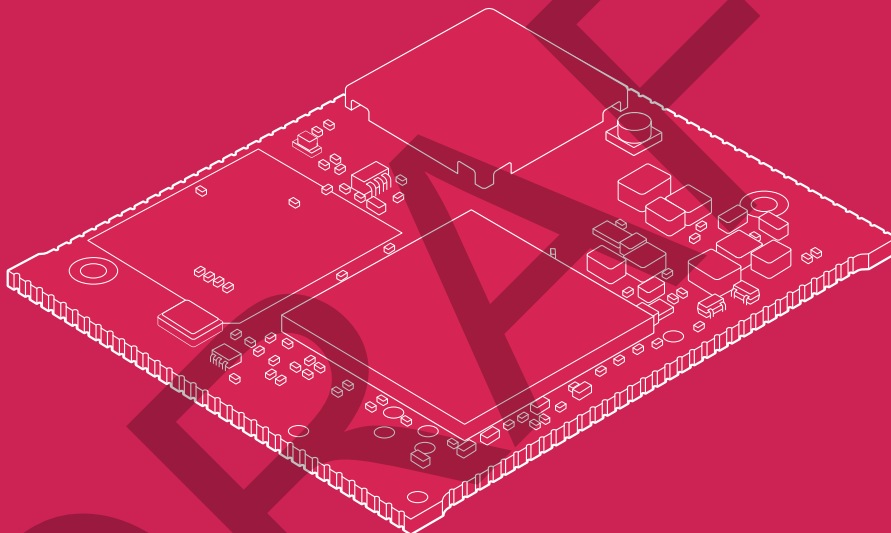




# Raspberry Pi Compute Module Zero

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## Overview



Compute Module Zero is a System on Module (SoM) built around the RP3A0 chip, a custom-built system-in-package designed by Raspberry Pi. It provides the core processing capability of Raspberry Pi Zero 2 W in a compact, embeddable form factor, with onboard RAM and optional Wi-Fi® connectivity. With 4-lane CSI and DSI for image and video capture and display applications, it enables developers and system designers to add Raspberry Pi functionality to a wide variety of custom hardware.

The Compute Module Zero board is designed to be soldered directly onto a carrier board. The module provides 132 castellated connections arranged around the edge of the module, spaced at a 1 mm pitch. The module can be soldered manually or using standard surface-mount processes during automated PCB assembly.

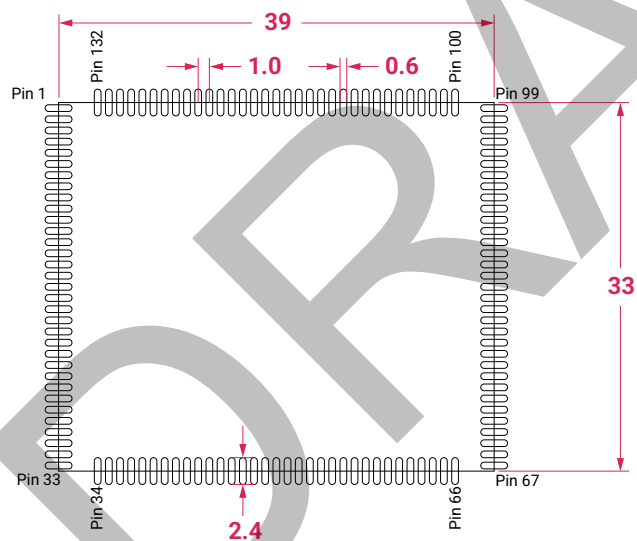
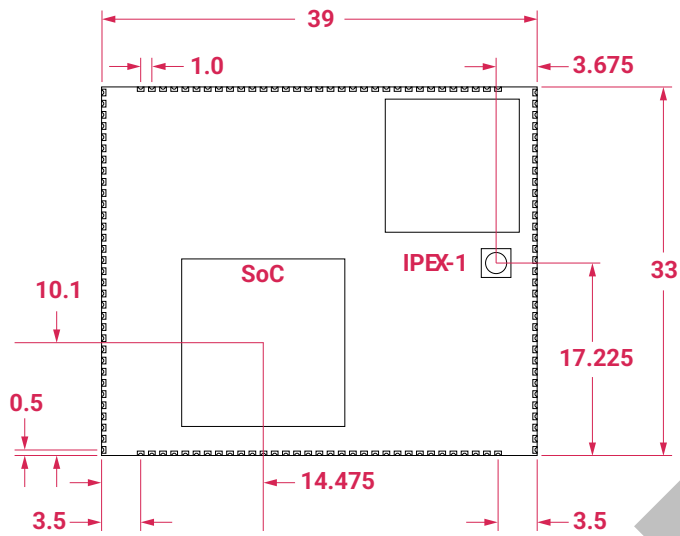
Because Compute Module Zero is based on Raspberry Pi Zero 2 W, developers can test their projects on Raspberry Pi Zero 2 W before building the final Compute Module Zero-based product.

Compute Module Zero is also available in a Compute Module Zero Lite variant without eMMC storage.

## Specification

<b>Processor</b>	1GHz quad-core 64-bit Arm Cortex-A53 CPU
<b>Memory</b>	512MB LPDDR2 SDRAM
<b>Connectivity</b>	Optional 2.4GHz 802.11 b/g/n Wi-Fi® and Bluetooth 5.0, BLE USB 2.0 interface 4-lane Display Serial Interface (DSI) 4-lane Camera Serial Interface (CSI) Display Parallel Interface (DPI) Composite video output HDMI® interface
<b>GPIO</b>	28 GPIO pins
<b>Multimedia</b>	H.264 or MPEG-4 1080p30 decode H.264 1080p30 encode OpenGL ES 1.1 and 2.0 graphics
<b>Storage</b>	Optional 8GB or 16GB eMMC flash storage
<b>SDIO interface</b>	Available on Compute Module Zero Lite (no eMMC) only
<b>Power</b>	5V DC
<b>Operating temperature</b>	-20°C to +85°C
<b>Dimensions</b>	39 mm × 33 mm × 2.8 mm
<b>MTBF</b>	<b>Ground, benign:</b> 374000 hours <b>Ground, mobile:</b> 32000 hours
<b>Compliance</b>	For a full list of local and regional product approvals, please visit <a href="http://pip.raspberrypi.com">pip.raspberrypi.com</a>

## Mechanical specification





## Other information

### Product availability

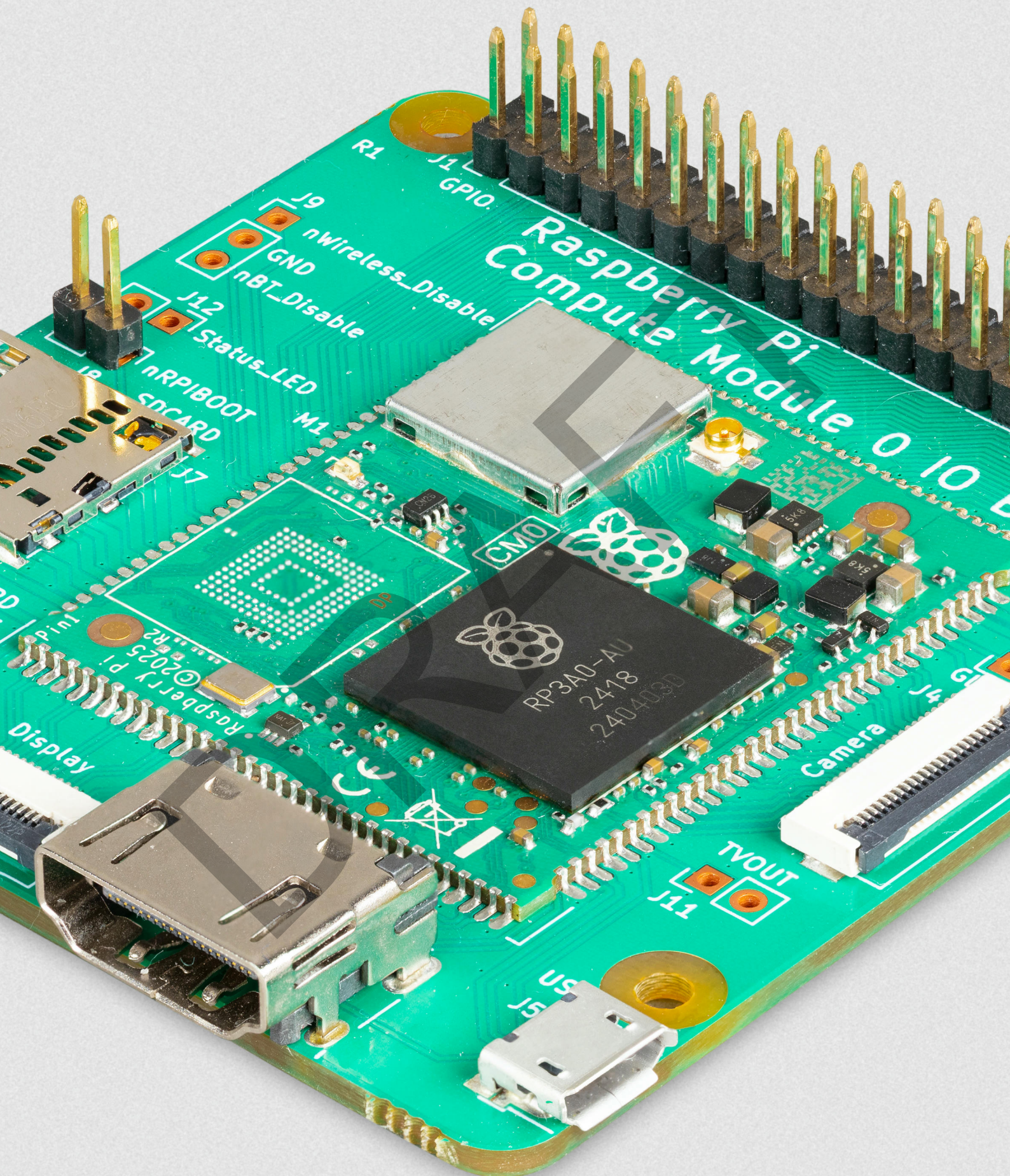
Part number	Wireless	eMMC
CM0000000	No	Lite (0GB)
CM0000008	No	8GB
CM0000016	No	16GB
CM0100000	Yes	Lite (0GB)
CM0100008	Yes	8GB
CM0100016	Yes	16GB

### Safety warnings

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

- Any external power supply used with Compute Module Zero shall comply with relevant regulations and standards applicable in the country of intended use.
- This product should be operated in a well-ventilated environment and should not be covered when being operated.
- The connection of incompatible devices to Compute Module Zero 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. These articles include, but are not limited to, mice, monitors and cables when used in conjunction with Compute Module Zero.
- The cables and connectors of all peripherals used with this product must have adequate insulation so that relevant safety requirements are met.
- Prolonged exposure to direct sunlight may cause discoloration.
- Do not expose to water or moisture whilst in operation.
- Do not expose to heat from any source; Compute Module Zero is designed for reliable operation at normal ambient temperatures.
- Take care whilst handling to avoid mechanical or electrical damage to the module.









**Raspberry Pi**

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