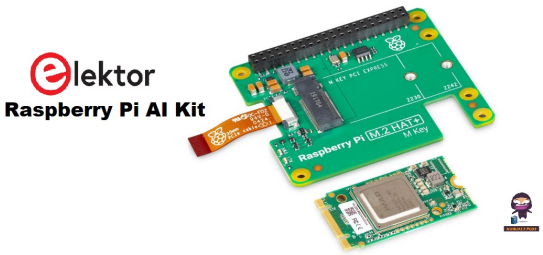

Elektor Raspberry Pi AI Kit User Guide

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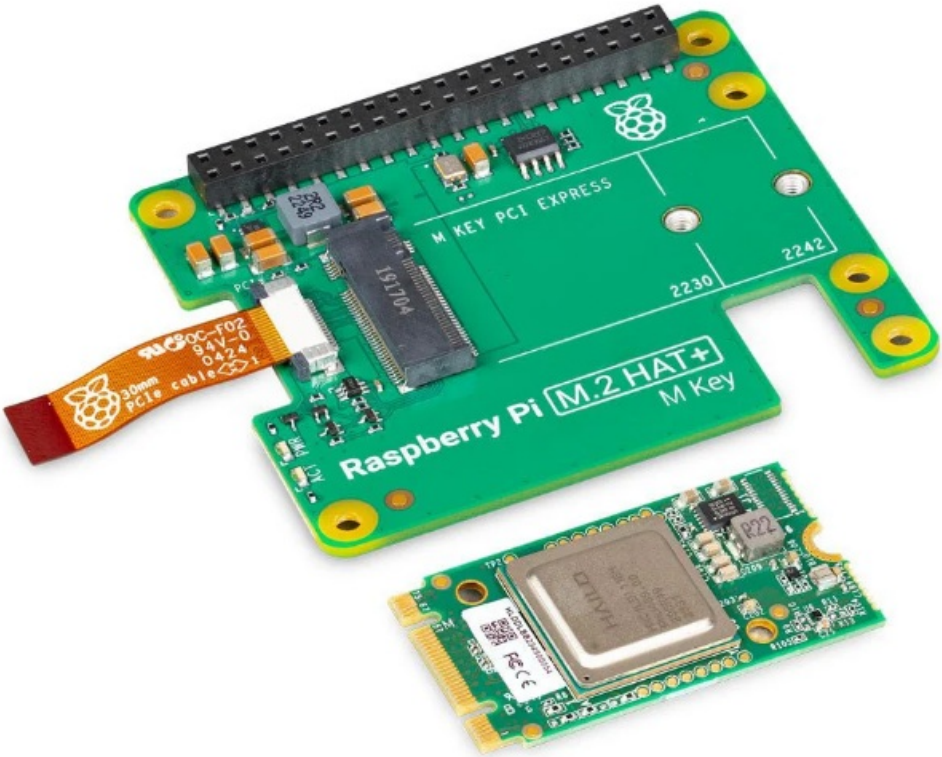

Product Information

Specifications

- **Product Name:** Raspberry Pi AI Kit
- **Author**: Dogan Ibrahim
- **Publication**: Elektor Publication
- **ISBN**: 978-3-89576-638-1 (Print), 978-3-89576-639-8 (eBook)

Product Usage Instructions

1. **Step 1: Unboxing**
   Open the package carefully and take out all the components included in the Raspberry Pi AI Kit.
2. **Step 2: Setting Up Raspberry Pi**
   Follow the provided instructions to set up your Raspberry Pi board with the necessary connections and power source.
3. **Step 3: Installing Software**
   Install the required software for AI and Edge Computing on your Raspberry Pi following the provided guidelines.
4. **Step 4: Getting Started with AI**
   Explore the beginner's guide included in the kit to start learning about AI and Edge Computing concepts.
5. **Step 5: Experimenting**
   Begin experimenting with AI projects on your Raspberry Pi using the knowledge gained from the guide.

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www.elektormagazine.com

- The Raspberry Pi AI Kit includes the Raspberry Pi M.2 HAT+ and a Hailo AI acceleration module for use with the Raspberry Pi 5. It provides an accessible, cost-effective, and power-efficient way to integrate high-performance AI. Explore applications including process control, security, home automation, and robotics!
- The AI module is a 13 TOPS (Trillions of Operations Per Second) neural network inference accelerator built around the Hailo-8L chip. The module uses the M.2 2242 form factor and comes pre-installed in the M.2 HAT+, to which it connects through an M key edge connector. The M.2 HAT+ communicates between the AI module's M.2 interface and the Raspberry Pi 5's PCIe 2.0 interface.
- When the host Raspberry Pi 5 is running an up-to-date Raspberry Pi OS image, it automatically detects the Hailo module and makes the NPU available for AI computing tasks. The built-in *spam-apps* camera applications in Raspberry Pi OS natively support the AI module, automatically using the NPU to run compatible post-processing tasks.

Features

- Contains a neural network inference accelerator capable of 13 TOPS (Trillions of Operations Per Second)
- Fully integrated into Raspberry Pi's camera software stack
- Thermal pad pre-fitted between module and HAT+ spreads heat across components, improving performance
- Conforms to Raspberry Pi HAT+ specification

Included

- Hailo 8L accelerator with Neural Processing Unit (NPU)

- Raspberry Pi M.2 HAT+
- Thermal pad pre-fitted between the module and the M.2 HAT+
- Mounting hardware kit (spacers, screws)
- 16 mm GPIO stacking header

FAQ

Q: Can I use this kit for advanced AI projects?
A: While this kit is designed for beginners, it can be a great starting point for more advanced AI projects with additional components and knowledge.

Q: Is technical support available for this product?
A: For technical support, refer to the Elektor website or contact their customer service for assistance.

Documents / Resources

	Elektor Raspberry Pi AI Kit [pdf] User Guide Raspberry Pi AI Kit, Pi AI Kit, Kit

References

- Elektor Magazine: Your Electronics Community > Design Share Earn | Elektor Magazine
- User Manual