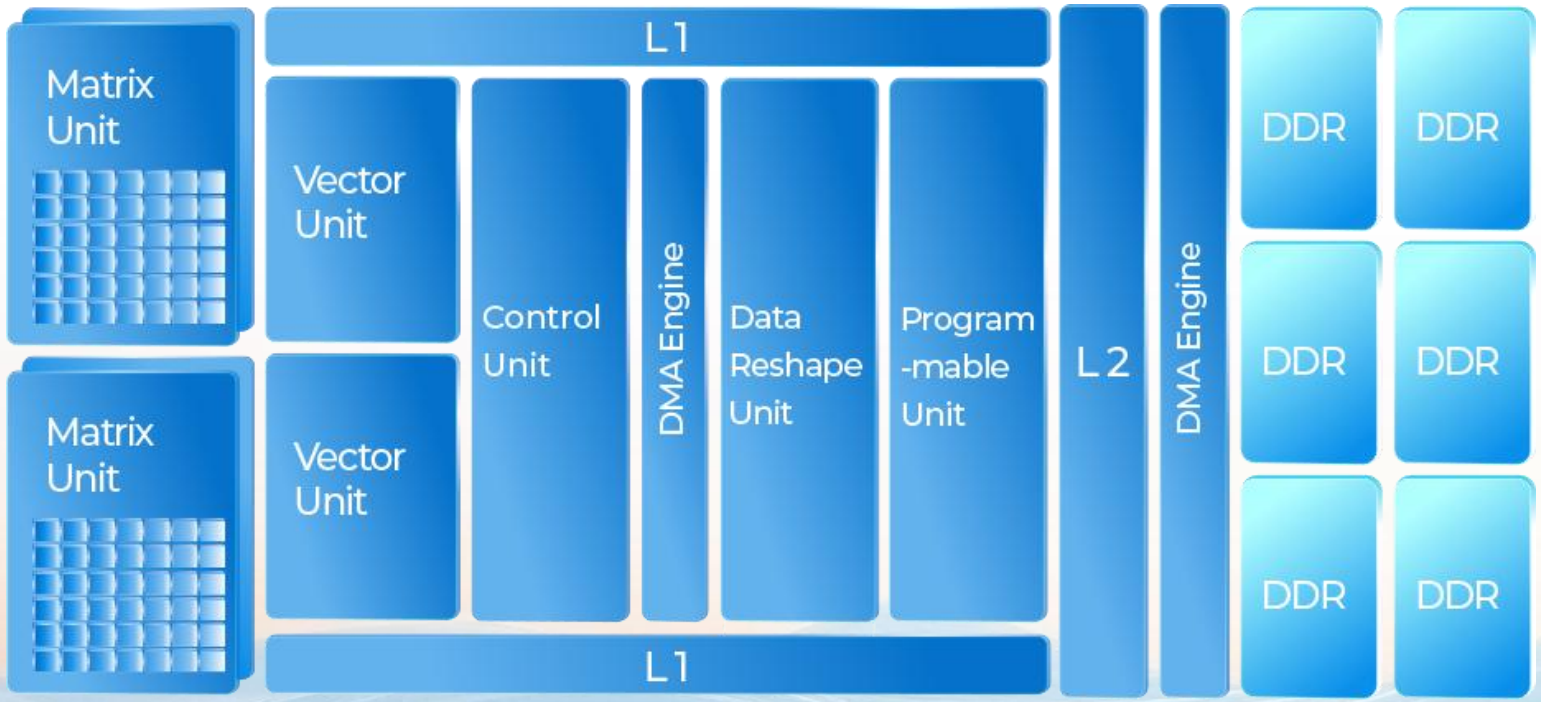
1080P 2-3Exp, lux (night flash)(Super low light), Suppression of LED flash

Stock Code: 2533.HK

JIUSHAO NPU | The Most Advanced NPU Architecture in the Industry

BLACK SESAME TECHNOLOGIES

Highest efficiency • Highest throughput



Future-Oriented

Supports a comprehensive mathematical computing architecture that optimizes traditional algorithms and accelerates future evolutionary algorithms

Big-core architecture

Design and integrate the industry's largest independent NPU cores, replacing traditional small core stacks for greater energy efficiency and ease of use

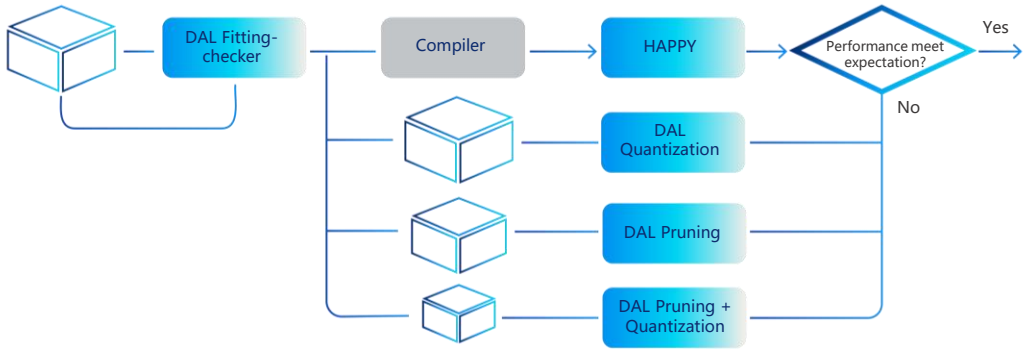
Flexible Expansion

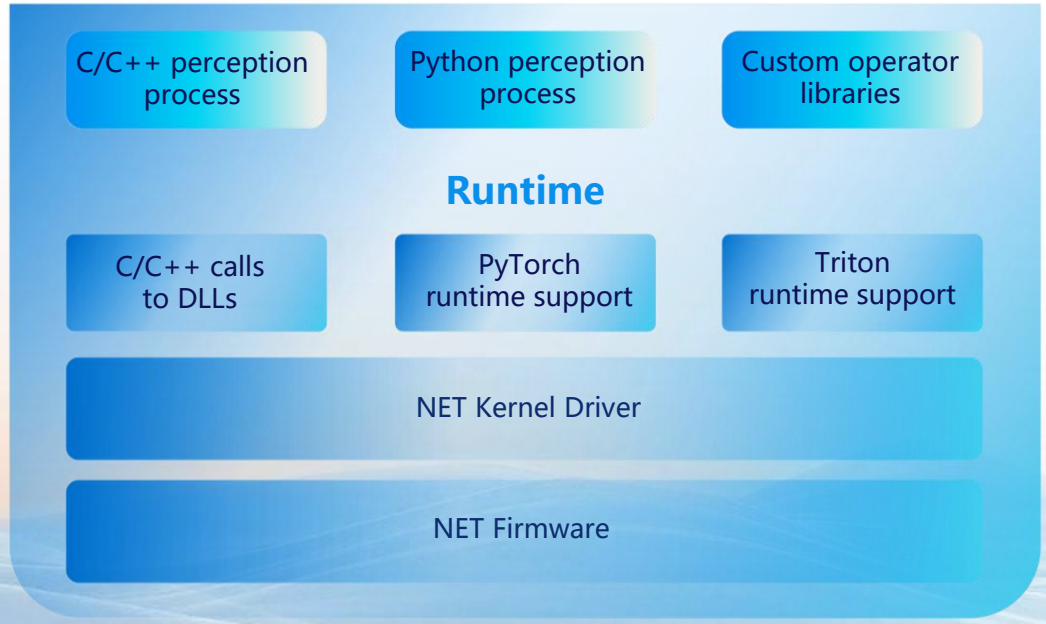
Supports a variety of popular frameworks, different type of precision data, various of network models, and adapted to multiple applications

New Level of Safety

Industry's highest safety-grade NPU core, brings the automotive grade safety to the next level

Shanhai Toolchain | New Generation Universal AI Toolchain







Model Compiler uses the industry-standard MLIR framework, supporting the conversion of models from ONNX, PyTorch, TensorFlow, & etc.



Native compatibility with PyTorch's inference API, supporting Python programming and deployment.



Supports custom operator programming in Python with Triton, automatically compiling to hardware-accelerated code.

Matured Experience in Perception Algorithms

With the development and validation from CNN to BEV then to E2E algorithms, the company has now entered the R&D stage of autonomous driving algorithms with VLM/VLA and deploying cloud-based world model for reinforcement learning. High level algorithms will **empower autonomous driving system a generalized perception of complex scenarios**, which **makes safer and more reasonable path planning and driving operations** by combining regulations, common sense and plenty of experience.

2023-2024

Unified BEV Perception and Two-stage E2E

Muli-scene adaptive temporal fusion:
- Regressive temporal information transfer
- Multi-frame temporal feature alignment
- Multi-frame temporal information concatenation

Reinforced lane topology prediction

Multi-functional backbone: Static object, dynamic object, lanes, occupancy, traffic light, vehicle head/tail light...

Two-stage E2E path planning:
- Human driver imitation learning
- Efficient closed-loop training

2024-2025

More Effective One-stage E2E

Token based path planning network

Multi-mode hybrid training:
- *Reinforcement learning of multiple driving styles*
- *Multi-objective joint training*

Physical scene simulation

- *Multi-agent joint training*
- *Online mining of high-value training data*

2025 & beyond

Multi-modal VLM for ADAS

Image features from VLM

Text features from LLM:
- *Traffic regulations*
- *Common sense*
- *Driver instructions*

...

Voice instructions

VLM with low-latency prediction and multi-modal input

Reinforcement learning using scene synthesis with generative world model

- Complex scene understanding
- LLM chain-of-thought (COT) reasoning

- Generalization to diverse scenes
- Path planning following traffic regulations
- Path planning with human drivers' experience and common sense

Complete Automotive Grade Certifications



ISO26262
Automotive Functional
Safety Professional



ISO26262 ASIL B
Functional Safety Product
Certificate for A1000



ISO26262 ASIL D
Functional Safety Process
Certificate



ISO26262 ASIL D
Software Functional
Safety Process Certificate



ISO9001 Quality
Management System



ASPICE CL2 Certificate



AEC-Q100 Reliability
Standard Certificate

BLACK SESAME TECHNOLOGIES

Black Sesame Technologies has obtained complete automotive grade certifications:

Automotive Functional Safety Professional

+

Functional Safety Product Certificate

+

Functional Safety Process Certificate

+

Software Functional Safety Process Certificate

+

ASPICE Certificate

+

AEC-Q100 Reliability Certificate

Stock Code: 2533.HK

Solutions

BLACK SESAME TECHNOLOGIES

01 Intelligent Vehicle

As a leader in Automotive intelligent Computing SoCs, Black Sesame Technologies offers two complete product lines: the Huashan Series and the Wudang Series. The Huashan Series ranges from the mass-production-proven A1000 high-compute platform to the A2000 chip, which delivers the highest computing power among domestic open platforms, comprehensively covering autonomous driving needs. The Wudang C1200 family is the first domestically mass-produced cockpit&driving integrated chip platform. Lt integrates mission-critical capabilities such as autonomous driving, intelligent cockpit, and body control. Leveraging its self-developed IP cores, algorithms, and full-stack solutions, the company meets the increasingly diverse and complex demands of the intelligent vehicle industry, helping customers achieve safe and efficient deployment of intelligent driving.





02 Embodied AI

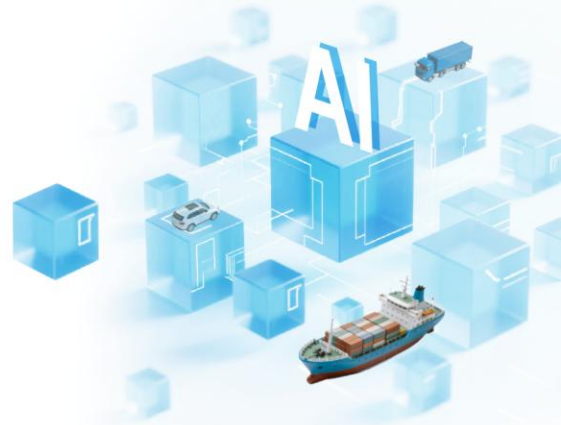
The SesameX Multi-dimensional Embodied Intelligence Computing Platform, launched by Black Sesame Technologies, is built around the core concepts of "whole-brain intelligence and multi-dimensional computing," making it the ideal partner for the commercial deployment of robots. The platform offers three core modules: Kalos, a dedicated platform for commercial service robots, as the most mature and cost-effective robotic central brain; Aura, a general-purpose computing platform for multi-task execution robots, as the most agile and reliable "action brain" for robots; and Liora, a full-capability computing platform for embodied AI brains –the fastest and most secure "thinking brain." With its full-stack, self-developed hardware and software architecture, the platform accelerates the rapid commercialization of applications such as humanoid robots, multi-legged robots, and intelligent robotic arms.

03 General AI

Black Sesame Technologies has built a General AI full-scenario intelligent computing platform. Leveraging a flexible hardware and software architecture, the company deploys its AI computing power chips across a wide range of fields including industrial, commercial, intelligent transportation, low-altitude flight, intelligent shipping, agriculture, security, and more. The platform supports flexible deployment and cross-scenario coverage, empowering the intelligent transformation of thousands of industries. With years of deep cultivation in the AI imaging field, the company's solutions have been adopt-ed in over 500 million devices, making it one of the top three global suppliers. Its mature technology and scalable capabilities provide a strong base for General AI applications.







Intelligent Vehicle | Passenger Vehicle Solutions

BLACK SESAME TECHNOLOGIES

ADAS & AD Solution

Covers full-scenario needs from passive safety to active driving. **Based on Huashan and Wudang series platforms with flexible compute and sensor configurations, one chip enables multiple autonomy levels with hardware reuse, lowering development costs.** Delivers tailored, scalable solutions for automakers—from L2 assisted driving to full-scenario autonomous driving.

- **Hardware reusable**
- **Flexible compute configuration**
- **Passive safety → Active driving**

Cross-domain Fusion Solution

Black Sesame Technologies' cross-domain fusion solution, powered by the Wudang C1296 chip, is a high-performance, highly integrated in-vehicle computing solution. **Its single-chip architecture meets diverse functional needs of mainstream vehicle models, enabling full-scenario cross-domain applications including CMS, integrated driving & parking, vehicle computing, infotainment, smart headlights, and in-cabin sensing.**

- **Single-chip integration of multi-domain functions – lowers BOM cost**
- **Cockpit-driving integration**
- **Vehicle computing + infotainment + smart headlights + in-cabin sensing**

Safety Intelligent Platform Solution

The safety-intelligent base solution, powered by the Wudang C1200 family, delivers an integrated in-vehicle intelligent platform that is "safety-first, scalable compute, full-scenario coverage." It supports cockpit and assisted driving from entry-level to flagship models, enabling one-time development and multi-generation reuse.

- **Extensibility of computing power**
- **High safety level for cross-domain fusion**
- **Balanced solution to cover all type car models**

Intelligent Vehicle | Commercial Vehicle Solutions

BLACK SESAME TECHNOLOGIES

Commercial Vehicle Active Safety System – Patronus 2.0

A post-market all-in-one solution compatible with commercial vehicles, logistics carts, and more. Powered by the Huashan series chips, it supports ultra-large neural network perception algorithms, including DMS (driver monitoring), BSD (blind spot detection), and surround-view.

- Next Generation Monocular Front-View Perception Algorithm
- BSD
- In-Cabin Monitoring
- 360° Surround View & Parking Assistance

Commercial Vehicle + Insurance New Model

Black Sesame Technologies innovatively creates a "technology + insurance + operations" business model, partnering with OEMs, autonomous driving companies, insurers, and risk reduction operators to deliver a full-chain solution covering intelligent driving devices, insurance services, and risk reduction operations.

- High-performance domain control, comprehensive L2 assistance
- Multi-party collaboration and proactive risk management
- Reducing risks, benefiting customers



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Embodied AI | Multi-dimensional Embodied Intelligence Computing Platform

BLACK SESAME TECHNOLOGIES

SesameX | **The Premier Partner for Robotic Commercial Deployment**

Full-Stack Computing Platform for Robotics: Whole-Brain AI & Multi-Dimensional Computing

Whole-Brain Intelligence for Deeper Scene Understanding

Safety Mechanisms for Smoother Behavior Control

Unified System for More Autonomous Evolution

Closed-Loop Evolution for More Efficient Global Deployment

System Security

SesameX Atomic Application Layer (Advanced Tasks & Atomic Capabilities)

- Task model: Semantic SLAM | Cognition & Semantics | Trajectory Planning | Dynamic Segmentation | Responsive Control | Skill Graph
- Atom model: Perception Model | Decision-Making Model | Control Model | Fusion Model

SesameX Middleware Layer (System Optimization & Acceleration)

- SesameX - Toolchain: 3D Parallelism | Mixed Precision | Attention Acceleration | Automatic Distillation & Quantization
- SesameX - Scheduling Engine: Secure Scheduling | Multi-Task Orchestration | Quality of Service | Resource Isolation
- SesameX - Runtime: Heterogeneous Scheduling | Parallel Inference | Model Sandbox | Telemetry & Self-Tuning

SesameX Computing Platform Layer (Underlying Computing & Operating System)

- OS: Linux | ROS2 | SesameX RTOS
- SesameX Module: Kalos | Aura | Liora

SesameX Network (Multi-Protocol Intelligent Fusion Gateway)

The industry's First **"Full-Stack Self-Evolving & Whole-Brain AI Platform"**
A robot computing platform for full-scenario application deployment that **integrates perception, cognition, decision-making, control and safety closure.**

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Embodied AI | SesameX Applications

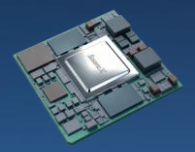
BLACK SESAME TECHNOLOGIES

SesameX Kalos

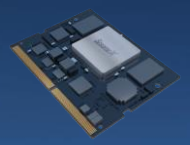
Integrated Perception and Motion Control · Dedicated Platform for Service and Consumer Robots

SCENARIOS

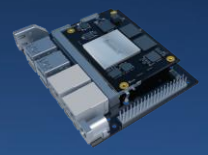
Low-speed Wheeled Robots: Delivery Robots / Reception Robots / Inspection Robots / Cleaning Robots / Logistics Robots / Educational Robots



Automotive-grade SIP Module



Kalos Module



Kalos DevKit

Kalos (Standard)

High performance NPU (CNN & Transformer)	48 TOPS (INT8)
Integrated Motion & Control	8×A55 @1.5GHz · 32K DMIPS
Multi-channel Visual Perception	(4+1)× Vision DSP @800MHz 3 cores · 1.2Gpps · 120dB HDR 8×1080p (2×CSI-2 via SerDes)
Various I / O	PCIe Gen3 · 2×1GbE TSN · USB 3.0 3 channels CAN-FD 4×UART · 5×I2C · 2×SPI · 2×I2S · 4×PWM · GPIO
Dimensions	SO-DIMM 260-pin · 69.6×55mm · Active cooling

ADVANTAGES

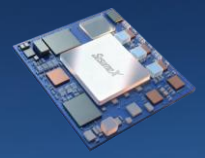
The most mature and cost-effective robot computing core — balancing visual perception and motion control, enabling robots to "see clearly and move steadily".

SesameX Aura

Cognitive-Motor Integrated General-Purpose Computing Platform for Multi-Task Robots and Next-Gen Edge AI

SCENARIOS

Legged Robots: Inspection & Maintenance Robots (Industrial / Power / Port) Smart Robotic Arms & Collaborative Robotic Arms Humanoid Robots: Teleoperated Robots / Industrial Collaborative Robots



Automotive-grade SIP Module



Aura Module



Aura DevKit

Aura (Standard)

High performance NPU (CNN & Transformer)	70 TOPS (INT8)
General-Purpose Processor	8×A78AE @1.7GHz · 150K DMIPS
Heterogeneous Motion & Control Processor	2×A78AE + 1×G78AE + 6×R5F DCLS · 42K+ DMIPS
Multi-channel Visual Perception	3×MIPI CSI-2 · 12×1080p or 4×4K 4 cores @600MHz · 120dB HDR · 12 concurrent
Various I / O	PCIe Gen4 · 4×USB 3.1 + 1 Safety CAN-FD + 8 CAN-FD
Dimensions	MXM 314-pin · 82×54 mm

ADVANTAGES

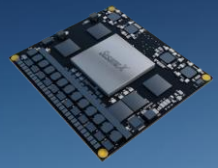
The most agile and reliable robot action brain — fusing multi-modal perception and safety control, enabling robots to "understand the world and act precisely"

SesameX Liora

Embodied Brain · Near-Memory Computing · All-Round Computing Platform for Humanoid and Embodied Robots

SCENARIOS

Humanoid Robots (Service/Education/Research) Advanced Bionic Robots (Dual-Arm Collaboration/Emotional Interaction) Intelligent Tour Guide / Teaching Assistant Robots Multi-Robot Collaboration Systems (Swarm/Smart Dispatch Center)



Liora Module



Liora DevKit

Liora

High performance NPU (CNN & Transformer)	700 TOPS
General - Purpose Processor	16×A78AE @1.7GHz · 352K DMIPS
Motion & Control Processor	6×R52 DCLS @1.2GHz · 60K+ DMIPS · 8MB safety SRAM
Multi-channel Visual Perception	4×CSI-2, 16 lanes (up to 20 cameras); 4×4K@60 enc / 4×4K@120 dec
Various I / O	4×10GbE TSN + RMII real-time port; PCIe Gen4 ×8 (or 2×4); C2C ×16
Dimensions	87×100 mm; forced air cooling

ADVANTAGES

The fastest and safest "Thinking Brain" — supporting world models and E2E control, enabling robots to "think, predict, and make autonomous decisions".

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General AI | Edge Intelligence Computing for Scenario Applications

BLACK SESAME TECHNOLOGIES

High-performance Edge Computing Unit

Focusing on edge-side applications in the "cloud-edge-device" architecture, the self-developed chips and AI algorithms enable local data aggregation, analysis, and intelligent decision-making on a full-scenario AI computing platform. This reduces cloud dependency, cuts latency and bandwidth needs, while ensuring data privacy and security.



Powerful real-time AI chip	Automotive-grade reliability	Data localization
Domestically developed and controllable	Multi-source, heterogeneous data integration	Information security and protection

Smart Vision Terminals (cameras/inspection devices with integrated AI processing capabilities)

Based on the Huashan series chips, it integrates imaging, analysis, and inference, featuring low latency, low power consumption, industrial-grade reliability, and customizable/upgradable algorithms. Suitable for rail transit, industrial inspection, and traffic law enforcement.



Low-latency, high-compute stereo AI camera

Capable of railway intrusion detection and driver behavior monitoring. Flexibly adaptable to high-speed trains, conventional trains, urban rail, and other vehicle types.



High-compute industrial inspection camera

Captures, analyzes, and infers in real time to identify product defects. Widely used in automotive, 3C, PV, machining, and more.



Mobile law enforcement device

Capable of detecting people, non-motorized vehicles, and specific violations. Suitable for urban mobile law enforcement scenarios.

Compute-enhanced intelligent hardware

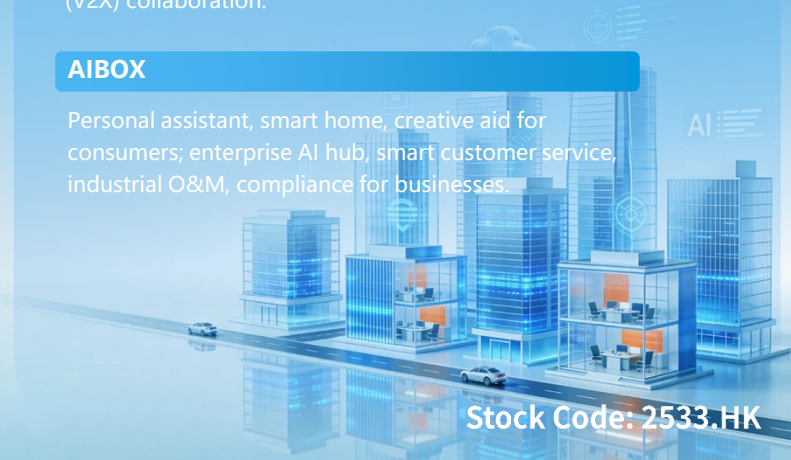
Built on Black Sesame Technologies' automotive-grade chips, this high-performance edge hardware integrates a self-developed NPU with CPU/GPU, ensuring data security while boosting compute utilization and model efficiency—strongly supporting large models at the edge.

Intelligent connected accelerator card

For in-vehicle domain controllers, roadside intelligent units, and connected servers. Enhances AI inference and data transmission efficiency for vehicle-to-everything (V2X) collaboration.

AIBOX

Personal assistant, smart home, creative aid for consumers; enterprise AI hub, smart customer service, industrial O&M, compliance for businesses.



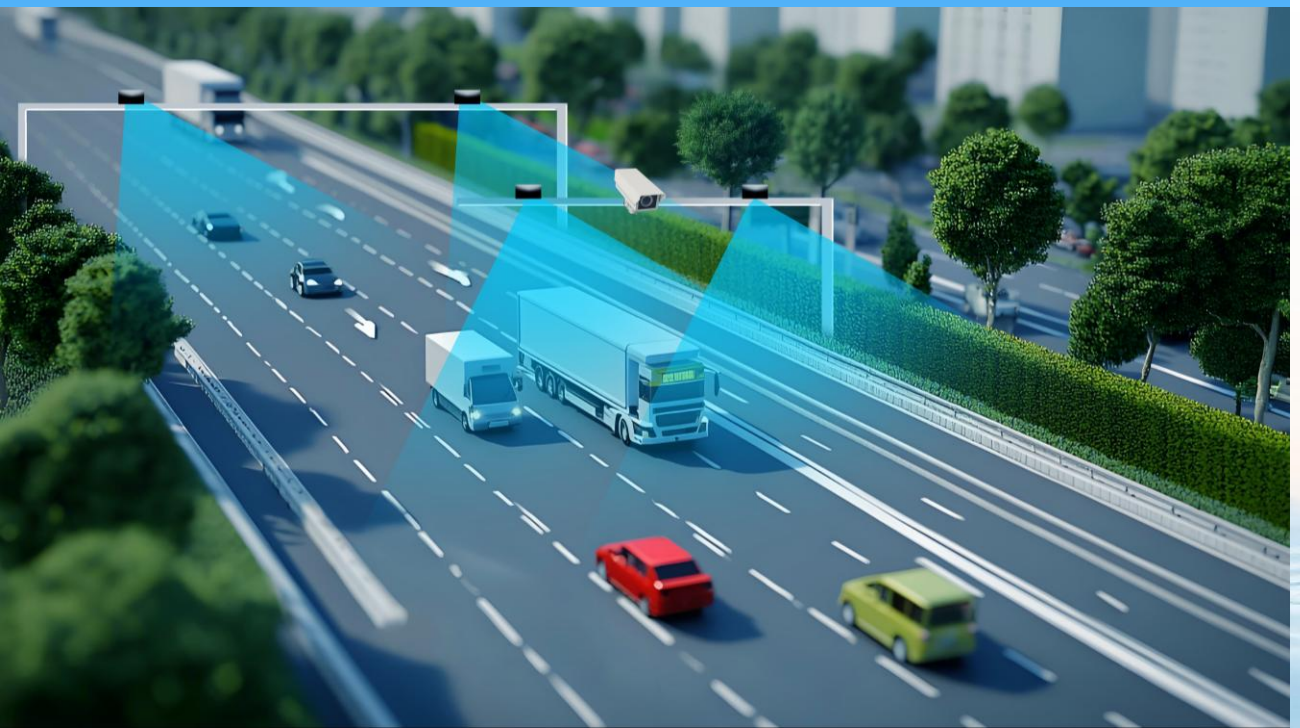
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General AI | Industry AI Solutions

V2X Edge Computing Solution

Black Sesame Technologies delivers a roadside solution for vehicle-road collaboration: self-developed edge units + full-stack algorithms on automotive-grade chips. It supports quick customization and integrates perception, fusion, analysis, and storage—solving low accuracy and high latency. Already deployed at scale in multiple city smart connected vehicle projects.

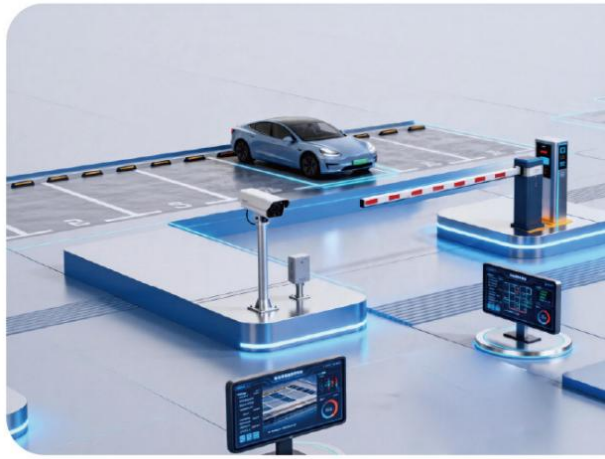
- Continuous roadside compute & perception improvement
- Powerful Real-time Computing Chip
- Multi-Scenarios Image Processing
- Empowering Smart City and Smart Road
- Reliable MEC Unit
- Efficient and Precise Perception Algorithm



Smart Parking System

Parking guidance, reverse car finding, violation alerts, fault self-diagnosis, security integration, flexible billing, mechanical garage support.

Parks, commercial complexes, transport hubs, residential properties.



UAV Image Processing & Intelligent Analytics

Full-stack proprietary algorithms with image enhancement; supports traffic event recognition, power line defect detection, spatiotemporal analysis.

Traffic management, power line inspection, urban governance, environmental monitoring, emergency rescue, water inspection.



AI Imaging Full-Stack Solution

Product Line Overview

Black Sesame Technologies AI Imaging Solution focuses on visual perception and image processing technologies，provides imaging algorithm solutions of the smart device to customers. The solution has already been mass-deployed in smartphones, tablets, smart glasses, AI cameras, and other AIoT product categories. Supported by dedicated teams covering algorithms, integration, debugging, optimization, testing, and delivery, provides full-chain services to domestic and international customers.

Smartphone Imaging Solution





AI Glass Imaging Solution

AIoT Embedded Imaging Solution





Cloud Imaging Agent

Product Line Advantages

Full-scenario coverage

Full-scenario high coverage supports nearly all AI imaging applications for both photography and video.

High-frequency scenario breakthrough: focus on AI Depth, YUV IQ, and RAW Lite solutions for high-frequency scenarios such as portrait photography and image quality enhancement.

Full-scenario coverage

Focusing on mid-to-low-end platforms, deliver lightweight product solutions with balanced performance and leading capabilities.

Launched the Lite version of RAW solutions that prioritize performance while optimizing time and memory efficiency for mid-to-low-end platforms.

Full-chain integration

Black Sesame Technologies performs full-link integration.

Solution Integration: from basic image quality products to specific ai imaging applications, maximizing multi-module reusability for integrated output of final chain effects

High-quality delivery

Complete delivery team

Respond efficiently to customer needs and issues,

Customized development and debugging, tailored to user needs and performance goals

Solid Customer Base & Open Ecosystem

BLACK SESAME TECHNOLOGIES

Application Scenarios

Automotive OEM

北汽集团 BAIC GROUP · 长安汽车 CHANGAN · 中国中车 CRRC · 东风汽车 DONGFENG MOTOR · 中国一汽 FAW GROUP · FOTON 福田汽车 · GEELY 吉利控股集团 · 江汽集团 JAC GROUP · 三一重工 · LOTUS NYO · SAIC · 陕汽集团 · SKYWORTH 创维汽车

V2X

5G · 中国电信 CHINA TELECOM · 中电信数智科技 · 中国联通 China unicom · CUSC 联通智网 · 招商公路 CMET · 招商新智 · LES · 金桥集团 · 中海庭 · 天翼交通 · 西部智联 · 伊电集团 · 中国南方电网

Robotics

智平方 · 中国移动 China Mobile · DEEPRobotics 云深处科技 · 灵御智能 · FOURIER 傅利叶 · Geek+ · 镜识科技 · Lenovo 联想 · NUS · 北京大学 · Sentient Technology · 星尘智能 STAR1.AI · 国家电网 STATE GRID · 武汉大学 · X SQUARE ROBOT · 云迹科技 · 天问机器人

Commercial Applications

曹操出行 · 太平洋保险 CPIC · 行深智能 · 萝卜快跑 · ON TIME 如祺出行

Mobile Intelligent Device

理想 · motorola

Tier 1

ADAYO 华阳集团 · AIBAYTEK · AICO · ANNGIC 安智杰 · APTIV · BAOLONG 保隆科技 · 北斗智联 BiCV · BOSCH · CAIC 中汽创智 · 中信科智联 CICTCI · Continental · 德赛西威 · 东发 · DiAS · ecarX · ECTEK · FULSCIENCE · 光昱智能 GOYU · 科大国创 GUOCHUANG · HAISTAR · HASCO · HUILIAN 慧联智能 · HYPERVIEW 宏景智驾 · iTruckTec 智博汽车科技（上海）有限公司 · 经纬恒润 JINGWEI HIRAIN · JOYNEXT 均联智行 · 六力智行 · MARELLI · Megatronix · SD 英博超算 · SOTEREA 所托瑞安 · 创时智驾 TECHNOMOUS · Tsingtech 清研微视 · UAES · Xretinai · 远峰科技 YF TECH · 优控

Software Ecosystem

阿里云 · 诚迈科技 ARCHERMIND · Baidu 百度 · BlackBerry QNX · CALMCAR · CETC 普华基础软件 · DEEPROUTE.AI 元戎启行 · DIRAC · MAXIEYE 智驾科技 · Elektrobit · 流马锐驰 iharseal.com · JIMU · KANZI ONE · LANDMARK · LeddarTech · MACH 迈驰智行 · 元橡科技 METOAK · multicoreware · NESINEXT 均联智星 · nullmax AI · 斑马智行 Powered by AliOS · 润光智行 AINCOM · ROCKAI 岩芯智驾 · RT-Thread · 中科慧眼 Smarter Eye · STRADVISION · 足下科技 STEP · TELENAV · ThunderSoft 中科创达 · VECTOR · UNREAL ENGINE · WNDRVR · 易行智联 · 易航智能 YIMANG AI · ZTE中兴

Hardware Ecosystem

alhua · AICO · 北斗智联 BiCV · cadence · 承泰科技 Cheng-Tech · 酷赛智能 COOSEA SMART · 德赛西威 · 国汽智端 · HAWKEYE 隼眼科技 · HESAI · HiY海易科技 · HUAQIN 华勤技术 · Infineon · intel · 迈特威视 iSmartVision · 均胜电子 JOYSON ELECTRONICS · Labpano · Lanodo · micron · JOYNEXT 均联智行 · REACHENG 锐承 · robosense 速腾聚创 · EVOLUTION 千方智驾 · Sursoft · tanway 探维 · 腾讯智慧出行 · TINNO 天珑 · UHNDER · ULTRONIX · WHST 森思泰克 · 优诺智行 YOUNUO ZHIXING · 中际旭创 ZHONGJI INNOLIGHT

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LinkedIn

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Official Wechat Account

Black Sesame Technologies
Wechat Video Channel

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