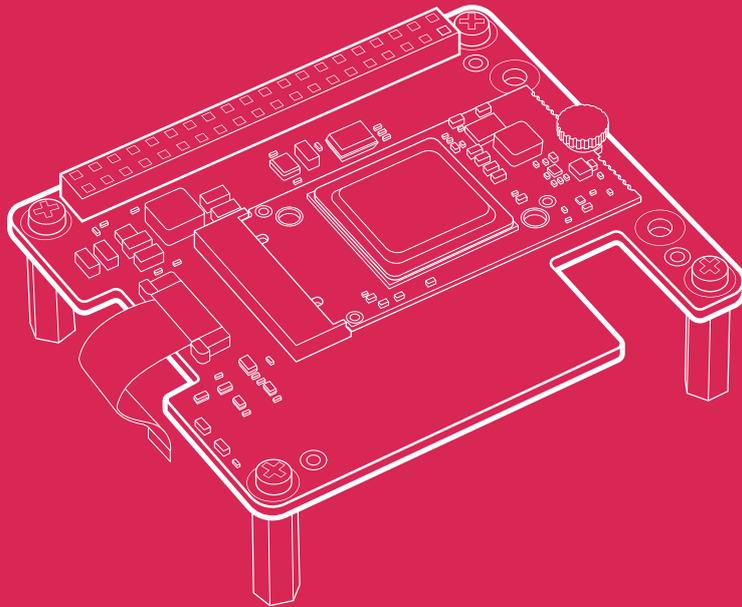




Raspberry Pi AI Kit

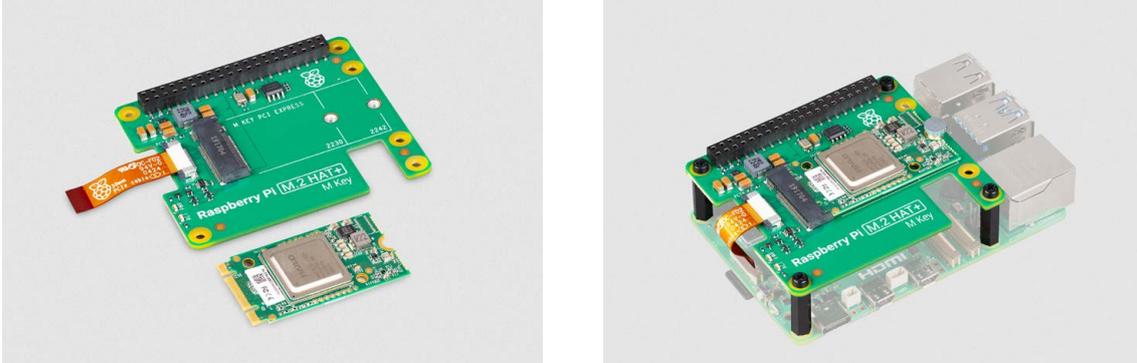
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EMPOWERED BY

HAILO

Overview



The Raspberry Pi AI Kit bundles the Raspberry Pi M.2 HAT+ with a Hailo AI acceleration module for use with 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. Contains:

- a Hailo AI module containing a Neural Processing Unit (NPU)
- a Raspberry Pi M.2 HAT+, to connect the AI module to your Raspberry Pi 5
- a thermal pad pre-fitted between the module and the M.2 HAT+
- a mounting hardware kit
- a 16mm stacking GPIO header

The AI module is a 13 tera-operations per second (TOPS) 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 `picam`-apps camera applications in Raspberry Pi OS natively support the AI module, automatically using the NPU to run compatible post-processing tasks.

Specification

Features:	<p>Contains a neural network inference accelerator capable of 13 tera-operations per second (TOPS)</p> <p>Fully integrated into Raspberry Pi's camera software stack</p> <p>Thermal pad pre-fitted between module and HAT+ spreads heat across components, improving performance</p> <p>Conforms to Raspberry Pi HAT+ specification</p> <p>Supplied with 16mm stacking header, spacers, and screws to enable fitting on Raspberry Pi 5 with Raspberry Pi Active Cooler in place</p>
Operating temperature:	0°C to 50°C (ambient)
Compliance:	For a full list of local and regional product approvals, please visit pip.raspberrypi.com

For more information on the Raspberry Pi AI Kit, see the [AI Kit documentation](#)

For more information on the Hailo AI module, see the [Hailo AI module product page](#)

For more information on the M.2 HAT+, see the [M.2 HAT+ documentation](#)

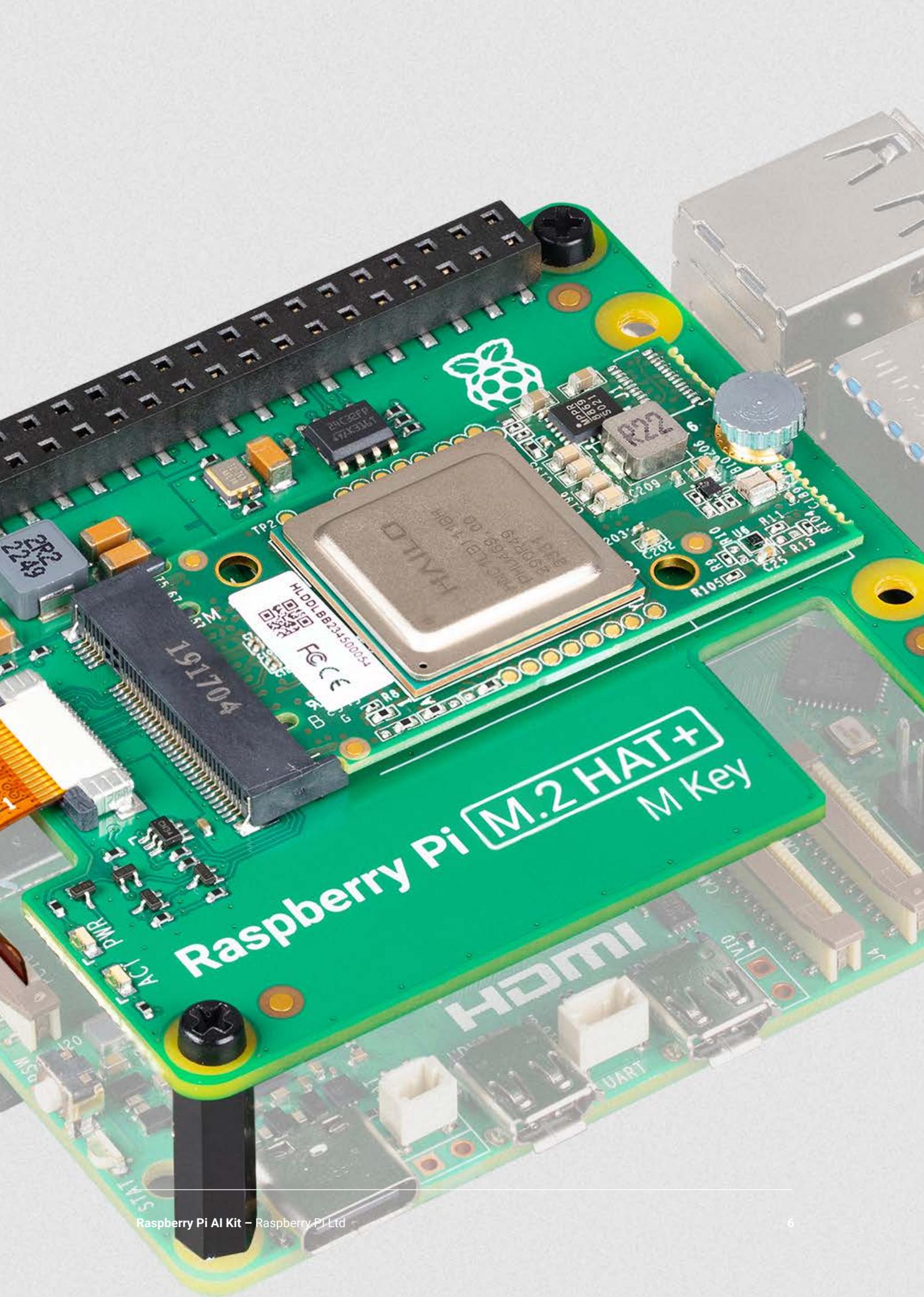
WARNINGS

- The Hailo AI module shall only be connected to a Raspberry Pi M.2 HAT+ via the M.2 key interface.
- The Raspberry Pi M.2 HAT+ shall only be connected to a Raspberry Pi via the PCIe interface and GPIO header.
- This product should be operated in a well-ventilated environment, and if used inside a case, the case should not be covered.
- Whilst in use, this product should be firmly secured, and should not be contacted by conductive items.
- The connection of incompatible devices to the Raspberry Pi AI Kit may affect compliance, result in damage to the unit, and invalidate the warranty.
- All peripherals used with this product should comply with relevant standards for the country of use and be marked accordingly to ensure that safety and performance requirements are met.
- The cables and connectors of all peripherals used with this product must have adequate insulation so that relevant safety requirements are met.
- Operation of this device requires adult supervision.

SAFETY INSTRUCTIONS

To avoid malfunction or damage to this product, please observe the following:

- Do not expose to water or moisture, or place on a conductive surface whilst in operation.
- Do not expose to heat from any source; Raspberry Pi computers and the Raspberry Pi AI Kit are designed for reliable operation at normal ambient temperatures.
- Take care whilst handling to avoid mechanical or electrical damage to the printed circuit board and connectors.
- Whilst it is powered, avoid handling the printed circuit board, or only handle it by the corners to minimise the risk of electrostatic discharge damage.





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