PRODUCT DATASHEET

Sentinel Core



333435

Mini-ITX carrier board for the Raspberry Pi Compute Module 5 with a PCIe x16 slot, two HDMI ports, Gigabit Ethernet and ATX power.

Full product documentation, files and tutorials: **solde.red/333435**

CORE ATTRIBUTES

SKU	333435
DIMENSIONS	170.0 × 170.0 × — mm
ORIGIN	HR

DESCRIPTION

Sentinel Core is a 170 × 170 mm Mini-ITX carrier board for the Raspberry Pi Compute Module 5. You fit a CM5 or CM5 Lite onto its two 100-pin connectors and get a board that mounts in a standard Mini-ITX case and runs from a standard ATX power supply, with the module's interfaces brought out on full-size connectors.

The board carries a **PCIe x16 slot** wired to the module's single PCIe Gen 2 lane, **two HDMI 2.0 ports**, **two stacked USB 3.0 ports** with a current-limited power switch, **Gigabit Ethernet** with ESD protection on the pairs, two 22-pin MIPI connectors for CSI cameras or DSI displays, a **40-pin GPIO header** with the Raspberry Pi pinout, two 4-pin 12 V PWM fan headers, a CR2032 holder for the module's real-time clock, a power button and a front-panel header for case LEDs and a power switch.

Power comes from a **24-pin ATX connector** or from the USB-C port at 5 V, where the module negotiates up to 5 A over USB PD; an ideal-diode circuit keeps the two inputs apart. The PCIe slot and the fan headers take their 12 V from the ATX supply, so they need the ATX input. The USB-C port also carries the module's USB 2.0 port, and a jumper on the 14-pin service header forces rpiboot mode for flashing the eMMC. GPIO signalling is 3.3 V by default and can be set to 1.8 V with a 0 ohm resistor. The Compute Module is not included.

TECHNICAL DETAILS

- **Module:** Raspberry Pi Compute Module 5 or CM5 Lite, on two 100-pin board-to-board connectors (module not included)
- **Form factor:** Mini-ITX, 170 × 170 mm
- **Expansion:** PCIe x16 slot, one lane, PCIe Gen 2 from the module

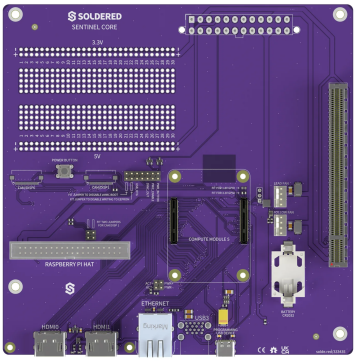
- **Video:** 2x HDMI 2.0, full-size connectors
- **USB:** 2x USB 3.0 Type-A (stacked) with a current-limited power switch; USB 2.0 on the USB-C port
- **Network:** Gigabit Ethernet RJ45 with integrated magnetics and ESD protection
- **Camera and display:** 2× 22-pin MIPI connectors (CSI or DSI)
- **GPIO:** 40-pin header with the Raspberry Pi pinout; 3.3 V signalling by default, 1.8 V selectable with a 0 ohm resistor
- **Fans:** 2× 4-pin 12 V PWM fan headers, tachometer on one
- **RTC:** CR2032 battery holder for the module's real-time clock
- **Power input:** 24-pin ATX connector or USB-C at 5 V, with an ideal-diode circuit between them; 12 V for PCIe and fans comes only from ATX
- **Controls:** power button, front-panel header for power switch and LEDs, 14-pin service header (rpiboot, EEPROM write protect, PMIC enable, sync out)
- **Indicators:** power and activity LEDs

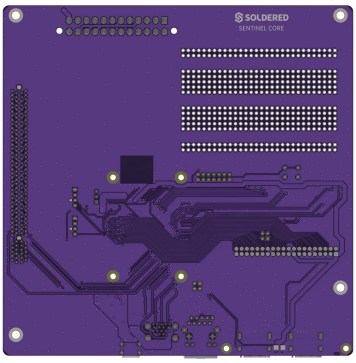
LINKS

Pinout	https://cms.soldered.com/products/333435/media/333435_pinout-png_49402c.png

GALLERY




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