79.00 EUR
incl. 19% VAT, plus shipping

- ESP32 S3 !
- OV5640 AF Camera !
- Dual LED Flash Light !
- Programmable buttons !

Support: Specifications | Manual

NORVI AIOPTIC ESP32-CAM, a reliable IoT camera designed to solve inconsistencies in camera modules. Perfect for computer vision, machine learning, and image processing projects with built-in display and battery backup.

Features:
- ESP32 S3 WROOM Chip with 16MB Flash and 8MB PSRAM
- OV5640 Auto Focus Camera
- 2-inch LCD Display (models with display)
- Dual LED Flash Light
- micro SD Card Support

Auxiliary:
- Joystick toggle switch
- External Trigger Dry Contact Input

Power & Programming:
- Built-in 800mAh Backup battery
- USB C Power and Programming

Operating Systems and Softwares
- Arduino IDE
- ESP-IDF (Espressif IoT Development Framework)

NORVI AIOptic Applications
- Habitat Monitoring
- Plant Monitoring
- Image Recognition
- Barcode Reader
- People Counter
- Object recognition
- Time-lapse
- Meter reading
- People in-out counter

Programmable Camera
Reliable Camera Modules and Lenses
NORVI AIOptic ESP32-CAM used quality controlled camera modules and lenses, ensuring consistency in each product. We have carefully selected the camera and lenses manufacturers after verifying the quality and consistency. We are able to offer customized versions with specific camera types and lens types for according to application.

Enclosed Design with Flexible Mounting

A fixed firm mounting is essential for your solution. We have used a standard camera mount, making the camera compatible with camera stands or brackets available on the market. Everything is packed into a small-sized enclosure, allowing you to place it in tiny spaces or install it without disturbing the ongoing processes.

High Power LEDs for Consistent Lighting

The inclusion of two high-power LEDs ensures adjustable lighting conditions, which is crucial for image recognition projects that require consistency in lighting. This feature helps maintain optimal lighting for accurate image processing.

Engineered for Continuous Operation

The NORVI ESP32-CAM is well-engineered to solve overheating issues, allowing for continuous operation. This design includes high-quality cameras and components that can withstand extended use without performance degradation.

Built-in Display for Standalone Operation

The built-in 2-inch LCD display enables standalone operation, increasing available diagnostic options and providing a viewfinder for the camera. It also allows users to tweak the camera settings directly on the device, enhancing usability and flexibility in various applications.

Battery Powered

The NORVI ESP32-CAM includes a built-in 800mAh battery, ensuring uninterrupted operation during power interruptions. This feature is particularly useful for remote or critical applications where continuous operation is essential.

Benefits of using ESP32-CAM

1. Enhanced Performance:

Dual-core Processor: The ESP32-S3 features a dual-core Xtensa LX7 processor, providing higher processing power compared to the single-core ESP32-CAM. Increased Speed: The ESP32-S3 can run at up to 240 MHz, allowing for faster image processing and more efficient handling of computational tasks.

2. AI Acceleration:

Vector Instructions: The ESP32-S3 includes vector instructions, which are beneficial for AI and machine learning tasks, enabling more efficient computation of neural networks. Tensor Processing: Built-in support for tensor computations enhances the device's capability to run AI models directly on the microcontroller.

3. Improved Memory:

Larger RAM: The ESP32-S3 comes with increased SRAM (512 KB), which allows for handling larger image buffers and more complex algorithms. Extended Flash Storage: It supports larger external flash storage, providing more space for firmware and data storage.

4. Advanced Connectivity:

Wi-Fi 6 (802.11ax): The ESP32-S3 supports the latest Wi-Fi standard, offering better performance, reduced latency, and improved power efficiency. Bluetooth 5.0: Enhanced Bluetooth capabilities, including BLE and Bluetooth mesh, provide more robust and versatile wireless communication options.

5. Improved Security:

Enhanced Encryption: The ESP32-S3 supports improved hardware encryption, secure boot, and digital signature features, ensuring better protection of sensitive data. Trusted Execution Environment: Provides a more secure environment for executing sensitive code.

6. Low Power Consumption:

Energy Efficiency: The ESP32-S3 has various low-power modes, making it suitable for battery-powered camera applications. Dynamic Power Management: Allows for real-time adjustments to power consumption based on the current task.