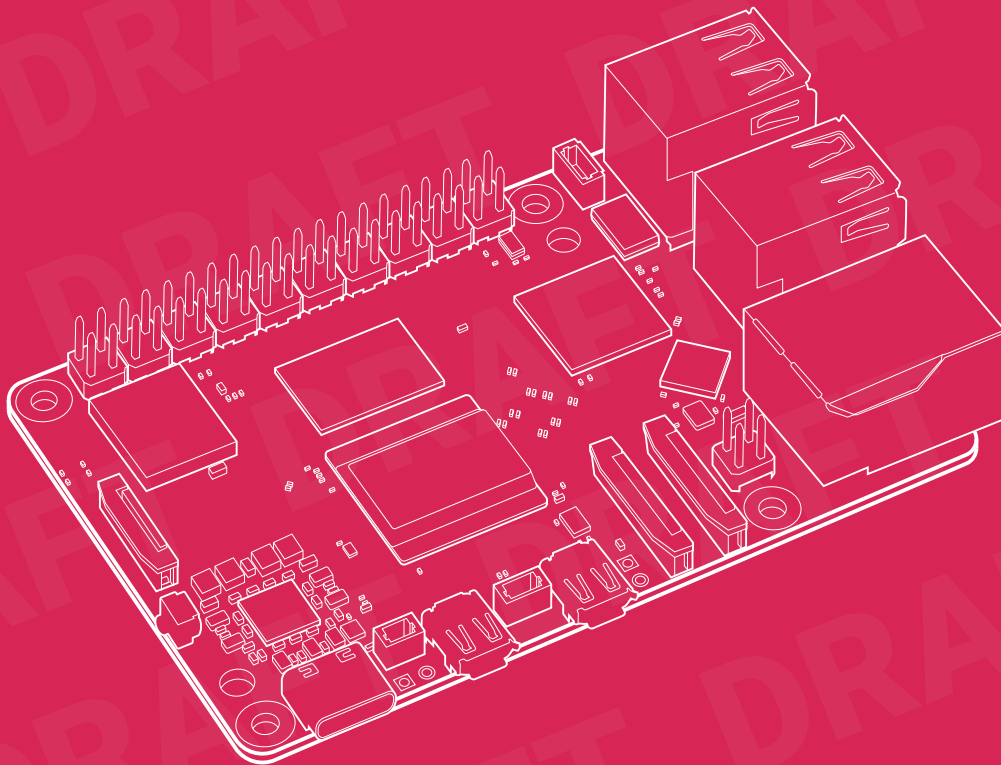




Raspberry Pi 5

Published September 2023



HDMI[™]
HIGH-DEFINITION MULTIMEDIA INTERFACE

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Overview



Welcome to the latest generation of Raspberry Pi: the everything computer.

Featuring a 64-bit quad-core Arm Cortex-A76 processor running at 2.4GHz, Raspberry Pi 5 delivers a 2–3× increase in CPU performance relative to Raspberry Pi 4. Alongside a substantial uplift in graphics performance from an 800MHz VideoCore VII GPU; dual 4Kp60 display output over HDMI; and state-of-the-art camera support from a rearchitected Raspberry Pi Image Signal Processor, it provides a smooth desktop experience for consumers, and opens the door to new applications for industrial customers.

For the first time, this is a full-size Raspberry Pi computer using silicon built in-house at Raspberry Pi. The RP1 “southbridge” provides the bulk of the I/O capabilities for Raspberry Pi 5, and delivers a step change in peripheral performance and functionality. Aggregate USB bandwidth is more than doubled, yielding faster transfer speeds to external UAS drives and other high-speed peripherals; the dedicated two-lane 1Gbps MIPI camera and display interfaces present on earlier models have been replaced by a pair of four-lane 1.5Gbps MIPI transceivers, tripling total bandwidth, and supporting any combination of up to two cameras or displays; peak SD card performance is doubled, through support for the SDR104 high-speed mode; and for the first time the platform exposes a single-lane PCI Express 2.0 interface, providing support for high-bandwidth peripherals.

Specification

Processor 2.4GHz quad-core 64-bit Arm Cortex-A76 CPU, with cryptography extensions, 512KB per-core L2 caches, and a 2MB shared L3 cache

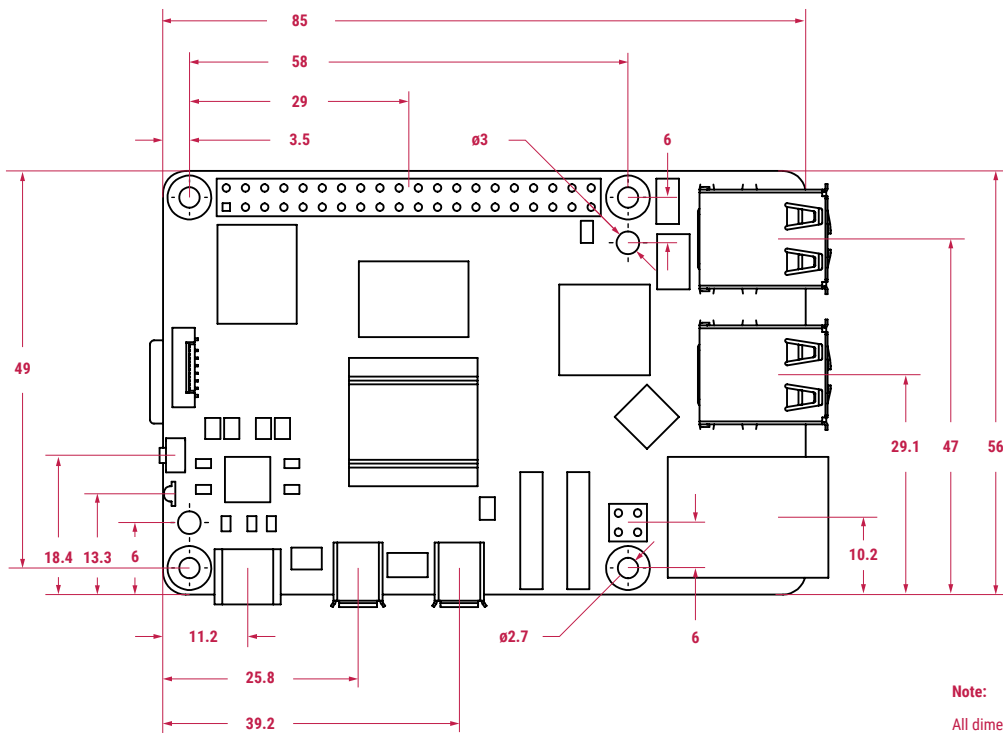
Features:

- VideoCore VII GPU, supporting OpenGL ES 3.1, Vulkan 1.2
- Dual 4Kp60 HDMI[®] display output with HDR support
- 4Kp60 HEVC decoder
- LPDDR4X-4267 SDRAM (4GB and 8GB SKUs available at launch)
- Dual-band 802.11ac Wi-Fi[®]
- Bluetooth 5.0/Bluetooth Low Energy (BLE)
- microSD card slot, with support for high-speed SDR104 mode
- 2 × USB 3.0 ports, supporting simultaneous 5Gbps operation
- 2 × USB 2.0 ports
- Gigabit Ethernet, with PoE+ support (requires separate PoE+ HAT)
- 2 × 4-lane MIPI camera/display transceivers
- PCIe 2.0 x1 interface for fast peripherals (requires separate M.2 HAT or other adapter)
- 5V/5A DC power via USB-C, with Power Delivery support
- Raspberry Pi standard 40-pin header
- Real-time clock (RTC), powered from external battery
- Power button

Production lifetime: Raspberry Pi 5 will remain in production until at least January 2035

Compliance: For a full list of local and regional product approvals, please visit pip.raspberrypi.com

Physical specification



Note:

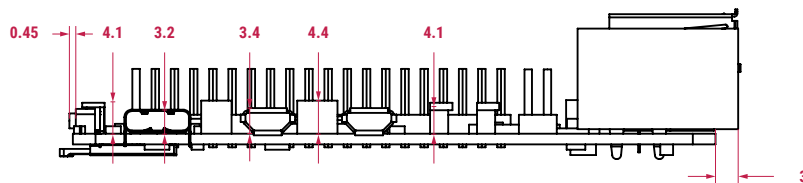
All dimensions in mm

All dimensions are approximate and for reference purposes only. The dimensions shown should not be used for producing production data

The dimensions are subject to part and manufacturing tolerances

Not all of the board components are shown. Please reference a physical board for representation of componentry

Dimensions may be subject to change



ADVERTENCIAS

- Este producto debe utilizarse en un entorno bien ventilado y, si se utiliza dentro de una caja, ésta no debe estar cubierta.
- Para prevenir problemas de sobrecalentamiento en tu Raspberry Pi, se aconseja utilizar disipadores de calor y ventiladores como medida preventiva
- Mientras esté en uso, este producto debe estar firmemente sujeto o colocado sobre una superficie estable, plana y no conductora, y no debe entrar en contacto con elementos conductores.
- La conexión de dispositivos incompatibles con Raspberry Pi 5 puede afectar a la conformidad, provocar daños en la unidad e invalidar la garantía.
- Todos los periféricos utilizados con este producto deben cumplir las normas pertinentes del país de uso y estar marcados en consecuencia para garantizar que se cumplen los requisitos de seguridad y rendimiento.

INSTRUCCIONES DE SEGURIDAD

Para evitar un funcionamiento incorrecto o daños en este producto, tenga en cuenta lo siguiente:

- No lo exponga al agua ni a la humedad, ni lo coloque sobre una superficie conductora mientras esté en funcionamiento.
- No lo exponga al calor de ninguna fuente; Raspberry Pi 5 está diseñado para un funcionamiento fiable a temperaturas ambiente normales.
- Guárdelo en un lugar fresco y seco.
- Tenga cuidado al manipularlo para evitar daños mecánicos o eléctricos en la placa de circuito impreso y los conectores.
- Mientras esté encendida, evite manipular la placa de circuito impreso, o tómelas sólo por los bordes, para minimizar el riesgo de daños por descargas electrostáticas.

"Por favor, tenga extremo cuidado al insertar la tarjeta microSD en su Raspberry Pi. Evite aplicar fuerza excesiva y asegúrese de colocarla correctamente. Cualquier daño causado por una inserción indebida no será cubierto por la garantía de AG Electrónica. Le recomendamos seguir las instrucciones detalladas en el manual para garantizar un uso adecuado y prolongar la vida útil de su dispositivo."



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