

NeoEyes NE101

Sensing Camera

ESP32-S3 Based



Introduction

CamThink NeoEyes NE101 series is designed for diverse edge vision applications, featuring event-triggered image capture with low-power consumption less than 1W on the standby mode. NE101 adopts modular design and supports replaceable lenses, communication modules (Wi-Fi Halow / Cat.1), optional housing, and flexible mounting options, ensuring adaptability across IoT use cases.



Built-in with a high-performance ESP32-S3 MCU.



Event-triggered mechanism based on user scenarios (PIR/Laser Radar/Sound, etc.).



Ultra-low power consumption down to 1W on standby mode.



Supports 4G/Wi-Fi Halow for both long-distant and short-distant communications.



Rich interfaces: USB, GPIO, Type-C, etc.



Supports open SDK, firmware for developers' secondary development.

Applications



Smart Metering



Predictive Maintenance of Equipment



Elderly Monitoring



Smart Agriculture



Specifications

Model Name	NE101		NE101-L01GL	NE101-HL00	NE101-HL01
Hardware					
MCU	ESP32-S3				
Memory	8MB RAM				
Flash	16MB				
Communication					
Wireless	Wi-Fi	Cat.1 (Global, Ex. NA)	Wi-Fi Halow (868MHz)	Wi-Fi Halow (915MHz)	
Bluetooth	Bluetooth v4.2 BR/EDR, BLE				
Optical					
Camera module	OV5640 module (120° / 60° FOV and near/far focus options available)				
Illuminating	LED fill light x 1				
Interfaces					
Expansion IO	UART x 1, 16Pin IO x1 (on the motherboard), I2C, SPI, GPIOs				
Alarm	Alarm x 1 (motherboard)				
Synchronization	Hardware trigger / software trigger / free-run				
Power Supply					
Battery	4 x AA batteries, Type-C charge support (on the motherboard)				
Power consumption	≤ 1W (standby mode)				
Operation					
Temperature	-20°C - 50°C				
Dimension and Installation					
Dimension	77 x 77 x 48 mm, plastic housing				
Installation	Optional Wall/Desk/Pole mounting, provide printable 3D bracket file for customization				
Certifications	CE/FCC/RoHs				



Standard Accessories

SKU	Item	Quan.	Description
Not Included	Battery	4	AA Batteries

Optional Accessories

SKU	Item	Quan.	Description
56.999.000048	Pole Bracket	1	Suitable for complex scenarios requiring multi-angle adjustment of the camera. The kit includes 2 metal poles and 2 adapters, with customizable metal poles.
56.999.000049	Back / Rear Bracket	1	Suitable for wall mounting
56.999.000050	Desk / Base Bracket	1	Suitable for desk installation
56.999.000051	Meteingr Bracket	/	3D design files can be provided for self-3D printing
56.999.000037	Ball Joint Bracket	1	Suitable for fixed installation of instruments with less environmental light impact
73.002.000033 73.002.000034 73.002.000035 73.002.000036	OV5640 Module	1	Supports 4 specifications: 60° FOV, 15cm focus 60° FOV, 4m focus 120° FOV, 8cm focus 120° FOV, 3m focus
73.002.000043 73.002.000044	Cat.1 Antenna Wi-Fi Halow Antenna	1	Antenna — Inquiry only
73.002.000029 73.002.000030	Cat.1 Module Board	1	Cat.1 Global (Ex.NA) or Cat.1 North America
73.002.000031 73.002.000032	WiFi Halow Module Board	1	Wi-Fi Halow (868 MHz for Europe, Asia) Wi-Fi Halow (915 MHz for NA)

