CamThink

www.camthink.ai

Accelerating Vision AI Innovations for Developers

CamThink Overview

CamThink provides vision AI cameras and edge AI devices that enable developers, engineers, and makers to quickly create custom, production-ready AI models for real-world applications across industries. By simplifying hardware customization and integration, CamThink streamlines the entire prototype-to-practice process. Combining expertise in hardware manufacturing with strong developer support, it ensures ease of use and faster time-to-market for developers working on vision AI projects. With a focus on open architecture and adaptability, CamThink empowers developers to build vision AI innovations in ways as diverse and dynamic as their ideas.

Mission

Accelerating Real-world AI Adoption with Edge Intelligence.

Vision

Be a Trustworthy Partner for AI Developers, Enabling Edge AI Across Industries.

Core Strengths

- Hardware Excellence
- Community Collaboration
- Continuous Innovation
- Edge AI Incubation

A Brand of Milesight

CamThink is a brand established by Milesight, dedicated to propelling the deep integration of edge AI based on open architecture hardware for AI developers. Founded in 2011, Milesight offers multi-potential sensing products to capture meaningful data. It innovatively applies AI, 5G, IoT to bring real impacts to diverse applications.

- **15%+** of revenue invested in R&D
- **50%+ R&D force among** 700+ employees
- More than **1 Million sensing devices** deployed in **120+** countries and regions
- **2000+** distributors and ecosystem partners worldwide
- **Global Operations:** 2 R&D Centers and 8 Branch offices

NeoEyes Series

Vision AI Camera

Modular and Efficient for Vision AI Developers

Designed for diverse vision AI applications, CamThink NE101 features triggered image capture with low power consumption. Its modular design supports replaceable lenses, communication modules (Wi-Fi HaLow & CAT1), optional housings, and versatile mounts, ensuring adaptability across environments and AI use cases.

NE101

Key Features

Build It Your Way

Modular design with interchangeable lenses, communication modules, and 3D-printable bracket files lets you customize with ease.

Designed for Developers

Open SDK, firmware, Wiki resources, and MQTT support provide a complete toolkit for rapid development.

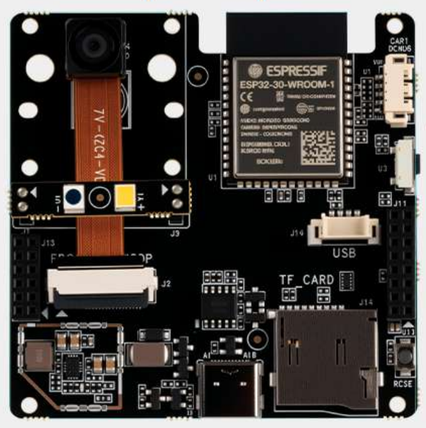
Sharper Vision, Smarter Integration

Triggered image capture with basic adjustable parameters, light management, and extensive internal I/O interfaces.

Built Tough, Built Flexible

IP67-rated durable housing meets a sleek, compact design, making it perfect for demanding environments.

CamThink NE101 takes developer support to the next level by including a Development Board, streamlining prototyping, testing, and customization for Vision AI applications.



Type-C port supports DC 5V power input.

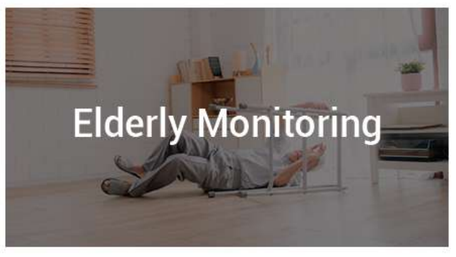
UART, I2C, GPIO, and SPI ports simplify integration.

Compact size 60 x 60 x 25 mm form factor for easy deployment.

--20°C to 50°C wide operating range.

Optional accessories, including antennas, lenses, and communication modules.

Application Scenarios



NeoEyes NE101

Model	NE101
MCU	ESP32-S3
RAM	8MB
Flash	16MB
Camera Sensor	OV5640 Module, selectable 120°/60° FOV and near/far focus options
Illumination	1 x LED
Button	1 x Snap Button
Communication	WiFi+Bluetooth, optional WiFi HaLow or Cat.1
Operating Temperature	-20°C to 50°C
Ambient Humidity	10% ~ 90% RH (non-condensing)
Power Supply	4 x AA Batteries (Not Included)
Ingress Protection	IP67
Dimension	77 x 77 x 48 mm
Mounting	Wall/Desk/Expandable Bracket

NeoEyes Dev Board

Model	NE101 Dev Board
MCU	ESP32-S3
RAM	8MB
Flash	16MB
UART	By Wafer 4Pins or Type-C
Storage	Micro-TF
Sensor	OV5640
WiFi	802.11b/g/n
Bluetooth	Bluetooth v4.2 BR/EDR, BLE
Communication	Optional WiFi HaLow or Cat.1 module
Alarm	1 x Alarm
Buttons	1 x Boot Button, 1 x Reset Button, 1 x Snap Button
Expansion IOs	Pinheader for UART, I2C, SPI, GPIOs
Illumination	1 x 3000K LED, 1 x Photodiode
Power Supply	DC 4-6V, by Wafer 2Pins or Type-C@5V
Operation Temperature	-20°C to 60°C
Storage Temperature	-40°C to 85°C
Certifications	CE/FCC/RoHS

NeoEyes Series

Edge AI Camera

Robuts and Flexibile for Industrial Edge

Powered by the STM32N6 (Cortex-M55) processor with Neural-ART™ NPU, the NE301 delivers real-time AI inference and professional image processing with ultra-low power consumption. Leveraging Arm® Helium™ vector processing, it features flexible hardware interfaces, robust industrial connectivity, and an open-source ecosystem, providing a scalable and modular platform for AI-driven vision applications at the edge.

NE301

Key Features

Edge AI Processing

SSTM32N6 (Cortex-M55) with Neural-ART™ NPU delivers 0.6 TOPS with 256MB RAM for real-time vision and audio AI, supporting on-device YOLO-based vision AI and YAMNet-1024 voice AI.

Optimized Imaging Pipeline

Built-in ISP with H.264 1080p@30fps encoding, JPEG compression, MIPI CSI-2/USB camera support, and XGA display for real-time, high-quality imaging

Industrial-Grade Connectivity

16-Pin GPIO, UART, RS485, SPI, I2C, plus optional Cat.1 LTE / Wi-Fi HaLow enable reliable wired and wireless AI deployment.

Developer-First SDK

Open SDK with STM32Cube.AI, TensorFlow™ Lite, ONNX (PyTorch™/MATLAB®) , and REST API support for seamless AI models deployment.

Rugged & Reliable

-20°C to 50°C operating range, engineered for industrial and outdoor AI deployments.

Highlights

Open-Source Ready, Industrial-Grade Performance

Instant On
<1ms cold boot with real-time 25fps/s AI inference

High-Efficiency
3 TOPS/W NPU efficiency with optimized thermal design

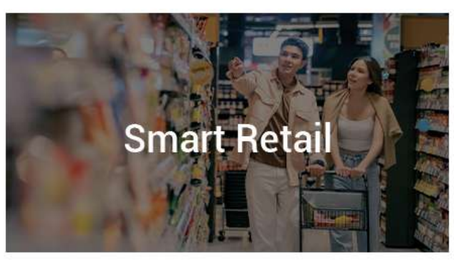
Plug & Play AI
Pre-trained STM32 model zoo with TensorFlow™ Lite, Keras, ONNX(PyTorch™, MATLAB®) support

Flexible Deployment
Runs on battery, USB-C and PoE for diverse applications

Modular Expansion
Industrial I/Os including 16-Pin, UATR, RS485, SPI, Wafer, GND for extended connectivity

Secure & Scalable
Built-in MQTT, hardware monitoring, and real-time model management

Application Scenarios



NeoEyes NE301

Model		NE301
MCU	Core	Cortex-M55 @ 800 MHz, Arm Helium (M-Profile Vector Extension)
	NPU	Neural-ART™ accelerator @1GHz, up to 0.6 TOPS AI inference
	SRAM	4.2 MB
	Flash	128MB
	MCU	256MB
Mainboard	Buttons	1x Reset, 1x Boot, 1x Snapshot/Recording
	Indicators	Power Status LED, System Status LED
	Communication	Wi-Fi 6, BLE
	Lens Module	4-Pin USB, MIPI CSI-2
	I/O Interfaces	1x UART, 1x RS485, 1x I2C 2x GPIO, 2x GND, 1x 3.3V/5V (controllable)
	Debug/Power	USB Type-C, 4-Pin UART Wafer
	Audio I/O	Wafer Audio-IN/OUT
	Communication Expansion Interface	12-Pin + 16-Pin IOs for communication modules
	Power Interface	2-Pin Connector (Battery/USB Type-C)
Modular Expansion	Camera Module	4MP OS04C10 or USB Camera
	Sensor Expansion	PIR, radar, temperature sensors via modular interface
	Communication Module	Optional LTE Cat-1 or WiFi HaLow (802.11ah)
	Power Module	1. POE support 2. RJ45 Ethernet with status LEDs 3. Solar power via Type-C 4. Alarm/GND/RS485/Wafer port 5. 16-Pin GPIO header
Power Supply		5V DC-In
Operating Temperature		-20°C to 50°C
Ambient Humidity		0–95% RH (non-condensing)
Dimension		77 x 77 x 48 mm
Certification		CE/FCC/RoHS

NeoEdge Series

Edge AI Box

Built with NVIDIA® AI Embedded System

Powered by NVIDIA® Jetson Orin™ NX/Nano module, CamThink NG4500 features a fanless chassis and high-performance hardware. It provides extensive I/Os and wireless connectivity for seamless integration into diverse applications. With NVIDIA® JetPack 6.0+ and 12V-36V DC-in support, it streamlines AI deployment of VLMs, LLMs, and deep learning models. Operating reliably from -25°C to 60°C, it delivers exceptional stability for next-gen AI applications.

NG4500

Key Features

Powerful AI at the Edge

Up to 157 TOPS AI performance, powered by the Jetson Orin™ Super Developer Kit with 12V-36V DC-in support.

Seamless Device Integration

Equipped with extensive industrial I/Os (RJ-45, RS-232/RS-485, DI/DO, CAN, USB 3.1, HDMI) to ensure seamless integration.

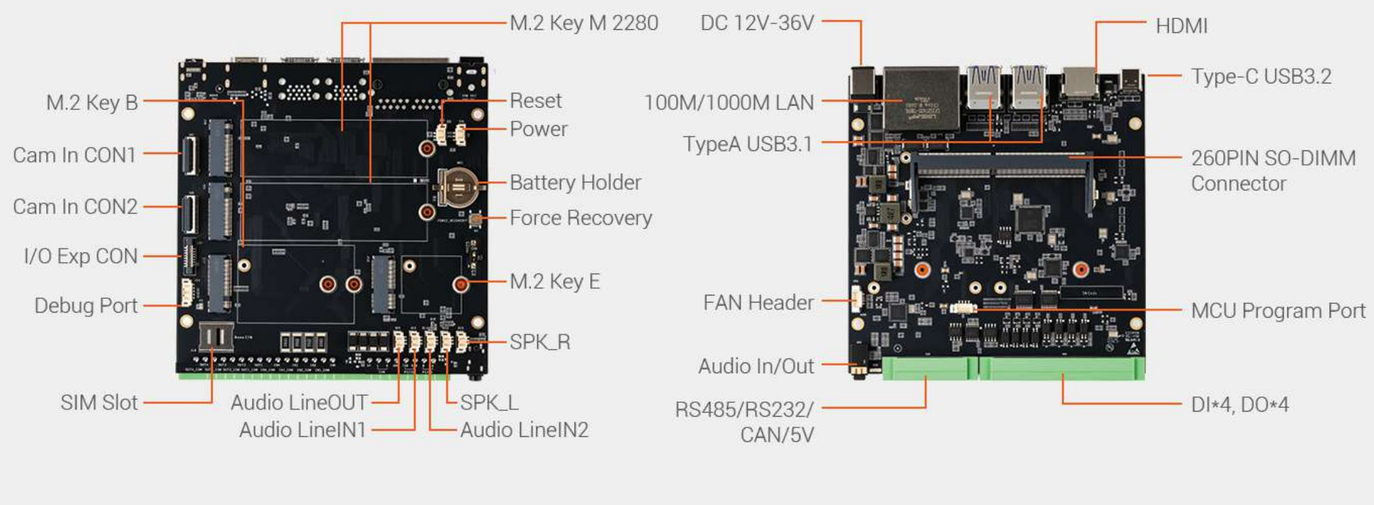
Next-Gen AI Ready

Built-in JetPack 6.0+ simplifies deployment of visual and language models (VLMs, LLMs) and advanced deep learning applications.

Built to Perform Anywhere

Fanless design with an operating range of -25°C to 60°C ensures durability in harsh environments without sacrificing performance.

CamThink NG4500 enhances edge AI development by providing a carrier board packed with versatile interfaces to simplify AI development and prototyping.



Compatible with Mainstream AI Platforms

Open AI · Gemma (Google) · Ollama
YOLO · Mistral AI · TensorFlow
Qwen-VL · Pytorch · Open CV
Llama · Speacht5 (Mictrosoft) · DeepSeek

Application Scenarios

NeoEdge NG4500

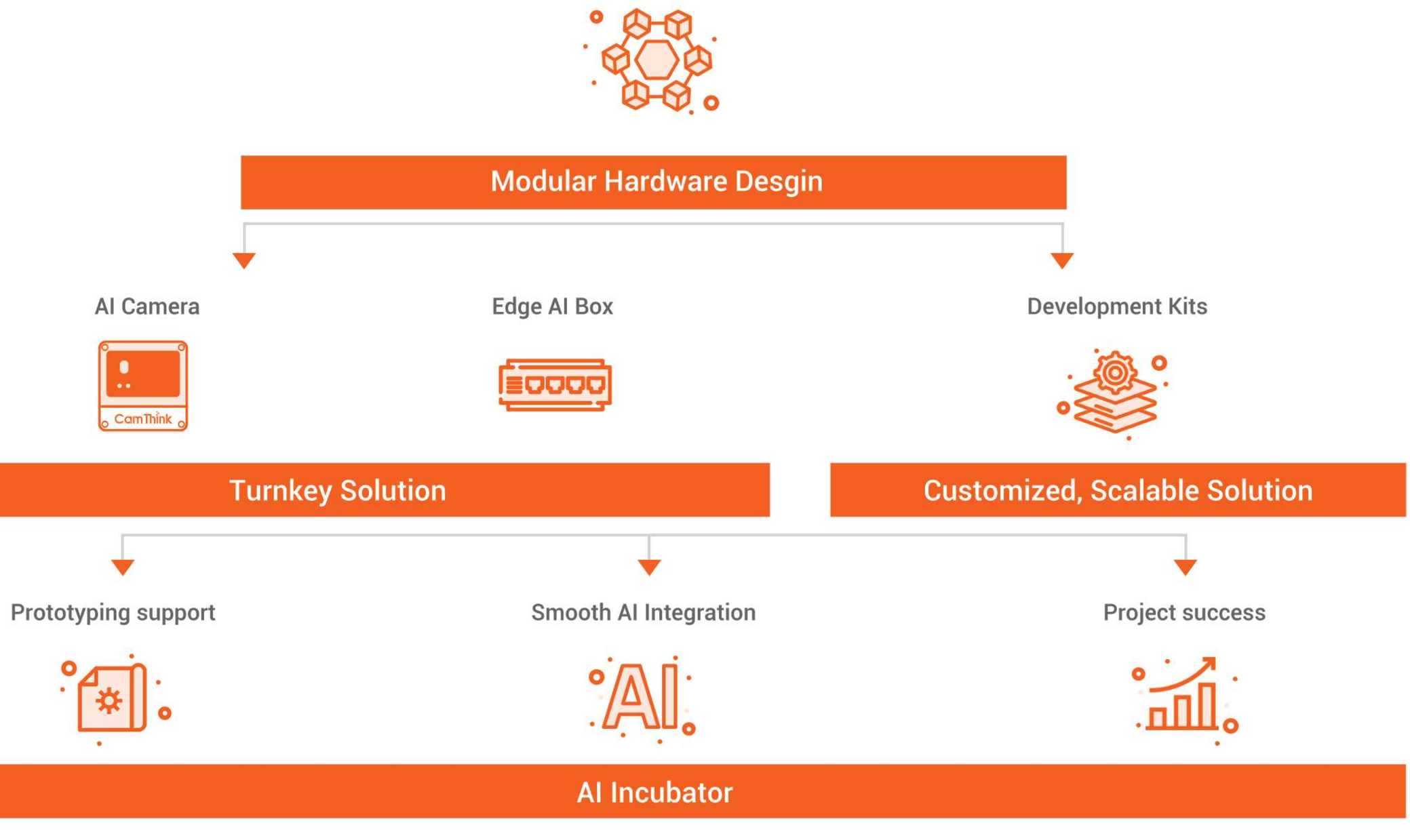
Model		NG4510	NG4511	NG4520	NG4521
System Core	Module	Jetson Orin™ Nano 4GB	Jetson Orin™ Nano 8GB	Jetson Orin™ NX 8GB	Jetson Orin™ NX 16GB
	AI Performance	20 TOPS	40 TOPS	70 TOPS	100 TOPS
	AI Performance (Update to SUPER)	34 TOPS	67 TOPS	117 TOPS	157 TOPS
	GPU	512 NVIDIA® CUDA® cores | 16 Tensor cores	1024 NVIDIA® CUDA® cores | 32 Tensor cores	1024 NVIDIA® CUDA® cores | 32 Tensor cores	
	CPU	6-core Arm® Cortex® A78AE (64-bit)		6-cores Arm® Cortex® A78AE v8.2 (64-bit)	8-cores Arm® Cortex® A78AE v8.2 (64-bit)
	DRAM SIZE	4GB	8GB	8GB	16GB
	DRAM BW	34 GB/s	68 GB/s	102 GB/s	102 GB/s
	OS	Ubuntu 22.04 (supports Jetpack 6.2 Super Developer Kit)			
Mechanical	Dimensions	160 x 125 x 75 mm			
	Installation	Desk/Wall mounting			
	Thermal	Fanless			

NeoEdge Carrier Board

Model		Carrier Board	
Storage		1 x M.2 Key M PCIe*4_Gen3 SSD 1 x M.2 Key M PCIe*1_Gen3 SSD	1 x M.2 Key M PCIe*4_Gen4 SSD 1 x M.2 Key M PCIe*1_Gen4 SSD
I/O	Ethernet	2 x RJ45 (1000Mbps Ethernet)	
	USB	4 x Type-A (USB3.1), 1 x Type-C (USB3.2)	
	Multifunctional Port	4 x DI, 4 x DO, 4 x GND_DI, 4 x GND_DO, 1 x CAN, 1 x RS232, 1 x RS485, 1 x DC 5V Power	
	HDMI	1 x HDMI	
	Audio	1 x Audio Jack	
Communication	M.2 Key B	M.2 Key B 2242/2252 Support 4G/5G/Wi-Fi Halow (Module Optional)	
	M.2 Key E	M.2 Key E 2230 Support Wi-Fi/Bluetooth	
Power	Power Supply	DC Input 12V-36V	
	RTC	1 x CR2032 RTC Battery	
Operating Temperature		-25°C to 70°C	
Dimensions		125 x 125 x 23 mm	
Certification		CE/FCC/RoHS	

Enriching Edge Intelligence across AIoT Industries

CamThink is committed to bridging the gap between AI applications and hardware engineering by building an open hardware and tool ecosystem, allowing AI developers to focus on using AI to solve real-world challenges without compromising on hardware complexity.

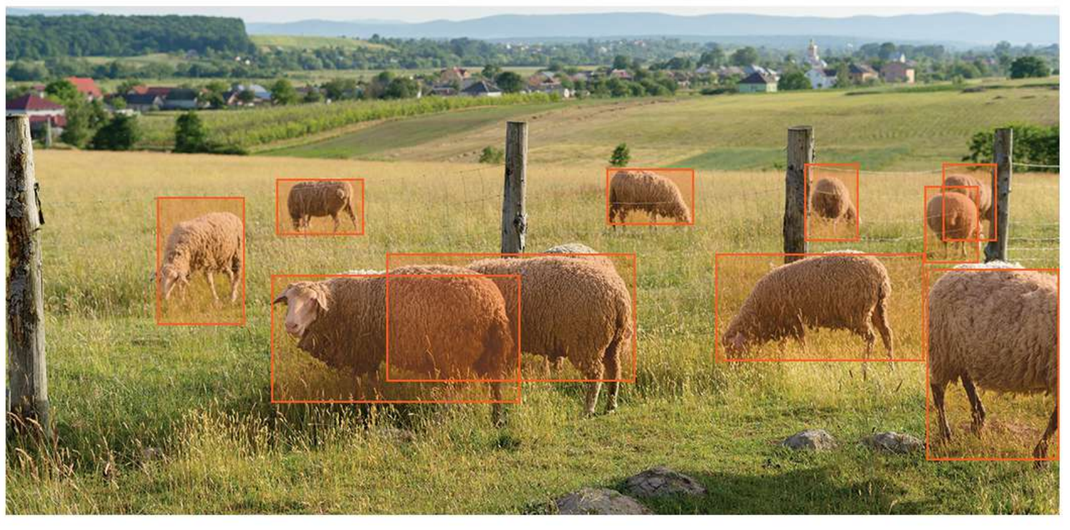


Industry-specific Applications

Warehouse Management

Safety Monitoring

Smart Metering



Smart Agriculture

Building Edge AI Applications with Developers

Resources Center:

Quick access to documents via Wiki, website, and provides sample code for project validation.

Hardware Expertise:

Professional expert consultation at the beginning stage.

Developer Community:

A thriving community on Discord and Github, encourages innovations and overcomes design challenges.

Project Success:

Fast-response technical support and long-term product evolution.

Project Booster:

PoC support and co-development opportunities.

Cultivating Customer’s Project with Dedicated Service

Customer-oriented

We value each customer's request and offer seamless, responsive interactions. Unlike traditional vendors, we focus on each customer's success.

Strict Quality Control

We utilize the supply chain advantages in Milesight to deliver high-performance products compatible with ISO, CE, RoHS certifications.

Technical Support

We offer after-sale technical support with a dedicated field engineer. Our professional team will engage in product training, solving business needs to ensure your success.

Strong Partnership

Collaborate with ecosystem partners to streamline the integration, cultivate AI develoeprs with trustworthy support.

Thank you!

www.camthink.ai

For more information, visit us: www.camthink.ai

Follow us on:

Email: sales@camthink.ai
Phone: +86-592-5023062
Website: www.camthink.ai
Address: Building C09, Software Park Phase III, Xiamen 361024, Fujian, China